



Allen-Bradley

ControlLogix Drive Module

1756-DMD30, 1756-DMF30

efesotomasyon.com

User Manual

**Rockwell
Automation**

Important User Information

Solid state equipment has operational characteristics differing from those of electromechanical equipment. “*Safety Guidelines for the Application, Installation and Maintenance of Solid State Controls*” (Publication SGI-1.1 available from your local Rockwell Automation Sales Office or online at <http://www.ab.com/manuals/gi>) describes some important differences between solid state equipment and hard-wired electromechanical devices. Because of this difference, and also because of the wide variety of uses for solid state equipment, all persons responsible for applying this equipment must satisfy themselves that each intended application of this equipment is acceptable.

In no event will Rockwell Automation, Inc. be responsible or liable for indirect or consequential damages resulting from the use or application of this equipment.

The examples and diagrams in this manual are included solely for illustrative purposes. Because of the many variables and requirements associated with any particular installation, Rockwell Automation, Inc. cannot assume responsibility or liability for actual use based on the examples and diagrams.

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Throughout this manual we use notes to make you aware of safety considerations.

WARNING



Identifies information about practices or circumstances that can cause an explosion in a hazardous environment, which may lead to personal injury or death, property damage, or economic loss.

ATTENTION



Identifies information about practices or circumstances that can lead to personal injury or death, property damage, or economic loss.

IMPORTANT

Identifies information that is critical for successful application and understanding of the product.

Rockwell Automation Support

Before you contact Rockwell Automation for technical assistance, we suggest you please review the troubleshooting information contained in this publication first.

If the problem persists, call your local Rockwell Automation representative or contact Rockwell Automation in one of the following ways:

Phone	United States/Canada	1.262.512.8176
	Outside United States/Canada	You can access the phone number for your country via the Internet: 1. Go to http://www.ab.com 2. Click on <i>Product Support</i> (http://support.automation.rockwell.com) 3. Under <i>Support Centers</i>, click on <i>Contact Information</i>
Internet	⇒	1. Go to http://www.ab.com 2. Click on <i>Product Support</i> (http://support.automation.rockwell.com)

Your Questions or Comments on this Manual

If you find a problem with this manual, please notify us by using one of these two methods:

- Filling out the enclosed "How Are We Doing" form
- Filling out the "Tell Us How We Can Make Our Manuals Better" form online at http://www.ab.com/manuals/dr/manuals_feedback.html

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Summary of Changes

The table below summarizes the changes to this publication since the last update:

For this updated information:	See:
Reliability specification	A-1
Documentation of 1756-DMD30 (Firmware Revision 2.01) Algorithms, Parameters and Faults	B-1
Documentation of 1756-DMF30 (Firmware Revision 1.09) Algorithms, Parameters and Faults	C-1

Notes:

About This Preface

This preface describes how to use this manual. The following table describes what this preface contains and its location.

For information about:	See page:
Who Should Use This Manual	Preface-1
Purpose of This Manual	Preface-1
Related Products and Documentation	Preface-2

Who Should Use This Manual

You must be able to program and operate an Allen-Bradley ControlLogix™ Logix controller and ControlLogix I/O modules to efficiently use your Drive module.

We assume that you know how to do this in this manual. If you do not, refer to Related Documentation, before you attempt to use this module.

IMPORTANT

SynchLink must be used in conjunction with a standard control network, such as ControlNet or Ethernet. A standard network is used for general control interlocking and transfer of diagnostic data across the system.

SynchLink does not function as a standard control network (e.g. it broadcasts data in a unidirectional manner).

Purpose of This Manual

This manual describes how to install, configure, and troubleshoot your ControlLogix Drive module.

What This Manual Contains

This user manual contains the following sections:

- Description of the Drive module
- Description of Drive Communication
- Description of Drive module certifications and features
- Description of how to install the Drive module and connect the fiber optic cables
- Description of how to configure the Drive module with RSLogix 5000 and DriveExecutive programming software
- Description of how to troubleshoot the Drive module
- Listing of Drive module specifications
- Information specific to the SD3000 Interface (1756-DMD30)

Related Products and Documentation

The following table lists related Allen-Bradley products and documentation:

Table Preface.A
Related Documentation

Catalog number:	Document title:	Pub. number:
1756-DM	ControlLogix Drive Module Installation Instructions	1756-IN577
1756-A4, -A7, -A10, -A13	ControlLogix Chassis Installation Instructions	1756-IN080B
1756-PA72, -PB72	ControlLogix Power Supply Installation Instructions	1756-5.67
1756-PA75, -PB75	ControlLogix Power Supply Installation Instructions	1756-5.78
1756-Series	ControlLogix Module Installation Instructions (Each module has separate installation document.)	Multiple 1756-IN numbers
1756-Series	ControlLogix System User Manual	1756-UM001
Multiple numbers	SynchLink Design Guide	1756-TD008
1751-SLBA	SynchLink Base Block Installation Instructions	1751-IN001
1751-SL4SP	SynchLink 4-port Splitter Block Installation Instructions	1751-IN002
1751-SLBP	SynchLink Bypass Switch Block Installation Instructions	1751-IN003
PowerFlex 700S	PowerFlex 700S User Manual	20D-UM001

The following table lists related Reliance Electric products and documentation:

Table Preface.B
Related Documentation

Catalog number:	Document title:	Pub. number:
Multiple numbers	Distributed Power System Overview	S-3005
SD3000, SF3000	Distributed Power System SD3000/SF3000 Power Module Interface Rack and Modules	S-3008
SD3000	Distributed Power System SD3000 Drive Diagnostics, Troubleshooting, and Start-Up Guidelines	S-3011
SD3000, SF3000	Distributed Power System SD3000/SF3000 3-Phase DC Power Models	S-3037
SD3000	Distributed Power System High Horsepower D-C Power Bridge 1000 HP Power Modules	S-3039
SF3000	Distributed Power System SF3000 Panel-Mounted Single-Phase Field Power Modules	S-3060
SD3000, SF3000	Distributed Power System SD3000/SF3000 Parallel Gate Amplifier System	S-3045

If you need more information on these products, contact your local Allen-Bradley integrator or sales office for assistance. Information and manuals are also available online at <http://www.ab.com/manuals/> and <http://www.theautomationbookstore.com/>.

Notes:

What is the ControlLogix Drive Module?

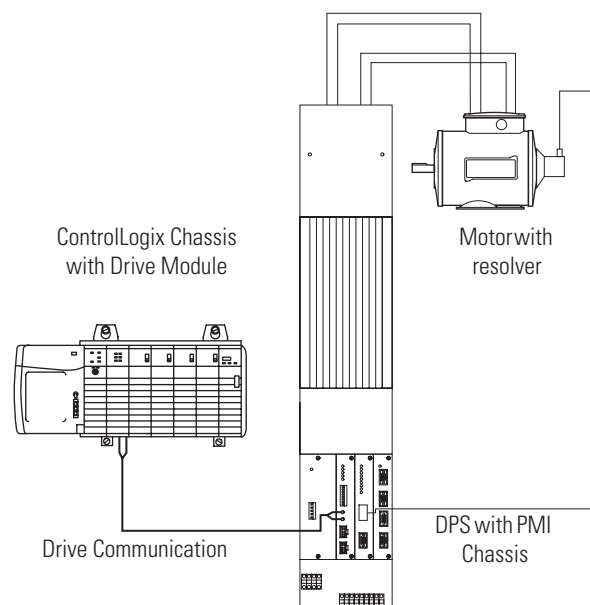
This chapter describes the ControlLogix Drive module. It also describes what you must know and do before using the Drive module.

For information about:	See page:
What is the ControlLogix Drive Module?	1-1
Connecting the Drive Module to SynchLink and Drive Comm	1-3
Using Module Identification and Status Information	1-5
Preventing Electrostatic Discharge	1-7
Removal and Insertion Under Power	1-7
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What is the ControlLogix Drive Module?

The 1756-DM Drive Module is a single slot ControlLogix based module for interface to Reliance Electric Distributed Power System (DPS) drive equipment. Each drive module interfaces with an individual Power Module Interface (PMI) chassis, performing velocity and position and outer torque control.

Figure 1.1 SD3000 System Example



There are two types of Drive module, each works with a different type of DPS drive equipment.

Table 1.A

Drive Module	DPS Equipment	Description
1756-DMD30	SD3000 6 Pulse	DC Drive S6 and S6R
	SD3000 12 Pulse	DC Drive S12 and S12R
1756-DMF30	SF3000	Three Phase Field Supply

What Are Some of the Features Available On the ControlLogix Drive Module?

The following are some of the features available on the ControlLogix Drive module:

- The 1756-DMD30 utilizes velocity and position and outer torque control similar to the PowerFlex 700S
- Motor Control capability mimics the respective Reliance Electric Distributed Power drive
- PC Tools, such as RSLogix 5000™ and DriveExecutive™ in the DriveTools 2000™ program suite, used for programming, configuring, monitoring and troubleshooting
- Fiber optic connection to the Power Module Interface
- SynchLink™ for advanced high performance synchronization and data transfer.
- Removal and insertion under power (RIUP) - This system feature allows you to remove and insert the module while power is applied. For more information on RIUP, see page 1-7.
- Class I Division 2, UL, CSA, and CE Agency Certification

Connecting the Drive Module to SynchLink and Drive Comm

SynchLink

The ControlLogix Drive module mounts in a ControlLogix chassis and connects to other SynchLink nodes through a fiber optic cable system.

Table 1.B
Fiber Optic Cables for SynchLink

Catalog Number:	Cable Length	Cables per box:
1403-CF001	1 meter	2
1403-CF003	3 meters	2
1403-CF005	5 meters	2
1403-CF010	10 meters	1
1403-CF020	20 meters	1
1403-CF050	50 meters	1
1403-CF100	100 meters	1
1403-CF250	250 meters	1

Drive Comm (Drive Communication)

The ControlLogix Drive module connects to a PMI chassis through special Drive Communication fiber optic cables.

Table 1.C
Fiber Optic Cables for Drive Communication

Catalog Number	Length
1756-DMCF001	1 meter
1756-DMCF003	3 meters
1756-DMCF010	10 meters
1756-DMCF030	30 meters
1756-DMAF ⁽¹⁾	N/A

⁽¹⁾ Use the 1756-DMAF to connect existing UDC/PMI fiber optic cables to the Drive Module

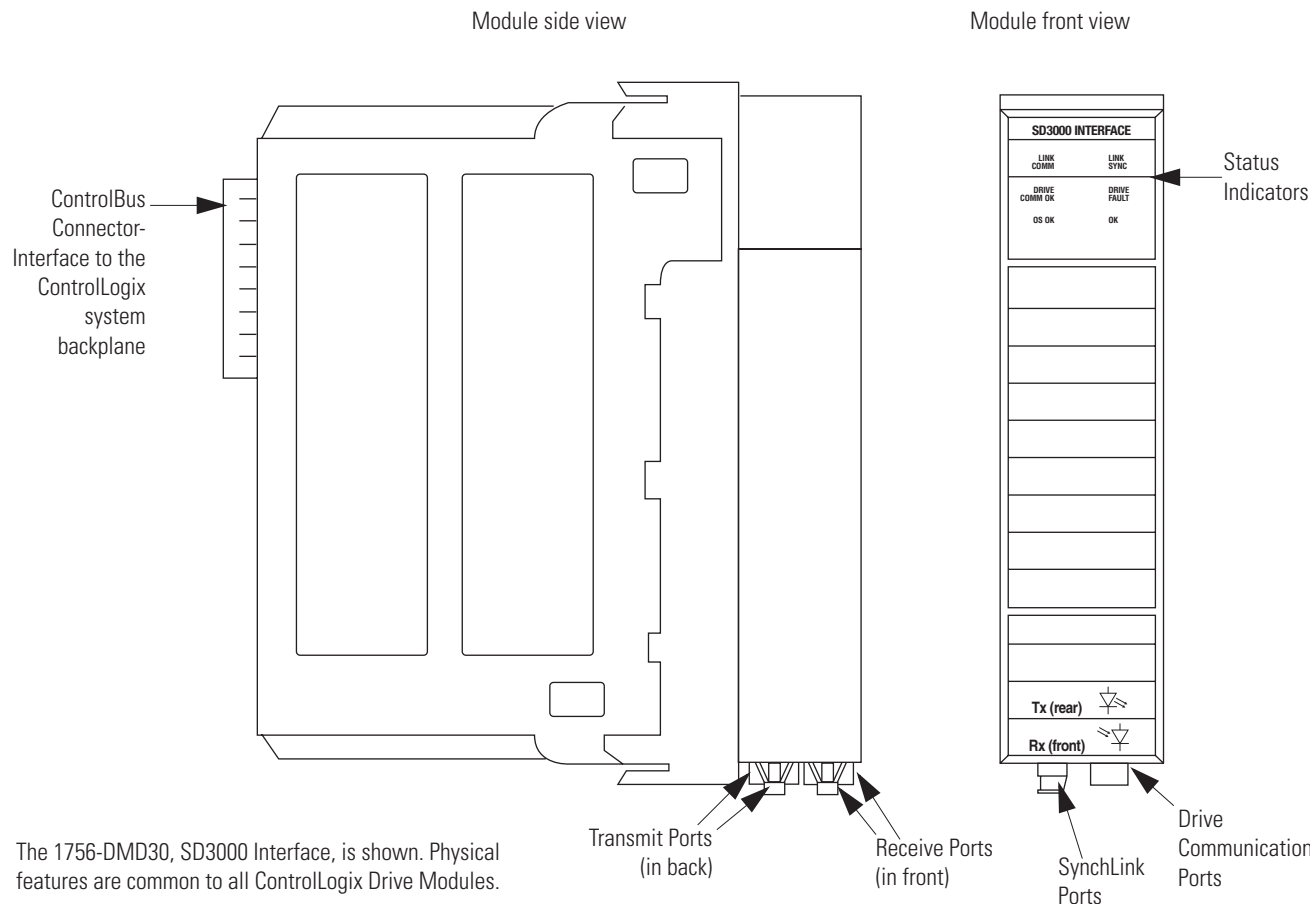
Before you install and use your module you should have already:

- installed and grounded a 1756 chassis and power supply. For more information, refer to the publications listed in Table 1.D.

Table 1.D
Chassis and Power Supply Documentation

Catalog number:	Document title:	Pub. number:
1756-A4, -A7, -A10, -A13	ControlLogix Chassis Installation Instructions	1756-IN080
1756-PA72, -PB72	ControlLogix Power Supply Installation Instructions	1756-5.67
1756-PA75, -PB75	ControlLogix Power Supply Installation Instructions	1756-5.78
1756-PA75R/A, -PB75R/A	ControlLogix Redundant Power Supply Installation Instructions	1756-IN573

Physical Features of the ControlLogix Drive Module



Backplane Connector - The backplane connector connects the module to the ControlLogix chassis backplane.

Status Indicators - The status indicators display the module's communications, Drive Communication and SynchLink system status.

SynchLink Transmit Fiber Port - The transmit fiber port allows connection (via fiber optic cables) to other SynchLink modules so the module can send data.

SynchLink Receive Fiber Port - The receive fiber port allows connection (via fiber optic cables) to other SynchLink modules so the module can receive data.

Drive Communication Transmit Fiber Port - The transmit fiber port allows connection (via fiber optic cables) to the PMI processor of the drive.

Drive Communication Receive Fiber Port - The receive fiber port allows connection (via fiber optic cables) to the PMI processor of the drive.

Using Module Identification and Status Information

Each ControlLogix Drive module maintains specific identification information that separates it from all other modules. This information assists you in tracking all the components of your system.

For example, you can track module identification information to be aware of exactly what modules are located in any ControlLogix rack at any time. While retrieving module identity, you can also retrieve the module's status.

Each module maintains the following information:

Table 1.E
Module Identification and Status Information

Module Identification:	Description:
Product Type	Module's product type, such as Digital I/O or Analog I/O module
Catalog Code	Module's catalog number
Major Revision	Module's major firmware revision number
Minor Revision	Module's minor firmware revision number

Table 1.E
Module Identification and Status Information

Module Identification:	Description:
Status	Module's status. Returns the following information: • Controller ownership (if any) • Whether module has been configured • Device Specific Status, such as: – Self-Test – Flash update in progress – Communications fault – Not owned (outputs in program mode) – Internal fault (need flash update) – Run mode • Minor recoverable fault • Minor unrecoverable fault • Major recoverable fault • Major unrecoverable fault
Vendor ID	Module manufacturer vendor, for example Allen-Bradley
Serial Number	Module serial number
Length of ASCII Text String	Number of characters in module's text string
ASCII Text String	Module name

IMPORTANT	To retrieve this information, you can use the WHO service in the RSLinx software. For more information on how to retrieve module identification information, see the RSLinx online help.
------------------	--

Preventing Electrostatic Discharge

This module is sensitive to electrostatic discharge.

ATTENTION



Preventing Electrostatic Discharge

This equipment is sensitive to electrostatic discharge, which can cause internal damage and affect normal operation. Follow these guidelines when you handle this equipment:

- Touch a grounded object to discharge potential static.
- Wear an approved grounding wrist strap.
- Do not touch connectors or pins on component boards.
- Do not touch circuit components inside the equipment.
- If available, use a static-safe workstation.
- When not in use, store the equipment in appropriate static-safe packaging.

Removal and Insertion Under Power

These modules are designed to be installed or removed while chassis power is applied, while in non-hazardous locations only.

WARNING



When you insert or remove the module while backplane power is on, an electrical arc can occur. This could cause an explosion in hazardous location installations. Be sure that power is removed or the area is nonhazardous before proceeding.

ATTENTION



The removal of a Drive Module while under power may cause personal injury or property damage. Make sure that removal of the module does not adversely impact other parts of the system.

IMPORTANT

Repeated electrical arcing causes excessive wear to contacts on both the module and its mating connector. Worn contacts may create electrical resistance that can affect module operation.

Chapter Summary and What's Next

In this chapter, you learned about the ControlLogix Drive module. Move to Chapter 2, Drive Comm (Drive Communication) for details on the communications interface to DPS equipment.

Drive Comm (Drive Communication)

This chapter describes Drive Comm (Drive Communication), the interface between the ControlLogix Drive module communicates and Distributed Power System (DPS).

For information about:	See page:
Interface to DPS Drive Equipment	2-1
Drive Communication Protocol	2-1
Initialization	2-2
Synchronized Communication	2-2
Chapter Summary and What's Next	2-3

Interface to DPS Drive Equipment

The main function of the Drive module is to interface to Distributed Power System (DPS) drive equipment, enabling a ControlLogix processor to control the drive equipment. A ControlLogix processor performs high level control algorithms and drive coordination. The Drive module performs outer control loop processing⁽¹⁾, and the Power Module Interface (PMI) performs real-time control of the Power Module.

Each drive module interfaces with an individual Power Module Interface (PMI) processor. It resides in a ControlLogix chassis and connects to a PMI processor via fiber-optic and Drive Communication protocol.

Drive Communication Protocol

Drive Communication is a point to point serial link between the Drive module and the Power Module Interface (PMI), on fiber-optic cable. It is similar to the protocol used between the Universal Drive Controller (UDC) and the PMI processor in an AutoMax DPS environment. The data is Manchester-encoded and transmitted over the fiber-optic links at a rate of 10M bits per second. Transfers on fiber-optic cables are immune to electromagnetic interference (EMI).

During initialization, the Drive Module and PMI processor use an asynchronous master-slave protocol to transfer the PMI operating system to the PMI processor and to establish synchronized communication. After initialization, they use synchronized “Set

⁽¹⁾ The 1756-DMF30 does not perform outer control loop processing - it only functions as a bridge between the ControlLogix controller and the PMI processor.

Point/Feedback Data Exchange” to transfer data. The Drive Module sends set point data to the PMI processor, which returns feedback data to the Drive Module.

Initialization

At boot time, the Drive Module and PMI processor use an asynchronous master-slave protocol to transfer the PMI operating system and establish synchronized communication. The PMI processor is the master, and commences by requesting its operating system. The Drive Module responds by downloading the operating system in a special message, containing up to 256 byte packets.

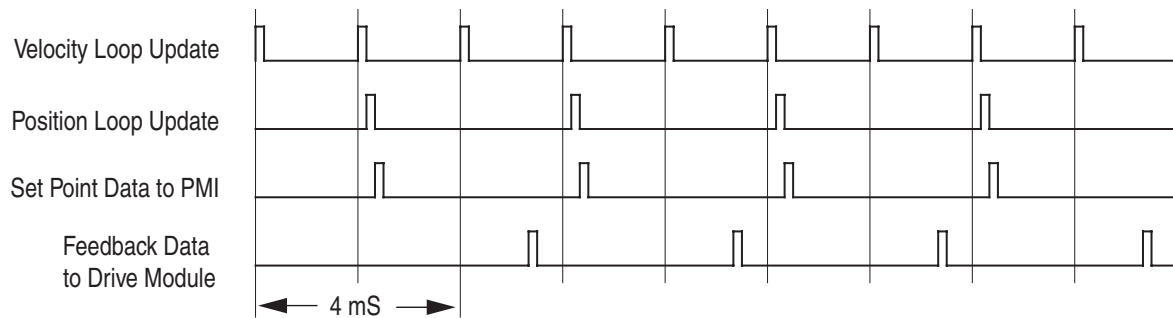
When the operating system transfer is complete, the Drive Module sends a configuration message and a gain message. The configuration message contains information that fixes the communication frequency at 4 mS. Once the Drive Module and PMI processor have synchronized communications, normal Set Point/Feedback data transfer can begin.

Synchronized Communication

The synchronized protocol is called “Set Point/Feedback Data Exchange”. The drive module sends set point data to the PMI processor. The set point data contains reference data, for drive control, and a time stamp. This time stamp enables the PMI processor to calculate what the proper time is for the next feedback message. The PMI processor sends feedback messages to the Drive Module. The feedback messages contains data about drive operation.

Timing

The velocity loop updates (reads from, and writes to Drive Communication) every 2 mS. After every other velocity loop update (at a 4 mS interval), the position loop performs its update. After every position update, the Drive Module sends set point data to the PMI processor. After the next velocity update (but before the following one), the PMI processor sends feedback data to the Drive Module. Refer to the following timing chart.

Figure 2.1 Drive Communication Timing

Synchronization with CST

Synchronization to Coordinated System Time (CST) is not necessary to synchronize Drive Communication between the Drive Module and the PMI processor. However, if the Drive Module is synchronized to the CST, Drive Communication will also synchronize to the CST.

Chapter Summary and What's Next

In this chapter, you learned about Drive Communication. For more information on Drive Module features see Chapter 3, Drive Module Features.

Notes:

Drive Module Features

This chapter describes the ControlLogix Drive module features.

For information about:	See page:
General Module Features	3-1
Configurable Module Features	3-4
Chapter Summary and What's Next	3-10

General module features are features (e.g. Removal and Insertion Under Power) that are supported on the module regardless of configuration and application.

Configurable module features are features (e.g. Communications Format) that can be configured to work differently in various applications.

General Module Features

The following general module features are available with the ControlLogix Drive module:

- Removal and Insertion Under Power (RIUP)
- Module Fault Reporting
- Fully Software Configurable
- LED Status Information
- Class I Division 2 Certification
- Agency Certification

Removal and Insertion Under Power (RIUP)

All ControlLogix Drive modules may be removed and inserted from the chassis while power is applied. This feature allows greater availability of the overall control system because, while the module is being removed or inserted, there is no additional disruption to the rest of the controlled process.

WARNING

When you insert or remove the module while backplane power is on, an electrical arc can occur. This could cause an explosion in hazardous location installations. Be sure that power is removed or the area is nonhazardous before proceeding.

ATTENTION

The removal of a Drive Module while under power may cause personal injury or property damage. Make sure that removal of the module does not adversely impact other parts of the system.

IMPORTANT

Repeated electrical arcing causes excessive wear to contacts on both the module and its mating connector. Worn contacts may create electrical resistance that can affect module operation.

Module Fault Reporting

ControlLogix Drive modules provide both hardware and software indication when a module fault has occurred. Each module's LED fault indicator as well as DriveExecutive and RSLogix 5000 will graphically display this fault and include a fault message describing the nature of the fault.

This feature allows you to determine how your module has been affected and what action should be taken to resume normal operation.

Fully Software Configurable

RSLogix 5000 and DriveExecutive software packages use custom, easily understood interfaces to determine the module configuration. All module features are enabled or disabled through the configuration portions of the software.

You can also use the software to interrogate any module in the system to retrieve

- serial number
- revision information
- catalog number
- vendor identification
- error/fault information

By eliminating such tasks as setting hardware switches and jumpers, the software makes module configuration easier.

LED Status Information

The ControlLogix Drive module has LED indicators on the front of the module that allow you to check the module health and operational status.

The following status can be checked with the LED indicators:

- SynchLink and ControlLogix backplane status
- Drive Comm status
- Drive status
- Module health status

For examples of LED indicators, see page 6-1.

Class I Division 2 Certification

The ControlLogix Drive module is certified for use in nonhazardous locations as well as Class I, Division 2 hazardous Locations containing gas groups A, B, C, and D. This equipment may be used as a component of a control system which is certified to operate in hazardous locations.

WARNING

When you insert or remove the module while backplane power is on, an electrical arc can occur. This could cause an explosion in hazardous location installations. Be sure that power is removed or the area is nonhazardous before proceeding.

ATTENTION

The removal of a Drive Module while under power may cause personal injury or property damage. Make sure that removal of the module does not adversely impact other parts of the system.

Agency Certification

When the Drive module is marked appropriately, the following agency certifications apply:

- UL Listed Industrial Control Equipment
- CSA Certified Process Control Equipment
- CSA Certified for Class I, Division 2 Hazardous Locations

Configurable Module Features

The following Drive module features are configurable via RSLogix 5000 and DriveExecutive:

- Controller Communication Format
- SynchLink Controller Communication Format
- Electronic Keying
- Requested Packet Interval
- Transmitted Direct Words
- SynchLink Mastership

Each of these features is described in this section, including information on which RSLogix 5000 and DriveExecutive configuration screens should be used to configure the feature. For an overview of the entire configuration process, see Chapter 5, Configuring the Drive Module.

Controller Communication Format

The controller communications format defines the connection between the owner-controller and the module (i.e. determines what type of data is transferred between them). The 1756-DMD30 module supports Velocity Control, Position Control, User-Defined and Custom User-Defined communication formats. The 1756-DMF30 supports the User-Defined communication format.

SynchLink Communications Format

The SynchLink communications format defines the connection at the SynchLink Receive Port and the SynchLink Transmit Port. It determines the type and number of data type in each connection.

SynchLink messages are structured as six 32-bit words; the words are divided into three types:

- Direct - Data delivered in a single message. A SynchLink message can contain a maximum of four direct data words; each word is 32 bits in length. Direct data can be automatically forwarded to the next node in the daisy chain and ring configurations.
- Buffered - Data that exceeds the four word limit of a direct data transfer. A maximum of 18 buffered are transferred every 500 μ S. Buffered data is appropriately segmented at the transmitting module and reassembled at the receiving module. Buffered data cannot be automatically forwarded to the next node in the daisy chain and ring configurations.
- Axis - the Drive module does not support this data type.

Multiple Port Communications Formats in Single Module

You must set a communications format for receiving data (Receive Port Communications Format) and transmitting data (Transmit Port Communications Format) in each SynchLink node.

The following requirements apply to communication format choices:

- If a Drive module does not receive data (e.g. the first node in a daisy chain topology), you must choose the *No Receive Data* Receive Port communication format.
- If a Drive module does not transmit data (e.g. an end node), you must choose the *No Transmit Data* Transmit Port communications format.
- The receive communication format for any Drive module that receives data must match the transmit communications format of the upstream node in the system.

IMPORTANT

The receive and transmit on the same module do not have to match.

Also, once the module is created, the communications format cannot be changed. The module must be deleted and recreated.

Internal Scan on Drive Module

Every 500 μ S, the Drive module scans its internal hardware and captures a “snapshot” of the data there. This data is then sent to the local owner-controller at the Change of State (COS) instance, independent of the requested packet interval (RPI) rate. But, depending on the communications formats chosen during module configuration, data types are transmitted between SynchLink nodes (via the fiber optic cable) at various rates and may be transmitted multiple times between the 500 μ S snapshots.

IMPORTANT

The transfer rate times listed in Table 3.A and Table 3.B only represent the rate at which data is passed between SynchLink modules over the fiber optic cable.

Although the data is passed over the fiber optic cable at various rates, depending on the communications format choices, the **owner-controllers** in each local chassis only **receive the data** after the local SynchLink module's internal scan **every 500 μ S**.

The Drive module updates its receive and transmit buffers once every 500 μ S. Because direct data can be passed through from node to node once every 50 μ S, up to 10 nodes can be updated with direct data in a single 500 μ S SynchLink scan. Pass-through functionality only applies

to direct data in a daisy chain configuration, In order to pass-through buffered data, the local controller must intervene to move data along.

Table 3.A
Drive Module Receive Communications Formats

Receive Port Communications Format	Transfer Rate (across the fiber optic cable) for Each Data Type:
2 Direct Words, 18 Buffered	Direct Data - Updated every 50μS Buffered Data - Updated every 250μS
4 Direct Words, 18 Buffered	Direct Data - Updated every 50μS Buffered Data - Updated every 500μS
4 Direct Words, 8 Buffered	Direct Data - Updated every 50μS Buffered Data - Updated every 250μS
No Receive Data	No data updated in this format

Table 3.B
Drive Module Transmit Communications Formats

Transmit Port Communications Format	Transfer Rate (across the fiber optic cable) for Each Data Type:
2 Direct Words, 18 Buffered	Direct Data - Updated every 50μS Buffered Data - Updated every 250μS
4 Direct Words, 18 Buffered	Direct Data - Updated every 50μS Buffered Data - Updated every 500μS
4 Direct Words, 8 Buffered	Direct Data - Updated every 50μS Buffered Data - Updated every 250μS
Listen Only, No Transmit Data	No data updated in this format
No Transmit Data	No data updated in this format

Module-Defined Data Tags

When you create a module, module-defined data types and tags are created in the RSLogix 5000 programming software. These tags allow you to access the Input and Output Data of the module via the controller's ladder logic, if necessary

The types of tags created vary, depending on which communications format you choose when creating a module. There are two types of tags:

- Input Data Tags
- Output Data Tags

Electronic Keying

Instead of plastic mechanical backplane keys, electronic keying allows the ControlLogix system to control what modules belong in the various slots of a configured system.

During module configuration, you must choose one of the following keying options for your SynchLink module:

- Exact Match
- Compatible Match
- Disable Keying

When the controller attempts to connect to and configure a Drive module (e.g. after program download), the module compares the following parameters before allowing the connection and configuration to be accepted:

- Vendor
- Product Type
- Catalog Number
- Major Revision
- Minor Revision

The comparison is made between the keying information present in the Drive module and the keying information in the controller's program. This feature can guard against the inadvertent operation of a control system with the wrong module in the wrong slot.

Exact Match

All of the parameters listed above must match or the inserted module will reject a connection to the controller.

Compatible Match

The Compatible Match mode allows a Drive module to determine whether it can emulate the module defined in the configuration sent from the controller.

With ControlLogix Drive modules, the module can emulate older revisions. The module will accept the configuration if the controller's major.minor revision is less than or equal to the physical module's revision.

For example, if the configuration contains a major.minor revision of 2.7, the module inserted into the slot must have minor revision of 2.7 or higher for a connection to be made.

TIP

We recommend using Compatible Match whenever possible. Remember, though, the module will only work to the level of the configuration.

For example, if a slot is configured for a module with major.minor revision of 2.7 and you insert a module with a major.minor revision of 3.1, the module works at the 2.7 level despite having been previously upgraded.

If possible, we suggest you make sure configuration is updated to match the revision levels of all Drive modules. Failure to do so may not prevent the application from working but may defeat the purpose of upgrading your modules' revision levels.

Disable Keying

The inserted module attempts to accept a connection to the controller regardless of its type.

ATTENTION

Be extremely cautious when using the disable keying option; if used incorrectly, this option can lead to personal injury or death, property damage or economic loss.

If keying is disabled, a controller makes a connection with most modules of the same type as that used in the slot configuration.

A controller will not establish a connection if any of the following conditions exist, even if keying is disabled:

- The slot is configured for one module type (e.g. digital input module) and a module of another type (e.g. Drive module) is inserted in the slot.
- The module inserted into the slot cannot accept some portion of the configuration. This case should not arise if the slot is configured for a Drive module and one is inserted.

Requested Packet Interval

The Requested Packet Interval (RPI) is a configurable parameter that defines when the module multicasts its data onto the local chassis backplane.

In addition to the RPI, Change of State (COS) functionality also causes the module to produce its data to the consuming controller whenever the values of the data changes. The RPI timer is asynchronous to the COS functionality. Both cause the module to produce data when triggered.

Buffered, Direct and Diagnostic Data - RPI Effect on Output Data (from the controller)

As a producing controller writes data to the Drive module, the output data is placed in a local buffer until the next RPI reset occurs. When the RPI timer expires, the output data is moved from the controller's local buffer to the Drive module.

The RPI timer is asynchronous to the program execution. Therefore, a worst case update to the Drive module can be calculated by adding the program execution time to the RPI timer setting, as configured by the user.

Chapter Summary and What's Next

In this chapter, you learned about the ControlLogix Drive module features. Move to Chapter 4, Installing the Drive Module, to learn how to install the module.

Installing the Drive Module

This chapter describes how to install the ControlLogix Drive module.

For information about:	See page:
Noting the Power Requirements	4-1
Installing the Module	4-2
Connecting SynchLink Cables	4-3
Connecting (Drive Comm Drive Communication) Cables	4-5
Removing the Module	4-6
Chapter Summary and What's Next	4-7

Noting the Power Requirements

This module receives power from the 1756 chassis power supply and requires 2 sources of power from the backplane:

- 1.35A at 5.1V dc
- 3.0mA at 24V dc

Account for this power consumption (6.96W) in addition to the requirements of all other modules in the chassis to prevent overloading the power supply.

Installing the Module

You can install or remove the module while chassis power is applied.

WARNING

When you insert or remove the module while backplane power is on, an electrical arc can occur. This could cause an explosion in hazardous location installations. Be sure that power is removed or the area is nonhazardous before proceeding.

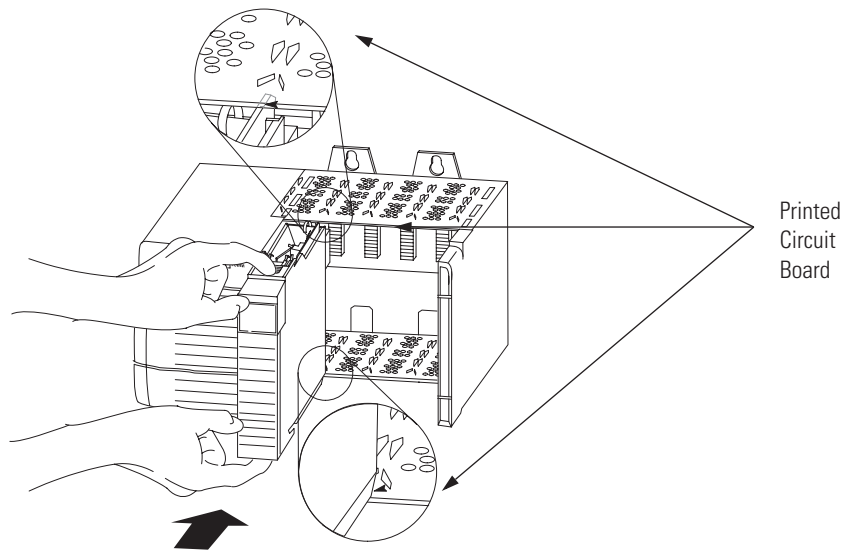
ATTENTION

The removal of a Drive Module while under power may cause personal injury or property damage. Make sure that removal of the module does not adversely impact other parts of the system.

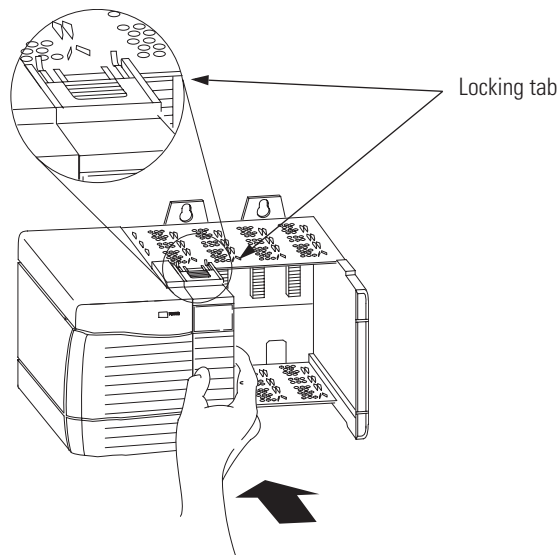
IMPORTANT

Repeated electrical arcing causes excessive wear to contacts on both the module and its mating connector. Worn contacts may create electrical resistance that can affect module operation.

1. Align the circuit board with the top and bottom chassis guides.



2. Slide the module into the chassis until the module locking tabs 'click'.



Connecting SynchLink Cables

The two fiber optic ports on the bottom-left of the module are for SynchLink. The front-left port receives SynchLink data, and the rear-left port transmits SynchLink data.

ATTENTION



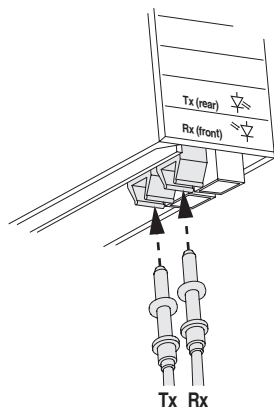
The Drive module is a Class I LED product. Light levels may cause damage to eyesight. Do not look directly into the fiber ports or fiber cables.

TIP



Keep the plugs that were removed to connect the fiber optic cables. When the cables are disconnected, you can reinsert the plugs into the ports to protect them.

Figure 4.1 SynchLink Connections



Refer to See Table 1.B on page 1-3 for information on available pre-configured fiber optic SynchLink cables.

Table 4.A lists the possible connections that might be made to your 1756-DM module and where to connect the fiber optic cable.

Table 4.A
Making Fiber Optic Cable Connections to the 1756-DM Module

If your 1756-DM module is configured to:	Make this fiber optic cable connection:
transmit data only	Connect the fiber optic cable to the rear port. The other end of the cable should be connected to a device receiving data over the SynchLink from your 1756-DM module.
receive data only	Connect the fiber optic cable to the front port. The other end of the cable should be connected to a device transmitting data to your 1756-DM module over the SynchLink.
transmit and receive data	1. Connect the fiber optic cable going to (i.e. transmitting the data to) a module receiving the data to the front port. 2. Connect the fiber optic cable coming from (i.e. receiving the data from) a module transmitting data to the rear port.

Connecting (Drive Comm Drive Communication) Cables

The two fiber optic ports on the bottom-right of the module are for Drive Comm. The front-right port receives data from the PMI processor on the drive. The rear-right port transmits data to the PMI processor.

- Connect the 1756-DM transmit port (Tx) to the PMI receive port (RCV).
- Connect the 1756-DM receive port (Rx) to the PMI transmit port (XMT).

ATTENTION



The Drive module is a Class I LED product. Light levels may cause damage to eyesight. Do not look directly into the fiber ports or fiber cables.

TIP



Keep the plugs that were removed to connect the fiber optic cables. When the cables are disconnected, you can reinsert the plugs into the ports to protect them.

Figure 4.2 Drive Comm - Drive Module End Connections

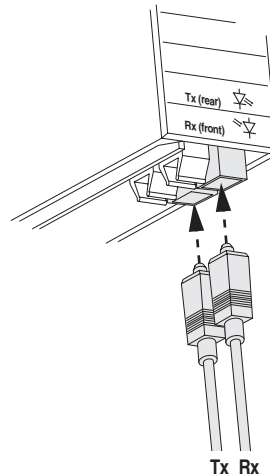
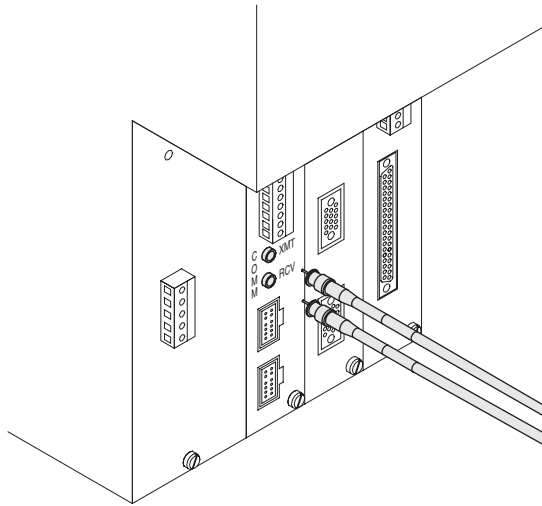


Figure 4.3 Drive Comm - PMI Processor Connections



Refer to See Table 1.C on page 1-3 for information on available pre-configured fiber optic Drive Comm cables.

Removing the Module

ATTENTION



Before you remove the module, you must disconnect the fiber optic cables.

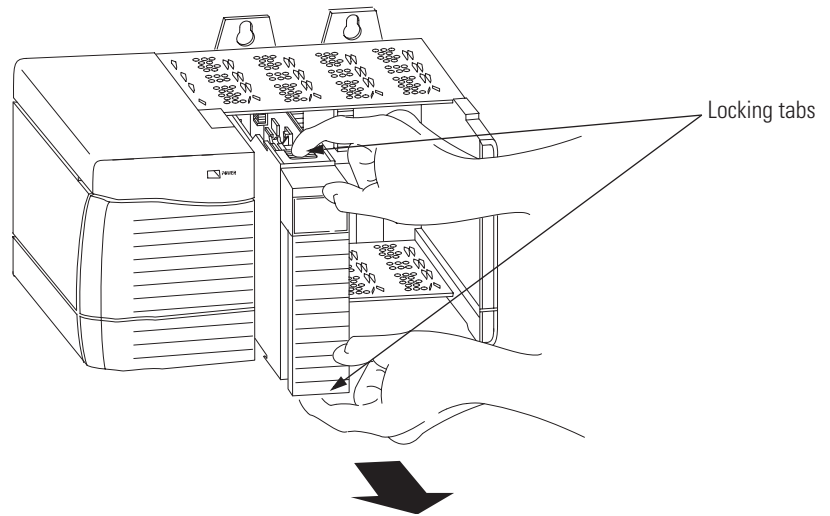
1. Push in the top and bottom locking tabs.

TIP



If you kept the plugs that were removed to connect the fiber optic cables, reinsert them to protect the ports.

2. Pull the module out of the chassis as shown.

Figure 4.4

Chapter Summary and What's Next

In this chapter, you learned how to install the ControlLogix Drive module. Move to Chapter 5, Configuring the Drive Module, to learn how to configure the module.

Notes:

Configuring the Drive Module

This chapter describes how to configure the ControlLogix Drive Module using RSLogix 5000 and DriveExecutive in the DriveTools 2000 programming suite.

For information about:	See page:
Overview of the Configuration Process	5-1
Planning the System	5-2
Checking and Updating the DriveExecutive Database	5-6
Using RSLogix 5000 to Configure the Drive Module	5-9
Using DriveExecutive to Configure Drive Module	5-16
Return to RSLogix 5000 to Finish Configuring the Drive Module	5-23
Chapter Summary and What's Next	5-24

Overview of the Configuration Process

To configure your ControlLogix Drive Module, you must perform the following steps:

1. Plan the system.
 - Choose Controller Communication format
 - Choose SynchLink communications format (if you are using SynchLink)
 - Choose SynchLink topology (if you are using SynchLink)
2. Make sure DriveExecutive has database for the firmware revision and configuration of the module.
3. Configure each Drive Module with RSLogix 5000.
4. Configure each Drive Module with DriveExecutive, and download parameters and links to Drive module.
5. Return to RSLogix 5000, and download program to ControlLogix processor.

Planning the System

Before programming, you must choose a Controller - Drive Module interface (Controller Communication Format) for each Drive Module in the system.

If you are going to use SynchLink, you must choose the SynchLink data format, and a SynchLink network topology. This chapter covers these topics.

Understanding the Controller - Drive Module Interface

You must configure communications between the ControlLogix controller and the Drive Module by selecting a “Controller Communication Format”. A controller communication format is a set of links that connects controller output tags to Drive Module sinking parameters, and connects controller input tags to Drive Module sourcing parameters. There are four controller communication formats to choose from, depending on which module you are configuring:

- Velocity Control
- Position Control
- User-Defined Control
- Custom User-Defined Control

Each controller communication format contains both required connections and user definable connections. You must use both RSLogix 5000 and DriveExecutive to configure these connections. The programming software will not allow you to choose Velocity Control or Position control for the 1756-DMF30.

IMPORTANT

Once the module is created, the communications format cannot be changed. The module must be deleted and recreated.

Choosing the SynchLink Communication Formats

You must set a communications format for receiving data (Receive Port Communications Formats) and transmitting data (Transmit Port Communications Formats) in each module.

The following requirements apply to communication format choices:

- If a Drive module does not receive data (e.g. the first module in a non-loop topology), you must choose the *No Receive Data* Receive Port communication format.
- If a Drive module does not transmit data (e.g. an end node in the daisy chain configuration or star), you must choose the *No Transmit Data* Transmit Port communications format.
- The receive communication format for any SynchLink node that receives data must match the transmit communications format of the previous node in the system.

Receive Port Communications Formats

The following communications formats are available for the receive port of your Drive module:

- 2 Direct Words, 18 Buffered - Data updated every 500 μ S
- 4 Direct Words, 18 Buffered - Data updated every 500 μ S
- 4 Direct Words, 8 Buffered - Data updated every 500 μ S
- No Receive Data - Data updated every 500 μ S

Transmit Port Communications Formats

The following communications formats are available for the transmit port of your Drive module:

- 2 Direct Words, 18 Buffered - Data updated every 500 μ S
- 4 Direct Words, 18 Buffered - Data updated every 500 μ S
- 4 Direct Words, 8 Buffered - Data updated every 500 μ S
- No Transmit Data - Data updated every 500 μ S

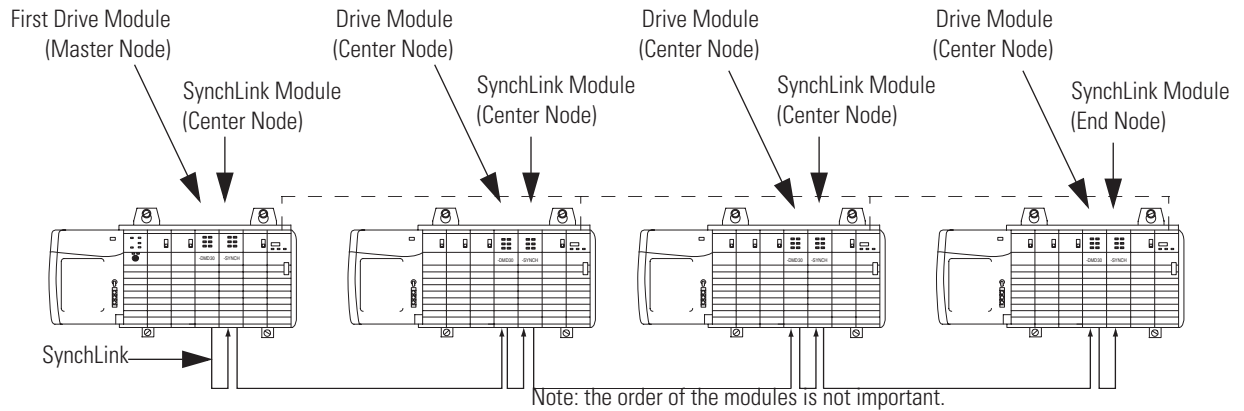
IMPORTANT

The update times referenced above are for data updates across the SynchLink fiber optic cable only and do not represent full processing time. Refer to 3-5 for more information regarding data updates and processing times.

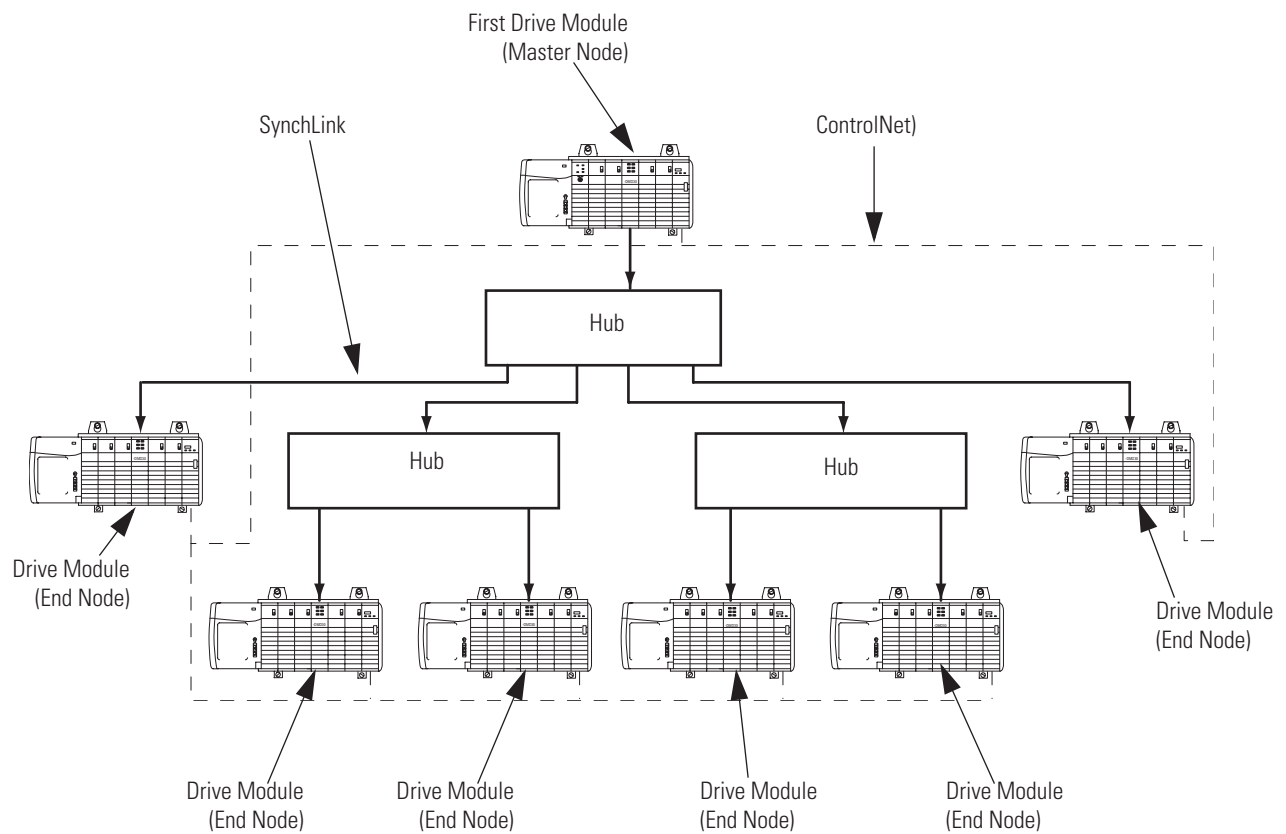
Choosing the SynchLink Network Topology

You can use one of the following SynchLink topologies:

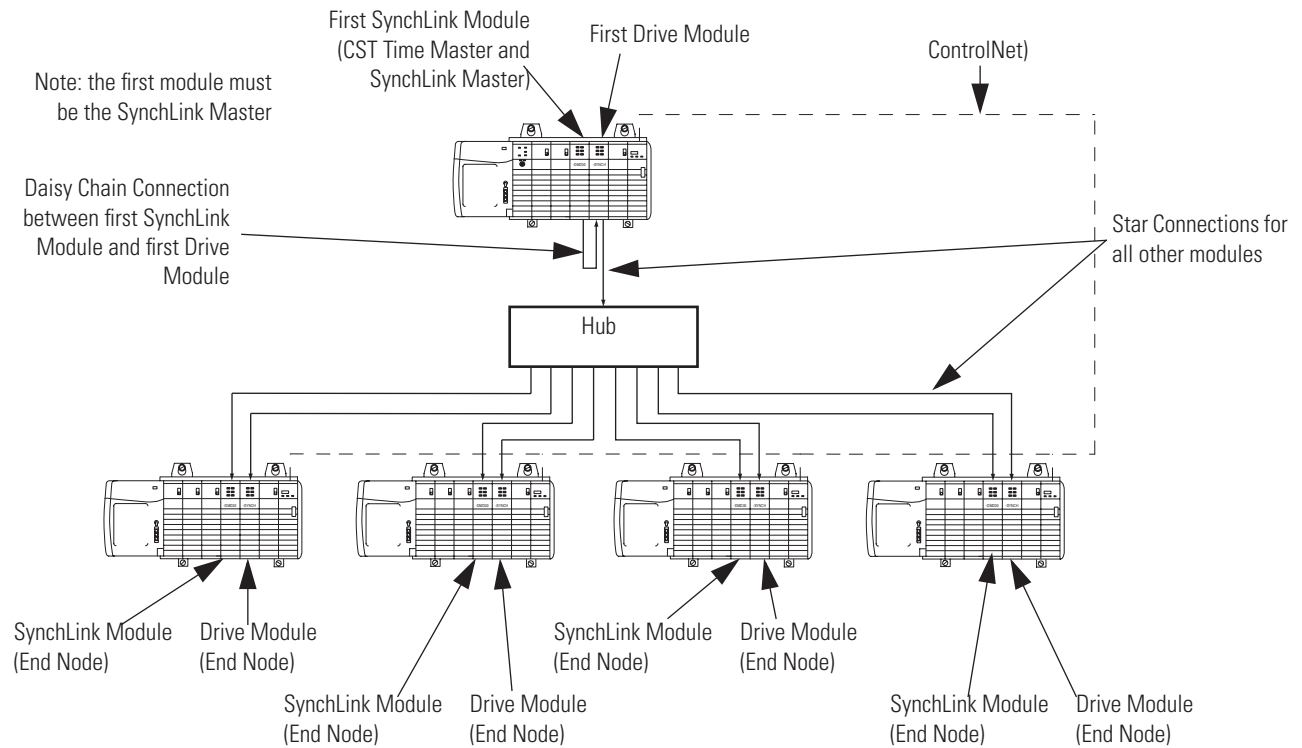
- Daisy Chain



- Star (asynchronous)

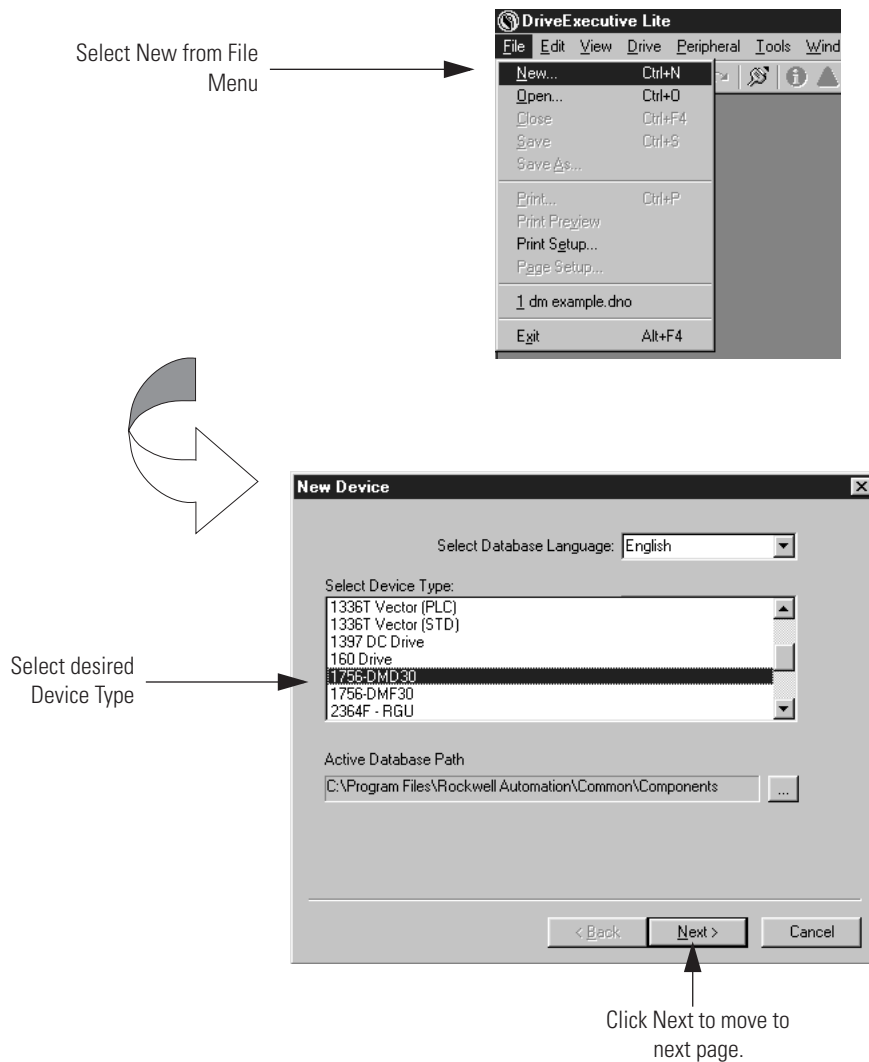


- Hybrid (synchronous)

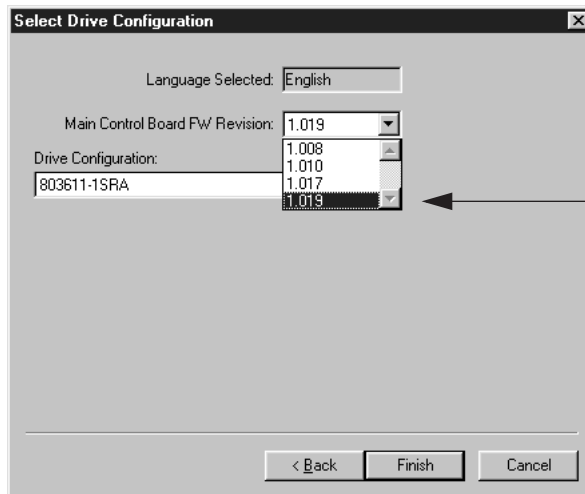


Checking and Updating the DriveExecutive Database

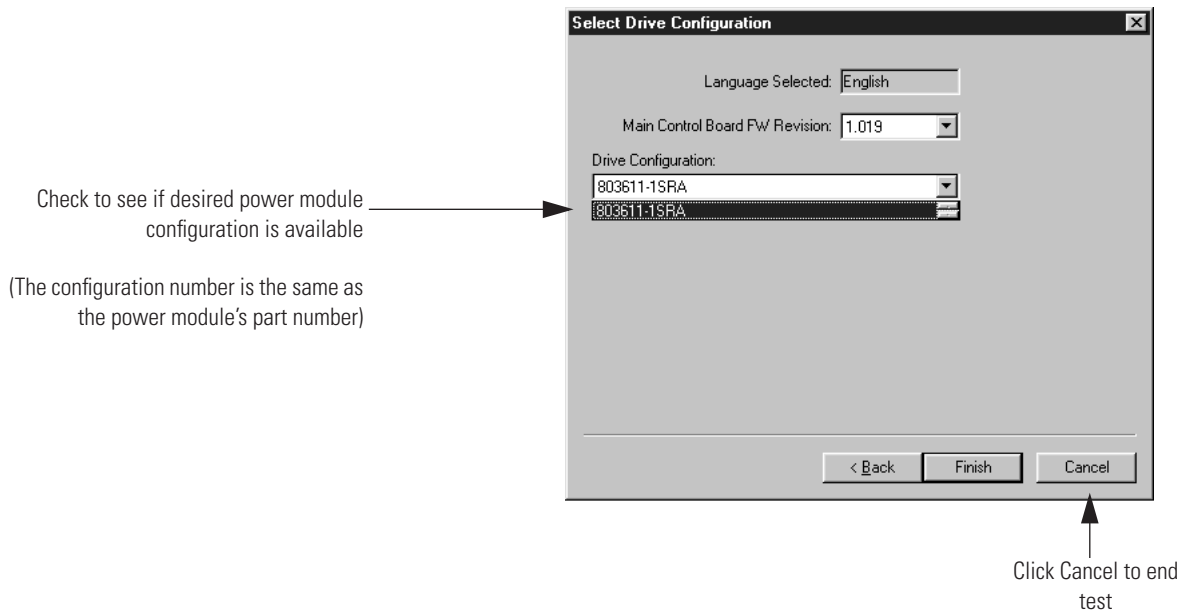
DriveExecutive must have a database for the Drive module firmware revision and power module configuration, in order to configure the module's parameters and links. In addition, the database is required for RSLogix and DriveExecutive to synchronize. Check the availability of the database by attempting to create a new module with the desired firmware revision level and power module configuration.



Checking the DriveExecutive Database (continued)



Check to see if desired
Firmware Revision is
available



Check to see if desired power module
configuration is available

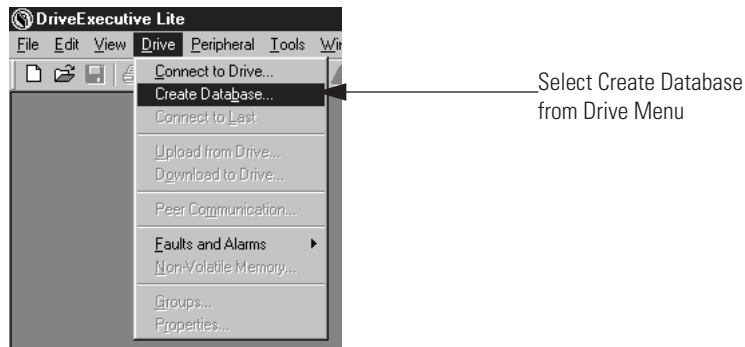
(The configuration number is the same as
the power module's part number)

Updating the DriveExecutive Database

There are two ways to obtain the desired database if your computer does not contain it.

- Connecting to the module and creating the database in DriveExecutive
- Downloading the database from the DriveTools 2000 software website (http://www.ab.com/drives/drivetools_2000)

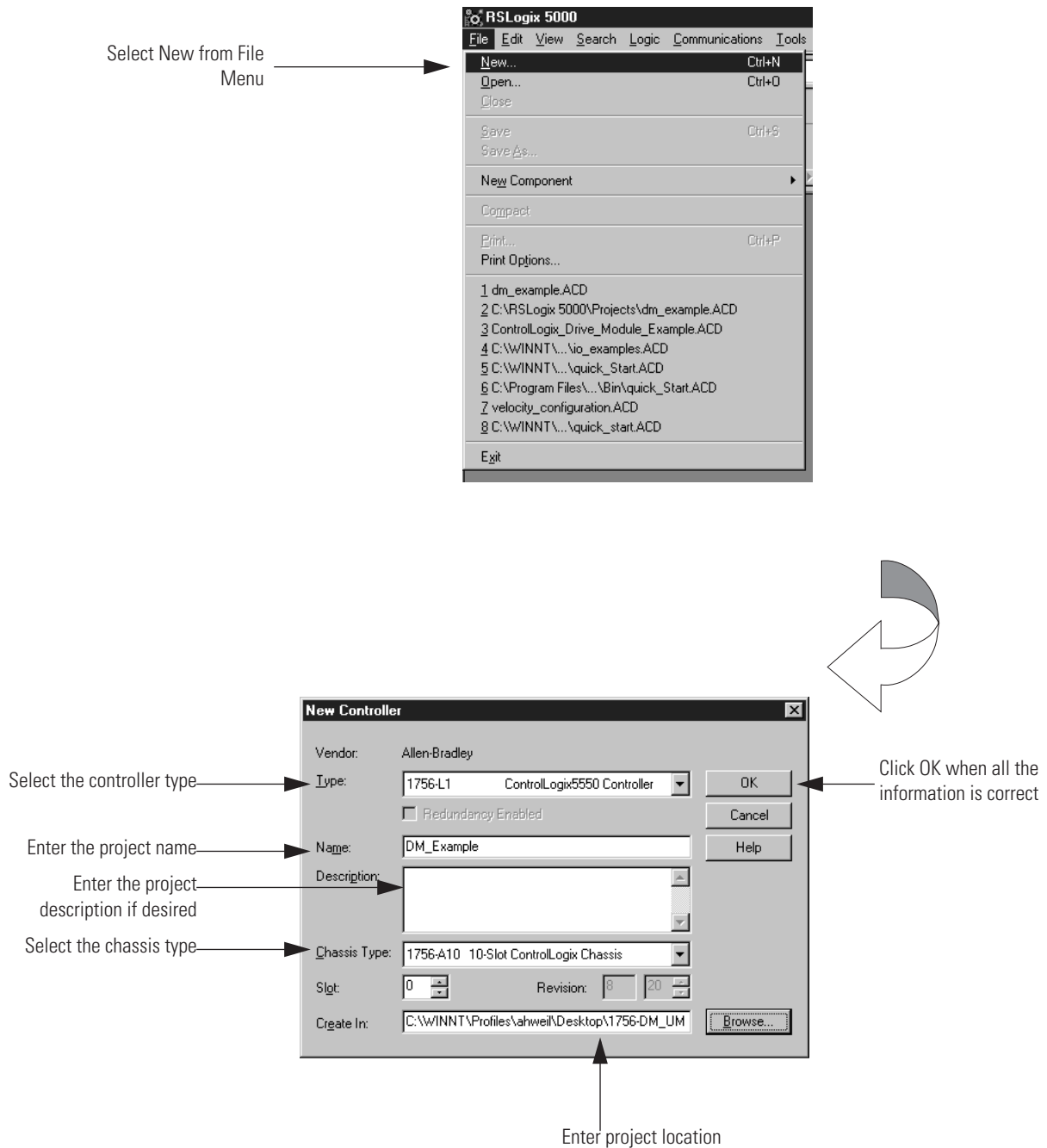
If you have access to a Drive module with the desired firmware revision, DriveExecutive can read the database from the module.



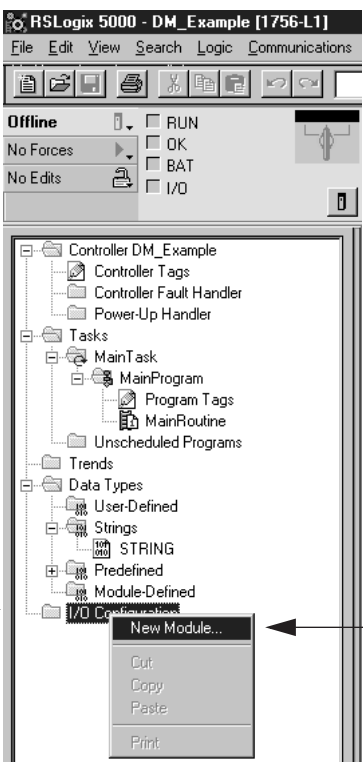
From here, DriveExecutive and RSLinx will guide you to connect the Drive module and create the database.

Using RSLogix 5000 to Configure the Drive Module

Create a new RSLogix 5000 Project

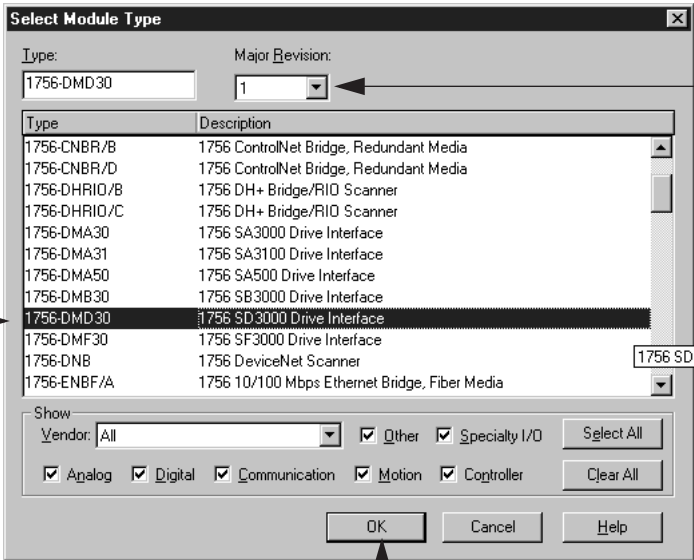


Add a Drive Module to the Project



Place the cursor over the I/O Configuration folder

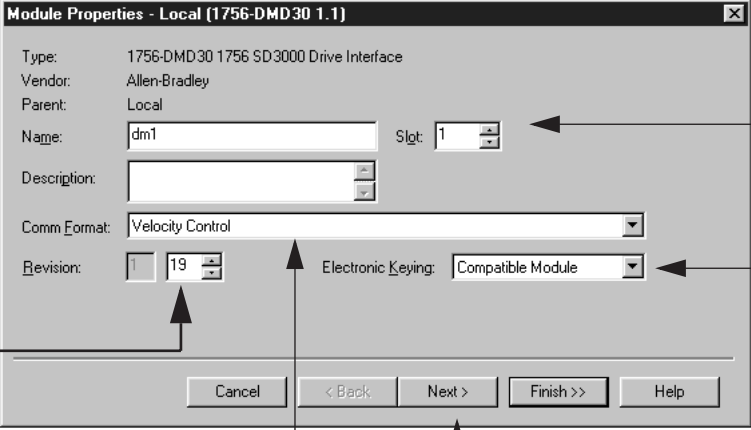
Click the right mouse button and select New Module



Select the correct catalog number for the Drive Module

Select the correct major revision level.

Click OK to open Module Properties window

Add a Drive Module to the Project (continued)

Annotations for the **Module Properties - Local (1756-DMD30 1.1)** dialog box:

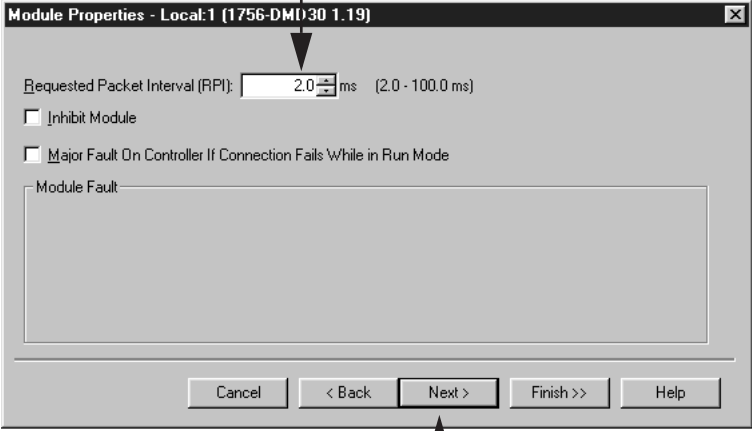
- Enter the module name → **Name:** dm1
- Enter a description → **Description:**
- Enter the correct minor revision level → **Revision:** 19
- Verify Slot Number → **Slot:** 1
- Select the Comm Format → **Comm Format:** Velocity Control
- Select Electronic Keying mode → **Electronic Keying:** Compatible Module
- Click Next to advance the wizard → **Next >**

Buttons: Cancel, < Back, Next >, Finish >>, Help

ATTENTION

Be extremely cautious when using the disable keying option; if used incorrectly, this option can lead to personal injury or death, property damage or economic loss.

Enter the desired RPI

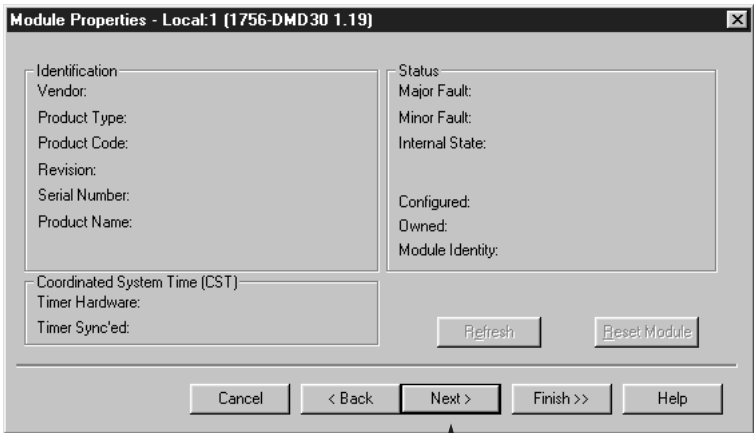


Annotations for the **Module Properties - Local:1 (1756-DMD30 1.19)** dialog box:

- Enter the desired RPI → **Requested Packet Interval (RPI):** 2.0 ms (2.0 - 100.0 ms)
- Click Next to advance the wizard → **Next >**

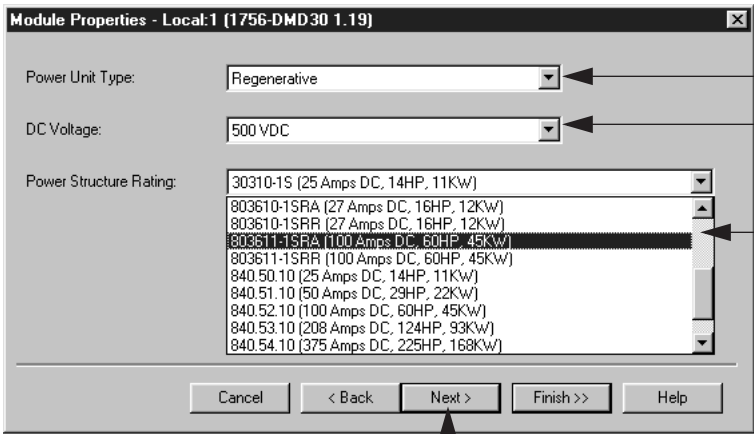
Buttons: Cancel, < Back, Next >, Finish >>, Help

Add a Drive Module to the Project (continued)



The dialog box is titled "Module Properties - Local:1 (1756-DMD30 1.19)". It contains two main sections: "Identification" and "Status". The "Identification" section includes fields for Vendor, Product Type, Product Code, Revision, Serial Number, and Product Name. The "Status" section includes fields for Major Fault, Minor Fault, Internal State, Configured, Owned, and Module Identity. Below these sections is a "Coordinated System Time (CST)" section with fields for Timer Hardware and Timer Sync'd. At the bottom right are "Refresh" and "Reset Module" buttons. At the bottom are "Cancel", "< Back", "Next >", "Finish >>", and "Help" buttons.

Click Next to
advance the wizard



The dialog box is titled "Module Properties - Local:1 (1756-DMD30 1.19)". It contains three main sections: "Power Unit Type", "DC Voltage", and "Power Structure Rating". The "Power Unit Type" section has a dropdown menu set to "Regenerative". The "DC Voltage" section has a dropdown menu set to "500 VDC". The "Power Structure Rating" section has a list box with the following items: 30310-1S (25 Amps DC, 14HP, 11KW), 803610-1SRA (27 Amps DC, 16HP, 12KW), 803610-1SRR (27 Amps DC, 16HP, 12KW), 803611-1SRA (100 Amps DC, 60HP, 45KW), 803611-1SRR (100 Amps DC, 60HP, 45KW), 840.50.10 (25 Amps DC, 14HP, 11KW), 840.51.10 (50 Amps DC, 29HP, 22KW), 840.52.10 (100 Amps DC, 60HP, 45KW), 840.53.10 (208 Amps DC, 124HP, 93KW), and 840.54.10 (375 Amps DC, 225HP, 168KW). The "803611-1SRA (100 Amps DC, 60HP, 45KW)" item is selected. At the bottom are "Cancel", "< Back", "Next >", "Finish >>", and "Help" buttons.

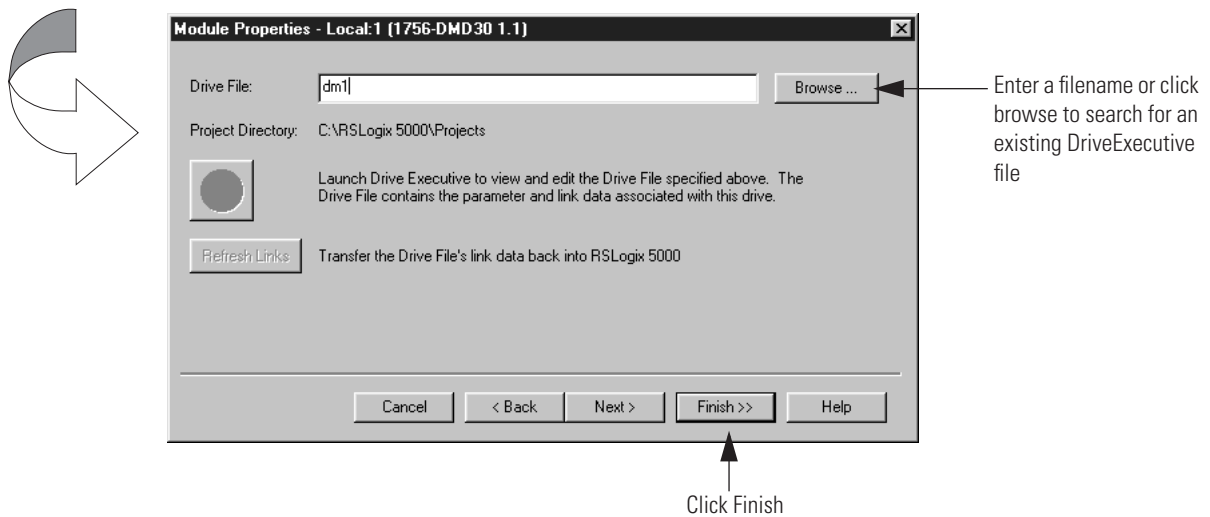
Select the Power Unit Type

Select the Voltage

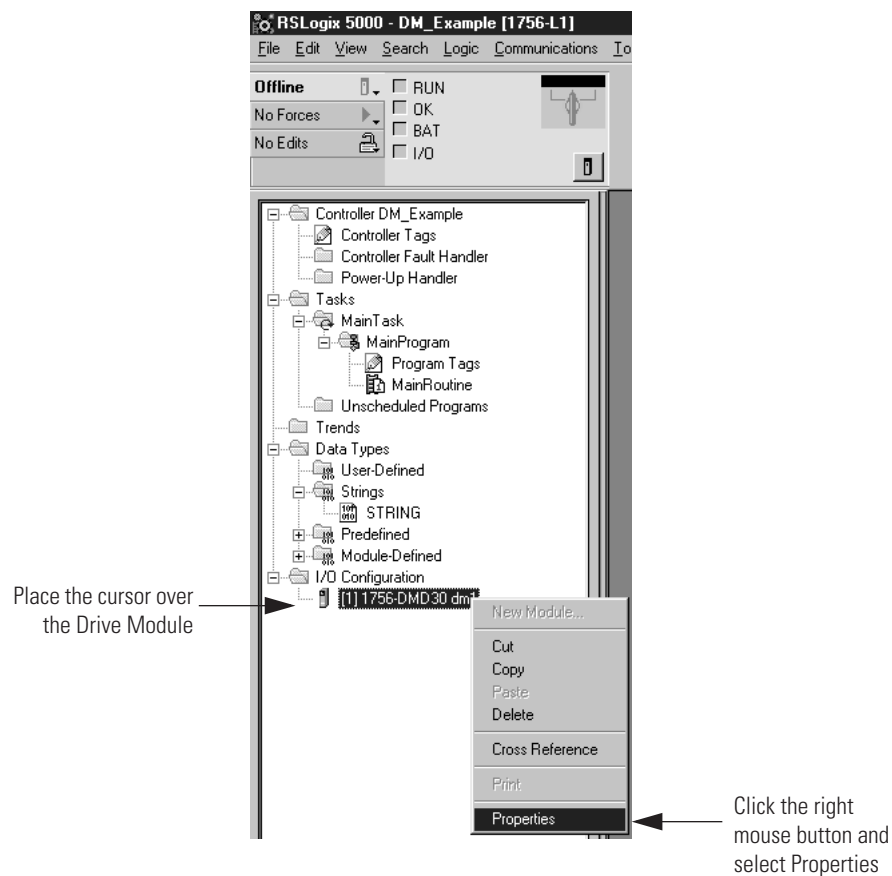
Select the Power
Structure Rating
(configuration)

Click Next to
advance the wizard

Add a Drive Module to the Project (continued)

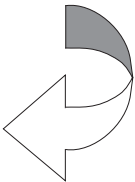


Monitor and Configure the Module



Monitor and Configure the Module (continued)

The screenshot shows the 'General' tab of the 'Module Properties' dialog. The title bar reads 'Module Properties - Local:1 (1756-DMD30 1.19)'. The tabs are General, Connection, Module Info, Power, Setup, and Backplane. The 'General' tab contains the following fields: Type (1756-DMD30 1756 SD3000 Drive Interface), Vendor (Allen-Bradley), Parent (Local), Name (dm1), Slot (1), Description (empty), Comm Format (Velocity Control), Revision (1 19), and Electronic Keying (Compatible Module). At the bottom, the status is 'Offline', and there are buttons for OK, Cancel, Apply, and Help.



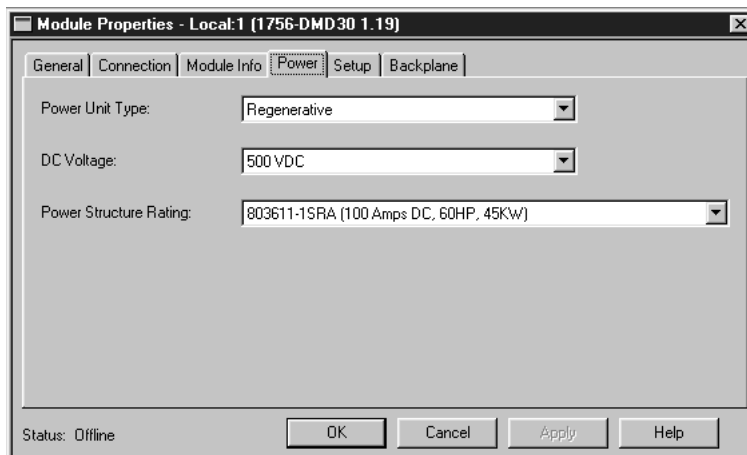
Use the General tab to view or modify the module name, slot number, controller communication format, revision or keying configurations

The screenshot shows the 'Connection' tab of the 'Module Properties' dialog. The title bar reads 'Module Properties - Local:1 (1756-DMD30 1.19)'. The tabs are General, Connection, Module Info, Power, Setup, and Backplane. The 'Connection' tab contains the following fields: Requested Packet Interval (RPI) (2.0 ms, range 2.0 - 100.0 ms), Inhibit Module (unchecked), Major Fault On Controller If Connection Fails While in Run Mode (unchecked), and a Module Fault text area. At the bottom, the status is 'Offline', and there are buttons for OK, Cancel, Apply, and Help.

Use the Connection tab to view or modify the configuration of the connection to the controller and to view module faults.

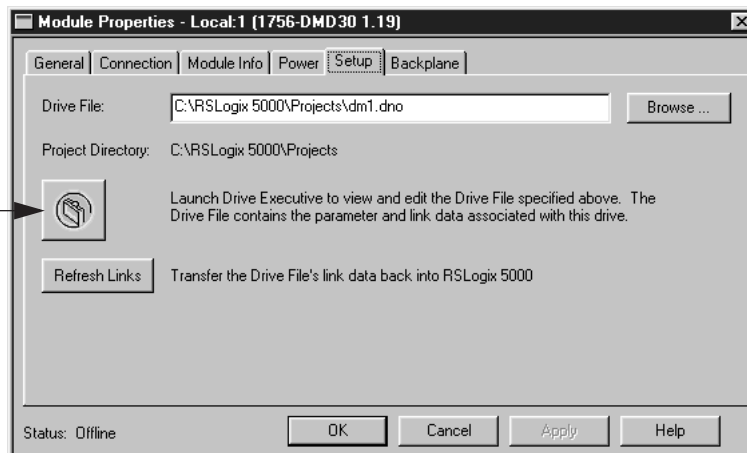
The screenshot shows the 'Module Info' tab of the 'Module Properties' dialog. The title bar reads 'Module Properties - Local:1 (1756-DMD30 1.19)'. The tabs are General, Connection, Module Info, Power, Setup, and Backplane. The 'Module Info' tab contains the following fields: Identification (Vendor, Product Type, Product Code, Revision, Serial Number, Product Name), Status (Major Fault, Minor Fault, Internal State, Configured, Owned, Module Identity), Coordinated System Time (CST) (Timer Hardware, Timer Sync'd), and buttons for Refresh and Reset Module. At the bottom, the status is 'Offline', and there are buttons for OK, Cancel, Apply, and Help.

Use the Module Info tab to view module identification information, module status and CST status.

Monitor and Configure the Module (continued)

Use the Power tab to view or modify configuration for the power unit connected to the Drive Module

Click this button to launch DriveExecutive



Using DriveExecutive to Configure Drive Module

Configure the Drive Module's Peer Communication

DriveExecutive Lite - [C:\VRSLogix 5000\Projects\Adv]

File Edit View Drive Peripheral Tools Window Help

Connect to Drive...
Create Database...
Connect to Last
Upload from 0 - 1756-DMD30...
Download to 0 - 1756-DMD30...
Peer Communication...
Faults and Alarms
Non-Volatile Memory...
Groups...
Properties...

Select Peer Communication from Drive Menu

On the SynchLink Setup Tab
The settings you make on this tab determine what the module does during every SynchLink Update cycle

Select sources for Direct Data transmissions

Select the Receive and Transmit Formats

Configure the Multiplier Block

Select source parameters for Buffered Data transmissions

Select source parameters for Direct Data, if the sources are drive parameters

Click SynchLink Node Configuration to open SynchLink Node Configuration Window

1756-DMD30 Peer Communication Setup

SynchLink Setup From Controller To Controller

SynchLink Receive Format: 2 Direct Words, 18 Buffered Words

SynchLink Transmit Format: 2 Direct Words, 18 Buffered Words

Multiplier Block Setup:

Receive word to multiply: None

Multiplier Base Value: 10000.000000

Multiplier Value: 1.000000

Source Parameter: (None)

Transmitted Direct Words:

Source: Item:

0: Drive Parameter 152 - Applied LogicCmd

1: Drive Parameter 303 - Motor Torque Ref

2: No Data

3: No Data

SynchLink Node Configuration

Transmitted Buffered Data (parameter values):

Word 0: 323 - Fault Status 1

Word 1: (None)

Word 2: (None)

Word 3: (None)

Word 4: (None)

Word 5: (None)

Word 6: (None)

Word 7: (None)

Word 8: (None)

Word 9: (None)

Word 10: (None)

Word 11: (None)

Word 12: (None)

Word 13: (None)

Word 14: (None)

Word 15: (None)

Word 16: (None)

Word 17: (None)

OK Cancel

Configure the Drive Module's Peer Communication (continued)

The value tab is useful for configuring the module as a Time Keeper

Check this box if the module is to be the Time Keeper

Value	Internal Value
Minimum: 00000000000000000000000000000000	0
Maximum: 11111111111111111111111111111111	4294967295
Default: 0000000000000000000000000000000100	4

Click OK when the configuration is as desired

Configure the Drive Module's Peer Communication (continued)

Click the From Controller tab

1756-DMD30 Peer Communication Setup

SynchLink Setup From Controller To Controller

Controller Output Tag Element	#	Required	Actual
LogicCommand	600	151 - Logic Command	151 - Logic Command
SpeedRef1	603	10 - Speed Ref 1	10 - Speed Ref 1
TorqueRef1	605	111 - Torque Ref 1	111 - Torque Ref 1
SpdTorqModeSelect	606	110 - Spd/Torq ModeSel	110 - Spd/Torq ModeSi
TorqueStep	609	116 - Torque Step	116 - Torque Step
SpdRegDroop	611	86 - Spd Reg Droop	86 - Spd Reg Droop
UserDefinedRealData[0]	613	User Defined	12 - Speed Ref 2
UserDefinedRealData[1]	615	User Defined	13 - Spd Ref2 Multi
UserDefinedRealData[2]	617	User Defined	(None)
UserDefinedRealData[3]	619	User Defined	(None)
UserDefinedRealData[4]	621	User Defined	12 - Speed Ref 2
UserDefinedRealData[5]	623	User Defined	13 - Spd Ref2 Multi
UserDefinedRealData[6]	625	User Defined	14 - Speed Ref 4
UserDefinedIntegerData[0]	626	User Defined	15 - Speed Ref 5
UserDefinedIntegerData[1]	628	User Defined	17 - Jog Speed 1
UserDefinedIntegerData[2]	630	User Defined	18 - Jog Speed 2

Controller Comm Format: Velocity Control

OK Cancel



These links are part of the selected Controller Communication Format. They are not changeable.

Select parameters in the Drive Module that will consume data produced by tags in the controller.

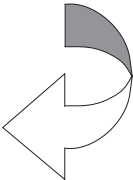
This displays the Controller Communication Format, chosen in RSLogix 5000.

If you need to change the Controller Communication Format, choose another from the pull-down menu.

IMPORTANT Conflicts between the DriveExecutive and RSLogix 5000 configurations cause communication faults. Make sure the Controller Communication Format is the same in DriveExecutive and RSLogix 5000 before downloading.

Configure the Drive Module's Peer Communication (continued)

Click the To Controller
tab



1756-DMD30 Peer Communication Setup

SynchLink Setup | From Controller | **To Controller**

Controller Input Tag Element	#	Required	Actual
LogicStatus	632	155 - Logic Status	155 - Logic Status
FilteredSpdFdbk	635	71 - Filtered SpdFdbk	71 - Filtered SpdFdbk
MotorTorqueRef	637	303 - Motor Torque Ref	303 - Motor Torque Ref
OutputCurrent	639	308 - Output Current	308 - Output Current
MCFaults	640	2122 - MC Faults	2122 - MC Faults
MCWarnings	642	2123 - MC Warnings	2123 - MC Warnings
UserDefinedRealData[0]	645	User Defined	40 - Selected Spd Ref
UserDefinedRealData[1]	647	User Defined	41 - Curr Lim Spd Ref
UserDefinedRealData[2]	649	User Defined	(None)
UserDefinedRealData[3]	651	User Defined	(None)
UserDefinedRealData[4]	653	User Defined	40 - Selected Spd Ref
UserDefinedRealData[5]	655	User Defined	41 - Curr Lim Spd Ref
UserDefinedRealData[6]	657	User Defined	42 - Rate Lim Spd Ref
UserDefinedIntegerData[0]	658	User Defined	43 - S Curve Spd Ref
UserDefinedIntegerData[1]	660	User Defined	44 - Filtered Spd Ref
UserDefinedIntegerData[2]	662	User Defined	45 - Delayed Spd Ref

OK Cancel

Select parameters
in the Drive
Module that will
produce data
consumed by tags
in the controller.

Click OK when all the data on these tabs is correct

Configure the Drive Module's Links to SynchLink Data

On the Link List

Double - click on the parameter you want to consume SynchLink data

Sink	Sink Name	Source	Source Name
93	SRegFB Filt Gain		
94	SReg FB Filt Bw/		
95	SRegOut FiltGain		
96	SReg Out Filt B'W		
98	Spd Gain TP Sel		
102	Spd Reg Pos Lim		
103	Spd Reg Neg Lim		
108	Spd Reg TP Sel		
110	Spd/Torq ModeSel	606	Integer In03
111	Torque Ref 1	605	Real In02
113	Torque Ref 2		
114	Torq Ref2 Mult		
115	Torque Trim		
116	Torque Step	609	Real In04
117	Notch Filt Mode		
118	Notch Filt Freq		
119	Current NegLimit		
120	Current PosLimit		

Click on the Link Data tab

Parameter 111 - "Torque Ref 1" Properties

Value Link Data Documentation Attributes

Value
0.0000

Internal Value
00000000000000000000000000000000

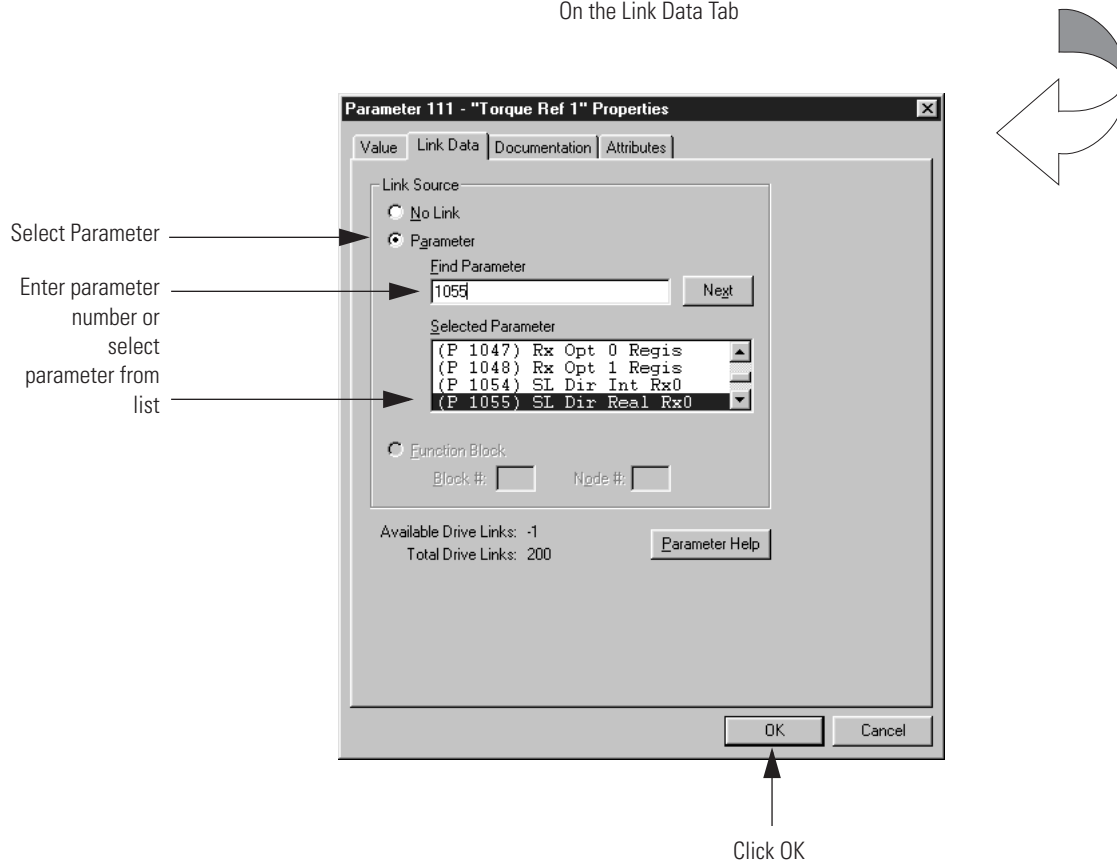
☐ Dec ☐ Hex ☒ Bin [Parameter Help](#)

Range	Value	Internal Value
Minimum:	-2200000000.0000	-821878442
Maximum:	2200000000.0000	1325605206
Default:	0.0000	0

OK Cancel

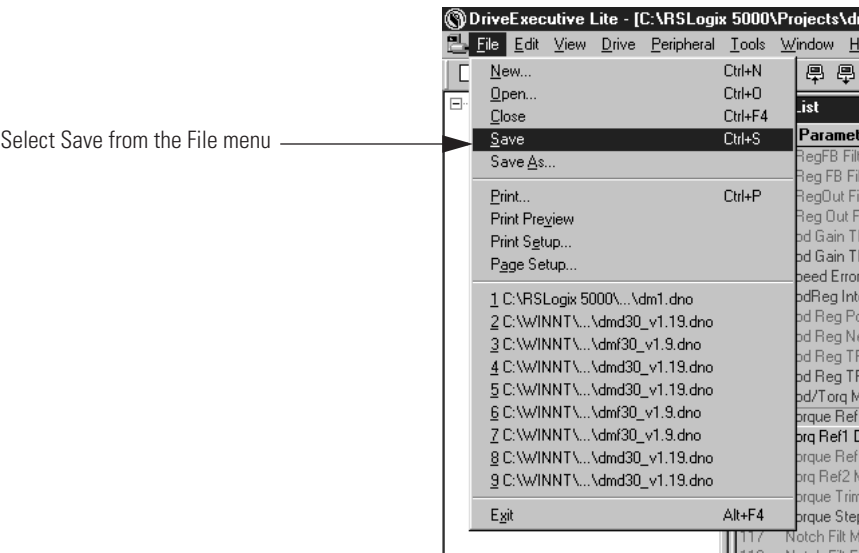
Configure the Drive Module's Links to SynchLink Data (continued)

On the Link Data Tab

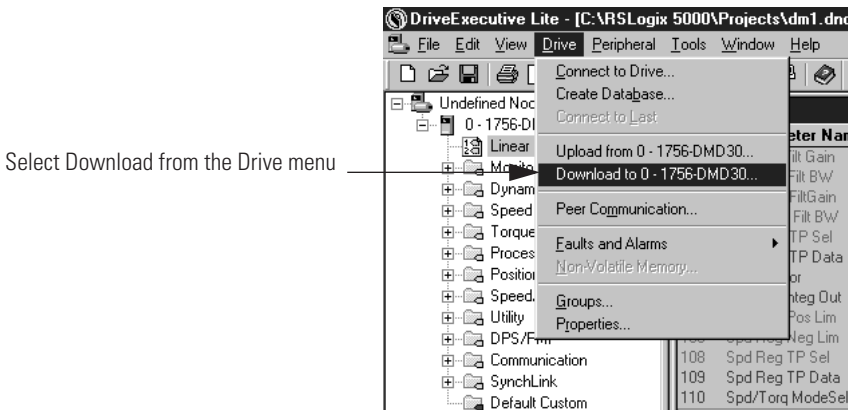
**IMPORTANT**

The data format (e.g. Real or Integer) of the sink parameter must match the data format of the source parameter.

Save the Project



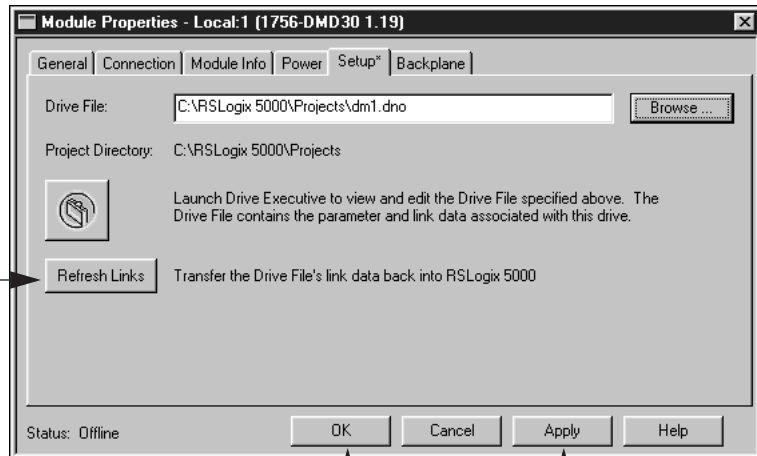
Download the Project



Return to RSLogix 5000 to Finish Configuring the Drive Module

Complete Setup Properties

Click on this button to cause additional user defined links (links created in DriveExecutive in addition to the default links associated with the Controller Communication Format) to be transferred from the Drive File into RSLogix 5000.



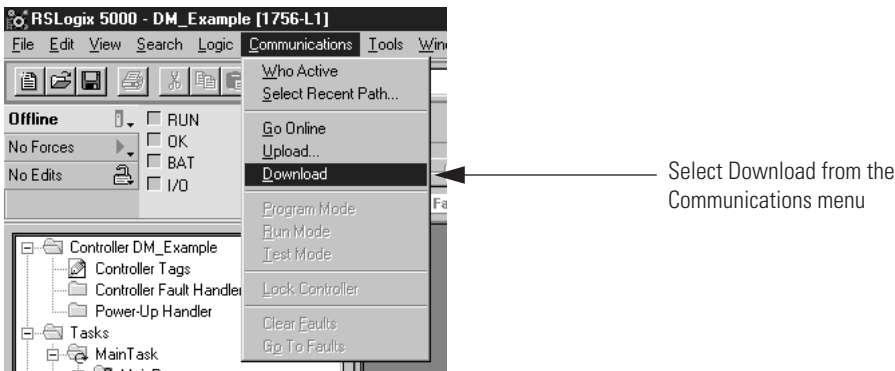
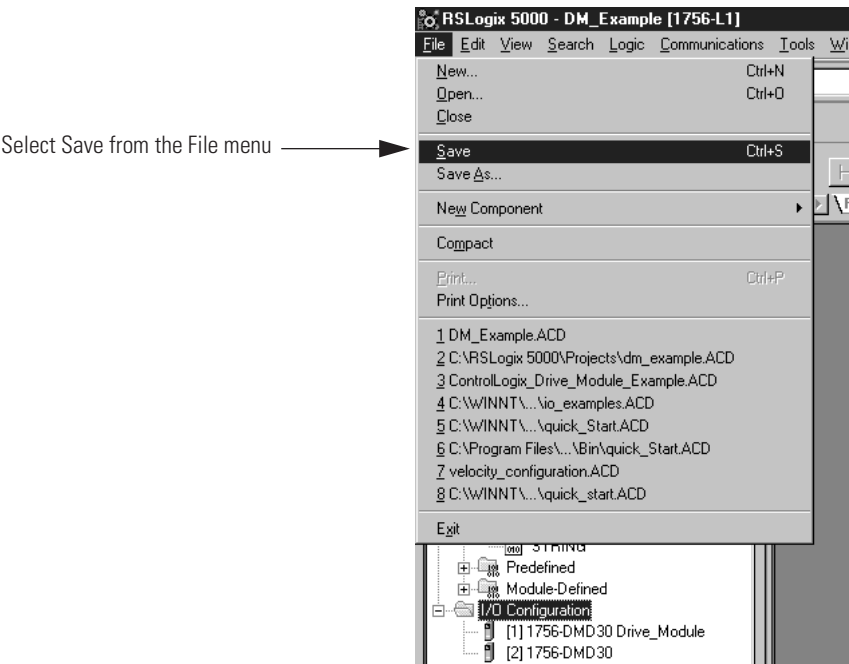
Click Apply to make the changes to the configuration

Click OK when satisfied with configuration

IMPORTANT

Refreshed links will not take affect unless both the RSLogix and Drive Executive projects have been downloaded.

Save and Download



Chapter Summary and
What's Next

In this chapter, you learned how to configure the ControlLogix Drive Module. Move to Chapter 6, Troubleshooting the Drive Module, to learn how to troubleshoot the module.

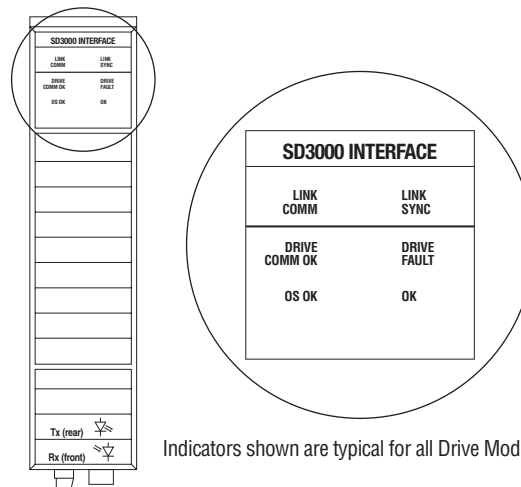
Troubleshooting the Drive Module

This chapter describes how to troubleshoot the ControlLogix Drive module.

For information about:	See page:
Using the Status Indicators	6-1
Using DriveExecutive to Troubleshoot the Module	6-3
Using RSLogix 5000 to Troubleshoot the Module	6-8
Chapter Summary and What's Next	6-10

Using the Status Indicators

Bi-colored (red/green) LEDs indicate the status of several module functions.



During power up, the OK indicator turns red for 5 seconds and then turns to flashing green if it has passed the self-test.

Use the table on the next page to troubleshoot your module.

LED Indicator	Display	Means	Take this Action
OK	Green	Connection is running.	None
	Flashing Green	Inhibited I/O connection.	None
	Red	Non-Recoverable Fault	Remove module from service
	Flashing Red	Flash download in progress.	None
	Off	Module is powered down.	None
DRIVE FAULT	Red	Module is faulted.	See Fault Status parameters.
	Off	No fault is present or module is powered down.	None
LINK SYNC	Green	The module is the time master or a time relay and synchronization is complete.	None
	Flashing Green	The module is configured as a time relay from CST to SynchLink but is not synchronized with a CST master on the backplane.	N/A
		The module is configured as a time relay from SynchLink to CST but has not synchronized with the upstream device.	N/A
	Flashing Red	The module is configured as a CST master and has detected another CST master.	N/A
		The module is configured as a time master on SynchLink and has received time information from another time master on SynchLink.	Ensure that only 1 time master is present and transmitting time information on SynchLink.
	Off	The module is not configured as a time master or time relay or module is powered down.	None
OS OK	Green	System and parameter constants loaded.	None
	Off	Checksum failure.	Reflash the module.
DRIVE COMM OK	Green	DPS communication is active and synchronized.	None
	Off	DPS communication is not active, is not synchronized, or the module is powered down.	Verify that cables are securely connected.
LINK COMM	Green	The module is configured and receiving valid data from SynchLink.	None
		The module is configured and enabled to only transmit on SynchLink.	None
	Off	The module is configured but not receiving valid data from SynchLink.	Verify that cables are securely connected.
		The module is configured but not enabled to transmit on SynchLink.	Enable module transmitter.
		Module is powered down.	Power the module.

Using DriveExecutive to Troubleshoot the Module

DriveExecutive (a program in the DriveTools 2000 suite) alerts you to fault conditions. If you are online with the Drive Module, the software will alert you in the following ways:

- Warning signal on the main screen
- Notification in the Fault and Alarm Information Window
- Diagnostic parameters

Warning Signal on Main Screen

The screenshot shows the DriveExecutive Lite software interface. The title bar reads "DriveExecutive Lite - [WUS03161194]AB_PCIC-". The menu bar includes File, Edit, View, Drive, Peripheral, Tools, and Window. The toolbar contains icons for file operations and a warning icon. The main window is divided into three panes. The left pane shows a tree view with "Node 3 Slot 8" expanded, containing "0 - 1756-DMD30" and "Linear List". The middle pane shows a "Faulted" status with a warning icon. The right pane shows a "Linear List" table.

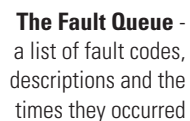
Faulted Indication →

Click the warning icon to open the Fault and Alarm Information window

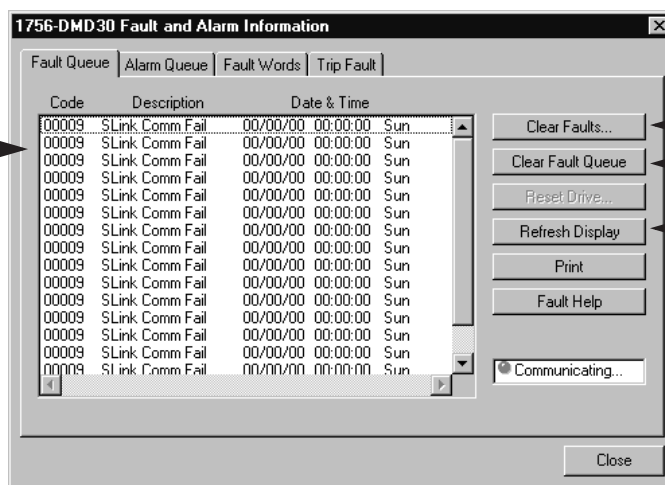
#	Parameter Name
327	Alarm Status 2
329	Fault TP Sel
330	Fault TP Data
335	Abs OverSpd Lim
336	Service Factor
337	Mtr I2T Curr Min
338	Mtr I2T Spd Min
339	Mtr I2T Calibrat
340	Mtr I2T Trp ThrH
350	Current Actl Ref
351	Current Ref Trim
354	Curr Rate Limit
355	Curr RateLimited
360	Min Flux

Fault and Alarm Window

Fault Queue Tab



The Fault Queue - a list of fault codes, descriptions and the times they occurred

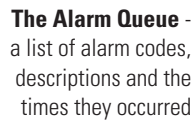


—Click here to clear faults

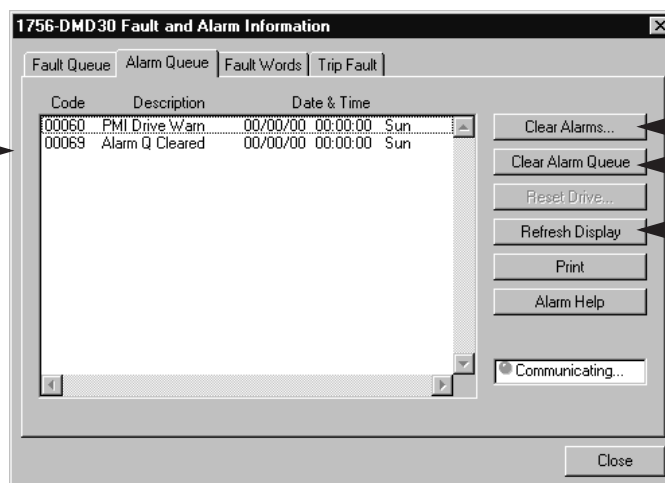
—Click here to empty fault queue

- Click here to get new fault information from the Drive Module

Alarm Queue Tab



The Alarm Queue -
a list of alarm codes,
descriptions and the
times they occurred

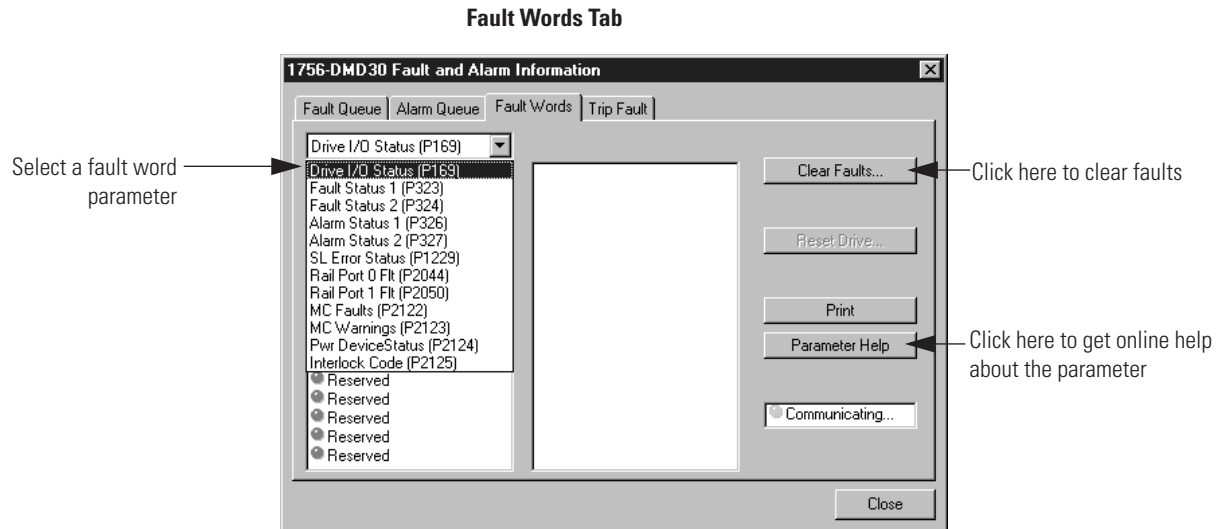


—Click here to clear alarms

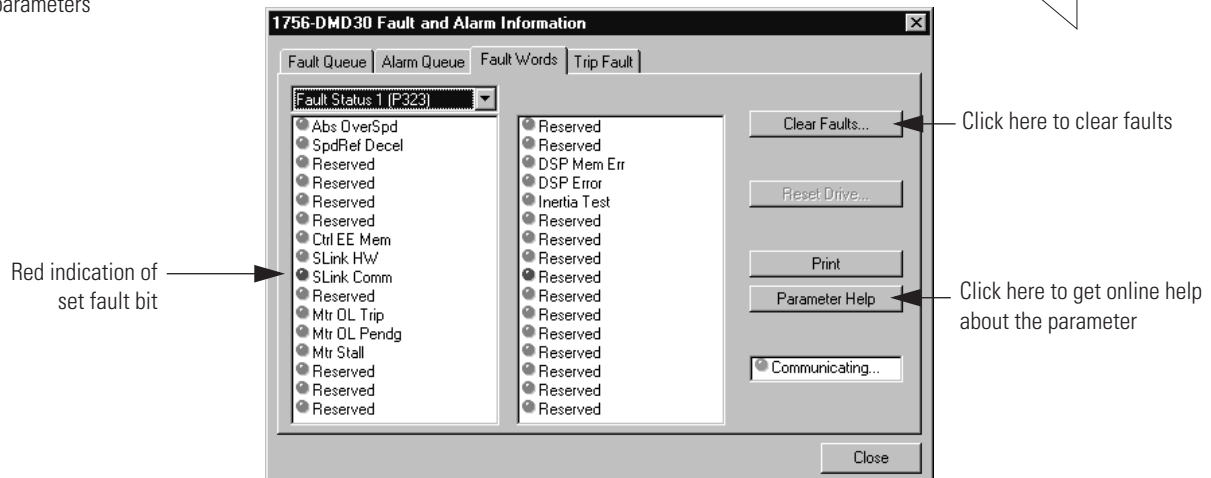
—Click here to empty alarm queue

- Click here to get new alarm information from the Drive Module

Fault and Alarm Window (continued)



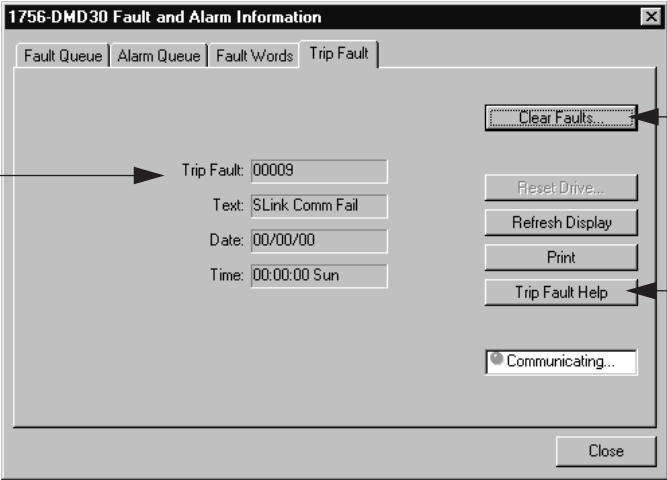
This tab shows bit-wise views of the primary fault parameters



Refer to the appropriate appendix to interpret fault information that is specific to a certain Drive Module

Fault and Alarm Window (continued)

Trip Fault Tab

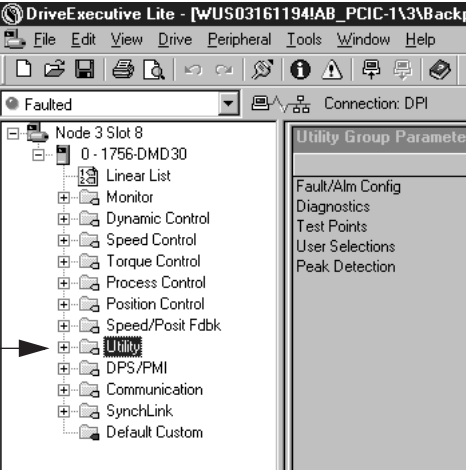


Code, description, date and time of fault that tripped the Drive Module

Click here to clear faults

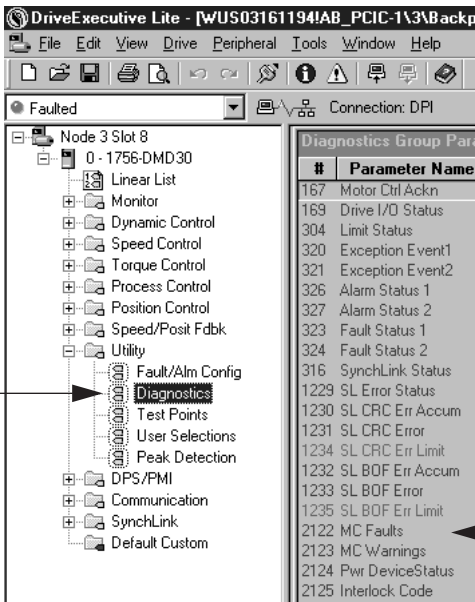
Click here to get online help about Trip Fault

Diagnostic Parameters



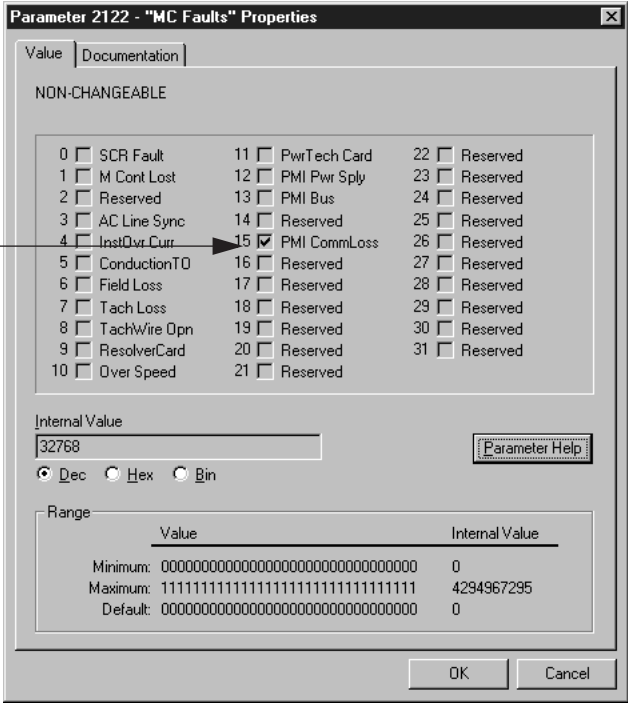
Double-click on the Utility folder to expand it

Diagnostic Parameters (continued)



Double-click on the Diagnostics group to expand it

Double-click on the parameter you want to examine



An check mark indicates the presence of a fault

NON-CHANGEABLE		
0 ☐ SCR Fault	11 ☐ PwrTech Card	22 ☐ Reserved
1 ☐ M Cont Lost	12 ☐ PMI Pwr Sply	23 ☐ Reserved
2 ☐ Reserved	13 ☐ PMI Bus	24 ☐ Reserved
3 ☐ AC Line Sync	14 ☐ Reserved	25 ☐ Reserved
4 ☒ InstOvr Curr	15 ☒ PMI CommLoss	26 ☐ Reserved
5 ☐ ConductionTD	16 ☐ Reserved	27 ☐ Reserved
6 ☐ Field Loss	17 ☐ Reserved	28 ☐ Reserved
7 ☐ Tach Loss	18 ☐ Reserved	29 ☐ Reserved
8 ☐ TachWire Opn	19 ☐ Reserved	30 ☐ Reserved
9 ☐ ResolverCard	20 ☐ Reserved	31 ☐ Reserved
10 ☐ Over Speed	21 ☐ Reserved	

Internal Value: 32768

Dec Hex Bin

Range	Value	Internal Value
Minimum:	00000000000000000000000000000000	0
Maximum:	1111111111111111111111111111111111	4294967295
Default:	00000000000000000000000000000000	0

OK Cancel

Refer to the appropriate appendix to interpret fault information that is specific to a certain Drive Module

Using RSLogix 5000 to Troubleshoot the Module

RSLogix 5000 alerts you to fault conditions. If you are online with the Drive Module the software will alert you in the following ways:

- Warning signal on the main screen next to the module-This occurs when the connection to the module is broken
- Status on the Module Info Page

Warning Signal on Main Screen

The screenshot shows the RSLogix 5000 - DL_DM_SL_Rack3 [1756-L1] window. The interface includes a menu bar (File, Edit, View, Search, Logic, Communications, Tools), a toolbar, and a status bar. The main workspace displays a project tree on the left and a component list on the right. A warning icon (a triangle with an exclamation mark) is shown next to the module [8] 1756-DMD30 DM8 in the component list. A context menu is open over this module, showing options: New Module..., Cut, Copy, Paste, Delete, Cross Reference, Print, and Properties. The Properties option is highlighted.

Warning Icon indicates presence of a communication fault

Place the right mouse button over the Drive Module icon

Click the right mouse button and select Properties to open the Module Properties window

Module Properties Window

General Tab



Module Properties - Local:8 (1756-DMD30 1.9)

General | Connection | Module Info | Power | Setup | Backplane

Type: 1756-DMD30 1756 SD3000 Drive Interface
 Vendor: Allen-Bradley
 Parent: Local
 Name: DM8 Slot: 8
 Description:
 Comm Format: Velocity Control
 Revision: 9 Electronic Keying: Compatible Module

Status: Faulted OK Cancel Apply Help

Status line provides information on the connection to the module

ATTENTION



Be extremely cautious when using the disable keying option; if used incorrectly, this option can lead to personal injury or death, property damage or economic loss.

Connection Tab

Module Properties - Local:8 (1756-DMD30 1.9)

General | Connection | Module Info | Power | Setup | Backplane

Requested Packet Interval (RPI): 2.0 ms (2.0 - 100.0 ms)
☐ Inhibit Module
☐ Major Fault On Controller If Connection Fails While in Run Mode

Module Fault:
 (Code 16#0110) Connection Request Error: Module not configured.

Status: Faulted OK Cancel Apply Help

Code number and description of fault

Status line provides information on the connection to the module

Module Properties Window (continued)

Module Info Tab

The screenshot shows the 'Module Properties - Local:8 (1756-DMD30 1.9)' window with the 'Module Info' tab selected. The window is divided into several sections:

- Identification:**
 - Vendor: Allen-Bradley
 - Product Type: High Performance
 - Product Code: 1756-DMD30
 - Revision: 1.11
 - Serial Number: 07FE07FD
 - Product Name: 1756-DMD30
- Status:**
 - Major Fault: None
 - Minor Fault: Recoverable
 - Internal State: Unconnected
 - Configured: Yes
 - Owned: No
 - Module Identity: Match
- Coordinated System Time (CST):**
 - Timer Hardware: Ok
 - Timer Sync'ed: Yes

At the bottom of the window, there is a 'Status: Faulted' line. Below this line are buttons for 'OK', 'Cancel', 'Apply', and 'Help'. To the right of these buttons are 'Refresh' and 'Reset Module' buttons.

Annotations with arrows point to the following elements:

- 'Status line provides information on the connection to the module' points to the 'Status: Faulted' line.
- 'Click Refresh to update Module Info' points to the 'Refresh' button.
- 'Click Reset Module to clear fault' points to the 'Reset Module' button.

Chapter Summary and What's Next

In this chapter, you learned how to troubleshoot the ControlLogix Drive module. Move to Appendix A to see the module's specifications.

Specifications

Module Specifications

Consideration	Description	
Module Location	1756 ControlLogix Chassis	
Backplane Current	1.35A at 5.1V DC and 3.0mA at 24V DC	
Maximum Power Dissipation	6.96 W	
Thermal Dissipation	23.7 BTU/hr	
Indicators	Green and red indicators for operation, status, and diagnostics.	
Environmental Conditions		
Operating Temperature	0° to 60°C (32° to 140°F)	
Storage Temperature	-40° to 85°C (-40° to 185°F)	
Relative Humidity	5 to 95% non condensing	
Shock		
Operating	30g peak acceleration, 11 (±1 ms) pulse width	
Non-operating	50g peak acceleration, 11 (±1 ms) pulse width	
Vibration	Tested 2g at 10-500Hz per IEC 68-2-6	
Reliability	Mean Time Between Failure (MTBF) 1.7 million hours	
Agency Certification (When product is marked.)		Listed Industrial Control Equipment
		Certified Process Control Equipment
		Certified Class I, Division 2, Group A, B, C, D
		Approved Class I, Division 2, Group A, B, C, D
		Marked for all applicable directives
		Marked for all applicable acts

Communication Specifications

Consideration	SynchLink	Drive Communication
Connecting Cables	(1)200/230 micron HCS (Hard Clad Silica) Versalink V-System Lucent Technologies, Specialty Fibers Technology Division	(2)62.5/125 micron glass One pair SC Style, one pair ST Style Breakout Cables: Belden 225362 or Mohawk M92021
Maximum Cable Length	300 meters with no more than one splice or one adapter	300 meters with no more than one splice or one adapter
Minimum Cable Length	1 meter	1 meter

Consideration	SynchLink	Drive Communication
Operating Wavelength	650 nm (Red)	820 nm (InfraRed)
Data Rate	5 Mbps	10 Mbps
Maximum Node Count	10 - Daisy Chain, 256 - Star Configuration	1 - PMI Chassis

⁽¹⁾ See page 1-3 for Allen-Bradley catalog numbers.

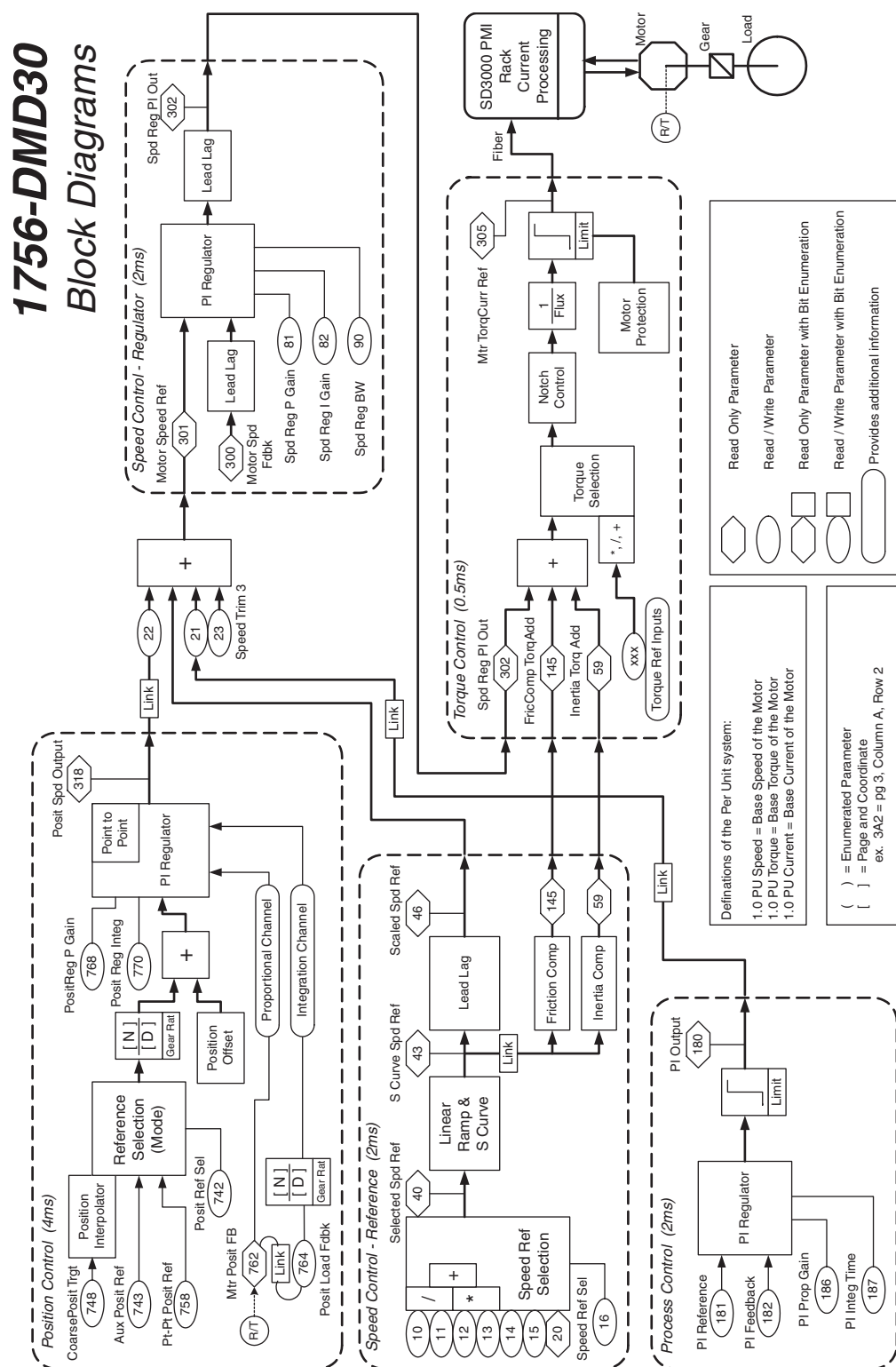
⁽²⁾ See page 1-3 for Allen-Bradley catalog numbers.

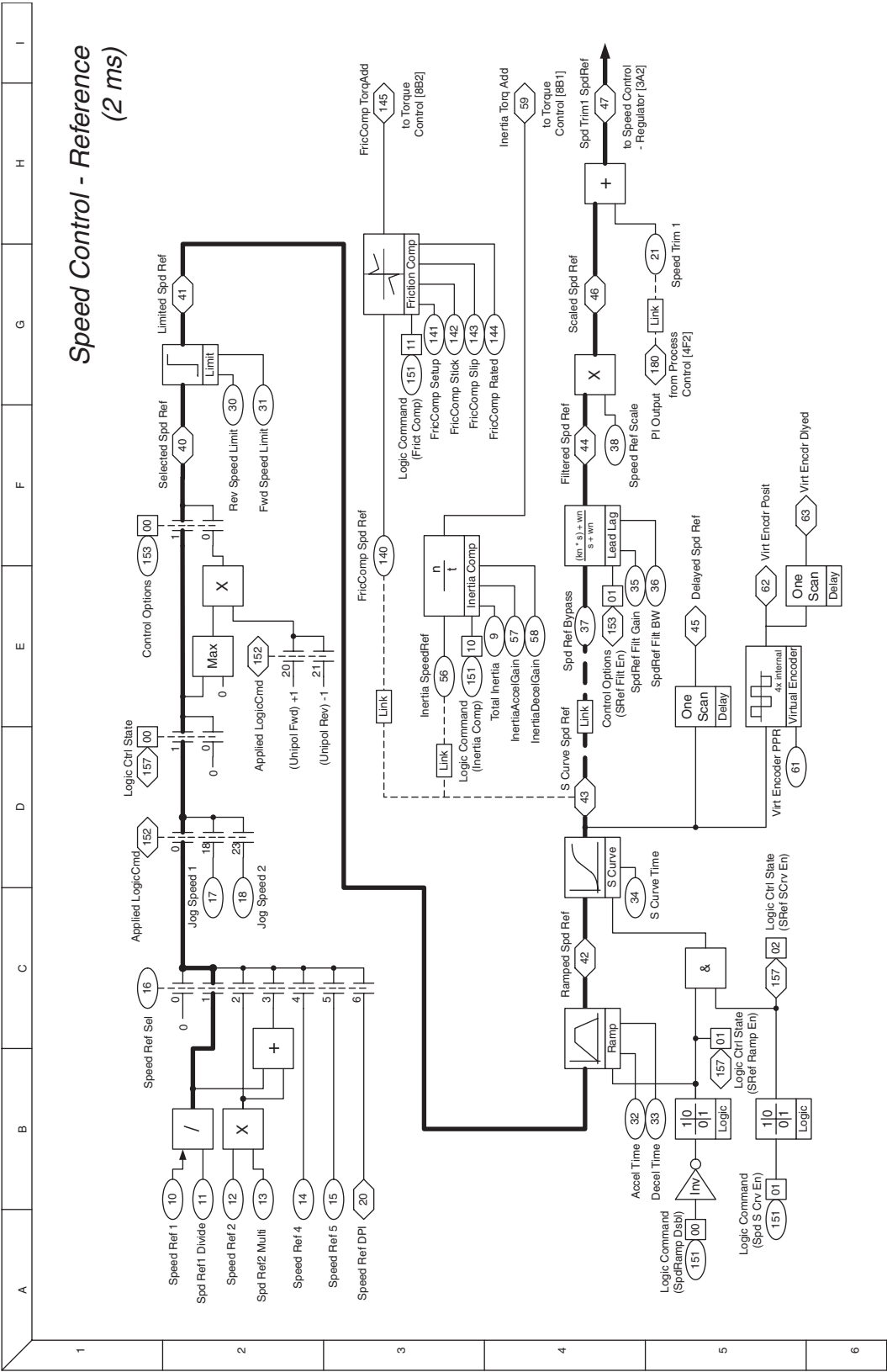
1756-DMD30 Specific Information

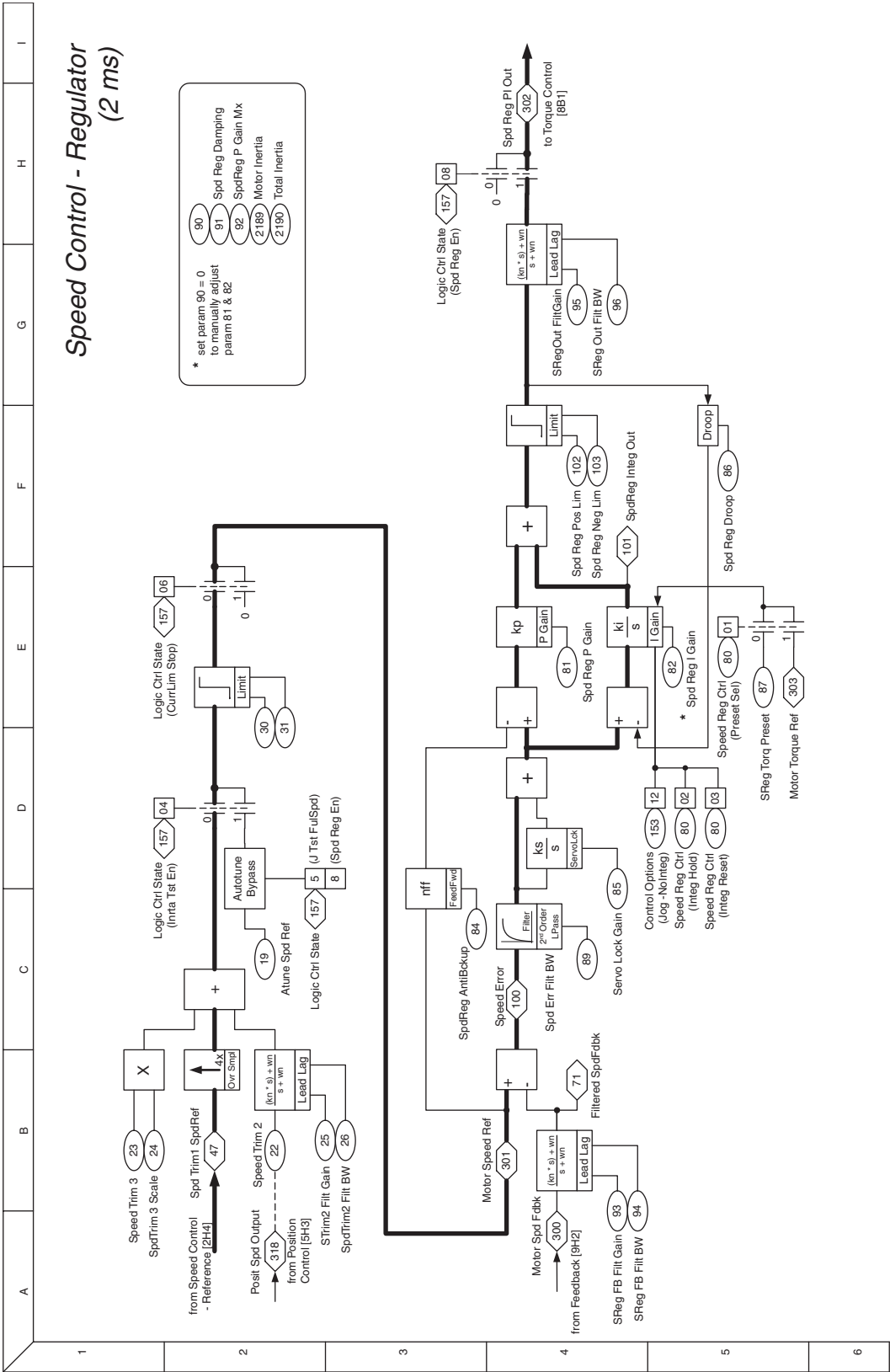
This appendix contains information that applies specifically to the 1756-DMD30.

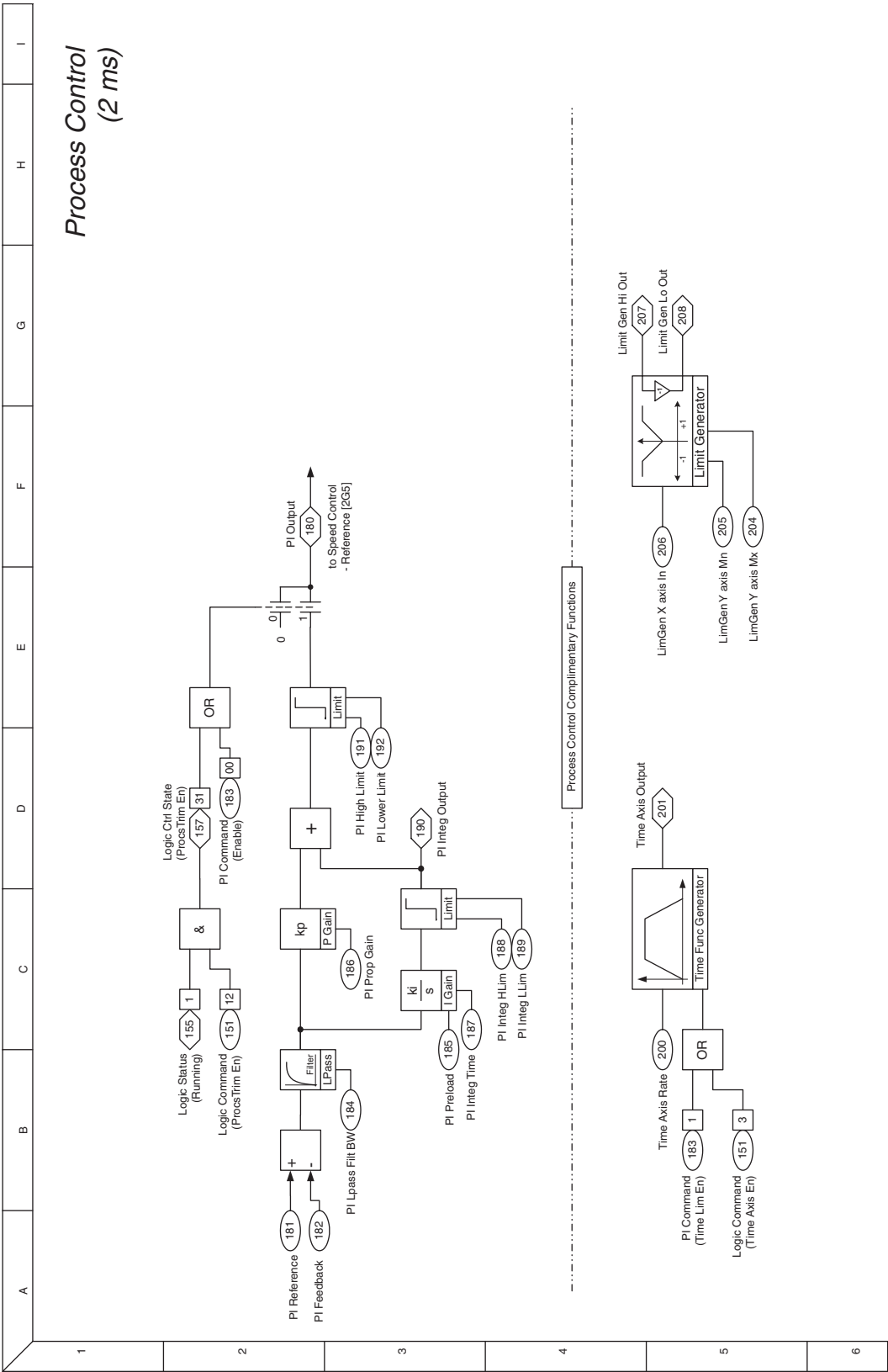
For information about:	See page:
Control Block Diagrams	B-2
Parameters	B-13
Interpreting Drive Module Faults in DriveExecutive	B-159

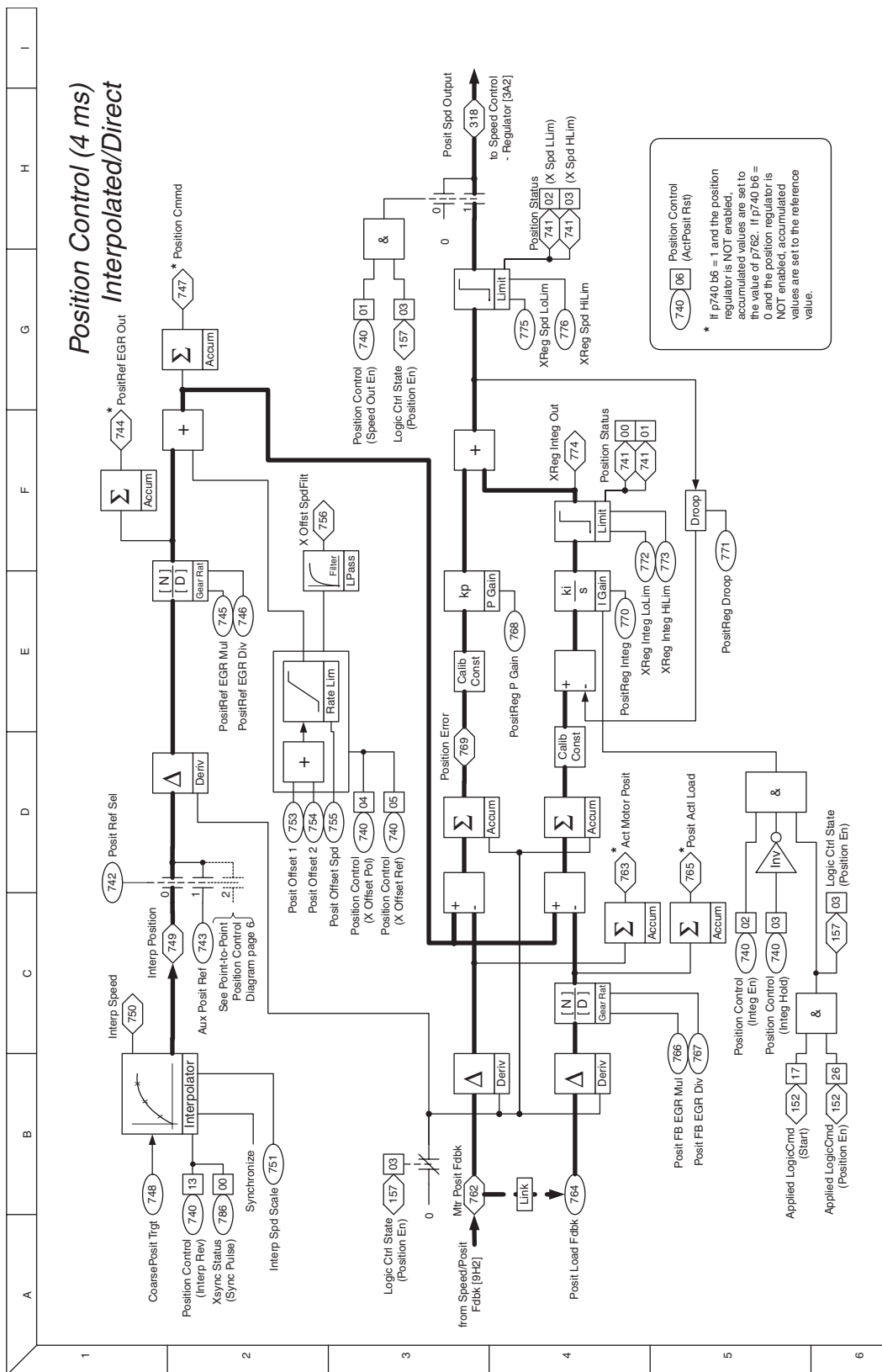
Control Block Diagrams



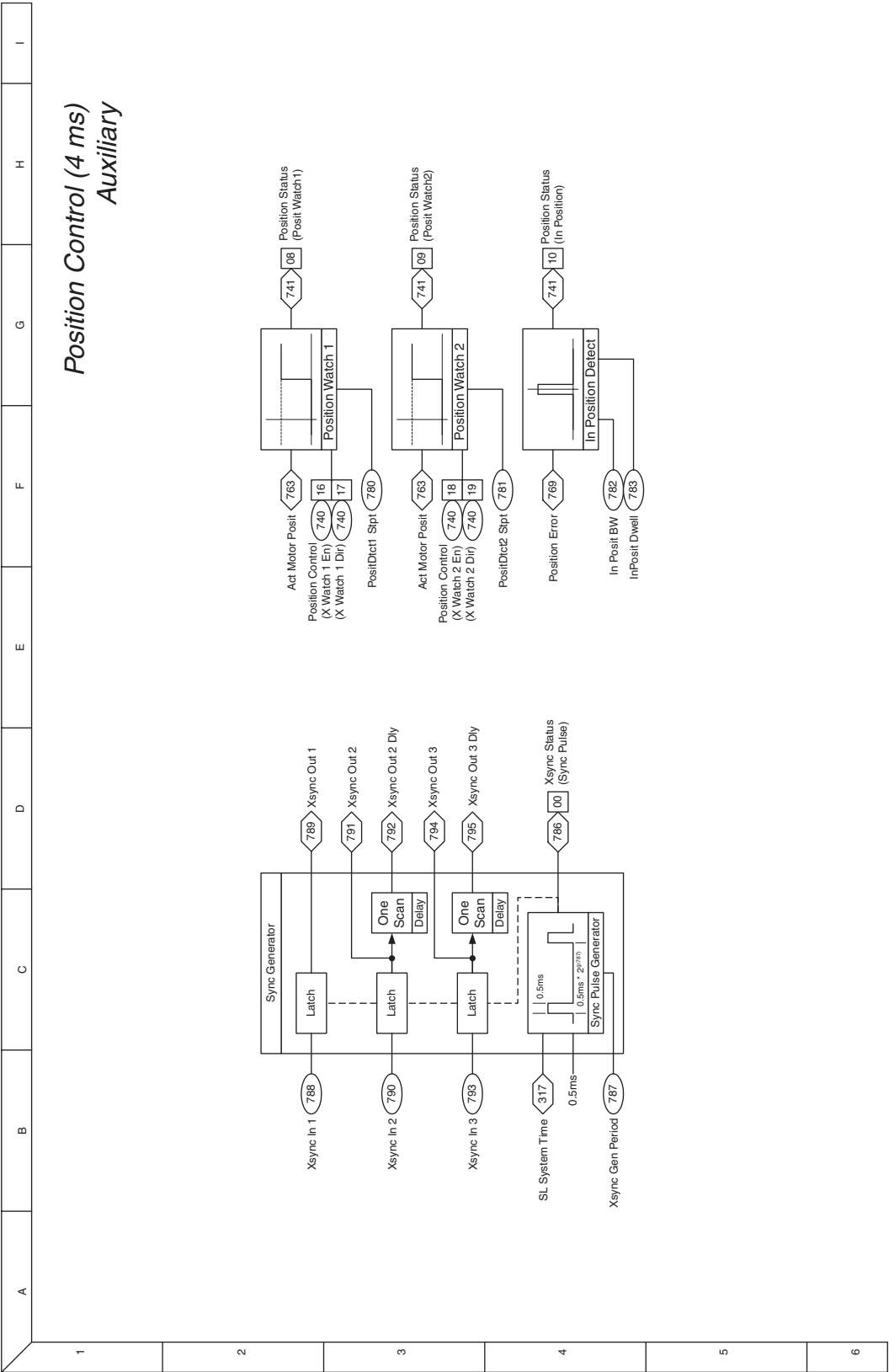


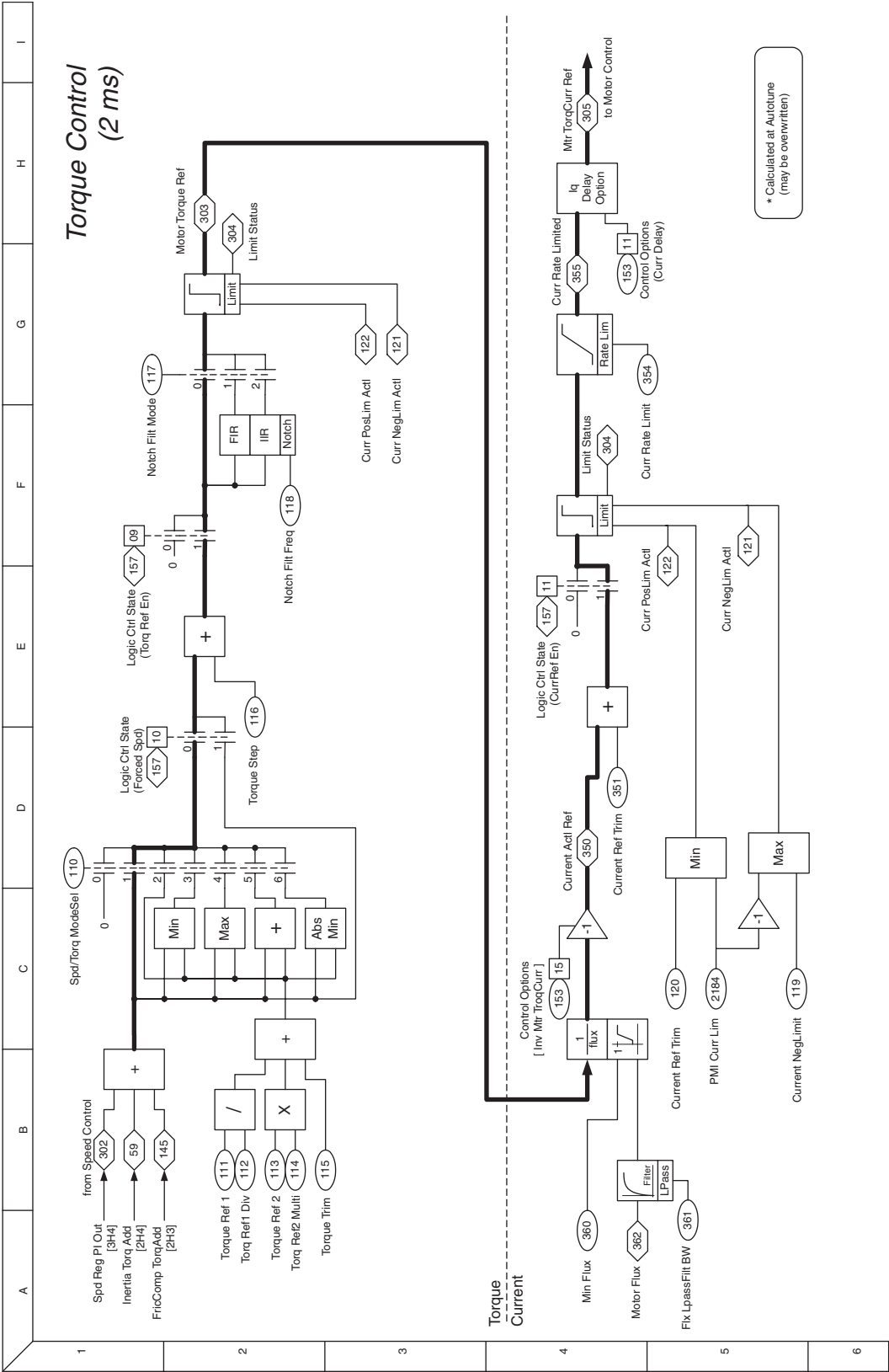


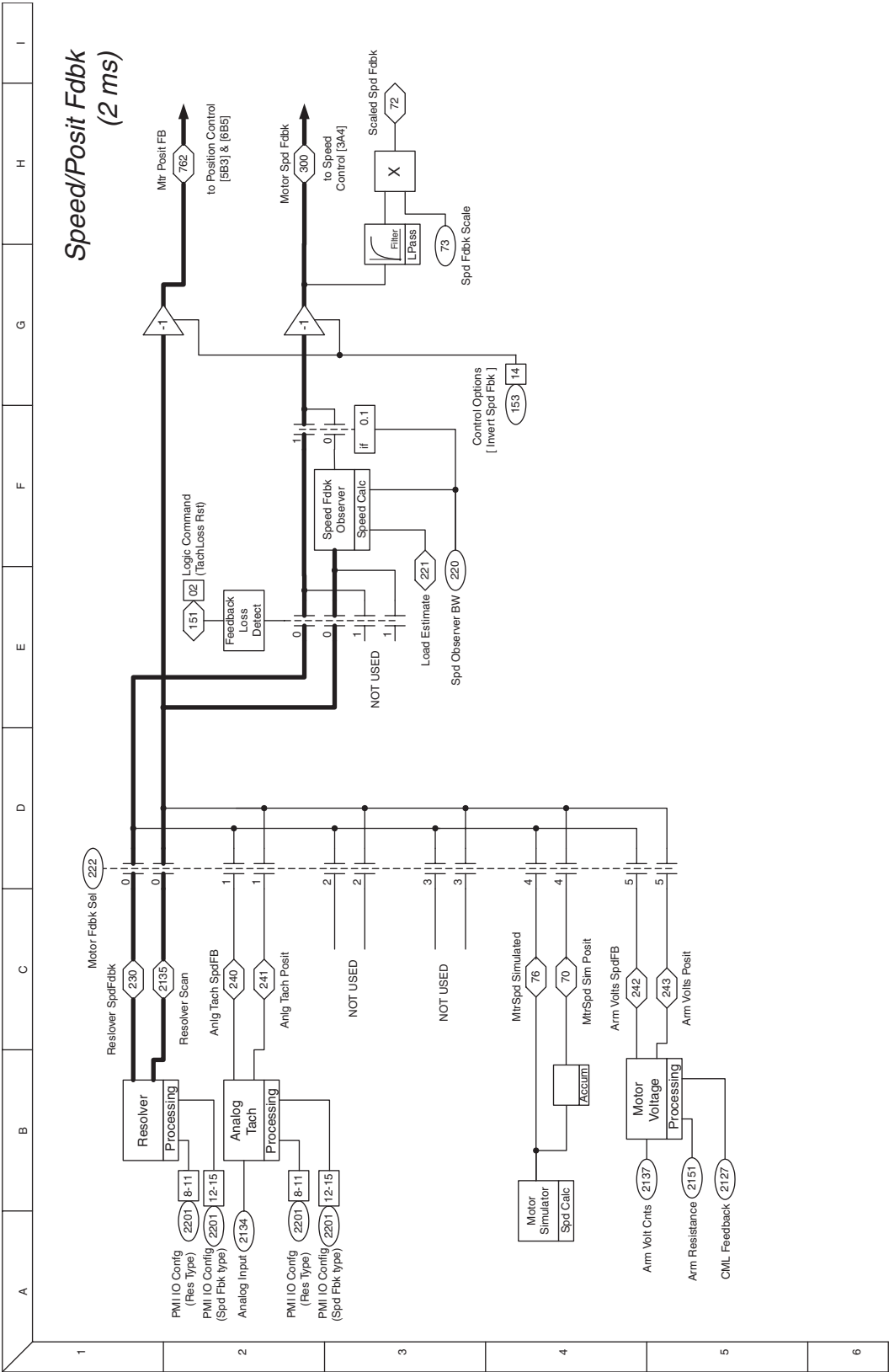


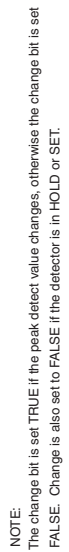


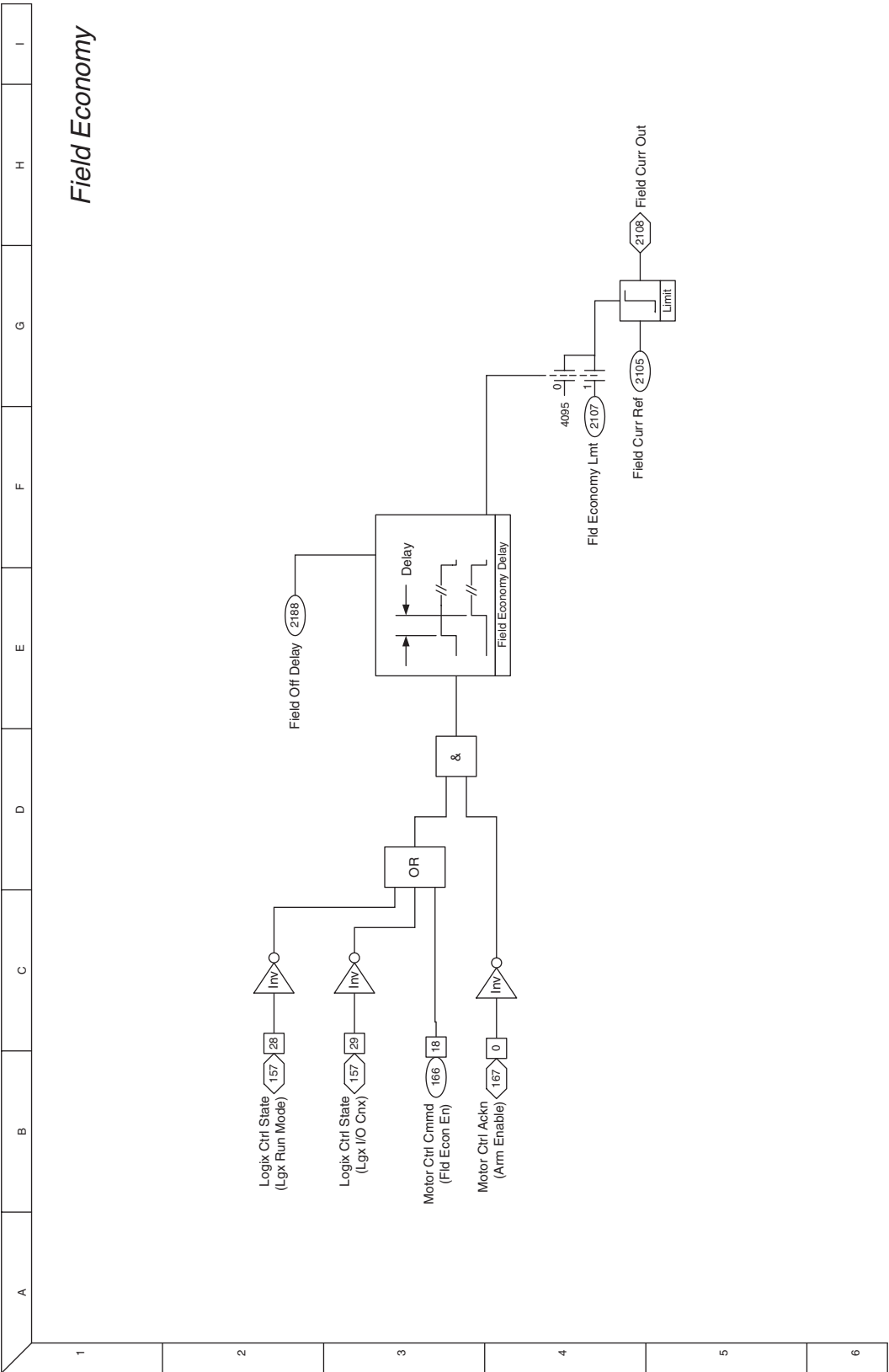












Parameters

To configure a Drive module to operate in a specific way, drive parameters may have to be set. Three types of parameters exist:

- **ENUM Parameters**

These parameters allow a selection from 2 or more items

- **Bit Parameters**

These parameters have individual bits associated with features or conditions. If the bit is 0, the feature is off or the condition is false. If the bit is 1, the feature is on or the condition is true.

- **Numeric Parameters**

These parameters have a single numeric value (i.e. 0.1 Volts).

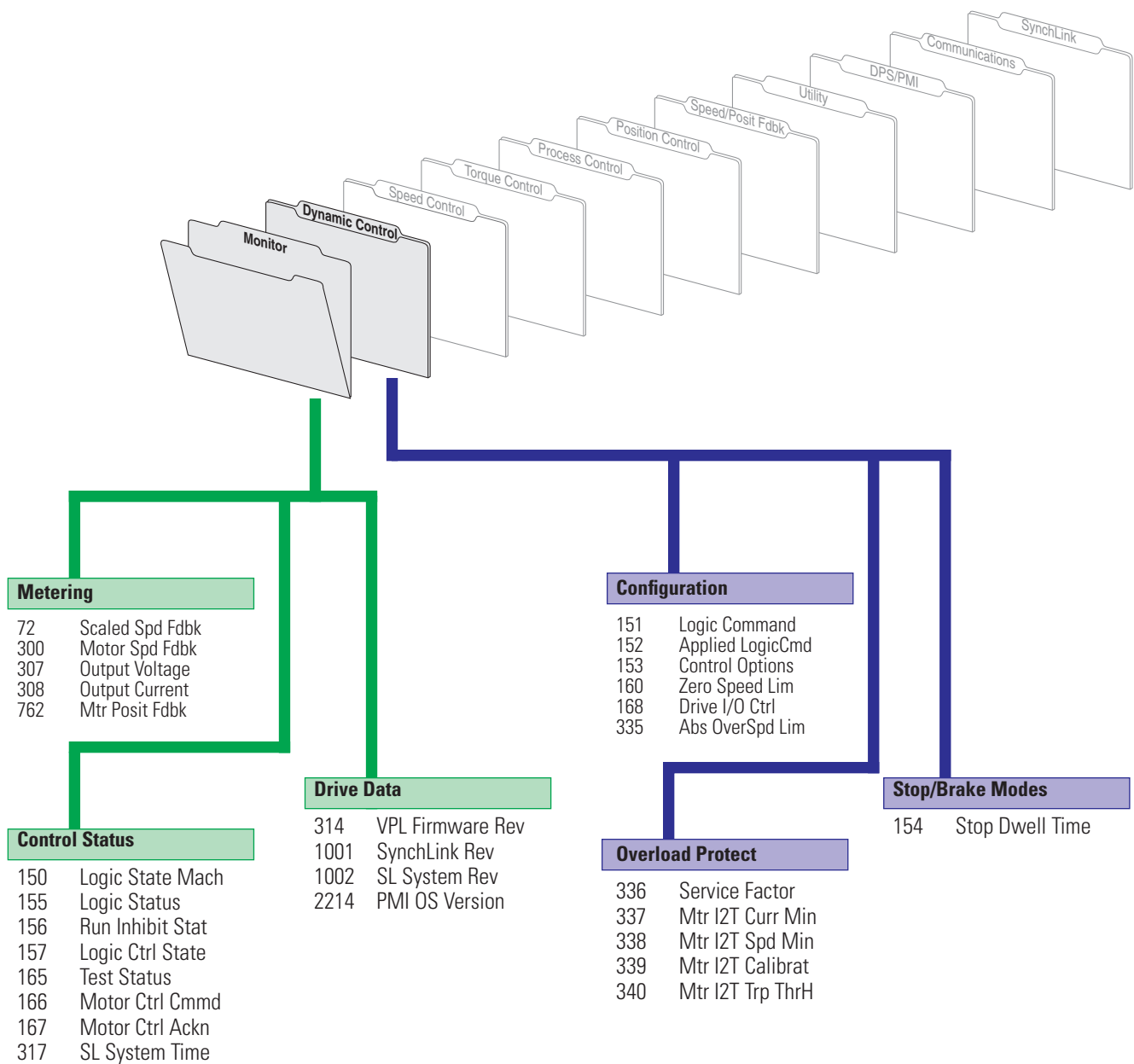
The example on the following page shows how each parameter type is presented in this manual.

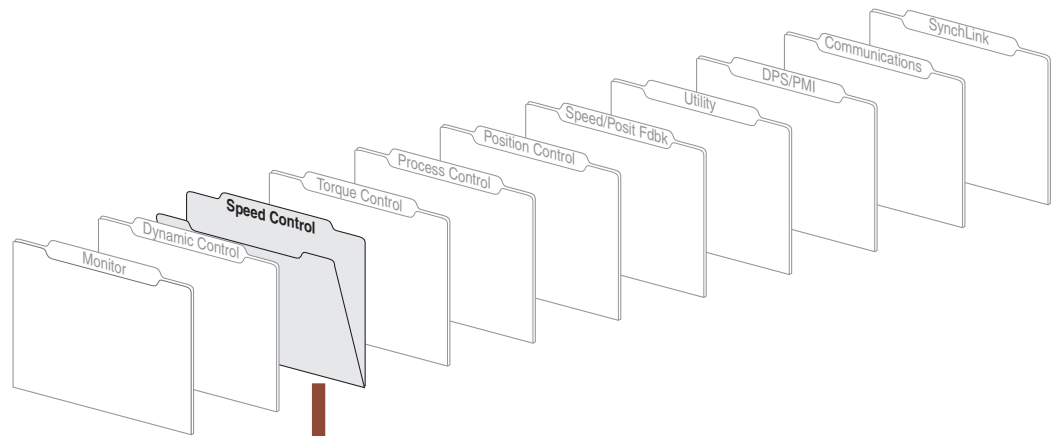
①	②	③																		
No.	Name Description	Values																		
16	Speed Ref Sel Enter or write a value to select the source of the speed reference to the drive.	<table> <tr> <td>Default:</td><td>Val 1</td><td>Spd Ref 1</td></tr> <tr> <td>Options:</td><td>Val 0 Val 1 Val 2</td><td>Zero Speed Spd Ref 1 Spd Ref 2</td></tr> <tr> <td>File: Group:</td><td colspan="2">Speed Control Reference</td></tr> </table>	Default:	Val 1	Spd Ref 1	Options:	Val 0 Val 1 Val 2	Zero Speed Spd Ref 1 Spd Ref 2	File: Group:	Speed Control Reference										
Default:	Val 1	Spd Ref 1																		
Options:	Val 0 Val 1 Val 2	Zero Speed Spd Ref 1 Spd Ref 2																		
File: Group:	Speed Control Reference																			
80	Speed Reg Ctrl Enter or write a value to configure the speed regulator integrator.	<table> <tr> <td>Default:</td><td colspan="2">0000 0000</td></tr> <tr> <td>Options:</td><td>Bit 0 Bit 1 Bit 2 Bit 3 Bit 4</td><td>Reserved Preset Sel Integ Hold Integ Reset</td></tr> <tr> <td>File: Group:</td><td colspan="2">Speed Control Regulator</td></tr> </table>	Default:	0000 0000		Options:	Bit 0 Bit 1 Bit 2 Bit 3 Bit 4	Reserved Preset Sel Integ Hold Integ Reset	File: Group:	Speed Control Regulator										
Default:	0000 0000																			
Options:	Bit 0 Bit 1 Bit 2 Bit 3 Bit 4	Reserved Preset Sel Integ Hold Integ Reset																		
File: Group:	Speed Control Regulator																			
11	Spd Ref1 Divide Speed Ref 1 is divided by this number. Use this parameter to scale the value of Speed Ref 1.	<table> <tr> <td>Default:</td><td colspan="2">1</td></tr> <tr> <td>Min:</td><td colspan="2">-2200000000</td></tr> <tr> <td>Max:</td><td colspan="2">2200000000</td></tr> <tr> <td>Type:</td><td colspan="2">Non-Linkable Read-Write Floating Point</td></tr> <tr> <td>File:</td><td colspan="2">Speed Control</td></tr> <tr> <td>Group:</td><td colspan="2">Reference</td></tr> </table>	Default:	1		Min:	-2200000000		Max:	2200000000		Type:	Non-Linkable Read-Write Floating Point		File:	Speed Control		Group:	Reference	
Default:	1																			
Min:	-2200000000																			
Max:	2200000000																			
Type:	Non-Linkable Read-Write Floating Point																			
File:	Speed Control																			
Group:	Reference																			

No.	Description	
①	No. - Parameter Number.  = Stop drive before changing this parameter.	
②	Name - Parameter name as is appears in DriveExecutive software. Description - Brief description of parameter function.	
③	Values - Defines the various operating characteristics of the parameter. Three types exist	
	ENUM	Default: Options: File: Group: Lists the value assigned at the factory. Displays the selections available. Lists the major parameter file category. Lists the parameter group within the file.
	Bit	Default: Options: File: Group: Lists the bit pattern assigned at the factory. Displays the selections available. Lists the major parameter file category. Lists the parameter group within the file.
	Numeric	Default: Min: Max: Type: File: Group Lists the value assigned at the factory. Displays lowest possible setting. Displays highest possible setting. Indicates if parameter is linkable, read-write, read-only, and data type (i.e. integer, floating point, boolean). Lists the major parameter file category. Lists the parameter group within the file.

How Parameters are Organized

DriveExecutive programming software displays parameters in “Linear List” or “File Group Parameter” format. Viewing the parameters in “File Group Parameter” format simplifies programming by grouping parameters that are used for similar functions. There are eleven files. Each file is divided into multiple groups of parameters.



**Reference**

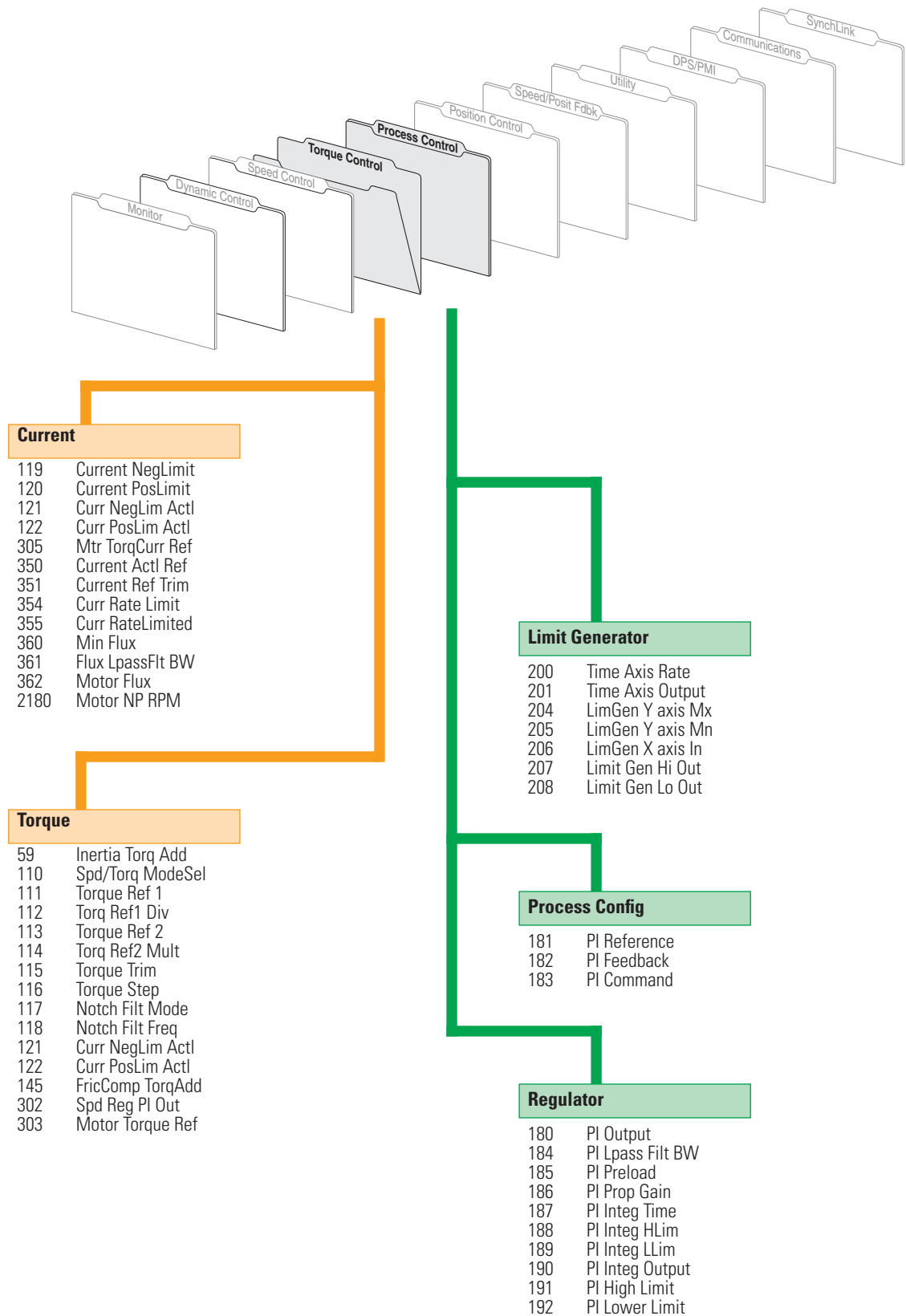
10	Speed Ref 1	140	FricComp Spd Ref
11	Spd Ref1 Divide	141	FricComp Setup
12	Speed Ref 2	142	FricComp Stick
13	Spd Ref2 Multi	143	FricComp Slip
14	Speed Ref 4	144	FricComp Rated
15	Speed Ref 5	145	FricComp TorqAdd
16	Speed Ref Sel		
17	Jog Speed 1		
18	Jog Speed 2		
21	Speed Trim 1		
30	Rev Speed Limit		
31	Fwd Speed Limit		
32	Accel Time		
33	Decel Time		
34	S Curve Time		
35	SpdRef Filt Gain		
36	SpdRef Filt BW		
37	Spd Ref Bypass		
38	Speed Ref Scale		
40	Selected Spd Ref		
41	Limited Spd Ref		
42	Ramped Spd Ref		
43	S Curve Spd Ref		
44	Filtered Spd Ref		
45	Delayed Spd Ref		
46	Scaled Spd Ref		
47	Spd Trim1 SpdRef		
56	Inertia SpeedRef		
57	InertiaAccelGain		
58	InertiaDecelGain		
59	Inertia Torq Add		
61	Virt Encoder PPR		
62	Virt Enchr Posit		
63	Virt Enchr Dlyed		

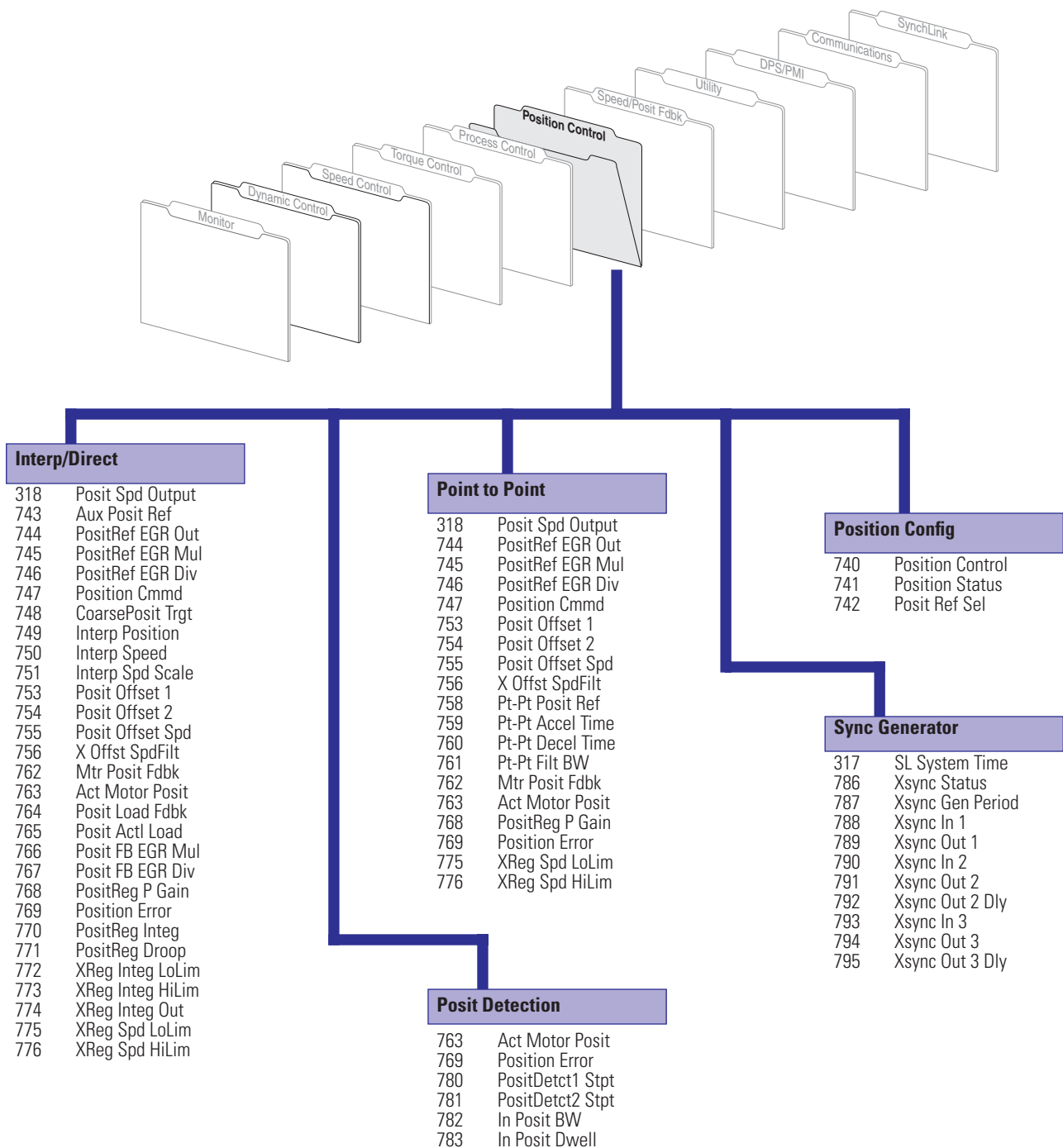
Regulator

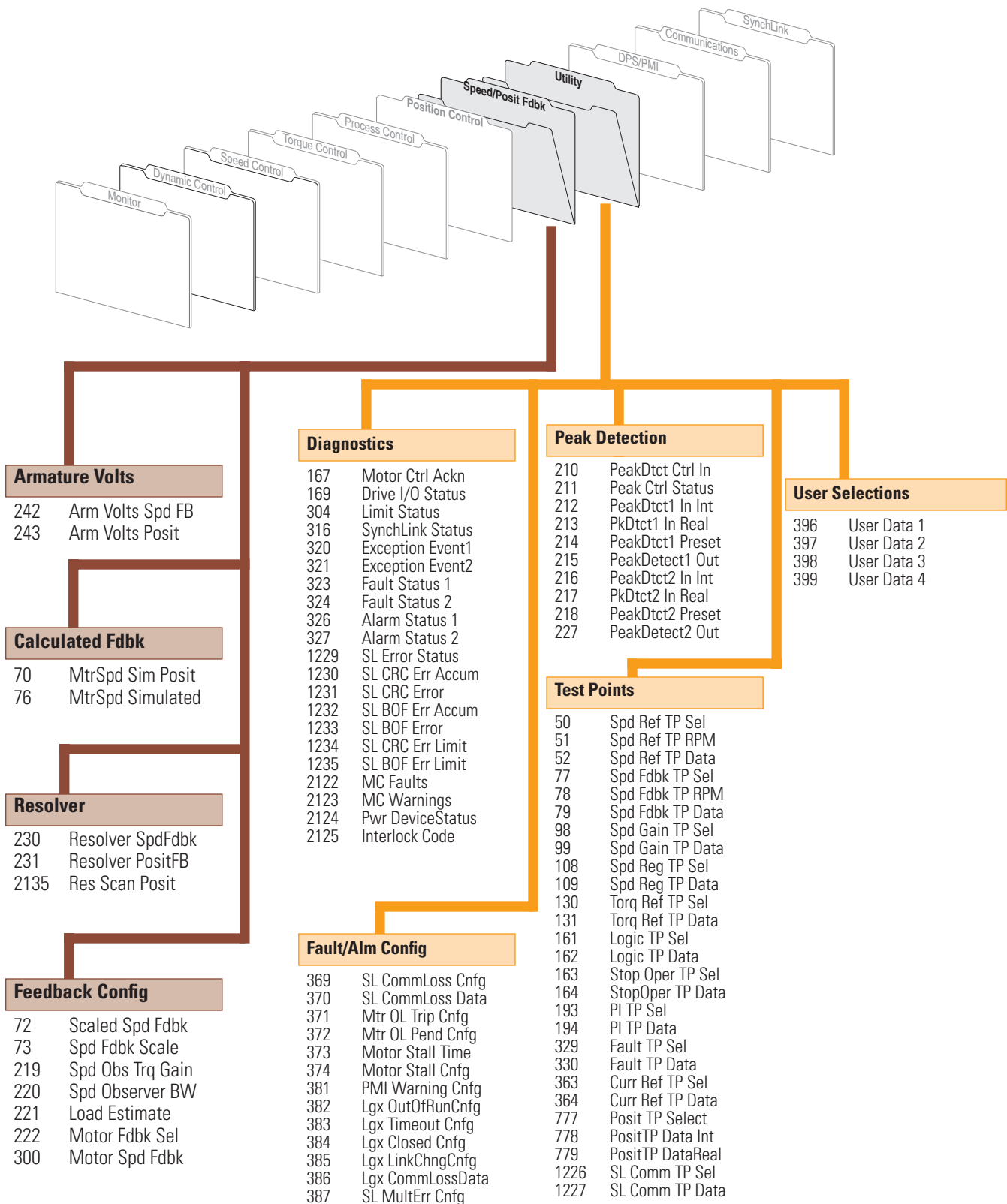
19	Atune Spd Ref
22	Speed Trim 2
23	Speed Trim 3
24	SpdTrim 3 Scale
25	STrim2 Filt Gain
26	SpdTrim2 Filt BW
30	Rev Speed Limit
31	Fwd Speed Limit
47	Spd Trim1 SpdRef
71	Filtered SpdFdbk
80	Speed Reg Ctrl
81	Spd Reg P Gain
82	Spd Reg I Gain
84	SpdReg AntiBckup
85	Servo Lock Gain
86	Spd Reg Droop
87	SReg Torq Preset
89	Spd Err Filt BW
90	Spd Reg BW
91	Spd Reg Damping
92	SpdReg P Gain Mx
93	SRegFB Filt Gain
94	SReg FB Filt BW
95	SRegOut FiltGain
96	SReg Out Filt BW
100	Speed Error
101	SpdReg Integ Out
102	Spd Reg Pos Lim
103	Spd Reg Neg Lim
301	Motor Speed Ref
2185	Hot Field Curr
2187	Field Loss Amps
300	Motor Spd Fdbk
302	Spd Reg PI Out
2189	Motor Inertia
2190	Total Inertia

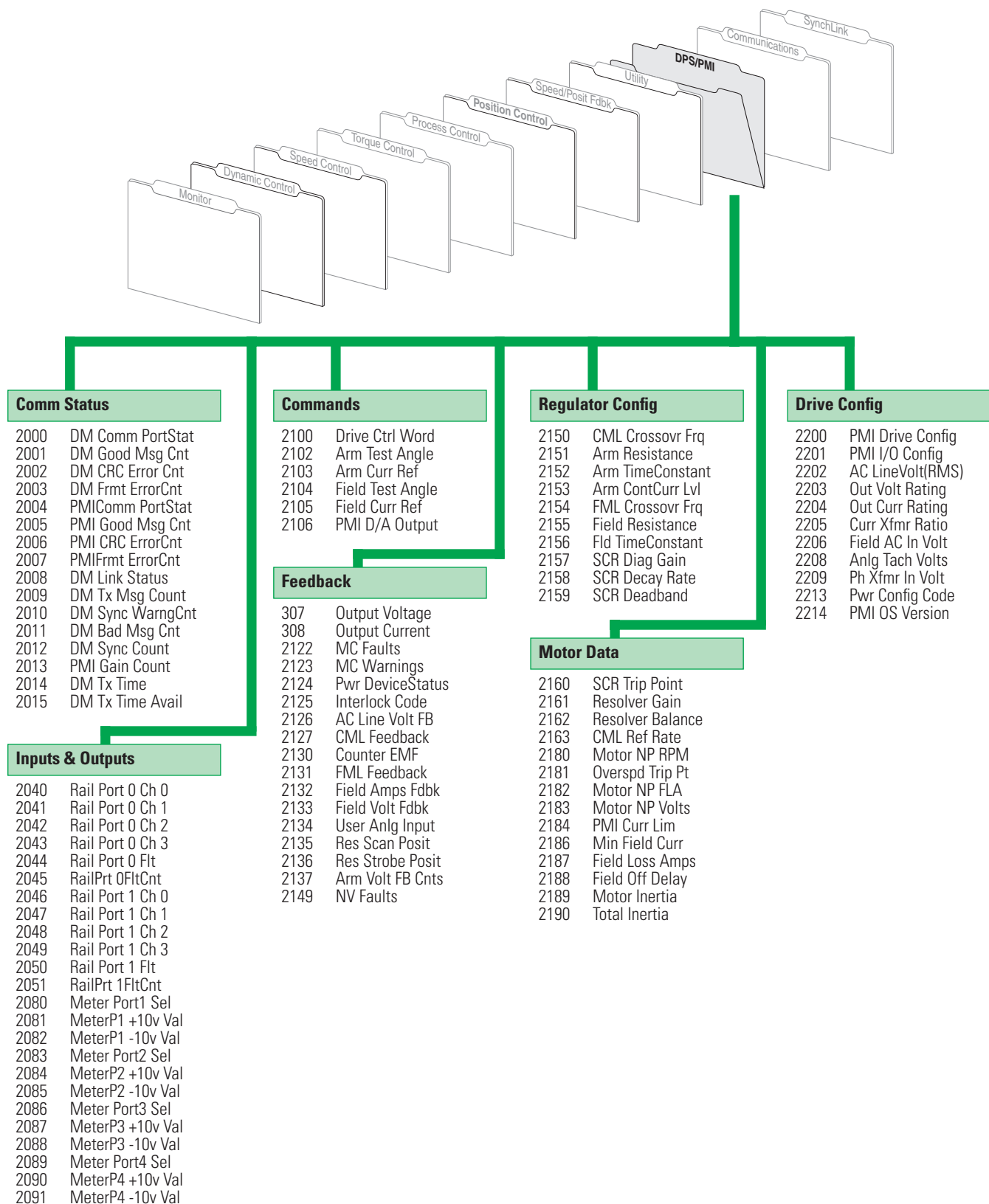
Setpoint Monitor

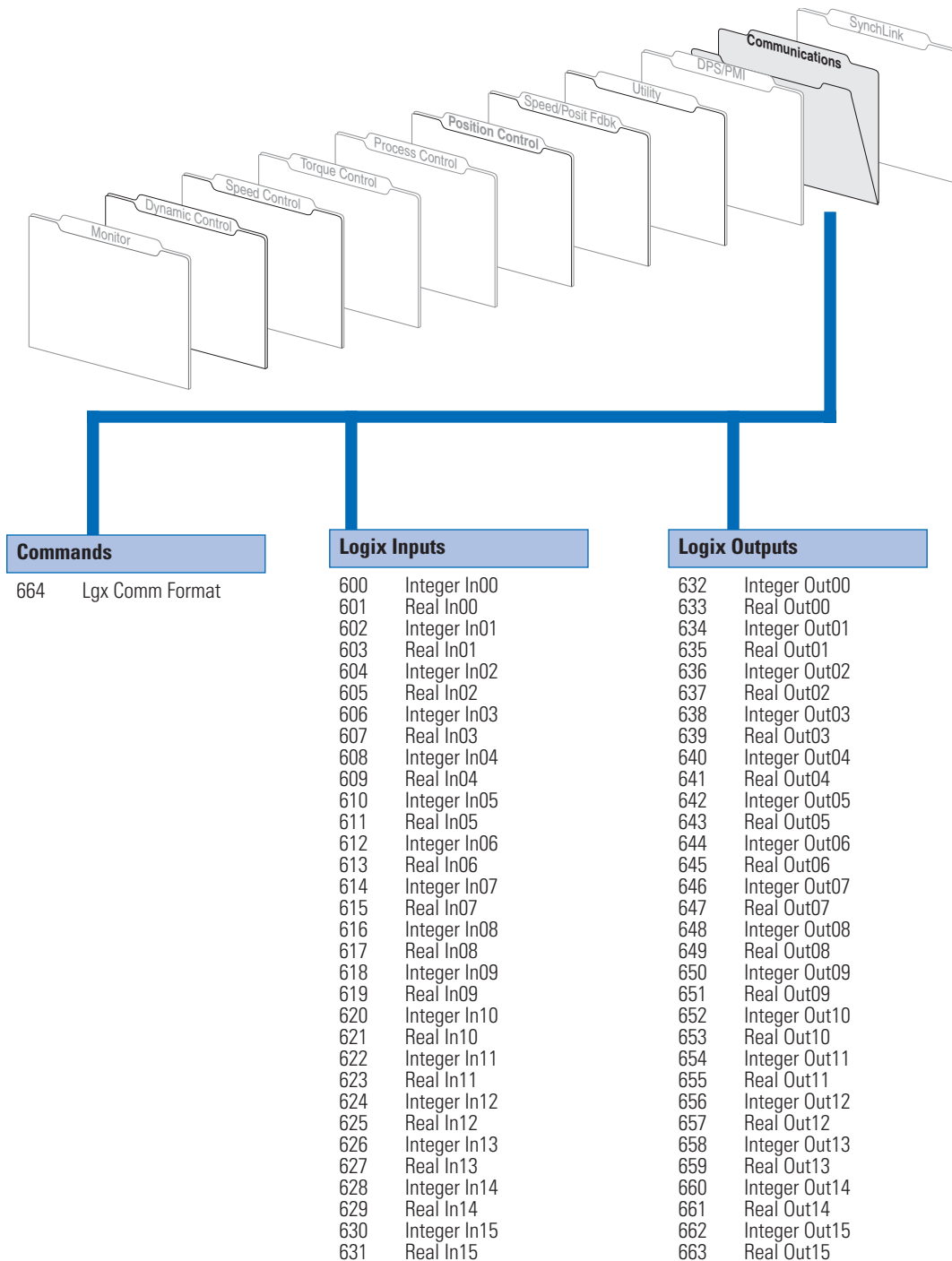
171	Set Speed Lim
172	Setpt 1 Data
173	Setpt1 TripPoint
174	Setpt 1 Limit
175	Setpt 2 Data
176	Setpt2 TripPoint
177	Setpt 2 Limit

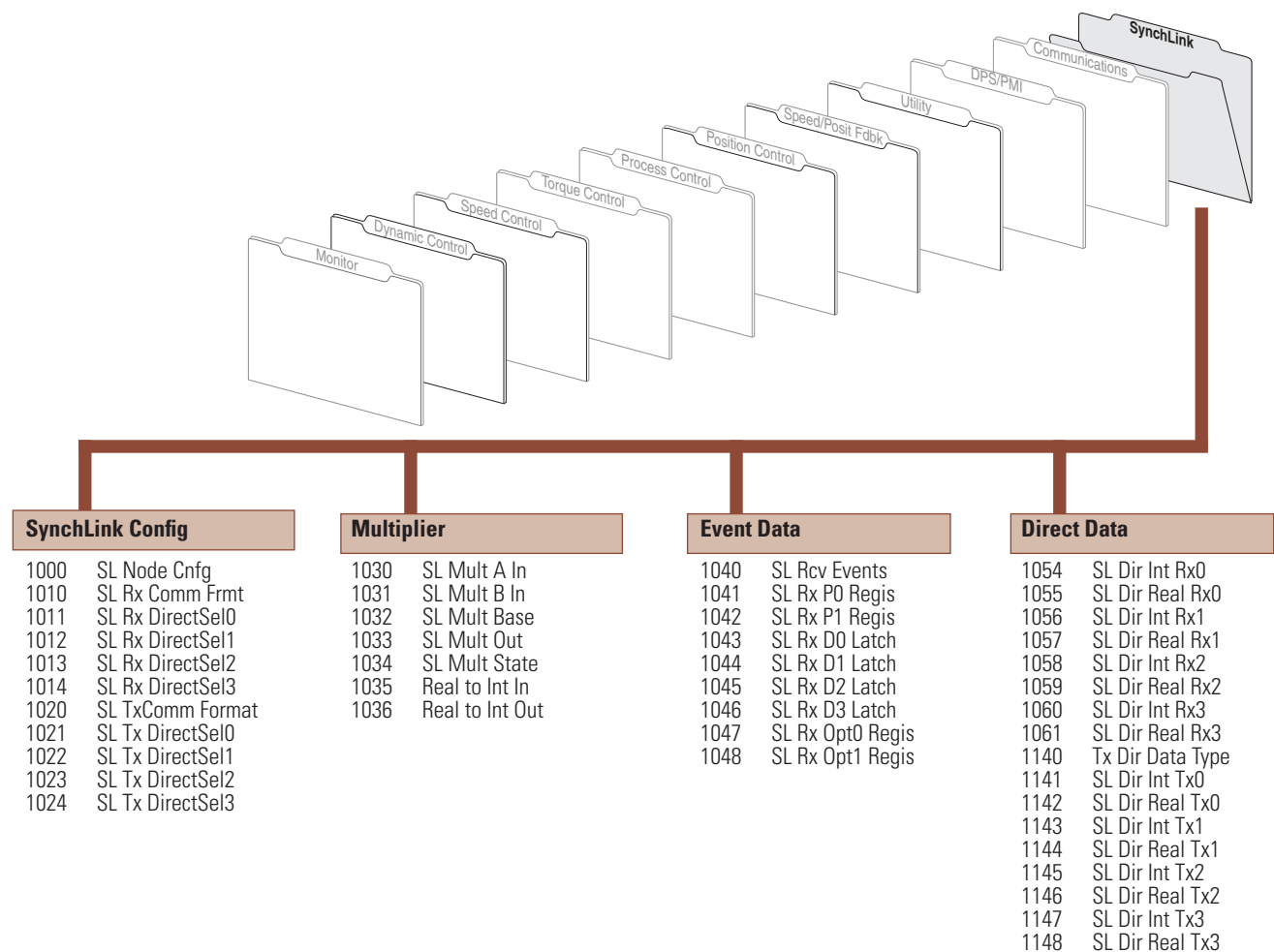


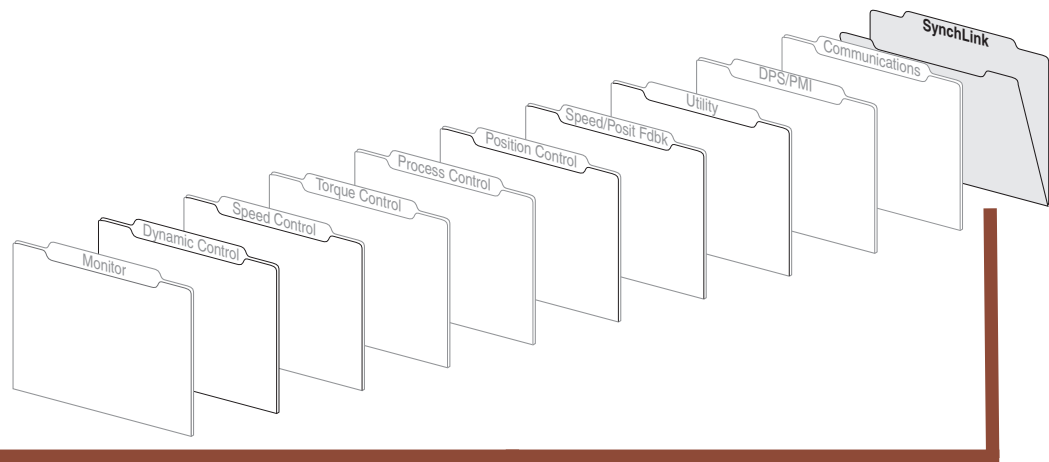










**Buffered Data In**

1073	SL Buf Int Rx00	1117	SL Buf Int Rx22
1074	SL Buf Real Rx00	1118	SL Buf Real Rx22
1075	SL Buf Int Rx01	1119	SL Buf Int Rx23
1076	SL Buf Real Rx01	1120	SL Buf Real Rx23
1077	SL Buf Int Rx02	1121	SL Buf Int Rx24
1078	SL Buf Real Rx02	1122	SL Buf Real Rx24
1079	SL Buf Int Rx03	1123	SL Buf Int Rx25
1080	SL Buf Real Rx03	1124	SL Buf Real Rx25
1081	SL Buf Int Rx04	1125	SL Buf Int Rx26
1082	SL Buf Real Rx04	1126	SL Buf Real Rx26
1083	SL Buf Int Rx05	1127	SL Buf Int Rx27
1084	SL Buf Real Rx05	1128	SL Buf Real Rx27
1085	SL Buf Int Rx06	1129	SL Buf Int Rx28
1086	SL Buf Real Rx06	1130	SL Buf Real Rx28
1087	SL Buf Int Rx07	1131	SL Buf Int Rx29
1088	SL Buf Real Rx07		
1089	SL Buf Int Rx08		
1090	SL Buf Real Rx08		
1091	SL Buf Int Rx09		
1092	SL Buf Real Rx09		
1093	SL Buf Int Rx10		
1094	SL Buf Real Rx10		
1095	SL Buf Int Rx11		
1096	SL Buf Real Rx11		
1097	SL Buf Int Rx12		
1098	SL Buf Real Rx12		
1099	SL Buf Int Rx13		
1100	SL Buf Real Rx13		
1101	SL Buf Int Rx14		
1102	SL Buf Real Rx14		
1103	SL Buf Int Rx15		
1104	SL Buf Real Rx15		
1105	SL Buf Int Rx16		
1106	SL Buf Real Rx16		
1107	SL Buf Int Rx17		
1108	SL Buf Real Rx17		
1109	SL Buf Int Rx18		
1110	SL Buf Real Rx18		
1111	SL Buf Int Rx19		
1112	SL Buf Real Rx19		
1113	SL Buf Int Rx20		
1114	SL Buf Real Rx20		
1115	SL Buf Int Rx21		
1116	SL Buf Real Rx21		

Buffered DataOut

1160	Tx Buf Data Type	1204	SL Buf Real Tx21
1161	SL Buf Int Tx00	1205	SL Buf Int Tx22
1162	SL Buf Real Tx00	1206	SL Buf Real Tx22
1163	SL Buf Int Tx01	1207	SL Buf Int Tx23
1164	SL Buf Real Tx01	1208	SL Buf Real Tx23
1165	SL Buf Int Tx02	1209	SL Buf Int Tx24
1166	SL Buf Real Tx02	1210	SL Buf Real Tx24
1167	SL Buf Int Tx03	1211	SL Buf Int Tx25
1168	SL Buf Real Tx03	1212	SL Buf Real Tx25
1169	SL Buf Int Tx04	1213	SL Buf Int Tx26
1170	SL Buf Real Tx04	1214	SL Buf Real Tx26
1171	SL Buf Int Tx05	1215	SL Buf Int Tx27
1172	SL Buf Real Tx05	1216	SL Buf Real Tx27
1173	SL Buf Int Tx06	1217	SL Buf Int Tx28
1174	SL Buf Real Tx06	1218	SL Buf Real Tx28
1175	SL Buf Int Tx07	1219	SL Buf Int Tx29
1176	SL Buf Real Tx07	1220	SL Buf Real Tx29
1177	SL Buf Int Tx08		
1178	SL Buf Real Tx08		
1179	SL Buf Int Tx09		
1180	SL Buf Real Tx09		
1181	SL Buf Int Tx10		
1182	SL Buf Real Tx10		
1183	SL Buf Int Tx11		
1184	SL Buf Real Tx11		
1185	SL Buf Int Tx12		
1186	SL Buf Real Tx12		
1187	SL Buf Int Tx13		
1188	SL Buf Real Tx13		
1189	SL Buf Int Tx14		
1190	SL Buf Real Tx14		
1191	SL Buf Int Tx15		
1192	SL Buf Real Tx15		
1193	SL Buf Int Tx16		
1194	SL Buf Real Tx16		
1195	SL Buf Int Tx17		
1196	SL Buf Real Tx17		
1197	SL Buf Int Tx18		
1198	SL Buf Real Tx18		
1199	SL Buf Int Tx19		
1200	SL Buf Real Tx19		
1201	SL Buf Int Tx20		
1202	SL Buf Real Tx20		
1203	SL Buf Int Tx21		

Parameter Data In Linear List Format

No.	Name Description	Values		
10	Speed Ref 1 Provides the speed reference that the drive uses when selected by parameter 16 [Speed Ref Sel]. A value of 1.0 represents base speed of the motor.	Default: Min: Max: Type: File: Group:	0.0000 -2200000000 2200000000 Linkable, Read-Write, Floating Point Speed Control Reference	
11	 Spd Ref1 Divide Parameter 10 [Speed Ref 1] is divided by this number. Use this parameter to scale the value of Speed Ref 1.	Default: Min: Max: Type: File: Group:	1.0000 -2200000000 2200000000 Non-Linkable, Read-Write, Floating Point Speed Control Reference	
12	Speed Ref 2 Provides the speed reference that the drive uses when selected by parameter 16 [Speed Ref Sel]. A value of 1.0 represents base speed of the motor.	Default: Min: Max: Type: File: Group:	0.0000 -2200000000 2200000000 Linkable, Read-Write, Floating Point Speed Control Reference	
13	Spd Ref2 Multi Parameter 12 [Speed Ref 2] is multiplied by this number. Use this parameter to scale the value of Speed Ref 2.	Default: Min: Max: Type: File: Group:	1.0000 -2200000000 2200000000 Linkable, Read-Write, Floating Point Speed Control Reference	
14	Speed Ref 4 Provides the speed reference that the drive uses when selected by parameter 16 [Speed Ref Sel]. A value of 1.0 represents base speed of the motor.	Units: Default: Min: Max: Type: File: Group:	RPM 0.0000 -14000 14000 Linkable, Read-Write, Floating Point Speed Control Reference	
15	Speed Ref 5 Provides the speed reference that the drive uses when selected by parameter 16 [Speed Ref Sel]. A value of 1.0 represents base speed of the motor.	Units: Default: Min: Max: Type: File: Group:	RPM 0.0000 -14000 14000 Linkable, Read-Write, Floating Point Speed Control Reference	
16	Speed Ref Sel Enter or write a value to select the source of the speed reference to the drive.	Default:	Val 1	Spd Ref 1
		Options:	Val 0 Val 1 Val 2 Val 3 Val 4 Val 5	Zero Speed Spd Ref 1 Spd Ref 2 Spd Ref 3 Spd Ref 4 Spd Ref 5
		File: Group:	Speed Control Reference	

No.	Name Description	Values	
17	Jog Speed 1 Provides the speed reference that the drive uses when responding to bit 18 [Jog 1] of parameter 152 [Applied LogicCmd].	Units: Default: Min: Max: Type: File: Group:	RPM 0 -14000 14000 Linkable, Read-Write, Floating Point Speed Control Reference
18	Jog Speed 2 Provides the speed reference that the drive uses when responding to bit 23 [Jog 2] of parameter 152 [Applied LogicCmd].	Units: Default: Min: Max: Type: File: Group:	RPM 0 -14000 14000 Linkable, Read-Write, Floating Point Speed Control Reference
19	 Atune Spd Ref Sets the maximum speed of the motor during the Flux current and inertia tests. A value of 1.0 represents base speed of the motor.	Units: Default: Min: Max: Type: File: Group:	RPM 1487.5 525 1750 Non-Linkable, Read-Write, Floating Point Speed Control Regulator
21	Speed Trim 1 Provides an additive trim value to the Scaled Speed Reference. A value of 1.0 represents base speed of the motor.	Units: Default: Min: Max: Type: File: Group:	RPM 0 -14000 14000 Linkable, Read-Write, Floating Point Speed Control Reference
22	Speed Trim 2 Provides an additive speed trim value with a Lead/Lag filter. Position regulator output is linked to this parameter by default. This speed trim value affects the speed reference input to the speed regulator.	Units: Default: Min: Max: Type: File: Group:	RPM 0 -14000 14000 Linkable, Read-Write, Floating Point Speed Control Regulator
23	Speed Trim 3 Provides a scalable speed trim value that will be added to the speed reference input to the speed regulator. Parameter 24 [SpdTrim3 Scale] scales this value prior to the trim value affecting the speed reference. A value of 1.0 represents base speed of the motor.	Units: Default: Min: Max: Type: File: Group:	RPM 0 -14000 14000 Linkable, Read-Write, Floating Point Speed Control Regulator
24	SpdTrim 3 Scale This parameter is multiplied with the value in parameter 23 [Speed Trim 3].	Default: Min: Max: Type: File: Group:	1 -3.2767 3.2767 Linkable, Read-Write, Floating Point Speed Control Regulator

No.	Name Description	Values	
25	STrim2 Filt Gain Sets the lead term for the parameter 22 [Speed Trim 2] filter. Values greater than 1 will result in a lead function and value less than 1 will result in a lag function. A value of 1 will disable the filter.	Default: Min: Max: Type: File: Group:	1 -15 15 Linkable, Read-Write, Floating Point Speed Control Regulator
26	SpdTrim2 Filt BW Sets the natural frequency for the Speed Trim 2 filter.	Units: Default: Min: Max: Type: File: Group:	R/S 200 0 1000 Linkable, Read-Write, Floating Point Speed Control Regulator
30	 Rev Speed Limit Sets a limit on the speed in the negative direction. This value can be entered in as a negative value or zero. This parameter is internally linked to parameters 335 [Abs OverSpd Lim] and 2180 [Motor NP RPM].	Units: Default: Min: Max: Type: File: Group:	RPM -2187.5 -14000 0 Non-Linkable, Read-Write, Floating Point Speed Control Reference, Regulator
31	 Fwd Speed Limit Sets a limit on the speed in the positive direction. This value can be entered in as a positive value or zero. This parameter is internally linked to parameters 335 [Abs OverSpd Lim] and 2180 [Motor NP RPM].	Units: Default: Min: Max: Type: File: Group:	RPM 2187.5 0 14000 Non-Linkable, Read-Write, Floating Point Speed Control Reference, Regulator
32	Accel Time Sets the rate of acceleration for all speed increases. (Rated Speed/Accel Time) = Accel Rate	Units: Default: Min: Max: Type: File: Group:	Sec 10 0.1 6553.5 Linkable, Read-Write, Floating Point Speed Control Reference
33	Decel Time Sets the rate of deceleration for all speed decreases. (Rated Speed/Decel Time) = Decel Rate	Units: Default: Min: Max: Type: File: Group:	Sec 10 0.1 6553.5 Linkable, Read-Write, Floating Point Speed Control Reference
34	S Curve Time Sets the S time (Round In and Round Out) in seconds. This time is added at the beginning and to the end of the applied ramp. The S time is independent of speed and results in a trapezoidal torque profile.	Units: Default: Min: Max: Type: File: Group:	Sec 0.5 0 4 Non-Linkable, Read-Write, Floating Point Speed Control Reference

No.	Name Description	Values	
35	SpdRef Filt Gain Sets the lead term for the Speed Reference filter. Values greater than 1 will result in a lead function and value less than 1 will result in a lag function. A value of 1 will disable the filter.	Default: Min: Max: Type: File: Group:	1 -5 5 Linkable, Read-Write, Floating Point Speed Control Reference
36	SpdRef Filt BW Sets the natural frequency for the Speed Reference filter.	Units: Default: Min: Max: Type: File: Group:	R/S 0 0 500 Linkable, Read-Write, Floating Point Speed Control Reference
37	Spd Ref Bypass The speed command after the limit, ramp and s-curve blocks. Link a source directly to this parameter to bypass these blocks.	Units: Default: Min: Max: Type: File: Group:	RPM 0 -14000 14000 Linkable, Read-Write, Floating Point Speed Control Reference
38	Speed Ref Scale This parameter is multiplied with the value in parameter 44 [Filtered Spd Ref] to produce the value in parameter 46 [Scaled Spd Ref].	Default: Min: Max: Type: File: Group:	1 -3.2767 3.2767 Linkable, Read-Write, Floating Point Speed Control Reference
40	Selected Spd Ref The speed command before the limit block. A value of 1.0 represents base speed of the motor.	Units: Default: Min: Max: Type: File: Group:	RPM 0 -14000 14000 Non-Linkable, Read Only, Floating Point Speed Control Reference
41	Limited Spd Ref Displays the speed command after the limit block, limited by parameter 30 [Rev Speed Limit] and parameter 31 [Fwd Speed Limit]. A value of 1.0 represents base speed of the motor.	Units: Default: Min: Max: Type: File: Group:	RPM 0 -14000 14000 Non-Linkable, Read Only, Floating Point Speed Control Reference
42	Ramped Spd Ref Displays the speed command after the linear ramp block, modified by parameter 32 [Accel Time] and parameter 33 [Decel Time]. A value of 1.0 represents base speed of the motor.	Units: Default: Min: Max: Type: File: Group:	RPM 0 -14000 14000 Non-Linkable, Read Only, Floating Point Speed Control Reference

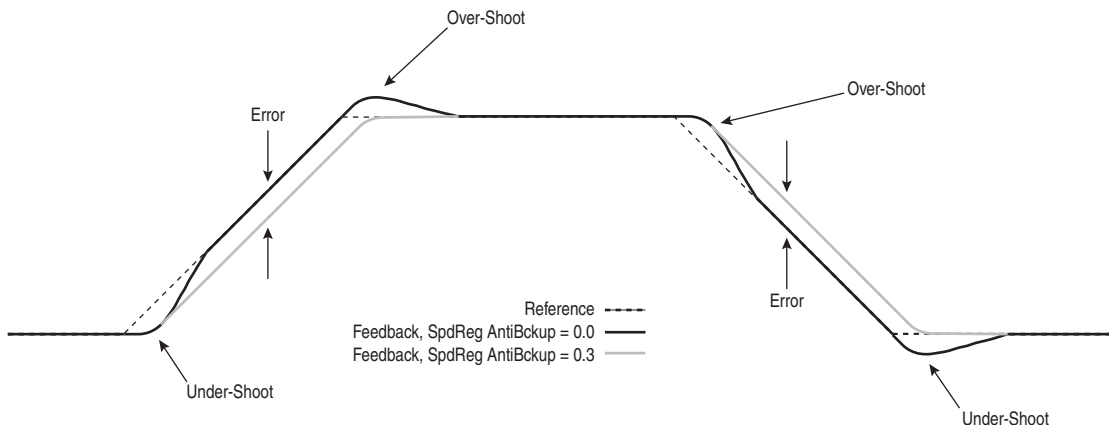
No.	Name Description	Values	
43	S Curve Spd Ref Displays the speed command after the s-curve block, modified by parameter 34 [S Curve Time]. A value of 1.0 represents base speed of the motor.	Units: Default: Min: Max: Type: File: Group:	RPM 0 -14000 14000 Non-Linkable, Read Only, Floating Point Speed Control Reference
44	Filtered Spd Ref Displays the speed reference value output from the reference Lead/Lag filter. A value of 1.0 represents base speed of the motor.	Units: Default: Min: Max: Type: File: Group:	RPM 0 -14000 14000 Non-Linkable, Read Only, Floating Point Speed Control Reference
45	Delayed Spd Ref One sample period delayed output of parameter 43 [S Curve Spd Ref]. Used in some applications to phase synchronize the speed reference value through SynchLink. This parameter would be utilized in place of [S Curve Spd Ref] in the master drive. [S Curve Spd Ref] would then be transmitted to the slave drives over SynchLink. A value of 1.0 represents base speed of the motor.	Units: Default: Min: Max: Type: File: Group:	RPM 0 -14000 14000 Non-Linkable, Read Only, Floating Point Speed Control Reference
46	Scaled Spd Ref Displays the speed command after scaling (the product of parameter 44 [Filtered Spd Ref] and parameter 38 [Speed Ref Scale]. A value of 1.0 represents base speed of the motor.	Units: Default: Min: Max: Type: File: Group:	RPM 0 -14000 14000 Non-Linkable, Read Only, Floating Point Speed Control Reference
47	Spd Trim1 SpdRef The final speed command that will be utilized by the Speed Regulator. It is the sum of the parameter 46 [Scaled Spd Ref] and parameter 21 [Speed Trim1]. A value of 1.0 represents base speed of the motor.	Units: Default: Min: Max: Type: File: Group:	RPM 0 -14000 14000 Non-Linkable, Read Only, Floating Point Speed Control Reference, Regulator

No.	Name Description	Values		
50	Spd Ref TP Sel Enter or write a value to select speed reference data displayed in parameter 52 [Spd TP Data] and parameter 51 [Spd Ref TP RPM].	Default:	Val 0	Zero
		Options:	Val 0 Val 1 Val 2 Val 3 Val 4 Val 5 Val 6 Val 7 Val 8 Val 9 Val 10 Val 11 Val 12 Val 13 Val 14 Val 15 Val 16 Val 17 Val 18 Val 19 Val 20 Val 21	Zero User Ref Logic Select Lgc Sel Ref Reserved Logic En Ref Rev Spd Lim Fwd Spd Lim Rev Lim Stat Fwd Lim Stat Amp Lim Stat Ramp Match S Crv Match S Array size S Array Indx VE Pos Diff Scl Ext Trim Trim Filt OutRef w/Trim Amp Lim2 In Amp LimStat2 Amp Lim2 Out
		File: Group:	Speed Control Reference, Regulator	
51	Spd Ref TP RPM Displays the value selected by parameter 50 [SPd Ref TP Sel] in RPM. This display should only be used if the selected value is floating point data.	Units: Default: Min: Max: Type: File: Group:	RPM 0 -14000 14000 Non-Linkable, Read Only, Floating Point Utility Test Points	
52	Spd Ref TP Data Displays the value selected by parameter 50 [SPd Ref TP Sel]. A value of 1.0 represents base speed of the motor.	Default: Min: Max: Type: File: Group:	0 -32768 32767 Non-Linkable, Read Only, 16-bit Integer Utility Test Points	
56	Inertia SpeedRef The speed input of the inertia compensator. Link this parameter to the output of an internal ramp or s-curve block. The inertia compensator generates a torque reference that is proportional to the rate of change of speed input and total inertia.	Units: Default: Min: Max: Type: File: Group:	RPM 0 -14000 14000 Linkable, Read-Write, Floating Point Speed Control Reference	
57	InertiaAccelGain Sets the acceleration gain for the Inertia Compensation function. A value of 1 produces 100% compensation.	Default: Min: Max: Type: File: Group:	0 0 2 Linkable, Read-Write, Floating Point Speed Control Reference	

No.	Name Description	Values	
58	InertiaDecelGain Sets the deceleration gain for the Inertia Compensation function. A value of 1 produces 100% compensation.	Default: Min: Max: Type: File: Group:	0 0 2 Linkable, Read-Write, Floating Point Speed Control Reference
59	Inertia Torq Add The torque reference output generated by the inertia compensator. This torque level is modified by parameter 57 [InertiaAccelGain] and parameter 58 [InertiaDecelGain]. A value of 1.0 represents rated torque of the motor.	Units: Default: Min: Max: Type: File: Group:	P.U. 0 -8 8 Non-Linkable, Read Only, Floating Point Speed Control, Torque Control Reference, Torque
61	 Virt Encoder PPR Equivalent Pulses Per Revolution or line count of a virtual encoder. A virtual encoder is a position reference whose input comes from speed reference. It accumulates pulses at the same rate as a real encoder of identical PPR. The virtual encoder PPR is internally multiplied by 4 so that total accumulated pulses per revolution is 4x the specified PPR.	Units: Default: Min: Max: Type: File: Group:	PPR 4096 10 65535 Non-Linkable, Read-Write, 16-bit Integer Speed Control Reference
62	Virt Encdr Posit A 32 bit pulse accumulator of the virtual encoder. The accumulated pulse count is equivalent to the hardware accumulator of a real encoder. It accumulates at a rate of 4x the value in parameter 61 [Virt Encoder PPR]. The accumulator starts at zero upon position enable.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer Speed Control Reference
63	Virt Encdr Dlyed One sample period delayed output of parameter 62 [Virt Encdr Posit]. Used in some applications to phase synchronize position reference through synchLink. The master is delayed one sample while the downstream drives update their position references – then all drives sample position simultaneously. The downstream drives do not select a delay.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer Speed Control Reference
70	MtrSpd Sim Posit The motor position output of the motor simulator. The motor simulator provides motor position information during setup and troubleshooting when actual motor control is not desired or possible. To use the motor simulator, enter a value of 4 in parameter 222 [Motor Fdbk Sel].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer Speed/Posit Fdbk Calculated Fdbk
71	Filtered SpdFdbk Displays the motor speed feedback value output from the feedback Lead/Lag filter. A value of 1.0 represents base speed of the motor. A value of 1.0 represents base speed of the motor.	Units: Default: Min: Max: Type: File: Group:	RPM 0 -14000 14000 Non-Linkable, Read Only, Floating Point Speed Control Regulator

No.	Name Description	Values		
72	Scaled Spd Fdbk Displays the product of the speed feedback and parameter 73 [Spd Fdbk Scale]. This parameter is for display only.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point Monitor, Speed/Posit Fdbk Metering, Feedback Config	
73	Spd Fdbk Scale A user adjustable scale factor (multiplier) for speed feedback. It is multiplied with speed feedback to produce parameter 72 [Scaled Spd Fdbk].	Default: Min: Max: Type: File: Group:	1 -2200000000 2200000000 Linkable, Read-Write, Floating Point Speed/Posit Fdbk Feedback Config	
76	MtrSpd Simulated The motor speed output of the motor simulator. The motor simulator provides motor speed information during setup and troubleshooting when actual motor control is not desired or possible. To use the motor simulator, enter a value of 4 in parameter 222 [Motor Fdbk Sel].	Units: Default: Min: Max: Type: File: Group:	RPM 0 -14000 14000 Non-Linkable, Read Only, Floating Point Speed/Posit Fdbk Calculated Fdbk	
77	Spd Fdbk TP Sel Enter or write a value to select the data displayed in parameter 78 [Spd Fdbk TP RPM] and parameter 79 [Spd Fdbk TP data].	Default:	Val 0	Zero
		Options:	Val 0 Val 1 Val 2 Val 3 Val 4 Val 5 Val 6 Val 7 Val 8 Val 9 Val 10 Val 11 Val 12 Val 13 Val 14 Val 15	Zero Clock Time Tach Loss Sw Actl FB Dev Reserved Observer Err UnFilt Load Pri Actl Spd Alt Actl Spd Pri Actl Pos Alt Actl Pos Obser dp in Obser dp Obser dperr Obser accel Obser K3/S
		File: Group:	Utility Test Points	
78	Spd Fdbk TP RPM Displays the value selected by parameter 77 [Spd Fdbk TP Sel] in RPM. This display should only be used if the selected value is floating point data.	Units: Default: Min: Max: Type: File: Group:	RPM 0 -14000 14000 Non-Linkable, Read Only, Floating Point Utility Test Points	
79	Spd Fdbk TP Data Displays the value selected by [Spd Fdbk TP Sel]. This display should only be used if the selected value is integer data.	Default: Min: Max: Type: File: Group:	0 -32768 32767 Non-Linkable, Read Only, 16-bit Integer Utility Test Points	

No.	Name Description	Values		
80	Speed Reg Ctrl Enter or write a value to configure the speed regulator integrator.	Default:	0000 0000	
		Options:	Bit 0 Bit 1 Bit 2 Bit 3 Bit 4 Bit 5 Bit 6 Bit 7	Reserved Preset SelInteg HoldInteg Reset Reserved Reserved Reserved
		File: Group:	Speed Control Regulator	
81	Spd Reg P Gain Sets the proportional gain of the speed regulator. It's value is automatically calculated based on the bandwidth setting in parameter 90 [Spd Reg BW]. Proportional gain may be manually adjusted by setting parameter 90 to a value of zero. Units are (per unit torque) / (per unit speed).	Default: Min: Max: Type: File: Group:	8 0 200 Linkable, Read-Write, Floating Point Speed Control Regulator	
82	Spd Reg I Gain Sets the integral gain of the speed regulator. It's value is automatically calculated based on the bandwidth setting in parameter 90 [Spd Reg BW]. Integral gain may be manually adjusted by setting parameter 90 to a value of zero. Units are (per unit torque/sec) / (per unit speed).	Units: Default: Min: Max: Type: File: Group:	/Sec 8 0 4095.8 Linkable, Read-Write, Floating Point Speed Control Regulator	
84	SpdReg AntiBckup This term modifies the drive's response to the speed reference. With the value minimized, the drive will follow the reference very closely, minimizing error, which is desirable for most process applications. However, it will exhibit some over-shoot and under-shoot. Increasing the value of this term decreases the over-shoot and under-shoot, which is desirable where back-up can not be tolerated. However, this tends to increase the following error. This parameter has no affect on the drive's response to load changes.	Default: Min: Max: Type: File: Group:	0 0 0.5 Linkable, Read-Write, Floating Point Speed Control Regulator	



No.	Name Description	Values	
85	Servo Lock Gain Sets the gain of an additional integrator in the speed regulator. The effect of Servo Lock is to increase stiffness of the speed response to a load disturbance. It behaves like a position regulator with velocity feed forward, but without the pulse accuracy of a true position regulator. The units of Servo Lock are the same as a position regulator with units in rad/sec. Gain should normally be set to less than 1/3 speed regulator bandwidth, or for the desired response. Set to zero to disable Servo Lock.	Units: Default: Min: Max: Type: File: Group:	/Sec 0 0 300 Linkable, Read-Write, Floating Point Speed Control Regulator
86	Spd Reg Droop Specifies the amount of base speed that the speed reference is reduced when at full load torque. Use the droop function to cause the motor speed to droop with an increase in load. The units are per unit speed / per unit torque.	Units: Default: Min: Max: Type: File: Group:	P.U. 0 0 0.25 Linkable, Read-Write, Floating Point Speed Control Regulator
87	SReg Torq Preset When the drive is not enabled, this parameter presets integrator output parameter 101 [SpdReg Integ Out] to specified torque level. This ensures that the torque command will be at the preset value when the drive is enabled and run. Parameter 80 [Speed Reg Ctrl] bit 1 [Preset Sel] = 0 will permit this preset.	Units: Default: Min: Max: Type: File: Group:	P.U. 0 -8 8 Linkable, Read-Write, Floating Point Speed Control Regulator
89	Spd Err Filt BW Sets the bandwidth of a 2nd order Butterworth low pass filter, which reduces quantization noise. The units are rad/sec. A value of 0 will disable the filter. The value should be greater than 6 times the value of parameter 90 [Spd Reg BW].	Units: Default: Min: Max: Type: File: Group:	R/S 500 0 3500 Linkable, Read-Write, Floating Point Speed Control Regulator
90	Spd Reg BW Sets the bandwidth of the speed regulator in rad/sec. Bandwidth is also referred to as the crossover frequency. Small signal time response is approximately 1/BW and is the time to reach 63% of set point. A change to this parameter will cause an automatic update of parameters 81 [Spd Reg P Gain] and 82 [Spd Reg I Gain]. To disable the automatic gain calculation, set this parameter to a value of zero.	Units: Default: Min: Max: Type: File: Group:	R/S 10 0 500 Linkable, Read-Write, Floating Point Speed Control Regulator
91	Spd Reg Damping Sets the damping factor of the drive's characteristic equation and factors in the calculation of the integral gain. A damping factor of 1.0 is considered critical damping. Lowering the damping will produce faster load disturbance rejection, but may cause a more oscillatory response. When parameter 90 [Spd Reg BW] is set to zero, damping factor has no effect.	Default: Min: Max: Type: File: Group:	1 0.5 3 Linkable, Read-Write, Floating Point Speed Control Regulator

No.	Name Description	Values	
92	SpdReg P Gain Mx Places a limit on the maximum value of proportional gain in parameter 81 [Spd Reg P Gain]. When gains are automatically calculated, this parameter is necessary to limit the amplification of noise with increased inertia.	Default: Min: Max: Type: File: Group:	100 0 200 Linkable, Read-Write, Floating Point Speed Control Regulator
93	SRegFB Filt Gain Sets the lead term for the speed feedback filter. Values greater than 1 will result in a lead function and value less than 1 will result in a lag function. A value of 1 will disable the filter.	Default: Min: Max: Type: File: Group:	1 -5 20 Linkable, Read-Write, Floating Point Speed Control Regulator
94	SReg FB Filt BW Sets the natural frequency for the Speed feedback filter.	Units: Default: Min: Max: Type: File: Group:	R/S 0 0 3760 Linkable, Read-Write, Floating Point Speed Control Regulator
95	SRegOut FiltGain Sets the lead term for the Speed Regulator output filter. Values greater than 1 will result in a lead function and value less than 1 will result in a lag function. A value of 1 will disable the filter.	Default: Min: Max: Type: File: Group:	1 -5 5 Linkable, Read-Write, Floating Point Speed Control Regulator
96	SReg Out Filt BW Sets the natural frequency for the Speed Regulator output filter.	Units: Default: Min: Max: Type: File: Group:	R/S 0 0 3760 Linkable, Read-Write, Floating Point Speed Control Regulator

No.	Name Description	Values		
98	Spd Gain TP Sel Enter or write a value to select the speed gain data displayed in parameter 99 [Spd Gain TP Data].	Default:	Val 0	Zero
		Options:	Val 0 Val 1 Val 2 Val 3 Val 4 Val 5 Val 6 Val 7 Val 8 Val 9 Val 10 Val 11 Val 12 Val 13 Val 14 Val 15 Val 16 Val 17	Zero Intg Rate BW Inertia BW PGain Max BW BW Limit BW CalcBW Lim Stat BW Select Totl Inertia TI Lim Stat Mtr Inertia M InrtLmStat I Rate Limit I RtLim Stat PGain Max GnMx LimStat Damping Dmp Lim Stat
		File: Group:	Utility Test Points	
99	Spd Gain TP Data Displays the value selected by parameter 98 [Spd Gain TP Sel].	Default: Min: Max: Type: File: Group:	0 0 500 Non-Linkable, Read Only, Floating Point Utility Test Points	
100	Speed Error The error (difference) between the motor speed reference (+) and the filtered motor speed feedback (-).	Units: Default: Min: Max: Type: File: Group:	RPM 0 -14000 14000 Non-Linkable, Read Only, Floating Point Speed Control Regulator	
101	SpdReg Integ Out The output value of the Speed Regulator Intergal channel.	Units: Default: Min: Max: Type: File: Group:	P.U. 0 -8 8 Non-Linkable, Read Only, Floating Point Speed Control Regulator	
102	Spd Reg Pos Lim Specifies the positive limit of the Speed regulator output value. The output of the Speed regulator is limited by adjustable high and low limits.	Units: Default: Min: Max: Type: File: Group:	P.U. 3 0 6 Linkable, Read-Write, Floating Point Speed Control Regulator	

No.	Name Description	Values		
103	Spd Reg Neg Lim The negative limit of the Speed regulator output value. The output of the Speed regulator is limited by adjustable high and low limits.	Units: Default: Min: Max: Type: File: Group:	P.U. -3 -6 0 Linkable, Read-Write, Floating Point Speed Control Regulator	
108	Spd Reg TP Sel Enter or write a value to select speed regulator data displayed in parameter 109 [Spd Reg TP Data].	Default:	Val 0	Zero
		Options:	Val 0 Val 1 Val 2 Val 3 Val 4 Val 5 Val 6 Val 7 Val 8 Val 9 Val 10 Val 11 Val 12 Val 13 Val 14 Val 15 Val 16 Val 17 Val 18 Val 19	Zero Spd FiltOut Servo Lock Spd+ServLock Prop Output Intg Input Scld Int Pre Sel Int Pre Droop Output Out Lim Stat Intg Hold Reserved1 GainParLim P GainParLim SrvLck ParLm AntiBkup PLm Droop ParLim Pos Lim Stat Neg Lim Stat Limiter Out
		File: Group:	Utility Test Points	
109	Spd Reg TP Data Displays the data selected by parameter 108 [Spd Reg TP Sel].	Units: Default: Min: Max: Type: File: Group:	P.U. 0 -8 8 Non-Linkable, Read Only, Floating Point Utility Test Points	
110	Spd/Torq ModeSel Selects the source for the drive torque reference. It operates as a selector switch, whose position determines the torque reference selection.	Default:	Val 1	Speed Reg
		Options:	Val 0 Val 1 Val 2 Val 3 Val 4 Val 5 Val 6	Zero Torque Speed Reg Torque Ref Min Spd/Torq Max Spd/Torq Sum Spd/Torq AbsMn Spd/Tq
		File: Group:	Torque Control Torque	

No.	Name Description	Values		
111	Torque Ref 1 Supplies an external motor torque reference to the drive. This parameter is divided by the value in parameter 112 [Torq Ref1 Div]. A value of 1.0 represents rated torque of the motor.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point Torque Control Torque	
112	Torq Ref1 Div The divisor for parameter 111 [Torque Ref 1]. 	Default: Min: Max: Type: File: Group:	1 -2200000000 2200000000 Non-Linkable, Read-Write, Floating Point Torque Control Torque	
113	Torque Ref 2 Supplies an external motor torque reference to the drive. This parameter is multiplied by the value in [Torq Ref2 Mult]. A value of 1.0 represents rated torque of the motor.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point Torque Control Torque	
114	Torq Ref2 Mult The multiplier for parameter 113 [Torque Ref 2].	Default: Min: Max: Type: File: Group:	1 -2200000000 2200000000 Linkable, Read-Write, Floating Point Torque Control Torque	
115	Torque Trim The amount added to the Torque Reference before the Speed - Torque Mode Selector. A value of 1.0 represents rated torque of the motor.	Units: Default: Min: Max: Type: File: Group:	P.U. 0 -8 8 Linkable, Read-Write, Floating Point Torque Control Torque	
116	Torque Step The amount added to the selected Torque Reference before notch filtering or limits are applied. A value of 1.0 represents rated torque of the motor.	Units: Default: Min: Max: Type: File: Group:	P.U. 0 -8 8 Linkable, Read-Write, Floating Point Torque Control Torque	
117	Notch Filt Mode Enter or write a value to select the type of notch filter.	Default:	Val 0	No Filter
		Options:	Val 0 Val 1 Val 2	No Filter FIR Notch IR Notch
		File: Group:	Torque Control Torque	

No.	Name Description	Values		
118	Notch Filt Freq The center frequency for both types of Notch filter.	Units: Default: Min: Max: Type: File: Group:	Hz 135 0 500 Linkable, Read-Write, Floating Point Torque Control Torque	
119	Current NegLimit The negative current limit value. If this value is less than the absolute value of parameter 2184 [PMI Curr Lim], this value will set parameter 122 [Curr PosLim Actl]. A value of 1.0 represents motor rated current.	Units: Default: Min: Max: Type: File: Group:	P.U. -1 -8 0 Linkable, Read-Write, Floating Point Torque Control Current	
120	Current PosLimit The positive current limit value. If this value is less than the absolute value of parameter 2184 [PMI Curr Lim], this value will set parameter 121 [Curr NegLim Actl]. A value of 1.0 represents motor rated current.	Units: Default: Min: Max: Type: File: Group:	P.U. 1 0 8 Linkable, Read-Write, Floating Point Torque Control Current	
121	Curr NegLim Actl The actual negative current limit value determined as the maximum value of parameter 119 [Current NegLimit] and the negative of the value in parameter 2184 [PMI Curr Lim]. A value of 1.0 represents rated torque of the motor.	Units: Default: Min: Max: Type: File: Group:	P.U. -1 -8 0 Non-Linkable, Read Only, Floating Point Torque Control, Torque Control Torque, Current	
122	Curr PosLim Actl The actual positive current limit value determined as the maximum value of parameter 120 [Current PosLimit] and parameter 2184 [PMI Curr Lim]. A value of 1.0 represents rated torque of the motor.	Units: Default: Min: Max: Type: File: Group:	P.U. 1 0 8 Non-Linkable, Read Only, Floating Point Torque Control, Torque Control Torque, Current	
130	Torq Ref TP Sel Enter or write a value to select torque reference data displayed in parameter 131 [Torq Ref TP Data].	Default:	Val 0	Zero
		Options:	Val 0 Val 1 Val 2 Val 3 Val 4 Val 5 Val 6 Val 7 Val 8 Val 9	Zero Scale Output Spd Torque TorqMode Out Reserved Actv Mod Out Torq En In Reserved NotchFilt In Torq Lim In
		File: Group:	Utility Test Points	

No.	Name Description	Values	
131	Torq Ref TP Data Displays the data selected by parameter 130 [Torque Ref TP Sel].	Units: Default: Min: Max: Type: File: Group:	P.U. 0 -8 8 Non-Linkable, Read Only, Floating Point Utility Test Points
140	FricComp Spd Ref Supplies a speed input to the Friction Compensation algorithm. This input is normally a speed reference from a motion planner or ramped speed reference. It will trigger a torque feed forward response depending on its value.	Units: Default: Min: Max: Type: File: Group:	RPM 0 -14000 14000 Linkable, Read-Write, Floating Point Speed Control Reference
141	FricComp Setup Enter or write a value to configure the friction compensation algorithm. This is a packed word of 3 digits. Each digit has a possible selection of 10 levels. - The most significant digit sets the number of time steps from stick to slip, each step is 0.002 sec. - The least significant digit sets the speed threshold in intervals of 0.0005 pu speed. - The next (middle) digit sets the hysteresis band for the "units" digit in intervals of 0.0005 pu velocity. Example: FricComp Setup = 324 means: 3 time steps between stick and slip, each of 0.002 sec. duration, 2 counts of hysteresis or 0.001 pu_speed (each count is 0.0005 pu speed), and 4 counts or 0.002 pu_speed is the trigger threshold (each count is 0.0005 pu speed).	Default: Min: Max: Type: File: Group:	325 0 999 Non-Linkable, Read-Write, 16-bit Integer Speed Control Reference
142	FricComp Stick The torque needed to break away from zero speed. By nature of friction, the break away friction will always be greater than the running friction.	Units: Default: Min: Max: Type: File: Group:	P.U. 0.15 0 8 Linkable, Read-Write, Floating Point Speed Control Reference
143	FricComp Slip The torque level to sustain very low speed – once "break away" has been achieved. By nature of friction, running torque (slip) will always be less than break away torque.	Units: Default: Min: Max: Type: File: Group:	P.U. 0.1 0 8 Linkable, Read-Write, Floating Point Speed Control Reference
144	FricComp Rated The torque needed to keep the motor running at base motor speed and with no process loading. The friction compensation algorithm assumes a linear or viscous component of friction between parameter 143 [FricComp Slip] and parameter 144 [FricComp Rated].	Units: Default: Min: Max: Type: File: Group:	P.U. 0.2 0 8 Linkable, Read-Write, Floating Point Speed Control Reference

No.	Name Description	Values		
145	FricComp TorqAdd The torque reference output of the Friction Compensation function. A value of 1.0 represents rated torque of the motor.	Units: Default: Min: Max: Type: File: Group:	P.U. 0 -8 8 Non-Linkable, Read Only, Floating Point Speed Control, Torque Control Reference, Torque	
150	Logic State Mach Indicates the logical state of the drive. Value 0 - Stopped indicates zero speed has been detected and the speed and torque regulators are disabled.	Default:	Val 0	Stopped
		Options:	Val 0 Val 1 Val 2 Val 3 Val 4 Val 5 Val 6	Stopped Starting Running Stopping Inertia Test MC Diag Reserved
		File: Group:	Monitor Control Status	
151	Logic Command The controller-drive interface (as defined by the Controller Communication Format), set bits to enable and disable various functions and algorithms. Bits that are changed here are reflected in parameter 152 [Applied LogicCmd]. Note: Bits 4 through 9 in Logic Command are NOT recalled from Control EEPROM. They will be cleared upon drive powerup or following an EEPROM recall operation. Refer to Peak Detector / Control Logix on page B-11, the block diagram shows the connection to the LogicCommand word, of the Controller Communication Format, via parameter 600 [Integer In00].	Default:	0000 0000 0000 0000	
		Options:	Bit 0 Bit 1 Bit 2 Bit 3 Bit 4 Bit 5 Bit 6 Bit 7 Bit 8 Bit 9 Bit 10 Bit 11 Bit 12 Bit 13 Bit 14 Bit 15	SpdRamp Dsbl Spd S Crv En TachLoss Rst Time Axis En MC Atune En Reserved Reserved Reserved Mtr Inert En Sys Inert En Inertia Comp Frict Comp ProcsTrim En Reserved Reserved Reserved
		File: Group:	Dynamic Control Configuration	

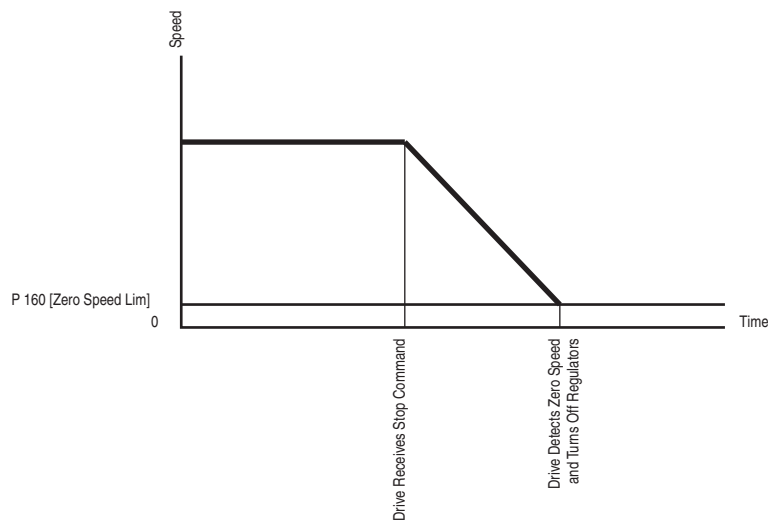
No.	Name Description	Values		
152	Applied LogicCmd Displays Logic Command that is applied to the Regulators and Control Algorithms within the drive. Logic Commands come from the 32-bit Logic Command found in a connection with the Logix Controller. Refer to Peak Detector / Control Logix on page B-11, the block diagram shows the connection to the LogicCommand word, of the Controller Communication Format, via parameter 600 [Integer In00].	Default:	0000 0000 0000 0000 0000 0000 0000 0000	
		Options:	Bit 0 Bit 1 Bit 2 Bit 3 Bit 4 Bit 5 Bit 6 Bit 7 Bit 8 Bit 9 Bit 10 Bit 11 Bit 12 Bit 13 Bit 14 Bit 15 Bit 16 Bit 17 Bit 18 Bit 19 Bit 20 Bit 21 Bit 22 Bit 23 Bit 24 Bit 25 Bit 26 Bit 27 Bit 28 Bit 29 Bit 30 Bit 31	SpdRamp Dsbl Spd S Crv En TachLoss Rst Time Axis En MC Atune En Reserved Reserved Reserved Mtr Inert En Sys Inert En Inertia Comp Frict Comp ProcsTrim En Reserved Reserved Reserved Normal Stop Start Jog 1 Clear Fault UniPol Fwd UniPol Rev Reserved Jog 2 CurrLim Stop Coast Stop Position En Reserved Reserved Reserved Field En Reserved
		File: Group:	Dynamic Control Configuration	

No.	Name Description	Values			
153	Control Options Select options for operating the drive logic operations.	Default:	0000 0000 0000 0000 0000 0001 0000 0001		
		Options:	Bit 0	Bipolar SRef	
			Bit 1	SRef Filt En	
			Bit 2	Reserved	
			Bit 3	Reserved	
			Bit 4	Jog in Torq	
			Bit 5	Jog - NoRamp	
			Bit 6	Stop in Torq	
			Bit 7	Stop Cndt Tq	
			Bit 8	Latch Start	
			Bit 9	2W CoastStop	
			Bit 10	Reserved	
			Bit 11	Curr Delay	
			Bit 12	Jog -NoInteg	
			Bit 13	Reserved	
			Bit 14	Invt Spd Fbk	
			Bit 15	Invt Mtr Cur	
			Bit 16	Reserved	
			Bit 17	Reserved	
			Bit 18	Reserved	
			Bit 19	Reserved	
			Bit 20	Reserved	
			Bit 21	Reserved	
			Bit 22	Reserved	
			Bit 23	Reserved	
			Bit 24	Reserved	
			Bit 25	Reserved	
			Bit 26	Reserved	
			Bit 27	Reserved	
			Bit 28	Reserved	
			Bit 29	Reserved	
			Bit 30	Reserved	
			Bit 31	Reserved	
File: Group:	Dynamic Control Configuration				

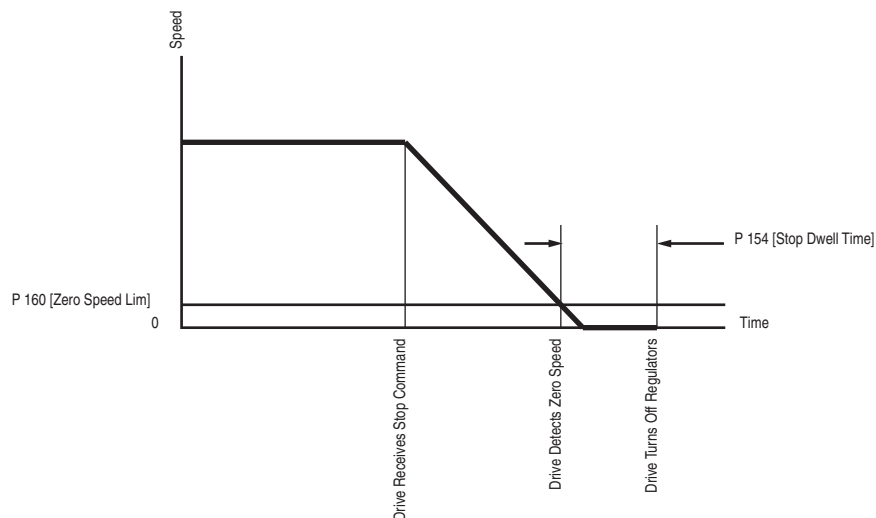
No.	Name Description	Values	
154	Stop Dwell Time Sets an adjustable delay time between detecting zero speed and disabling the speed and torque regulators, when responding to a stop command.	Units: Default: Min: Max: Type: File: Group:	Sec 0 0 10 Linkable, Read-Write, Floating Point Dynamic Control Stop/Brake Modes

IMPORTANT

Consult industry and local codes when setting the value of this parameter.

Drive Operation when paramter 154 [Stop Dwell Time] equals zero

When parameter 154 [Stop Dwell Time] equals zero, the drive turns off the velocity and torque regulators when it detects zero speed.

Drive Operation when paramter 154 [Stop Dwell Time] is greater than zero

When parameter 154 [Stop Dwell Time] is greater than zero, the drive delays turning off the velocity and torque regulators for the amount of time specified by parameter 154.

No.	Name Description	Values		
155	Logic Status Displays the status - condition of the drive. If there is a Controller to Drive Module error or inhibit, the data in the LogicStatus word of the Controller Communication Format will be set to 0x0000ffff. Bit 15 [Reserved] was used in AutoGen to detect loss of connection. This parameter is linked to the LogicStatus word of the Controller Communication Format via parameter 632 [Integer Out00].	Default:	0000 0000 0000 0000 0000 0000 0000 0000	
		Options:	Bit 0 Bit 1 Bit 2 Bit 3 Bit 4 Bit 5 Bit 6 Bit 7 Bit 8 Bit 9 Bit 10 Bit 11 Bit 12 Bit 13 Bit 14 Bit 15 Bit 16 Bit 17 Bit 18 Bit 19 Bit 20 Bit 21 Bit 22 Bit 23 Bit 24 Bit 25 Bit 26 Bit 27 Bit 28 Bit 29 Bit 30 Bit 31	Enabled Running Command Dir Actual Dir Accelerating Decelerating Jogging Faulted Alarm Flash Mode Run Ready At Limit Tach Loss Sw At Zero Spd At Setpt Spd Reserved At Setpt 1 Above Setpt2 MC En Ack MC Commis Spd Commis Reserved Torque Mode Speed Mode PositionMode Start Active Command Run Reserved Reserved Reserved FieldCurr On Reserved
		File: Group:	Monitor Control Status	

No.	Name Description	Values			
156	Run Inhibit Stat Indicates which condition is preventing the drive from starting or running.	Default:	0000 0000 0000 0000 0000 0000 0000 0000		
		Options:	Bit 0 Bit 1 Bit 2 Bit 3 Bit 4 Bit 5 Bit 6 Bit 7 Bit 8 Bit 9 Bit 10 Bit 11 Bit 12 Bit 13 Bit 14 Bit 15 Bit 16 Bit 17 Bit 18 Bit 19 Bit 20 Bit 21 Bit 22 Bit 23 Bit 24 Bit 25 Bit 27 Bit 28 Bit 29 Bit 30 Bit 31	Bit 0 Bit 1 Bit 2 Bit 3 Bit 4 Bit 5 Bit 6 Bit 7 Bit 8 Bit 9 Bit 10 Bit 11 Bit 12 Bit 13 Bit 14 Bit 15 Bit 16 Bit 17 Bit 18 Bit 19 Bit 20 Bit 21 Bit 22 Bit 23 Bit 24 Bit 25 Bit 27 Bit 28 Bit 29 Bit 30 Bit 31	Faulted Reserved SW Ramp Stop SW Cost Stp SW I Stp Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Start Jog Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved No PMI Sync No Run Perm PMI Drv Flt PMIDrvIntrlk
		File: Group:	Monitor Control Status		

No.	Name Description	Values				
157	Logic Ctrl State Indicates which logic control functions are enabled.	Default:	0000 0000 0000 0000 0000 0000 0000 0000			
		Options:	Bit 0 Bit 1 Bit 2 Bit 3 Bit 4 Bit 5 Bit 6 Bit 7 Bit 8 Bit 9 Bit 10 Bit 11 Bit 12 Bit 13 Bit 14 Bit 15 Bit 16 Bit 17 Bit 18 Bit 19 Bit 20 Bit 21 Bit 22 Bit 23 Bit 24 Bit 25 Bit 26 Bit 27 Bit 28 Bit 29 Bit 30 Bit 31	Spd Ref En SRef Ramp En SRef SCrv En Position En Reserved J Tst FulSpd CurrLim Stop SReg IntgHld Spd Reg En Torq Ref En Forced Spd CurrRef En Reserved Mtr Sim Mode Reserved Reserved MC En Req Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Lgx Run Mode Lgx I/O Cnx Cmd Dir Upol ProcsTrim En		
		File: Group:	Monitor Control Status			
160	Zero Speed Lim Establishes a band around zero speed that is used to determine when the drive considers the motor to be at zero speed. A value of 1.0 represents base speed of the motor.	Units: Default: Min: Max: Type: File: Group:	RPM 17.5 0 875 Linkable, Read-Write, Floating Point Dynamic Control Dynamic Control			

No.	Name Description	Values		
161	Logic TP Sel Enter or write a value to select logic status indication displayed in parameter 162 [Logic TP Data].	Default:	Val 0	Zero
		Options:	Val 0 Val 1 Val 2 Val 3 Val 4 Val 5 Val 6 Val 7 Val 8 Val 9 Val 10 Val 11	Zero Avg Spd Ref Avg Spd Fdbk LastStopMode Spd Ref Sel Start State Run State Stop State Reserved Meas State Data State Diag State
		File: Group:	Utility Test Points	
162	Logic TP Data Displays the indication selected by parameter 161 [Logic TP Sel].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point Utility Test Points	
163	Stop Oper TP Sel Enter or write a value to select data displayed in parameter 164 [StpOper TPDData] at the time of the last initiated stop.	Default:	Val 0	Zero
		Options:	Val 0 Val 1 Val 2 Val 3 Val 4 Val 5 Val 6 Val 7 Val 8 Val 9 Val 10 Val 11 Val 12 Val 13 Val 14 Val 15 Val 16 Val 17 Val 18 Val 19 Val 20 Val 21 Val 22 Val 23	Zero Lgoic State Logic Input Reserved Logic Status Run Inhibit Logic Ctrl Mtr Ctrl Cmd Mtr Ctrl Ack Std Dig I/O Flt Status 1 Flt Status 2 Motor Speed Avg Spd Fdbk ZM1 Spd Fdbk Speed Ref Avg Spd Ref ZM1 Spd Ref SReg PI Out Torq Ref TorqRef Stat Reserved Motor Volts Mtr Current
		File: Group:	Utility Test Points	

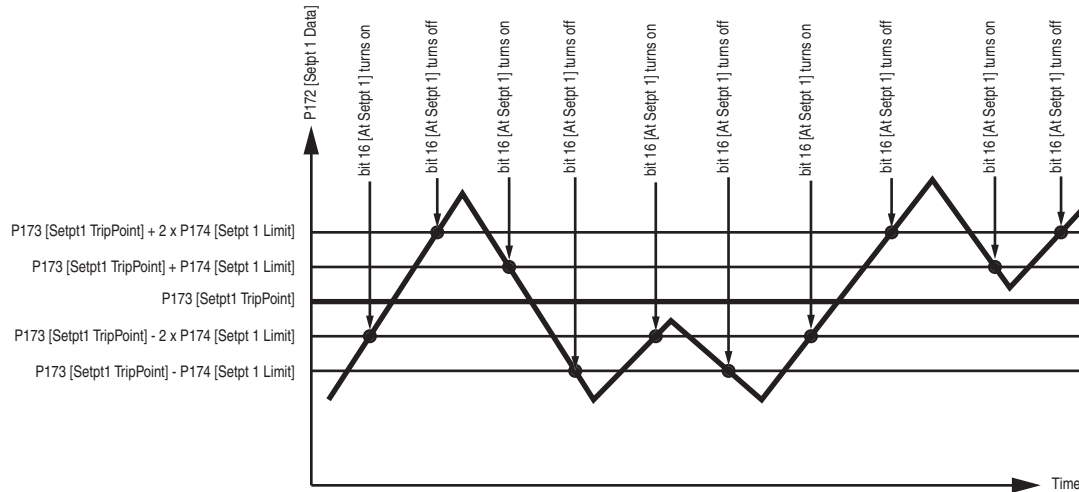
No.	Name Description	Values		
164	StopOper TP Data Displays the data selected by parameter 163 [Stop Oper TP Sel].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point Utility Test Points	
165	Test Status Displays the name of any active test in progress.	Default:	Val 0	Diag Off
		Options:	Val 0 Val 1 Val 2 Val 3 Val 4 Val 5 Val 6 Val 7 Val 8 Val 9 Val 10 Val 11 Val 12 Val 13 Val 14 Val 15 Val 16 Val 17 Val 18 Val 19 Val 20 Val 21 Val 22 Val 23 Val 24 Val 25 Val 26 Val 27 Val 28 Val 29 Val 30 Val 31	
		File: Group:	Monitor Control Status	

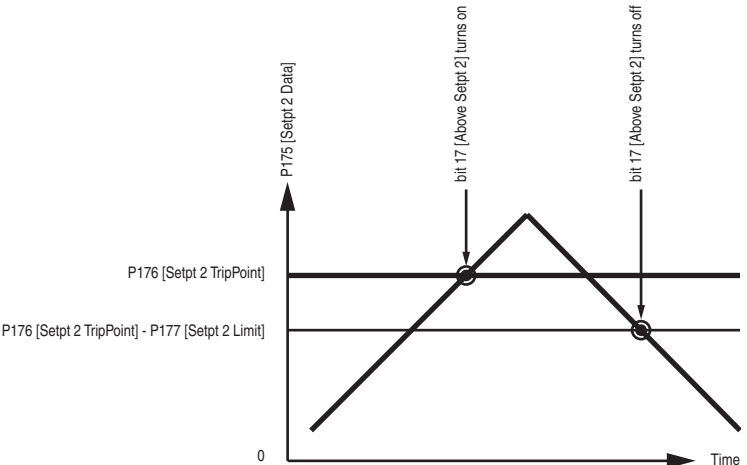
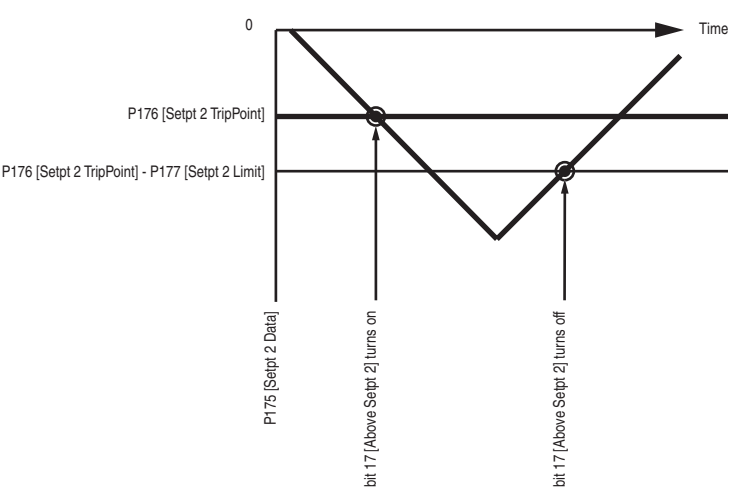
No.	Name Description	Values		
166	Motor Ctrl Cmmnd Displays the command bits to the Motor Control Processor from the Velocity Processor	Default:	0000 0000 0000 0000 0000 0000 0000 0000	
		Options:	Bit 0	Reserved
			Bit 1	Reserved
			Bit 2	Reserved
			Bit 3	Reserved
			Bit 4	Reserved
			Bit 5	Reserved
			Bit 6	Reserved
			Bit 7	Reserved
			Bit 8	Reserved
			Bit 9	Reserved
			Bit 10	Reserved
			Bit 11	Reserved
			Bit 12	Reserved
			Bit 13	Reserved
			Bit 14	Reserved
			Bit 15	Reserved
			Bit 16	Reserved
			Bit 17	Reserved
			Bit 18	Fld Econ En
			Bit 19	Clr Drv Wm
			Bit 20	Dsbl BrstFrg
			Bit 21	Dsbl Fld Wk
			Bit 22	Dsbl ShrtSCR
			Bit 23	Dsbl Opn SCR
			Bit 24	Arm Id Tst
			Bit 25	Fld Id Tst
			Bit 26	Arm Alph Tst
			Bit 27	Fld Alph Tst
			Bit 28	ArmRAmph Tst
			Bit 29	FldRAmph Tst
			Bit 30	Reserved
			Bit 31	Reserved
		File: Group:	Monitor Control Status	

No.	Name Description	Values		
167	Motor Ctrl Ackn Displays the Motor Control Processor's acknowledgment to the Velocity Processor for the Motor Control Command bits.	Default:	0000 0000 0000 0000	
		Options:	Bit 0 Bit 1 Bit 2 Bit 3 Bit 4 Bit 5 Bit 6 Bit 7 Bit 8 Bit 9 Bit 10 Bit 11 Bit 12 Bit 13 Bit 14 Bit 15	Arm Enabl Arm ID Done Arm AlphaMin Arm AlphaMax Field Enable Fld ID Done Fld AlphaLim Reserved Fault Detect Warning Detect AC Phase ABC Phase Ready Reserved Rail I/O OK PMI Syncd PMI O SLoaded
		File: Group:	Monitor Control Status	
168	Drive I/O Ctrl Set bits to control PMI functions.	Default:	0000 0000 0000 0000	
		Options:	Bit 0 Bit 1 Bit 2 Bit 3 Bit 4 Bit 5 Bit 6 Bit 7 Bit 8 Bit 9 Bit 10 Bit 11 Bit 12 Bit 13 Bit 14 Bit 15	Reserved M-Cont Out Ext Flt LED Reserved Aux Output Reserved Enbl Res Bal Reserved Ext Strobe Ext StrobeFE Dis BrknWire Reserved Reserved Reserved Reserved DM Fiber Tst
		File: Group:	Dynamic Control Configuration	

No.	Name Description	Values		
169	Drive I/O Status Indicates status of PMI functions.	Default:	0000 0000 0000 0000	
		Options:	Bit 0 Bit 1 Bit 2 Bit 3 Bit 4 Bit 5 Bit 6 Bit 7 Bit 8 Bit 9 Bit 10 Bit 11 Bit 12 Bit 13 Bit 14 Bit 15	Run Perm M-Cont Fdbk Aux In 2 Aux In 3 Aux In 4 Aux In 5 Res Gain OK Res Bal OK StrobeDetect Strobe Level Reserved Reserved Reserved Reserved Reserved Reserved
		File: Group:	Utility Diagnostics	
171	Set Speed Lim Creates a tolerance - hysteresis band around the value in parameter 41 [Limited Spd Ref] for comparison to average speed feedback. The comparison controls bit 14 [At Setpt Spd] of parameter 155 [Logic Status]. In general bit 14 [At Setpt Spd] turns on when the feedback is within the tolerance of the reference. Technically - Turn-on level for rising feedback = Limited Spd Ref - Limit. Turn-off level for rising feedback = Limited Spd Ref + 2(Limit). Turn-on level for falling feedback = Limited Spd Ref + Limit. Turn-off level for falling feedback = Limited Spd Ref - 2(Limit).	Units: Default: Min: Max: Type: File: Group:	RPM 17.5 0 875 Linkable, Read-Write, Floating Point Speed Control Setpoint Monitor	

No.	Name Description	Values	
172	Setpt 1 Data Provides data for comparison to parameter 173 [Setpt1 TripPoint], driving bit 16 [At Setpt 1] of parameter 155 [Logic Status].	Units: Default: Min: Max: Type: File: Group:	P.U. 0 -8 8 Linkable, Read-Write, , Floating Point Speed Control Setpoint Monitor
173	Setpt1 TripPoint Provides the midpoint for operation of bit 16 [At Setpt 1] of parameter 155 [Logic Status].	Units: Default: Min: Max: Type: File: Group:	P.U. 0.1 -8 8 Linkable, Read-Write, Floating Point Speed Control Setpoint Monitor
174	Setpt 1 Limit Creates a tolerance - hysteresis band around the value in parameter 173 [Setpt1 TripPoint]. Turn-on level for ascending data = TripPoint - Limit. Turn-off level for ascending data = TripPoint + 2(Limit). Turn-on level for descending data = TripPoint + Limit. Turn-off level for descending data = TripPoint - 2(Limit).	Units: Default: Min: Max: Type: File: Group:	P.U. 0.01 0 0.5 Linkable, Read-Write, Floating Point Speed Control Setpoint Monitor



No.	Name Description	Values	
175	Setpt 2 Data Provides data for comparison to parameter 177 [Setpt2 TripPoint], driving bit 17 [Above Setpt 2] of parameter 155 [Logic Status].	Units: Default: Min: Max: Type: File: Group:	P.U. 0 -8 8 Linkable, Read-Write, Floating Point Speed Control Setpoint Monitor
	Positive Setpoint (Parameter 176 [Setpt 2 TripPoint] Greater Than Zero)  Negative Setpoint (Parameter 176 [Setpt 2 TripPoint] Less Than Zero) 		
176	Setpt2 TripPoint Provides the midpoint for operation of bit 16 [At Setpt 1] of parameter 155 [Logic Status].	Units: Default: Min: Max: Type: File: Group:	P.U. 0.2 -8 8 Linkable, Read-Write, Floating Point Speed Control Setpoint Monitor

No.	Name Description	Values	
177	Setpt 2 Limit Creates a tolerance - hysteresis band around the value in parameter 176 [Setpt2 TripPoint]. For positive setpoints: Turn-on level = TripPoint, Turn-off level = TripPoint - Limit. For negative setpoints: Turn-on level = TripPoint, Turn-off level = TripPoint + Limit.	Units: Default: Min: Max: Type: File: Group:	P.U. 0.01 0 0.5 Linkable, Read-Write, Floating Point Speed Control Setpoint Monitor
180	PI Output The final output of the Process Control regulator. A value of 1 can represent either base motor speed, motor rated torque, or 100% for some external function.	Units: Default: Min: Max: Type: File: Group:	P.U. 0 -8 8 Non-Linkable, Read Only, Floating Point Process Control Regulator
181	PI Reference The reference input for the process control regulator. A value of 1 can represent either base motor speed, motor rated torque, or 100% for some external function.	Units: Default: Min: Max: Type: File: Group:	P.U. 0 -8 8 Linkable, Read-Write, Floating Point Process Control Process Config
182	PI Feedback The feedback input for the process control regulator. A value of 1 can represent either base motor speed, motor rated torque, or 100% for some external function.	Units: Default: Min: Max: Type: File: Group:	P.U. 0 -8 8 Linkable, Read-Write, Floating Point Process Control Process Config

No.	Name Description	Values			
183	PI Command Set bits to configure the process control regulator -enable or disable the regulator, enable or disable the time function generator and limit generator.	Default:	0000 0000 0000 0000 0000 0000 0000 0000		
		Options:	Bit 0 Bit 1 Bit 2 Bit 3 Bit 4 Bit 5 Bit 6 Bit 7 Bit 8 Bit 9 Bit 10 Bit 11 Bit 12 Bit 13 Bit 14 Bit 15 Bit 16 Bit 17 Bit 18 Bit 19 Bit 20 Bit 21 Bit 22 Bit 23 Bit 24 Bit 25 Bit 26 Bit 27 Bit 28 Bit 29 Bit 30 Bit 31	Enable Time Lim En Reserved 	

No.	Name Description	Values	
186	PI Prop Gain Controls the proportional gain of the Process Control regulator. If the proportional gain is 1.0, the regulator output equals 1 pu for 1 pu error.	Default: Min: Max: Type: File: Group:	8 0 200 Linkable, Read-Write, Floating Point Process Control Regulator
187	PI Integ Time Controls the integral gain of the Process Control regulator. If the integrator time is 1.0, the regulator output equals 1 pu in 1 second for 1 pu error.	Units: Default: Min: Max: Type: File: Group:	/Sec 8 0 4095.8 Linkable, Read-Write, Floating Point Process Control Regulator
188	PI Integ HLim The high limit of the integral gain channel for the Process Control regulator. A value of 1 can represent either base motor speed, motor rated torque, or 100% for some external function.	Units: Default: Min: Max: Type: File: Group:	P.U. 0.1 0 8 Linkables Read-Write, Floating Point Process Control Regulator
189	PI Integ LLim The low limit of the integral gain channel for the Process Control regulator. A value of 1 can represent either base motor speed, motor rated torque, or 100% for some external function.	Units: Default: Min: Max: Type: File: Group:	P.U. -0.1 -8 0 Linkable, Read-Write, Floating Point Process Control Regulator
190	PI Integ Output Displays the output value of the integral channel of the Process Control regulator. A value of 1 can represent either base motor speed, motor rated torque, or 100% for some external function.	Units: Default: Min: Max: Type: File: Group:	P.U. 0 -8 8 Non-Linkable, Read Only, Floating Point Process Control Regulator
191	PI High Limit The high limit of the Process Control regulator output. A value of 1 can represent either base motor speed, motor rated torque, or 100% for some external function.	Units: Default: Min: Max: Type: File: Group:	P.U. 0.1 0 8 Linkable, Read-Write, Floating Point Process Control Regulator
192	PI Lower Limit The low limit of the Process Control regulator output. A value of 1 can represent either base motor speed, motor rated torque, or 100% for some external function.	Units: Default: Min: Max: Type: File: Group:	P.U. -0.1 -8 0 Linkable, Read-Write, Floating Point Process Control Regulator

No.	Name Description	Values		
193	PI TP Sel Enter or write a value to select Process Control PI data displayed by parameter 194 [PI TP Data].	Default:	Val 0	Zero
		Options:	Val 0 Val 1 Val 2 Val 3 Val 4 Val 5 Val 6 Val 7 Val 8 Val 9 Val 10	Zero PI Error LPF Output P Gain Term Reg Output On Intg Lim On Out Limit Extern Hold Hold Status Enabl Status Time Axis En
		File: Group:	Utility Test Points	
194	PI TP Data Displays the data selected by parameter 193 [PI TP Sel].	Units: Default: Min: Max: Type: File: Group:	P.U. 0 -8 8 Non-Linkable, Read Only, Floating Point Utility Test Points	
200	Time Axis Rate Sets rate (1/sec) for the Time Function Generator to ramp from and output of 0 to 1 and from 1 to 0.	Units: Default: Min: Max: Type: File: Group:	/Sec 1 0.01 20 Linkable, Read-Write, Floating Point Process Control Limit Generator	
201	Time Axis Output The output of the Time Function Generator. When the Time Function Generator is enabled by parameter 183 [PI Command] bit 1 or parameter 151 [Logic Command] bit 3, the value of this parameter ramps from 0 to 1 at a rate determined by parameter 200 [Time Axis Rate]. Conversely, when the Function Generator is disabled, the value of this parameter ramps from 1 to 0.	Default: Min: Max: Type: File: Group:	0 0 1 Non-Linkable, Read Only, Floating Point Process Control Limit Generator	
204	LimGen Y axis Mx Sets parameter 207 [Limit Gen Hi Out] and parameter 208 [Limit Gen Lo Out] when the absolute value of parameter 206 [LimGen X axis in] is greater than or equal to 1.	Units: Default: Min: Max: Type: File: Group:	P.U. 0.25 0 8 Linkable, Read-Write, Floating Point Process Control Limit Generator	
205	LimGen Y axis Mn Sets [Limit Gen Hi Out] and [Limit Gen Lo Out] when the absolute value of [LimGen X axis in] is equal to 0.	Units: Default: Min: Max: Type: File: Group:	P.U. 0.05 0 8 Linkable, Read-Write, Floating Point Process Control Limit Generator	

No.	Name Description	Values		
206	LimGen X axis In The x axis input to the Limit Generator. Typically this parameter is linked to a speed reference or to parameter 201 [Time Axis Output].	Default: Min: Max: Type: File: Group:	0 -8 8 Linkable, Read-Write, Floating Point Process Control Limit Generator	
207	Limit Gen Hi Out Indicates the positive output of the Limit Generator. When parameter 206 [Limit Gen X Axis In] is greater than or equal to 1, this value equals parameter 204 [Limit Gen Y axis Mx]. When parameter 206 [Limit Gen X Axis In] is equal to 0, this value equals parameter 205 [Limit Gen Y axis Mn]. For values of x Axis input between 0 and 1, the value of this parameter is interpolated from Y axis min and max values. Typically it is linked to parameter 188 [PI High Limit].	Units: Default: Min: Max: Type: File: Group:	P.U. 0 -8 8 Non-Linkable, Read Only, Floating Point Process Control Limit Generator	
208	Limit Gen Lo Out Indicates the negative output of the Limit Generator. The value of this parameter is the negative of parameter 207 [Limit Gen Hi Out]. Typically it is linked to parameter 189 [PI Lower Limit].	Units: Default: Min: Max: Type: File: Group:	P.U. -8 -8 0 Non-Linkable, Read Only, Floating Point Process Control Limit Generator	
210	PeakDtct Ctrl In Sets configuration of the two peak/level detectors. - Set mode is a level detector which causes the output to match the preset when the input exceeds the preset. - Hold mode is a level detector which causes the output to match the input, the moment it detects the input exceeding the preset. - Regular peak detection (when set and hold are off) causes the output to match the input at the moment a peak is detected. - Sel determines if the peak/level detector is positive or negative. If the bit is set the detector detects positive peaks or levels above the preset. If the bit is not set the detector detects negative "valleys" or levels below the preset.	Default:	0000 0000	
211	Peak Ctrl Status Status of peak/level detectors. A peak detector sets its bit when it detects a peak or when its input exceeds its preset - depending on mode.	Options:	Bit 0 Bit 1 Bit 2 Bit 3 Bit 4 Bit 5 Bit 6 Bit 7	Peak 1 Set Peak 1 Hold Peak 1 Sel Reserved Peak 2 Set Peak 2 Hold Peak 2 Sel Reserved
		File: Group:	Utility Peak Detection	
		Options:	Bit 0 Bit 1 Bit 2 Bit 3 Bit 4 Bit 5 Bit 6 Bit 7	Peak 1 Ch Peak 2 Chng Reserved Reserved Reserved Reserved Reserved Reserved
		File: Group:	Utility Peak Detection	

No.	Name Description	Values	
212	PeakDtct1 In Int Integer input to the first peak/level detector.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-bit Integer Utility Peak Detection
213	PkDtct1 In Real Floating point input to the first peak/level detector	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point Utility Peak Detection
214	PeakDtct1 Preset With the first detector (in set or hold modes) compares this value to its input for level detection. When the detector trips (in set mode) it transfers the value of this parameter to its output.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point Utility Peak Detection
215	PeakDetect1 Out Output from the first peak/level detector.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point Utility Peak Detection
216	PeakDtct2 In Int Integer input to second peak/level detector.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-bit Integer Utility Peak Detection
217	PkDtct2 In Real Floating point input to second peak/level detector	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point Utility Peak Detection
218	PeakDtct2 Preset With the second detector (in set or hold modes) compares this value to its input for level detection. When the detector trips (in set mode) it transfers the value of this parameter to its output.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point Utility Peak Detection
219	Spd Obs Trq Gain Multiplication factor for the inertia input to the Speed Observer. If the specified inertia differs from actual, this is used to fine tune the inertia value input to the observer. Normally set to 1.	Default: Min: Max: Type: File: Group:	1 0 2 Linkable, Read-Write, Floating Point Speed/Posit Fdbk Feedback Config

No.	Name Description	Values		
220	Spd Observer BW Sets the internal bandwidth for the speed feedback observer. The setting should be as high a possible, preferably at least 6 times the value of parameter 90 [Spd Reg BW]. A setting of 1000 rad/sec is reasonable for most applications. The speed observer is bypassed when set to zero.	Units: Default: Min: Max: Type: File: Group:	R/S 0 0 300 Linkable, Read-Write, Floating Point Speed/Posit Fdbk Feedback Config	
221	Load Estimate Displays the estimated load torque, which is the side effect of the speed observer and does not include torque to accelerate or decelerate the motor if the inertia input is correct. The value is provided for display purposes.	Units: Default: Min: Max: Type: File: Group:	P.U. 0 -8 8 Non-Linkable, Read Only, Floating Point Speed/Posit Fdbk Feedback Config	
222	Motor Fdbk Sel Enter or write a value to select the primary motor speed feedback device.	Default:	Val 0	Resolver
		Options:	Val 0 Val 1 Val 2 Val 3 Val 4 Val 5	Resolver Analog Tach Reserved Reserved Motor Sim Mtr Voltage
		File: Group:	Speed/Posit Fdbk Feedback Config	
227	PeakDetect2 Out Output from the second peak/level detector.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable Read Only Floating Point Utility Peak Detection	
230	Resolver SpdFdbk Displays speed feedback from the resolver. Select resolver by entering a value of 0 in of parameter 222 [Motor Fdbk Sel]. Configure the resolver with parameter 2201 [PMI I/O Config].	Units: Default: Min: Max: Type: File: Group:	RPM 0 -14000 14000 Non-Linkable, Read Only, Floating Point Speed/Posit Fdbk Resolver	
231	Resolver PositFB Indicates accumulated position feedback generated by the resolver. This parameter supplies position regulator feedback if position control is enabled.	Default: Min: Max: Type: File: Group:	0 -32768 32767 Non-Linkable, Read Only, 16-bit Integer Speed/Posit Fdbk Resolver	
240	Anlg Tach Spd FB Displays speed feedback from an analog tach. Select analog tach by entering a value of 2 in of parameter 222 [Motor Fdbk Sel].	Units: Default: Min: Max: Type: File: Group:	RPM 0 -14000 14000 Non-Linkable, Read Only, Floating Point Speed/Posit Fdbk Analog Tach	

No.	Name Description	Values	
241	Anlg Tach Posit Indicates accumulated position feedback generated by the analog tach. This parameter supplies position regulator feedback if position control is enabled.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer Speed/Posit Fdbk Analog Tach
242	Arm Volts Spd FB Displays speed feedback from armature voltage. Select analog tach by entering a value of 6 in of parameter 222 [Motor Fdbk Sel]. Armature Voltage Feedback is calculated using parameter 2137[Arm Volt FB Cnts] parameter 2151 [Arm Resistance], and parameter 2127 [CML Feedback].	Units: Default: Min: Max: Type: File: Group:	RPM 0 -14000 14000 Non-Linkable, Read Only, Floating Point Speed/Posit Fdbk Armature Volts
243	Arm Volts Posit Indicates accumulated position feedback generated by armature voltage feedback. This parameter supplies position regulator feedback if position control is enabled.	Units: Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer Speed/Posit Fdbk Armature Volts
300	Motor Spd Fdbk Displays measured motor speed information from the selected feedback device. A value of 1.0 represents base speed of the motor.	Units: Default: Min: Max: Type: File: Group:	RPM 0 -14000 14000 Non-Linkable, Read Only, Floating Point Monitor, Speed Control, Speed/Posit Fdbk Metering, Regulator, Feedback Config
301	Motor Speed Ref Displays the speed reference value, after the limit function. This is the input to the error calculator and speed regulator. A value of 1.0 represents base speed of the motor.	Units: Default: Min: Max: Type: File: Group:	RPM 0 -14000 14000 Non-Linkable, Read Only, Floating Point Speed Control Regulator
302	Spd Reg PI Out Displays the output of the speed regulator. This is the input to torque control. A value of 1.0 represents base Torque of the motor.	Units: Default: Min: Max: Type: File: Group:	P.U. 0 -8 8 Non-Linkable Read Only, Floating Point Speed Control, Torque Control Regulator, Torque
303	Motor Torque Ref Displays the calculated value of motor torque. The actual value of the motor torque is within 5% of this value.	Units: Default: Min: Max: Type: File: Group:	P.U. 0 -8 8 Non-Linkable, Read Only, Floating Point Torque Control Torque

No.	Name Description	Values																																																																	
304	Limit Status Indicates any condition that may be limiting either the current or the torque reference. - Setting parameter 120 [Current PosLimit] and the absolute value of parameter 119 [Current NegLimit] less than parameter 2184 [PMI Curr Lim] will result in bits 4 and 20 indicating a current limit condition. - Setting parameter 2184 [PMI Curr Lim] less than parameter 120 [Current PosLimit] and the absolute value of parameter 119 [Current NegLimit] will result in bits 9 and 25 indicating a current limit condition.	Default:	0000 0000 0000 0000 0000 0000 0000 0000																																																																
		Options:	<table><tr><td>Bit 0</td><td>Reserved</td></tr><tr><td>Bit 1</td><td>Reserved</td></tr><tr><td>Bit 2</td><td>Reserved</td></tr><tr><td>Bit 3</td><td>Reserved</td></tr><tr><td>Bit 4</td><td>=+Current Lim</td></tr><tr><td>Bit 5</td><td>Reserved</td></tr><tr><td>Bit 6</td><td>Reserved</td></tr><tr><td>Bit 7</td><td>Reserved</td></tr><tr><td>Bit 8</td><td>Reserved</td></tr><tr><td>Bit 9</td><td>PMI Curr Lim</td></tr><tr><td>Bit 10</td><td>Reserved</td></tr><tr><td>Bit 11</td><td>Atune Tq Lim</td></tr><tr><td>Bit 12</td><td>Reserved</td></tr><tr><td>Bit 13</td><td>Reserved</td></tr><tr><td>Bit 14</td><td>Reserved</td></tr><tr><td>Bit 15</td><td>Reserved</td></tr><tr><td>Bit 16</td><td>Reserved</td></tr><tr><td>Bit 17</td><td>Reserved</td></tr><tr><td>Bit 18</td><td>Reserved</td></tr><tr><td>Bit 19</td><td>Reserved</td></tr><tr><td>Bit 20</td><td>=-Current Lim</td></tr><tr><td>Bit 21</td><td>Reserved</td></tr><tr><td>Bit 22</td><td>Reserved</td></tr><tr><td>Bit 23</td><td>Reserved</td></tr><tr><td>Bit 24</td><td>Reserved</td></tr><tr><td>Bit 25</td><td>Regen PwrLim</td></tr><tr><td>Bit 26</td><td>Reserved</td></tr><tr><td>Bit 27</td><td>Reserved</td></tr><tr><td>Bit 28</td><td>Reserved</td></tr><tr><td>Bit 29</td><td>Reserved</td></tr><tr><td>Bit 30</td><td>Reserved</td></tr><tr><td>Bit 31</td><td>Reserved</td></tr></table>	Bit 0	Reserved	Bit 1	Reserved	Bit 2	Reserved	Bit 3	Reserved	Bit 4	=+Current Lim	Bit 5	Reserved	Bit 6	Reserved	Bit 7	Reserved	Bit 8	Reserved	Bit 9	PMI Curr Lim	Bit 10	Reserved	Bit 11	Atune Tq Lim	Bit 12	Reserved	Bit 13	Reserved	Bit 14	Reserved	Bit 15	Reserved	Bit 16	Reserved	Bit 17	Reserved	Bit 18	Reserved	Bit 19	Reserved	Bit 20	=-Current Lim	Bit 21	Reserved	Bit 22	Reserved	Bit 23	Reserved	Bit 24	Reserved	Bit 25	Regen PwrLim	Bit 26	Reserved	Bit 27	Reserved	Bit 28	Reserved	Bit 29	Reserved	Bit 30	Reserved	Bit 31	Reserved
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305	Mtr TorqCurr Ref Displays the value of torque current reference that is present at the output of the current rate limiter. 100% is equal to 1 per unit (pu) rated motor torque.	Units: Default: Min: Max: Type: File: Group:	P.U. 0 -8 8 Non-Linkable, Read OnlyFloating Point Torque Control Current																																																																
307	Output Voltage Displays the actual line-to-line fundamental RMS value of motor voltage. This data is averaged and updated every 50 milliseconds.	Units: Default: Min: Max: Type: File: Group:	Volt 0 -1350 1350 Non-Linkable, Read Only, Floating Point Monitor, DPS/PMI Metering, Feedback																																																																

No.	Name Description	Values		
308	Output Current Displays the actual RMS value of the motor current as determined from the current sensors.	Units: Default: Min: Max: Type: File: Group:	Amps 0 -6000 6000 Non-Linkable, Read Only, Floating Point Monitor, DPS/PMI Metering, Feedback	
314	VPL Firmware Rev Indicates the major and minor revision levels of the drive module's Velocity Position Loop (VPL) firmware.	Default: Min: Max: Type: File: Group:	x.xxx 0.001 65.255 Non-Linkable, Read Only, 16-bit Integer Monitor Drive Data	
315	VPL Build Number Indicates the build number of the drive module's Velocity Position Loop (VPL) firmware.	Default: Min: Max: Type:	x 1 10000 Non-Linkable, Read Only, 16-bit Integer	
316	SynchLink Status Indicates status of SynchLink functions.	Default:	0000 0000 0000 0000 0000 0000 0000	
		Options:	Bit 0 Bit 1 Bit 2 Bit 3 Bit 4 Bit 5 Bit 6 Bit 7 Bit 8 Bit 9 Bit 10 Bit 11 Bit 12 Bit 13 Bit 14 Bit 15 Bit 16 Bit 17 Bit 18 Bit 19 Bit 20 Bit 21 Bit 22 Bit 23 Bit 24 Bit 25 Bit 26 Bit 27 Bit 28 Bit 29 Bit 30 Bit 31	Reserved Reserved Reserved In Sync Tx Active Rx Active Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Rx Data Enbl Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved
		File: Group:	Utility Diagnostics	

No.	Name Description	Values		
317	SL System Time Displays the SynchLink system time counter.	Units: Default: Min: Max: Type: File: Group:	uSec 0 0 1048575 Non-Linkable, Read Only, 32-bit Integer Monitor Control Status	
318	Posit Spd Output Final output of the position regulator. A value of 1.0 represents base speed of the motor.	Units: Default: Min: Max: Type: File: Group:	RPM 0 -14000 14000 Non-Linkable, Read Only, Floating Point Position Control, Position Control, Position Control Sync Generator, Interp/Direct, Point to Point	
320	Exception Event1 Indicates the presence of certain drive anomalies. Configure the drive's response to these events by entering values in the parameters of the fault/alarm configuration group of the utility file.	Default:	0000 0000 0000 0000 0000 0000 0000 0000	
		Options:	Bit 0	Abs OverSpd
			Bit 1	SpdRef Decel
			Bit 2	Reserved
			Bit 3	Reserved
			Bit 4	Reserved
			Bit 5	Reserved
			Bit 6	Ctrl EE Mem
			Bit 7	SLink HW
			Bit 8	SLink Comm
			Bit 9	Reserved
			Bit 10	Mtr OL Trip
			Bit 11	Mtr OL Pendg
			Bit 12	Motor Stall
			Bit 13	Reserved
			Bit 14	Reserved
			Bit 15	Reserved
			Bit 16	Reserved
			Bit 17	Reserved
			Bit 18	DSP Mem Err
			Bit 19	DSP Error
			Bit 20	Inertia Test
			Bit 21	Reserved
			Bit 22	Reserved
			Bit 23	Reserved
			Bit 24	Reserved
			Bit 25	Reserved
			Bit 26	Reserved
			Bit 27	Reserved
			Bit 28	Reserved
			Bit 29	Reserved
			Bit 30	Reserved
			Bit 31	Reserved
		File: Group:	Utility Diagnostics	

No.	Name Description	Values			
321	Exception Event2 Indicates the presence of certain drive anomalies. Configure the drive's response to these events by entering values in the parameters of the fault/alarm configuration group of the utility file.	Default:	0000 0000 0000 0000 0000 0000 0000 0000		
		Options:	Bit 0 Bit 1 Bit 2 Bit 3 Bit 4 Bit 5 Bit 6 Bit 7 Bit 8 Bit 9 Bit 10 Bit 11 Bit 12 Bit 13 Bit 14 Bit 15 Bit 16 Bit 17 Bit 18 Bit 19 Bit 20 Bit 21 Bit 22 Bit 23 Bit 24 Bit 25 Bit 26 Bit 27 Bit 28 Bit 29 Bit 30 Bit 31	Reserved Reserved Reserved Reserved Reserved Reserved Reserved Slink Mult Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Drv Fault Drv Warning Lgx OutOfRun Lgx Timeout Lgx Closed Lgx LinkChng	
		File: Group:	Utility Diagnostics		

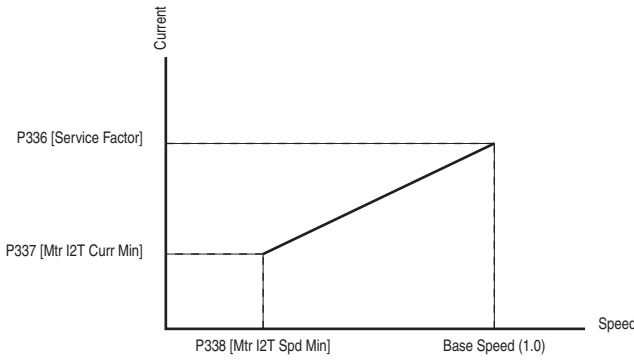
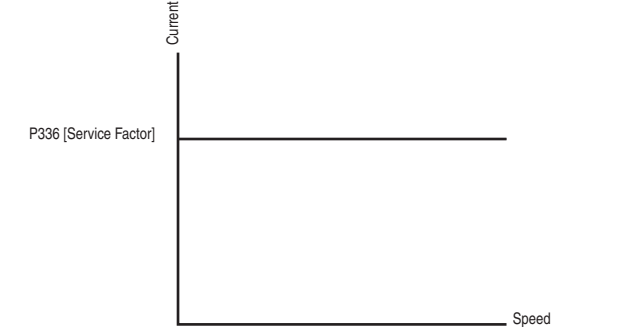
No.	Name Description	Values		
323	Fault Status 1 Indicates the occurrence of the exception events that have been configured as fault conditions. These are the same events shown in parameter 320 [Exception Event1].	Default:	0000 0000 0000 0000 0000 0000 0000 0000	
		Options:	Bit 0	Abs OverSpd
			Bit 1	Ref Decel
			Bit 2	Reserved
			Bit 3	Reserved
			Bit 4	Reserved
			Bit 5	Reserved
			Bit 6	Ctrl EE Mem
			Bit 7	SLink HW
			Bit 8	SLink Comm
			Bit 9	Reserved
			Bit 10	Mtr OL Trip
			Bit 11	Mtr OL Pendg
			Bit 12	Motor Stall
			Bit 13	Reserved
			Bit 14	Reserved
			Bit 15	Reserved
			Bit 16	Reserved
			Bit 17	Reserved
			Bit 18	DSP Mem Err
			Bit 19	DSP Error
			Bit 20	Inertia Test
			Bit 21	Reserved
			Bit 22	Reserved
			Bit 23	Reserved
			Bit 24	Reserved
			Bit 25	Reserved
			Bit 26	Reserved
			Bit 27	Reserved
			Bit 28	Reserved
			Bit 29	Reserved
			Bit 30	Reserved
			Bit 31	Reserved
		File:	Utility	
		Group:	Diagnostics	

No.	Name Description	Values			
324	Fault Status 2 Indicates the occurrence of the exception events that have been configured as fault conditions. These are the same events shown in parameter 321 [Exception Event2].	Default:	0000 0000 0000 0000 0000 0000 0000 0000		
		Options:	Bit 0	Reserved	
		Bit 1	Reserved		
		Bit 2	Reserved		
		Bit 3	Reserved		
		Bit 4	Reserved		
		Bit 5	Reserved		
		Bit 6	Reserved		
		Bit 7	Slink Mult		
		Bit 8	Reserved		
		Bit 9	Reserved		
		Bit 10	Reserved		
		Bit 11	Reserved		
		Bit 12	Reserved		
		Bit 13	Reserved		
		Bit 14	Reserved		
		Bit 15	Reserved		
		Bit 16	Reserved		
		Bit 17	Reserved		
		Bit 18	Reserved		
		Bit 19	Reserved		
		Bit 20	Reserved		
		Bit 21	Reserved		
		Bit 22	Reserved		
		Bit 23	Reserved		
		Bit 24	Reserved		
		Bit 25	Reserved		
		Bit 26	Dry Fault		
		Bit 27	Dry Warning		
		Bit 28	Lgx OutOfRun		
		Bit 29	Lgx Timeout		
		Bit 30	Lgx Closed		
		Bit 31	Lgx LinkChng		
		File:	Utility		
		Group:	Diagnostics		

No.	Name Description	Values		
326	Alarm Status 1 Indicates the occurrence of the exception events that have been configured as alarm conditions. These are the same events shown in parameter 320 [Exception Event1].	Default:	0000 0000 0000 0000 0000 0000 0000 0000	
		Options:	Bit 0	Abs OverSpd
			Bit 1	SpdRef Decel
			Bit 2	Reserved
			Bit 3	Reserved
			Bit 4	Reserved
			Bit 5	Reserved
			Bit 6	Ctrl EE Mem
			Bit 7	SLink HW
			Bit 8	SLink Comm
			Bit 9	Reserved
			Bit 10	Mtr OL Trip
			Bit 11	Mtr OL Pendg
			Bit 12	Motor Stall
			Bit 13	Reserved
			Bit 14	Reserved
			Bit 15	Reserved
			Bit 16	Reserved
			Bit 17	Reserved
			Bit 18	DSP Mem Err
			Bit 19	DSP Error
			Bit 20	Inertia Test
			Bit 21	Reserved
			Bit 22	Reserved
			Bit 23	Reserved
			Bit 24	Reserved
			Bit 25	Reserved
			Bit 26	Reserved
			Bit 27	Reserved
			Bit 28	Reserved
			Bit 29	Reserved
			Bit 30	Reserved
			Bit 31	Reserved
		File:	Utility	
		Group:	Diagnostics	

No.	Name Description	Values		
327	Alarm Status 2 Indicates the occurrence of the exception events that have been configured as alarm conditions. These are the same events shown in parameter 321 [Exception Event2].	Default:	0000 0000 0000 0000 0000 0000 0000 0000	
		Options:		Bit 0 Reserved Bit 1 Reserved Bit 2 Reserved Bit 3 Reserved Bit 4 Reserved Bit 5 Reserved Bit 6 Reserved Bit 7 Slink Mult Bit 8 Reserved Bit 9 Reserved Bit 10 Reserved Bit 11 Reserved Bit 12 Reserved Bit 13 Reserved Bit 14 Reserved Bit 15 Reserved Bit 16 Reserved Bit 17 Reserved Bit 18 Reserved Bit 19 Reserved Bit 20 Reserved Bit 21 Reserved Bit 22 Reserved Bit 23 Reserved Bit 24 Reserved Bit 25 Reserved Bit 26 Drv Fault Bit 27 Drv Warning Bit 28 Lgx OutOfRun Bit 29 Lgx Timeout Bit 30 Lgx Closed Bit 31 Lgx LinkChng
		File: Group:	Utility Diagnostics	
329	Fault TP Sel Enter or write a value to select Fault data data displayed in parameter 330 [Fault TP Data].	Default	Val 0	Zero
		Options:		Val 0 Zero Val 1 Abs OverSpd Val 2 Reserved Val 3 Reserved Val 4 Reserved Val 5 Reserved Val 6 Reserved Val 7 Reserved Val 8 Reserved Val 9 Reserved Val 10 VPL FitReset Val 11 Reserved Val 12 Mtr OL Input Val 13 Mtr OL Outpt
		File: Group:	Utility Test Points	

No.	Name Description	Values	
330	Fault TP Data Displays the data selected by parameter 329 [Fault TP Sel].	Units: Default: Min: Max: Type: File: Group:	0 0 -2200000000 2200000000 Non-Linkable Read Only Floating Point Utility Test Points
335 	Abs OverSpd Lim Sets an incremental speed above parameter 31 [Fwd Speed Limit] and below parameter 30 [Rev Speed Limit] that is allowable before the drive indicates its speed is out of range.	Units: Default: Min: Max: Type: File: Group:	RPM 350 0 1750 Non-Linkable, Read-Write, Floating Point Dynamic Control Dynamic Control
336 	Service Factor Sets the minimum level of current that causes a motor overload trip under continuous operation. Current levels below this value will not result in an overload trip. For example, a service factor of 1.15 implies continuous operation up to 115% of nameplate motor current.	Units: Default: Min: Max: Type: File: Group:	P.U. 1.15 1 2 Non-Linkable, Read-Write, Floating Point Dynamic Control Overload Protect
337 	Mtr I2T Curr Min Sets the minimum current threshold for the motor overload (I ² T) function. The value indicates minimum current at the minimum speed, parameter 338 [Mtr I2T Spd Min], and these are the first current/speed breakpoint. From this point the current threshold is linear to the value specified by parameter 336 [Service Factor].	Units: Default: Min: Max: Type: File: Group:	P.U. 0.5 0.05 1 Non-Linkable, Read-Write, Floating Point Dynamic Control Overload Protect

No.	Name Description	Values	
338 	Mtr I2T Spd Min Sets the minimum speed for the motor overload (I^2T) function. The value indicates minimum speed below the minimum current threshold [Mtr I2T Curr Min], and these are the first current/speed breakpoint. From this point the current threshold is linear to the value specified by the motor service factor [Service Factor]. Motor Overload curve when parameter 338 [Mtr I2T Spd Min] is Less Than 1.0  Motor Overload curve when parameter 338 [Mtr I2T Spd Min] Equals 1.0 	Units: Default: Min: Max: Type: File: Group:	P.U. 1 0.05 1 Non-Linkable, Read-Write, Floating Point Dynamic Control Overload Protect
339 	Mtr I2T Calibrat Sets the current calibration level for the motor overload (I^2T) function. The value indicates the current level that the drive will fault at this current in 60 seconds.	Units: Default: Min: Max: Type: File: Group:	P.U. 2 1.1 4 Non-Linkable, Read-Write, Floating Point Dynamic Control Overload Protect
340	Mtr I2T Trp ThrH Displays the trip threshold current for the motor overload (I^2T) function. The value depends on the motor speed, and is calculated from the minimum current, parameter 337 [Mtr I2T Curr Min], the minimum speed, parameter 338 [Mtr I2T Spd Min] and the motor service factor, parameter 336 [Service Factor].	Units: Default: Min: Max: Type: File: Group:	P.U. 1.15 0.05 2 Non-Linkable, Read Only, Floating Point Dynamic Control Overload Protect

No.	Name Description	Values	
350	Current Actl Ref Displays the value of motor current reference that is present at the output of the divide by flux calculation.	Units: Default: Min: Max: Type: File: Group:	P.U. 0 -8 8 Non-Linkable, Read Only, Floating Point Torque Control Current
351	Current Ref Trim Provides an external source to command, trim or offset the internal motor current reference. This value is summed with parameter 351 [Current Actl Ref] before the current limit is applied. Scaling is in per unit motor current.	Units: Default: Min: Max: Type: File: Group:	P.U. 0 -8 8 Linkable, Read-Write, Floating Point Torque Control Current
354	Curr Rate Limit The maximum rate of change for Current Reference, in per unit current/ sec. Parameter 90 [Spd Reg BW] will be limited to 2/3 of this value.	Units: Default: Min: Max: Type: File: Group:	/Sec 50 10 2000 Linkable, Read-Write, Floating Point Torque Control Current
355	Curr RateLimited The current reference output of the rate limiter.	Units: Default: Min: Max: Type: File: Group:	P.U. 0 -8 8 Non-Linkable, Read Only, Floating Point Torque Control Current
360	Min Flux Sets the smallest level of flux used to convert parameter 303 [Motor Torque Ref] to a current reference above base speed.	Units: Default: Min: Max: Type: File: Group:	P.U. 1 0.1 1 Linkable, Read-Write, Floating Point Torque Control Current
361	Flux LpassFlt BW Sets bandwidth of filter which adjusts the response of the flux estimate used in the torque to current conversion. Since the field time constant varies between motors a better control response may be obtained by adjusting the filter time constant. Normally this parameter is not changed unless a significant disturbance occurs as the motor enters field weakening AND parameter 360 [Min Flux] is less than 1 per unit.	Units: Default: Min: Max: Type: File: Group:	R/S 20 0.5 100 Linkable, Read-Write, Floating Point Torque Control Current
362	Motor Flux The motor flux value used to calculate motor current reference from parameter 303 [Motor Torque Ref]. For operation above base speed, this value should be linked to the output of a flux curve in the ControlLogix controller. A value of 1.0 represents rated motor flux.	Units: Default: Min: Max: Type: File: Group:	P.U. 1 -8 8 Linkable, Read-Write, Floating Point Torque Control Current

No.	Name Description	Values		
363	Curr Ref TP Sel Enter or write a value to select current reference data displayed in parameter 364 [Curr Ref TP Data].	Default	Val 0	Zero
		Options:	Val 0 Val 1 Val 2 Val 3 Val 4 Val 5 Val 6 Val 7 Val 8 Val 9 Val 10 Val 11 Val 12 Val 13 Val 14	Zero Curr Sum Curr Lim In Curr Lim Out CurrRateStat Limited Flux Reserved Reserved Max Curr Lim Reserved Curr-LimActl Curr+LimActl Reserved Flux Status Flux LPF Out
		File: Group:	Utility	Test Points
364	Curr Ref TP Data Displays the data selected by parameter 363 [Curr Ref TP Sel].	Units: Default: Min: Max: Type: File: Group:	P.U. 0 -8 8 Non-Linkable, Read Only, Floating Point Utility Test Points	

No.	Name Description	Values		
369	SL CommLoss Cnfg Enter a value to configures the drive's response to SynchLink communication loss. Refer to parameter 1229 [SL Error Status] for possible causes of communication loss. - Value 0 - Ignore configures the drive module to continue running as normal, in response to this event - Value 1 - Alarm configures the drive module to set the appropriate alarm bit in response to this event - Value 2 - FltCoastStop configures the drive module to perform a coast stop and set the appropriate fault bit in response to this event - Value 3 - FltRampStop configures the drive module to perform a ramp stop and set the appropriate fault bit in response to this event - Value 4 - CurLimStp configures the drive module to perform a current limit stop and set the appropriate fault bit in response to this event	Default	Val 2	FltCoastStop
		Options:	Val 0 Val 1 Val 2 Val 3 Val 4	Ignore Alarm FltCoastStop FltRampStop FltCurLimStp
		File: Group:	Utility Fault/Alm Config	
ATTENTION  Risk of injury or equipment damage exists. Parameter 369 [SL CommLoss Cnfg] lets you determine the action of the drive if communications are disrupted. By default this parameter causes the drive to fault and coast to a stop. You can set this parameter so that the drive continues to run. Precautions should be taken to ensure that the setting of this parameter does not create a hazard of injury or equipment damage.				
370	SL CommLoss Data Enter a value to determine what is done with the data received from SynchLink when a communication loss occurs. - Value 0 - Zero Data configures the drive module to reset the data to zero, in response to this event - Value 1 - Alarm configures the drive module hold the data in its last state, in response to this event	Default	Val 1	Last State
		Options:	Val 0 Val 1	Zero Data Last State
		File: Group:	Utility Fault/Alm Config	
ATTENTION  Risk of injury or equipment damage exists. Parameter 370 [SL CommLoss Data] lets you determine what the drive module does with received data if communications are disrupted. By default this parameter causes the drive module to hold the data in its last state. You can set this parameter so that the drive module resets the data to zero. Precautions should be taken to ensure that the setting of this parameter does not create a hazard of injury or equipment damage.				

No.	Name Description	Values		
371	Mtr OL Trip Cnfg Enter a value to configure the drive's response to a "Motor Overload Trip" exception event. - Value 0 - Ignore configures the drive module to continue running as normal, in response to this event - Value 1 - Alarm configures the drive module to set the appropriate alarm bit in response to this event - Value 2 - FltCoastStop configures the drive module to perform a coast stop and set the appropriate fault bit in response to this event - Value 3 - FltRampStop configures the drive module to perform a ramp stop and set the appropriate fault bit in response to this event - Value 4 - CurLimStp configures the drive module to perform a current limit stop and set the appropriate fault bit in response to this event	Default	Val 2	FltCoastStop
		Options:	Val 0 Val 1 Val 2 Val 3 Val 4	Ignore Alarm FltCoastStop FltRampStop FltCurLimStp
		File: Group:	Utility Fault/Alm Config	
372	Mtr OL Pend Cnfg Enter a value to configure the drive's response to a "Motor Overload Pending" exception event. - Value 0 - Ignore configures the drive module to continue running as normal, in response to this event - Value 1 - Alarm configures the drive module to set the appropriate alarm bit in response to this event - Value 2 - FltCoastStop configures the drive module to perform a coast stop and set the appropriate fault bit in response to this event - Value 3 - FltRampStop configures the drive module to perform a ramp stop and set the appropriate fault bit in response to this event - Value 4 - CurLimStp configures the drive module to perform a current limit stop and set the appropriate fault bit in response to this event	Default	Val 1	Alarm
		Options:	Val 0 Val 1 Val 2 Val 3 Val 4	Ignore Alarm FltCoastStop FltRampStop FltCurLimStp
		File: Group:	Utility Fault/Alm Config	
373	Motor Stall Time Enter or write a value to specify the time delay between when the drive detects a "Motor Stall" condition and when it declares the exception event.	Units: Default: Min: Max: Type: File: Group:	Sec 5 0.1 3000 Linkable, Read-Write, Floating Point Utility Fault/Alm Config	
374	Motor Stall Cnfg Enter a value to configure the drive's response to a "Motor Stall" exception event. - Value 0 - Ignore configures the drive module to continue running as normal, in response to this event - Value 1 - Alarm configures the drive module to set the appropriate alarm bit in response to this event - Value 2 - FltCoastStop configures the drive module to perform a coast stop and set the appropriate fault bit in response to this event	Default	Val 0	Ignore
		Options:	Val 0 Val 1 Val 2	Ignore Alarm FltCoastStop
		File: Group:	Utility Fault/Alm Config	

No.	Name Description	Values		
381	PMI Warning Cnfg Enter a value to configure the drive's response to a "PMI Warning" exception event (events enumerated in parameter 2123 [MC Warnings]). - Value 0 - Ignore configures the drive module to continue running as normal, in response to this event - Value 1 - Alarm configures the drive module to set the appropriate alarm bit in response to this event - Value 2 - FltCoastStop configures the drive module to perform a coast stop and set the appropriate fault bit in response to this event - Value 3 - FltRampStop configures the drive module to perform a ramp stop and set the appropriate fault bit in response to this event - Value 4 - CurLimStp configures the drive module to perform a current limit stop and set the appropriate fault bit in response to this event	Default	Val 1	Alarm
		Options:	Val 0 Val 1 Val 2 Val 3 Val 4	Ignore Alarm FltCoastStop FltRampStop FltCurLimStp
		File: Group:	Utility Fault/Alm Config	
382	Lgx OutOfRunCnfg Enter a value to configure the drive's response to the ControlLogix processor being in Non-Run mode. Non-Run modes include Program, Remote-Program and Faulted. - Value 0 - Ignore configures the drive module to continue running as normal, in response to this event - Value 1 - Alarm configures the drive module to set the appropriate alarm bit in response to this event - Value 2 - FltCoastStop configures the drive module to perform a coast stop and set the appropriate fault bit in response to this event - Value 3 - FltRampStop configures the drive module to perform a ramp stop and set the appropriate fault bit in response to this event - Value 4 - CurLimStp configures the drive module to perform a current limit stop and set the appropriate fault bit in response to this event	Default	Val 2	FltCoastStop
		Options:	Val 0 Val 1 Val 2 Val 3 Val 4	Ignore Alarm FltCoastStop FltRampStop FltCurLimStp
		File: Group:	Utility Fault/Alm Config	

ATTENTION



Risk of injury or equipment damage exists. Parameter 382 [Lgx OutOfRunCnfg] lets you determine the action of the drive if communications are disrupted. By default this parameter causes the drive to fault and coast to a stop. You can set this parameter so that the drive continues to run. Precautions should be taken to ensure that the setting of this parameter does not create a hazard of injury or equipment damage.

No.	Name Description	Values		
383	Lgx Timeout Cnfg Enter a value to configure the Drive Module's response to a Controller to Drive Module connection timeout, as detected by the Drive Module. - Value 0 - Ignore configures the drive module to continue running as normal, in response to this event - Value 1 - Alarm configures the drive module to set the appropriate alarm bit in response to this event - Value 2 - FltCoastStop configures the drive module to perform a coast stop and set the appropriate fault bit in response to this event - Value 3 - FltRampStop configures the drive module to perform a ramp stop and set the appropriate fault bit in response to this event - Value 4 - CurLimStp configures the drive module to perform a current limit stop and set the appropriate fault bit in response to this event	Default	Val 2	FltCoastStop
		Options:	Val 0 Val 1 Val 2 Val 3 Val 4	Ignore Alarm FltCoastStop FltRampStop FltCurLimStp
		File: Group:	Utility Fault/Alm Config	

ATTENTION



Risk of injury or equipment damage exists. Parameter 383 [Lgx Timeout Cnfg] lets you determine the action of the drive if communications are disrupted. By default this parameter causes the drive to fault and coast to a stop. You can set this parameter so that the drive continues to run. Precautions should be taken to ensure that the setting of this parameter does not create a hazard of injury or equipment damage.

No.	Name Description	Values		
384	Lgx Closed Cnfg Enter a value to configure the Drive Module's response to the controller closing the Controller to Drive Module connection. - Value 0 - Ignore configures the drive module to continue running as normal, in response to this event - Value 1 - Alarm configures the drive module to set the appropriate alarm bit in response to this event - Value 2 - FltCoastStop configures the drive module to perform a coast stop and set the appropriate fault bit in response to this event - Value 3 - FltRampStop configures the drive module to perform a ramp stop and set the appropriate fault bit in response to this event - Value 4 - CurLimStp configures the drive module to perform a current limit stop and set the appropriate fault bit in response to this event	Default	Val 2	FltCoastStop
		Options:	Val 0 Val 1 Val 2 Val 3 Val 4	Ignore Alarm FltCoastStop FltRampStop FltCurLimStp
		File: Group:	Utility Fault/Alm Config	
ATTENTION  Risk of injury or equipment damage exists. Parameter 384 [Lgx Closed Cnfg] lets you determine the action of the drive if communications are disrupted. By default this parameter causes the drive to fault and coast to a stop. You can set this parameter so that the drive continues to run. Precautions should be taken to ensure that the setting of this parameter does not create a hazard of injury or equipment damage.				

No.	Name Description	Values		
385	Lgx LinkChngCnfg Enter a value to configure the Drive Module's response to Controller to Drive Module default links being removed. A default link is a link automatically set up when a communication format is selected for the Controller to Drive Module connection. - Value 0 - Ignore configures the drive module to continue running as normal, in response to this event - Value 1 - Alarm configures the drive module to set the appropriate alarm bit in response to this event - Value 2 - FltCoastStop configures the drive module to perform a coast stop and set the appropriate fault bit in response to this event - Value 3 - FltRampStop configures the drive module to perform a ramp stop and set the appropriate fault bit in response to this event - Value 4 - CurLimStp configures the drive module to perform a current limit stop and set the appropriate fault bit in response to this event	Default	Val 2	FltCoastStop
		Options:	Val 0 Val 1 Val 2 Val 3 Val 4	Ignore Alarm FltCoastStop FltRampStop FltCurLimStp
		File: Group:	Utility Fault/Alm Config	
ATTENTION  Risk of injury or equipment damage exists. Parameter 385 [Lgx LinkChngCnfg] lets you determine the action of the drive if communications are disrupted. By default this parameter causes the drive to fault and coast to a stop. You can set this parameter so that the drive continues to run. Precautions should be taken to ensure that the setting of this parameter does not create a hazard of injury or equipment damage.				
386	Lgx CommLossData Enter a value to configure what Drive Module does with the data received from the controller when the connection is closed or times out. - Value 0 - Zero Data configures the drive module to reset the data to zero, in response to this event - Value 1 - Alarm configures the drive module hold the data in its last state, in response to this event	Default	Val 1	Last State
		Options:	Val 0 Val 1	Zero Data Last State
		File: Group:	Utility Fault/Alm Config	
ATTENTION  Risk of injury or equipment damage exists. Parameter 386 [Lgx CommLossData] lets you determine what the drive module does with received data if communications are disrupted. By default this parameter causes the drive module to hold the data in its last state. You can set this parameter so that the drive module resets the data to zero. Precautions should be taken to ensure that the setting of this parameter does not create a hazard of injury or equipment damage.				

No.	Name Description	Values		
387	SL MultErr Cnfg Enter a value to configure the Drive Module's response to SynchLink Multiplier error. Refer to parameter 1034 [SL Mult State] for possible causes for multiplier errors. - Value 0 - Ignore configures the drive module to continue running as normal, in response to this event - Value 1 - Alarm configures the drive module to set the appropriate alarm bit in response to this event - Value 2 - FltCoastStop configures the drive module to perform a coast stop and set the appropriate fault bit in response to this event - Value 3 - FltRampStop configures the drive module to perform a ramp stop and set the appropriate fault bit in response to this event - Value 4 - CurLimStp configures the drive module to perform a current limit stop and set the appropriate fault bit in response to this event	Default	Val 2	FltCoastStop
		Options:	Val 0 Val 1 Val 2 Val 3 Val 4	Ignore Alarm FltCoastStop FltRampStop FltCurLimStp
		File: Group:	Utility Fault/Alm Config	
		ATTENTION  Risk of injury or equipment damage exists. Parameter 387 [SL MultErr Cnfg] lets you determine the action of the drive if communications are disrupted. By default this parameter causes the drive to fault and coast to a stop. You can set this parameter so that the drive continues to run. Precautions should be taken to ensure that the setting of this parameter does not create a hazard of injury or equipment damage.		
396	User Data 1 General purpose parameter available for storage of 32 bit integer data by the operator. This value will be retained through a power cycle.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read-Write, 32-bit Integer Utility User Selections	
397	User Data 2 General purpose parameter available for storage of 32 bit integer data by the operator. This value will be retained through a power cycle.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read-Write, 32-bit Integer Utility User Selections	

No.	Name Description	Values		
398	User Data 3 General purpose parameter available for storage of 32 bit enumerated data by the operator. This value will be retained through a power cycle.	Default:	0000 0000 0000 0000 0000 0000 0000 0000	
		Options:	Bit 0 Bit 1 Bit 2 Bit 3 Bit 4 Bit 5 Bit 6 Bit 7 Bit 8 Bit 9 Bit 10 Bit 11 Bit 12 Bit 13 Bit 14 Bit 15 Bit 16 Bit 17 Bit 18 Bit 19 Bit 20 Bit 21 Bit 22 Bit 23 Bit 24 Bit 25 Bit 26 Bit 27 Bit 28 Bit 29 Bit 30 Bit 31	Reserved Reserved
		File: Group:	Utility User Selections	
399	User Data 4 General purpose parameter available for storage of floating point data by the operator. This value will be retained through a power cycle.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read-Write, Floating Point Utility User Selections	
600	Integer In00 Displays input word 00 of the controller communication format in integer format. Paired with parameter 601 [Real In00], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer Communication Logix Inputs	
601	Real In00 Displays input word 00 of the controller communication format in floating point format. Paired with parameter 600 [Integer In00], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point Communication Logix Inputs	

No.	Name Description	Values	
602	Integer In01 Displays input word 01 of the controller communication format in integer format. Paired with parameter 603 [Real In01], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer Communication Logix Inputs
603	Real In01 Displays input word 01 of the controller communication format in floating point format. Paired with parameter 602 [Integer In01], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point Communication Logix Inputs
604	Integer In02 Displays input word 02 of the controller communication format in integer format. Paired with parameter 605 [Real In02], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer Communication Logix Inputs
605	Real In02 Displays input word 02 of the controller communication format in floating point format. Paired with parameter 604 [Integer In02], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point Communication Logix Inputs
606	Integer In03 Displays input word 03 of the controller communication format in integer format. Paired with parameter 607 [Real In03], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer Communication Logix Inputs
607	Real In03 Displays input word 03 of the controller communication format in floating point format. Paired with parameter 606 [Integer In03], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point Communication Logix Inputs
608	Integer In04 Displays input word 04 of the controller communication format in integer format. Paired with parameter 609 [Real In04], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer Communication Logix Inputs
609	Real In04 Displays input word 04 of the controller communication format in floating point format. Paired with parameter 608 [Integer In04], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point Communication Logix Inputs

No.	Name Description	Values	
610	Integer In05 Displays input word 05 of the controller communication format in integer format. Paired with parameter 611 [Real In05], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer Communication Logix Inputs
611	Real In05 Displays input word 05 of the controller communication format in floating point format. Paired with parameter 610 [Integer In05], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point Communication Logix Inputs
612	Integer In06 Displays input word 06 of the controller communication format in integer format. Paired with parameter 613 [Real In06], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer Communication Logix Inputs
613	Real In06 Displays input word 06 of the controller communication format in floating point format. Paired with parameter 612 [Integer In06], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point Communication Logix Inputs
614	Integer In07 Displays input word 07 of the controller communication format in integer format. Paired with parameter 615 [Real In07], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer Communication Logix Inputs
615	Real In07 Displays input word 07 of the controller communication format in floating point format. Paired with parameter 614 [Integer In07], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point Communication Logix Inputs
616	Integer In08 Displays input word 08 of the controller communication format in integer format. Paired with parameter 617 [Real In08], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer Communication Logix Inputs
617	Real In08 Displays input word 08 of the controller communication format in floating point format. Paired with parameter 616 [Integer In08], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point Communication Logix Inputs

No.	Name Description	Values	
618	Integer In09 Displays input word 09 of the controller communication format in integer format. Paired with parameter 619 [Real In09], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer Communication Logix Inputs
619	Real In09 Displays input word 09 of the controller communication format in floating point format. Paired with parameter 618 [Integer In09], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point Communication Logix Inputs
620	Integer In10 Displays input word 10 of the controller communication format in integer format. Paired with parameter 621 [Real In10], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer Communication Logix Inputs
621	Real In10 Displays input word 10 of the controller communication format in floating point format. Paired with parameter 620 [Integer In10], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point Communication Logix Inputs
622	Integer In11 Displays input word 11 of the controller communication format in integer format. Paired with parameter 623 [Real In11], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer Communication Logix Inputs
623	Real In11 Displays input word 11 of the controller communication format in floating point format. Paired with parameter 622 [Integer In11], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point Communication Logix Inputs
624	Integer In12 Displays input word 12 of the controller communication format in integer format. Paired with parameter 625 [Real In12], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer Communication Logix Inputs
625	Real In12 Displays input word 12 of the controller communication format in floating point format. Paired with parameter 624 [Integer In12], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point Communication Logix Inputs

No.	Name Description	Values	
626	Integer In13 Displays input word 13 of the controller communication format in integer format. Paired with parameter 627 [Real In13], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer Communication Logix Inputs
627	Real In13 Displays input word 13 of the controller communication format in floating point format. Paired with parameter 626 [Integer In13], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point Communication Logix Inputs
628	Integer In14 Displays input word 14 of the controller communication format in integer format. Paired with parameter 629 [Real In14], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer Communication Logix Inputs
629	Real In14 Displays input word 14 of the controller communication format in floating point format. Paired with parameter 628 [Integer In14], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point Communication Logix Inputs
630	Integer In15 Displays input word 15 of the controller communication format in integer format. Paired with parameter 631 [Real In15], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer Communication Logix Inputs
631	Real In15 Displays input word 15 of the controller communication format in floating point format. Paired with parameter 630 [Integer In15], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point Communication Logix Inputs
632	Integer Out00 Displays output word 00 of the controller communication format in integer format. Paired with parameter 633 [Real Out00], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer Communication Logix Outputs
633	Real Out00 Displays output word 00 of the controller communication format in floating point format. Paired with parameter 632 [Integer Out00], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point Communication Logix Outputs

No.	Name Description	Values	
634	Integer Out01 Displays output word 01 of the controller communication format in integer format. Paired with parameter 635 [Real Out01], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer Communication Logix Outputs
635	Real Out01 Displays output word 01 of the controller communication format in floating point format. Paired with parameter 634 [Integer Out01], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point Communication Logix Outputs
636	Integer Out02 Displays output word 02 of the controller communication format in integer format. Paired with parameter 637 [Real Out02], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer Communication Logix Outputs
637	Real Out02 Displays output word 02 of the controller communication format in floating point format. Paired with parameter 636 [Integer Out02], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point Communication Logix Outputs
638	Integer Out03 Displays output word 03 of the controller communication format in integer format. Paired with parameter 639 [Real Out03], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer Communication Logix Outputs
639	Real Out03 Displays output word 03 of the controller communication format in floating point format. Paired with parameter 638 [Integer Out03], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point Communication Logix Outputs
640	Integer Out04 Displays output word 04 of the controller communication format in integer format. Paired with parameter 641 [Real Out04], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer Communication Logix Outputs
641	Real Out04 Displays output word 04 of the controller communication format in floating point format. Paired with parameter 640 [Integer Out04], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point Communication Logix Outputs

No.	Name Description	Values	
642	Integer Out05 Displays output word 05 of the controller communication format in integer format. Paired with parameter 643 [Real Out05], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer Communication Logix Outputs
643	Real Out05 Displays output word 05 of the controller communication format in floating point format. Paired with parameter 642 [Integer Out05], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point Communication Logix Outputs
644	Integer Out06 Displays output word 06 of the controller communication format in integer format. Paired with parameter 645 [Real Out06], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer Communication Logix Outputs
645	Real Out06 Displays output word 06 of the controller communication format in floating point format. Paired with parameter 644 [Integer Out06], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point Communication Logix Outputs
646	Integer Out07 Displays output word 07 of the controller communication format in integer format. Paired with parameter 647 [Real Out07], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer Communication Logix Outputs
647	Real Out07 Displays output word 07 of the controller communication format in floating point format. Paired with parameter 646 [Integer Out07], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point Communication Logix Outputs
648	Integer Out08 Displays output word 08 of the controller communication format in integer format. Paired with parameter 649 [Real Out08], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer Communication Logix Outputs
649	Real Out08 Displays output word 08 of the controller communication format in floating point format. Paired with parameter 648 [Integer Out08], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point Communication Logix Outputs

No.	Name Description	Values	
650	Integer Out09 Displays output word 09 of the controller communication format in integer format. Paired with parameter 651 [Real Out09], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer Communication Logix Outputs
651	Real Out09 Displays output word 09 of the controller communication format in floating point format. Paired with parameter 650 [Integer Out09], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point Communication Logix Outputs
652	Integer Out10 Displays output word 10 of the controller communication format in integer format. Paired with parameter 653 [Real Out10], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer Communication Logix Outputs
653	Real Out10 Displays output word 10 of the controller communication format in floating point format. Paired with parameter 652 [Integer Out10], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point Communication Logix Outputs
654	Integer Out11 Displays output word 11 of the controller communication format in integer format. Paired with parameter 655 [Real Out11], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer Communication Logix Outputs
655	Real Out11 Displays output word 11 of the controller communication format in floating point format. Paired with parameter 654 [Integer Out11], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point Communication Logix Outputs
656	Integer Out12 Displays output word 12 of the controller communication format in integer format. Paired with parameter 657 [Real Out12], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer Communication Logix Outputs
657	Real Out12 Displays output word 12 of the controller communication format in floating point format. Paired with parameter 656 [Integer Out12], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point Communication Logix Outputs

No.	Name Description	Values	
658	Integer Out13 Displays output word 13 of the controller communication format in integer format. Paired with parameter 659 [Real Out13], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer Communication Logix Outputs
659	Real Out13 Displays output word 13 of the controller communication format in floating point format. Paired with parameter 658 [Integer Out13], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point Communication Logix Outputs
660	Integer Out14 Displays output word 14 of the controller communication format in integer format. Paired with parameter 661 [Real Out14], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer Communication Logix Outputs
661	Real Out14 Displays output word 14 of the controller communication format in floating point format. Paired with parameter 660 [Integer Out14], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point Communication Logix Outputs
662	Integer Out15 Displays output word 15 of the controller communication format in integer format. Paired with parameter 663 [Real Out15], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer Communication Logix Outputs
663	Real Out15 Displays output word 15 of the controller communication format in floating point format. Paired with parameter 662 [Integer Out15], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point Communication Logix Outputs
664	Lgx Comm Format Indicates the Controller to Drive Module communication format. • A value of 16 indicates Velocity Control • A value of 17 indicates Position Control • A value of 18 indicates User-Defined • A value of 32 indicates Custom User-Defined	Default: Min: Max: Type: File: Group:	0 0 4294967296 Non-Linkable, Read Only, 32-bit Integer Communication Commands

No.	Name Description	Values		
740	Position Control Set bits to enable various position control functions. • bit 1 - Enables position regulator output at parameter 318 [Posit Spd Output] • bit 2 - Enables integrator operation. Resets integrator if cleared. • bit 3 - Holds integrator in present state when set. • bit 4 - When set reverses polarity of offset parameters. • bit 5 - When set, permits changing the value of position offsets without changing actual position. When cleared, position offset is relative to the re-referenced value or the latched value upon enable if re-reference was not performed. • bit 6 - When set disabling the position regulator causes all accumulated values to be set to the value in parameter 762 [Mtr Posit Fdbk]. When cleared disabling the position regulator causes all accumulated values to be set to the selected position reference value. • bit 10 - When set parameter 758 [Pt-Pt Posit Ref] may be changed without changing actual position. • bit 13 - Reverses direction of interpolated position and speed. • bit 16 - When set position Watch 1 is enabled. When cleared parameter 741 [Position Status] bit 8 is cleared. • bit 17 - When set Position Watch 1 output is set when parameter 763 [Act Motor Posit] is greater than parameter 780 [PositDtct1 Stpt]. When cleared Position Watch 1 output is set when parameter 763 [Act Motor Posit] is less than parameter 763 [Act Motor Posit] [PositDtct1 Stpt]. • bit 18 - When set position Watch 2 is enabled. When cleared parameter 741 [Position Status] bit 9 is cleared. • bit 19 - When set Position Watch 2 output is set when parameter 763 [Act Motor Posit] is greater than parameter 781 [Posit Dtct2 Stpt]. When cleared Position Watch 2 output is set when parameter 763 [Act Motor Posit] is less than parameter 781 [Posit Dtct2 Stpt].	Default:	0000 0000 0000 1010 0000 0000 0000 0000	
		Options:	Bit 0 Bit 1 Bit 2 Bit 3 Bit 4 Bit 5 Bit 6 Bit 7 Bit 8 Bit 9 Bit 10 Bit 11 Bit 12 Bit 13 Bit 14 Bit 15 Bit 16 Bit 17 Bit 18 Bit 19 Bit 20 Bit 21 Bit 22 Bit 23 Bit 24 Bit 25 Bit 26 Bit 27 Bit 28 Bit 29 Bit 30 Bit 31	Reserved Speed Out En Integ En Integ Hold X Offset Pol X Offset Ref ActPosit Rst Reserved Reserved Reserved Pt-Pt ReRef Reserved Reserve Interp Rev Reserved Reserved X Watch1 En X Watch1 Dir X Watch2 En X Watch2 Dir Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved
		File: Group:	Position Control Position Config	

No.	Name Description	Values		
741	Position Status Indicates status of position control algorithms. - bit 0 - Position integrator in lower limit. - bit 1 - Position integrator in high limit. - bit 2 - Position regulator output in low limit. - bit 3 - Position regulator output on high limit. - bit 8 - Indicates Position Watch 1 position has been reached. - bit 9 - Indicates Position Watch 2 position has been reached. - bit 10 - Indicates parameter 769 [Position Error] is within the position deadband specified by parmameter 782 [In Posit BW]	Default:	0000 0000 0000 0000 0000 0000 0000 0000	
		Options:	Bit 0 X IGain LLX Bit 1 X IGain HLim Bit 2 X Spd LLim Bit 3 X Spd HLim Bit 4 Reserved Bit 5 Reserved Bit 6 Reserved Bit 7 Reserved Bit 8 Posit Watch1 Bit 9 Posit Watch2 Bit 10 In Position Bit 11 Reserved Bit 12 Reserved Bit 13 Reserved Bit 14 Reserved Bit 15 Reserved Bit 16 Reserved Bit 17 Reserved Bit 18 Reserved Bit 19 Reserved Bit 20 Reserved Bit 21 Reserved Bit 22 Reserved Bit 23 Reserved Bit 24 Reserved Bit 25 Reserved Bit 26 Reserved Bit 27 Reserved Bit 28 Reserved Bit 29 Reserved Bit 30 Reserved Bit 31 Reserved	
		File: Group:	Position Control Position Config	
742	 Posit Ref Sel Enter a value to select the position mode and corresponding reference.	Default:	Val 1	AuxPosit Ref
		Options:	Val 0 Interpolate Val 1 AuxPosit Ref Val 2 Pt to Pt	
		File: Group:	Position Control Position Config	
743	Aux Posit Ref Supplies position reference to the position regulator when selected by parameter 742 [Posit Ref Sel]. This input is designed to be linked to a position reference that has been profiled or well behaved (unlike point to point).	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-bit Integer Position Control Interp/Direct	

No.	Name Description	Values	
744	PositRef EGR Out Accumuated output of the position reference Electronic Gear Ratio. When the position regulator is not enabled, this parameter is initialized to parameter 762 [Mtr Posit Fdbk] or to the selected position reference as determined by parameter 740 [Position Control] bit 6.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer Position Control, Position Control Interp/Direct, Point to Point
745	PositRef EGR Mul An integer value in the numerator of the Electronic Gear Ratio function that is precision multiplied by the selected position reference. A negative value will effect a change in polarity	Default: Min: Max: Type: File: Group:	1 -2147483648 2147483648 Linkable, Read-Write, 32-bit Integer Position Control, Position Control Interp/Direct, Point to Point
746	PositRef EGR Div An integer value in the denominator of the Electronic Gear Ratio function that divides into the product of the numerator and the selected position reference. Remainders are accumulated and not lost.	Default: Min: Max: Type: File: Group:	1 1 2147483648 Non-Linkable, Read-Write, 32-bit Integer Position Control, Position Control Interp/Direct, Point to Point
747	Position Cmmd Final accumulated command to the position regulator. When the position regulator is not enabled, this parameter is initialized to parameter 762 [Mtr Posit Fdbk] or to the selected position reference as determined by parameter 740 [Position Control] bit 6. Thereafter, its value will reflect the result of reference and offset changes.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer Position Control, Position Control Interp/Direct, Point to Point
748	CoarsePosit Trgt A 32 bit integer sink parameter that receives position updates at a slow but periodic rate. The coarse position target is applied to an interpolator that presents a smooth position reference and speed at its output. Coarse position input is typically linked to a motion planner that will provide target points at an integer multiple of 1 msec. The maximum coarse target time interval is 32 msec. The precise time interval need not be specified but it should be "rock solid" for best performance. An internal sync pulse must be received at the time of coarse position update	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-bit Integer Position Control Interp/Direct
749	Interp Position Displays the smoothed position output of the interpolator function that supplies the position reference to the regulator when selected by parameter 742 [Posit Ref Sel].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer Position Control Interp/Direct
750	Interp Speed Displays the smoothed speed output of the interpolator function. It may linked to speed reference as a feed forward to secure zero position error.	Units: Default: Min: Max: Type: File: Group:	RPM 0 -14000 14000 Non-Linkable, Read Only, Floating Point Position Control Interp/Direct

No.	Name Description	Values	
751	Interp Spd Scale A gain multiplier for the interpolator, whose product is output parameter 750 [Interp Speed]. Normally it is set close to 1.0 to secure minimum following error.	Default: 1 Min: 0 Max: 200 Type: Linkable, Read-Write, Floating Point File: Position Control Group: Interp/Direct	
753	Posit Offset 1 Supplies a position reference offset, which is summed after the Electronic Gear Ratio and used to phase trim position reference. A step in the offset position will be internally rate limited and added to the selected reference position. The rate of correction is set by parameter 755 [Posit Offset Spd]. The initial value of this parameter is latched upon position enable without causing a change in reference. Subsequent changes to the value will be relative to the latched value. See parameter 740 [Position Control] bit 5 for re-referencing the offsets.	Default: 0 Min: -2147483648 Max: 2147483648 Type: Linkable, Read-Write, 32-bit Integer File: Position Control, Position Control Group: Interp/Direct, Point to Point	
754	Posit Offset 2 Supplies another position reference offset, which is summed directly with parameter 753 [Positi Offset 1]. Used to trim the phase of the selected position reference. Position offset will be internally rate limited to a velocity set by parameter 755 [Posit Offset Spd].	Default: 0 Min: -2147483648 Max: 2147483648 Type: Linkable, Read-Write, 32-bit Integer File: Position Control, Position Control Group: Interp/Direct, Point to Point	
755	Posit Offset Spd Sets the speed of position offset. A position offset command will not exceed this speed. The actual speed of offset is limited to a maximum value of $1/(\text{inertia} * \text{pos gain})$ so as not to cause a torque pulse greater than 1 per unit. The speed will change exponentially.	Units: RPM Default: 175 Min: -14000 Max: 14000 Type: Linkable, Read-Write, Floating Point File: Position Control, Position Control Group: Interp/Direct, Point to Point	
756	X Offst SpdFilt Displays the output of a first order filter whose time response is shaped specifically to provide an output that represents the actual speed of offset correction. It may be used as feed forward into speed reference to secure minimal position error during changes to offset.	Units: RPM Default: 0 Min: -14000 Max: 14000 Type: Non-Linkable, Read Only, Floating Point File: Position Control, Position Control Group: Interp/Direct, Point to Point	
758	Pt-Pt Posit Ref The point to point mode 32 bit position reference is selected by parameter 742[Posit Ref Sel]. The initial value is latched upon position enable without causing movement. Subsequent changes to reference are relative to the latched position unless the position is re-referenced by parameter 740 [Position Control] bit 10. Position moves may be made within the limits of plus or minus 31 bits. Point to point reference may also be changed, even reversed, during a move.	Default: 0 Min: -2147483648 Max: 2147483648 Type: Linkable, Read-Write, 32-bit Integer File: Position Control Group: Point to Point	

No.	Name Description	Values	
759	Pt-Pt Accel Time Acceleration time (sec) to base speed, active only in point to point mode. Acceleration to a relatively low speed may be exponential	Units: Default: Min: Max: Type: File: Group:	Sec 10 0.1 6553.5 Linkable, Read-Write, Floating Point Position Control Point to Point
760	Pt-Pt Decel Time Deceleration time (sec) from base speed to zero, active only in point to point mode. Some tailing can be expected at the end of a move as the drive comes into command position. It is left to the user to select a time that does not place the drive in current or torque limit. Deceleration from relatively low speed may be exponential.	Units: Default: Min: Max: Type: File: Group:	Sec 10 0.1 6553.5 Linkable, Read-Write, Floating Point Position Control Point to Point
761	Pt-Pt Filt BW Sets the bandwidth of a low pass filter which affects smoothness at the start of deceleration in the point to point mode. A high filter bandwidth will produce a more square deceleration torque, one with a higher level of jerk. Typical values range from 5 to 100 (rad/sec). A zero value will bypass the filter. Tail-out is influenced mainly by parameter 768 Posit Reg P Gain].	Units: Default: Min: Max: Type: File: Group:	R/S 25 0 500 Linkable, Read-Write, Floating Point Position Control Point to Point
762	Mtr Posit Fdbk Displays the accumulated pulse count of the primary feedback device as a 32 bit integer. The primary feedback device is selected by parameter 222 [Motor Fdbk Sel].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer Monitor, Position Control, Position Control Metering, Interp/Direct, Point to Point
763	Act Motor Posit Displays the accumulated motor position as a 32 bit integer. It tracks parameter 762 [Mtr Posit Fdbk]. When the position regulator is not enabled, this parameter is initialized to parameter 762 [Mtr Posit Fdbk] or to the selected position reference as determined by parameter 740 [Position Control] bit 6.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer Position Control, Position Control, Position Control Interp/Direct, Point to Point, Posit Detection
764	Posit Load Fdbk Tracks the load position, as a 32 bit integer. When a gear box connects the load to the motor, parameter 766 [Posit FB EGR Mul] and parameter 767 [Posit FB EGR Div] must be set to account for the gear ratio. Set parameter 766 [Posit FB EGR Mul] equal to parameter 767 [Posit FB EGR Div] if the load is directly connected to the motor.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-bit Integer Position Control Interp/Direct

No.	Name Description	Values	
765	Posit Actl Load Holds the accumulated output of the Load Gear Ratio as a 32 bit integer and forms the primary feedback for the position regulator integral channel. It is very important that the load gear ratio be precisely set such that the delta pulse count of one motor revolution equals the delta pulse count of this parameter. When the position regulator is not enabled, this parameter is initialized to parameter 762 [Mtr Posit Fdbk] or to the selected position reference as determined by parameter 740 [Position Control] bit 6.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer Position Control Interp/Direct
766	Posit FB EGR Mul A 32 bit integer in the numerator of the load Electronic Gear Ratio function. It is multiplied by parameter 764 [Posit Load Fdbk] and divided by parameter 767 [Posit FB EGR Div] to reflect the load pulse count to the motor (effectively removing the gear box ratio). The accumulated position values parameter 763 [Act Motor Posit] and parameter 764 [Posit Actl Load] will be equal if the ratio is set properly. There may be some difference due to lost motion in the gear train, but there should not be an accumulated difference. It is often necessary to count gear teeth as gear box manufacturers often approximate exact ratios with decimal numbers. Enter a negative value in the numerator to account for reversed motor rotation.	Default: Min: Max: Type: File: Group:	1 -2147483648 2147483648 Linkable, Read-Write, 32-bit Integer Position Control Interp/Direct
767	Posit FB EGR Div This is a 32 bit integer that forms the denominator of the load Electronic Gear Ratio function.	Default: Min: Max: Type: File: Group:	1 1 2147483648 Non-Linkable, Read-Write, 32-bit Integer Position Control Interp/Direct
768	PositReg P Gain Sets position regulator gain as measured from position error to speed reference. The gain number is identically equal to position regulator bandwidth in rad/sec. For example: A gain of 10 means that a per unit position error of 0.1 sec. will effect a 1.0 pu speed change (1 per unit position error is the distance traveled in 1 sec. at base motor speed). The maximum value of this parameter is typically 1/3 of the speed bandwidth (rad/sec) but may be set considerably higher with careful tuning of the speed regulator output lead/lag filter.	Units: Default: Min: Max: Type: File: Group:	R/S 4 0 200 Linkable, Read-Write, Floating Point Position Control, Position Control Interp/Direct, Point to Point
769	Position Error Actual position error in motor pulse counts. When the position regulator is not enabled, this 32 bit integer register is initialized to zero. When the position regulator is enabled, this parameter contains the running value of position error, often referred to as "following error".	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer Position Control, Position Control, Position Control Interp/Direct, Point to Point, Posit Detection

No.	Name Description	Values	
770	PositReg Integ Sets position regulator integral gain as measured from position error to velocity reference. It has gain units of (per unit velocity/sec) / (per unit position) and is unit compatible with [PositReg P Gain]. An integral gain of 25 means that a per unit position error of 0.1 sec will effect a 2.5 pu speed change per sec. A typical maximum value is π *[PositReg P Gain] ² . Note: 1 per unit position is the distance traveled in 1 sec. at base motor speed.	Units: Default: Min: Max: Type: File: Group:	/Sec 1 0.01 500 Linkable, Read-Write, Floating Point Position Control Interp/Direct
771	PositReg Droop Position Droop limits the low frequency gain of the position regulators integral channel to a value of (1/droop). It provides a means to fine tune the stability for load mounted feedback devices where lost motion may cause a problem. Typically, position droop will have a value that is less than (1/position gain), perhaps even zero for tightly coupled loads. Position droop has a gain value of (per unit position) / (per unit speed). Note: 1 per unit position is the distance traveled in 1 sec. at base motor speed.	Default: Min: Max: Type: File: Group:	0 0 200 Linkable, Read-Write, Floating Point Position Control Interp/Direct
772	XReg Integ LoLim The negative limit of the position integrator.	Units: Default: Min: Max: Type: File: Group:	RPM -2187.5 -14000 0 Linkable, Read-Write, Floating Point Position Control Interp/Direct
773	XReg Integ HiLim The positive limit of the position integrator.	Units: Default: Min: Max: Type: File: Group:	RPM 2187.5 0 14000 Linkable, Read-Write, Floating Point Position Control Interp/Direct
774	XReg Integ Out The output of the position regulator integral channel after application of the limits. This output is set to zero if the integral gain is set to zero or the integrator is not enabled.	Units: Default: Min: Max: Type: File: Group:	RPM 0 -14000 14000 Non-Linkable, Read Only, Floating Point Position Control Interp/Direct
775	XReg Spd LoLim The negative limit of total position regulator output. Point to point mode uses this parameter to set the reverse speed reference.	Units: Default: Min: Max: Type: File: Group:	RPM -1750 -14000 0 Linkable, Read-Write, Floating Point Position Control, Position Control Interp/Direct, Point to Point

No.	Name Description	Values		
776	XReg Spd HiLim The positive limit of total position regulator output. Point to point mode uses this parameter to set the forward speed reference. A value of 1.0 represents base speed of the motor.	Units: Default: Min: Max: Type: File: Group:	RPM 1750 0 14000 Linkable, Read-Write, Floating Point Position Control, Position Control Interp/Direct, Point to Point	
777	Posit TP Select Enter or write a value to select position regulator data displayed in parameter 778 [Posit TP Data Int] and parameter 779 [Posit TP DataReal].	Default:	Val 0	Zero
		Options:	Val 0 Val 1 Val 2 Val 3 Val 4 Val 5 Val 6 Val 7 Val 8 Val 9 Val 10 Val 11 Val 12 Val 13 Val 14	Zero del Xo68 s Vout del X cmd del Act Load del Act Mtr Integ Error Xprop Out Reserved PreLim Xvout Limiter Out Ref EGR In OffsetVellim PtoP VelLim Sec per Edge Edge per Sec
		File: Group:	Utility Test Points	
778	PositTP Data Int Displays the data selected by parameter [Posit TP Sel]. This display should only be used if the selected value is integer data.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer Utility Test Points	
779	PositTP DataReal Displays the dat selected by parameter [Posit TP Sel] in RPM. This display should only be used if the selected value is floating point data.	Units: Default: Min: Max: Type: File: Group:	RPM 0 -3.85×10^{12} 3.85×10^{12} Non-Linkable, Read Only, Floating Point Utility Test Points	
780	PositDetct1 Stpt Provides the setpoint for Position Watch 1. Position Watch 1 is enabled and configured with parameter 740 [Position Control] bits 16 & 17. Position Watch 1 compares this value with parameter 763 [Act Motor Posit] and sets bit 8 of parameter 741 [Position Status] when the appropriate condition is satisfied.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-bit Integer Position Control Posit Detection	

No.	Name Description	Values	
781	PositDetct2 Stpt Provides the setpoint for Position Watch 2. Position Watch 2 is enabled and configured with parameter 740 [Position Control] bits 18 & 19. Position Watch 2 compares this value with parameter 763 [Act Motor Posit] and sets bit 9 of parameter 741 [Position Status] when the appropriate condition is satisfied.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-bit Integer Position Control Posit Detection
782	In Posit BW Sets overall band width of In Position detector. The detector sets bit 10 of parameter 741 [Position Status], when parameter 769 [Position Error] is within limits for a sufficient time, specified by parameter 783 [In Posit Dwell] A modest hysteresis count is added to the position band width after the position error is within specified limits.	Default: Min: Max: Type: File: Group:	200 -2147483648 2147483648 Linkable, Read-Write, 32-bit Integer Position Control Posit Detection
783	In Posit Dwell Position error must be within the value specified by parameter 782 [In Posit BW] for this amount of time before the In Position detector sets bit 10 [In Position] of parameter 741 [Position Status]. A momentary out of position indication will reset the internal timer and clear the In Position status bit.	Units: Default: Min: Max: Type: File: Group:	Sec 0.004 0 10 Linkable, Read-Write, Floating Point Position Control Posit Detection

No.	Name Description	Values		
786	Xsync Status Bit 0 will go high for 0.5ms latching the Sync Generator inputs to the Sync Generator outputs. The period at which this bit is set is determined by parameter 787 [Xsync Gen Period]	Default:	0000 0000 0000 0000 0000 0000 0000 0000	
		Options:	Bit 0	Sync Pulse
			Bit 1	Reserved
			Bit 2	Reserved
			Bit 3	Reserved
			Bit 4	Reserved
			Bit 5	Reserved
			Bit 6	Reserved
			Bit 7	Reserved
			Bit 8	Reserved
			Bit 9	Reserved
			Bit 10	Reserved
			Bit 11	Reserved
			Bit 12	Reserved
			Bit 13	Reserved
			Bit 14	Reserved
			Bit 15	Reserved
			Bit 16	Reserved
			Bit 17	Reserved
			Bit 18	Reserved
			Bit 19	Reserved
			Bit 20	Reserved
			Bit 21	Reserved
			Bit 22	Reserved
			Bit 23	Reserved
			Bit 24	Reserved
			Bit 25	Reserved
			Bit 26	Reserved
			Bit 27	Reserved
			Bit 28	Reserved
			Bit 29	Reserved
			Bit 30	Reserved
		Bit 31	Reserved	
File: Group:	Position Control Sync Generator			
787	 Xsync Gen Period Sets the period for the Sync Pulse Generator. Bit 0 of parameter 786 [Xsync Status] will be set for 0.5 msec and will be cleared for 0.5msec x 2[Xsync Gen Period]] - 0.5 msec.	Default:	Val 1	2 msec
		Options:	Val 0	1 msec
			Val 1	2 msec
Val 2	3 msec			
Val 3	4 msec			
Val 4	8 msec			
Val 5	16 msec			
Val 6	32 msec			
File: Group:	Position Control Sync Generator			
788	Xsync In 1 32 bit integer input of the Sync Generator. Latched to parameter 789 [Xsync Out 1]. Link any 32 bit integer parameter to this input parameter.	Default:	0	
		Min:	-2147483648	
		Max:	2147483648	
		Type:	Linkable, Read-Write, 32-bit Integer	
		File:	Position Control	
		Group:	Sync Generator	

No.	Name Description	Values	
789	Xsync Out 1 Sync Generator 32 bit output register. Latched to parameter 788 [Xsync In 1] every time bit 0 of parameter 786 [Xsync Status] (Sync Pulse) is set.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer Position Control Sync Generator
790	Xsync In 2 32 bit integer input of the Sync Generator. Latched to parameter 791 [Xsync Out 2]. Link any 32 bit integer parameter to this input parameter.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-bit Integer Position Control Sync Generator
791	Xsync Out 2 Sync Generator 32 bit output register. Latched to parameter 790 [Xsync In 2] every time bit 0 of parameter 786 [Xsync Status] (Sync Pulse) is set.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer Position Control Sync Generator
792	Xsync Out 2 Dly Displays data of parameter 791 [Xsync Out 2] from the last sync period.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer Position Control Sync Generator
793	Xsync In 3 32 bit integer input of the Sync Generator. Latched to parameter 794 [Xsync Out 3]. Link any 32 bit integer parameter to this input parameter.	Units: Default: Min: Max: Type: File: Group:	P.U. 0 -8 8 Linkable, Read-Write, Floating Point Position Control Sync Generator
794	Xsync Out 3 Sync Generator 32 bit output register. Latched to parameter 793 [Xsync In 3] every time bit 0 of parameter 786 [Xsync Status] (Sync Pulse) is set.	Units: Default: Min: Max: Type: File: Group:	P.U. 0 -8 8 Non-Linkable, Read Only, Floating Point Position Control Sync Generator
795	Xsync Out 3 Dly Displays data of parameter 794 [Xsync Out 3] from the last sync period.	Units: Default: Min: Max: Type: File: Group:	P.U. 0 -8 8 Non-Linkable, Read Only, Floating Point Position Control Sync Generator

No.	Name Description	Values			
1000 	SL Node Cnfg Set bits to configure the SynchLink node. Setting bit 0 configures the local node as the Time Master. Setting bit 2 configures the node to synchronize with the Time Master immediately (1-2S per node) on power-up or recovery. If you do not set bit 2, the node will stay in the fast mode, taking up to 36S per node to synchronize on power-up or recovery.	Default:	0000 0000 0000 0000 0000 0000 0100		
		Options:	Bit 0 Bit 1 Bit 2 Bit 3 Bit 4 Bit 5 Bit 6 Bit 7 Bit 8 Bit 9 Bit 10 Bit 11 Bit 12 Bit 13 Bit 14 Bit 15 Bit 16 Bit 17 Bit 18 Bit 19 Bit 20 Bit 21 Bit 22 Bit 23 Bit 24 Bit 25 Bit 26 Bit 27 Bit 28 Bit 29 Bit 30 Bit 31	Time Keeper Reserved Sync Now Reserved	

No.	Name Description	Values				
1010 	SL Rx Comm Frmt Defines the node's communication format for receiving SynchLink data. This determines the number of axis data, direct data and buffered data words received. Configure the format by using the Peer Communication window in DriveExecutive programming software.		Value	Axis	Direct	Buffered
		Options:	Val 0 Val 7 Val 9 Val 17	0 0 0 0	0 2 4 4	0 18 8 18
		File: Group:	SynchLink SynchLink Config			
1011 	SL Rx DirectSel0 Determines the destination for the data received at word 0 of direct received data. Configure the selection by using the Peer Communication window.	Default:	Val 0	No Data		
		Options:	Val 0 Val 1 Val 2 Val 3 Val 4 Val 5 Val 6 Val 7 Val 8 Val 9 Val 10	No Data SL Multiply Event P0 Event P1 Event D0 Event D1 Event D2 Event D3 Event Opt0 Event Opt1 Event Status		
		File: Group:	SynchLink SynchLink Config			
1012 	SL Rx DirectSel1 Determines the destination for the data received at word 1 of direct received data. Configure the selection by using the Peer Communication window.	Default:	Val 0	No Data		
		Options:	Val 0 Val 1 Val 2 Val 3 Val 4 Val 5 Val 6 Val 7 Val 8 Val 9 Val 10	No Data SL Multiply Event P0 Event P1 Event D0 Event D1 Event D2 Event D3 Event Opt0 Event Opt1 Event Status		
		File: Group:	SynchLink SynchLink Config			
1013 	SL Rx DirectSel2 Determines the destination forced data. Configure the selection by using the Peer Communication window.	Default:	Val 0	No Data		
		Options:	Val 0 Val 1 Val 2 Val 3 Val 4 Val 5 Val 6 Val 7 Val 8 Val 9 Val 10	No Data SL Multiply Event P0 Event P1 Event D0 Event D1 Event D2 Event D3 Event Opt0 Event Opt1 Event Status		
		File: Group:	SynchLink SynchLink Config			

No.	Name Description	Values				
1014 	SL Rx DirectSel3 Determines the destination for the data received at word 3 of direct received data. Configure the selection by using the Peer Communication window.	Default:	Val 0	No Data		
		Options:	Val 0 Val 1 Val 2 Val 3 Val 4 Val 5 Val 6 Val 7 Val 8 Val 9 Val 10	No Data SL Multiply Event P0 Event P1 Event D0 Event D1 Event D2 Event D3 Event Opt0 Event Opt1 Event Status		
		File: Group:	SynchLink SynchLink Config			
1020 	SL Tx Comm Frmt Defines the node's communication format for transmitting SynchLink data. This determines the number of axis data words, direct data words and buffered data words transmitted. Configure the format by using the Peer Communication window.		Value	Axis	Direct	Buffered
		Options:	Val 0 Val 7 Val 9 Val 17	0 0 0 0	0 2 4 4	0 18 8 18
		File: Group:	SynchLink SynchLink Config			
1021 	SL Tx DirectSel0 Determines the source type for the data transmitted by direct transmit word 0. The source type selections are: no data, event, feedback and drive parameter. If drive parameter is selected, a parameter of the appropriate data format (integer or real) must be linked to parameter 1141 [SL Dir Int Tx0] or parameter 1142 [SL Dir Real Tx0]. Configure the selection by using the Peer Communication window.	Default:	Val 0	No Data		
		Options:	Val 0 Val 1 Val 2 Val 3 Val 4 Val 5 Val 6 Val 7 Val 8 Val 9 Val 10 Val 11 Val 12 Val 13 Val 14 Val 15 Val 16 Val 17 Val 18 Val 19 Val 20 Val 21 Val 22 Val 23 Val 24 Val 25 Val 26	No Data SL Multiply Event P0 Event P1 Event D0 Event D1 Event D2 Event D3 Event Opt0 Event Opt1 Event Status Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Dir Tx Data Dir Rx Data E0 Accum E1 Accum Opt0 Accum Opt1 Accum		
		File: Group:	SynchLink SynchLink Config			

No.	Name Description	Values		
1022 	SL Tx DirectSel1 Determines the source type for the data transmitted by direct transmit word 1. The source type selections are: no data, event, feedback and drive parameter. If drive parameter is selected, a parameter of the appropriate data format (integer or real) must be linked to parameter 1143 [SL Dir Int Tx1] or parameter 1144 [SL Dir Real Tx1]. Configure the selection by using the Peer Communication window.	Default:	Val 0	No Data
		Options:	Val 0 Val 1 Val 2 Val 3 Val 4 Val 5 Val 6 Val 7 Val 8 Val 9 Val 10 Val 11 Val 12 Val 13 Val 14 Val 15 Val 16 Val 17 Val 18 Val 19 Val 20 Val 21 Val 22 Val 23 Val 24 Val 25 Val 26	No Data SL Multiply Event P0 Event P1 Event D0 Event D1 Event D2 Event D3 Event Opt0 Event Opt1 Event Status Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Dir Tx Data Dir Rx Data E0 Accum E1 Accum Opt0 Accum Opt1 Accum
		File: Group:	SynchLink SynchLink Config	

No.	Name Description	Values		
1023 	SL Tx DirectSel2 Determines the source type for the data transmitted by direct transmit word 2. The source type selections are: no data, event, feedback and drive parameter. If drive parameter is selected, a parameter of the appropriate data format (integer or real) must be linked to parameter 1145 [SL Dir Int Tx2] or parameter 1146 [SL Dir Real Tx2]. Configure the selection by using the Peer Communication window.	Default:	Val 0	No Data
		Options:	Val 0 Val 1 Val 2 Val 3 Val 4 Val 5 Val 6 Val 7 Val 8 Val 9 Val 10 Val 11 Val 12 Val 13 Val 14 Val 15 Val 16 Val 17 Val 18 Val 19 Val 20 Val 21 Val 22 Val 23 Val 24 Val 25 Val 26	No Data SL Multiply Event P0 Event P1 Event D0 Event D1 Event D2 Event D3 Event Opt0 Event Opt1 Event Status Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Dir Tx Data Dir Rx Data E0 Accum E1 Accum Opt0 Accum Opt1 Accum
		File: Group:	SynchLink SynchLink Config	

No.	Name Description	Values		
1024	 SL Tx DirectSel3 Determines the source type for the data transmitted by direct transmit word 3. The source type selections are: no data, event, feedback and drive parameter. If drive parameter is selected, a parameter of the appropriate data format (integer or real) must be linked to parameter 1147 [SL Dir Int Tx3] or parameter 1148 [SL Dir Real Tx3]. Configure the selection by using the Peer Communication window.	Default:	Val 0	No Data
		Options:	Val 0 Val 1 Val 2 Val 3 Val 4 Val 5 Val 6 Val 7 Val 8 Val 9 Val 10 Val 11 Val 12 Val 13 Val 14 Val 15 Val 16 Val 17 Val 18 Val 19 Val 20 Val 21 Val 22 Val 23 Val 24 Val 25 Val 26	No Data SL Multiply Event P0 Event P1 Event D0 Event D1 Event D2 Event D3 Event Opt0 Event Opt1 Event Status Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Dir Tx Data Dir Rx Data E0 Accum E1 Accum Opt0 Accum Opt1 Accum
		File: Group:	SynchLink SynchLink Config	
1030	SL Mult A In Displays the A Multiplier Input, as a floating point (real) value. This value is divided by the parameter 1032 [SL Mult Base]. The source of the A Multiplier is determined by the "Rx Direct Data Selector" (parameters 1011-1014). The possible sources are: zero, parameter 1054[Dir Int Rx0], parameter 1056 [Dir Int Rx1], parameter 1058 [Dir Int Rx2], or parameter 1060 [Dir Int Rx3]. The SynchLink Multiply function takes this input before it is converted to floating point.	Default: Min: Max: Type: File: Group:	0 0 16 Non-Linkable, Read Only, Floating Point SynchLink Multiplier	
1031	SL Mult B In The B Multiplier Input. This must be a floating point (real) value. The SynchLink Multiply function takes this input after it is converted to integer.	Default: Min: Max: Type: File: Group:	1 0.5 2 Linkable, Read-Write, Floating Point SynchLink Multiplier	
1032	 SL Mult Base Specifies the base for SynchLink real to integer and integer to real conversion functions. Determines the resolution of the conversion results. You must use the same value at the transmitting node and receiving / multiplying nodes. Enter a value that will not produce an overflow - the product of this value and the inputs to the conversion and multiply functions must be less than 65,536.	Default: Min: Max: Type: File: Group:	10000 5000 50000 Non-Linkable, Read-Write, Floating Point SynchLink Multiplier	

No.	Name Description	Values		
1033	SL Mult Out Displays the output of the SynchLink Multiply function as a floating (real) value. The value is the result of the formula "Mult A In source (integer) x parameter 1031 [Mult B In] / parameter 1032 [Mult Base]" or "parameter 1030 [Mult A In] x parameter 1031 [Mult B In]". Note: the SynchLink Multiply function produces an output that is always positive.	Default: Min: Max: Type: File: Group:	0 0 16 Non-Linkable, Read Only, Floating Point SynchLink Multiplier	
1034	SL Mult State Displays the status of the SynchLink Multiply function. Bit 0 [Local Overflow] indicates a math overflow due to local multiply. Bit 1 [Rx Overflow] indicates a math overflow in received data. Bit 3 [Ftol Overflow] indicates a math overflow in the real to integer conversion function.	Default:	0000 0000 0000 0000 0000 0000 0000 0000	
		Options:	Bit 0 Bit 1 Bit 2 Bit 3 Bit 4 Bit 5 Bit 6 Bit 7 Bit 8 Bit 9 Bit 10 Bit 11 Bit 12 Bit 13 Bit 14 Bit 15 Bit 16 Bit 17 Bit 18 Bit 19 Bit 20 Bit 21 Bit 22 Bit 23 Bit 24 Bit 25 Bit 26 Bit 27 Bit 28 Bit 29 Bit 30 Bit 31	Local Overflow Rx Overflow Reserved Ftol Overflow Reserved

No.	Name Description	Values		
1036	Real to Int Out Displays the integer output of the real to integer conversion function. The value is the result of the formula "parameter 1035 [Real to Int In] x parameter 1032 [SL Mult Base]".	Default:	0	
		Min:	0	
		Max:	65535	
		Type:	Non-Linkable, Read Only, 16-bit Integer	
		File:	SynchLink	
		Group:	Multiplier	
1040	SL Rcv Events Displays the received event status from parameter 1041 [Rx P0 Regis] through parameter 1048 [Rx Opt1 Regis].	Default:	0000 0000 0000 0000 0000 0000 0000 0000	
		Options:	Bit 0	E0 Regis
			Bit 1	E1 Regis
			Bit 2	D0
			Bit 3	D1
			Bit 4	D2
			Bit 5	D3
			Bit 6	Opt0 Regis
			Bit 7	Opt1 Regis
			Bit 8	Reserved
			Bit 9	Reserved
			Bit 10	Reserved
			Bit 11	Reserved
			Bit 12	Reserved
			Bit 13	Reserved
			Bit 14	Reserved
			Bit 15	Reserved
			Bit 16	Reserved
			Bit 17	Reserved
			Bit 18	Reserved
			Bit 19	Reserved
			Bit 20	Reserved
			Bit 21	Reserved
			Bit 22	Reserved
			Bit 23	Reserved
			Bit 24	Reserved
			Bit 25	Reserved
			Bit 26	Reserved
			Bit 27	Reserved
			Bit 28	Reserved
			Bit 29	Reserved
			Bit 30	Reserved
			Bit 31	Reserved
		File:	SynchLink	
		Group:	Multiplier	
1041	SL Rx P0 Regis Displays received port 0 registration data, if direct received data is configured to be port 0 registration data by the Rx Direct Data Selector (parameters 1011-1014). Configure this selection by using the Peer Communication window.	Default:	0	
		Min:	-2147483648	
		Max:	2147483648	
		Type:	Non-Linkable, Read Only, 32-bit Integer	
		File:	SynchLink	
		Group:	Event Data	
1042	SL Rx P1 Regis Displays received port 1 registration data, if direct received data is configured to be port 1 registration data by the Rx Direct Data Selector (parameters 1011-1014). Configure this selection by using the Peer Communication window.	Default:	0	
		Min:	-2147483648	
		Max:	2147483648	
		Type:	Non-Linkable, Read Only, 32-bit Integer	
		File:	SynchLink	
		Group:	Event Data	

No.	Name Description	Values	
1043	SL Rx D0 Latch Displays received event D0 latch data, if direct received data is configured to be event D0 latch data by the Rx Direct Data Selector (parameters 1011-1014). Configure this selection by using the Peer Communication window.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer SynchLink Event Data
1044	SL Rx D1 Latch Displays received event D1 latch data, if direct received data is configured to be event D1 latch data by the Rx Direct Data Selector (parameters 1011-1014). Configure this selection by using the Peer Communication window.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer SynchLink Event Data
1045	SL Rx D2 Latch Displays received event D2 latch data, if direct received data is configured to be event D2 latch data by the Rx Direct Data Selector (parameters 1011-1014). Configure this selection by using the Peer Communication window.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer SynchLink Event Data
1046	SL Rx D3 Latch Displays received event D3 latch data, if direct received data is configured to be event D3 latch data by the Rx Direct Data Selector (parameters 1011-1014). Configure this selection by using the Peer Communication window.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer SynchLink Event Data
1047	SL Rx Opt0 Regis Displays received registration data from feedback option 1 (high resolution encoder daughter card), if direct received data is configured to be feedback option 1 registration data by the Rx Direct Data Selector (parameters 1011-1014). Configure this selection by using the Peer Communication window.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer SynchLink Event Data
1048	SL Rx Opt1 Regis Displays received registration data from feedback option 0 (high resolution encoder daughter card), if direct received data is configured to be feedback option 0 registration data by the Rx Direct Data Selector (parameters 1011-1014). Configure this selection by using the Peer Communication window.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer SynchLink Event Data
1054	SL Dir Int Rx0 Displays the integer value of the Direct Received Data for word 0. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1055 [SL Dir Real Rx0].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer SynchLink Event Data
1055	SL Dir Real Rx0 Displays the floating point (real) value of the Direct Received Data for word 0. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1054 [SL Dir Int Rx0].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point SynchLink Direct Data

No.	Name Description	Values	
1056	SL Dir Int Rx1 Displays the integer value of the Direct Received Data for word 1. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1057 [SL Dir Real Rx1].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer SynchLink Event Data
1057	SL Dir Real Rx1 Displays the floating point (real) value of the Direct Received Data for word 1. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1056 [SL Dir Int Rx1].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point SynchLink Direct Data
1058	SL Dir Int Rx2 Displays the integer value of the Direct Received Data for word 2. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1059 [SL Dir Real Rx2].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer SynchLink Event Data
1059	SL Dir Real Rx2 Displays the floating point (real) value of the Direct Received Data for word 2. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1058 [SL Dir Int Rx2].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point SynchLink Direct Data
1060	SL Dir Int Rx3 Displays the integer value of the Direct Received Data for word 3. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1061 [SL Dir Real Rx3].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer SynchLink Event Data
1061	SL Dir Real Rx3 Displays the floating point (real) value of the Direct Received Data for word 3. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1060 [SL Dir Int Rx3].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point SynchLink Direct Data
1073	SL Buf Int Rx00 Displays the integer value of the Buffered Received Data for word 0. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1074 [SL Buf Real Rx00].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer SynchLink Buffered Data In
1074	SL Buf Real Rx00 Displays the floating point (real) value of the Buffered Received Data for word 0. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1073 [SL Buf Int Rx00].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point SynchLink Buffered Data In

No.	Name Description	Values	
1075	SL Buf Int Rx01 Displays the integer value of the Buffered Received Data for word 1. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1076 [SL Buf Real Rx01].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer SynchLink Buffered Data In
1076	SL Buf Real Rx01 Displays the floating point (real) value of the Buffered Received Data for word 1. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1075 [SL Buf Int Rx01].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point SynchLink Buffered Data In
1077	SL Buf Int Rx02 Displays the integer value of the Buffered Received Data for word 2. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1078 [SL Buf Real Rx02].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer SynchLink Buffered Data In
1078	SL Buf Real Rx02 Displays the floating point (real) value of the Buffered Received Data for word 2. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1079 [SL Buf Int Rx02].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point SynchLink Buffered Data In
1079	SL Buf Int Rx03 Displays the integer value of the Buffered Received Data for word 3. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1080 [SL Buf Real Rx03].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer SynchLink Buffered Data In
1080	SL Buf Real Rx03 Displays the floating point (real) value of the Buffered Received Data for word 3. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1079 [SL Buf Int Rx03].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point SynchLink Buffered Data In
1081	SL Buf Int Rx04 Displays the integer value of the Buffered Received Data for word 4. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1082 [SL Buf Real Rx04].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer SynchLink Buffered Data In
1082	SL Buf Real Rx04 Displays the floating point (real) value of the Buffered Received Data for word 4. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1081 [SL Buf Int Rx04].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point SynchLink Buffered Data In

No.	Name Description	Values	
1083	SL Buf Int Rx05 Displays the integer value of the Buffered Received Data for word 5. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1084 [SL Buf Real Rx05].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer SynchLink Buffered Data In
1084	SL Buf Real Rx05 Displays the floating point (real) value of the Buffered Received Data for word 5. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1083 [SL Buf Int Rx05].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point SynchLink Buffered Data In
1085	SL Buf Int Rx06 Displays the integer value of the Buffered Received Data for word 6. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1086 [SL Buf Real Rx06].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer SynchLink Buffered Data In
1086	SL Buf Real Rx06 Displays the floating point (real) value of the Buffered Received Data for word 6. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1085 [SL Buf Int Rx06].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point SynchLink Buffered Data In
1087	SL Buf Int Rx07 Displays the integer value of the Buffered Received Data for word 7. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1088 [SL Buf Real Rx07].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer SynchLink Buffered Data In
1088	SL Buf Real Rx07 Displays the floating point (real) value of the Buffered Received Data for word 7. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1087 [SL Buf Int Rx07].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point SynchLink Buffered Data In
1089	SL Buf Int Rx08 Displays the integer value of the Buffered Received Data for word 8. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1090 [SL Buf Real Rx08].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer SynchLink Buffered Data In
1090	SL Buf Real Rx08 Displays the floating point (real) value of the Buffered Received Data for word 8. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1089 [SL Buf Int Rx08].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point SynchLink Buffered Data In

No.	Name Description	Values	
1091	SL Buf Int Rx09 Displays the integer value of the Buffered Received Data for word 9. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1092 [SL Buf Real Rx09].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer SynchLink Buffered Data In
1092	SL Buf Real Rx09 Displays the floating point (real) value of the Buffered Received Data for word 9. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1091 [SL Buf Int Rx09].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point SynchLink Buffered Data In
1093	SL Buf Int Rx10 Displays the integer value of the Buffered Received Data for word 10. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1094 [SL Buf Real Rx10].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer SynchLink Buffered Data In
1094	SL Buf Real Rx10 Displays the floating point (real) value of the Buffered Received Data for word 10. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1093 [SL Buf Int Rx10].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point SynchLink Buffered Data In
1095	SL Buf Int Rx11 Displays the integer value of the Buffered Received Data for word 11. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1096 [SL Buf Real Rx11].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer SynchLink Buffered Data In
1096	SL Buf Real Rx11 Displays the floating point (real) value of the Buffered Received Data for word 11. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1095 [SL Buf Int Rx11].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point SynchLink Buffered Data In
1097	SL Buf Int Rx12 Displays the integer value of the Buffered Received Data for word 12. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1098 [SL Buf Real Rx12].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer SynchLink Buffered Data In
1098	SL Buf Real Rx12 Displays the floating point (real) value of the Buffered Received Data for word 12. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1097 [SL Buf Int Rx12].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point SynchLink Buffered Data In

No.	Name Description	Values	
1099	SL Buf Int Rx13 Displays the integer value of the Buffered Received Data for word 13. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1100 [SL Buf Real R13].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer SynchLink Buffered Data In
1100	SL Buf Real Rx13 Displays the floating point (real) value of the Buffered Received Data for word 13. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1099 [SL Buf Int R13].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point SynchLink Buffered Data In
1101	SL Buf Int Rx14 Displays the integer value of the Buffered Received Data for word 14. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1102 [SL Buf Real R14].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer SynchLink Buffered Data In
1102	SL Buf Real Rx14 Displays the floating point (real) value of the Buffered Received Data for word 14. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1101 [SL Buf Int R14].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point SynchLink Buffered Data In
1103	SL Buf Int Rx15 Displays the integer value of the Buffered Received Data for word 15. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1104 [SL Buf Real R15].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer SynchLink Buffered Data In
1104	SL Buf Real Rx15 Displays the floating point (real) value of the Buffered Received Data for word 15. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1103 [SL Buf Int R15].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point SynchLink Buffered Data In
1105	SL Buf Int Rx16 Displays the integer value of the Buffered Received Data for word 16. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1106 [SL Buf Real Rx16].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer SynchLink Buffered Data In
1106	SL Buf Real Rx16 Displays the floating point (real) value of the Buffered Received Data for word 16. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1105 [SL Buf Int Rx16].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point SynchLink Buffered Data In

No.	Name Description	Values	
1107	SL Buf Int Rx17 Displays the integer value of the Buffered Received Data for word 17. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1108 [SL Buf Real Rx17].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer SynchLink Buffered Data In
1108	SL Buf Real Rx17 Displays the floating point (real) value of the Buffered Received Data for word 17. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1107 [SL Buf Int Rx17].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point SynchLink Buffered Data In
1109	SL Buf Int Rx18 Displays the integer value of the Buffered Received Data for word 18. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1110 [SL Buf Real Rx18].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer SynchLink Buffered Data In
1110	SL Buf Real Rx18 Displays the floating point (real) value of the Buffered Received Data for word 18. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1109 [SL Buf Int Rx18].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point SynchLink Buffered Data In
1111	SL Buf Int Rx19 Displays the integer value of the Buffered Received Data for word 19. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1112 [SL Buf Real Rx19].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer SynchLink Buffered Data In
1112	SL Buf Real Rx19 Displays the floating point (real) value of the Buffered Received Data for word 19. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1111 [SL Buf Int Rx19].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point SynchLink Buffered Data In
1113	SL Buf Int Rx20 Displays the integer value of the Buffered Received Data for word 20. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1114 [SL Buf Real Rx20].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer SynchLink Buffered Data In
1114	SL Buf Real Rx20 Displays the floating point (real) value of the Buffered Received Data for word 20. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1113 [SL Buf Int Rx20].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point SynchLink Buffered Data In

No.	Name Description	Values	
1115	SL Buf Int Rx21 Displays the integer value of the Buffered Received Data for word 21. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1116 [SL Buf Real Rx21].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer SynchLink Buffered Data In
1116	SL Buf Real Rx21 Displays the floating point (real) value of the Buffered Received Data for word 21. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1115 [SL Buf Int Rx21].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point SynchLink Buffered Data In
1117	SL Buf Int Rx22v Displays the integer value of the Buffered Received Data for word 22. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1118 [SL Buf Real Rx22].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer SynchLink Buffered Data In
1118	SL Buf Real Rx22 Displays the floating point (real) value of the Buffered Received Data for word 22. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1117 [SL Buf Int Rx22].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point SynchLink Buffered Data In
1119	SL Buf Int Rx23 Displays the integer value of the Buffered Received Data for word 23. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1120 [SL Buf Real Rx23].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer SynchLink Buffered Data In
1120	SL Buf Real Rx23 Displays the floating point (real) value of the Buffered Received Data for word 23. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1119 [SL Buf Int Rx23].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point SynchLink Buffered Data In
1121	SL Buf Int Rx24 Displays the integer value of the Buffered Received Data for word 24. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1122 [SL Buf Real Rx24].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer SynchLink Buffered Data In
1122	SL Buf Real Rx24 Displays the floating point (real) value of the Buffered Received Data for word 24. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1121 [SL Buf Int Rx24].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point SynchLink Buffered Data In

No.	Name Description	Values	
1123	SL Buf Int Rx25 Displays the integer value of the Buffered Received Data for word 25. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1124 [SL Buf Real Rx25].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer SynchLink Buffered Data In
1124	SL Buf Real Rx25 Displays the floating point (real) value of the Buffered Received Data for word 25. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1123 [SL Buf Int Rx25].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point SynchLink Buffered Data In
1125	SL Buf Int Rx26 Displays the integer value of the Buffered Received Data for word 26. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1126 [SL Buf Real Rx26].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer SynchLink Buffered Data In
1126	SL Buf Real Rx26 Displays the floating point (real) value of the Buffered Received Data for word 26. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1125 [SL Buf Int Rx26].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point SynchLink Buffered Data In
1127	SL Buf Int Rx27 Displays the integer value of the Buffered Received Data for word 27. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1128 [SL Buf Real Rx27].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer SynchLink Buffered Data In
1128	SL Buf Real Rx27 Displays the floating point (real) value of the Buffered Received Data for word 27. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1127 [SL Buf Int Rx27].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point SynchLink Buffered Data In
1129	SL Buf Int Rx28 Displays the integer value of the Buffered Received Data for word 28. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1130 [SL Buf Real Rx28].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer SynchLink Buffered Data In
1130	SL Buf Real Rx28 Displays the floating point (real) value of the Buffered Received Data for word 28. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1129 [SL Buf Int Rx28].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read Only, Floating Point SynchLink Buffered Data In



No.	Name Description	Values	
1142	SL Dir Real Tx0 Provides floating point (real) data for Direct Transmit word 0, if the data type for word 0 (indicated in parameter 1140 [Tx Dir Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Direct Data
1143	SL Dir Int Tx1 Provides integer data for Direct Transmit word 1, if the data type for word 1 (indicated in parameter 1140 [Tx Dir Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-bit Integer SynchLink Direct Data
1144	SL Dir Real Tx1 Provides floating point (real) data for Direct Transmit word 1, if the data type for word 1 (indicated in parameter 1140 [Tx Dir Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Direct Data
1145	SL Dir Int Tx2 Provides integer data for Direct Transmit word 2, if the data type for word 2 (indicated in parameter 1140 [Tx Dir Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-bit Integer SynchLink Direct Data
1146	SL Dir Real Tx2 Provides floating point (real) data for Direct Transmit word 2, if the data type for word 2 (indicated in parameter 1140 [Tx Dir Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Direct Data
1147	SL Dir Int Tx3 Provides integer data for Direct Transmit word 3, if the data type for word 3 (indicated in parameter 1140 [Tx Dir Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-bit Integer SynchLink Direct Data
1148	SL Dir Real Tx3 Provides floating point (real) data for Direct Transmit word 3, if the data type for word 3 (indicated in parameter 1140 [Tx Dir Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Direct Data

No.	Name Description	Values																																																													
1160 	Tx Buf Data Type Indicates the data type of each Buffered Transmit word. If the word's bit is set the data type is floating point (real). If the bit is not set the data type is integer. Use the Peer Communication window to configure this selection.	Default:	0000 0000 0000 0000 0000 0000 0000 0000																																																												
		Options:	<table><tr><td>Bit 0</td><td>Real Tx0</td></tr><tr><td>Bit 1</td><td>Real Tx1</td></tr><tr><td>Bit 2</td><td>Real Tx2</td></tr><tr><td>Bit 3</td><td>Real Tx3</td></tr><tr><td>Bit 4</td><td>Real Tx4</td></tr><tr><td>Bit 5</td><td>Real Tx5</td></tr><tr><td>Bit 6</td><td>Real Tx6</td></tr><tr><td>Bit 7</td><td>Real Tx7</td></tr><tr><td>Bit 8</td><td>Real Tx8</td></tr><tr><td>Bit 9</td><td>Real Tx9</td></tr><tr><td>Bit 10</td><td>Real Tx10</td></tr><tr><td>Bit 11</td><td>Real Tx11</td></tr><tr><td>Bit 12</td><td>Real Tx12</td></tr><tr><td>Bit 13</td><td>Real Tx13</td></tr><tr><td>Bit 14</td><td>Real Tx14</td></tr><tr><td>Bit 15</td><td>Real Tx15</td></tr><tr><td>Bit 16</td><td>Real Tx16</td></tr><tr><td>Bit 17</td><td>Real Tx17</td></tr><tr><td>Bit 18</td><td>Real Tx18</td></tr><tr><td>Bit 19</td><td>Real Tx19</td></tr><tr><td>Bit 20</td><td>Real Tx20</td></tr><tr><td>Bit 21</td><td>Real Tx21</td></tr><tr><td>Bit 22</td><td>Real Tx22</td></tr><tr><td>Bit 23</td><td>Real Tx23</td></tr><tr><td>Bit 24</td><td>Real Tx24</td></tr><tr><td>Bit 25</td><td>Real Tx25</td></tr><tr><td>Bit 26</td><td>Real Tx26</td></tr><tr><td>Bit 27</td><td>Real Tx27</td></tr><tr><td>Bit 28</td><td>Real Tx28</td></tr><tr><td>Bit 29</td><td>Real Tx29</td></tr></table>	Bit 0	Real Tx0	Bit 1	Real Tx1	Bit 2	Real Tx2	Bit 3	Real Tx3	Bit 4	Real Tx4	Bit 5	Real Tx5	Bit 6	Real Tx6	Bit 7	Real Tx7	Bit 8	Real Tx8	Bit 9	Real Tx9	Bit 10	Real Tx10	Bit 11	Real Tx11	Bit 12	Real Tx12	Bit 13	Real Tx13	Bit 14	Real Tx14	Bit 15	Real Tx15	Bit 16	Real Tx16	Bit 17	Real Tx17	Bit 18	Real Tx18	Bit 19	Real Tx19	Bit 20	Real Tx20	Bit 21	Real Tx21	Bit 22	Real Tx22	Bit 23	Real Tx23	Bit 24	Real Tx24	Bit 25	Real Tx25	Bit 26	Real Tx26	Bit 27	Real Tx27	Bit 28	Real Tx28	Bit 29	Real Tx29
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1161	SL Buf Int Tx00 Provides integer data for Direct Transmit word 0, if the data type for word 0 (indicated in parameter 1160 [Tx Buf Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-bit Integer SynchLink Buffered DataOut																																																												
1162	SL Buf Real Tx00 Provides floating point (real) data for Direct Transmit word 0, if the data type for word 0 (indicated in parameter 1160 [Tx Buf Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Buffered DataOut																																																												
1163	SL Buf Int Tx01 Provides integer data for Direct Transmit word 1, if the data type for word 1 (indicated in parameter 1160 [Tx Buf Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-bit Integer SynchLink Buffered DataOut																																																												

No.	Name Description	Values	
1164	SL Buf Real Tx01 Provides floating point (real) data for Direct Transmit word 1, if the data type for word 1 (indicated in parameter 1160 [Tx Buf Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Buffered DataOut
1165	SL Buf Int Tx02 Provides integer data for Direct Transmit word 2, if the data type for word 2 (indicated in parameter 1160 [Tx Buf Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-bit Integer SynchLink Buffered DataOut
1166	SL Buf Real Tx02 Provides floating point (real) data for Direct Transmit word 2, if the data type for word 2 (indicated in parameter 1160 [Tx Buf Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Buffered DataOut
1167	SL Buf Int Tx03 Provides integer data for Direct Transmit word 3, if the data type for word 3 (indicated in parameter 1160 [Tx Buf Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-bit Integer SynchLink Buffered DataOut
1168	SL Buf Real Tx03 Provides floating point (real) data for Direct Transmit word 3, if the data type for word 3 (indicated in parameter 1160 [Tx Buf Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Buffered DataOut
1169	SL Buf Int Tx04 Provides integer data for Direct Transmit word 4, if the data type for word 4 (indicated in parameter 1160 [Tx Buf Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-bit Integer SynchLink Buffered DataOut
1170	SL Buf Real Tx04 Provides floating point (real) data for Direct Transmit word 4, if the data type for word 4 (indicated in parameter 1160 [Tx Buf Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Buffered DataOut
1171	SL Buf Int Tx05 Provides integer data for Direct Transmit word 5, if the data type for word 5 (indicated in parameter 1160 [Tx Buf Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-bit Integer SynchLink Buffered DataOut

No.	Name Description	Values	
1172	SL Buf Real Tx05 Provides floating point (real) data for Direct Transmit word 5, if the data type for word 5 (indicated in parameter 1160 [Tx Buf Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Buffered DataOut
1173	SL Buf Int Tx06 Provides integer data for Direct Transmit word 6, if the data type for word 6 (indicated in parameter 1160 [Tx Buf Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-bit Integer SynchLink Buffered DataOut
1174	SL Buf Real Tx06 Provides floating point (real) data for Direct Transmit word 6, if the data type for word 6 (indicated in parameter 1160 [Tx Buf Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Buffered DataOut
1175	SL Buf Int Tx07 Provides integer data for Direct Transmit word 7, if the data type for word 7 (indicated in parameter 1160 [Tx Buf Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-bit Integer SynchLink Buffered DataOut
1176	SL Buf Real Tx07 Provides floating point (real) data for Direct Transmit word 7, if the data type for word 7 (indicated in parameter 1160 [Tx Buf Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Buffered DataOut
1177	SL Buf Int Tx08 Provides integer data for Direct Transmit word 8, if the data type for word 8 (indicated in parameter 1160 [Tx Buf Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-bit Integer SynchLink Buffered DataOut
1178	SL Buf Real Tx08 Provides floating point (real) data for Direct Transmit word 8, if the data type for word 8 (indicated in parameter 1160 [Tx Buf Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Buffered DataOut
1179	SL Buf Int Tx09 Provides integer data for Direct Transmit word 9, if the data type for word 9 (indicated in parameter 1160 [Tx Buf Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-bit Integer SynchLink Buffered DataOut

No.	Name Description	Values	
1180	SL Buf Real Tx09 Provides floating point (real) data for Direct Transmit word 9, if the data type for word 9 (indicated in parameter 1160 [Tx Buf Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Buffered DataOut
1181	SL Buf Int Tx10 Provides integer data for Direct Transmit word 10, if the data type for word 10 (indicated in parameter 1160 [Tx Buf Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-bit Integer SynchLink Buffered DataOut
1182	SL Buf Real Tx10 Provides floating point (real) data for Direct Transmit word 10, if the data type for word 10 (indicated in parameter 1160 [Tx Buf Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Buffered DataOut
1183	SL Buf Int Tx11 Provides integer data for Direct Transmit word 11, if the data type for word 11 (indicated in parameter 1160 [Tx Buf Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-bit Integer SynchLink Buffered DataOut
1184	SL Buf Real Tx11 Provides floating point (real) data for Direct Transmit word 11, if the data type for word 11 (indicated in parameter 1160 [Tx Buf Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Buffered DataOut
1185	SL Buf Int Tx12 Provides integer data for Direct Transmit word 12, if the data type for word 12 (indicated in parameter 1160 [Tx Buf Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-bit Integer SynchLink Buffered DataOut
1186	SL Buf Real Tx12 Provides floating point (real) data for Direct Transmit word 12, if the data type for word 12 (indicated in parameter 1160 [Tx Buf Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Buffered DataOut
1187	SL Buf Int Tx13 Provides integer data for Direct Transmit word 13, if the data type for word 13 (indicated in parameter 1160 [Tx Buf Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-bit Integer SynchLink Buffered DataOut

No.	Name Description	Values	
1188	SL Buf Real Tx13 Provides floating point (real) data for Direct Transmit word 13, if the data type for word 13 (indicated in parameter 1160 [Tx Buf Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Buffered DataOut
1189	SL Buf Int Tx14 Provides integer data for Direct Transmit word 14, if the data type for word 14 (indicated in parameter 1160 [Tx Buf Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-bit Integer SynchLink Buffered DataOut
1190	SL Buf Real Tx14 Provides floating point (real) data for Direct Transmit word 14, if the data type for word 14 (indicated in parameter 1160 [Tx Buf Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Buffered DataOut
1191	SL Buf Int Tx15 Provides integer data for Direct Transmit word 15, if the data type for word 15 (indicated in parameter 1160 [Tx Buf Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-bit Integer SynchLink Buffered DataOut
1192	SL Buf Real Tx15 Provides floating point (real) data for Direct Transmit word 15, if the data type for word 15 (indicated in parameter 1160 [Tx Buf Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Buffered DataOut
1193	SL Buf Int Tx16 Provides integer data for Direct Transmit word 16, if the data type for word 16 (indicated in parameter 1160 [Tx Buf Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-bit Integer SynchLink Buffered DataOut
1194	SL Buf Real Tx16 Provides floating point (real) data for Direct Transmit word 16, if the data type for word 16 (indicated in parameter 1160 [Tx Buf Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Buffered DataOut
1195	SL Buf Int Tx17 Provides integer data for Direct Transmit word 17, if the data type for word 17 (indicated in parameter 1160 [Tx Buf Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-bit Integer SynchLink Buffered DataOut

No.	Name Description	Values	
1196	SL Buf Real Tx17 Provides floating point (real) data for Direct Transmit word 17, if the data type for word 17 (indicated in parameter 1160 [Tx Buf Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Buffered DataOut
1197	SL Buf Int Tx18 Provides integer data for Direct Transmit word 18, if the data type for word 18 (indicated in parameter 1160 [Tx Buf Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-bit Integer SynchLink Buffered DataOut
1198	SL Buf Real Tx18 Provides floating point (real) data for Direct Transmit word 18, if the data type for word 18 (indicated in parameter 1160 [Tx Buf Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Buffered DataOut
1199	SL Buf Int Tx19 Provides integer data for Direct Transmit word 19, if the data type for word 19 (indicated in parameter 1160 [Tx Buf Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-bit Integer SynchLink Buffered DataOut
1200	SL Buf Real Tx19 Provides floating point (real) data for Direct Transmit word 19, if the data type for word 19 (indicated in parameter 1160 [Tx Buf Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Buffered DataOut
1201	SL Buf Int Tx20 Provides integer data for Direct Transmit word 20, if the data type for word 20 (indicated in parameter 1160 [Tx Buf Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-bit Integer SynchLink Buffered DataOut
1202	SL Buf Real Tx20 Provides floating point (real) data for Direct Transmit word 20, if the data type for word 20 (indicated in parameter 1160 [Tx Buf Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Buffered DataOut
1203	SL Buf Int Tx21 Provides integer data for Direct Transmit word 21, if the data type for word 21 (indicated in parameter 1160 [Tx Buf Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-bit Integer SynchLink Buffered DataOut

No.	Name Description	Values	
1204	SL Buf Real Tx21 Provides floating point (real) data for Direct Transmit word 21, if the data type for word 21 (indicated in parameter 1160 [Tx Buf Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Buffered DataOut
1205	SL Buf Int Tx22 Provides integer data for Direct Transmit word 22, if the data type for word 22 (indicated in parameter 1160 [Tx Buf Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-bit Integer SynchLink Buffered DataOut
1206	SL Buf Real Tx22 Provides floating point (real) data for Direct Transmit word 22, if the data type for word 22 (indicated in parameter 1160 [Tx Buf Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Buffered DataOut
1207	SL Buf Int Tx23 Provides integer data for Direct Transmit word 23, if the data type for word 23 (indicated in parameter 1160 [Tx Buf Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-bit Integer SynchLink Buffered DataOut
1208	SL Buf Real Tx23 Provides floating point (real) data for Direct Transmit word 23, if the data type for word 23 (indicated in parameter 1160 [Tx Buf Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Buffered DataOut
1209	SL Buf Int Tx24 Provides integer data for Direct Transmit word 24, if the data type for word 24 (indicated in parameter 1160 [Tx Buf Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-bit Integer SynchLink Buffered DataOut
1210	SL Buf Real Tx24 Provides floating point (real) data for Direct Transmit word 24, if the data type for word 24 (indicated in parameter 1160 [Tx Buf Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Buffered DataOut
1211	SL Buf Int Tx25 Provides integer data for Direct Transmit word 25, if the data type for word 25 (indicated in parameter 1160 [Tx Buf Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-bit Integer SynchLink Buffered DataOut

No.	Name Description	Values	
1212	SL Buf Real Tx25 Provides floating point (real) data for Direct Transmit word 25, if the data type for word 25 (indicated in parameter 1160 [Tx Buf Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Buffered DataOut
1213	SL Buf Int Tx26 Provides integer data for Direct Transmit word 26, if the data type for word 26 (indicated in parameter 1160 [Tx Buf Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-bit Integer SynchLink Buffered DataOut
1214	SL Buf Real Tx26 Provides floating point (real) data for Direct Transmit word 26, if the data type for word 26 (indicated in parameter 1160 [Tx Buf Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Buffered DataOut
1215	SL Buf Int Tx27 Provides integer data for Direct Transmit word 27, if the data type for word 27 (indicated in parameter 1160 [Tx Buf Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-bit Integer SynchLink Buffered DataOut
1216	SL Buf Real Tx27 Provides floating point (real) data for Direct Transmit word 27, if the data type for word 27 (indicated in parameter 1160 [Tx Buf Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Buffered DataOut
1217	SL Buf Int Tx28 Provides integer data for Direct Transmit word 28, if the data type for word 28 (indicated in parameter 1160 [Tx Buf Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-bit Integer SynchLink Buffered DataOut
1218	SL Buf Real Tx28 Provides floating point (real) data for Direct Transmit word 28, if the data type for word 28 (indicated in parameter 1160 [Tx Buf Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Buffered DataOut
1219	SL Buf Int Tx29 Provides integer data for Direct Transmit word 29, if the data type for word 29 (indicated in parameter 1160 [Tx Buf Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-bit Integer SynchLink Buffered DataOut

No.	Name Description	Values		
1220	SL Buf Real Tx29 Provides floating point (real) data for Direct Transmit word 29, if the data type for word 29 (indicated in parameter 1160 [Tx Buf Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Buffered DataOut	
1226	SL Comm TP Sel Enter or write a value to select SynchLink data displayed by parameter 1227 [SL Comm TP Data].	Default: Options:	Val 0 Val 0 Val 1 Val 2 Val 3 Val 4 Val 5 Val 6 Val 7 Val 8 Val 9 Val 10 Val 11 Val 12 Val 13 Val 14 Val 15 Val 16 Val 17 Val 18 Val 19 Val 20 Val 21 Val 22 Val 23 Val 24 Val 25	Zero Zero SI MulA Src SI Mult A In SI Mult B In SI Mult Out Rx Axis Size Rx Dir Size Rx Buf Size Rx Pkg Size Rx Seq Cnt Rx Index 0 Rx Index 1 Rx Index 2 BufSeqErrTim Rx Sys Rev Tx Axis Size Tx Dir Size Tx Buf Size Tx Pkg Size Tx Seq Cnt Tx Index 0 Tx Index 1 Tx Index 2 Rx Vendor ID Rx Module Typ Rx Serial #
1227	SL Comm TP Data Displays data selected by parameter 1226 [SL Comm TP Sel].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read Only, 32-bit Integer Utility Diagnostics	

No.	Name Description	Values		
1228	SL Error History Displays SynchLink faults which have occurred since the last fault clear or power cycle. • Bit 0 [Sync Loss] indicates SynchLink communication has failed, after it had been established • Bit 1 [Rx Loss] indicates the receive port is not receiving data, and the receive port configuration is set toeceive data • Bit 2 [Many BOF Err] indicates the number of Beginning Of Frame (BOF) errors exceeds limit set by parameter 1235 [SL BOF Err Limit] • Bit 3 [Many CRC Err] indicatesindicates the number of Cyclic Redundancy Check (CRC) errors exceeds limit set by parameter 1234 [SL CRC Err Limit] • Bit 4 [Pckg Msg Err] indicates the received package sequence number has not matched for 1.OS • Bit 5 [CommForm Err] indicates the format of received data does not match the configuration of the receive port • Bit 6 [Sys Rev Err] indicates the system revision in the received data does not match the value of parameter 1001 [SynchLink Rev] • Bit 7 [Mult TKeeper] indicates more than one node on the SynchLink system is configured as a time keeper	Default:	0000 0000 0000 0000 0000 0000 0000 0000	
		Options:	Bit 0	Sync Loss
			Bit 1	Rx Loss
			Bit 2	Many BOF Err
			Bit 3	Many CRC Err
			Bit 4	Pckg Msg Err
			Bit 5	CommForm Err
			Bit 6	Sys Rev Err
			Bit 7	Mult TKeeper
			Bit 8	Reserved
			Bit 9	Reserved
			Bit 10	Reserved
			Bit 11	Reserved
			Bit 12	Reserved
			Bit 13	Reserved
			Bit 14	Reserved
			Bit 15	Reserved
			Bit 16	Reserved
			Bit 17	Reserved
			Bit 18	Reserved
			Bit 19	Reserved
			Bit 20	Reserved
			Bit 21	Reserved
			Bit 22	Reserved
			Bit 23	Reserved
			Bit 24	Reserved
			Bit 25	Reserved
			Bit 26	Reserved
			Bit 27	Reserved
			Bit 28	Reserved
			Bit 29	Reserved
			Bit 30	Reserved
			Bit 31	Reserved
File: Group:	Utility Diagnostics			

No.	Name Description	Values																																																																	
1229	SL Error Status Indicates presence of SynchLink faults. This data is visible on the SynchLink diagnostics tab of the Peer Communication window. • Bit 0 [Sync Loss] indicates SynchLink communication has failed, after it had been established • Bit 1 [Rx Loss] indicates the receive port is not receiving data, and the receive port configuration is set toeceive data • Bit 2 [Many BOF Err] indicates the number of Beginning Of Frame (BOF) errors exceeds limit set by parameter 1235 [SL BOF Err Limit] • Bit 3 [Many CRC Err] indicatesindicates the number of Cyclic Redundancy Check (CRC) errors exceeds limit set by parameter 1234 [SL CRC Err Limit] • Bit 4 [Pckg Msg Err] indicates the received package sequence number has not matched for 1.0S • Bit 5 [CommForm Err] indicates the format of received data does not match the configuration of the receive port • Bit 6 [Sys Rev Err] indicates the system revision in the received data does not match the value of parameter 1001 [SynchLink Rev] • Bit 7 [Mult TKeeper] indicates more than one node on the SynchLink system is configured as a time keeper	Default:	0000 0000 0000 0000 0000 0000 0000 0000																																																																
		Options:	<table><tr><td>Bit 0</td><td>Sync Loss</td></tr><tr><td>Bit 1</td><td>Rx Loss</td></tr><tr><td>Bit 2</td><td>Many BOF Err</td></tr><tr><td>Bit 3</td><td>Many CRC Err</td></tr><tr><td>Bit 4</td><td>Pckg Msg Err</td></tr><tr><td>Bit 5</td><td>CommForm Err</td></tr><tr><td>Bit 6</td><td>Sys Rev Err</td></tr><tr><td>Bit 7</td><td>Mult TKeeper</td></tr><tr><td>Bit 8</td><td>Reserved</td></tr><tr><td>Bit 9</td><td>Reserved</td></tr><tr><td>Bit 10</td><td>Reserved</td></tr><tr><td>Bit 11</td><td>Reserved</td></tr><tr><td>Bit 12</td><td>Reserved</td></tr><tr><td>Bit 13</td><td>Reserved</td></tr><tr><td>Bit 14</td><td>Reserved</td></tr><tr><td>Bit 15</td><td>Reserved</td></tr><tr><td>Bit 16</td><td>Reserved</td></tr><tr><td>Bit 17</td><td>Reserved</td></tr><tr><td>Bit 18</td><td>Reserved</td></tr><tr><td>Bit 19</td><td>Reserved</td></tr><tr><td>Bit 20</td><td>Reserved</td></tr><tr><td>Bit 21</td><td>Reserved</td></tr><tr><td>Bit 22</td><td>Reserved</td></tr><tr><td>Bit 23</td><td>Reserved</td></tr><tr><td>Bit 24</td><td>Reserved</td></tr><tr><td>Bit 25</td><td>Reserved</td></tr><tr><td>Bit 26</td><td>Reserved</td></tr><tr><td>Bit 27</td><td>Reserved</td></tr><tr><td>Bit 28</td><td>Reserved</td></tr><tr><td>Bit 29</td><td>Reserved</td></tr><tr><td>Bit 30</td><td>Reserved</td></tr><tr><td>Bit 31</td><td>Reserved</td></tr></table>	Bit 0	Sync Loss	Bit 1	Rx Loss	Bit 2	Many BOF Err	Bit 3	Many CRC Err	Bit 4	Pckg Msg Err	Bit 5	CommForm Err	Bit 6	Sys Rev Err	Bit 7	Mult TKeeper	Bit 8	Reserved	Bit 9	Reserved	Bit 10	Reserved	Bit 11	Reserved	Bit 12	Reserved	Bit 13	Reserved	Bit 14	Reserved	Bit 15	Reserved	Bit 16	Reserved	Bit 17	Reserved	Bit 18	Reserved	Bit 19	Reserved	Bit 20	Reserved	Bit 21	Reserved	Bit 22	Reserved	Bit 23	Reserved	Bit 24	Reserved	Bit 25	Reserved	Bit 26	Reserved	Bit 27	Reserved	Bit 28	Reserved	Bit 29	Reserved	Bit 30	Reserved	Bit 31	Reserved
		Bit 0	Sync Loss																																																																
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File: Group:	Utility Diagnostics																																																																		
1230	SL CRC Err Accum Displays the total accumulated number of CRC (Cycling Ring Checksum) errors. Clearing a fault resets this accumulator. This data is visible on the SynchLink diagnostics tab of the Peer Communication window.	Default: Min: Max: Type: File: Group:	0 0 4294967296 Non-Linkable, Read Only, 32-bit Integer Utility Diagnostics																																																																
1231	SL CRC Error Displays the number of CRC (Cycling Ring Checksum) errors that occurred during the last test (last 8 mS). This data is visible on the SynchLink diagnostics tab of the Peer Communication window.	Default: Min: Max: Type: File: Group:	0 0 4294967296 Non-Linkable, Read Only, 32-bit Integer Utility Diagnostics																																																																
1232	SL BOF Err Accum Displays the total accumulated number of BOF (Beginning Of Frame) errors. Clearing a fault resets this accumulator. This data is visible on the SynchLink diagnostics tab of the Peer Communication window.	Default: Min: Max: Type: File: Group:	0 0 4294967296 Non-Linkable, Read Only, 32-bit Integer DPS/PMI DPS/PMI																																																																

No.	Name Description	Values		
1233	SL BOF Error Displays the number of BOF (Beginning Of Frame) errors that occurred during the last test (last 8 mS). This data is visable on the SynchLink diagnostics tab of the Peer Communication window.	Default: Min: Max: Type: File: Group:	0 0 4294967296 Non-Linkable, Read Only, 32-bit Integer DPS/PMI Comm Status	
1234	SL CRC Err Limit The number of CRC (Cycling Ring Checksum) errors per test (per 8 mS) allowed before the drive declares a SynchLink CRC Error exception event. Set this limit on the SynchLink diagnostics tab of the Peer Communication window.	Default: Min: Max: Type: File: Group:	2 0 256 Non-Linkable, Read-Write, 32-bit Integer DPS/PMI DPS/PMI	
1235	SL BOF Err Limit The number of BOF (Beginning Of Frame) errors per test (per 8 mS) allowed before the drive declares a SynchLink BOF Error exception event. Set this limit on the SynchLink diagnostics tab of the Peer Communication window.	Default: Min: Max: Type: File: Group:	2 0 256 Non-Linkable, Read-Write, 32-bit Integer DPS/PMI Comm Status	
2000	DM Com Prt Stat Indicates faults or warnings related to the Drive Module's Drive Communication ports. • Bit 0 [Bad Rcv Int] indicates the interrupt generated by the Universal Serial Controller (USC) is not properly marked • Bit 1 [No EOF] indicates the USC did not report an End of Frame condition when the recieve interrupt was generated • Bit 2 [CRC Error] indicates the USC has reported a Cyclic Redundancy Check (CRC) error on the last frame (message) received • Bit 3 [Overrun Err] indicates the USC has reported a receive firs-in, first out error • Bit 4 [DMA Error] indicates the length of a received message did not match the length encoded in the message itself • Bit 5 [Xmit Underun] indicates the USC has reported a transmit first-in, first-out underrun • Bit 6 [Sync Error] indicates two or more CCLK counter ticks occurred and no message was recieved • Bit 7 [LoopBack Err] indicates failure in the loopback test (the transmit message did not match the receive message). The Drive Module performs this test on power-up and reset. • Bit 8 [Missed Gains] indicates gain data could not be written because memory was being written to when the gain values were received • Bit 9 [Multplx Err] indicates data which is multiplexed into a command/feedback message has not verified correctly	Default:	0000 0000 0000 0000	
		Options:	Bit 0 Bit 1 Bit 2 Bit 3 Bit 4 Bit 5 Bit 6 Bit 7 Bit 8 Bit 9 Bit 10 Bit 11 Bit 12 Bit 13 Bit 14 Bit 15	Bad Rcv Int No EOF CRC Error Overrun Err DMA Error Xmit Underun Sync Error LoopBack Err Missed Gains Multplx Err No PMI OS Bad OS Hdr Bad PMI HW Reserved Reserved Reserved
		File: Group:	DPS/PMI DPS/PMI	
		• Bit 10 [No PMI OS] indicates the correct PMI operating system is not present in the Drive Module and the PMI is requesting an operating system • Bit 11 [Bad OS Hdr] indicates the Drive Module cannot locate a valid PMI operating system header when attempting to load an operating system to a PMI • Bit 12 [Bad PMI HW] indicates PMI hardware is not compatible with the PMI operating systems in the Drive Module		

No.	Name Description	Values		
2001	DM Good Msg Cnt Displays the number of messages received by the Drive Module from the PMI processor. This is a 16-bit value that rolls over when it reaches its maximum.	Default: Min: Max: Type: File: Group:	0 0 65535 Non-Linkable, Read Only, 16-bit Integer DPS/PMI Comm Status	
2002	DM CRC Error Cnt Displays the number of messages with CRC errors received by Drive Module from the PMI processor. This is a 16-bit value that rolls over when it reaches its maximum.	Default: Min: Max: Type: File: Group:	0 0 65535 Non-Linkable, Read Only, 16-bit Integer DPS/PMI DPS/PMI	
2003	DM Frmt ErrorCnt Displays the number of messages with format errors received by Drive Module from the PMI processor. This is a 16-bit value that rolls over when it reaches its maximum.	Default: Min: Max: Type: File: Group:	0 0 65535 Non-Linkable, Read Only, 16-bit Integer DPS/PMI Comm Status	
2004	DM Com Prt Stat Indicates faults or warnings related to the Drive Module's Drive Communication ports. • Bit 0 [Bad Rcv Int] indicates the interrupt generated by the Universal Serial Controller (USC) is not properly marked • Bit 1 [No EOF] indicates the USC did not report an End of Frame condition when the recieve interrupt was generated • Bit 2 [CRC Error] indicates the USC has reported a Cyclic Redundancy Check (CRC) error on the last frame (message) received • Bit 3 [Overrun Err] indicates the USC has reported a receive firs-in, first out error • Bit 4 [DMA Error] indicates the length of a received message did not match the length encoded in the message itself • Bit 5 [Xmit Underun] indicates the USC has reported a transmit first-in, first-out underrun • Bit 6 [Sync Error] indicates two or more CCLK counter ticks occurred and no message was recieved • Bit 8 [DM Sync Err] indicates two or more CCLK counter ticks occurred and no message was recieved • Bit 9 [Muxplx Err] indicates data which is multiplexed into a command/feedback message has not verified correctly • Bit 12 [Bad Start Ad] indicates the operating system is not within the allocated operating system address area	Default:	0000 0000 0000 0000	
		Options:	Bit 0 Bit 1 Bit 2 Bit 3 Bit 4 Bit 5 Bit 6 Bit 7 Bit 8 Bit 9 Bit 10 Bit 11 Bit 12 Bit 13 Bit 14 Bit 15	Bad Rcv Int No EOF CRC Error Overrun Err DMA Error Xmit Underun Sync Error Reserved DM Sync Err Muxplx Err Reserved Reserved Bad Start Ad Bad PMI Mem Bad Load Ad PMI OverFlow
		File: Group:	DPS/PMI DPS/PMI	
		• Bit 13 [Bad PMI Mem] indicates there is insufficient memory in the PMI processor for loading the operating system • Bit 14 [Bad Load Ad] indicates the address at which the PMI processor is to load the operating system is invalid • Bit 15 [PMI OverFlow] indicates the loading of the PMI operating system will overrun the PMI stack memory area		
2005	PMI Good Msg Cnt Displays the number of messages received by the PMI processor from the Drive Module. This is a 16-bit value that rolls over when it reaches its maximum.	Default: Min: Max: Type: File: Group:	0 0 65535 Non-Linkable, Read Only, 16-bit Integer DPS/PMI Comm Status	

No.	Name Description	Values		
2006	PMI CRC ErrorCnt Displays the number of messages with CRC errors received by the PMI processor from the Drive Module. This is a 16-bit value that rolls over when it reaches its maximum.	Default: Min: Max: Type: File: Group:	0 0 65535 Non-Linkable, Read Only, 16-bit Integer DPS/PMI DPS/PMI	
2007	PMIFmt ErrorCnt Displays the number of messages with format errors received by the PMI processor from the Drive Module. This is a 16-bit value that rolls over when it reaches its maximum.	Default: Min: Max: Type: File: Group:	0 0 65535 Non-Linkable, Read Only, 16-bit Integer DPS/PMI Comm Status	
2008	DM Link Status Indicates the current status of Drive Communication. • Bit 1 [Pending OS] indicates the Drive Module is waiting for a request from the PMI processor for an operating system • Bit 2 [Loading OS] indicates the Drive Module is downloading an operating system to the PMI processor • Bit 3 [Setpt Fdbk] indicates the Drive Module and PMI processor are exchanging data • Bit 5 [LoopBack Tst] indicates the Drive Module and PMI processor are performing the loopback test • Bit 6 [Test Mode] indicates tba • Bit 8 [Synchronized] indicates Drive Communication is synchronized • Bit 9 [Unsynchroniz] indicates Drive Communication is not synchronized	Default:	0000 0000 0000 0000	
		Options:	Bit 0 Bit 1 Bit 2 Bit 3 Bit 4 Bit 5 Bit 6 Bit 7 Bit 8 Bit 9 Bit 10 Bit 11 Bit 12 Bit 13 Bit 14 Bit 15	Reserved Pending OS Loading OS Setpt Fdbk Reserved LoopBack Tst Test Mode Reserved Synchronized Unsynchroniz Reserved Reserved Reserved Reserved Reserved Reserved
		File: Group:	DPS/PMI DPS/PMI	
2009	DM Tx Msg Count Displays the number of messages transmitted by the Drive Module. This is a 16-bit value that rolls over when it reaches its maximum.	Default: Min: Max: Type: File: Group:	0 0 65535 Non-Linkable, Read Only, 16-bit Integer DPS/PMI Comm Status	
2010	DM Sync WarnCnt Displays the number of messages transmitted by the Drive Module, that the PMI processor can not synchronize. This is a 16-bit value that rolls over when it reaches its maximum.	Default: Min: Max: Type: File: Group:	0 0 65535 Non-Linkable, Read Only, 16-bit Integer DPS/PMI DPS/PMI	
2011	DM Bad Msg Cnt Displays the number of invalid messages transmitted on Drive Communication. This is a 16-bit value that rolls over when it reaches its maximum.	Default: Min: Max: Type: File: Group:	0 0 65535 Non-Linkable, Read Only, 16-bit Integer DPS/PMI Comm Status	

No.	Name Description	Values	
2012	DM Sync Count Displays the value of an internal counter that synchronizes the Drive Module and PMI processor.	Default: Min: Max: Type: File: Group:	0 0 65535 Non-Linkable, Read Only, 16-bit Integer DPS/PMI DPS/PMI
2013	PMI Gain Count Displays the number of gain messages sent on Drive Communication. This is a 16-bit value that rolls over when it reaches its maximum.	Default: Min: Max: Type: File: Group:	0 0 65535 Non-Linkable, Read Only, 16-bit Integer DPS/PMI DPS/PMI
2014	DM Tx Time Displays the value of parameter 2012 [DM Sync Count] when the Drive Module finished transmitting a set point message.	Default: Min: Max: Type: File: Group:	0 0 65535 Non-Linkable, Read Only, 16-bit Integer DPS/PMI DPS/PMI
2015	DM Tx Time Avail Displays the value of the parameter 2012 [DM Sync Count] when the Drive Module receives a feedback message. This is a good indication of the amount of remaining bandwidth on Drive Communication.	Default: Min: Max: Type: File: Group:	0 0 65535 Non-Linkable, Read Only, 16-bit Integer DPS/PMI DPS/PMI
2040	Rail Port 0 Ch 0 Enter the code for the type of Rail I/O on each channel. Refer to section 3.1, "Rail I/O Port Registers", of Reliance Electric publication 3006, <i>Distributed Power System SD3000 Drive Configuration and Programming</i> .	Default: Min: Max: Type: File: Group:	0 0 65535 Linkable, Read-Write, 16-bit Integer DPS/PMI DPS/PMI
2041	Rail Port 0 Ch 1 Enter the code for the type of Rail I/O on each channel. Refer to section 3.1, "Rail I/O Port Registers", of Reliance Electric publication 3006, <i>Distributed Power System SD3000 Drive Configuration and Programming</i> .	Default: Min: Max: Type: File: Group:	0 0 65535 Linkable, Read-Write, 16-bit Integer DPS/PMI DPS/PMI
2042	Rail Port 0 Ch 2 Enter the code for the type of Rail I/O on each channel. Refer to section 3.1, "Rail I/O Port Registers", of Reliance Electric publication 3006, <i>Distributed Power System SD3000 Drive Configuration and Programming</i> .	Default: Min: Max: Type: File: Group:	0 0 65535 Linkable, Read-Write, 16-bit Integer DPS/PMI DPS/PMI
2043	Rail Port 0 Ch 3 Enter the code for the type of Rail I/O on each channel. Refer to section 3.1, "Rail I/O Port Registers", of Reliance Electric publication 3006, <i>Distributed Power System SD3000 Drive Configuration and Programming</i> .	Default: Min: Max: Type: File: Group:	0 0 65535 Linkable, Read-Write, 16-bit Integer DPS/PMI DPS/PMI

No.	Name Description	Values		
2044	Rail Port 0 Flt Indicates faults associated with Rail I/O on the port.	Default:	0000 0000 0000 0000	
		Options:	Bit 0 Bit 1 Bit 2 Bit 3 Bit 4 Bit 5 Bit 6 Bit 7 Bit 8 Bit 9 Bit 10 Bit 11 Bit 12 Bit 13 Bit 14 Bit 15	Ch0 OvrRange Ch0 UndRange Ch1 OvrRange Ch1 UndRange Ch2 OvrRange Ch2 UndRange Ch3 OvrRange Ch3 UndRange Port NotCntd Bad ID Bad Chk Bits I/O NotRdy Reserved Reserved Reserved Reserved
		File: Group:	DPS/PMI DPS/PMI	
2045	RailPrt 0FltCnt Displays number of fault occurrences at the port.	Default: Min: Max: Type: File: Group:	0 0 65535 Non-Linkable, Read Only, 16-bit Integer DPS/PMI DPS/PMI	
2046	Rail Port 1 Ch 0 Enter the code for the type of Rail I/O on each channel. Refer to section 3.1, "Rail I/O Port Registers", of Reliance Electric publication 3006, <i>Distributed Power System SD3000 Drive Configuration and Programming</i> .	Default: Min: Max: Type: File: Group:	0 0 65535 Linkable, Read-Write, 16-bit Integer DPS/PMI DPS/PMI	
2047	Rail Port 1 Ch 1 Enter the code for the type of Rail I/O on each channel. Refer to section 3.1, "Rail I/O Port Registers", of Reliance Electric publication 3006, <i>Distributed Power System SD3000 Drive Configuration and Programming</i> .	Default: Min: Max: Type: File: Group:	0 0 65535 Linkable, Read-Write, 16-bit Integer DPS/PMI DPS/PMI	
2048	Rail Port 1 Ch 2 Enter the code for the type of Rail I/O on each channel. Refer to section 3.1, "Rail I/O Port Registers", of Reliance Electric publication 3006, <i>Distributed Power System SD3000 Drive Configuration and Programming</i> .	Default: Min: Max: Type: File: Group:	0 0 65535 Linkable, Read-Write, 16-bit Integer DPS/PMI DPS/PMI	
2049	Rail Port 1 Ch 3 Enter the code for the type of Rail I/O on each channel. Refer to section 3.1, "Rail I/O Port Registers", of Reliance Electric publication 3006, <i>Distributed Power System SD3000 Drive Configuration and Programming</i> .	Default: Min: Max: Type: File: Group:	0 0 65535 Linkable, Read-Write, 16-bit Integer DPS/PMI DPS/PMI	

No.	Name Description	Values		
2050	Rail Port 1 Flt Indicates faults associated with Rail I/O on the port.	Default:	0000 0000 0000 0000	
		Options:	Bit 0 Bit 1 Bit 2 Bit 3 Bit 4 Bit 5 Bit 6 Bit 7 Bit 8 Bit 9 Bit 10 Bit 11 Bit 12 Bit 13 Bit 14 Bit 15	Ch0 OvrRange Ch0 UndRange Ch1 OvrRange Ch1 UndRange Ch2 OvrRange Ch2 UndRange Ch3 OvrRange Ch3 UndRange Port NotCntd Bad ID Bad Chk Bits I/O NotRdy Reserved Reserved Reserved Reserved
		File: Group:	DPS/PMI DPS/PMI	
2051	RailPrt 1FltCnt Displays number of fault occurrences at the port.	Default: Min: Max: Type: File: Group:	0 0 65535 Non-Linkable, Read Only, 16-bit Integer DPS/PMI DPS/PMI	

No.	Name Description	Values		
2080	Meter Port1 Sel Enter a value to configure the output of the meter port.	Default:	Val 0	Zero
		Options:	Val 0 Val 1 Val 2 Val 3 Val 4 Val 5 Val 6 Val 7 Val 8 Val 9 Val 10 Val 11 Val 12 Val 13 Val 14 Val 15 Val 16 Val 17 Val 18 Val 19 Val 20 Val 21 Val 22 Val 23 Val 24 Val 25 Val 26 Val 27 Val 28	Zero Arm I Ref Ct Arm I FB Ct Arm I FB A Arm Voltage Arm Max Ang Arm Ang Arm Min Ang Fld I Ref Ct Fld I FB Ct Fld I FB A Fld Voltage Fld Max Ang Fld Ang Fld Min Ang Cntr EMF V AC Volts User An In Spd FB RPM App Data Rail Prt0 C0 Rail Prt0 C1 Rail Prt0 C2 Rail Prt0 C3 Rail Prt1 C0 Rail Prt1 C1 Rail Prt1 C2 Rail Prt1 C3 Arm Rate Out
		File: Group:	DPS/PMI DPS/PMI	
2081	MeterP1 +10v Val Enter the value of the source parameter that corresponds to +10V dc output at the meter.	Default: Min: Max: Type: File: Group:	0 -32768 32767 Linkable, Read-Write, 32-bit Integer DPS/PMI DPS/PMI	
2082	MeterP1 -10v Val Enter the value of the source parameter that corresponds to -10V dc output at the meter.	Default: Min: Max: Type: File: Group:	0 -32768 32767 Linkable, Read-Write, 32-bit Integer DPS/PMI DPS/PMI	

No.	Name Description	Values		
2083	Meter Port2 Sel Enter a value to configure the output of the meter port.	Default:	Val 0	Zero
		Options:	Val 0	Zero
			Val 1	Arm I Ref Ct
Val 2	Arm I FB Ct			
Val 3	Arm I FB A			
Val 4	Arm Voltage			
Val 5	Arm Max Ang			
Val 6	Arm Ang			
Val 7	Arm Min Ang			
Val 8	Fld I Ref Ct			
Val 9	Fld I FB Ct			
Val 10	Fld I FB A			
Val 11	Fld Voltage			
Val 12	Fld Max Ang			
Val 13	Fld Ang			
Val 14	Fld Min Ang			
Val 15	Cntr EMF V			
Val 16	AC Volts			
Val 17	User An In			
Val 18	Spd FB RPM			
Val 19	App Data			
Val 20	Rail Prt0 C0			
Val 21	Rail Prt0 C1			
Val 22	Rail Prt0 C2			
Val 23	Rail Prt0 C3			
Val 24	Rail Prt1 C0			
Val 25	Rail Prt1 C1			
Val 26	Rail Prt1 C2			
Val 27	Rail Prt1 C3			
Val 28	Arm Rate Out			
	File: Group:	DPS/PMI DPS/PMI		
2084	MeterP2 +10v Val Enter the value of the source parameter that correponds to +10V dc output at the meter.	Default:	0	
		Min: Max: Type: File: Group:	-32768 32767 Linkable, Read-Write, 32-bit Integer DPS/PMI DPS/PMI	
2085	MeterP2 -10v Val Enter the value of the source parameter that correponds to -10V dc output at the meter.	Default:	0	
		Min: Max: Type: File: Group:	-32768 32767 Linkable, Read-Write, 32-bit Integer DPS/PMI DPS/PMI	

No.	Name Description	Values		
2086	Meter Port3 Sel Enter a value to configure the output of the meter port.	Default:	Val 0	Zero
		Options:	Val 0	Zero
			Val 1	Arm I Ref Ct
Val 2	Arm I FB Ct			
Val 3	Arm I FB A			
Val 4	Arm Voltage			
Val 5	Arm Max Ang			
Val 6	Arm Ang			
Val 7	Arm Min Ang			
Val 8	Fld I Ref Ct			
Val 9	Fld I FB Ct			
Val 10	Fld I FB A			
Val 11	Fld Voltage			
Val 12	Fld Max Ang			
Val 13	Fld Ang			
Val 14	Fld Min Ang			
Val 15	Cntr EMF V			
Val 16	AC Volts			
Val 17	User An In			
Val 18	Spd FB RPM			
Val 19	App Data			
Val 20	Rail Prt0 C0			
Val 21	Rail Prt0 C1			
Val 22	Rail Prt0 C2			
Val 23	Rail Prt0 C3			
Val 24	Rail Prt1 C0			
Val 25	Rail Prt1 C1			
Val 26	Rail Prt1 C2			
Val 27	Rail Prt1 C3			
Val 28	Arm Rate Out			
	File: Group:	DPS/PMI DPS/PMI		
2087	MeterP3 +10v Val Enter the value of the source parameter that correponds to +10V dc output at the meter.	Default: Min: Max: Type: File: Group:	0 -32768 32767 Linkable, Read-Write, 32-bit Integer DPS/PMI DPS/PMI	
2088	MeterP3 -10v Val Enter the value of the source parameter that correponds to -10V dc output at the meter.	Default: Min: Max: Type: File: Group:	0 -32768 32767 Linkable, Read-Write, 32-bit Integer DPS/PMI DPS/PMI	

No.	Name Description	Values		
2089	Meter Port4 Sel Enter a value to configure the output of the meter port.	Default:	Val 0	Zero
		Options:	Val 0 Val 1 Val 2 Val 3 Val 4 Val 5 Val 6 Val 7 Val 8 Val 9 Val 10 Val 11 Val 12 Val 13 Val 14 Val 15 Val 16 Val 17 Val 18 Val 19 Val 20 Val 21 Val 22 Val 23 Val 24 Val 25 Val 26 Val 27 Val 28	Zero Arm I Ref Ct Arm I FB Ct Arm I FB A Arm Voltage Arm Max Ang Arm Ang Arm Min Ang Fld I Ref Ct Fld I FB Ct Fld I FB A Fld Voltage Fld Max Ang Fld Ang Fld Min Ang Cntr EMF V AC Volts User An In Spd FB RPM App Data Rail Prt0 C0 Rail Prt0 C1 Rail Prt0 C2 Rail Prt0 C3 Rail Prt1 C0 Rail Prt1 C1 Rail Prt1 C2 Rail Prt1 C3 Arm Rate Out
		File: Group:	DPS/PMI Commands	
2090	MeterP4 +10v Val Enter the value of the source parameter that corresponds to +10V dc output at the meter.	Default: Min: Max: Type: File: Group:	0 -32768 32767 Linkable, Read-Write, 32-bit Integer DPS/PMI DPS/PMI	
2091	MeterP4 -10v Val Enter the value of the source parameter that corresponds to -10V dc output at the meter.	Default: Min: Max: Type: File: Group:	0 -32768 32767 Linkable, Read-Write, 32-bit Integer DPS/PMI DPS/PMI	

No.	Name Description	Values		
2100	Drive Ctrl Word Displays the control word sent to the PMI processor. Parameter 166 [Motor Ctrl Cmmd] and the VPL sequencer determine the value of this parameter.	Default:	0000 0000 0000 0000	
		Options:	Bit 0 Bit 1 Bit 2 Bit 3 Bit 4 Bit 5 Bit 6 Bit 7 Bit 8 Bit 9 Bit 10 Bit 11 Bit 12 Bit 13 Bit 14 Bit 15	CMLoop Run Arm ID Tst Arm AlphaTst ArmRALph Tst FML Run Fld Id Tst Fld AlphaTst FldRALph Tst Fault Reset Warng Reset Dsbl BrstFrg Dsbl Fld Wk Dsbl ShrtSCR Open Lop Cur Dsbl Opn SCR Reserved
		File: Group:	DPS/PMI Commands	
2102	Arm Test Angle Enter the firing angle for the armature alpha test. Enter a value between 5 degrees (full on) and 180 degrees (full off). The drive module clamps any entry outside this range to be within the limits. Select forward and reverse tests by setting bit 26 [Arm Alph Tst] or bit 28 [ArmRALph Tst] of parameter 166 [Motor Ctrl Cmmd]. Enter the firing angle value before enabling the test. Attention: Uncontrolled machine operation could result with motor connected during this test. This could cause bodily injury. Disconnect motor from drive before enabling test.	Default: Min: Max: Type: File: Group:	Deg 180 5 180 Linkable, Read-Write, 16-bit Integer DPS/PMI Commands	
2103	Arm Curr Ref Displays the current reference for the armature current minor loop. A value of 4095 indicates maximum positive current - equal to the value of parameter 122 [Curr PosLim Actl]. A value of -4095 indicates a maximum negative current - equal to the value of parameter 121 [Curr NegLim Actl].	Default: Min: Max: Type: File: Group:	0 -4095 4095 Non-Linkable, Read Only, 16-bit Integer Utility Diagnostics	
2104	Field Test Angle Enter the firing angle for the field alpha test. Enter a value between 5 degrees (full on) and 180 degrees (full off). The drive module clamps any entry outside this range to be within the limits. Select forward and reverse tests by setting bit 27 [Fld Alph Tst] or bit 29 [FldRALph Tst] of parameter 166 [Motor Ctrl Cmmd]. Enter the firing angle value before enabling the test. Attention: Uncontrolled machine operation could result with motor connected during this test. This could cause bodily injury. Disconnect motor from drive before enabling test.	Units: Default: Min: Max: Type: File: Group:	Deg 180 5 180 Linkable, Read-Write, 16-bit Integer DPS/PMI Feedback	
2105	Field Curr Ref Displays the current reference for the field current minor loop. A value of 4095 indicates hot field current - equal to the value of parameter 2185 [Hot Field Curr].	Default: Min: Max: Type: File: Group:	0 -4095 4095 Linkable, Read-Write, 32-bit Integer Utility Diagnostics	

No.	Name Description	Values		
2106	PMI D/A Output The value in the PMI D/A Output register is transmitted to the PMI Processor. The value can then be displayed on one of the four PMI Processor meter ports. This register can contain any variable in the system as long as it is a 16-bit integer. Floating point or double-integer values cannot be displayed on the PMI Processor's D/A meter ports.	Default: Min: Max: Type: File: Group:	0 -32768 32767 Linkable, Read-Write, 32-bit Integer DPS/PMI Feedback	
2107	Field Econ Limit Sets a limit on the field current reference, when the drive is in field economy mode. A value of 4095 limits the reference to 100% of the current specified by parameter 2185 [Hot Field Curr].	Default: Min: Max: Type:	4095 0 4095 Linkable, Read-Write, 32-bit Integer	
2108	Field Curr Out Displays the final field current reference. A value of 4095 indicates 100% of the current specified by parameter 2185 [Hot Field Curr].	Default: Min: Max: Type:	4095 0 4095 Non-Linkable, Read Only, 32-bit Integer	
2122	MC Faults Indicates Motor-Control faults. These bits latch when a Motor-Control fault event occurs. They stay latched until bit 19 [Clear Fault] of parameter 152 [Applied LogicCmd] or bit 19 [Clr Drv Wrn] of parameter 166 [Motor Ctrl Cmmnd] is set. If the fault condition remains present, the identifying bit is set again.	Default:	0000 0000 0000 0000 0000 0000 0000 0000	
		Options:	Bit 0 Bit 1 Bit 2 Bit 3 Bit 4 Bit 5 Bit 6 Bit 7 Bit 8 Bit 9 Bit 10 Bit 11 Bit 12 Bit 13 Bit 14 Bit 15 Bit 16 Bit 17 Bit 18 Bit 19 Bit 20 Bit 21 Bit 22 Bit 23 Bit 24 Bit 25 Bit 26 Bit 27 Bit 28 Bit 29 Bit 30 Bit 31	SCR Fault M Cont Lost Reserved AC Line Sync InstOvr Curr ConductionTO Field Loss Tach Loss TachWire Opn ResolverCard Over Speed PwrTech Card PMI Pwr Sply PMI Bus Reserved PMI CommLoss Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved
		File: Group:	Utility, DPS/PMI Diagnostics, Feedback	

No.	Name Description	Values				
2123	MC Warnings Indicates Motor-Control warnings. These bits latch when a Motor-Control warning event occurs. They stay latched until bit 19 [Clear Fault] of parameter 152 [Applied LogicCmd] or bit 19 [Clr Drv Wrn] of parameter 166 [Motor Ctrl Cmmd] is set. If the warning condition remains present, the identifying bit is set again.	Default:	0000 0000 0000 0000 0000 0000 0000 0000			
		Options:	Bit 0 Bit 1 Bit 2 Bit 3 Bit 4 Bit 5 Bit 6 Bit 7 Bit 8 Bit 9 Bit 10 Bit 11 Bit 12 Bit 13 Bit 14 Bit 15 Bit 16 Bit 17 Bit 18 Bit 19 Bit 20 Bit 21 Bit 22 Bit 23 Bit 24 Bit 25 Bit 26 Bit 27 Bit 28 Bit 29 Bit 30 Bit 31	BrdgNotFirng Low AC Line Reserved LineSyncLoss Curr Ref Lim ID TestAbort Fld OvrCurr Arm Fdbk Rev CT Fdbk Rev Reserved Reserved Reserved PMI Fan Loss Rail IO Comm PMI CommSync PMI Comm Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved		
		File: Group:	Utility, DPS/PMI Diagnostics, Feedback			

No.	Name Description	Values		
2124	Pwr DeviceStatus Indicates which SCR has shorted or not firing. If an SCR is shorted, bit 0 [SCR Fault] of parameter 2122 [MC Faults] will be set. If an SCR is not firing correctly, bit 0 [BrdgNotFirng] of parameter 2123 [MC Warnings] will be set. For a regenerative drive, this parameter indicates the pair of SCRs that has faulted. For a non-regenerative drive, this parameter indicates the specific SCR that has faulted. The bits of this parameters are set when a fault event is detected. They stay latched until bit 19 [Clear Fault] of parameter 152 [AppliedLogic Cmd] or bit 19 [Clr Drv Wrn] of parameter 166 [Motor Ctrl Cmm] is set. If the fault event remains present, the identifying bit is set again.	Default:	0000 0000 0000 0000	
		Options:	Bit 0 Bit 1 Bit 2 Bit 3 Bit 4 Bit 5 Bit 6 Bit 7 Bit 8 Bit 9 Bit 10 Bit 11 Bit 12 Bit 13 Bit 14 Bit 15	SCR 1 Fault SCR 2 Fault SCR 3 Fault SCR 4 Fault SCR 5 Fault SCR 6 Fault SCR 11 Fault SCR 12 Fault SCR 13 Fault SCR 14 Fault SCR 15 Fault SCR 16 Fault Reserved Reserved Reserved Reserved
		File: Group:	DPS/PMI Feedback	
2125	Interlock Code The PMI processor performs interlock tests in response to parameter 2100 [Drive Ctrl Word]. If any of the diagnostics fail the PMI processor sets the bit in parameter 2125 [Interlock Code] that corresponds to the first failed diagnostic. The bit stays latched until bit 19 [Clear Fault] of parameter 152 [Applied LogicCmd] or bit 19 [Clr Drv Wrn] of parameter 166 [Motor Ctrl Cmm] is set. Refer to Reliance Electric publication S-3011-1, Distributed Power System SD3000 Drive Diagnostics, Troubleshooting and Start-Up Guidelines, for information about the interlock diagnostics.	Default:	0000 0000 0000 0000	
		Options:	Bit 0 Bit 1 Bit 2 Bit 3 Bit 4 Bit 5 Bit 6 Bit 7 Bit 8 Bit 9 Bit 10 Bit 11 Bit 12 Bit 13 Bit 14 Bit 15	Bad CML Req A Par NotLod A Gns NotLod A Flt Rst Rq RPI Missing Fld Not Rdy Fld NotAlwd M-Con NotCls Bad FML Req F Par NotLod F Gns NotLod F Flt Rst Rq Reserved Reserved F FB or Cfg Reserved
		File: Group:	DPS/PMI Feedback	
2126	AC Line Volt FB Displays the measured AC RMS line voltage in volts.	Default: Min: Max: Type: File: Group:	Volt 0 0 1000 Non-Linkable, Read Only, Floating Point DPS/PMI Feedback	
2127	CML Feedback Displays measured armature current. A value of 4095 indicates maximum positive current - equal to the value of parameter 122 [Curr PosLim Actl]. A value of -4095 indicates a maximum negative current - equal to the value of parameter 121 [Curr NegLim Actl].	Default: Min: Max: Type: File: Group:	0 -4095 4095 Non-Linkable, Read Only, 16-bit Integer DPS/PMI Feedback	

No.	Name Description	Values	
2130	Counter EMF Displays the measured counter-EMF voltage, in volts.	Units: Default: Min: Max: Type: File: Group:	Volt 0 -32768 32767 Non-Linkable, Read Only, Floating Point DPS/PMI Feedback
2131	FML Feedback Displays measured field current. A value of 4095 indicates hot field current - equal to the value of parameter 2185 [Hot Field Curr].	Units: Default: Min: Max: Type: File: Group:	P.U. 0 -4095 4095 Non-Linkable, Read Only, 16-bit Integer Speed/Posit Fdbk Resolver
2132	Field Amps Fdbk Displays measured field current in Amps.	Units: Default: Min: Max: Type: File: Group:	Amps 0 -32768 32767 Non-Linkable, Read Only, Floating Point DPS/PMI Feedback
2133	Field Volt Fdbk Displays the field voltage feedback value, in volts. This voltage is calculated based on the AC line voltage and field firing angle.	Units: Default: Min: Max: Type: File: Group:	Volt 0 -32768 32767 Non-Linkable, Read Only, Floating Point DPS/PMI Feedback
2134	User Anlg Input Displays the measured user analog input value from the Resolver Feedback connector on the Resolver & Drive I/O module. This value may be accessed through the PMI meter ports.	Default: Min: Max: Type: File: Group:	0 -2048 2048 Non-Linkable, Read Only, 16-bit Integer DPS/PMI Feedback
2135	Res Scan Posit Displays the electrical position of the resolver (if used). This register is reset to zero at power-up.	Default: Min: Max: Type: File: Group:	0 -32768 32767 Non-Linkable, Read Only, 16-bit Integer DPS/PMI, DPS/PMI Feedback, Regulator Config
2136	Res Strobe Posit Displays the electrical position of the resolver at the time a strobe signal is detected.	Default: Min: Max: Type: File: Group:	0 -32768 32767 Non-Linkable, Read Only, 16-bit Integer DPS/PMI Regulator Config
2137	Arm Volt FB Cnts Displays measured armature voltage. A value of 4095 indicates armature voltage - equal to Rated Armature voltage.	Default: Min: Max: Type: File: Group:	0 -4095 4095 Non-Linkable, Read Only, 16-bit Integer DPS/PMI Regulator Config

No.	Name Description	Values	
2149	NV Faults Non Volatile storage location for internal module faults. Rockwell development personnel may use the value in this register to debug the module firmware.	Default: Min: Max: Type: File: Group:	0 0 4294967296 Non-Linkable, Read Only, 32-bit Integer DPS/PMI Regulator Config
2150	CML Crossovr Frq Enter a value to determine the response of the current minor loop. Higher values improve response. However, higher values may degrade stability.	Units: Default: Min: Max: Type: File: Group:	R/S 200 0 400 Linkable, Read-Write, 16-bit Integer DPS/PMI Regulator Config
2151	Arm Resistance Enter the continuous-conduction resistance of the armature, in ohms.	Units: Default: Min: Max: Type: File: Group:	Ohms 0 0 32.767 Linkable, Read-Write, 16-bit Integer DPS/PMI Regulator Config
2152	Arm TimeConstant Enter the electric time constant (Te) of the armature, in mS. This is the ratio of armature inductance to armature resistance. If this value is not specified by the motor manufacturer, use the following formula: parameter 2152 [Arm TimeConstant] = 1,000 x L / R; where L is the armature inductance in henries, and R is the hot armature resistance in ohms. The ID test will provide a value that takes into account the entire circuit (motor and motor leads), which may be different from a value from the motor manufacturer or the calculation.	Units: Default: Min: Max: Type: File: Group:	mSec 0 0 500 Linkable, Read-Write, 16-bit Integer DPS/PMI Regulator Config
2153	Arm ContCurr Lvl The amount of current at the threshold of continuous conduction, in Amps. The armature ID test will automatically generate this value.	Units: Default: Min: Max: Type: File: Group:	Amps 0 0 3276.7 Linkable, Read-Write, 16-bit Integer DPS/PMI Regulator Config
2154	FML Crossovr Frq Enter a value to determine the response of the field regulation loop. Higher values improve response. However, higher values may degrade stability.	Units: Default: Min: Max: Type: File: Group:	R/S 15 0 75 Linkable, Read-Write, 16-bit Integer DPS/PMI Regulator Config
2155	Field Resistance Enter the resistance of the field, in ohms.	Units: Default: Min: Max: Type: File: Group:	Ohms 0 0 3276.7 Linkable, Read-Write, 16-bit Integer DPS/PMI Regulator Config

No.	Name Description	Values	
2156	Fld TimeConstant Enter the electric time constant (Tf) of the field, in mS. This is the ratio of field inductance to field resistance. If this value is not specified by the motor manufacturer, use the following formula: parameter 2156 [Fld TimeConstant] = $1,000 \times L / R$; where L is the field inductance in henries, and R is the field resistance in ohms. The ID test will provide a value that takes into account the entire circuit (motor and motor leads), which may be different from a value from the motor manufacturer or the calculation.	Units: Default: Min: Max: Type: File: Group:	mSec 0 0 32767 Linkable, Read-Write, 16-bit Integer DPS/PMI Regulator Config
2157	SCR Diag Gain Determines how fast error builds up in the Open SCR diagnostics. Increase the value if warnings need to be annunciated quickly. A value of 100 (the default) means the gain is 1 (100/100). A value of 500 (the maximum) means the gain is 5 time the error (500/100).	Default: Min: Max: Type: File: Group:	100 1 500 Linkable, Read-Write, 16-bit Integer DPS/PMI Regulator Config
2158	SCR Decay Rate Determines how much error is retained from calculation to calculation. Decrease the value when nuisance warnings are occurring due to large cyclic loads.	Default: Min: Max: Type: File: Group:	99 1 99 Linkable, Read-Write, 16-bit Integer DPS/PMI Regulator Config
2159	SCR Deadband Determines the amount of imbalance (in percent) ignored by Open SCR diagnostics, (e.g., when the value is 20, the diagnostics will ignore imbalances of less than 20%). Increasing the value reduces the sensitivity of the diagnostics - reducing nuisance warnings that may occur due to small imbalances between the SCRs.	Default: Min: Max: Type: File: Group:	10 0 50 Linkable, Read-Write, 16-bit Integer DPS/PMI Regulator Config
2160	SCR Trip Point Determines the threshold of integrated error that cause a warning to be annunciated. Increasing the value reduces the sensitivity of the Open SCR diagnostics.	Default: Min: Max: Type: File: Group:	1500 1500 3000 Linkable, Read-Write, 16-bit Integer DPS/PMI Motor Data
2161	Resolver Gain The amount of gain used to compensate for varying lengths of resolver wiring. Set to zero to enable automatic calibration test on power-up. Values range from 0-255 counts, with 1 count representing .15 volts gain.	Default: Min: Max: Type: File: Group:	0 0 255 Linkable, Read-Write, 16-bit Integer DPS/PMI Motor Data
2162	Resolver Balance The amount of capacitance that is added to the sine or cosine channel of the resolver to compensate for varying lengths of resolver wiring. Values from 1 to 39 add capacitance to the cosine channel, while values from 41 to 79 add capacitance to the sine channel.	Default: Min: Max: Type: File: Group:	40 0 79 Linkable, Read-Write, 16-bit Integer DPS/PMI Motor Data

No.	Name Description	Values	
2163	CML Ref Rate Controls the current reference ramp block within the PMI processor. Leave at default for most applications, which sets the rate equal to parameter 354[Curr Rate Limit].	Default: Min: Max: Type: File: Group:	4095 1 4095 Linkable, Read-Write, 16-bit Integer DPS/PMI Motor Data
2180 	Motor NP RPM Set to the motor nameplate rated RPM.	Units: Default: Min: Max: Type: File: Group:	RPM 1750 1 30000 Non-Linkable, Read-Write, 16-bit Integer Torque Control Current
2181 	Overspd Trip Pt Set the overspeed trip point for overspeed detection in the PMI processor.	Units: Default: Min: Max: Type: File: Group:	RPM 2000 1 30000 Non-Linkable, Read-Write, 16-bit Integer DPS/PMI Motor Data
2182 	Motor NP FLA Set to the motor nameplate full load amps.	Units: Default: Min: Max: Type: File: Group:	Amps 1 1 3276.7 Non-Linkable, Read-Write, 16-bit Integer DPS/PMI Motor Data
2183 	Motor NP Volts Set to the motor nameplate rated volts.	Units: Default: Min: Max: Type: File: Group:	Volt 1 1 32767 Non-Linkable, Read-Write, 16-bit Integer DPS/PMI Motor Data
2184 	PMI Curr Lim Provides positive and negative current limit values within the PMI processor. If this value is less than parameter 120[Current PosLimit] and the absolute value of parameter 119 [Current NegLimit], this value will set both the positive and negative actual current limits.	Units: Default: Min: Max: Type: File: Group:	% 100 100 400 Non-Linkable, Read-Write, 16-bit Integer DPS/PMI Motor Data
2185 	Hot Field Curr Set to the Hot Amps value on the motor nameplate.	Units: Default: Min: Max: Type: File: Group:	Amps 0.10 0.01 327.67 Non-Linkable, Read-Write, 16-bit Integer Speed Control Regulator

No.	Name Description	Values	
2186 	Min Field Curr Set to the minimum amps value on the motor nameplate.	Units: Default: Min: Max: Type: File: Group:	Amps 0.10 0.01 99.99 Non-Linkable, Read-Write, 16-bit Integer DPS/PMI Motor Data
2187 	Field Loss Amps Set the under-current trip point for field loss detection in the PMI processor.	Units: Default: Min: Max: Type: File: Group:	Amps 0.10 0.01 99.99 Non-Linkable, Read-Write, 16-bit Integer Speed Control Regulator
2188 	Field Off Delay Set the amount of time the field will remain energized after a fault condition. (1 to 300S)	Units: Default: Min: Max: Type: File: Group:	Sec 180 1 300 Non-Linkable, Read-Write, 16-bit Integer DPS/PMI Motor Data
2189	Motor Inertia The time, in seconds, for the motor (not coupled to load) to accelerate from zero to base speed, at rated motor torque. The drive calculates Motor Inertia during the auto-tune procedure.	Units: Default: Min: Max: Type: File: Group:	Sec 0.4 0.01 655 Linkable, Read-Write, Floating Point DPS/PMI Drive Config
2190	Total Inertia The time, in seconds, for a motor coupled to a load to accelerate from zero to base speed, at rated motor torque. The drive calculates Total Inertia during the auto-tune procedure.	Units: Default: Min: Max: Type: File: Group:	Sec 2 0.01 655 Linkable, Read-Write, Floating Point DPS/PMI Drive Config

No.	Name Description	Values																																	
2200 	PMI Drive Config Set bits to configure the PMI processor. • Bits 0-7 [PMI OS Sel] indicate the catalog number of the Drive Module (do not modify these settings). • Bit 8 [Arm Reg Used] enables control of the motor armature. • Bit 9 [Rev Bdge Usd] enables control of a regenerative armature bridge. • Bit 10 [S12 Config] enables twelve-pulse control. • Bit 11 [M-Cont Used] enables Drive Module control of the main contactor. • Bit 12 [Fld Reg Used] enables control of the motor field. • Bit 13 [4 quad fld] enables four-quadrant control of the motor field. • Bit 14 [3ph fld gene] is not used.	Default:	0000 0000 0000 0000																																
		Options:	<table><tr><td>Bit 0</td><td>PMI OS Sel</td></tr><tr><td>Bit 1</td><td>PMI OS Sel</td></tr><tr><td>Bit 2</td><td>PMI OS Sel</td></tr><tr><td>Bit 3</td><td>PMI OS Sel</td></tr><tr><td>Bit 4</td><td>PMI OS Sel</td></tr><tr><td>Bit 5</td><td>PMI OS Sel</td></tr><tr><td>Bit 6</td><td>PMI OS Sel</td></tr><tr><td>Bit 7</td><td>PMI OS Sel</td></tr><tr><td>Bit 8</td><td>Arm Reg Used</td></tr><tr><td>Bit 9</td><td>Rev Bdge Usd</td></tr><tr><td>Bit 10</td><td>S12 Config</td></tr><tr><td>Bit 11</td><td>M-Cont Used</td></tr><tr><td>Bit 12</td><td>Fld Reg Used</td></tr><tr><td>Bit 13</td><td>4 quad fld</td></tr><tr><td>Bit 14</td><td>3ph fld gene</td></tr><tr><td>Bit 15</td><td>Reserved</td></tr></table>	Bit 0	PMI OS Sel	Bit 1	PMI OS Sel	Bit 2	PMI OS Sel	Bit 3	PMI OS Sel	Bit 4	PMI OS Sel	Bit 5	PMI OS Sel	Bit 6	PMI OS Sel	Bit 7	PMI OS Sel	Bit 8	Arm Reg Used	Bit 9	Rev Bdge Usd	Bit 10	S12 Config	Bit 11	M-Cont Used	Bit 12	Fld Reg Used	Bit 13	4 quad fld	Bit 14	3ph fld gene	Bit 15	Reserved
		Bit 0	PMI OS Sel																																
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Bit 12	Fld Reg Used																																		
Bit 13	4 quad fld																																		
Bit 14	3ph fld gene																																		
Bit 15	Reserved																																		
File: Group:	DPS/PMI Drive Config																																		
2201 	PMI I/O Config Set bits to configure the rail I/O and speed feedback in the PMI processor. • Bits 0-3 [Prt 0 Config] form a nibble that configures the port 0 rail I/O and bits 4-7 [Prt 1 Config] form a nibble that configures the port 1 rail I/O: 0 = no I/O, 1 = Digital I/O, 2 = 2 Channel Analog Input / 2 Channel Analog Output, 3 = 4 Channel Analog Output, 4 = 4 Channel Analog Input. • Bits 8-11 [Res Type] form a nibble that configures the resolver type: 0 = no resolver, 1 = 1 x resolver, 2 = 2 x resolver, 3 = 5 x resolver. • Bits 12-15 [SpdFdbk Type] form a nibble that configures the speed feedback type: 0 = no speed feedback, 1 = analog tachometer, 2 = resolver.	Default:	0010 0001 0000 0000																																
		Options:	<table><tr><td>Bit 0</td><td>Prt 0 Config</td></tr><tr><td>Bit 1</td><td>Prt 0 Config</td></tr><tr><td>Bit 2</td><td>Prt 0 Config</td></tr><tr><td>Bit 3</td><td>Prt 0 Config</td></tr><tr><td>Bit 4</td><td>Prt 1 Config</td></tr><tr><td>Bit 5</td><td>Prt 1 Config</td></tr><tr><td>Bit 6</td><td>Prt 1 Config</td></tr><tr><td>Bit 7</td><td>Prt 1 Config</td></tr><tr><td>Bit 8</td><td>Res Type</td></tr><tr><td>Bit 9</td><td>Res Type</td></tr><tr><td>Bit 10</td><td>Res Type</td></tr><tr><td>Bit 11</td><td>Res Type</td></tr><tr><td>Bit 12</td><td>SpdFdbk Type</td></tr><tr><td>Bit 13</td><td>SpdFdbk Type</td></tr><tr><td>Bit 14</td><td>SpdFdbk Type</td></tr><tr><td>Bit 15</td><td>SpdFdbk Type</td></tr></table>	Bit 0	Prt 0 Config	Bit 1	Prt 0 Config	Bit 2	Prt 0 Config	Bit 3	Prt 0 Config	Bit 4	Prt 1 Config	Bit 5	Prt 1 Config	Bit 6	Prt 1 Config	Bit 7	Prt 1 Config	Bit 8	Res Type	Bit 9	Res Type	Bit 10	Res Type	Bit 11	Res Type	Bit 12	SpdFdbk Type	Bit 13	SpdFdbk Type	Bit 14	SpdFdbk Type	Bit 15	SpdFdbk Type
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Bit 14	SpdFdbk Type																																		
Bit 15	SpdFdbk Type																																		
File: Group:	DPS/PMI Drive Config																																		
2202 	AC LineVolt(RMS) Enter the nominal input voltage to the Armature Power Module. The PMI processor uses this value to determine the threshold (15% below this value) for indicating the low AC line voltage warning.	Units: Default: Min: Max: Type: File: Group:	Volt 230 10 32767 Non-Linkable, Read-Write, 16-bit Integer DPS/PMI Drive Config																																
		Units: Default: Min: Max: Type: File: Group:	Volt 1 10 32767 Non-Linkable, Read-Write, 16-bit Integer DPS/PMI Drive Config																																

No.	Name Description	Values	
2204 	Out Curr Rating Enter the Power Module rated DC output Amps, from the Power Module's nameplate.	Units: Default: Min: Max: Type: File: Group:	Amps 1 1 32767 Non-Linkable, Read-Write, 16-bit Integer DPS/PMI Drive Config
2205 	Curr Xfmr Ratio Defines the input to output ratio of the current transformer in the Armature Power Module.	Default: Min: Max: Type: File: Group:	1 1 32767 Non-Linkable, Read-Write, 16-bit Integer DPS/PMI Drive Config
2206 	Field AC In Volt Enter the nominal voltage at the Field Power Module input. If an isolation transformer is used, enter the secondary voltage.	Units: Default: Min: Max: Type: File: Group:	Volt 1 1 32767 Non-Linkable, Read-Write, 16-bit Integer DPS/PMI Drive Config
2207 	Fld OutCurrRatng Enter the Field Power Module's DC Amps output rating. This value can be found on the Power Module's nameplate.	Units: Default: Min: Max: Type: File: Group:	Amps 15 1 327.67 Non-Linkable, Read-Write, 16-bit Integer Monitor Drive Data
2208 	Anlg Tach Volts Enter the tachometer voltage that will be present when the motor is turning at the speed specified in parameter 2181[Overspd Trip Pt].	Units: Default: Min: Max: Type: File: Group:	Volt 5 5 327.67 Non-Linkable, Read-Write, 16-bit Integer DPS/PMI Drive Config

No.	Name Description	Values	
2209 	Ph Xfmr In Volt The voltage at the primary of the phasing transformer, which produces 6.3V at the secondary. Typically this equals the value in parameter 2202 [AC LineVolt(RMS)].	Units: Default: Min: Max: Type: File: Group:	Volt 230 10 32767 Non-Linkable, Read-Write, 16-bit Integer DPS/PMI Drive Config
2213	Pwr Config Code For internal use.	Default: Min: Max: Type: File: Group:	0 0 256 Non-Linkable, Read Only, 16-bit Integer DPS/PMI Drive Config
2214	PMI OS Version Indicates Operating System version for the PMI processor.	Default: Min: Max: Type: File: Group:	0 0 255 Non-Linkable, Read Only, 16-bit Integer DPS/PMI Drive Config

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Real Out01	635
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Real Out03	639
Real Out04	641
Real Out05	643
Real Out06	645
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Real Out09	651
Real Out10	653
Real Out11	655
Real Out12	657
Real Out13	659
Real Out14	661
Real Out15	663
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Name	No.
Res Scan Posit	2135
Res Strobe Posit	2136
Resolver Balance	2162
Resolver Gain	2161
Resolver PositFB	231
Resolver SpdFdbk	230
Rev Speed Limit	30
Run Inhibit Stat	156
S Curve Spd Ref	43
S Curve Time	34
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Scaled Spd Ref	46
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SCR Decay Rate	2158
SCR Diag Gain	2157
SCR Trip Point	2160
Selected Spd Ref	40
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Setpt 1 Data	172
Setpt 1 Limit	174
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Setpt 2 Limit	177
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SL BOF Err Limit	1235
SL BOF Error	1233
SL Buf Int Rx00	1073
SL Buf Int Rx01	1075
SL Buf Int Rx02	1077
SL Buf Int Rx03	1079
SL Buf Int Rx04	1081
SL Buf Int Rx05	1083

Name	No.
SL Buf Int Rx06	1085
SL Buf Int Rx07	1087
SL Buf Int Rx08	1089
SL Buf Int Rx09	1091
SL Buf Int Rx10	1093
SL Buf Int Rx11	1095
SL Buf Int Rx12	1097
SL Buf Int Rx13	1099
SL Buf Int Rx14	1101
SL Buf Int Rx15	1103
SL Buf Int Rx16	1105
SL Buf Int Rx17	1107
SL Buf Int Rx18	1109
SL Buf Int Rx19	1111
SL Buf Int Rx20	1113
SL Buf Int Rx21	1115
SL Buf Int Rx22	1117
SL Buf Int Rx23	1119
SL Buf Int Rx24	1121
SL Buf Int Rx25	1123
SL Buf Int Rx26	1125
SL Buf Int Rx27	1127
SL Buf Int Rx28	1129
SL Buf Int Rx29	1131
SL Buf Int Tx00	1161
SL Buf Int Tx01	1163
SL Buf Int Tx02	1165
SL Buf Int Tx03	1167
SL Buf Int Tx04	1169
SL Buf Int Tx05	1171
SL Buf Int Tx06	1173
SL Buf Int Tx07	1175
SL Buf Int Tx08	1177
SL Buf Int Tx09	1179
SL Buf Int Tx10	1181

Name	No.
SL Buf Int Tx11	1183
SL Buf Int Tx12	1185
SL Buf Int Tx13	1187
SL Buf Int Tx14	1189
SL Buf Int Tx15	1191
SL Buf Int Tx16	1193
SL Buf Int Tx17	1195
SL Buf Int Tx18	1197
SL Buf Int Tx19	1199
SL Buf Int Tx20	1201
SL Buf Int Tx21	1203
SL Buf Int Tx22	1205
SL Buf Int Tx23	1207
SL Buf Int Tx24	1209
SL Buf Int Tx25	1211
SL Buf Int Tx26	1213
SL Buf Int Tx27	1215
SL Buf Int Tx28	1217
SL Buf Int Tx29	1219
SL Buf Real Rx00	1074
SL Buf Real Rx01	1076
SL Buf Real Rx02	1078
SL Buf Real Rx03	1080
SL Buf Real Rx04	1082
SL Buf Real Rx05	1084
SL Buf Real Rx06	1086
SL Buf Real Rx07	1088
SL Buf Real Rx08	1090
SL Buf Real Rx09	1092
SL Buf Real Rx10	1094
SL Buf Real Rx11	1096
SL Buf Real Rx12	1098
SL Buf Real Rx13	1100
SL Buf Real Rx14	1102
SL Buf Real Rx15	1104

Name	No.
SL Buf Real Rx16	1106
SL Buf Real Rx17	1108
SL Buf Real Rx18	1110
SL Buf Real Rx19	1112
SL Buf Real Rx20	1114
SL Buf Real Rx21	1116
SL Buf Real Rx22	1118
SL Buf Real Rx23	1120
SL Buf Real Rx24	1122
SL Buf Real Rx25	1124
SL Buf Real Rx26	1126
SL Buf Real Rx27	1128
SL Buf Real Rx28	1130
SL Buf Real Rx29	1132
SL Buf Real Tx00	1162
SL Buf Real Tx01	1164
SL Buf Real Tx02	1166
SL Buf Real Tx03	1168
SL Buf Real Tx04	1170
SL Buf Real Tx05	1172
SL Buf Real Tx06	1174
SL Buf Real Tx07	1176
SL Buf Real Tx08	1178
SL Buf Real Tx09	1180
SL Buf Real Tx10	1182
SL Buf Real Tx11	1184
SL Buf Real Tx12	1186
SL Buf Real Tx13	1188
SL Buf Real Tx14	1190
SL Buf Real Tx15	1192
SL Buf Real Tx16	1194
SL Buf Real Tx17	1196
SL Buf Real Tx18	1198
SL Buf Real Tx19	1200
SL Buf Real Tx20	1202

Name	No.
SL Buf Real Tx21	1204
SL Buf Real Tx22	1206
SL Buf Real Tx23	1208
SL Buf Real Tx24	1210
SL Buf Real Tx25	1212
SL Buf Real Tx26	1214
SL Buf Real Tx27	1216
SL Buf Real Tx28	1218
SL Buf Real Tx29	1220
SL Comm TP Data	1227
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SL CommLoss Cnfg	369
SL CommLoss Data	370
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SL CRC Err Limit	1234
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SL Dir Int Rx0	1054
SL Dir Int Rx1	1056
SL Dir Int Rx2	1058
SL Dir Int Rx3	1060
SL Dir Int Tx0	1141
SL Dir Int Tx1	1143
SL Dir Int Tx2	1145
SL Dir Int Tx3	1147
SL Dir Real Rx0	1055
SL Dir Real Rx1	1057
SL Dir Real Rx2	1059
SL Dir Real Rx3	1061
SL Dir Real Tx0	1142
SL Dir Real Tx1	1144
SL Dir Real Tx2	1146
SL Dir Real Tx3	1148
SL Error History	1228
SL Error Status	1229
SL Mult A In	1030

Name	No.
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SL Mult Base	1032
SL Mult Out	1033
SL Mult State	1034
SL MultErr Cnfg	387
SL Node Cnfg	1000
SL Rcv Events	1040
SL Rx Comm Frmt	1010
SL Rx D0 Latch	1043
SL Rx D1 Latch	1044
SL Rx D2 Latch	1045
SL Rx D3 Latch	1046
SL Rx DirectSel0	1011
SL Rx DirectSel1	1012
SL Rx DirectSel2	1013
SL Rx DirectSel3	1014
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SL Rx Opt1 Regis	1048
SL Rx P0 Regis	1041
SL Rx P1 Regis	1042
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SL Tx DirectSel0	1021
SL Tx DirectSel1	1022
SL Tx DirectSel2	1023
SL Tx DirectSel3	1024
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Spd Fdbk Scale	73
Spd Fdbk TP Data	79
Spd Fdbk TP RPM	78
Spd Fdbk TP Sel	77
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Spd Gain TP Sel	98
Spd Obs Trq Gain	219

Name	No.
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Spd Ref TP Data	52
Spd Ref TP RPM	51
Spd Ref TP Sel	50
Spd Ref1 Divide	11
Spd Ref2 Multi	13
Spd Reg BW	90
Spd Reg Damping	91
Spd Reg Droop	86
Spd Reg I Gain	82
Spd Reg Neg Lim	103
Spd Reg P Gain	81
Spd Reg PI Out	302
Spd Reg Pos Lim	102
Spd Reg TP Data	109
Spd Reg TP Sel	108
Spd Trim1 SpdRef	47
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SpdRef Filt BW	36
SpdRef Filt Gain	35
SpdReg AntiBckup	84
SpdReg Integ Out	101
SpdReg P Gain Mx	92
SpdTrim 3 Scale	24
SpdTrim2 Filt BW	26
Speed Error	100
Speed Ref 1	10
Speed Ref 2	12
Speed Ref 4	14
Speed Ref 5	15
Speed Ref Scale	38
Speed Ref Sel	16
Speed Reg Ctrl	80
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Speed Trim 3	23
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SRegFB Filt Gain	93
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Torq Ref1 Div	112
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Name	No.
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VPL Firmware Rev	314
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XReg Integ Out	774
XReg Spd HiLim	776
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Interpreting Drive Module Faults in DriveExecutive

The Fault Words tab of the Fault and Alarm window of DriveExecutive allows you to view several parameters. These parameters have individual bits associated with faults or conditions. If the bit is 0, the fault is not present or the condition is false. If the bit is 1, the fault is present or the condition is true.

Parameter 169 [Drive I/O Status]

The bits in this parameter indicate the current state of the inputs on the Resolver & Drive I/O module.

Bit	Fault Name	Fault Description
Bit 0	Run Perm	This bit reflects the status of the run permissive input signal connected to pin A on the DRIVE I/O connector. When the signal is present, this bit is set. The run permissive input signal typically originates from the drive's coast stop circuitry and is required to turn on parameter 168 [Drive I/O Ctrl] bit 1 [M-Cont Out].
Bit 1	M-Cont Fdbk	This bit reflects the status of the M-contactor feedback input signal, which is connected to the AUX_IN1 input on the Resolver & Drive I/O module.
Bit 2	Aux In 2	This bit reflects the status of 115 VAC auxiliary input 2 on the Resolver & Drive I/O module. If an inverting fault breaker is used, this bit is used to reflect the status of the inverting fault breaker input signal.
Bit 3	Aux In 3	This bit reflects status of 115 VAC auxiliary input 3 on the Resolver & Drive I/O module. If Power Module air loss is being monitored, this bit reflects the status of the Power Module's air loss signal. An air flow sensor in the Power Module generates this signal.
Bit 4	Aux In 4	This bit reflects the status of 115 VAC auxiliary input 4 on the Resolver & Drive I/O module. If the motor's thermal switch is being monitored, this bit reflects the status of the switch's signal.
Bit 5	Aux In 5	This bit reflects the status of 115 VAC auxiliary input 5 on the Resolver & Drive I/O module.
Bit 6	Res Gain OK	This bit is set when the resolver gain calibration procedure is completed. This procedure is performed when the value stored in parameter 2161 [Resolver Gain] equals zero.

Bit	Fault Name	Fault Description
Bit 7	Res Bal OK	This bit is set when the resolver balance calibration procedure is complete. This procedure is performed when parameter 168 [Drive I/O Ctrl] bit 6 [Enbl Res Bal] is set and the motor is turning.
Bit 8	StrobeDetect	This bit is set when the external strobe on the motor's resolver is detected. Parameter 2136 [Res Strobe Posit] displays the position of the resolver at the time of the strobe. Note that this bit is set for only one scan allowing a strobe to be detected every scan. The Logix task must check the External Strobe Detected bit each scan to ensure the validity of the strobe data in Parameter 2136.
Bit 9	Strobe Level	This bit is set or reset when the external strobe is detected. It indicates whether the external strobe level was rising (1) or falling (0).

Parameter 323 [Fault Status 1]

This parameter indicates the occurrence of exception events that have been configured as fault conditions. These events are from parameter 320 [Exception Event1]. These bits are latched until they are reset by setting bit 19 [Clear Fault] of parameter 152 [Applied LogicCmd]. After turning the Clear Fault bit on, the drive may be re-started after turning the command bits off and then back on again. If the fault conditions still exist, the identifying bit in this parameter will immediately be set again. The fault conditions reported in this register result in turning off the drive.

Bit	Fault Name	Fault Description
Bit 0	Abs OverSpd	Motor speed has exceed the value in parameter 335 [Abs OverSpd Lim].
Bit 1	SpdRef Decel	The drive has failed to achieve a zero speed condition.
Bit 6	Ctrl EE Mem	Not Used
Bit 7	Slink HW	Not Used
Bit 8	Slink Comm	A SynchLink communication failure has occurred. These faults are enumerated in parameter 1229 [SL Error Status].
Bit 10	Mtr OL Trip	A Mtr OL Trip exception event has faulted the drive module. Refer to parameter 371 [Mtr OL Trip Cnfg], parameter 336 [Service Factor], parameter 337 [Mtr I2T Curr Min], and parameter 338 [Mtr I2T Spd Min].
Bit 11	Mtr OL Pendg	A Mtr OL Pendg exception event has faulted the drive module. Refer to parameter 372 [Mtr OL Pend Cnfg], parameter 336 [Service Factor], parameter 337 [Mtr I2T Curr Min], and parameter 338 [Mtr I2T Spd Min].

Bit	Fault Name	Fault Description
Bit 12	Motor Stall	A motor stall has lasted longer than the time specified by parameter 373 [Motor Stall Time]. This has faulted the drive module. Refer to parameter 374 [Moter Stall Cnfg].
Bit 18	DSP Mem Err	Flash memory does not match the SRAM memory.
Bit 19	DSP Err	The drive has failed to complete DSP (VPL) interrupt tasks in the allotted time.

Parameter 324 [Fault Status 2]

This parameter indicates the presence of certain drive anomalies that caused the drive to fault (stop). These are the same events shown in parameter 321 [Exception Event 2]. These bits are latched until they are reset by setting bit 19 [Clear Fault] of parameter 152 [Applied LogicCmd]. After turning the Clear Fault bit on, the drive may be re-started after turning the command bits off and then back on again. If the fault conditions still exist, the identifying bit in this parameter will immediately be set again. The fault conditions reported in this register result in turning off the drive.

Bit	Fault Name	Fault Description
7	Slink Mult	SynchLink Multiply failure has occurred. These faults are enumerated in parameter 1034 [SL Mult State].
26	Drv Fault	A motor control fault event has occurred. Motor control faults are enumerated in parameter 2122 [MC Faults].
27	Drv Warning	A motor control warning event has occurred. Motor control warnings are enumerated in parameter 2123 [MC Warnings].
28	Lgx OutOfRun	The Logix Controller is out of the run mode.
29	Lgx Timeout	Communications with the Logix Controller has timed out.
30	Lgx Closed	The Logix Controller has closed a connection to the Drive Module.
31	Lgx LinkChng	A required parameter link relating to a communications connection has been modified.

Parameter 326 [Alarm Status 1]

This parameter indicates the occurrence of exception events that have been configured as alarm conditions. These events are from parameter 320 [Exception Event1].

Bit	Fault Name	Fault Description
Bit 0	Abs OverSpd	Motor speed has exceed the value in Parameter 335 [Abs OverSpd Lim].
Bit 1	SpdRef Decel	The drive has failed to achieve a zero speed condition.
Bit 6	Ctrl EE Mem	Not Used
Bit 7	SLink HW	Not Used
Bit 8	SLink Comm	A SynchLink communication failure has occurred. These faults are enumerated in parameter 1229 [SL Error Status].
Bit 10	Mtr OL Trip	A Mtr OL Trip exception event has alarmed the drive module. Refer to parameter 371 [Mtr OL Trip Cnfg], parameter 336 [Service Factor], parameter 337 [Mtr I2T Curr Min], and parameter 338 [Mtr I2T Spd Min].
Bit 11	Mtr OL Pendg	A Mtr OL Pendg exception event has alarmed the drive module. Refer to parameter 372 [Mtr OL Pend Cnfg], parameter 336 [Service Factor], parameter 337 [Mtr I2T Curr Min], and parameter 338 [Mtr I2T Spd Min].
Bit 12	Motor Stall	A motor stall has lasted longer than the time specified by parameter 373 [Motor Stall Time]. This has alarmed the drive module. Refer to parameter 374 [Moter Stall Cnfg].
Bit 18	DSP Mem Err	Flash memory does not match the SRAM memory.
Bit 19	DSP Err	The drive has failed to complete DSP (VPL) interrupt tasks in the allotted time.

Parameter 327 [Alarm Status 2]

This parameter indicates the occurrence of exception events that have been configured as alarm conditions. These are the same events shown in parameter 321 [Exception Event 2].

Bit	Fault Name	Fault Description
7	Slink Mult	SynchLink Multiply failure has occurred. These faults are enumerated in parameter 1034 [SL Mult State].
26	Drv Fault	A motor control fault event has occurred. Motor control faults are enumerated in parmeter 2122 [MC Faults].
27	Drv Warning	A motor control warning event has occured. Motor control warnings are enumerated in parmeter 2123 [MC Warnings].
28	Lgx OutOfRun	The Logix Controller is out of the run mode.

Bit	Fault Name	Fault Description
29	Lgx Timeout	Communications with the Logix Controller has timed out.
30	Lgx Closed	The Logix Controller has closed a connection to the Drive Module.
31	Lgx LinkChng	A required parameter link relating to a communications connection has been modified.

Parameter 1229 [SL Error Status]

This parameter indicates the occurrence of SynchLink errors.

Bit	Fault Name	Fault Description
0	Sync Loss	SynchLink communication has failed, after it had been established.
1	Rx Loss	The receive port is not receiving data, and the receive port configuration is set to receive data.
2	Many BOF Err	The number of BOF (Beginning Of Frame) errors accumulated in parameter 1232 [SL BOF Err Accum] exceeds the value in parameter 1235 [SL BOF Err Limit].
3	Many CRC Err	The number of CRC (Cycling Ring Checksum) errors accumulated in parameter 1230 [SL CRC Err Accum] exceeds the value in parameter 1234 [SL CRC Err Limit].
4	Pckg Msg Err	The received package sequence number has not matched for 1.0 S.
5	CommForm Err	The format of received data does not match the configuration of the receive port.
6	Sys Rev Err	The system revision in received data does not match the value of parameter 1001 [SynchLink Rev].
7	Mult TKeeper	More than one node on the SynchLink system is configured as a Time Keeper.

Parameter 2044 [Rail Port 0 Faults]

This parameter indicates the occurrence of faults associated with Rail I/O on Port 0.

Bit	Fault Name	Fault Description
0	Ch0 OvrRange	Analog input on channel 0 is over the maximum value. ⁽¹⁾
1	Ch0 UndRange	Analog input on channel 0 is under the minimum value. ⁽²⁾
2	Ch1 OvrRange	Analog input on channel 1 is over the maximum value. ⁽¹⁾
3	Ch1 UndRange	Analog input on channel 1 is under the minimum value. ⁽²⁾
4	Ch2 OvrRange	Analog input on channel 2 is over the maximum value. ⁽¹⁾
5	Ch2 UndRange	Analog input on channel 2 is under the minimum value. ⁽²⁾
6	Ch3 OvrRange	Analog input on channel 3 is over the maximum value. ⁽¹⁾
7	Ch3 UndRange	Analog input on channel 3 is under the minimum value. ⁽²⁾
8	Port NotCntd	No device is connected to the port, which is configured to accept a device.
9	Bad ID	A device other than a rail is plugged into the port.
10	Bad Chk Bits	Bad rail communication check bits have been received.
11	IO NotRdy	The I/O interface is not ready.

⁽¹⁾ Analog 4 input 4-20 mA (model number 61C345) maximum value = 22.1 mA
 Analog 4 input 0-10V (model number 61C346) maximum value = 11.3V
 Analog 2 input / 2 output 4-20 mA (model number 61C345) maximum value = 22.6 mA
 Analog 2 input / 2 output 0-10V (model number 61C346) maximum value = 11.3V

⁽²⁾ Analog 4 input 4-20 mA (model number 61C345) minimum value = 2.4 mA
 Analog 4 input 0-10V (model number 61C346) minimum value = -1.0V
 Analog 2 input / 2 output 4-20 mA (model number 61C345) minimum value = 2.5 mA
 Analog 2 input / 2 output 0-10V (model number 61C346) minimum value = -1.0V

Parameter 2050 [Rail Port 1 Faults]

This parameter indicates the occurrence of faults associated with Rail I/O on Port 1.

Bit	Fault Name	Fault Description
0	Ch0 OvrRange	Analog input on channel 0 is over the maximum value. ⁽¹⁾
1	Ch0 UndRange	Analog input on channel 0 is under the minimum value. ⁽²⁾
2	Ch1 OvrRange	Analog input on channel 1 is over the maximum value. ⁽¹⁾
3	Ch1 UndRange	Analog input on channel 1 is under the minimum value. ⁽²⁾
4	Ch2 OvrRange	Analog input on channel 2 is over the maximum value. ⁽¹⁾
5	Ch2 UndRange	Analog input on channel 2 is under the minimum value. ⁽²⁾
6	Ch3 OvrRange	Analog input on channel 3 is over the maximum value. ⁽¹⁾
7	Ch3 UndRange	Analog input on channel 3 is under the minimum value. ⁽²⁾
8	Port NotCntd	No device is connected to the port, which is configured to accept a device.
9	Bad ID	A device other than a rail is plugged into the port.
10	Bad Chk Bits	Bad rail communication check bits have been received.
11	IO NotRdy	The I/O interface is not ready.

⁽¹⁾ Analog 4 input 4-20 mA (model number 61C345) maximum value = 22.1 mA
 Analog 4 input 0-10V (model number 61C346) maximum value = 11.3V
 Analog 2 input / 2 output 4-20 mA (model number 61C345) maximum value = 22.6 mA
 Analog 2 input / 2 output 0-10V (model number 61C346) maximum value = 11.3V

⁽²⁾ Analog 4 input 4-20 mA (model number 61C345) minimum value = 2.4 mA
 Analog 4 input 0-10V (model number 61C346) minimum value = -1.0V
 Analog 2 input / 2 output 4-20 mA (model number 61C345) minimum value = 2.5 mA
 Analog 2 input / 2 output 0-10V (model number 61C346) minimum value = -1.0V

Parameter 2122 [MC Faults]

This parameter indicates the occurrence of a motor-control fault. These bits are set when a fault event is detected. They stay latched until bit 19 [Clear Fault] of parameter 152 [Applied Logic Cmd] or bit 19 [Clr Drv Wrn] of parameter 166 [Motor Ctrl Cmd] is set. If the fault event remains present, the identifying bit is set again.

Bit	Fault Name	Fault Description
0	SCR Fault	An SCR has shorted. Check Parameter 2124 [Pwr DeviceStatus] to determine which SCR has shorted.
1	M Cont Lost	Parameter 169 [Drive I/O Stauts] bit 1 [M-Cont Fdbk] indicated the M-contactor has remained open when it should have been closed.
3	AC Line Sync	AC line voltage has been missing for more than 2 seconds. Refer to parameter 2123 bit 3 [LineSyncLoss].
4	InstOvr Curr	Armature current feedback has exceeded 175% of the value in parameter 2184 [PMI Curr Lim].
5	Conduction TO	The PMI Current Minor Loop has been turned off (parameter 2100 [Drive Ctrl Word] bit 0 [CMLoop Run] equals zero) and discontinuous conduction has not been detected within 2 seconds.
6	Field Loss	A field loss has been detected: - Parameter 2132 [Fld Amps Fdbk] has been less than parameter 2187 [FldLos Trip Pt] for more than 5 times the electrical time constant of the field. This assumes parameter 152 [Applied LogicCmd] bit 30 [Field En] is on. - Parameter 2132 [Fld Amps Fdbk] has been less than parameter 2187 [FldLos Trip Pt] for more than 30mS after the field has been turned on. - - Parameter 2132 [Fld Amps Fdbk] has been greater than 150% of parameter 2185 [Hot Fld Cur] for more than 30mS. - Parameter 2132 [Fld Amps Fdbk] has been greater than parameter 2207 [Fld PMI Rating] for more than 30mS.
7	Tach Loss	CEMF is greater than 40% of the rated armature voltage value and the speed feedback signal is less than 5% of the motor base speed as entered as a configuration parameter.
8	TachWire Opn	A sine or cosine signal being used for speed or other application feedback is missing, due to one of the following causes: - a resolver wiring connection has broken - The value in parameter 2161 [Resolver Gain] is too low. The Drive Module always performs this test if resolver feedback is selected (parameter 222 [Motor Fdbk Sel] equals "0 - Resolver"), and when parameter 168 [Drive I/O Ctrl] bit 10 [Dis Brkn Wire] equals one.

Bit	Fault Name	Fault Description
9	ResolverCard	A fuse on the Resolver & Drive I/O module has blown.
10	Over Speed	The motor's speed has gone above the value in parameter 31 [Fwd Speed Lim] by more than the value in parameter 335 [Abs Overspd Lim], or gone below the value of parameter [Rev Speed Lim] by more than the value in parameter 335.
11	PwrTech Card	The watchdog timer on the D-C Power Technology module has expired. This fault disables the gate firing circuitry.
12	PMI Pwr Sply	The PMI power supply is not working correctly.
13	PMI Bus	There is a bus fault in the PMI rack. This is indicated when the Resolver and Drive I/O module and the DC Power Technology module do not respond to requests from the PMI Processor. This error indicates that there is a hardware problem in the rack.
15	PMI CommLoss	Communication between the PMI processor and the Drive Module has failed.

Parameter 2123 [MC Warnings]

This parameter indicates the occurrence of a motor-control warning event. These bits are set when a warning event is detected. They stay latched until bit 19 [Clear Fault] of parameter 152 [Applied Logic Cmd] or bit 19 [Clr Drv Wrn] of parameter 166 [Motor Ctrl Cmd] is set. If the warning event remains present, the identifying bit is set again. Refer to parameter 381 [PMI Warning Cnfg] to configure the Drive Module's response to these warnings.

Bit	Fault Name	Fault Description
0	BrdgNotFirng	Not all SCRs are carrying the same the load. A bit set in the parameter 2124 [Pwr DeviceStatus] indicates which SCR is not working properly.
1	Low AC Line	AC line voltage is less than 85% of its nominal value, which was entered as a configuration parameter. This can be caused by a low-line condition or a missing phase. The system will automatically adjust the phase angle to give the correct current amount and will continue to fire SCRs as long as zero crossings are detected. If zero crossings are no longer detected, a fault condition will result.
3	LineSyncLoss	The system is continuing to operate through a temporary loss of AC line voltage. Refer to bit 3 [AC Line Sync] of parameter 2122 [MC Fault].
4	Curr Ref Lim	The current reference has exceeded the value entered in parameter 2184 [PMI Curr Lim].

Bit	Fault Name	Fault Description
5	ID TestAbort	The drive has failed an armature identification test, field identification test or resolver balance calibration test.
6	Fld OvrCurr	Field current has exceeded 150% of the value in parameter 2185 [Hot Field Curr].
7	Arm Fdbk Rev	Armature feedback wiring is reversed - the polarity of the feedback is the opposite of expected.
8	CT Fdbk Rev	Current transformer feedback is reversed - the polarity of the feedback is the opposite of expected.
12	PMI Fan Loss	Airflow through the PMI rack is not being sensed. A solid-state airflow switch in the PMI power supply monitors airflow.
13	Rail IO Comm	A rail communication warning event has occurred. Parameter 2044 [Rail Port 0 Faul] and parameter 2050 [Rail Port 0 Faul] enumerate these faults.
14	PMI CommSync	The PMI Processor and the Drive Module are momentarily not synchronized.
15	PMI Comm	A fiber-optic communication error has been detected between the PMI Processor module and the Drive Module. Communication errors in two consecutive messages will cause a fault.

Parameter 2124 [Pwr Device Status]

The bits of this parameter indicate which SCR has shorted or not firing. If an SCR is shorted parameter 2122 [MC Faults] bit 0 [SCR Fault] will be set. If an SCR is not firing correctly parameter 2123 [MC Warnings] bit 0 [BrdgNotFirng] will be set.

For a regenerative drive, this parameter indicates the pair of SCRs that has faulted. For a non-regenerative drive, this parameter indicates the specific SCR that has faulted.

The bits of this parameters are set when a fault event is detected. They stay latched until bit 19 [Clear Fault] of parameter 152 [Applied Logic Cmd] or bit 19 [Clr Drv Wrn] of parameter 166 [Motor Ctrl Cmd] is set. If the fault event remains present, the identifying bit is set again.

Bit	Fault Name	Fault Description
0	SCR 1 Fault	SCR 1 Fault (Forward Bridge)
1	SCR 2 Fault	SCR 2 Fault (Forward Bridge)
3	SCR 3 Fault	SCR 3 Fault (Forward Bridge)
4	SCR 4 Fault	SCR 4 Fault (Forward Bridge)
5	SCR 5 Fault	SCR 5 Fault (Forward Bridge)
6	SCR 6 Fault	SCR 6 Fault (Forward Bridge)
7	SCR 11 Fault	SCR 11 Fault (Reverse Bridge)
8	SCR 12 Fault	SCR 12 Fault (Reverse Bridge)
9	SCR 13 Fault	SCR 13 Fault (Reverse Bridge)
10	SCR 14 Fault	SCR 14 Fault (Reverse Bridge)
11	SCR 15 Fault	SCR 15 Fault (Reverse Bridge)
12	SCR 16 Fault	SCR 16 Fault (Reverse Bridge)

Parameter 2125 [Interlock Code]

The PMI processor performs interlock tests in response to parameter 2100 [Drive Ctrl Word]. If any of the diagnostics fail the PMI processor sets the bit in parameter 2125 [Interlock Code] that corresponds to the first failed diagnostic. The bit stays latched until bit 19 [Clear Fault] of parameter 152 [Applied LogicCmd] or bit 19 [Clr Drv Wrn] of parameter 166 [Motor Ctrl Ccmd] is set. Refer to Reliance Electric publication S-3001-1, *Distributed Power System SD3000 Drive Diagnostics, Troubleshooting and Start-Up Guidelines*, for information about the interlock diagnostics.

Bit	Fault Name	Fault Description
0	Bad CML Req	More than one incompatible CML operating mode has been requested at a time in parameter 166 [Motor Ctrl Ccmd]. The following operating modes are mutually exclusive: • Armature Alpha Test • Armature Identification Test • CML Run This bit is also set if you have attempted to restart the drive without resetting the appropriate command bits from parameter 166. Note that the bits in register 166 are edge-sensitive.
1	A Par NotLod	Armature configuration parameters have not been downloaded into the PMI module from the Drive Module.
2	A Gns NotLod	Armature configuration parameters have not been downloaded into the PMI module from the Dive Module.
3	A Flt Rst Rq	The CML Faults Need to be Reset bit is set if previous armature faults (parameter 2122 [MC Faults]) have not been cleared.
4	RPI Missing	The run permissive input on the Resolver & Drive I/O module is not on.
5	Fld Not Rdy	The single-phase field is not on. Note that the CML can-not be executed if the field is not on.
6	Fld NotAlwd	The single-phase field has been requested when the armature identification test or the armature alpha test is running.
7	M-Con NotCls	The M-Contactor did not close at the expected time.
8	Bad FML Req	More than one incompatible Field operating mode is requested at a time in parameter 166 [Motor Ctrl Ccmd]. The following operating modes are mutually exclusive: • Field Alpha Test • Field Identification Test • Field Run This bit is also set if you have attempted to restart the drive without resetting the appropriate command bits from parameter 166. Note that the bits in register 166 are edge-sensitive.

Bit	Fault Name	Fault Description
9	F Par NotLod	Field configuration parameters have not been downloaded into the PMI module from the Dive Module.
10	F Gns NotLod	Field configuration parameters have not been downloaded into the PMI module from the Dive Module.
11	F Flt Rst Rq	Previous field faults (parameter 2122 [MC Faults]), e.g., field loss and line synchronization loss faults, have not been cleared.
14	F FB or CFG	A field current feedback fault or configuration error has occurred: • The drive has sensed field current feedback when the field is off. • You have attempted to turn on the field without setting parameter 2200 [PMI Drive Config] bit 12 [Fld Reg Used].

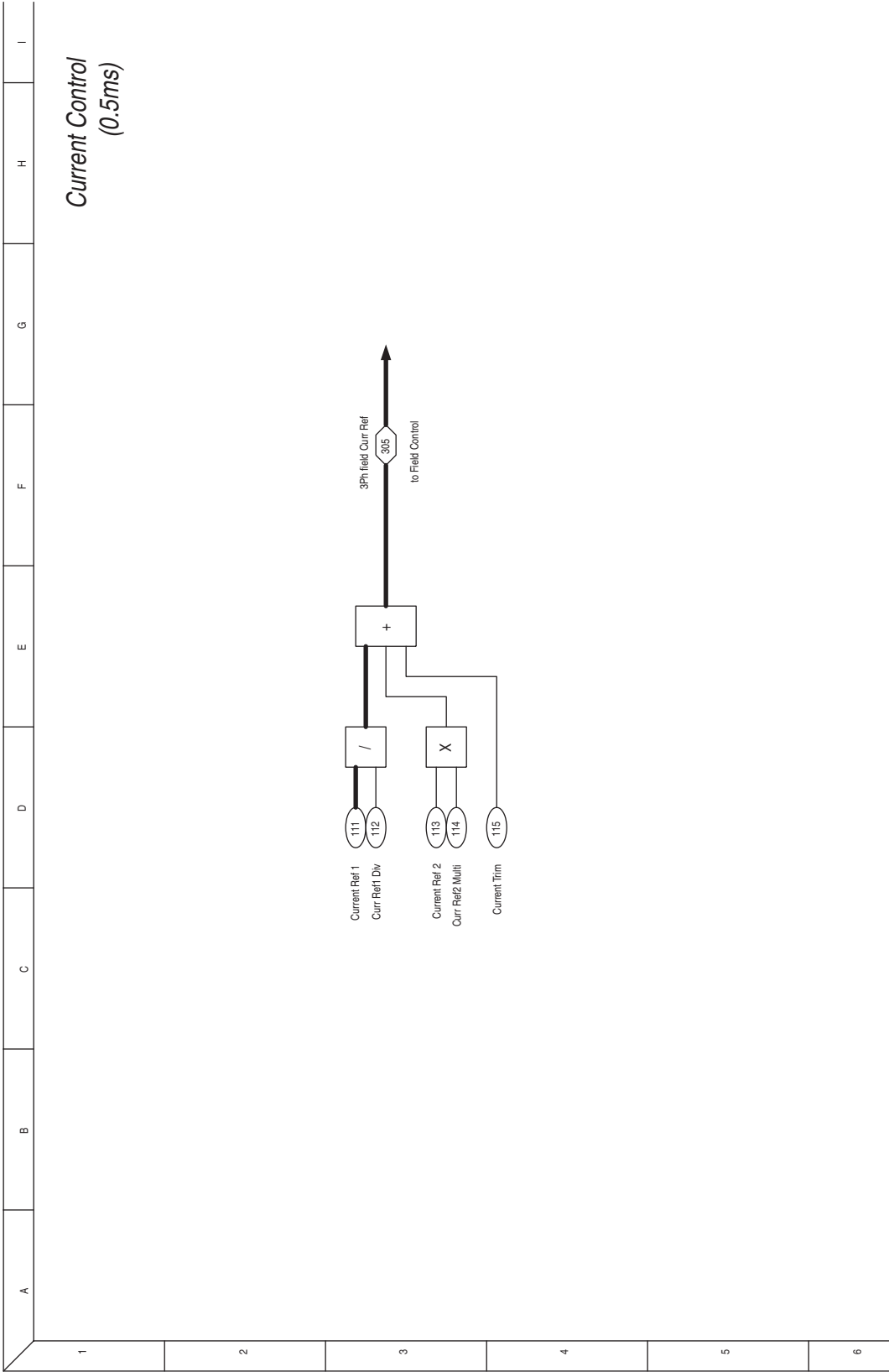
Notes:

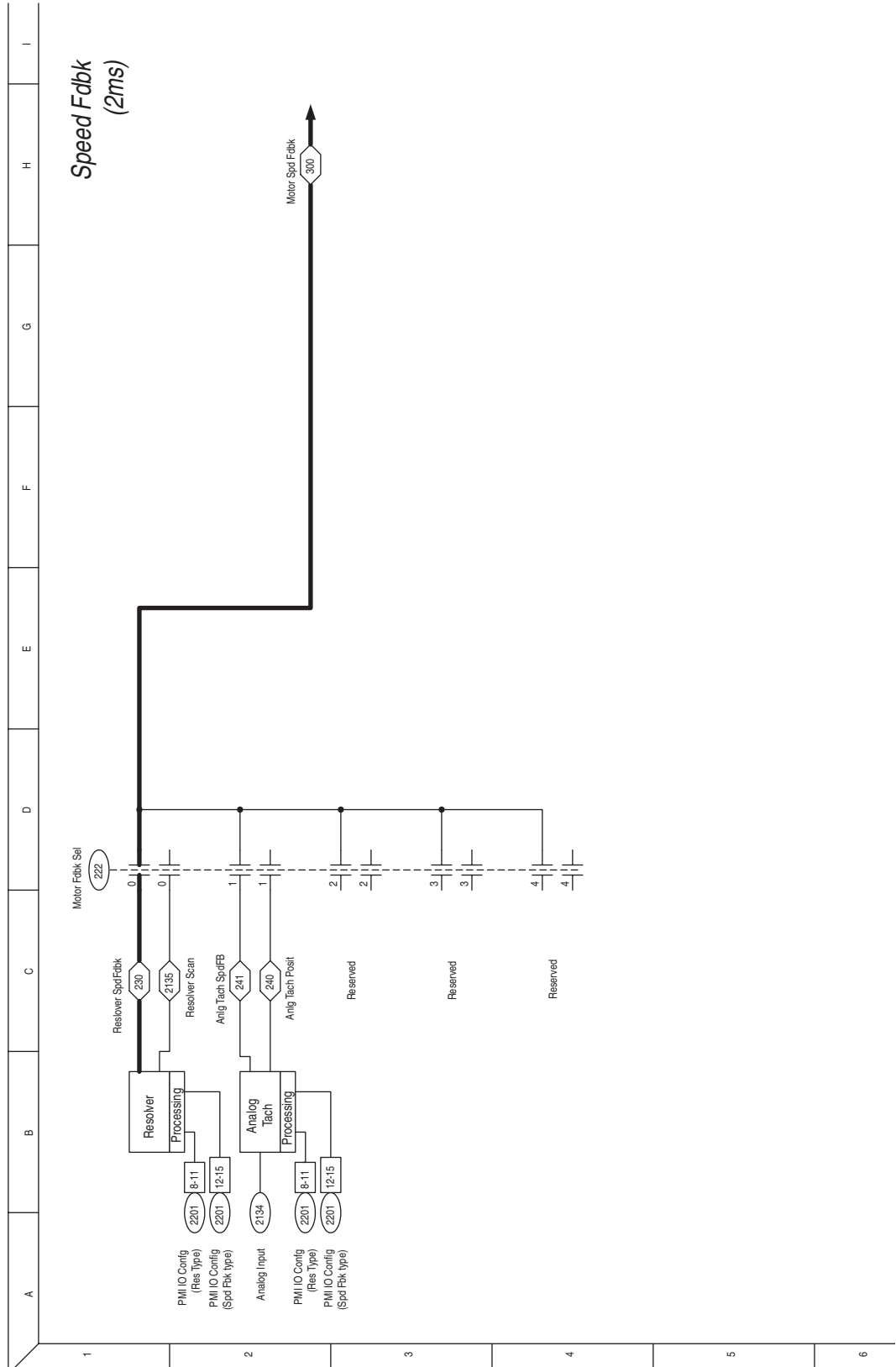
1756-DMF30 Specific Information

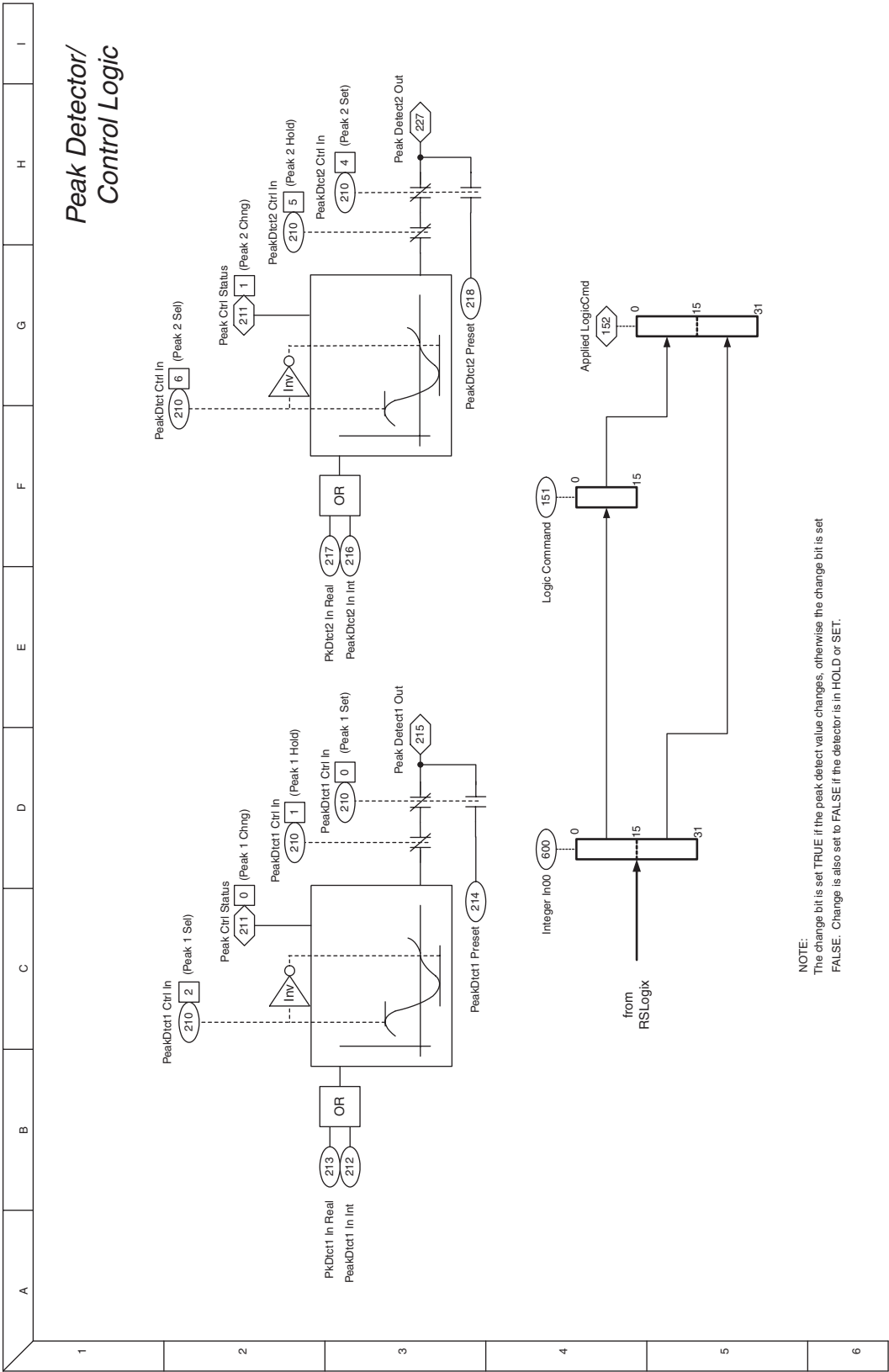
This appendix contains information that applies specifically to the 1756-DMF30.

For information about:	See page:
Control Block Diagrams	C-2
Parameters	C-5
Interpreting Drive Module Faults in DriveExecutive	C-100

Control Block Diagrams







Parameters

To configure a Drive module to operate in a specific way, drive parameters may have to be set. Three types of parameters exist:

- **ENUM Parameters**

These parameters allow a selection from 2 or more items

- **Bit Parameters**

These parameters have individual bits associated with features or conditions. If the bit is 0, the feature is off or the condition is false. If the bit is 1, the feature is on or the condition is true.

- **Numeric Parameters**

These parameters have a single numeric value (i.e. 0.1 Volts).

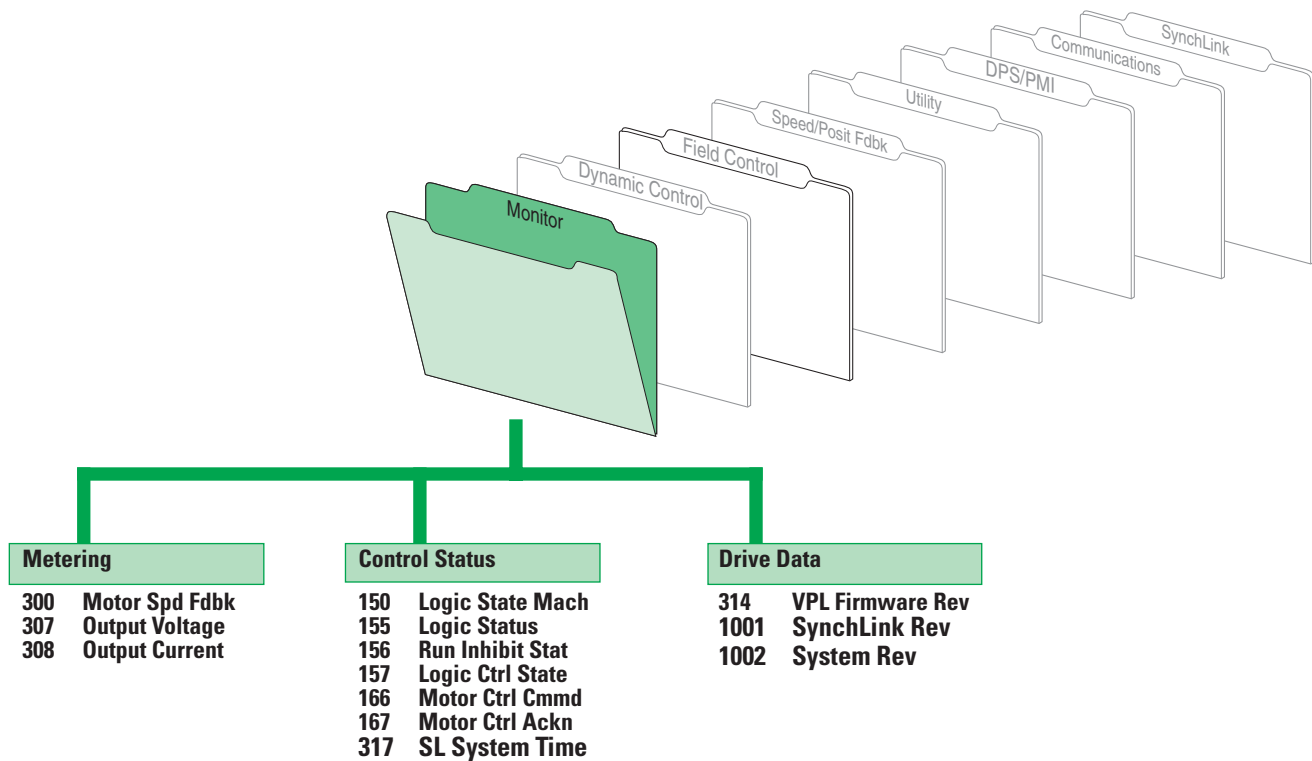
The example on the following page shows how each parameter type is presented in this manual.

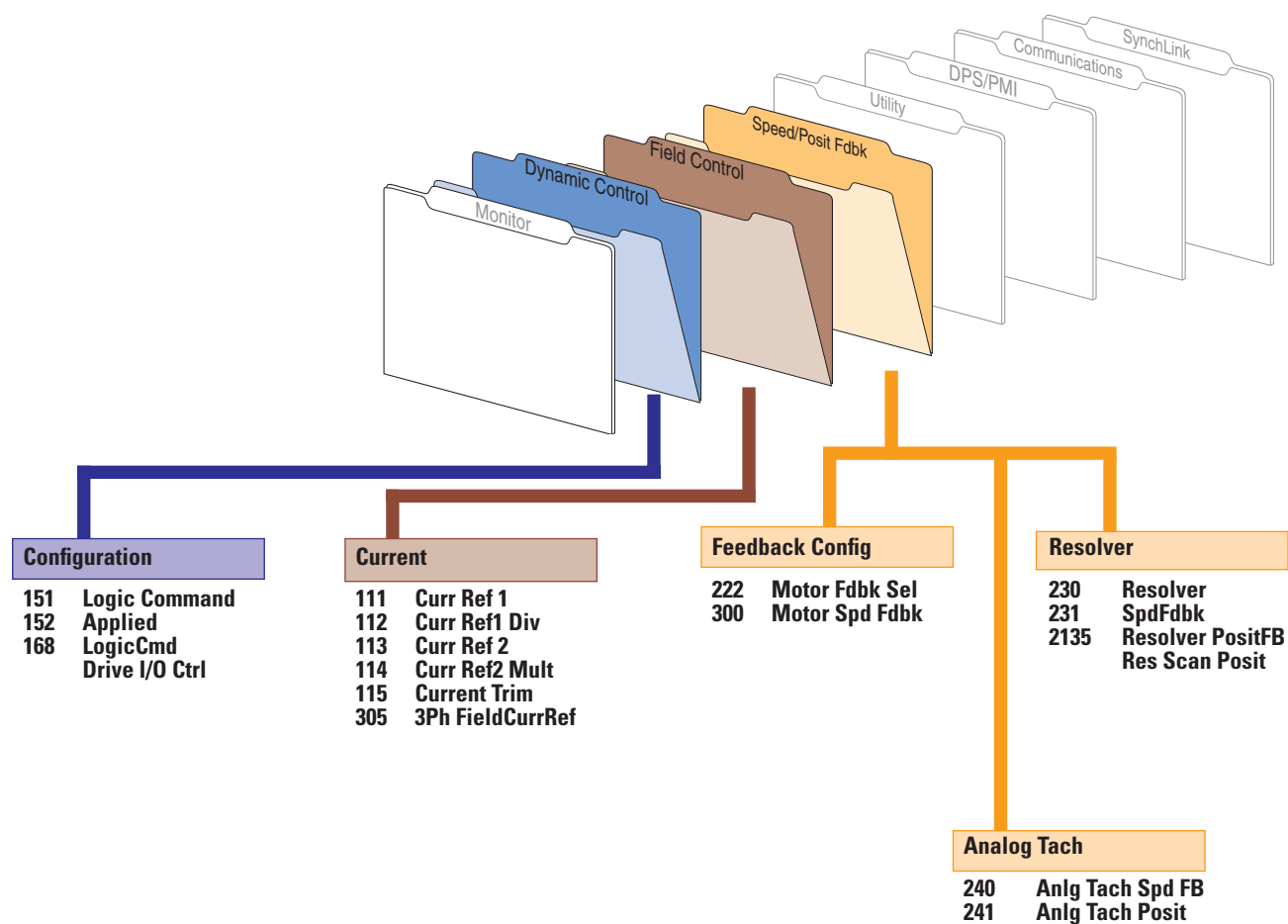
①	②	③		
No.	Name Description	Values		
16	Speed Ref Sel Enter or write a value to select the source of the speed reference to the drive.	Default:	Val 1	Spd Ref 1
		Options:	Val 0 Val 1 Val 2	Zero Speed Spd Ref 1 Spd Ref 2
		File: Group:	Speed Control Reference	
80	Speed Reg Ctrl Enter or write a value to configure the speed regulator integrator.	Default:	0000 0000	
		Options:	Bit 0 Bit 1 Bit 2 Bit 3 Bit 4	Reserved Preset Sel Integ Hold Integ Reset
		File: Group:	Speed Control Regulator	
11	Spd Ref1 Divide Speed Ref 1 is divided by this number. Use this parameter to scale the value of Speed Ref 1.	Default: Min: Max: Type: File: Group:	1 -2200000000 2200000000 Non-Linkable Read-Write Floating Point Speed Control Reference	

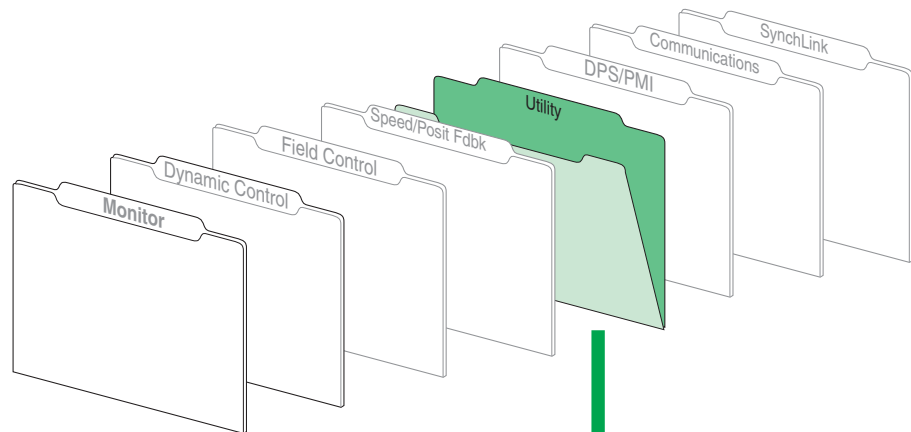
No.	Description		
①	No. - Parameter Number.  = Stop drive before changing this parameter.		
②	Name - Parameter name as is appears in DriveExecutive software. Description - Brief description of parameter function.		
③	Values - Defines the various operating characteristics of the parameter. Three types exist		
	ENUM	Default: Options: File: Group:	Lists the value assigned at the factory. Displays the selections available. Lists the major parameter file category. Lists the parameter group within the file.
	Bit	Default: Options: File: Group:	Lists the bit pattern assigned at the factory. Displays the selections available. Lists the major parameter file category. Lists the parameter group within the file.
	Numeric	Default: Min: Max: Type: File: Group	Lists the value assigned at the factory. Displays lowest possible setting. Displays highest possible setting. Indicates if parameter is linkable, read-write, read-only, and data type (i.e. integer, floating point, boolean). Lists the major parameter file category. Lists the parameter group within the file.

How Parameters Are Organized

DriveExecutive programming software displays parameters in “Linear List” or “File Group Parameter” format. Viewing the parameters in “File Group Parameter” format simplifies programming by grouping parameters that are used for similar functions. There are eight files. Each file is divided into multiple groups of parameters.





**Fault/Alm Config**

369 SL CommLoss Cnfg
 370 SL CommLoss Data
 381 PMI Warning Cnfg
 382 Lgx OutOfRunCnfg
 383 Lgx Timeout Cnfg
 384 Lgx Closed Cnfg
 385 Lgx LinkChngCnfg
 386 Lgx CommLossData
 387 SL MultErr Cnfg

Diagnostics

167 Motor Ctrl Ackn
 169 Drive I/O Status
 316 SynchLink Status
 320 Exception Event1
 321 Exception Event2
 323 Fault Status 1
 324 Fault Status 2
 326 Alarm Status 1
 327 Alarm Status 2
 1229 SL Error Status
 1230 SL CRC Err
 1231 Accum
 1232 SL CRC Error
 1233 SL BOF Err
 1234 Accum
 1235 SL BOF Error
 2122 SL CRC Err Limit
 2123 SL BOF Err Limit
 2124 MC Faults
 2125 MC Warnings
 Pwr
 DeviceStatus
 Interlock Code

Test Points

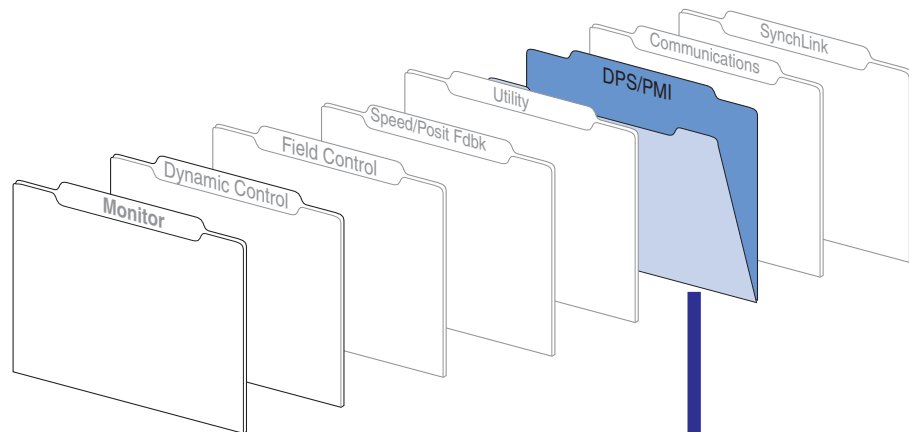
329 Fault TP Sel
 330 Fault TP Data
 1226 SL Comm TP Sel
 1227 SL Comm TP Data

User Selections

396 User Data 1
 397 User Data 2
 398 User Data 3
 399 User Data 4

Peak Detection

210 PeakDtct Ctrl In
 211 Peak Ctrl Status
 212 PeakDtct1 In Int
 213 PkDtct1 In Real
 214 PeakDtct1 Preset
 215 PeakDetect1 Out
 216 PeakDtct2 In Int
 217 PkDtct2 In Real
 218 PeakDtct2 Preset
 227 PeakDetect2 Out

**Comm Status**

2000	DM Comm PortStat
2001	DM Good Msg Cnt
2002	DM CRC Error Cnt
2003	DM Frmt ErrorCnt
2004	PMIComm PortStat
2005	PMI Good Msg Cnt
2006	PMI CRC ErrorCnt
2007	PMIFrmt ErrorCnt
2008	DM Link Status
2009	DM Tx Msg Count
2010	DM Sync WarnngCnt
2011	DM Bad Msg Cnt
2012	DM Sync Count
2013	PMI Gain Count
2014	DM Tx Time
2015	DM Tx Time Avail

Commands

2100	Drive Ctrl Word
2102	3Ph Test Angle
2103	3Ph Curr Ref
2104	Field Test Angle
2105	Field Curr Ref
2106	PMI D/A Output

Inputs & Outputs

2040	Rail Port 0 Ch 0
2041	Rail Port 0 Ch 1
2042	Rail Port 0 Ch 2
2043	Rail Port 0 Ch 3
2044	Rail Port 0 Flt
2045	RailPrt 0FltCnt
2046	Rail Port 1 Ch 0
2047	Rail Port 1 Ch 1
2048	Rail Port 1 Ch 2
2049	Rail Port 1 Ch 3
2050	Rail Port 1 Flt
2051	RailPrt 1FltCnt
2080	Meter Port1 Sel
2081	MeterP1 +10v Val
2082	MeterP1 -10v Val
2083	Meter Port2 Sel
2084	MeterP2 +10v Val
2085	MeterP2 -10v Val
2086	Meter Port3 Sel
2087	MeterP3 +10v Val
2088	MeterP3 -10v Val
2089	Meter Port4 Sel
2090	MeterP4 +10v Val
2091	MeterP4 -10v Val

Feedback

2122	MC Faults
2123	MC Warnings
2124	Pwr DeviceStatus
2125	Interlock Code
2126	AC Line Volt FB
2127	3Ph Feedback
2131	FML Feedback
2132	Field Amps Fdbk
2133	Field Volt Fdbk
2134	User Anlg Input
2135	Res Scan Posit
2136	Res Strobe Posit
2149	NV Faults

Regulator Config

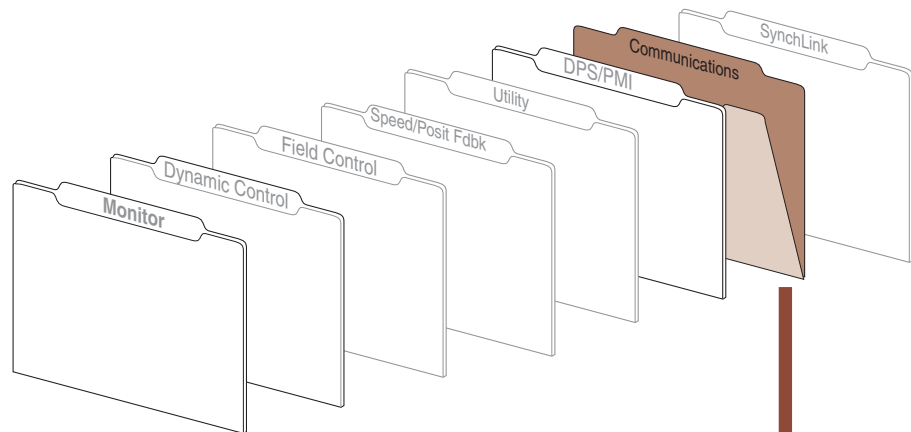
2150	CML Crossover Frq
2151	3Ph Resistance
2152	3Ph TimeConstant
2154	FML Crossover Frq
2155	Field Resistance
2156	Fld TimeConstant
2157	SCR Diag Gain
2158	SCR Decay Rate
2159	SCR Deadband
2160	SCR Trip Point
2161	Resolver Gain
2162	Resolver Balance

Motor Data

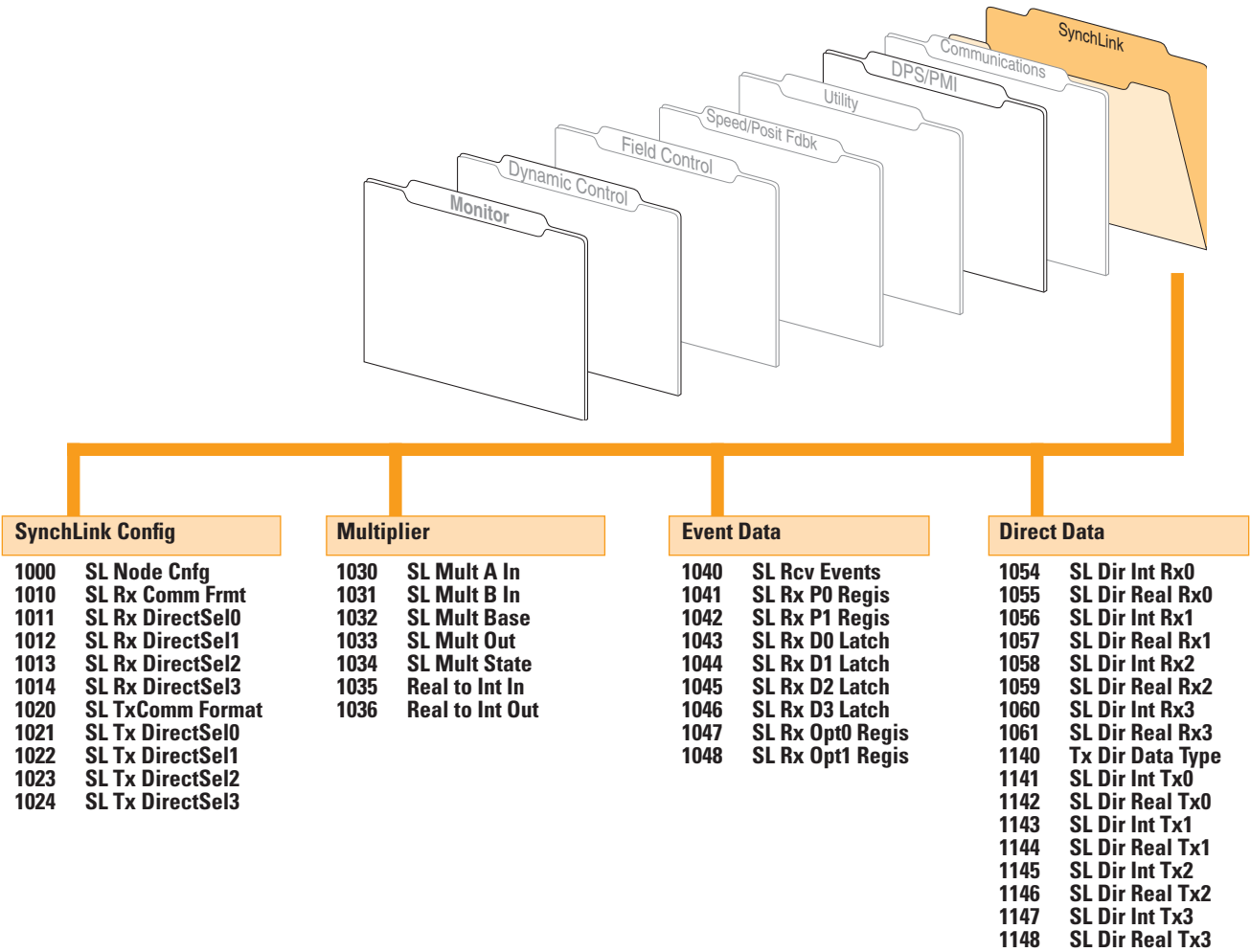
2180	Motor NP RPM
2181	Anlg Tach RPM
2182	3Ph Hot Fld Curr
2184	PMI Curr Lim
2185	Hot Field Curr
2186	Min Field Curr
2187	Field Loss Amps
2188	Field Off Delay

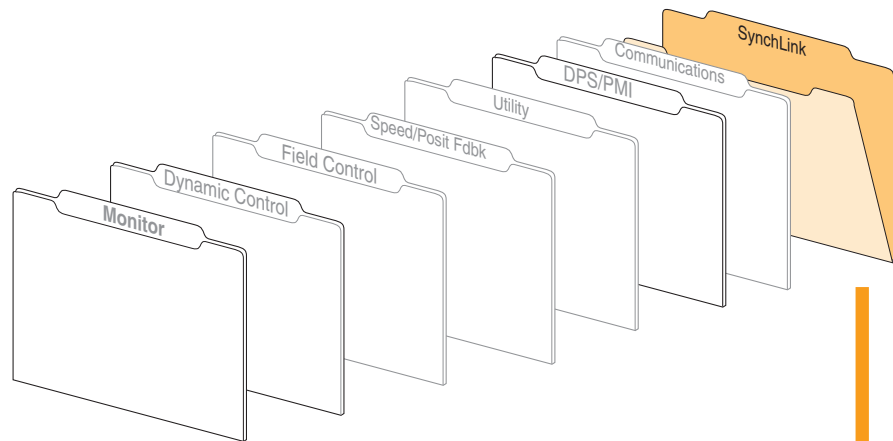
Drive Config

2200	PMI Drive Config
2201	PMI I/O Config
2202	AC
2203	LineVolt(RMS)
2204	Out Volt Rating
2205	Out Curr Rating
2206	Curr Xfmr Ratio
2207	Field AC In Volt
2208	Fld OutCurrRatng
2209	Anlg Tach Volts
2213	Ph Xfmr In Volt
2214	Pwr Config Code
	PMI OS Version



Commands		Logix Inputs		Logix Outputs	
664	Lgx Comm Format	600	Integer In00	632	Integer Out00
		601	Real In00	633	Real Out00
		602	Integer In01	634	Integer Out01
		603	Real In01	635	Real Out01
		604	Integer In02	636	Integer Out02
		605	Real In02	637	Real Out02
		606	Integer In03	638	Integer Out03
		607	Real In03	639	Real Out03
		608	Integer In04	640	Integer Out04
		609	Real In04	641	Real Out04
		610	Integer In05	642	Integer Out05
		611	Real In05	643	Real Out05
		612	Integer In06	644	Integer Out06
		613	Real In06	645	Real Out06
		614	Integer In07	646	Integer Out07
		615	Real In07	647	Real Out07
		616	Integer In08	648	Integer Out08
		617	Real In08	649	Real Out08
		618	Integer In09	650	Integer Out09
		619	Real In09	651	Real Out09
		620	Integer In10	652	Integer Out10
		621	Real In10	653	Real Out10
		622	Integer In11	654	Integer Out11
		623	Real In11	655	Real Out11
		624	Integer In12	656	Integer Out12
		625	Real In12	657	Real Out12
		626	Integer In13	658	Integer Out13
		627	Real In13	659	Real Out13
		628	Integer In14	660	Integer Out14
		629	Real In14	661	Real Out14
		630	Integer In15	662	Integer Out15
		631	Real In15	663	Real Out15



**Buffered Data In**

1073	SL Buf Int Rx00	1117	SL Buf Int Rx22
1074	SL Buf Real Rx00	1118	SL Buf Real Rx22
1075	SL Buf Int Rx01	1119	SL Buf Int Rx23
1076	SL Buf Real Rx01	1120	SL Buf Real Rx23
1077	SL Buf Int Rx02	1121	SL Buf Int Rx24
1078	SL Buf Real Rx02	1122	SL Buf Real Rx24
1079	SL Buf Int Rx03	1123	SL Buf Int Rx25
1080	SL Buf Real Rx03	1124	SL Buf Real Rx25
1081	SL Buf Int Rx04	1125	SL Buf Int Rx26
1082	SL Buf Real Rx04	1126	SL Buf Real Rx26
1083	SL Buf Int Rx05	1127	SL Buf Int Rx27
1084	SL Buf Real Rx05	1128	SL Buf Real Rx27
1085	SL Buf Int Rx06	1129	SL Buf Int Rx28
1086	SL Buf Real Rx06	1130	SL Buf Real Rx28
1087	SL Buf Int Rx07	1131	SL Buf Int Rx29
1088	SL Buf Real Rx07		
1089	SL Buf Int Rx08		
1090	SL Buf Real Rx08		
1091	SL Buf Int Rx09		
1092	SL Buf Real Rx09		
1093	SL Buf Int Rx10		
1094	SL Buf Real Rx10		
1095	SL Buf Int Rx11		
1096	SL Buf Real Rx11		
1097	SL Buf Int Rx12		
1098	SL Buf Real Rx12		
1099	SL Buf Int Rx13		
1100	SL Buf Real Rx13		
1101	SL Buf Int Rx14		
1102	SL Buf Real Rx14		
1103	SL Buf Int Rx15		
1104	SL Buf Real Rx15		
1105	SL Buf Int Rx16		
1106	SL Buf Real Rx16		
1107	SL Buf Int Rx17		
1108	SL Buf Real Rx17		
1109	SL Buf Int Rx18		
1110	SL Buf Real Rx18		
1111	SL Buf Int Rx19		
1112	SL Buf Real Rx19		
1113	SL Buf Int Rx20		
1114	SL Buf Real Rx20		
1115	SL Buf Int Rx21		
1116	SL Buf Real Rx21		

Buffered DataOut

1160	Tx Buf Data Type	1204	SL Buf Real Tx21
1161	SL Buf Int Tx00	1205	SL Buf Int Tx22
1162	SL Buf Real Tx00	1206	SL Buf Real Tx22
1163	SL Buf Int Tx01	1207	SL Buf Int Tx23
1164	SL Buf Real Tx01	1208	SL Buf Real Tx23
1165	SL Buf Int Tx02	1209	SL Buf Int Tx24
1166	SL Buf Real Tx02	1210	SL Buf Real Tx24
1167	SL Buf Int Tx03	1211	SL Buf Int Tx25
1168	SL Buf Real Tx03	1212	SL Buf Real Tx25
1169	SL Buf Int Tx04	1213	SL Buf Int Tx26
1170	SL Buf Real Tx04	1214	SL Buf Real Tx26
1171	SL Buf Int Tx05	1215	SL Buf Int Tx27
1172	SL Buf Real Tx05	1216	SL Buf Real Tx27
1173	SL Buf Int Tx06	1217	SL Buf Int Tx28
1174	SL Buf Real Tx06	1218	SL Buf Real Tx28
1175	SL Buf Int Tx07	1219	SL Buf Int Tx29
1176	SL Buf Real Tx07	1220	SL Buf Real Tx29
1177	SL Buf Int Tx08		
1178	SL Buf Real Tx08		
1179	SL Buf Int Tx09		
1180	SL Buf Real Tx09		
1181	SL Buf Int Tx10		
1182	SL Buf Real Tx10		
1183	SL Buf Int Tx11		
1184	SL Buf Real Tx11		
1185	SL Buf Int Tx12		
1186	SL Buf Real Tx12		
1187	SL Buf Int Tx13		
1188	SL Buf Real Tx13		
1189	SL Buf Int Tx14		
1190	SL Buf Real Tx14		
1191	SL Buf Int Tx15		
1192	SL Buf Real Tx15		
1193	SL Buf Int Tx16		
1194	SL Buf Real Tx16		
1195	SL Buf Int Tx17		
1196	SL Buf Real Tx17		
1197	SL Buf Int Tx18		
1198	SL Buf Real Tx18		
1199	SL Buf Int Tx19		
1200	SL Buf Real Tx19		
1201	SL Buf Int Tx20		
1202	SL Buf Real Tx20		
1203	SL Buf Int Tx21		

Parameter Data In Linear List Format

No.	Name Description	Values		
111	Curr Ref 1 Supplies an external current reference to the drive. This parameter is divided by the value in parameter 112 [Curr Ref1 Div]. A value of 1.0 represents rated current of the drive.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point Field Control Current	
112	 Curr Ref1 Div The divisor for parameter 111 [Curr Ref 1].	Default: Min: Max: Type: File: Group:	1 -2200000000 2200000000 Non-Linkable, Read-Write, Floating Point Field Control Current	
113	Curr Ref 2 Supplies an external current reference to the drive. This parameter is multiplied by the value in [Curr Ref2 Mult]. A value of 1.0 represents rated current of the drive.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point Field Control Current	
114	Curr Ref2 Mult The multiplier for parameter 113 [Curr Ref 2].	Default: Min: Max: Type: File: Group:	1 -2200000000 2200000000 Linkable, Read-Write, Floating Point Field Control Current	
115	Current Trim The amount added to the Current Reference before the Speed - Torque Mode Selector. A value of 1.0 represents rated current of the drive.	Units: Default: Min: Max: Type: File: Group:	P.U. 0 -8 8 Linkable, Read-Write, Floating Point Field Control Current	
150	Logic State Mach Indicates the logical state of the drive. Value 0 - Stopped indicates zero speed has been detected and the speed and torque regulators are disabled.	Default:	0	Zero
		Options:	Val 0 Val 1 Val 2 Val 3 Val 4 Val 5 Val 6	Stopped Starting Running Stopping Inertia Test MC Diag Reserved
		File: Group:	Monitor Control Status	

No.	Name Description	Values		
151	Logic Command The controller-drive interface (as defined by the Controller Communication Format), set bits to enable and disable various functions and algorithms. Bits that are changed here are reflected in parameter 152 [Applied LogicCmd]. Note: Bits 4 through 9 in Logic Command are NOT recalled from Control EEPROM. They will be cleared upon drive powerup or following an EEPROM recall operation. Refer to Peak Detector/Control Logic on page C-4, the block diagram shows the connection to the LogicCommand word, of the Controller Communication Format, via parameter 600 [Integer In00].	Default:	0000 0000 0000 0000	
		Options	Bit 0 Bit 1 Bit 2 Bit 3 Bit 4 Bit 5 Bit 6 Bit 7 Bit 8 Bit 9 Bit 10 Bit 11 Bit 12 Bit 13 Bit 14 Bit 15	Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved
		File: Group:	Dynamic Control Configuration	

No.	Name Description	Values			
152	Applied LogicCmd Displays Logic Command that is applied to the Regulators and Control Algorithms within the drive. Logic Commands come from the 32-bit Logic Command found in a connection with the Logix Controller. Refer to Peak Detector/Control Logic on page C-4, the block diagram shows the connection to the LogicCommand word, of the Controller Communication Format, via parameter 600 [Integer In00].	Default:	0000 0000 0000 0000 0000 0000 0000 0000		
		Options	Bit 0	Reserved	
			Bit 1	Reserved	
			Bit 2	Reserved	
			Bit 3	Reserved	
			Bit 4	Reserved	
			Bit 5	Reserved	
			Bit 6	Reserved	
			Bit 7	Reserved	
			Bit 8	Reserved	
			Bit 9	Reserved	
			Bit 10	Reserved	
			Bit 11	Reserved	
			Bit 12	Reserved	
			Bit 13	Reserved	
			Bit 14	Reserved	
			Bit 15	Reserved	
			Bit 16	Reserved	
			Bit 17	Start	
			Bit 18	Reserved	
			Bit 19	Clear Fault	
			Bit 20	Reserved	
			Bit 21	Reserved	
			Bit 22	Reserved	
			Bit 23	Reserved	
			Bit 24	Reserved	
			Bit 25	Reserved	
			Bit 26	Reserved	
			Bit 27	Reserved	
			Bit 28	Reserved	
			Bit 29	Reserved	
			Bit 30	Field En	
			Bit 31	Reserved	
		File: Group:	Dynamic Control Configuration		

No.	Name Description	Values			
155	Logic Status Displays the status - condition of the drive. If there is a Controller to Drive Module error or inhibit, the data in the LogicStatus word of the Controller Communication Format will be set to 0x0000ffff. Bit 15 [Reserved] was used in AutoGen to detect loss of connection. This parameter is linked to the LogicStatus word of the Controller Communication Format via parameter 632 [Integer Out00].	Default:	0000 0000 0000 0000 0000 0000 0000 0000		
		Options	Bit 0	Enabled	
			Bit 1	Reserved	
			Bit 2	Reserved	
Bit 3	Reserved				
Bit 4	Reserved				
Bit 5	Reserved				
Bit 6	Reserved				
Bit 7	Faulted				
Bit 8	Alarm				
Bit 9	Reserved				
Bit 10	Run Ready				
Bit 11	Reserved				
Bit 12	Reserved				
Bit 13	Reserved				
Bit 14	Reserved				
Bit 15	Reserved				
Bit 16	Reserved				
Bit 17	Reserved				
Bit 18	MC En Ack				
Bit 19	Reserved				
Bit 20	Reserved				
Bit 21	Reserved				
Bit 22	Reserved				
Bit 23	Reserved				
Bit 24	Reserved				
Bit 25	Reserved				
Bit 26	Command Run				
Bit 27	Reserved				
Bit 28	Reserved				
Bit 29	Reserved				
Bit 30	FieldCurr On				
Bit 31	Reserved				
	File: Group:	Monitor Control Status			

No.	Name Description	Values		
156	Run Inhibit Stat Indicates which condition is preventing the drive from starting or running.	Default:	0000 0000 0000 0000 0000 0000 0000 0000	
		Options	Bit 0	FAULTED
			Bit 1	Reserved
			Bit 2	Reserved
			Bit 3	Reserved
			Bit 4	Reserved
			Bit 5	Reserved
			Bit 6	Reserved
			Bit 7	Reserved
			Bit 8	Reserved
			Bit 9	Reserved
			Bit 10	Reserved
			Bit 11	Reserved
			Bit 12	Reserved
			Bit 13	Reserved
			Bit 14	Reserved
			Bit 15	Reserved
			Bit 16	Start
			Bit 17	Reserved
			Bit 18	Reserved
			Bit 19	Reserved
			Bit 20	Reserved
			Bit 21	Reserved
			Bit 22	Reserved
			Bit 23	Reserved
			Bit 24	Reserved
			Bit 25	Reserved
			Bit 26	Reserved
			Bit 27	Reserved
			Bit 28	No PMI Sync
			Bit 29	No Run Perm
			Bit 30	PMI Drv Flt
			Bit 31	PMIDrvIntrlk
		File: Group:	Monitor Control Status	

No.	Name Description	Values		
157	Logic Ctrl State Indicates which logic control functions are enabled.	Default:	0000 0000 0000 0000 0000 0000 0000 0000	
		Options	Bit 0	Reserved
			Bit 1	Reserved
			Bit 2	Reserved
			Bit 3	Reserved
			Bit 4	Reserved
			Bit 5	Reserved
			Bit 6	Reserved
			Bit 7	Reserved
			Bit 8	Reserved
			Bit 9	Reserved
			Bit 10	Reserved
			Bit 11	Reserved
			Bit 12	Reserved
			Bit 13	Reserved
			Bit 14	Reserved
			Bit 15	Reserved
			Bit 16	Reserved
			Bit 17	Reserved
			Bit 18	Reserved
			Bit 19	Reserved
			Bit 20	Reserved
			Bit 21	Reserved
			Bit 22	Reserved
			Bit 23	Reserved
			Bit 24	Reserved
			Bit 25	Reserved
			Bit 26	Reserved
			Bit 27	Reserved
			Bit 28	Lgx Run Mode
			Bit 29	Lgx I/O Cnx
			Bit 30	Reserved
			Bit 31	Reserved
		File: Group	Monitor Control Status	

No.	Name Description	Values			
166	Motor Ctrl Cmmnd Displays the command bits to the Motor Control Processor from the Velocity Processor	Default:	0000 0000 0000 0000 0000 0000 0000 0000		
		Options	Bit 0	Reserved	
			Bit 1	Reserved	
			Bit 2	Reserved	
			Bit 3	Reserved	
			Bit 4	Reserved	
			Bit 5	Reserved	
			Bit 6	Reserved	
			Bit 7	Reserved	
			Bit 8	Reserved	
			Bit 9	Reserved	
			Bit 10	Reserved	
			Bit 11	Reserved	
			Bit 12	Reserved	
			Bit 13	Reserved	
			Bit 14	Reserved	
			Bit 15	Reserved	
			Bit 16	Reserved	
			Bit 17	Reserved	
			Bit 18	Reserved	
			Bit 19	Clr Drv Wrn	
			Bit 20	Dsbl BrstFrg	
			Bit 21	Dsbl Fld Wk	
			Bit 22	Dsbl ShrtSCR	
			Bit 23	Dsbl Opn SCR	
			Bit 24	3Ph Id Tst	
			Bit 25	Fld Id Tst	
			Bit 26	3Ph Alph Tst	
			Bit 27	Fld Alph Tst	
			Bit 28	3PhRAIph Tst	
			Bit 29	FldRAIph Tst	
			Bit 30	Reserved	
			Bit 31	Reserved	
File: Group:	Monitor Control Status				

No.	Name Description	Values		
167	Motor Ctrl Ackn Displays the Motor Control Processor's acknowledgment to the Velocity Processor for the Motor Control Command bits.	Default:	0000 000 0000 0000	
		Options	Bit 0 Bit 1 Bit 2 Bit 3 Bit 4 Bit 5 Bit 6 Bit 7 Bit 8 Bit 9 Bit 10 Bit 11 Bit 12 Bit 13 Bit 14 Bit 15	3Ph Enable 3Ph ID Done 3Ph AlphaMin 3Ph AlphaMax Field Enable Fld ID Done Fld AlphaLim Reserved Fault Detect Warnng Detect AC Phase ABC Phase Ready Reserved Rail I/O OK PMI Syncd PMI OSLoaded
		File: Group:	Monitor,Utility Control Status, Diagnostics	
168	Drive I/O Ctrl Set bits to control PMI functions.	Default:	0000 0000 0000 0000	
		Options	Bit 0 Bit 1 Bit 2 Bit 3 Bit 4 Bit 5 Bit 6 Bit 7 Bit 8 Bit 9 Bit 10 Bit 11 Bit 12 Bit 13 Bit 14 Bit 15	Reserved M-Cont Out Ext Flt LED Reserved Aux Output Reserved Enbl Res Bal Reserved Ext Strobe Ext StrobeFE Dis BrknWire Reserved Reserved Reserved Reserved DM Fiber Tst
		File: Group:	Dynamic Control Configuration	

No.	Name Description	Values		
169	Drive I/O Status Indicates status of PMI functions.	Default:	0000 0000 0000 0000	
		Options	Bit 0 Bit 1 Bit 2 Bit 3 Bit 4 Bit 5 Bit 6 Bit 7 Bit 8 Bit 9 Bit 10 Bit 11 Bit 12 Bit 13 Bit 14 Bit 15	Run Perm M-Cont Fdbk Aux In 2 Aux In 3 Aux In 4 Aux In 5 Res Gain OK Res Bal OK StrobeDetect Strobe Level Reserved Reserved Reserved Reserved Reserved Reserved
		File: Group:	Utility Diagnostics	
210	PeakDtct Ctrl In Sets configuration of the two peak/level detectors. - Set mode is a level detector which causes the output to match the preset when the input exceeds the preset. - Hold mode is a level detector which causes the output to match the input, the moment it detects the input exceeding the preset. - Regular peak detection (when set and hold are off) causes the output to match the input at the moment a peak is detected. - Sel determines if the peak/level detector is positive or negative. If the bit is set the detector detects positive peaks or levels above the preset. If the bit is not set the detector detects negative "valleys" or levels below the preset.	Default:	0000 0000 0000 0000	
		Options	Bit 0 Bit 1 Bit 2 Bit 3 Bit 4 Bit 5 Bit 6 Bit 7	Peak 1 Set Peak 1 Hold Peak 1 Sel Reserved Peak 2 Set Peak 2 Hold Peak 2 Sel Reserved
		File: Group:	Utility Peak Detection	
211	Peak Ctrl Status Status of peak/level detectors. A peak detector sets its bit when it detects a peak or when its input exceeds its preset - depending on mode.	Default:	0000 0000 0000 0000	
		Options	Bit 0 Bit 1 Bit 2 Bit 3 Bit 4 Bit 5 Bit 6 Bit 7	Peak 1 Chng Peak 2 Chng Reserved Reserved Reserved Reserved Reserved Reserved
		File: Group:	Utility Peak Detection	
212	PeakDtct1 In Int Integer input to the first peak/level detector.	Default:	0	
		Min:	-2147483648	
		Max:	2147483648	
		Type:	Linkable, Read-Write, 32-Bit Integer	
		File: Group:	Utility Peak Detection	

No.	Name Description	Values		
213	PkDtct1 In Real Floating point input to the first peak/level detector	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point Utility Peak Detection	
214	PeakDtct1 Preset With the first detector (in set or hold modes) compares this value to its input for level detection. When the detector trips (in set mode) it transfers the value of this parameter to its output.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point Utility Peak Detection	
215	PeakDetect1 Out Output from the first peak/level detector.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read-Only, Floating Point Utility Peak Detection	
216	PeakDtct2 In Int Integer input to second peak/level detector.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-Bit Integer Utility Peak Detection	
217	PkDtct2 In Real Floating point input to second peak/level detector	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point Utility Peak Detection	
218	PeakDtct2 Preset With the second detector (in set or hold modes) compares this value to its input for level detection. When the detector trips (in set mode) it transfers the value of this parameter to its output.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point Utility Peak Detection	
222	Motor Fdbk Sel Enter or write a value to select the primary motor speed feedback device.	Default:	Val 0	Resolver
		Options:	Val 0 Val 1 Val 2 Val 3 Val 4 Val 5	Resolver Analog Tach Reserved Reserved Reserved Reserved
		File: Group:	Speed/Posit Fdbk Feedback Config	

No.	Name Description	Values	
227	PeakDetect2 Out Output from the second peak/level detector.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read-Only, Floating Point Utility Peak Detection
230	Resolver SpdFdbk Displays speed feedback from the resolver. Select resolver by entering a value of 0 in of parameter 222 [Motor Fdbk Sel]. Configure the resolver with parameter 2201 [PMI I/O Config].	Units: Default: Min: Max: Type: File: Group:	RPM 0 -14000 14000 Non-Linkable, Read-Only, Floating Point Speed/Posit Fdbk Resolver
231	Resolver PositFB Indicates accumulated position feedback generated by the resolver. This parameter supplies position regulator feedback if position control is enabled.	Default: Min: Max: Type: File: Group:	0 -32768 32767 Non-Linkable, Read-Only, 16-Bit Integer Speed/Posit Fdbk Resolver
240	Anlg Tach Spd FB Displays speed feedback from an analog tach. Select analog tach by entering a value of 2 in of parameter 222 [Motor Fdbk Sel].	Units: Default: Min: Max: Type: File: Group:	RPM 0 -14000 14000 Non-Linkable Read-Only, Floating Point Speed/Posit Fdbk Analog Tach
241	Anlg Tach Posit Indicates accumulated position feedback generated by the analog tach. This parameter supplies position regulator feedback if position control is enabled.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read-Only, 32-Bit Integer Speed/Posit Fdbk Analog Tach
300	Motor Spd Fdbk Displays measured motor speed information from the selected feedback device. A value of 1.0 represents base speed of the motor.	Units: Default: Min: Max: Type: File: Group:	RPM 0 -14000 14000 Non-Linkable, Read-Only, Floating Point Monitor, Speed/Posit Fdbk Metering, Feedback Config
305	3Ph FieldCurrRef Displays the value of current reference that is present at the output of the current rate limiter. 100% is equal to 1 per unit (pu) rated drive current.	Units: Default: Min: Max: Type: File: Group:	P.U. 0 -8 8 Non-Linkable, Read-Only, Floating Point Field Control Current

No.	Name Description	Values	
307	Output Voltage Displays the actual line-to-line fundamental RMS value of output voltage. This data is averaged and updated every 50 milliseconds.	Units: Default: Min: Max: Type: File: Group:	Volt 0 -1350 1350 Non-Linkable, Read-Only, Floating Point Monitor Metering
308	Output Current Displays the actual RMS value of the output current as determined from the current sensors.	Units: Default: Min: Max: Type: File: Group:	Amps 0 -6000 6000 Non-Linkable, Read-Only, Floating Point Monitor Metering
314	VPL Firmware Rev Displays the major and minor revision levels of the drive's Velocity Position Loop (VPL) software.	Default: Min: Max: Type: File: Group:	x.xxx 0.001 65.255 Non-Linkable, Read-Only, 16-Bit Integer Monitor Drive Data

No.	Name Description	Values		
316	SynchLink Status Indicates status of SynchLink functions. • Bit 0 [FB Opt Prsnt] indicates the presence of an optional feedback daughter card. • Bit 1 [Encdr0 Prsnt] indicates the presence of encoder 0. • Bit 2 [Encdr1 Prsnt] indicates the presence of encoder 1. • Bit 3 [In Sync] indicates SynchLink communications is synchronized. • Bit 4 [Tx Active] indicates TX frames are being transmitted downstream from this node. • Bit 5 [Rx Active] inidates RX frames are being received from nodes upstream. • Bit 15 [Rx Data Enbl] indicates received data is being updated.	Default:	0000 0000 0000 0000 0000 0000 0000 0000	
		Options	Bit 0	Reserved
			Bit 1	Reserved
			Bit 2	Reserved
			Bit 3	In Sync
			Bit 4	Tx Active
			Bit 5	Rx Active
			Bit 6	Reserved
			Bit 7	Reserved
			Bit 8	Reserved
			Bit 9	Reserved
			Biti 10	Reserved
			Bit 11	Reserved
			Bit 12	Reserved
			Bit 13	Reserved
			Bit 14	Reserved
			Bit 15	Rx Data Enbl
			Bit 16	Reserved
			Bit 17	Reserved
			Bit 18	Reserved
			Bit 19	Reserved
			Bit 20	Reserved
			Bit 21	Reserved
			Bit 22	Reserved
			Bit 23	Reserved
Bit 24	Reserved			
Bit 25	Reserved			
Bit 26	Reserved			
Bit 27	Reserved			
Bit 28	Reserved			
Bit 29	Reserved			
Bit 30	Reserved			
Bit 31	Reserved			
	File: Group:	Utility Diagnostics		
317	SL System Time Displays the SynchLink system time counter.	Units:	uSec	
		Default:	0	
		Min:	0	
		Max:	1048575	
		Type:	Non-Linkable, Read-Only, 32-Bit Integer Monitor	
		File: Group:	Control Status	

No.	Name Description	Values		
320	Exception Event1 Indicates the presence of certain drive anomalies. Configure the drive's response to these events by entering values in the parameters of the fault/alarm configuration group of the utility file.	Default:	0000 0000 0000 0000 0000 0000 0000 0000	
		Options	Bit 0	Reserved
			Bit 1	Reserved
			Bit 2	Reserved
			Bit 3	Reserved
			Bit 4	Reserved
			Bit 5	Reserved
			Bit 6	Reserved
			Bit 7	SLink HW
			Bit 8	SLink Comm
			Bit 9	Reserved
			Bit 10	Reserved
			Bit 11	Reserved
			Bit 12	Reserved
			Bit 13	Reserved
			Bit 14	Reserved
			Bit 15	Reserved
			Bit 16	Reserved
			Bit 17	Reserved
			Bit 18	DSP Mem Err
			Bit 19	DSP Error
			Bit 20	Reserved
			Bit 21	Reserved
			Bit 22	Reserved
			Bit 23	Reserved
			Bit 24	Reserved
			Bit 25	Reserved
			Bit 26	Reserved
			Bit 27	Reserved
			Bit 28	Reserved
			Bit 29	Reserved
			Bit 30	Reserved
			Bit 31	Reserved
		File: Group:	Utility Diagnostics	

No.	Name Description	Values				
321	Exception Event2 Indicates the presence of certain drive anomalies. Configure the drive's response to these events by entering values in the parameters of the fault/alarm configuration group of the utility file.	Default:	0000 0000 0000 00000000 0000 0000 0000			
		Options	Bit 0 Bit 1 Bit 2 Bit 3 Bit 4 Bit 5 Bit 6 Bit 7 Bit 8 Bit 9 Bit 10 Bit 11 Bit 12 Bit 13 Bit 14 Bit 15 Bit 16 Bit 17 Bit 18 Bit 19 Bit 20 Bit 21 Bit 22 Bit 23 Bit 24 Bit 25 Bit 26 Bit 27 Bit 28 Bit 29 Bit 30 Bit 31	Reserved Reserved Reserved Reserved Reserved Reserved Reserved SLink Mult Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Drv Fault Drv Warning Lgx OutOfRun Lgx Timeout Lgx Closed Lgx LinkChng		
		File: Group:	Utility Diagnostics			

No.	Name Description	Values		
323	Fault Status 1 Indicates the occurrence of the exception events that have been configured as fault conditions. These are the same events shown in parameter 320 [Exception Event1].	Default:	0000 0000 0000 0000 0000 0000 0000 0000	
		Options	Bit 0	Reserved
			Bit 1	Reserved
			Bit 2	Reserved
			Bit 3	Reserved
			Bit 4	Reserved
			Bit 5	Reserved
			Bit 6	Reserved
			Bit 7	SLink HW
			Bit 8	SLink Comm
			Bit 9	Reserved
			Bit 10	Reserved
			Bit 11	Reserved
			Bit 12	Reserved
			Bit 13	Reserved
			Bit 14	Reserved
			Bit 15	Reserved
			Bit 16	Reserved
			Bit 17	Reserved
			Bit 18	DSP Mem Err
			Bit 19	DSP Error
			Bit 20	Reserved
			Bit 21	Reserved
			Bit 22	Reserved
			Bit 23	Reserved
			Bit 24	Reserved
			Bit 25	Reserved
			Bit 26	Reserved
			Bit 27	Reserved
			Bit 28	Reserved
			Bit 29	Reserved
			Bit 30	Reserved
			Bit 31	Reserved
		File: Group:	Utility Diagnostics	

No.	Name Description	Values		
324	Fault Status 2 Indicates the occurrence of the exception events that have been configured as fault conditions. These are the same events shown in parameter 321 [Exception Event2].	Default:	0000 0000 0000 0000 0000 0000 0000 0000	
		Options	Bit 0	Reserved
			Bit 1	Reserved
			Bit 2	Reserved
			Bit 3	Reserved
			Bit 4	Reserved
			Bit 5	Reserved
			Bit 6	Reserved
			Bit 7	SLink Mult
			Bit 8	Reserved
			Bit 9	Reserved
			Bit 10	Reserved
			Bit 11	Reserved
			Bit 12	Reserved
			Bit 13	Reserved
			Bit 14	Reserved
			Bit 15	Reserved
			Bit 16	Reserved
			Bit 17	Reserved
			Bit 18	Reserved
			Bit 19	Reserved
			Bit 20	Reserved
			Bit 21	Reserved
			Bit 22	Reserved
			Bit 23	Reserved
			Bit 24	Reserved
			Bit 25	Reserved
			Bit 26	Drv Fault
			Bit 27	Drv Warning
			Bit 28	Lgx OutOfRun
			Bit 29	Lgx Timeout
			Bit 30	Lgx Closed
			Bit 31	Lgx LinkChng
		File:	Utility	
		Group:	Diagnostics	

No.	Name Description	Values		
326	Alarm Status 1 Indicates the occurrence of the exception events that have been configured as alarm conditions. These are the same events shown in parameter 320 [Exception Event1].	Default:	0000 0000 0000 0000 0000 0000 0000 0000	
		Options	Bit 0	Reserved
			Bit 1	Reserved
			Bit 2	Reserved
			Bit 3	Reserved
			Bit 4	Reserved
			Bit 5	Reserved
			Bit 6	Reserved
			Bit 7	SLink HW
			Bit 8	SLink Comm
			Bit 9	Reserved
			Bit 10	Reserved
			Bit 11	Reserved
			Bit 12	Reserved
			Bit 13	Reserved
			Bit 14	Reserved
			Bit 15	Reserved
			Bit 16	Reserved
			Bit 17	Reserved
			Bit 18	DSP Mem Err
			Bit 19	DSP Error
			Bit 20	Reserved
			Bit 21	Reserved
			Bit 22	Reserved
			Bit 23	Reserved
			Bit 24	Reserved
			Bit 25	Reserved
			Bit 26	Reserved
			Bit 27	Reserved
			Bit 28	Reserved
			Bit 29	Reserved
			Bit 30	Reserved
			Bit 31	Reserved
		File: Group:	Utility Diagnostics	

No.	Name Description	Values		
327	Alarm Status 2 InIndicates the occurrence of the exception events that have been configured as alarm conditions. These are the same events shown in parameter 321 [Exception Event2].	Default:	0000 0000 0000 0000 0000 0000 0000 0000	
		Options	Bit 0	Reserved
			Bit 1	Reserved
			Bit 2	Reserved
			Bit 3	Reserved
			Bit 4	Reserved
			Bit 5	Reserved
			Bit 6	Reserved
			Bit 7	SLink Mult
			Bit 8	Reserved
			Bit 9	Reserved
			Bit 10	Reserved
			Bit 11	Reserved
			Bit 12	Reserved
			Bit 13	Reserved
			Bit 14	Reserved
			Bit 15	Reserved
			Bit 16	Reserved
			Bit 17	Reserved
			Bit 18	Reserved
			Bit 19	Reserved
			Bit 20	Reserved
			Bit 21	Reserved
			Bit 22	Reserved
			Bit 23	Reserved
			Bit 24	Reserved
			Bit 25	Reserved
			Bit 26	Drv Fault
			Bit 27	Drv Warning
			Bit 28	Lgx OutOfRun
			Bit 29	Lgx Timeout
			Bit 30	Lgx Closed
		Bit 31	Lgx LinkChng	
File: Group:	Utility Diagnostics			
329	Fault TP Sel Enter or write a value to select Fault data data displayed in parameter 330 [Fault TP Data].	Default:	Val 0	Zero
		Options:	Val 0	Zero
			Val 1	Reserved
			Val 2	Reserved
			Val 3	Reserved
			Val 4	Reserved
			Val 5	Reserved
			Val 6	Reserved
			Val 7	Reserved
			Val 8	Reserved
			Val 9	Reserved
			Val 10	VPL FltReset
			Val 11	Reserved
			Val 12	Mtr Ovld Cur
		Val 13	Mtr Ovld Int	
		File: Group:	Utility Test Points	

No.	Name Description	Values		
330	Fault TP Data Displays the data selected by parameter 329 [Fault TP Sel].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read-Only, Floating Point Utility Test Points	
369	SL CommLoss Cnfg Enter a value to determine what is done with the data received from SynchLink when a communication loss occurs. - Value 0 - Ignore configures the drive to continue running, as normal, when this event occurs - Value 1 - Alarm configures the drive to continue running and set the appropriate alarm bit when this event occurs - Value 2 - FltCoastStop configures the drive to perform a coast stop and set the appropriate fault bit, in response this event. - Value 3 - Flt RampStop configures the drive to perform a ramp stop and set the appropriate fault bit, in response this event. - Value 4 - FltCurLimStp configures the drive to perform a current-limit stop and set the appropriate fault bit, in response this event.	Default:	Val 2	FltCoastStop
		Options:	Val 0 Val 1 Val 2	Ignore Alarm FltCoastStop
		File: Group:	Utility Fault/Alm Config	
		ATTENTION  ATTENTION: Risk of injury or equipment damage exists. Parameter 369 [SL CommLoss Cnfg] lets you determine the action of the drive if communications are disrupted. By default this parameter causes the drive fault and coast to a stop. You can set this parameter so that the drive continues to run. Precautions should be taken to ensure that the setting of this parameter does not create hazards of injury or equipment damage.		
370	SL CommLoss Data Enter a value to configures the drive's response to SynchLink communication loss. Refer to parameter 1229 [SL Error Status] for possible causes of communication loss. - Value 0 - Zero Data Resets data to zero - Value 1 - Last State Holds data in its last state	Default:	Val 1	Last State
		Options:	Val 0 Val 1	Zero Data Last State
		File: Group:	Utility Fault/Alm Config	
		ATTENTION  ATTENTION: Risk of injury or equipment damage exists. Parameter 370 [SL CommLoss Data] lets you determine the action of the drive if communications are disrupted. By default this parameter causes the drive module to hold the data in its last state. You can set this parameter so that the drive resets the data to zero. Precautions should be taken to ensure that the setting of this parameter does not create hazards of injury or equipment damage.		

No.	Name Description	Values		
381	PMI Warning Cnfg Enter a value to configure the drive's response to a "PMI Warning" exception event (events enumerated in parameter 2123 [MC Warnings]). - Value 0 - Ignore configures the drive to continue running, as normal, when this event occurs - Value 1 - Alarm configures the drive to continue running and set the appropriate alarm bit when this event occurs - Value 2 - FltCoastStop configures the drive to perform a coast stop and set the appropriate fault bit, in response this event.	Default:	Val 1	Alarm
		Options:	Val 0 Val 1 Val 2	Ignore Alarm FltCoastStop
		File: Group:	Utility Fault/Alm Config	
382	Lgx OutOfRunCnfg Enter a value to configure the drive's response to the DriveLogix processor being in Non-Run mode. Non-Run modes include Program, Remote-Program and Faulted. Value 2 - FltCoastStop configures the drive to perform a coast stop and set the appropriate fault bit, in response this event.	Default:	Val 2	FltCoastStop
		Options:	Val 2	FltCoastStop
		File: Group:	Utility Fault/Alm Config	
383	Lgx Timeout Cnfg Enter a value to configure the Drive Module's response to a Controller to Drive Module connection timeout, as detected by the Drive Module. - Value 0 - Ignore configures the drive to continue running, as normal, when this event occurs - Value 1 - Alarm configures the drive to continue running and set the appropriate alarm bit when this event occurs - Value 2 - FltCoastStop configures the drive to perform a coast stop and set the appropriate fault bit, in response this event.	Default:	Val 2	FltCoastStop
		Options:	Val 0 Val 1 Val 2	Ignore Alarm FltCoastStop
		File: Group:	Utility Fault/Alm Config	

ATTENTION



Risk of injury or equipment damage exists. Parameter 383 [Lgx Timeout Cnfg] lets you determine the action of the drive if communications are disrupted. By default this parameter causes the drive to fault and coast to a stop. You can set this parameter so that the drive continues to run. Precautions should be taken to ensure that the setting of this parameter does not create a hazard of injury or equipment damage.

No.	Name Description	Values		
384	Lgx Closed Cnfg Enter a value to configure the Drive Module's response to the controller closing the Controller to Drive Module connection. - Value 0 - Ignore configures the drive to continue running, as normal, when this event occurs - Value 1 - Alarm configures the drive to continue running and set the appropriate alarm bit when this event occurs - Value 2 - FltCoastStop configures the drive to perform a coast stop and set the appropriate fault bit, in response this event.	Default:	Val 2	FltCoastStop
		Options:	Val 0 Val 1 Val 2	Ignore Alarm FltCoastStop
		File: Group:	Utility Fault/Alm Config	
		ATTENTION  Risk of injury or equipment damage exists. Parameter 384 [Lgx Closed Cnfg] lets you determine the action of the drive if communications are disrupted. By default this parameter causes the drive to fault and coast to a stop. You can set this parameter so that the drive continues to run. Precautions should be taken to ensure that the setting of this parameter does not create a hazard of injury or equipment damage.		
385	Lgx LinkChngCnfg Enter a value to configure the Drive Module's response to Controller to Drive Module default links being removed. A default link is a link automatically set up when a communication format is selected for the Controller to Drive Module connection. - Value 0 - Ignore configures the drive to continue running, as normal, when this event occurs - Value 1 - Alarm configures the drive to continue running and set the appropriate alarm bit when this event occurs - Value 2 - FltCoastStop configures the drive to perform a coast stop and set the appropriate fault bit, in response this event.	Default:	Val 2	FltCoastStop
		Options:	Val 0 Val 1 Val 2	Ignore Alarm FltCoastStop
		File: Group:	Utility Fault/Alm Config	
		ATTENTION  Risk of injury or equipment damage exists. Parameter 385 [Lgx LinkChngCnfg] lets you determine the action of the drive if communications are disrupted. By default this parameter causes the drive to fault and coast to a stop. You can set this parameter so that the drive continues to run. Precautions should be taken to ensure that the setting of this parameter does not create a hazard of injury or equipment damage.		

No.	Name Description	Values		
386	Lgx CommLossData Enter a value to configure what Drive Module does with the data received from the controller when the connection is closed or times out. - Value 0 - Zero Data Resets data to zero - Value 1 - Last State Holds data in its last state	Default:	Val 1	Last State
		Options:	Val 0 Val 1	Zero Data Last State
		File: Group:	Utility Fault/Alm Config	
		ATTENTION  ATTENTION: Risk of injury or equipment damage exists. Parameter 386 [Lgx CommLossData] lets you determine what the drive module does with received data if communications are disrupted. By default this parameter causes the drive module hold the data in its last state. You can set this parameter so that the drive module resets the data to zero. Precautions should be taken to ensure that the setting of this parameter does not create a hazard of injury or equipment damage.		
387	SL MultErr Cnfg Enter a value to configure the Drive Module's response to SynchLink Multiplier error. Refer to parameter 1034 [SL Mult State] for possible causes for multiplier errors. - Value 0 - Ignore configures the drive to continue running, as normal, when this event occurs - Value 1 - Alarm configures the drive to continue running and set the appropriate alarm bit when this event occurs - Value 2 - FltCoastStop configures the drive to perform a coast stop and set the appropriate fault bit, in response this event	Default:	Val 2	FltCoastStop
		Options:	Val 0 Val 1 Val 2	Ignore Alarm FltCoastStop
		File: Group:	Utility Fault/Alm Config	
396	User Data 1 General purpose parameter available for storage of 32 bit integer data by the operator. This value will be retained through a power cycle.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read-Write, 32-Bit Integer Utility User Selections	
397	User Data 2 General purpose parameter available for storage of 32 bit integer data by the operator. This value will be retained through a power cycle.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read-Write, 32-Bit Integer Utility User Selections	
398	User Data 3 General purpose parameter available for storage of 32 bit enumerated data by the operator. This value will be retained through a power cycle.	Default: Min: Max: Type: File: Group:	0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 1111 1111 1111 1111 1111 1111 1111 1111 Non-Linkable, Read-Write, 32-Bit Integer Utility User Selections	

No.	Name Description	Values	
399	User Data 4 General purpose parameter available for storage of floating point data by the operator. This value will be retained through a power cycle.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read-Write, Floating Point Utility User Selections
600	Integer In00 Displays input word 00 of the controller communication format in integer format. Paired with parameter 601 [Real In00], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read-Only, 32-Bit Integer Communication Logix Inputs
601	Real In00 Displays input word 00 of the controller communication format in floating point format. Paired with parameter 600 [Integer In00], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read-Only, Floating Point Communication Logix Inputs
602	Integer In01 Displays input word 01 of the controller communication format in integer format. Paired with parameter 603 [Real In01], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read-Only, 32-Bit Integer Communication Logix Inputs
603	Real In01 Displays input word 01 of the controller communication format in floating point format. Paired with parameter 602 [Integer In01], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read-Only, Floating Point Communication Logix Inputs
604	Integer In02 Displays input word 02 of the controller communication format in integer format. Paired with parameter 605 [Real In02], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read-Only, 32-Bit Integer Communication Logix Inputs
605	Real In02 Displays input word 02 of the controller communication format in floating point format. Paired with parameter 604 [Integer In02], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read-Only, Floating Point Communication Logix Inputs
606	Integer In03 Displays input word 03 of the controller communication format in integer format. Paired with parameter 607 [Real In03], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read-Only, 32-Bit Integer Communication Logix Inputs

No.	Name Description	Values	
607	Real In03 Displays input word 03 of the controller communication format in floating point format. Paired with parameter 606 [Integer In03], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read-Only, Floating Point Communication Logix Inputs
608	Integer In04 Displays input word 04 of the controller communication format in integer format. Paired with parameter 609 [Real In04], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read-Only, 32-Bit Integer Communication Logix Inputs
609	Real In04 Displays input word 04 of the controller communication format in floating point format. Paired with parameter 608 [Integer In04], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read-Only, Floating Point Communication Logix Inputs
610	Integer In05 Displays input word 05 of the controller communication format in integer format. Paired with parameter 611 [Real In05], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read-Only, 32-Bit Integer Communication Logix Inputs
611	Real In05 Displays input word 05 of the controller communication format in floating point format. Paired with parameter 610 [Integer In05], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read-Only, Floating Point Communication Logix Inputs
612	Integer In06 Displays input word 06 of the controller communication format in integer format. Paired with parameter 613 [Real In06], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read-Only, 32-Bit Integer Communication Logix Inputs
613	Real In06 Displays input word 06 of the controller communication format in floating point format. Paired with parameter 612 [Integer In06], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read-Only, Floating Point Communication Logix Inputs
614	Integer In07 Displays input word 07 of the controller communication format in integer format. Paired with parameter 615 [Real In07], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read-Only, 32-Bit Integer Communication Logix Inputs

No.	Name Description	Values	
615	Real In07 Displays input word 07 of the controller communication format in floating point format. Paired with parameter 614 [Integer In07], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read-Only, Floating Point Communication Logix Inputs
616	Integer In08 Displays input word 08 of the controller communication format in integer format. Paired with parameter 617 [Real In08], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read-Only, 32-Bit Integer Communication Logix Inputs
617	Real In08 Displays input word 08 of the controller communication format in floating point format. Paired with parameter 616 [Integer In08], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read-Only, Floating Point Communication Logix Inputs
618	Integer In09 Displays input word 09 of the controller communication format in integer format. Paired with parameter 619 [Real In09], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read-Only, 32-Bit Integer Communication Logix Inputs
619	Real In09 Displays input word 09 of the controller communication format in floating point format. Paired with parameter 618 [Integer In09], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read-Only, Floating Point Communication Logix Inputs
620	Integer In10 Displays input word 10 of the controller communication format in integer format. Paired with parameter 621 [Real In10], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read-Only, 32-Bit Integer Communication Logix Inputs
621	Real In10 Displays input word 10 of the controller communication format in floating point format. Paired with parameter 620 [Integer In10], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read-Only, Floating Point Communication Logix Inputs
622	Integer In11 Displays input word 11 of the controller communication format in integer format. Paired with parameter 623 [Real In11], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read-Only, 32-Bit Integer Communication Logix Inputs

No.	Name Description	Values	
623	Real In11 Displays input word 11 of the controller communication format in floating point format. Paired with parameter 622 [Integer In11], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read-Only, Floating Point Communication Logix Inputs
624	Integer In12 Displays input word 12 of the controller communication format in integer format. Paired with parameter 625 [Real In12], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read-Only, 32-Bit Integer Communication Logix Inputs
625	Real In12 Displays input word 12 of the controller communication format in floating point format. Paired with parameter 624 [Integer In12], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read-Only, Floating Point Communication Logix Inputs
626	Integer In13 Displays input word 13 of the controller communication format in integer format. Paired with parameter 627 [Real In13], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read-Only, 32-Bit Integer Communication Logix Inputs
627	Real In13 Displays input word 13 of the controller communication format in floating point format. Paired with parameter 626 [Integer In13], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read-Only, Floating Point Communication Logix Inputs
628	Integer In14 Displays input word 14 of the controller communication format in integer format. Paired with parameter 629 [Real In14], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read-Only, 32-Bit Integer Communication Logix Inputs
629	Real In14 Displays input word 14 of the controller communication format in floating point format. Paired with parameter 628 [Integer In14], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read-Only, Floating Point Communication Logix Inputs
630	Integer In15 Displays input word 15 of the controller communication format in integer format. Paired with parameter 631 [Real In15], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read-Only, 32-Bit Integer Communication Logix Inputs

No.	Name Description	Values	
631	Real In15 Displays input word 15 of the controller communication format in floating point format. Paired with parameter 630 [Integer In15], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read-Only, Floating Point Communication Logix Inputs
632	Integer Out00 Displays output word 00 of the controller communication format in integer format. Paired with parameter 633 [Real Out00], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-Bit Integer Communication Logix Outputs
633	Real Out00 Displays output word 00 of the controller communication format in floating point format. Paired with parameter 632 [Integer Out00], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point Communication Logix Outputs
634	Integer Out01 Displays output word 01 of the controller communication format in integer format. Paired with parameter 635 [Real Out01], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-Bit Integer Communication Logix Outputs
635	Real Out01 Displays output word 01 of the controller communication format in floating point format. Paired with parameter 634 [Integer Out01], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point Communication Logix Outputs
636	Integer Out02 Displays output word 02 of the controller communication format in integer format. Paired with parameter 637 [Real Out02], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-Bit Integer Communication Logix Outputs
637	Real Out02 Displays output word 02 of the controller communication format in floating point format. Paired with parameter 636 [Integer Out02], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point Communication Logix Outputs
638	Integer Out03 Displays output word 03 of the controller communication format in integer format. Paired with parameter 639 [Real Out03], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-Bit Integer Communication Logix Outputs

No.	Name Description	Values	
639	Real Out03 Displays output word 03 of the controller communication format in floating point format. Paired with parameter 638 [Integer Out03], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point Communication Logix Outputs
640	Integer Out04 Displays output word 04 of the controller communication format in integer format. Paired with parameter 641 [Real Out04], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-Bit Integer Communication Logix Outputs
641	Real Out04 Displays output word 04 of the controller communication format in floating point format. Paired with parameter 640 [Integer Out04], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-Bit Integer Communication Logix Outputs
642	Integer Out05 Displays output word 05 of the controller communication format in integer format. Paired with parameter 643 [Real Out05], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point Communication Logix Outputs
643	Real Out05 Displays output word 05 of the controller communication format in floating point format. Paired with parameter 642 [Integer Out05], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-Bit Integer Communication Logix Outputs
644	Integer Out06 Displays output word 06 of the controller communication format in integer format. Paired with parameter 645 [Real Out06], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point Communication Logix Outputs
645	Real Out06 Displays output word 06 of the controller communication format in floating point format. Paired with parameter 644 [Integer Out06], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-Bit Integer Communication Logix Outputs
646	Integer Out07 Displays output word 07 of the controller communication format in integer format. Paired with parameter 647 [Real Out07], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point Communication Logix Outputs

No.	Name Description	Values	
647	Real Out07 Displays output word 07 of the controller communication format in floating point format. Paired with parameter 646 [Integer Out07], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-Bit Integer Communication Logix Outputs
648	Integer Out08 Displays output word 08 of the controller communication format in integer format. Paired with parameter 649 [Real Out08], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point Communication Logix Outputs
649	Real Out08 Displays output word 08 of the controller communication format in floating point format. Paired with parameter 648 [Integer Out08], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-Bit Integer Communication Logix Outputs
650	Integer Out09 Displays output word 09 of the controller communication format in integer format. Paired with parameter 651 [Real Out09], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point Communication Logix Outputs
651	Real Out09 Displays output word 09 of the controller communication format in floating point format. Paired with parameter 650 [Integer Out09], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-Bit Integer Communication Logix Outputs
652	Integer Out10 Displays output word 10 of the controller communication format in integer format. Paired with parameter 653 [Real Out10], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point Communication Logix Outputs
653	Real Out10 Displays output word 10 of the controller communication format in floating point format. Paired with parameter 652 [Integer Out10], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-Bit Integer Communication Logix Outputs
654	Integer Out11 Displays output word 11 of the controller communication format in integer format. Paired with parameter 655 [Real Out11], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point Communication Logix Outputs

No.	Name Description	Values	
655	Real Out11 Displays output word 11 of the controller communication format in floating point format. Paired with parameter 654 [Integer Out11], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-Bit Integer Communication Logix Outputs
656	Integer Out12 Displays output word 12 of the controller communication format in integer format. Paired with parameter 657 [Real Out12], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-Bit Integer Communication Logix Outputs
657	Real Out12 Displays output word 12 of the controller communication format in floating point format. Paired with parameter 656 [Integer Out12], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point Communication Logix Outputs
658	Integer Out13 Displays output word 13 of the controller communication format in integer format. Paired with parameter 659 [Real Out13], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-Bit Integer Communication Logix Outputs
659	Real Out13 Displays output word 13 of the controller communication format in floating point format. Paired with parameter 658 [Integer Out13], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point Communication Logix Outputs
660	Integer Out14 Displays output word 14 of the controller communication format in integer format. Paired with parameter 661 [Real Out14], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-Bit Integer Communication Logix Outputs
661	Real Out14 Displays output word 14 of the controller communication format in floating point format. Paired with parameter 660 [Integer Out14], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point Communication Logix Outputs
662	Integer Out15 Displays output word 15 of the controller communication format in integer format. Paired with parameter 663 [Real Out15], which displays the same data in floating point format.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-Bit Integer Communication Logix Outputs

No.	Name Description	Values		
663	Real Out15 Displays output word 15 of the controller communication format in floating point format. Paired with parameter 662 [Integer Out15], which displays the same data in integer format.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point Communication Logix Outputs	
664	Lgx Comm Format Indicates the Controller to Drive Module communication format. - A value of 18 indicates User-Defined - A value of 32 indicates Custom User-Defined	Default: Min: Max: Type: File: Group:	0 0 4294967296 Non-Linkable, Read-Only, 32-Bit Integer Communication Commands	
1000 	SL Node Cnfg Set bits to configure the SynchLink node. - Setting bit 0 configures the local node as the Time Master. - Setting bit 2 configures the node to synchronize with the Time Master immediately (1-2S per node) on power-up or recovery. If you do not set bit 2, the node will stay in the fast mode, taking up to 36S per node to synchronize on power-up or recovery.	Default:	0000 0000 000 00000 0000 0000 0000 0100	
		Options	Bit 0 Bit 1 Bit 2 Bit 3 Bit 4 Bit 5 Bit 6 Bit 7 Bit 8 Bit 9 Bti 10 Bit 11 Bit 12 Bit 13 Bit 14 Bit 15 Bit 16 Bit 17 Bit 18 Bit 19 Bit 20 Bit 21 Bit 22 Bit 23 Bti 24 Bit 25 Bit 26 Bit 27 Bit 28 Bti 29 Bit 30 Bit 31	Time Keeper Reserved Sync Now Reserved

No.	Name Description	Values				
1002	SL System Rev Indicates the system revision of the SynchLink network. To be compatible on the network, all nodes must have the same major revision.	Default: Min: Max: Type: File: Group:	0.001 0.001 999.999 Non-Linkable, Read-Only, 32-Bit Integer Monitor Drive Data			
1010 	SL Rx Comm Frmt Defines the node's communication format for receiving SynchLink data. This determines the number of axis data, direct data and buffered data words received. Configure the format by using the Peer Communication window in DriveExecutive programming software.		Value	Axis	Direct	Buffered
		Options:	Val 0	0	0	0
		File: Group:	SynchLink SynchLink Config			
1011 	SL Rx DirectSel0 Determines the destination for the data received at word 0 of direct received data. Configure the selection by using the Peer Communication window.	Default:	Val 0	No Data		
		Options:	Val 0 Val 1 Val 2 Val 3 Val 4 Val 5 Val 6 Val 7 Val 8 Val 9 Val 10	No Data SL Multiply Event P0 Event P1 Event D0 Event D1 Event D2 Event D3 Event Opt0 Event Opt1 Event Status		
		File: Group:	SynchLink SynchLink Config			
1012 	SL Rx DirectSel1 Determines the destination for the data received at word 1 of direct received data. Configure the selection by using the Peer Communication window.	Default:	Val 0	No Data		
		Options:	Val 0 Val 1 Val 2 Val 3 Val 4 Val 5 Val 6 Val 7 Val 8 Val 9 Val 10	No Data SL Multiply Event P0 Event P1 Event D0 Event D1 Event D2 Event D3 Event Opt0 Event Opt1 Event Status		
		File: Group:	SynchLink SynchLink Config			

No.	Name Description	Values				
1013 	SL Rx DirectSel2 Determines the destination for the data received at word 2 of direct received data. Configure the selection by using the Peer Communication window.	Default:	Val 0	No Data		
		Options:	Val 0 Val 1 Val 2 Val 3 Val 4 Val 5 Val 6 Val 7 Val 8 Val 9 Val 10	No Data SL Multiply Event P0 Event P1 Event D0 Event D1 Event D2 Event D3 Event Opt0 Event Opt1 Event Status		
		File: Group:	SynchLink SynchLink Config			
1014 	SL Rx DirectSel3 Determines the destination for the data received at word 3 of direct received data. Configure the selection by using the Peer Communication window.	Default:	Val 0	No Data		
		Options:	Val 0 Val 1 Val 2 Val 3 Val 4 Val 5 Val 6 Val 7 Val 8 Val 9 Val 10	No Data SL Multiply Event P0 Event P1 Event D0 Event D1 Event D2 Event D3 Event Opt0 Event Opt1 Event Status		
		File: Group:	SynchLink SynchLink Config			
1020 	SL Tx Comm Frmt Defines the node's communication format for transmitting SynchLink data. This determines the number of axis data words, direct data words and buffered data words transmitted. Configure the format by using the Peer Communication window.		Value	Axis	Direct	Buffered
		Options:	Val 0	0	0	0
		File: Group:	SynchLink SynchLink Config			

No.	Name Description	Values		
1021 	SL Tx DirectSel0 Determines the source type for the data transmitted by direct transmit word 0. The source type selections are: no data, event, feedback and drive parameter. If drive parameter is selected, a parameter of the appropriate data format (integer or real) must be linked to parameter 1141 [SL Dir Int Tx0] or parameter 1142 [SL Dir Real Tx0]. Configure the selection by using the Peer Communication window.	Default:	Val 0	No Data
		Options:	Val 0 Val 1 Val 2 Val 3 Val 4 Val 5 Val 6 Val 7 Val 8 Val 9 Val 10 Val 11 Val 12 Val 13 Val 14 Val 15 Val 16 Val 17 Val 18 Val 19 Val 20 Val 21 Val 22 Val 23 Val 24 Val 25 Val 26	No Data SL Multiply Event P0 Event P1 Event D0 Event D1 Event D2 Event D3 Event Opt0 Event Opt1 Event Status Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Dir Tx Data Dir Rx Data E0 Accum E1 Accum Opt0 Accum Opt1 Accum
		File: Group:	SynchLink SynchLink Config	

No.	Name Description	Values		
1022 	SL Tx DirectSel1 Determines the source type for the data transmitted by direct transmit word 1. The source type selections are: no data, event, feedback and drive parameter. If drive parameter is selected, a parameter of the appropriate data format (integer or real) must be linked to parameter 1143 [SL Dir Int Tx1] or parameter 1144 [SL Dir Real Tx1]. Configure the selection by using the Peer Communication window.	Default:	Val 0	No Data
		Options:	Val 0 Val 1 Val 2 Val 3 Val 4 Val 5 Val 6 Val 7 Val 8 Val 9 Val 10 Val 11 Val 12 Val 13 Val 14 Val 15 Val 16 Val 17 Val 18 Val 19 Val 20 Val 21 Val 22 Val 23 Val 24 Val 25 Val 26	No Data SL Multiply Event P0 Event P1 Event D0 Event D1 Event D2 Event D3 Event Opt0 Event Opt1 Event Status Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Dir Tx Data Dir Rx Data E0 Accum E1 Accum Opt0 Accum Opt1 Accum
		File: Group:	SynchLink SynchLink Config	

No.	Name Description	Values		
1023	SL Tx DirectSel2 Determines the source type for the data transmitted by direct transmit word 2. The source type selections are: no data, event, feedback and drive parameter. If drive parameter is selected, a parameter of the appropriate data format (integer or real) must be linked to parameter 1145 [SL Dir Int Tx2] or parameter 1146 [SL Dir Real Tx2]. Configure the selection by using the Peer Communication window.	Default:	Val 0	No Data
		Options:	Val 0 Val 1 Val 2 Val 3 Val 4 Val 5 Val 6 Val 7 Val 8 Val 9 Val 10 Val 11 Val 12 Val 13 Val 14 Val 15 Val 16 Val 17 Val 18 Val 19 Val 20 Val 21 Val 22 Val 23 Val 24 Val 25 Val 26	No Data SL Multiply Event P0 Event P1 Event D0 Event D1 Event D2 Event D3 Event Opt0 Event Opt1 Event Status Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Dir Tx Data Dir Rx Data E0 Accum E1 Accum Opt0 Accum Opt1 Accum
		File: Group:	SynchLink SynchLink Config	

No.	Name Description	Values		
1024 	SL Tx DirectSel3 Determines the source type for the data transmitted by direct transmit word 3. The source type selections are: no data, event, feedback and drive parameter. If drive parameter is selected, a parameter of the appropriate data format (integer or real) must be linked to parameter 1147 [SL Dir Int Tx3] or parameter 1148 [SL Dir Real Tx3]. Configure the selection by using the Peer Communication window.	Default:	Val 0	No Data
		Options:	Val 0 Val 1 Val 2 Val 3 Val 4 Val 5 Val 6 Val 7 Val 8 Val 9 Val 10 Val 11 Val 12 Val 13 Val 14 Val 15 Val 16 Val 17 Val 18 Val 19 Val 20 Val 21 Val 22 Val 23 Val 24 Val 25 Val 26	No Data SL Multiply Event P0 Event P1 Event D0 Event D1 Event D2 Event D3 Event Opt0 Event Opt1 Event Status Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Dir Tx Data Dir Rx Data E0 Accum E1 Accum Opt0 Accum Opt1 Accum
		File: Group:	SynchLink SynchLink Config	
1030	SL Mult A In Displays the A Multiplier Input, as a floating point (real) value. This value is divided by the parameter 1032 [SL Mult Base]. The source of the A Multiplier is determined by the "Rx Direct Data Selector" (parameters 1011-1014). The possible sources are: zero, parameter 1054 [Dir Int Rx0], parameter 1056 [Dir Int Rx1], parameter 1058 [Dir Int Rx2], or parameter 1060 [Dir Int Rx3]. The SynchLink Multiply function takes this input before it is converted to floating point.	Default: Min: Max: Type: File: Group:	0 0 16 Non-Linkable, Read-Only, Floating Point SynchLink Multiplier	
1031	SL Mult B In The B Multiplier Input. This must be a floating point (real) value. The SynchLink Multiply function takes this input after it is converted to integer.	Default: Min: Max: Type: File: Group:	1 0.5 2 Linkable, Read-Write, Floating Point SynchLink Multiplier	
1032 	SL Mult Base Specifies the base for SynchLink real to integer and integer to real conversion functions. Determines the resolution of the conversion results. You must use the same value at the transmitting node and receiving / multiplying nodes. Enter a value that will not produce an overflow - the product of this value and the inputs to the conversion and multiply functions must be less than 65,536.	Default: Min: Max: Type: File: Group:	10000 5000 50000 Non-Linkable, Read-Write, Floating Point SynchLink Multiplier	

[illegible]

No.	Name Description	Values		
1036	Real to Int Out Displays the integer output of the real to integer conversion function. The value is the result of the formula "parameter 1035 [Real to Int In] x parameter 1032 [SL Mult Base]".	Default:	0	
		Min:	0	
		Max:	65535	
		Type:	Non-Linkable, Read-Only, 16-Bit Integer	
		File:	SynchLink	
		Group:	Multiplier	
1040	SL Rcv Events Displays the received event status from parameter 1041 [Rx P0 Regis] through parameter 1048 [Rx Opt1 Regis].	Default:	0000 0000 0000 0000 0000 0000 0000 0000	
		Options	Bit 0	E0 Regis
			Bit 1	E1 Regis
			Bit 2	D0
			Bit 3	D1
			Bit 4	D2
			Bit 5	D3
			Bit 6	Opt0 Regis
			Bit 7	Opt1 Regis
			Bit 8	Reserved
			Bit 9	Reserved
			Bit 10	Reserved
			Bit 11	Reserved
			Bit 12	Reserved
			Bit 13	Reserved
			Bit 14	Reserved
			Bit 15	Reserved
			Bit 16	Reserved
			Bit 17	Reserved
			Bit 18	Reserved
			Bit 19	Reserved
			Bit 20	Reserved
			Bit 21	Reserved
			Bit 22	Reserved
			Bit 23	Reserved
			Bit 24	Reserved
			Bit 25	Reserved
			Bit 26	Reserved
			Bit 27	Reserved
			Bit 28	Reserved
			Bit 29	Reserved
			Bit 30	Reserved
			Bit 31	Reserved
		File:	SynchLink	
		Group:	Event Data	
1041	SL Rx P0 Regis Displays received port 0 registration data, if direct received data is configured to be port 0 registration data by the Rx Direct Data Selector (parameters 1011-1014). Configure this selection by using the Peer Communication window.	Default:	0	
		Min:	-2147483648	
		Max:	2147483648	
		Type:	Non-Linkable, Read-Only, 32-Bit Integer	
		File:	SynchLink	
		Group:	Event Data	
1042	SL Rx P1 Regis Displays received port 1 registration data, if direct received data is configured to be port 1 registration data by the Rx Direct Data Selector (parameters 1011-1014). Configure this selection by using the Peer Communication window.	Default:	0	
		Min:	-2147483648	
		Max:	2147483648	
		Type:	Non-Linkable, Read-Only, 32-Bit Integer	
		File:	SynchLink	
		Group:	Event Data	

No.	Name Description	Values	
1043	SL Rx D0 Latch Displays received event D0 latch data, if direct received data is configured to be event D0 latch data by the Rx Direct Data Selector (parameters 1011-1014). Configure this selection by using the Peer Communication window.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read-Only, 32-Bit Integer SynchLink Event Data
1044	SL Rx D1 Latch Displays received event D1 latch data, if direct received data is configured to be event D1 latch data by the Rx Direct Data Selector (parameters 1011-1014). Configure this selection by using the Peer Communication window.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read-Only, 32-Bit Integer SynchLink Event Data
1045	SL Rx D2 Latch Displays received event D2 latch data, if direct received data is configured to be event D2 latch data by the Rx Direct Data Selector (parameters 1011-1014). Configure this selection by using the Peer Communication window.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read-Only, 32-Bit Integer SynchLink Event Data
1046	SL Rx D3 Latch Displays received event D3 latch data, if direct received data is configured to be event D3 latch data by the Rx Direct Data Selector (parameters 1011-1014). Configure this selection by using the Peer Communication window.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read-Only, 32-Bit Integer SynchLink Event Data
1047	SL Rx Opt0 Regis Displays received registration data from feedback option 1 (high resolution encoder daughter card), if direct received data is configured to be feedback option 1 registration data by the Rx Direct Data Selector (parameters 1011-1014). Configure this selection by using the Peer Communication window.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read-Only, 32-Bit Integer SynchLink Event Data
1048	SL Rx Opt1 Regis Displays received registration data from feedback option 0 (high resolution encoder daughter card), if direct received data is configured to be feedback option 0 registration data by the Rx Direct Data Selector (parameters 1011-1014). Configure this selection by using the Peer Communication window.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read-Only, 32-Bit Integer SynchLink Event Data
1054	SL Dir Int Rx0 Displays the integer value of the Direct Received Data for word 0. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1055 [SL Dir Real Rx0].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read-Only, 32-Bit Integer SynchLink Direct Data
1055	SL Dir Real Rx0 Displays the floating point (real) value of the Direct Received Data for word 0. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1054 [SL Dir Int Rx0].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read-Only, Floating Point SynchLink Direct Data

No.	Name Description	Values	
1056	SL Dir Int Rx1 Displays the integer value of the Direct Received Data for word 1. Data transmitted from one node to another must be the same data type. This parameter is paired with parameter 1057 [SL Dir Real Rx1].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read-Only, 32-Bit Integer SynchLink Direct Data
1057	SL Dir Real Rx1 Displays the floating point (real) value of the Direct Received Data for word 1. Data transmitted from one node to another must be the same data type. This parameter is paired with parameter 1056 [SL Dir Int Rx1].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read-Only, Floating Point SynchLink Direct Data
1058	SL Dir Int Rx2 Displays the integer value of the Direct Received Data for word 2. Data transmitted from one node to another must be the same data type. This parameter is paired with parameter 1059 [SL Dir Real Rx2].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read-Only, 32-Bit Integer SynchLink Direct Data
1059	SL Dir Real Rx2 Displays the floating point (real) value of the Direct Received Data for word 2. Data transmitted from one node to another must be the same data type. This parameter is paired with parameter 1058 [SL Dir Int Rx2].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read-Only, Floating Point SynchLink Direct Data
1060	SL Dir Int Rx3 Displays the integer value of the Direct Received Data for word 3. Data transmitted from one node to another must be the same data type. This parameter is paired with parameter 1061 [SL Dir Real Rx3].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read-Only, 32-Bit Integer SynchLink Direct Data
1061	SL Dir Real Rx3 Displays the floating point (real) value of the Direct Received Data for word 3. Data transmitted from one node to another must be the same data type. This parameter is paired with parameter 1060 [SL Dir Int Rx3].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read-Only, Floating Point SynchLink Direct Data
1073	SL Buf Int Rx00 Displays the integer value of the Buffered Received Data for word 0. Data transmitted from one node to another must be the same data type. This parameter is paired with parameter 1074 [SL Buf Real Rx00].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read-Only, 32-Bit Integer SynchLink Buffered Data In
1074	SL Buf Real Rx00 Displays the floating point (real) value of the Buffered Received Data for word 0. Data transmitted from one node to another must be the same data type. This parameter is paired with parameter 1073 [SL Buf Int Rx00].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read-Only, Floating Point SynchLink Buffered Data In

No.	Name Description	Values	
1075	SL Buf Int Rx01 Displays the integer value of the Buffered Received Data for word 1. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1076 [SL Buf Real Rx01].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read-Only, 32-Bit Integer SynchLink Buffered Data In
1076	SL Buf Real Rx01 Displays the floating point (real) value of the Buffered Received Data for word 1. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1075 [SL Buf Int Rx01].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read-Only, Floating Point SynchLink Buffered Data In
1077	SL Buf Int Rx02 Displays the integer value of the Buffered Received Data for word 2. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1078 [SL Buf Real Rx02].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read-Only, 32-Bit Integer SynchLink Buffered Data In
1078	SL Buf Real Rx02 Displays the floating point (real) value of the Buffered Received Data for word 2. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1079 [SL Buf Int Rx02].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read-Only, Floating Point SynchLink Buffered Data In
1079	SL Buf Int Rx03 Displays the integer value of the Buffered Received Data for word 3. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1080 [SL Buf Real Rx03].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read-Only, 32-Bit Integer SynchLink Buffered Data In
1080	SL Buf Real Rx03 Displays the floating point (real) value of the Buffered Received Data for word 3. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1079 [SL Buf Int Rx03].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read-Only, Floating Point SynchLink Buffered Data In
1081	SL Buf Int Rx04 Displays the integer value of the Buffered Received Data for word 4. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1082 [SL Buf Real Rx04].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable Read-Only, 32-Bit Integer SynchLink Buffered Data In
1082	SL Buf Real Rx04 Displays the floating point (real) value of the Buffered Received Data for word 4. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1081 [SL Buf Int Rx04].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable Read-Only, Floating Point SynchLink Buffered Data In

No.	Name Description	Values	
1083	SL Buf Int Rx05 Displays the integer value of the Buffered Received Data for word 5. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1084 [SL Buf Real Rx05].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable Read-Only, 32-Bit Integer SynchLink Buffered Data In
1084	SL Buf Real Rx05 Displays the floating point (real) value of the Buffered Received Data for word 5. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1083 [SL Buf Int Rx05].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable Read-Only, Floating Point SynchLink Buffered Data In
1085	SL Buf Int Rx06 Displays the integer value of the Buffered Received Data for word 6. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1086 [SL Buf Real Rx06].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable Read-Only, 32-Bit Integer SynchLink Buffered Data In
1086	SL Buf Real Rx06 Displays the floating point (real) value of the Buffered Received Data for word 6. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1085 [SL Buf Int Rx06].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable Read-Only, Floating Point SynchLink Buffered Data In
1087	SL Buf Int Rx07 Displays the integer value of the Buffered Received Data for word 7. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1088 [SL Buf Real Rx07].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable Read-Only, 32-Bit Integer SynchLink Buffered Data In
1088	SL Buf Real Rx07 Displays the floating point (real) value of the Buffered Received Data for word 7. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1087 [SL Buf Int Rx07].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read-Only, Floating Point SynchLink Buffered Data In
1089	SL Buf Int Rx08 Displays the integer value of the Buffered Received Data for word 8. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1090 [SL Buf Real Rx08].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read-Only, 32-Bit Integer SynchLink Buffered Data In

No.	Name Description	Values	
1090	SL Buf Real Rx08 Displays the floating point (real) value of the Buffered Received Data for word 8. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1089 [SL Buf Int Rx08].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read-Only, Floating Point SynchLink Buffered Data In
1091	SL Buf Int Rx09 Displays the integer value of the Buffered Received Data for word 9. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1092 [SL Buf Real Rx09].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read-Only, 32-Bit Integer SynchLink Buffered Data In
1092	SL Buf Real Rx09 Displays the floating point (real) value of the Buffered Received Data for word 9. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1091 [SL Buf Int Rx09].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read-Only, Floating Point SynchLink Buffered Data In
1093	SL Buf Int Rx10 Displays the integer value of the Buffered Received Data for word 10. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1094 [SL Buf Real Rx10].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read-Only, 32-Bit Integer SynchLink Buffered Data In
1094	SL Buf Real Rx10 Displays the floating point (real) value of the Buffered Received Data for word 10. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1093 [SL Buf Int Rx10].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read-Only, Floating Point SynchLink Buffered Data In
1095	SL Buf Int Rx11 Displays the integer value of the Buffered Received Data for word 11. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1096 [SL Buf Real Rx11].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read-Only, 32-Bit Integer SynchLink Buffered Data In
1096	SL Buf Real Rx11 Displays the floating point (real) value of the Buffered Received Data for word 11. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1095 [SL Buf Int Rx11].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read-Only, Floating Point SynchLink Buffered Data In
1097	SL Buf Int Rx12 Displays the integer value of the Buffered Received Data for word 12. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1098 [SL Buf Real Rx12].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read-Only, 32-Bit Integer SynchLink Buffered Data In

No.	Name Description	Values	
1098	SL Buf Real Rx12 Displays the floating point (real) value of the Buffered Received Data for word 12. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1097 [SL Buf Int R12].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read-Only, Floating Point SynchLink Buffered Data In
1099	SL Buf Int Rx13 Displays the integer value of the Buffered Received Data for word 13. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1100 [SL Buf Real R13].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read-Only, 32-Bit Integer SynchLink Buffered Data In
1100	SL Buf Real Rx13 Displays the floating point (real) value of the Buffered Received Data for word 13. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1099 [SL Buf Int R13].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read-Only, Floating Point SynchLink Buffered Data In
1101	SL Buf Int Rx14 Displays the integer value of the Buffered Received Data for word 14. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1102 [SL Buf Real R14].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read-Only, 32-Bit Integer SynchLink Buffered Data In
1102	SL Buf Real Rx14 Displays the floating point (real) value of the Buffered Received Data for word 14. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1101 [SL Buf Int R14].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read-Only, Floating Point SynchLink Buffered Data In
1103	SL Buf Int Rx15 Displays the integer value of the Buffered Received Data for word 15. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1104 [SL Buf Real R15].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read-Only, 32-Bit Integer SynchLink Buffered Data In
1104	SL Buf Real Rx15 Displays the floating point (real) value of the Buffered Received Data for word 15. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1103 [SL Buf Int R15].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read-Only, Floating Point SynchLink Buffered Data In
1105	SL Buf Int Rx16 Displays the integer value of the Buffered Received Data for word 16. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1106 [SL Buf Real Rx16].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read-Only, 32-Bit Integer SynchLink Buffered Data In

No.	Name Description	Values	
1106	SL Buf Real Rx16 Displays the floating point (real) value of the Buffered Received Data for word 16. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1105 [SL Buf Int Rx16].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read-Only, Floating Point SynchLink Buffered Data In
1107	SL Buf Int Rx17 Displays the integer value of the Buffered Received Data for word 17. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1108 [SL Buf Real Rx17].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read-Only, 32-Bit Integer SynchLink Buffered Data In
1108	SL Buf Real Rx17 Displays the floating point (real) value of the Buffered Received Data for word 17. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1107 [SL Buf Int Rx17].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read-Only, Floating Point SynchLink Buffered Data In
1109	SL Buf Int Rx18 Displays the integer value of the Buffered Received Data for word 18. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1110 [SL Buf Real Rx18].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read-Only, 32-Bit Integer SynchLink Buffered Data In
1110	SL Buf Real Rx18 Displays the floating point (real) value of the Buffered Received Data for word 18. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1109 [SL Buf Int Rx18].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read-Only, Floating Point SynchLink Buffered Data In
1111	SL Buf Int Rx19 Displays the integer value of the Buffered Received Data for word 19. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1112 [SL Buf Real Rx19].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read-Only, 32-Bit Integer SynchLink Buffered Data In
1112	SL Buf Real Rx19 Displays the floating point (real) value of the Buffered Received Data for word 19. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1111 [SL Buf Int Rx19].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read-Only, Floating Point SynchLink Buffered Data In
1113	SL Buf Int Rx20 Displays the integer value of the Buffered Received Data for word 20. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1114 [SL Buf Real Rx20].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read-Only, 32-Bit Integer SynchLink Buffered Data In

No.	Name Description	Values	
1114	SL Buf Real Rx20 Displays the floating point (real) value of the Buffered Received Data for word 20. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1113 [SL Buf Int Rx20].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read-Only, Floating Point SynchLink Buffered Data In
1115	SL Buf Int Rx21 Displays the integer value of the Buffered Received Data for word 21. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1116 [SL Buf Real Rx21].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read-Only, 32-Bit Integer SynchLink Buffered Data In
1116	SL Buf Real Rx21 Displays the floating point (real) value of the Buffered Received Data for word 21. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1115 [SL Buf Int Rx21].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read-Only, Floating Point SynchLink Buffered Data In
1117	SL Buf Int Rx22 Displays the integer value of the Buffered Received Data for word 22. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1118 [SL Buf Real Rx22].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read-Only, 32-Bit Integer SynchLink Buffered Data In
1118	SL Buf Real Rx22 Displays the floating point (real) value of the Buffered Received Data for word 22. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1117 [SL Buf Int Rx22].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read-Only, Floating Point SynchLink Buffered Data In
1119	SL Buf Int Rx23 Displays the integer value of the Buffered Received Data for word 23. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1120 [SL Buf Real Rx23].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read-Only, 32-Bit Integer SynchLink Buffered Data In
1120	SL Buf Real Rx23 Displays the floating point (real) value of the Buffered Received Data for word 23. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1119 [SL Buf Int Rx23].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read-Only, Floating Point SynchLink Buffered Data In
1121	SL Buf Int Rx24 Displays the integer value of the Buffered Received Data for word 24. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1122 [SL Buf Real Rx24].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read-Only, 32-Bit Integer SynchLink Buffered Data In

No.	Name Description	Values	
1122	SL Buf Real Rx24 Displays the floating point (real) value of the Buffered Received Data for word 24. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1121 [SL Buf Int Rx24].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read-Only, Floating Point SynchLink Buffered Data In
1123	SL Buf Int Rx25 Displays the integer value of the Buffered Received Data for word 25. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1124 [SL Buf Real Rx25].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read-Only, 32-Bit Integer SynchLink Buffered Data In
1124	SL Buf Real Rx25 Displays the floating point (real) value of the Buffered Received Data for word 25. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1123 [SL Buf Int Rx25].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read-Only, Floating Point SynchLink Buffered Data In
1125	SL Buf Int Rx26 Displays the integer value of the Buffered Received Data for word 26. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1126 [SL Buf Real Rx26].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read-Only, 32-Bit Integer SynchLink Buffered Data In
1126	SL Buf Real Rx26 Displays the floating point (real) value of the Buffered Received Data for word 26. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1125 [SL Buf Int Rx26].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read-Only, Floating Point SynchLink Buffered Data In
1127	SL Buf Int Rx27 Displays the integer value of the Buffered Received Data for word 27. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1128 [SL Buf Real Rx27].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read-Only, 32-Bit Integer SynchLink Buffered Data In
1128	SL Buf Real Rx27 Displays the floating point (real) value of the Buffered Received Data for word 27. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1127 [SL Buf Int Rx27].	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Non-Linkable, Read-Only, Floating Point SynchLink Buffered Data In
1129	SL Buf Int Rx28 Displays the integer value of the Buffered Received Data for word 28. Data transmitted from one node to another must be the same data type. This parameter is paired with paramter 1130 [SL Buf Real Rx28].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read-Only, 32-Bit Integer SynchLink Buffered Data In



No.	Name Description	Values	
1141	SL Dir Int Tx0 Provides integer data for Direct Transmit word 0, if the data type for word 0 (indicated in parameter 1140 [Tx Dir Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-Bit Integer SynchLink Direct Data
1142	SL Dir Real Tx0 Provides floating point (real) data for Direct Transmit word 0, if the data type for word 0 (indicated in parameter 1140 [Tx Dir Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Direct Data
1143	SL Dir Int Tx1 Provides integer data for Direct Transmit word 1, if the data type for word 1 (indicated in parameter 1140 [Tx Dir Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-Bit Integer SynchLink Direct Data
1144	SL Dir Real Tx1 Provides floating point (real) data for Direct Transmit word 1, if the data type for word 1 (indicated in parameter 1140 [Tx Dir Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Direct Data
1145	SL Dir Int Tx2 Provides integer data for Direct Transmit word 2, if the data type for word 2 (indicated in parameter 1140 [Tx Dir Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-Bit Integer SynchLink Direct Data
1146	SL Dir Real Tx2 Provides floating point (real) data for Direct Transmit word 2, if the data type for word 2 (indicated in parameter 1140 [Tx Dir Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Direct Data
1147	SL Dir Int Tx3 Provides integer data for Direct Transmit word 3, if the data type for word 3 (indicated in parameter 1140 [Tx Dir Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-Bit Integer SynchLink Direct Data
1148	SL Dir Real Tx3 Provides floating point (real) data for Direct Transmit word 3, if the data type for word 3 (indicated in parameter 1140 [Tx Dir Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Direct Data

No.	Name Description	Values																																																																	
1160 	Tx Buf Data Type Indicates the data type of each Buffered Transmit word. If the word's bit is set the data type is floating point (real). If the bit is not set the data type is integer. Use the Peer Communication window to configure this selection.	Default:	0000 0000 0000 0000 0000 0000 0000 0000																																																																
		Options	<table><tr><td>Bit 0</td><td>Real Tx0</td></tr><tr><td>Bit 1</td><td>Real Tx1</td></tr><tr><td>Bit 2</td><td>Real Tx2</td></tr><tr><td>Bit 3</td><td>Real Tx3</td></tr><tr><td>Bit 4</td><td>Real Tx4</td></tr><tr><td>Bit 5</td><td>Real Tx5</td></tr><tr><td>Bit 6</td><td>Real Tx6</td></tr><tr><td>Bit 7</td><td>Real Tx7</td></tr><tr><td>Bit 8</td><td>Real Tx8</td></tr><tr><td>Bit 9</td><td>Real Tx9</td></tr><tr><td>Bit 10</td><td>Real Tx10</td></tr><tr><td>Bit 11</td><td>Real Tx11</td></tr><tr><td>Bit 12</td><td>Real Tx12</td></tr><tr><td>Bit 13</td><td>Real Tx13</td></tr><tr><td>Bit 14</td><td>Real Tx14</td></tr><tr><td>Bit 15</td><td>Real Tx15</td></tr><tr><td>Bit 16</td><td>Real Tx16</td></tr><tr><td>Bit 17</td><td>Real Tx17</td></tr><tr><td>Bit 18</td><td>Real Tx18</td></tr><tr><td>Bit 19</td><td>Real Tx19</td></tr><tr><td>Bit 20</td><td>Real Tx20</td></tr><tr><td>Bit 21</td><td>Real Tx21</td></tr><tr><td>Bit 22</td><td>Real Tx22</td></tr><tr><td>Bit 23</td><td>Real Tx23</td></tr><tr><td>Bit 24</td><td>Real Tx24</td></tr><tr><td>Bit 25</td><td>Real Tx25</td></tr><tr><td>Bit 26</td><td>Real Tx26</td></tr><tr><td>Bit 27</td><td>Real Tx27</td></tr><tr><td>Bit 28</td><td>Real Tx28</td></tr><tr><td>Bit 29</td><td>Real Tx29</td></tr><tr><td>Bit 30</td><td>Reserved</td></tr><tr><td>Bit 31</td><td>Reserved</td></tr></table>	Bit 0	Real Tx0	Bit 1	Real Tx1	Bit 2	Real Tx2	Bit 3	Real Tx3	Bit 4	Real Tx4	Bit 5	Real Tx5	Bit 6	Real Tx6	Bit 7	Real Tx7	Bit 8	Real Tx8	Bit 9	Real Tx9	Bit 10	Real Tx10	Bit 11	Real Tx11	Bit 12	Real Tx12	Bit 13	Real Tx13	Bit 14	Real Tx14	Bit 15	Real Tx15	Bit 16	Real Tx16	Bit 17	Real Tx17	Bit 18	Real Tx18	Bit 19	Real Tx19	Bit 20	Real Tx20	Bit 21	Real Tx21	Bit 22	Real Tx22	Bit 23	Real Tx23	Bit 24	Real Tx24	Bit 25	Real Tx25	Bit 26	Real Tx26	Bit 27	Real Tx27	Bit 28	Real Tx28	Bit 29	Real Tx29	Bit 30	Reserved	Bit 31	Reserved
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Bit 29	Real Tx29																																																																		
Bit 30	Reserved																																																																		
Bit 31	Reserved																																																																		
File: Group:	SynchLink Buffered DataOut																																																																		
1161	SL Buf Int Tx00 Provides integer data for Direct Transmit word 0, if the data type for word 0 (indicated in parameter 1160 [Tx Buf Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-Bit Integer SynchLink Buffered DataOut																																																																
1162	SL Buf Real Tx00 Provides floating point (real) data for Direct Transmit word 0, if the data type for word 0 (indicated in parameter 1160 [Tx Buf Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Buffered DataOut																																																																
1163	SL Buf Int Tx01 Provides integer data for Direct Transmit word 1, if the data type for word 1 (indicated in parameter 1160 [Tx Buf Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-Bit Integer SynchLink Buffered DataOut																																																																

No.	Name Description	Values	
1164	SL Buf Real Tx01 Provides floating point (real) data for Direct Transmit word 1, if the data type for word 1 (indicated in parameter 1160 [Tx Buf Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Buffered DataOut
1165	SL Buf Int Tx02 Provides integer data for Direct Transmit word 2, if the data type for word 2 (indicated in parameter 1160 [Tx Buf Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-Bit Integer SynchLink Buffered DataOut
1166	SL Buf Real Tx02 Provides floating point (real) data for Direct Transmit word 2, if the data type for word 2 (indicated in parameter 1160 [Tx Buf Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Buffered DataOut
1167	SL Buf Int Tx03 Provides integer data for Direct Transmit word 3, if the data type for word 3 (indicated in parameter 1160 [Tx Buf Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-Bit Integer SynchLink Buffered DataOut
1168	SL Buf Real Tx03 Provides floating point (real) data for Direct Transmit word 3, if the data type for word 3 (indicated in parameter 1160 [Tx Buf Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Buffered DataOut
1169	SL Buf Int Tx04 Provides integer data for Direct Transmit word 4, if the data type for word 4 (indicated in parameter 1160 [Tx Buf Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-Bit Integer SynchLink Buffered DataOut
1170	SL Buf Real Tx04 Provides floating point (real) data for Direct Transmit word 4, if the data type for word 4 (indicated in parameter 1160 [Tx Buf Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Buffered DataOut
1171	SL Buf Int Tx05 Provides integer data for Direct Transmit word 5, if the data type for word 5 (indicated in parameter 1160 [Tx Buf Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-Bit Integer SynchLink Buffered DataOut

No.	Name Description	Values	
1172	SL Buf Real Tx05 Provides floating point (real) data for Direct Transmit word 5, if the data type for word 5 (indicated in parameter 1160 [Tx Buf Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Buffered DataOut
1173	SL Buf Int Tx06 Provides integer data for Direct Transmit word 6, if the data type for word 6 (indicated in parameter 1160 [Tx Buf Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-Bit Integer SynchLink Buffered DataOut
1174	SL Buf Real Tx06 Provides floating point (real) data for Direct Transmit word 6, if the data type for word 6 (indicated in parameter 1160 [Tx Buf Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Buffered DataOut
1175	SL Buf Int Tx07 Provides integer data for Direct Transmit word 7, if the data type for word 7 (indicated in parameter 1160 [Tx Buf Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-Bit Integer SynchLink Buffered DataOut
1176	SL Buf Real Tx07 Provides floating point (real) data for Direct Transmit word 7, if the data type for word 7 (indicated in parameter 1160 [Tx Buf Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Buffered DataOut
1177	SL Buf Int Tx08 Provides integer data for Direct Transmit word 8, if the data type for word 8 (indicated in parameter 1160 [Tx Buf Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-Bit Integer SynchLink Buffered DataOut
1178	SL Buf Real Tx08 Provides floating point (real) data for Direct Transmit word 8, if the data type for word 8 (indicated in parameter 1160 [Tx Buf Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Buffered DataOut
1179	SL Buf Int Tx09 Provides integer data for Direct Transmit word 9, if the data type for word 9 (indicated in parameter 1160 [Tx Buf Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-Bit Integer SynchLink Buffered DataOut

No.	Name Description	Values	
1180	SL Buf Real Tx09 Provides floating point (real) data for Direct Transmit word 9, if the data type for word 9 (indicated in parameter 1160 [Tx Buf Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Buffered DataOut
1181	SL Buf Int Tx10 Provides integer data for Direct Transmit word 10, if the data type for word 10 (indicated in parameter 1160 [Tx Buf Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-Bit Integer SynchLink Buffered DataOut
1182	SL Buf Real Tx10 Provides floating point (real) data for Direct Transmit word 10, if the data type for word 10 (indicated in parameter 1160 [Tx Buf Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Buffered DataOut
1183	SL Buf Int Tx11 Provides integer data for Direct Transmit word 11, if the data type for word 11 (indicated in parameter 1160 [Tx Buf Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-Bit Integer SynchLink Buffered DataOut
1184	SL Buf Real Tx11 Provides floating point (real) data for Direct Transmit word 11, if the data type for word 11 (indicated in parameter 1160 [Tx Buf Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Buffered DataOut
1185	SL Buf Int Tx12 Provides integer data for Direct Transmit word 12, if the data type for word 12 (indicated in parameter 1160 [Tx Buf Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-Bit Integer SynchLink Buffered DataOut
1186	SL Buf Real Tx12 Provides floating point (real) data for Direct Transmit word 12, if the data type for word 12 (indicated in parameter 1160 [Tx Buf Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Buffered DataOut
1187	SL Buf Int Tx13 Provides integer data for Direct Transmit word 13, if the data type for word 13 (indicated in parameter 1160 [Tx Buf Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-Bit Integer SynchLink Buffered DataOut

No.	Name Description	Values	
1188	SL Buf Real Tx13 Provides floating point (real) data for Direct Transmit word 13, if the data type for word 13 (indicated in parameter 1160 [Tx Buf Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Buffered DataOut
1189	SL Buf Int Tx14 Provides integer data for Direct Transmit word 14, if the data type for word 14 (indicated in parameter 1160 [Tx Buf Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-Bit Integer SynchLink Buffered DataOut
1190	SL Buf Real Tx14 Provides floating point (real) data for Direct Transmit word 14, if the data type for word 14 (indicated in parameter 1160 [Tx Buf Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Buffered DataOut
1191	SL Buf Int Tx15 Provides integer data for Direct Transmit word 15, if the data type for word 15 (indicated in parameter 1160 [Tx Buf Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-Bit Integer SynchLink Buffered DataOut
1192	SL Buf Real Tx15 Provides floating point (real) data for Direct Transmit word 15, if the data type for word 15 (indicated in parameter 1160 [Tx Buf Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Buffered DataOut
1193	SL Buf Int Tx16 Provides integer data for Direct Transmit word 16, if the data type for word 16 (indicated in parameter 1160 [Tx Buf Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-Bit Integer SynchLink Buffered DataOut
1194	SL Buf Real Tx16 Provides floating point (real) data for Direct Transmit word 16, if the data type for word 16 (indicated in parameter 1160 [Tx Buf Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Buffered DataOut
1195	SL Buf Int Tx17 Provides integer data for Direct Transmit word 17, if the data type for word 17 (indicated in parameter 1160 [Tx Buf Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-Bit Integer SynchLink Buffered DataOut

No.	Name Description	Values	
1196	SL Buf Real Tx17 Provides floating point (real) data for Direct Transmit word 17, if the data type for word 17 (indicated in parameter 1160 [Tx Buf Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Buffered DataOut
1197	SL Buf Int Tx18 Provides integer data for Direct Transmit word 18, if the data type for word 18 (indicated in parameter 1160 [Tx Buf Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-Bit Integer SynchLink Buffered DataOut
1198	SL Buf Real Tx18 Provides floating point (real) data for Direct Transmit word 18, if the data type for word 18 (indicated in parameter 1160 [Tx Buf Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Buffered DataOut
1199	SL Buf Int Tx19 Provides integer data for Direct Transmit word 19, if the data type for word 19 (indicated in parameter 1160 [Tx Buf Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-Bit Integer SynchLink Buffered DataOut
1200	SL Buf Real Tx19 Provides floating point (real) data for Direct Transmit word 19, if the data type for word 19 (indicated in parameter 1160 [Tx Buf Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Buffered DataOut
1201	SL Buf Int Tx20 Provides integer data for Direct Transmit word 20, if the data type for word 20 (indicated in parameter 1160 [Tx Buf Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-Bit Integer SynchLink Buffered DataOut
1202	SL Buf Real Tx20 Provides floating point (real) data for Direct Transmit word 20, if the data type for word 20 (indicated in parameter 1160 [Tx Buf Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Buffered DataOut
1203	SL Buf Int Tx21 Provides integer data for Direct Transmit word 21, if the data type for word 21 (indicated in parameter 1160 [Tx Buf Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-Bit Integer SynchLink Buffered DataOut

No.	Name Description	Values	
1204	SL Buf Real Tx21 Provides floating point (real) data for Direct Transmit word 21, if the data type for word 21 (indicated in parameter 1160 [Tx Buf Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Buffered DataOut
1205	SL Buf Int Tx22 Provides integer data for Direct Transmit word 22, if the data type for word 22 (indicated in parameter 1160 [Tx Buf Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-Bit Integer SynchLink Buffered DataOut
1206	SL Buf Real Tx22 Provides floating point (real) data for Direct Transmit word 22, if the data type for word 22 (indicated in parameter 1160 [Tx Buf Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Buffered DataOut
1207	SL Buf Int Tx23 Provides integer data for Direct Transmit word 23, if the data type for word 23 (indicated in parameter 1160 [Tx Buf Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-Bit Integer SynchLink Buffered DataOut
1208	SL Buf Real Tx23 Provides floating point (real) data for Direct Transmit word 23, if the data type for word 23 (indicated in parameter 1160 [Tx Buf Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Buffered DataOut
1209	SL Buf Int Tx24 Provides integer data for Direct Transmit word 24, if the data type for word 24 (indicated in parameter 1160 [Tx Buf Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-Bit Integer SynchLink Buffered DataOut
1210	SL Buf Real Tx24 Provides floating point (real) data for Direct Transmit word 24, if the data type for word 24 (indicated in parameter 1160 [Tx Buf Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Buffered DataOut
1211	SL Buf Int Tx25 Provides integer data for Direct Transmit word 25, if the data type for word 25 (indicated in parameter 1160 [Tx Buf Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-Bit Integer SynchLink Buffered DataOut

No.	Name Description	Values	
1212	SL Buf Real Tx25 Provides floating point (real) data for Direct Transmit word 25, if the data type for word 25 (indicated in parameter 1160 [Tx Buf Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Buffered DataOut
1213	SL Buf Int Tx26 Provides integer data for Direct Transmit word 26, if the data type for word 26 (indicated in parameter 1160 [Tx Buf Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-Bit Integer SynchLink Buffered DataOut
1214	SL Buf Real Tx26 Provides floating point (real) data for Direct Transmit word 26, if the data type for word 26 (indicated in parameter 1160 [Tx Buf Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Buffered DataOut
1215	SL Buf Int Tx27 Provides integer data for Direct Transmit word 27, if the data type for word 27 (indicated in parameter 1160 [Tx Buf Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-Bit Integer SynchLink Buffered DataOut
1216	SL Buf Real Tx27 Provides floating point (real) data for Direct Transmit word 27, if the data type for word 27 (indicated in parameter 1160 [Tx Buf Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Buffered DataOut
1217	SL Buf Int Tx28 Provides integer data for Direct Transmit word 28, if the data type for word 28 (indicated in parameter 1160 [Tx Buf Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-Bit Integer SynchLink Buffered DataOut
1218	SL Buf Real Tx28 Provides floating point (real) data for Direct Transmit word 28, if the data type for word 28 (indicated in parameter 1160 [Tx Buf Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Buffered DataOut
1219	SL Buf Int Tx29 Provides integer data for Direct Transmit word 29, if the data type for word 29 (indicated in parameter 1160 [Tx Buf Data Type]) is integer.	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Linkable, Read-Write, 32-Bit Integer SynchLink Buffered DataOut

No.	Name Description	Values		
1220	SL Buf Real Tx29 Provides floating point (real) data for Direct Transmit word 29, if the data type for word 29 (indicated in parameter 1160 [Tx Buf Data Type]) is real.	Default: Min: Max: Type: File: Group:	0 -2200000000 2200000000 Linkable, Read-Write, Floating Point SynchLink Buffered DataOut	
1226	SL Comm TP Sel Enter or write a value to select SynchLink data displayed by parameter 1227 [SL Comm TP Data].	Default:	Val 0	Zero
		Options:	Val 0 Zero Val 1 SL MultA Src Val 2 SL Mult A In Val 3 SL Mult B In Val 4 SL Mult Out Val 5 Rx Axis Size Val 6 Rx Dir Size Val 7 Rx Buf Size Val 8 Rx Pkg Size Val 9 Rx Seq Cnt Val 10 Rx Index 0 Val 11 Rx Index 1 Val 12 Rx Index 2 Val 13 BufSeqErrTim Val 14 Rx Sys Rev Val 15 Tx Axis Size Val 16 Tx Dir Size Val 17 Tx Buf Size Val 18 Tx Pkg Size Val 19 Tx Seq Cnt Val 20 Tx Index 0 Val 21 Tx Index 1 Val 22 Tx Index 2 Val 23 Rx Vendor ID Val 24 Rx ModuleTyp Val 25 Rx Serial #	
		File: Group:	Utility Test Points	
1227	SL Comm TP Data Displays data selected by parameter 1226 [SL Comm TP Sel].	Default: Min: Max: Type: File: Group:	0 -2147483648 2147483648 Non-Linkable, Read-Only, 32-Bit Integer Utility Test Points	

No.	Name Description	Values		
1229	SL Error Status Indicates presence of SynchLink faults. This data is visable on the SynchLink diagnostics tab of the Peer Communication window.	Default:	0000 0000 0000 0000 0000 0000 0000 0000	
		Options	Bit 0 Bit 1 Bit 2 Bit 3 Bit 4 Bit 5 Bit 6 Bit 7 Bit 8 Bit 9 Bit 10 Bit 11 Bit 12 Bit 13 Bit 14 Bit 15 Bit 16 Bit 17 Bti 18 Bit 19 Bit 20 Bit 21 Bit 22 Bit 23 Bit 24 Bit 25 Bit 26 Bit 27 Bit 28 Bit 29 Bit 30 Bit 31	Sync Loss Rx Loss Many BOF Err Many CRC Err Pckg Msg Err CommForm Err Sys Rev Err Mult TKeeper Reserved
		File: Group:	Utility Diagnostics	
1230	SL CRC Err Accum Displays the total accumulated number of CRC errors. Clearing a fault resets this accumulator. This data is visable on the SynchLink diagnostics tab of the Peer Communication window.	Default:	0	
		Min: Max: Type: File: Group:	0 4294967296 Non-Linkable, Read-Only, 32-Bit Integer Utility Diagnostics	
1231	SL CRC Error Displays the number of CRC errors that occurred during the last test (last 8 mS). This data is visable on the SynchLink diagnostics tab of the Peer Communication window.	Default:	0	
		Min: Max: Type: File: Group:	0 4294967296 Non-Linkable, Read-Only, 32-Bit Integer Utility Diagnostics	
1232	SL BOF Err Accum Displays the total accumulated number of BOF errors. Clearing a fault resets this accumulator. This data is visable on the SynchLink diagnostics tab of the Peer Communication window.	Default:	0	
		Min: Max: Type: File: Group:	0 4294967296 Non-Linkable, Read-Only, 32-Bit Integer Utility Diagnostics	

No.	Name Description	Values		
1233	SL BOF Error Displays the number of BOF errors that occurred during the last test (last 8 mS). This data is visable on the SynchLink diagnostics tab of the Peer Communication window.	Default: Min: Max: Type: File: Group:	0 0 4294967296 Non-Linkable, Read-Only, 32-Bit Integer Utility Diagnostics	
1234	SL CRC Err Limit The number of CRC errors per test (per 8 mS) allowed before the drive declares a SynchLink CRC Error exception event. Set this limit on the SynchLink diagnostics tab of the Peer Communication window.	Default: Min: Max: Type: File: Group:	2 0 256 Non-Linkable, Read-Write, 32-Bit Integer Utility Diagnostics	
1235	SL BOF Err Limit The number of BOF errors per test (per 8 mS) allowed before the drive declares a SynchLink BOF Error exception event. Set this limit on the SynchLink diagnostics tab of the Peer Communication window.	Default: Min: Max: Type: File: Group:	2 0 256 Non-Linkable, Read-Write, 32-Bit Integer Utility Diagnostics	
2000	DM Com Prt Stat Indicates faults or warnings related to the Drive Module's Drive Communication ports. • Bit 0 [Bad Rcv Int] indicates the interrupt generated by the Universal Serial Controller (USC) is not properly marked • Bit 1 [No EOF] indicates the USC did not report an End of Frame condition when the recieve interrupt was generated • Bit 2 [CRC Error] indicates the USC has reported a Cyclic Redundancy Check (CRC) error on the last frame (message) received • Bit 3 [Overrun Err] indicates the USC has reported a receive firs-in, first out error • Bit 4 [DMA Error] indicates the length of a received message did not match the length encoded in the message itself • Bit 5 [Xmit Underun] indicates the USC has reported a transmit first-in, first-out underrun • Bit 6 [Sync Error] indicates two or more CCLK counter ticks occurred and no message was recieved • Bit 7 [LoopBack Err] indicates failure in the loopback test (the transmit message did not match the receive message). The Drive Module performs this test on power-up and reset. • Bit 8 [Missed Gains] indicates gain data could not be written because memory was being written to when the gain values were received • Bit 9 [Multplx Err] indicates data which is multiplexed into a command/feedback message has not verified correctly	Default:	0000 0000 0000 0000	
		Options:	Bit 0 Bit 1 Bit 2 Bit 3 Bit 4 Bit 5 Bit 6 Bit 7 Bit 8 Bit 9 Bit 10 Bit 11 Bit 12 Bit 13 Bit 14 Bit 15	Bad Rcv Int No EOF CRC Error Overrun Err DMA Error Xmit Underun Sync Error LoopBack Err Missed Gains Multplx Err No PMI OS Bad OS Hdr Bad PMI HW Reserved Reserved Reserved
		File: Group:	DPS/PMI DPS/PMI	
			• Bit 10 [No PMI OS] indicates the correct PMI operating system is not present in the Drive Module and the PMI is requesting an operating system • Bit 11 [Bad OS Hdr] indicates the Drive Module cannot locate a valid PMI operating system header when attempting to load an operating system to a PMI • Bit 12 [Bad PMI HW] indicates PMI hardware is not compatible with the PMI operating systems in the Drive Module	

No.	Name Description	Values		
2001	DM Good Msg Cnt Displays the number of messages received by the Drive Module from the PMI processor. This is a 16-bit value that rolls over when it reaches its maximum.	Default: Min: Max: Type: File: Group:	0 0 65535 Non-Linkable, Read-Only, 16-Bit Integer DPS/PMI Comm Status	
2002	DM CRC Error Cnt Displays the number of messages with CRC errors received by Drive Module from the PMI processor. This is a 16-bit value that rolls over when it reaches its maximum.	Default: Min: Max: Type: File: Group:	0 0 65535 Non-Linkable, Read-Only, 16-Bit Integer DPS/PMI Comm Status	
2003	DM Frmt ErrorCnt Displays the number of messages with format errors received by Drive Module from the PMI processor. This is a 16-bit value that rolls over when it reaches its maximum.	Default: Min: Max: Type: File: Group:	0 0 65535 Non-Linkable, Read-Only, 16-Bit Integer DPS/PMI Comm Status	
2004	DM Com Prt Stat Indicates faults or warnings related to the Drive Module's Drive Communication ports. • Bit 0 [Bad Rcv Int] indicates the interrupt generated by the Universal Serial Controller (USC) is not properly marked • Bit 1 [No EOF] indicates the USC did not report an End of Frame condition when the recieve interrupt was generated • Bit 2 [CRC Error] indicates the USC has reported a Cyclic Redundancy Check (CRC) error on the last frame (message) received • Bit 3 [Overrun Err] indicates the USC has reported a receive firs-in, first out error • Bit 4 [DMA Error] indicates the length of a received message did not match the length encoded in the message itself • Bit 5 [Xmit Underun] indicates the USC has reported a transmit first-in, first-out underrun • Bit 6 [Sync Error] indicates two or more CCLK counter ticks occurred and no message was recieved • Bit 8 [DM Sync Err] indicates two or more CCLK counter ticks occurred and no message was recieved • Bit 9 [Muxplx Err] indicates data which is multiplexed into a command/feedback message has not verified correctly • Bit 12 [Bad Start Ad] indicates the operating system is not within the allocated operating system address area	Default:	0000 0000 0000 0000	
		Options:	Bit 0 Bit 1 Bit 2 Bit 3 Bit 4 Bit 5 Bit 6 Bit 7 Bit 8 Bit 9 Bit 10 Bit 11 Bit 12 Bit 13 Bit 14 Bit 15	Bad Rcv Int No EOF CRC Error Overrun Err DMA Error Xmit Underun Sync Error Reserved DM Sync Err Muxplx Err Reserved Reserved Bad Start Ad Bad PMI Mem Bad Load Ad PMI OverFlow
		File: Group:	DPS/PMI DPS/PMI	
		• Bit 13 [Bad PMI Mem] indicates there is insufficient memory in the PMI processor for loading the operating system • Bit 14 [Bad Load Ad] indicates the address at which the PMI processor is to load the operating system is invalid • Bit 15 [PMI OverFlow] indicates the loading of the PMI operating system will overrun the PMI stack memory area		
2005	PMI Good Msg Cnt Displays the number of messages received by the PMI processor from the Drive Module. This is a 16-bit value that rolls over when it reaches its maximum.	Default: Min: Max: Type: File: Group:	0 0 65535 Non-Linkable, Read-Only, 16-Bit Integer DPS/PMI Comm Status	

No.	Name Description	Values		
2006	PMI CRC ErrorCnt Displays the number of messages with CRC errors received by the PMI processor from the Drive Module. This is a 16-bit value that rolls over when it reaches its maximum.	Default: Min: Max: Type: File: Group:	0 0 65535 Non-Linkable, Read-Only, 16-Bit Integer DPS/PMI Comm Status	
2007	PMIFmt ErrorCnt Displays the number of messages with format errors received by the PMI processor from the Drive Module. This is a 16-bit value that rolls over when it reaches its maximum.	Default: Min: Max: Type: File: Group:	0 0 65535 Non-Linkable, Read-Only, 16-Bit Integer DPS/PMI Comm Status	
2008	DM Link Status Indicates the current status of Drive Communication. • Bit 1 [Pending OS] indicates the Drive Module is waiting for a request from the PMI processor for an operating system • Bit 2 [Loading OS] indicates the Drive Module is downloading an operating system to the PMI processor • Bit 3 [Setpt Fdbk] indicates the Drive Module and PMI processor are exchanging data • Bit 5 [LoopBack Tst] indicates the Drive Module and PMI processor are performing the loopback test • Bit 6 [Test Mode] indicates tba • Bit 8 [Synchronized] indicates Drive Communication is synchronized • Bit 9 [Unsynchroniz] indicates Drive Communication is not synchronized	Default:	0000 0000 0000 0000	
		Options:	Bit 0 Bit 1 Bit 2 Bit 3 Bit 4 Bit 5 Bit 6 Bit 7 Bit 8 Bit 9 Bit 10 Bit 11 Bit 12 Bit 13 Bit 14 Bit 15	Reserved Pending OS Loading OS Setpt Fdbk Reserved LoopBack Tst Test Mode Reserved Synchronized Unsynchroniz Reserved Reserved Reserved Reserved Reserved Reserved
		File: Group:	DPS/PMI DPS/PMI	
2009	DM Tx Msg Count Displays the number of messages transmitted by the Drive Module. This is a 16-bit value that rolls over when it reaches its maximum.	Default: Min: Max: Type: File: Group:	0 0 65535 Non-Linkable, Read-Only, 16-Bit Integer DPS/PMI Comm Status	
2010	DM Sync WarnCnt Displays the number of messages transmitted by the Drive Module, that the PMI processor can not synchronize. This is a 16-bit value that rolls over when it reaches its maximum.	Default: Min: Max: Type: File: Group:	0 0 65535 Non-Linkable, Read-Only, 16-Bit Integer DPS/PMI Comm Status	
2011	DM Bad Msg Cnt Displays the number of invalid messages transmitted on Drive Communication. This is a 16-bit value that rolls over when it reaches its maximum.	Default: Min: Max: Type: File: Group:	0 0 65535 Non-Linkable, Read-Only, 16-Bit Integer DPS/PMI Comm Status	

No.	Name Description	Values	
2012	DM Sync Count Displays the value of an internal counter that synchronizes the Drive Module and PMI processor.	Default: Min: Max: Type: File: Group:	0 0 65535 Non-Linkable, Read-Only, 16-Bit Integer DPS/PMI Comm Status
2013	PMI Gain Count Displays the number of gain messages sent on Drive Communication. This is a 16-bit value that rolls over when it reaches its maximum.	Default: Min: Max: Type: File: Group:	0 0 65535 Non-Linkable, Read-Only, 16-Bit Integer DPS/PMI Comm Status
2014	DM Tx Time Displays the value of parameter 2012 [DM Sync Count] when the Drive Module finished transmitting a set point message.	Default: Min: Max: Type: File: Group:	0 0 65535 Non-Linkable, Read-Only, 16-Bit Integer DPS/PMI Comm Status
2015	DM Tx Time Avail Displays the value of the parameter 2012 [DM Sync Count] when the Drive Module receives a feedback message. This is a good indication of the amount of remaining bandwidth on Drive Communication.	Default: Min: Max: Type: File: Group:	0 0 65535 Non-Linkable, Read-Only, 16-Bit Integer DPS/PMI Comm Status
2040	Rail Port 0 Ch 0 Enter the code for the type of Rail I/O on each channel. Refer to section 3.1, "Rail I/O Port Registers", of Reliance Electric publication 3036, <i>Distributed Power System SF3000 Drive Configuration and Programming</i> .	Default: Min: Max: Type: File: Group:	0 0 65535 Linkable, Read-Write, 16-Bit Integer DPS/PMI Inputs & Outputs
2041	Rail Port 0 Ch 1 Enter the code for the type of Rail I/O on each channel. Refer to section 3.1, "Rail I/O Port Registers", of Reliance Electric publication 3036, <i>Distributed Power System SF3000 Drive Configuration and Programming</i> .	Default: Min: Max: Type: File: Group:	0 0 65535 Linkable, Read-Write, 16-Bit Integer DPS/PMI Inputs & Outputs
2042	Rail Port 0 Ch 2 Enter the code for the type of Rail I/O on each channel. Refer to section 3.1, "Rail I/O Port Registers", of Reliance Electric publication 3036, <i>Distributed Power System SF3000 Drive Configuration and Programming</i> .	Default: Min: Max: Type: File: Group:	0 0 65535 Linkable, Read-Write, 16-Bit Integer DPS/PMI Inputs & Outputs
2043	Rail Port 0 Ch 3 Enter the code for the type of Rail I/O on each channel. Refer to section 3.1, "Rail I/O Port Registers", of Reliance Electric publication 3036, <i>Distributed Power System SF3000 Drive Configuration and Programming</i> .	Default: Min: Max: Type: File: Group:	0 0 65535 Linkable, Read-Write, 16-Bit Integer DPS/PMI Inputs & Outputs

No.	Name Description	Values		
2044	Rail Port 0 Flt Indicates faults associated with Rail I/O on the port.	Default:	0000 0000 0000 0000	
		Options	Bit 0 Bit 1 Bit 2 Bit 3 Bit 4 Bit 5 Bit 6 Bit 7 Bit 8 Bit 9 Bti 10 Bit 11 Bit 12 Bit 13 Bit 14 Bit 15	Ch0 OvrRange Ch0 UndRange Ch1 OvrRange Ch1 UndRange Ch2 OvrRange Ch2 UndRange Ch3 OvrRange Ch3 UndRange Port NotCntd Bad ID Bad Chk Bits I/O NotRdy Reserved Reserved Reserved Reserved
		File: Group:	DPS/PMI Inputs & Outputs	
2045	RailPrt 0FltCnt Displays number of fault occurrences at the port. Refer to section 3.1, “Rail I/O Port Registers”, of Reliance Electric publication 3036, <i>Distributed Power System SF3000 Drive Configuration and Programming</i> .	Default: Min: Max: Type: File: Group:	0 0 65535 Non-Linkable, Read-Only, 16-Bit Integer DPS/PMI Inputs & Outputs	
2046	Rail Port 1 Ch 0 Enter the code for the type of Rail I/O on each channel. Refer to section 3.1, “Rail I/O Port Registers”, of Reliance Electric publication 3036, <i>Distributed Power System SF3000 Drive Configuration and Programming</i> .	Default: Min: Max: Type: File: Group:	0 0 65535 Linkable, Read-Write, 16-Bit Integer DPS/PMI Inputs & Outputs	
2047	Rail Port 1 Ch 1 Enter the code for the type of Rail I/O on each channel. Refer to section 3.1, “Rail I/O Port Registers”, of Reliance Electric publication 3036, <i>Distributed Power System SF3000 Drive Configuration and Programming</i> .	Default: Min: Max: Type: File: Group:	0 0 65535 Linkable, Read-Write, 16-Bit Integer DPS/PMI Inputs & Outputs	
2048	Rail Port 1 Ch 2 Enter the code for the type of Rail I/O on each channel. Refer to section 3.1, “Rail I/O Port Registers”, of Reliance Electric publication 3036, <i>Distributed Power System SF3000 Drive Configuration and Programming</i> .	Default: Min: Max: Type: File: Group:	0 0 65535 Linkable, Read-Write, 16-Bit Integer DPS/PMI Inputs & Outputs	
2049	Rail Port 1 Ch 3 Enter the code for the type of Rail I/O on each channel. Refer to section 3.1, “Rail I/O Port Registers”, of Reliance Electric publication 3036, <i>Distributed Power System SF3000 Drive Configuration and Programming</i> .	Default: Min: Max: Type: File: Group:	0 0 65535 Linkable, Read-Write, 16-Bit Integer DPS/PMI Inputs & Outputs	

No.	Name Description	Values		
2050	Rail Port 1 Flt Indicates faults associated with Rail I/O on the port.	Default:	0000 0000 0000 0000	
		Options	Bit 0 Bit 1 Bit 2 Bit 3 Bit 4 Bit 5 Bit 6 Bit 7 Bit 8 Bit 9 Bit 10 Bit 11 Bit 12 Bit 13 Bit 14 Bit 15	Ch0 OvrRange Ch0 UndRange Ch1 OvrRange Ch1 UndRange Ch2 OvrRange Ch2 UndRange Ch3 OvrRange Ch3 UndRange Port NotCntd Bad ID Bad Chk Bits I/O NotRdy Reserved Reserved Reserved Reserved
		File: Group:	DPS/PMI Inputs & Outputs	
2051	RailPrt 1FltCnt Displays number of fault occurrences at the port.	Default: Min: Max: Type: File: Group:	0 0 65535 Non-Linkable, Read-Only, 16-Bit Integer DPS/PMI Inputs & Outputs	

No.	Name Description	Values		
2080	Meter Port1 Sel Enter a value to configure the output of the meter port.	Default:	Val 0	Zero
		Options:	Val 0 Val 1 Val 2 Val 3 Val 4 Val 5 Val 6 Val 7 Val 8 Val 9 Val 10 Val 11 Val 12 Val 13 Val 14 Val 15 Val 16 Val 17 Val 18 Val 19 Val 20 Val 21 Val 22 Val 23 Val 24 Val 25 Val 26 Val 27 Val 28	Zero 3Ph I Ref Ct 3Ph I FB Ct 3Ph I Fbk A 3Ph Voltage 3Ph Max Ang 3Ph Ang 3Ph Min Ang Fld I Ref Ct Fld I FB Ct Fld I FB A Fld Voltage Fld Max Ang Fld Ang Fld Min Ang Cntr EMF V AC Volts User An In Spd FB RPM App Data Rail Prt0 C0 Rail Prt0 C1 Rail Prt0 C2 Rail Prt0 C3 Rail Prt1 C0 Rail Prt1 C1 Rail Prt1 C2 Rail Prt1 C3 Reserved
		File: Group:	DPS/PMI Inputs & Outputs	
2081	MeterP1 +10v Val Enter the value of the source parameter that corresponds to +10V dc output at the meter.	Default: Min: Max: Type: File: Group:	0 -32768 32767 Linkable, Read-Write, 32-Bit Integer DPS/PMI Inputs & Outputs	
2082	MeterP1 -10v Val Enter the value of the source parameter that corresponds to -10V dc output at the meter.	Default: Min: Max: Type: File: Group:	0 -32768 32767 Linkable, Read-Write, 32-Bit Integer DPS/PMI Inputs & Outputs	

No.	Name Description	Values		
2083	Meter Port2 Sel Enter a value to configure the output of the meter port.	Default:	Val 0	Zero
		Options:	Val 0 Val 1 Val 2 Val 3 Val 4 Val 5 Val 6 Val 7 Val 8 Val 9 Val 10 Val 11 Val 12 Val 13 Val 14 Val 15 Val 16 Val 17 Val 18 Val 19 Val 20 Val 21 Val 22 Val 23 Val 24 Val 25 Val 26 Val 27 Val 28	Zero 3Ph I Ref Ct 3Ph I FB Ct 3Ph I Fbk A 3Ph Voltage 3Ph Max Ang 3Ph Ang 3Ph Min Ang Fld I Ref Ct Fld I FB Ct Fld I FB A Fld Voltage Fld Max Ang Fld Ang Fld Min Ang Cntr EMF V AC Volts User An In Spd FB RPM App Data Rail Prt0 C0 Rail Prt0 C1 Rail Prt0 C2 Rail Prt0 C3 Rail Prt1 C0 Rail Prt1 C1 Rail Prt1 C2 Rail Prt1 C3 Reserved
		File: Group:	DPS/PMI Inputs & Outputs	
2084	MeterP2 +10v Val Enter the value of the source parameter that corresponds to +10V dc output at the meter.	Default: Min: Max: Type: File: Group:	0 -32768 32767 Linkable, Read-Write, 32-Bit Integer DPS/PMI Inputs & Outputs	
2085	MeterP2 -10v Val Enter the value of the source parameter that corresponds to -10V dc output at the meter.	Default: Min: Max: Type: File: Group:	0 -32768 32767 Linkable, Read-Write, 32-Bit Integer DPS/PMI Inputs & Outputs	

No.	Name Description	Values		
2086	Meter Port3 Sel Enter a value to configure the output of the meter port.	Default:	Val 0	Zero
		Options:	Val 0 Val 1 Val 2 Val 3 Val 4 Val 5 Val 6 Val 7 Val 8 Val 9 Val 10 Val 11 Val 12 Val 13 Val 14 Val 15 Val 16 Val 17 Val 18 Val 19 Val 20 Val 21 Val 22 Val 23 Val 24 Val 25 Val 26 Val 27 Val 28	Zero 3Ph I Ref Ct 3Ph I FB Ct 3Ph I Fbk A 3Ph Voltage 3Ph Max Ang 3Ph Ang 3Ph Min Ang Fld I Ref Ct Fld I FB Ct Fld I FB A Fld Voltage Fld Max Ang Fld Ang Fld Min Ang Cntr EMF V AC Volts User An In Spd FB RPM App Data Rail Prt0 C0 Rail Prt0 C1 Rail Prt0 C2 Rail Prt0 C3 Rail Prt1 C0 Rail Prt1 C1 Rail Prt1 C2 Rail Prt1 C3 Reserved
		File: Group:	DPS/PMI Inputs & Outputs	
2087	MeterP3 +10v Val Enter the value of the source parameter that corresponds to +10V dc output at the meter.	Default: Min: Max: Type: File: Group:	0 -32768 32767 Linkable, Read-Write, 32-Bit Integer DPS/PMI Inputs & Outputs	
2088	MeterP3 -10v Val Enter the value of the source parameter that corresponds to -10V dc output at the meter.	Default: Min: Max: Type: File: Group:	0 -32768 32767 Linkable, Read-Write, 32-Bit Integer DPS/PMI Inputs & Outputs	

No.	Name Description	Values		
2089	Meter Port4 Sel Enter a value to configure the output of the meter port.	Default:	Val 0	Zero
		Options:	Val 0 Val 1 Val 2 Val 3 Val 4 Val 5 Val 6 Val 7 Val 8 Val 9 Val 10 Val 11 Val 12 Val 13 Val 14 Val 15 Val 16 Val 17 Val 18 Val 19 Val 20 Val 21 Val 22 Val 23 Val 24 Val 25 Val 26 Val 27 Val 28	Zero 3Ph I Ref Ct 3Ph I FB Ct 3Ph I Fbk A 3Ph Voltage 3Ph Max Ang 3Ph Ang 3Ph Min Ang Fld I Ref Ct Fld I FB Ct Fld I FB A Fld Voltage Fld Max Ang Fld Ang Fld Min Ang Cntr EMF V AC Volts User An In Spd FB RPM App Data Rail Prt0 C0 Rail Prt0 C1 Rail Prt0 C2 Rail Prt0 C3 Rail Prt1 C0 Rail Prt1 C1 Rail Prt1 C2 Rail Prt1 C3 Reserved
		File: Group:	DPS/PMI Inputs & Outputs	
2090	MeterP4 +10v Val Enter the value of the source parameter that corresponds to +10V dc output at the meter.	Default: Min: Max: Type: File: Group:	0 -32768 32767 Linkable, Read-Write, 32-Bit Integer DPS/PMI Inputs & Outputs	
2091	MeterP4 -10v Val Enter the value of the source parameter that corresponds to -10V dc output at the meter.	Default: Min: Max: Type: File: Group:	0 -32768 32767 Linkable, Read-Write, 32-Bit Integer DPS/PMI Inputs & Outputs	

No.	Name Description	Values		
2100	Drive Ctrl Word Displays the control word sent to the PMI processor. Parameter 166 [Motor Ctrl Cmmd] and the VPL sequencer determine the value of this parameter.	Default:	0000 0000 0000 0000	
		Options	Bit 0 Bit 1 Bit 2 Bit 3 Bit 4 Bit 5 Bit 6 Bit 7 Bit 8 Bit 9 Bti 10 Bit 11 Bit 12 Bit 13 Bit 14 Bit 15	CMLoop Run 3Ph ID Tst 3Ph AlphaTst 3PhRALph Tst FML Run Fld Id Tst Fld AlphaTst FldRALph Tst Fault Reset Warng Reset Dsbl BrstFrg Dsbl Fld Wk Dsbl ShrtSCR Open Lop Cur Dsbl Opn SCR Reserved
		File: Group:	DPS/PMI Commands	
2102	3Ph Test Angle Enter the firing angle for the three-phase alpha test. Enter a value between 5 degrees (full on) and 180 degrees (full off). The drive module clamps any entry outside this range to be within the limits. Select forward and reverse tests by setting bit 26 [3Ph Alph Tst] or bit 28 [3PhRALph Tst] of parameter 166 [Motor Ctrl Cmmd]. Enter the firing angle value before enabling the test. Attention: Uncontrolled machine operation could result with motor connected during this test. This could cause bodily injury. Disconnect motor from drive before enabling test.	Units: Default: Min: Max: Type: File: Group:	Deg 180 5 180 Linkable, Read-Write, 16-Bit Integer DPS/PMI Commands	
2103	3Ph Curr Ref Displays the current reference for the three-phase current minor loop. A value of 4095 indicates maximum positive current - equal to the value of parameter 122 [Curr PosLim Actl]. A value of -4095 indicates a maximum negative current - equal to the value of parameter 121 [Curr NegLim Actl].	Default: Min: Max: Type: File: Group:	0 -4095 4095 Non-Linkable, Read-Only, 32-Bit Integer DPS/PMI Commands	
2104	Field Test Angle Enter the firing angle for the field alpha test. Enter a value between 5 degrees (full on) and 180 degrees (full off). The drive module clamps any entry outside this range to be within the limits. Select forward and reverse tests by setting bit 27 [Fld Alph Tst] or bit 29 [FldRALph Tst] of parameter 166 [Motor Ctrl Cmmd]. Enter the firing angle value before enabling the test. Attention: Uncontrolled machine operation could result with motor connected during this test. This could cause bodily injury. Disconnect motor from drive before enabling test.	Units: Default: Min: Max: Type: File: Group:	Deg 180 5 180 Linkable, Read-Write, 16-Bit Integer DPS/PMI Commands	
2105	Field Curr Ref Displays the current reference for the field current minor loop. A value of 4095 indicates hot field current - equal to the value of parameter 2185 [Hot Field Curr].	Default: Min: Max: Type: File: Group:	0 -4095 4095 Linkable, Read-Write, 32-Bit Integer DPS/PMI Commands	

No.	Name Description	Values		
2106	PMI D/A Output The value in the PMI D/A Output register is transmitted to the PMI Processor. The value can then be displayed on one of the four PMI Processor meter ports. This register can contain any variable in the system as long as it is a 16-bit integer. Floating point or double-integer values cannot be displayed on the PMI Processor's D/A meter ports.	Default: Min: Max: Type: File: Group:	0 -32768 32767 Linkable, Read-Write, 32-Bit Integer DPS/PMI Commands	
2122	MC Faults Indicates Motor-Control faults. These bits latch when a Motor-Control fault event occurs. They stay latched until bit 19 [Clear Fault] of parameter 152 [Applied LogicCmd] or bit 19 [Clr Drv Wrn] of parameter 166 [Motor Ctrl Cmmd] is set. If the fault condition remains present, the identifying bit is set again.	Default:	0000 0000 0000 0000 0000 0000 0000 0000	
		Options	Bit 0 Bit 1 Bit 2 Bit 3 Bit 4 Bit 5 Bit 6 Bit 7 Bit 8 Bit 9 Bti 10 Bit 11 Bit 12 Bit 13 Bit 14 Bit 15 Bit 16 Bit 17 Bit 18 Bit 19 Bit 20 Bit 21 Bit 22 Bit 23 Bit 24 Bit 25 Bit 26 Bit 27 Bit 28 Bit 29 Bit 30 Bit 31	SCR Fault Reserved Reserved AC Line Sync InstOvr Curr Reserved Field Loss Reserved TachWire Opn ResolverCard Reserved PwrTech Card PMI Pwr Sply PMI Bus Reserved PMI CommLoss Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved
		File: Group:	Utility, DPS/PMI Diagnostics, Feedback	

No.	Name Description	Values		
2123	MC Warnings Indicates Motor-Control warnings. These bits latch when a Motor-Control warning event occurs. They stay latched until bit 19 [Clear Fault] of parameter 152 [Applied LogicCmd] or bit 19 [Clr Drv Wrn] of parameter 166 [Motor Ctrl Cmmd] is set. If the warning condition remains present, the identifying bit is set again.	Default:	0000 0000 0000 0000 0000 0000 0000 0000	
		Options	Bit 0 Bit 1 Bit 2 Bit 3 Bit 4 Bit 5 Bit 6 Bit 7 Bit 8 Bit 9 Bit 10 Bit 11 Bit 12 Bit 13 Bit 14 Bit 15 Bit 16 Bit 17 Bit 18 Bit 19 Bit 20 Bit 21 Bit 22 Bit 23 Bit 24 Bit 25 Bit 26 Bit 27 Bit 28 Bit 29 Bit 30 Bit 31	BrdgNotFirng Low AC Line Reserved LineSyncLoss Curr Ref Lim ID TestAbort Fld OvrCurr 3Ph Fdbk Rev CT Fdbk Rev Reserved Reserved Reserved PMI Fan Loss Rail IO Comm PMI CommSync PMI Comm Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved Reserved
		File: Group:	Utility, DPS/PMI Diagnostics, Feedback	

No.	Name Description	Values		
2124	Pwr DeviceStatus Indicates which SCR has shorted or not firing. If an SCR is shorted, bit 0 [SCR Fault] of parameter 2122 [MC Faults] will be set. If an SCR is not firing correctly, bit 0 [BrdgNotFirng] of parameter 2123 [MC Warnings] will be set. For a regenerative drive, this parameter indicates the pair of SCRs that has faulted. For a non-regenerative drive, this parameter indicates the specific SCR that has faulted. The bits of this parameters are set when a fault event is detected. They stay latched until bit 19 [Clear Fault] of parameter 152 [AppliedLogic Cmd] or bit 19 [Clr Drv Wrn] of parameter 166 [Motor Ctrl Cmmnd] is set. If the fault event remains present, the identifying bit is set again.	Default:	0000 0000 0000 0000	
		Options	Bit 0 Bit 1 Bit 2 Bit 3 Bit 4 Bit 5 Bit 6 Bit 7 Bit 8 Bit 9 Bti 10 Bit 11 Bit 12 Bit 13 Bit 14 Bit 15	SCR 1 Fault SCR 2 Fault SCR 3 Fault SCR 4 Fault SCR 5 Fault SCR 6 Fault SCR 11 Fault SCR 12 Fault SCR 13 Fault SCR 14 Fault SCR 15 Fault SCR 16 Fault Reserved Reserved Reserved Reserved
		File: Group:	Utility, DPS/PMI Diagnostics, Feedback	
2125	Interlock Code The PMI processor performs interlock tests in response to parameter 2100 [Drive Ctrl Word]. If any of the diagnostics fail the PMI processor sets the bit in parameter 2125 [Interlock Code] that corresponds to the first failed diagnostic. The bit stays latched until bit 19 [Clear Fault] of parameter 152 [Applied LogicCmd] or bit 19 [Clr Drv Wrn] of parameter 166 [Motor Ctrl Cmmnd] is set. Refer to Reliance Electric publication S-3001-1, Distributed Power System SD3000 Drive Diagnostics, Troubleshooting and Start-Up Guidelines, for information about the interlock diagnostics.	Default:	0000 0000 0000 0000	
		Options	Bit 0 Bit 1 Bit 2 Bit 3 Bit 4 Bit 5 Bit 6 Bit 7 Bit 8 Bit 9 Bti 10 Bit 11 Bit 12 Bit 13 Bit 14 Bit 15	Bad CML Req 3PhPrmNotLod 3PhGnsNotLod 3PhFlt RstRq RPI Missing Fld Not Rdy Fld NotAlwd M-Con NotCls Bad FML Req F Par NotLod F Gns NotLod F Flt Rst Rq Reserved Reserved F FB or Cfg Reserved
		File: Group:	Utility, DPS/PMI Diagnostics, Feedback	
2126	AC Line Volt FB Displays the measured AC RMS line voltage in volts.	Units:	Volt	
		Default: Min: Max: Type: File: Group:	0 0 1000 Non-Linkable, Read-Only, Floating Point DPS/PMI Feedback	
2127	3Ph Feedback Displays measured three-phase current. A value of 4095 indicates maximum positive current - equal to the value of parameter 122 [Curr PosLim Actl]. A value of -4095 indicates a maximum negative current - equal to the value of parameter 121 [Curr NegLim Actl].	Default:	0	
		Min: Max: Type: File: Group:	-4095 4095 Non-Linkable, Read-Only, 16-Bit Integer DPS/PMI Feedback	

No.	Name Description	Values	
2131	FML Feedback Displays measured field current. A value of 4095 indicates hot field current - equal to the value of parameter 2185 [Hot Field Curr].	Units: Default: Min: Max: Type: File: Group:	P.U. 0 -4095 4095 Non-Linkable, Read-Only, 16-Bit Integer DPS/PMI Feedback
2132	Field Amps Fdbk Displays measured field current in Amps x 10, (e.g., a value of 501 indicates 50.1A).	Units: Default: Min: Max: Type: File: Group:	Amps 0 -32768 32767 Non-Linkable, Read-Only, Floating Point DPS/PMI Feedback
2133	Field Volt Fdbk Displays the field voltage feedback value, in volts. This voltage is calculated based on the AC line voltage and field firing angle.	Units: Default: Min: Max: Type: File: Group:	Volt 0 -32768 32767 Non-Linkable, Read-Only, Floating Point DPS/PMI Feedback
2134	User Anlg Input Displays the measured user analog input value from the Resolver Feedback connector on the Resolver & Drive I/O module. This value may be accessed through the PMI meter ports.	Default: Min: Max: Type: File: Group:	0 -2048 2048 Non-Linkable, Read-Only, 16-Bit Integer DPS/PMI Feedback
2135	Res Scan Posit Displays the electrical position of the resolver (if used). This register is reset to zero at power-up.	Default: Min: Max: Type: File: Group:	0 -32768 32767 Non-Linkable, Read-Only, 16-Bit Integer Speed/Posit Fdbk, DPS/PMI Resolver, Feedback
2136	Res Strobe Posit Displays the electrical position of the resolver at the time a strobe signal is detected.	Default: Min: Max: Type: File: Group:	0 -32768 32767 Non-Linkable, Read-Only, 16-Bit Integer DPS/PMI Feedback
2149	NV Faults Non Volatile storage location for internal module faults. Rockwell development personnel may use the value in this register to debug the module firmware.	Default: Min: Max: Type: File: Group:	0 0 4294967296 Non-Linkable, Read-Only, 32-Bit Integer DPS/PMI Feedback
2150	CML Crossovr Frq Enter a value to determine the response of the current minor loop. Higher values improve response. However, higher values may degrade stability.	Units: Default: Min: Max: Type: File: Group:	R/S 200 0 400 Linkable, Read-Write, 16-Bit Integer DPS/PMI Regulator Config

No.	Name Description	Values	
2151	3Ph Resistance Enter the continuous-conduction resistance of the three-phase field, in ohms.	Units: Default: Min: Max: Type: File: Group:	Ohms 0 0 327.67 Linkable, Read-Write, 16-Bit Integer DPS/PMI Regulator Config
2152	3Ph TimeConstant Enter the electric time constant (Te) of the motor or generator field, in mS x 10, (e.g., a value of 100 indicates a time constant of 10 mS). This is the ratio of field inductance to field resistance. If this value is not specified by the motor manufacturer, use the following formula: parameter 2152 [3Ph TimeConstant] = 10,000 x L / R; where L is the armature inductance in henries, and R is the hot armature resistance in ohms. The ID test will provide a value that takes into account the entire circuit (motor and motor leads), which may be different from a value from the motor manufacturer or the calculation.	Units: Default: Min: Max: Type: File: Group:	mSec 0 0 5000 Linkable, Read-Write, 16-Bit Integer DPS/PMI Regulator Config
2154	FML Crossover Frq Enter a value to determine the response of the field regulation loop. Higher values improve response. However, higher values may degrade stability.	Units: Default: Min: Max: Type: File: Group:	R/S 15 0 75 Linkable, Read-Write, 16-Bit Integer DPS/PMI Regulator Config
2155	Field Resistance Enter the resistance of the field, in ohms.	Units: Default: Min: Max: Type: File: Group:	Ohms 0 0 3276.7 Linkable, Read-Write, 16-Bit Integer DPS/PMI Regulator Config
2156	Fld TimeConstant Enter the electric time constant (Tf) of the field, in S x 1,000, (e.g., a value of 100 indicates a time constant of 0.1S). This is the ratio of field inductance to field resistance. If this value is not specified by the motor manufacturer, use the following formula: parameter 2156 [Fld TimeConstant] = 10 x L / R; where L is the field inductance in henries, and R is the field resistance in ohms. The ID test will provide a value that takes into account the entire circuit (motor and motor leads), which may be different from a value from the motor manufacturer or the calculation.	Units: Default: Min: Max: Type: File: Group:	mSec 0 0 32767 Linkable, Read-Write, 16-Bit Integer DPS/PMI Regulator Config
2157	SCR Diag Gain Determines how fast error builds up in the Open SCR diagnostics. Increase the value if warnings need to be annunciated quickly. A value of 100 (the default) means the gain is 1 (100/100). A value of 500 (the maximum) means the gain is 5 time the error (500/100).	Default: Min: Max: Type: File: Group:	100 1 500 Linkable, Read-Write, 16-Bit Integer DPS/PMI Regulator Config

No.	Name Description	Values	
2158	SCR Decay Rate Determines how much error is retained from calculation to calculation. Decrease the value when nuisance warnings are occurring due to large cyclic loads.	Default: Min: Max: Type: File: Group:	99 1 99 Linkable, Read-Write, 16-Bit Integer DPS/PMI Regulator Config
2159	SCR Deadband Determines the amount of imbalance (in percent) ignored by Open SCR diagnostics, (e.g., when the value is 20, the diagnostics will ignore imbalances of less than 20%). Increasing the value reduces the sensitivity of the diagnostics - reducing nuisance warnings that may occur due to small imbalances between the SCRs.	Default: Min: Max: Type: File: Group:	10 0 50 Linkable, Read-Write, 16-Bit Integer DPS/PMI Regulator Config
2160	SCR Trip Point Determines the threshold of integrated error that cause a warning to be annunciated. Increasing the value reduces the sensitivity of the Open SCR diagnostics.	Default: Min: Max: Type: File: Group:	1500 1500 3000 Linkable, Read-Write, 16-Bit Integer DPS/PMI Regulator Config
2161	Resolver Gain The amount of gain used to compensate for varying lengths of resolver wiring. Set to zero to enable automatic calibration test on power-up. Values range from 0-255 counts, with 1 count representing .15 volts gain.	Default: Min: Max: Type: File: Group:	0 0 255 Linkable, Read-Write, 16-Bit Integer DPS/PMI Regulator Config
2162	Resolver Balance The amount of capacitance that is added to the sine or cosine channel of the resolver to compensate for varying lengths of resolver wiring. Set to zero to enable automatic calibration test on power-up. Values from 1 to 39 add capacitance to the cosine channel, while values from 41 to 79 add capacitance to the sine channel.	Default: Min: Max: Type: File: Group:	40 0 79 Linkable, Read-Write, 16-Bit Integer DPS/PMI Regulator Config
2180	 Motor NP RPM Set to the motor nameplate rated RPM.	Units: Default: Min: Max: Type: File: Group:	RPM 1750 1 30000 Non-Linkable, Read-Write, 16-Bit Integer DPS/PMI Motor Data
2181	 Anlg Tach RPM Set the overspeed trip point for overspeed detection in the PMI processor.	Units: Default: Min: Max: Type: File: Group:	RPM 2000 1 30000 Non-Linkable, Read-Write, 16-Bit Integer DPS/PMI Motor Data

No.	Name Description	Values	
2182 	3Ph Hot Fld Curr Set to the 3Ph field current rating full load amps.	Units: Default: Min: Max: Type: File: Group:	Amps 1 1 3276.7 Non-Linkable, Read-Write, 16-Bit Integer DPS/PMI Motor Data
2184 	PMI Curr Lim Provides positive and negative current limit values within the PMI processor. If this value is less than parameter 120[Current PosLimit] and the absolute value of parameter 119 [Current NegLimit], this value will set both the positive and negative actual current limits.	Units: Default: Min: Max: Type: File: Group:	% 100 100 400 Non-Linkable, Read-Write, 16-Bit Integer DPS/PMI Motor Data
2185 	Hot Field Curr Set to the Hot Amps value on the motor nameplate.	Units: Default: Min: Max: Type: File: Group:	Amps 0.01 0.01 327.67 Non-Linkable, Read-Write, 16-Bit Integer DPS/PMI Motor Data
2186 	Min Field Curr Set to the minimum amps value on the motor nameplate.	Units: Default: Min: Max: Type: File: Group:	Amps 0.01 0.01 99.99 Non-Linkable, Read-Write, 16-Bit Integer DPS/PMI Motor Data
2187 	Field Loss Amps Set the under-current trip point for field loss detection in the PMI processor.	Units: Default: Min: Max: Type: File: Group:	Amps 0.01 0.01 99.99 Non-Linkable, Read-Write, 16-Bit Integer DPS/PMI Motor Data
2188 	Field Off Delay Set the amount of time the field will remain energized after a fault condition. (1 to 300S)	Units: Default: Min: Max: Type: File: Group:	Sec 1 1 300 Non-Linkable, Read-Write, 16-Bit Integer DPS/PMI Motor Data

No.	Name Description	Values		
2200 	PMI Drive Config Set bits to configure the PMI processor. • Bits 0-7 [PMI OS Sel] indicate the catalog number of the Drive Module (do not modify these settings). • Bit 8 [Arm Reg Used] enables control of the motor armature. • Bit 9 [re Bdge Usd] enables control of a regenerative armature bridge. • Bit 10 [S12 Config] enables twelve-pulse control. • Bit 11 [M-Cont Used] enables Drive Module control of the main contactor. • Bit 12 [Fld Reg Used] enables control of the motor field. • Bit 13 [4 quad fld] enables four-quadrant control of the motor field. • Bit 14 [3ph fld gene] is not used.	Default:	0000 0000 0000 0001	
		Options	Bit 0 Bit 1 Bit 2 Bit 3 Bit 4 Bit 5 Bit 6 Bit 7 Bit 8 Bit 9 Bti 10 Bit 11 Bit 12 Bit 13 Bit 14 Bit 15	PMI OS Sel PMI OS Sel PMI OS Sel PMI OS Sel PMI OS Sel PMI OS Sel PMI OS Sel PMI OS Sel Arm Reg Used Rev Bdge Usd S12 Config Reserved Fld Reg Used 4 quad fld 3ph fld gene Reserved
		File: Group:	DPS/PMI Drive Config	
2201 	PMI I/O Config Set bits to configure the rail I/O and speed feedback in the PMI processor. • Bits 0-3 [Prt 0 Config] form a nibble that configures the port 0 rail I/O • Bits 4-7 [Prt 1 Config] form a nibble that configures the port 1 rail I/O: 0 = no I/O, 1 = Digital I/O, 2 = 2 Channel Analog Input / 2 Channel Analog Output, 3 = 4 Channel Analog Output, 4 = 4 Channel Analog Input. • Bits 8-11 [Res Type] form a nibble that configures the resolver type: 0 = no resolver, 1 = 1 x resolver, 2 = 2 x resolver, 3 = 5 x resolver. • Bits 12-15 [SpdFdbk Type] form a nibble that configures the speed feedback type: 0 = no speed feedback, 1 = tachometer, 2 = resolver.	Default:	0000 0000 0000 0000	
		Options	Bit 0 Bit 1 Bit 2 Bit 3 Bit 4 Bit 5 Bit 6 Bit 7 Bit 8 Bit 9 Bti 10 Bit 11 Bit 12 Bit 13 Bit 14 Bit 15	Prt 0 Config Prt 0 Config Prt 0 Config Prt 0 Config Prt 1 Config Prt 1 Config Prt 1 Config Prt 1 Config Res Type Res Type Res Type Res Type SpdFdbk Type SpdFdbk Type SpdFdbk Type SpdFdbk Type
		File: Group:	DPS/PMI Drive Config	
2202 	AC LineVolt(RMS) Enter the nominal input voltage to the Armature Power Module. The PMI processor uses this value to determine the threshold (15% below this value) for indicating the low AC line voltage warning.	Units:	Volt	
		Default: Min: Max: Type: File: Group:	230 10 32767 Non-Linkable, Read-Write, 16-Bit Integer DPS/PMI Drive Config	
2203 	Out Volt Rating Enter the maximum output voltage the Power Module will produce.	Units:	Volt	
		Default: Min: Max: Type: File: Group:	10 10 32767 Non-Linkable, Read-Write, 16-Bit Integer DPS/PMI Drive Config	

No.	Name Description	Values	
2204 	Out Curr Rating Enter the Power Modules 100% output DC Amp rating.	Units: Default: Min: Max: Type: File: Group:	Amps 1 1 32767 Non-Linkable, Read-Write, 16-Bit Integer DPS/PMI Drive Config
2205 	Curr Xfmr Ratio Defines the input to output ratio of the current transformer in the Power Module. This value can be found on the Power Module's nameplate.	Default: Min: Max: Type: File: Group:	1 1 32767 Non-Linkable, Read-Write, 16-Bit Integer DPS/PMI Drive Config
2206 	Field AC In Volt Enter the nominal voltage at the Field Power Module input. If an isolation transformer is used, enter the secondary voltage.	Units: Default: Min: Max: Type: File: Group:	Volt 1 1 32767 Non-Linkable, Read-Write, 16-Bit Integer DPS/PMI Drive Config
2207 	Fld OutCurrRatng Enter the Field Power Module's DC Amps output rating. This value can be found on the Power Module's nameplate.	Units: Default: Min: Max: Type: File: Group:	Amps 15 1 327.67 Non-Linkable, Read-Write, 16-Bit Integer DPS/PMI Drive Config
2208 	Anlg Tach Volts Enter the tachometer voltage that will be present when the motor is turning at the speed specified in parameter 2181[Overspd Trip Pt].	Units: Default: Min: Max: Type: File: Group:	Volt 5 5 327.67 Non-Linkable, Read-Write, 16-Bit Integer DPS/PMI Drive Config

No.	Name Description	Values	
2209 	Ph Xfmr In Volt The voltage at the primary of the phasing transformer, which produces 6.3V at the secondary. Typically this equals the value in parameter 2202 [AC LineVolt(RMS)].	Units: Default: Min: Max: Type: File: Group:	Volt 230 10 32767 Non-Linkable, Read-Write, 16-Bit Integer DPS/PMI Drive Config
2213	Pwr Config Code For internal use.	Default: Min: Max: Type: File: Group:	0 0 256 Non-Linkable, Read-Only, 16-Bit Integer DPS/PMI Drive Config
2214	PMI OS Version Indicates Operating System version for the PMI processor.	Default: Min: Max: Type: File: Group:	0 0 255 Non-Linkable, Read-Only, 16-Bit Integer DPS/PMI Drive Config

Parameter Cross Reference by Name

Name	No.
3Ph Amps Fdbk	2128
3Ph Curr Ref	2103
3Ph Feedback	2127
3Ph FieldCurrRef	305
3Ph Hot Fld Curr	2182
3Ph Resistance	2151
3Ph Test Angle	2102
3Ph TimeConstant	2152
3Ph Volt Fdbk	2129
AC Line Volt FB	2126
AC LineVolt(RMS)	2202
Alarm Status 1	326
Alarm Status 2	327
Anlg Tach Posit	241
Anlg Tach RPM	2181
Anlg Tach Spd FB	240
Anlg Tach Volts	2208
Applied LogicCmd	152
CML Crossover Frq	2150
Curr Ref 1	111
Curr Ref 2	113
Curr Ref1 Div	112
Curr Ref2 Mult	114
Curr Xfmr Ratio	2205
Current Trim	115
DM Bad Msg Cnt	2011
DM Comm PortStat	2000
DM CRC Error Cnt	2002
DM Frmt ErrorCnt	2003
DM Good Msg Cnt	2001
DM Link Status	2008

Name	No.
DM Sync Count	2012
DM Sync WarnCnt	2010
DM Tx Msg Count	2009
DM Tx Time	2014
DM Tx Time Avail	2015
Drive Ctrl Word	2100
Drive I/O Ctrl	168
Drive I/O Status	169
Exception Event1	320
Exception Event2	321
Fault Status 1	323
Fault Status 2	324
Fault TP Data	330
Fault TP Sel	329
Field AC In Volt	2206
Field Amps Fdbk	2132
Field Curr Ref	2105
Field Loss Amps	2187
Field Off Delay	2188
Field Resistance	2155
Field Test Angle	2104
Field Volt Fdbk	2133
Fld OutCurrRatng	2207
Fld TimeConstant	2156
FML Crossover Frq	2154
FML Feedback	2131
Hot Field Curr	2185
Integer In00	600
Integer In01	602
Integer In02	604
Integer In03	606
Integer In04	608
Integer In05	610
Integer In06	612
Integer In07	614

Name	No.
Integer In08	616
Integer In09	618
Integer In10	620
Integer In11	622
Integer In12	624
Integer In13	626
Integer In14	628
Integer In15	630
Integer Out00	632
Integer Out01	634
Integer Out02	636
Integer Out03	638
Integer Out04	640
Integer Out05	642
Integer Out06	644
Integer Out07	646
Integer Out08	648
Integer Out09	650
Integer Out10	652
Integer Out11	654
Integer Out12	656
Integer Out13	658
Integer Out14	660
Integer Out15	662
Interlock Code	2125
Lgx Closed Cnfg	384
Lgx Comm Format	664
Lgx CommLossData	386
Lgx LinkChngCnfg	385
Lgx OutOfRunCnfg	382
Lgx Timeout Cnfg	383
Logic Command	151
Logic Ctrl State	157
Logic State Mach	150
Logic Status	155

Name	No.
MC Faults	2122
MC Warnings	2123
Meter Port1 Sel	2080
Meter Port2 Sel	2083
Meter Port3 Sel	2086
Meter Port4 Sel	2089
MeterP1 +10v Val	2081
MeterP1 -10v Val	2082
MeterP2 +10v Val	2084
MeterP2 -10v Val	2085
MeterP3 +10v Val	2087
MeterP3 -10v Val	2088
MeterP4 +10v Val	2090
MeterP4 -10v Val	2091
Min Field Curr	2186
Motor Ctrl Ackn	167
Motor Ctrl Cmmd	166
Motor Fdbk Sel	222
Motor NP RPM	2180
Motor Spd Fdbk	300
NV Faults	2149
Out Curr Rating	2204
Out Volt Rating	2203
Output Current	308
Output Voltage	307
Peak Ctrl Status	211
PeakDetect1 Out	215
PeakDetect2 Out	227
PeakDtct Ctrl In	210
PeakDtct1 In Int	212
PeakDtct1 Preset	214
PeakDtct2 In Int	216
PeakDtct2 Preset	218
Ph Xfmr In Volt	2209
PkDtct1 In Real	213

Name	No.
PkDtct2 In Real	217
PMI CRC ErrorCnt	2006
PMI Curr Lim	2184
PMI D/A Output	2106
PMI Drive Config	2200
PMI Gain Count	2013
PMI Good Msg Cnt	2005
PMI I/O Config	2201
PMI OS Version	2214
PMI Warning Cnfg	381
PMIComm PortStat	2004
PMIFrmt ErrorCnt	2007
Pwr Config Code	2213
Pwr DeviceStatus	2124
Rail Port 0 Ch 0	2040
Rail Port 0 Ch 1	2041
Rail Port 0 Ch 2	2042
Rail Port 0 Ch 3	2043
Rail Port 0 Flt	2044
Rail Port 1 Ch 0	2046
Rail Port 1 Ch 1	2047
Rail Port 1 Ch 2	2048
Rail Port 1 Ch 3	2049
Rail Port 1 Flt	2050
RailPrt 0FltCnt	2045
RailPrt 1FltCnt	2051
Real In00	601
Real In01	603
Real In02	605
Real In03	607
Real In04	609
Real In05	611
Real In06	613
Real In07	615
Real In08	617

Name	No.
Real In09	619
Real In10	621
Real In11	623
Real In12	625
Real In13	627
Real In14	629
Real In15	631
Real Out00	633
Real Out01	635
Real Out02	637
Real Out03	639
Real Out04	641
Real Out05	643
Real Out06	645
Real Out07	647
Real Out08	649
Real Out09	651
Real Out10	653
Real Out11	655
Real Out12	657
Real Out13	659
Real Out14	661
Real Out15	663
Real to Int In	1035
Real to Int Out	1036
Res Scan Posit	2135
Res Strobe Posit	2136
Reserved	1069
Reserved	1070
Reserved	1071
Reserved	1072
Resolver Balance	2162
Resolver Gain	2161
Resolver PositFB	231
Resolver SpdFdbk	230

Name	No.
Run Inhibit Stat	156
SCR Deadband	2159
SCR Decay Rate	2158
SCR Diag Gain	2157
SCR Trip Point	2160
SL BOF Err Accum	1232
SL BOF Err Limit	1235
SL BOF Error	1233
SL Buf Int Rx00	1073
SL Buf Int Rx01	1075
SL Buf Int Rx02	1077
SL Buf Int Rx03	1079
SL Buf Int Rx04	1081
SL Buf Int Rx05	1083
SL Buf Int Rx06	1085
SL Buf Int Rx07	1087
SL Buf Int Rx08	1089
SL Buf Int Rx09	1091
SL Buf Int Rx10	1093
SL Buf Int Rx11	1095
SL Buf Int Rx12	1097
SL Buf Int Rx13	1099
SL Buf Int Rx14	1101
SL Buf Int Rx15	1103
SL Buf Int Rx16	1105
SL Buf Int Rx17	1107
SL Buf Int Rx18	1109
SL Buf Int Rx19	1111
SL Buf Int Rx20	1113
SL Buf Int Rx21	1115
SL Buf Int Rx22	1117
SL Buf Int Rx23	1119
SL Buf Int Rx24	1121
SL Buf Int Rx25	1123
SL Buf Int Rx26	1125

Name	No.
SL Buf Int Rx27	1127
SL Buf Int Rx28	1129
SL Buf Int Rx29	1131
SL Buf Int Tx00	1161
SL Buf Int Tx01	1163
SL Buf Int Tx02	1165
SL Buf Int Tx03	1167
SL Buf Int Tx04	1169
SL Buf Int Tx05	1171
SL Buf Int Tx06	1173
SL Buf Int Tx07	1175
SL Buf Int Tx08	1177
SL Buf Int Tx09	1179
SL Buf Int Tx10	1181
SL Buf Int Tx11	1183
SL Buf Int Tx12	1185
SL Buf Int Tx13	1187
SL Buf Int Tx14	1189
SL Buf Int Tx15	1191
SL Buf Int Tx16	1193
SL Buf Int Tx17	1195
SL Buf Int Tx18	1197
SL Buf Int Tx19	1199
SL Buf Int Tx20	1201
SL Buf Int Tx21	1203
SL Buf Int Tx22	1205
SL Buf Int Tx23	1207
SL Buf Int Tx24	1209
SL Buf Int Tx25	1211
SL Buf Int Tx26	1213
SL Buf Int Tx27	1215
SL Buf Int Tx28	1217
SL Buf Int Tx29	1219
SL Buf Real Rx00	1074
SL Buf Real Rx01	1076

Name	No.
SL Buf Real Rx02	1078
SL Buf Real Rx03	1080
SL Buf Real Rx04	1082
SL Buf Real Rx05	1084
SL Buf Real Rx06	1086
SL Buf Real Rx07	1088
SL Buf Real Rx08	1090
SL Buf Real Rx09	1092
SL Buf Real Rx10	1094
SL Buf Real Rx11	1096
SL Buf Real Rx12	1098
SL Buf Real Rx13	1100
SL Buf Real Rx14	1102
SL Buf Real Rx15	1104
SL Buf Real Rx16	1106
SL Buf Real Rx17	1108
SL Buf Real Rx18	1110
SL Buf Real Rx19	1112
SL Buf Real Rx20	1114
SL Buf Real Rx21	1116
SL Buf Real Rx22	1118
SL Buf Real Rx23	1120
SL Buf Real Rx24	1122
SL Buf Real Rx25	1124
SL Buf Real Rx26	1126
SL Buf Real Rx27	1128
SL Buf Real Rx28	1130
SL Buf Real Rx29	1132
SL Buf Real Tx00	1162
SL Buf Real Tx01	1164
SL Buf Real Tx02	1166
SL Buf Real Tx03	1168
SL Buf Real Tx04	1170
SL Buf Real Tx05	1172
SL Buf Real Tx06	1174

Name	No.
SL Buf Real Tx07	1176
SL Buf Real Tx08	1178
SL Buf Real Tx09	1180
SL Buf Real Tx10	1182
SL Buf Real Tx11	1184
SL Buf Real Tx12	1186
SL Buf Real Tx13	1188
SL Buf Real Tx14	1190
SL Buf Real Tx15	1192
SL Buf Real Tx16	1194
SL Buf Real Tx17	1196
SL Buf Real Tx18	1198
SL Buf Real Tx19	1200
SL Buf Real Tx20	1202
SL Buf Real Tx21	1204
SL Buf Real Tx22	1206
SL Buf Real Tx23	1208
SL Buf Real Tx24	1210
SL Buf Real Tx25	1212
SL Buf Real Tx26	1214
SL Buf Real Tx27	1216
SL Buf Real Tx28	1218
SL Buf Real Tx29	1220
SL Comm TP Data	1227
SL Comm TP Sel	1226
SL CommLoss Cnfg	369
SL CommLoss Data	370
SL CRC Err Accum	1230
SL CRC Err Limit	1234
SL CRC Error	1231
SL Dir Int Rx0	1054
SL Dir Int Rx1	1056
SL Dir Int Rx2	1058
SL Dir Int Rx3	1060
SL Dir Int Tx0	1141

Name	No.
SL Dir Int Tx1	1143
SL Dir Int Tx2	1145
SL Dir Int Tx3	1147
SL Dir Real Rx0	1055
SL Dir Real Rx1	1057
SL Dir Real Rx2	1059
SL Dir Real Rx3	1061
SL Dir Real Tx0	1142
SL Dir Real Tx1	1144
SL Dir Real Tx2	1146
SL Dir Real Tx3	1148
SL Error Status	1229
SL Mult A In	1030
SL Mult B In	1031
SL Mult Base	1032
SL Mult Out	1033
SL Mult State	1034
SL MultErr Cnfg	387
SL Node Cnfg	1000
SL Rcv Events	1040
SL Rx Comm Frmt	1010
SL Rx D0 Latch	1043
SL Rx D1 Latch	1044
SL Rx D2 Latch	1045
SL Rx D3 Latch	1046
SL Rx DirectSel0	1011
SL Rx DirectSel1	1012
SL Rx DirectSel2	1013
SL Rx DirectSel3	1014
SL Rx Opt0 Regis	1047
SL Rx Opt1 Regis	1048
SL Rx P0 Regis	1041
SL Rx P1 Regis	1042
SL System Rev	1002
SL System Time	317

Name	No.
SL Tx DirectSel0	1021
SL Tx DirectSel1	1022
SL Tx DirectSel2	1023
SL Tx DirectSel3	1024
SL TxComm Format	1020
SynchLink Rev	1001
SynchLink Status	316
Tx Buf Data Type	1160
Tx Dir Data Type	1140
User Anlg Input	2134
User Data 1	396
User Data 2	397
User Data 3	398
User Data 4	399
VPL Firmware Rev	314

Interpreting Drive Module Faults in DriveExecutive

The Fault Words tab of the Fault and Alarm window of DriveExecutive allows you to view several parameters. These parameters have individual bits associated with faults or conditions. If the bit is 0, the fault is not present or the condition is false. If the bit is 1, the fault is present or the condition is true.

Parameter 323 [Fault Status 1]

This parameter indicates the occurrence of exception events that have been configured as fault conditions. These events are from parameter 320 [Exception Event1]. These bits are latched until they are reset by setting bit 19 [Clear Fault] of parameter 152 [Applied LogicCmd]. After turning the Clear Fault bit on, the drive may be re-started after turning the command bits off and then back on again. If the fault conditions still exist, the identifying bit in this parameter will immediately be set again. The fault conditions reported in this register result in turning off the drive.

Bit	Fault Name	Fault Description
Bit 7	Slink HW	Not Used
Bit 8	Slink Comm	A SynchLink communication failure has occurred. These faults are enumerated in parameter 1229 [SL Error Status].
Bit 18	DSP Mem Err	Flash memory does not match the SRAM memory
Bit 19	DSP Err	The drive has failed to complete DSP (VPL) interrupt tasks in the allotted time.

Parameter 324 [Fault Status 2]

This parameter indicates the presence of certain drive anomalies that caused the drive to fault (stop). These are the same events shown in parameter 321 [Exception Event 2]. These bits are latched until they are reset by setting bit 19 [Clear Fault] of parameter 152 [Applied LogicCmd]. After turning the Clear Fault bit on, the drive may be re-started after turning the command bits off and then back on again. If the fault conditions still exist, the identifying bit in this parameter will immediately be set again. The fault conditions reported in this register result in turning off the drive.

Bit	Fault Name	Fault Description
7	Slink Mult	SynchLink Multiply failure has occurred. These faults are enumerated in parameter 1034 [SL Mult State].
26	Drv Fault	A motor control fault event has occurred. Motor control faults are enumerated in parameter 2122 [MC Faults].
27	Drv Warning	A motor control warning event has occurred. Motor control warnings are enumerated in parameter 2123 [MC Warnings].
28	Lgx OutOfRun	The Logix Controller is out of the run mode
29	Lgx Timeout	Communications with the Logix Controller has timed out
30	Lgx Closed	The Logix Controller has closed a connection to the Drive Module
31	Lgx LinkChng	A required parameter link relating to a communications connection has been modified

Parameter 326 [Alarm Status 1]

This parameter indicates the occurrence of exception events that have been configured as alarm conditions. These events are from parameter 320 [Exception Event1].

Bit	Fault Name	Fault Description
Bit 7	Slink HW	Not Used
Bit 8	Slink Comm	A SynchLink communication failure has occurred. These faults are enumerated in parameter 1229 [SL Error Status].
Bit 18	DSP Mem Err	Flash memory does not match the SRAM memory
Bit 19	DSP Err	The drive has failed to complete DSP (VPL) interrupt tasks in the allotted time.

Parameter 327 [Alarm Status 2]

This parameter indicates the occurrence of exception events that have been configured as alarm conditions. These are the same events shown in parameter 321 [Exception Event 2].

Bit	Fault Name	Fault Description
7	Slink Mult	SynchLink Multiply failure has occurred. These faults are enumerated in parameter 1034 [SL Mult State].
26	Drv Fault	A motor control fault event has occurred. Motor control faults are enumerated in parameter 2122 [MC Faults].
27	Drv Warning	A motor control warning event has occurred. Motor control warnings are enumerated in parameter 2123 [MC Warnings].
28	Lgx OutOfRun	The Logix Controller is out of the run mode
29	Lgx Timeout	Communications with the Logix Controller has timed out
30	Lgx Closed	The Logix Controller has closed a connection to the Drive Module
31	Lgx LinkChng	A required parameter link relating to a communications connection has been modified

Parameter 1229 [SL Error Status]

This parameter indicates the occurrence of SynchLink errors.

Bit	Fault Name	Fault Description
0	Sync Loss	SynchLink communication has failed, after it had been established.
1	Rx Loss	The receive port is not receiving data, and the receive port configuration is set to receive data.
2	Many BOF Err	The number of BOF (Beginning Of Frame) errors accumulated in parameter 1232 [SL BOF Err Accum] exceeds the value in parameter 1235 [SL BOF Err Limit].
3	Many CRC Err	The number of CRC (Cycling Ring Checksum) errors accumulated in parameter 1230 [SL CRC Err Accum] exceeds the value in parameter 1234 [SL CRC Err Limit].
4	Pckg Msg Err	The received package sequence number has not matched for 1.0 S.
5	CommForm Err	The format of received data does not match the configuration of the receive port.
6	Sys Rev Err	The system revision in received data does not match the value of parameter 1001 [SynchLink Rev].
7	Mult TKeeper	More than one node on the SynchLink system is configured as a Time Keeper.

Parameter 2044 [Rail Port 0 Faults]

This parameter indicates the occurrence of faults associated with Rail I/O on Port 0.

Bit	Fault Name	Fault Description
0	Ch0 OvrRange	Analog input on channel 0 is over the maximum value. ⁽¹⁾
1	Ch0 UndRange	Analog input on channel 0 is under the minimum value. ⁽²⁾
2	Ch1 OvrRange	Analog input on channel 1 is over the maximum value. ⁽¹⁾
3	Ch1 UndRange	Analog input on channel 1 is under the minimum value. ⁽²⁾
4	Ch2 OvrRange	Analog input on channel 2 is over the maximum value. ⁽¹⁾
5	Ch2 UndRange	Analog input on channel 2 is under the minimum value. ⁽²⁾
6	Ch3 OvrRange	Analog input on channel 3 is over the maximum value. ⁽¹⁾
7	Ch3 UndRange	Analog input on channel 3 is under the minimum value. ⁽²⁾
8	Port NotCntd	No device is connected to the port, which is configured to accept a device.
9	Bad ID	A device other than a rail is plugged into the port.
10	Bad Chk Bits	Bad rail communication check bits have been received.
11	IO NotRdy	The I/O interface is not ready.

⁽¹⁾ Analog 4 input 4-20 mA (model number 61C345) maximum value = 22.1 mA
 Analog 4 input 0-10V (model number 61C346) maximum value = 11.3V
 Analog 2 input / 2 output 4-20 mA (model number 61C345) maximum value = 22.6 mA
 Analog 2 input / 2 output 0-10V (model number 61C346) maximum value = 11.3V

⁽²⁾ Analog 4 input 4-20 mA (model number 61C345) minimum value = 2.4 mA
 Analog 4 input 0-10V (model number 61C346) minimum value = -1.0V
 Analog 2 input / 2 output 4-20 mA (model number 61C345) minimum value = 2.5 mA
 Analog 2 input / 2 output 0-10V (model number 61C346) minimum value = -1.0V

Parameter 2050 [Rail Port 1 Faults]

This parameter indicates the occurrence of faults associated with Rail I/O on Port 1.

Bit	Fault Name	Fault Description
0	Ch0 OvrRange	Analog input on channel 0 is over the maximum value. ⁽¹⁾
1	Ch0 UndRange	Analog input on channel 0 is under the minimum value. ⁽²⁾
2	Ch1 OvrRange	Analog input on channel 1 is over the maximum value. ⁽¹⁾
3	Ch1 UndRange	Analog input on channel 1 is under the minimum value. ⁽²⁾
4	Ch2 OvrRange	Analog input on channel 2 is over the maximum value. ⁽¹⁾
5	Ch2 UndRange	Analog input on channel 2 is under the minimum value. ⁽²⁾
6	Ch3 OvrRange	Analog input on channel 3 is over the maximum value. ⁽¹⁾
7	Ch3 UndRange	Analog input on channel 3 is under the minimum value. ⁽²⁾
8	Port NotCntd	No device is connected to the port, which is configured to accept a device.
9	Bad ID	A device other than a rail is plugged into the port.
10	Bad Chk Bits	Bad rail communication check bits have been received.
11	IO NotRdy	The I/O interface is not ready.

⁽¹⁾ Analog 4 input 4-20 mA (model number 61C345) maximum value = 22.1 mA
 Analog 4 input 0-10V (model number 61C346) maximum value = 11.3V
 Analog 2 input / 2 output 4-20 mA (model number 61C345) maximum value = 22.6 mA
 Analog 2 input / 2 output 0-10V (model number 61C346) maximum value = 11.3V

⁽²⁾ Analog 4 input 4-20 mA (model number 61C345) minimum value = 2.4 mA
 Analog 4 input 0-10V (model number 61C346) minimum value = -1.0V
 Analog 2 input / 2 output 4-20 mA (model number 61C345) minimum value = 2.5 mA
 Analog 2 input / 2 output 0-10V (model number 61C346) minimum value = -1.0V

Parameter 2122 [MC Faults]

This parameter indicates the occurrence of a motor-control fault. These bits are set when a fault event is detected. They stay latched until bit 19 [Clear Fault] of parameter 152 [Applied Logic Cmd] or bit 19 [Clr Drv Wrn] of parameter 166 [Motor Ctrl Cmd] is set. If the fault event remains present, the identifying bit is set again.

Bit	Fault Name	Fault Description
0	SCR Fault	An SCR has shorted. Check Parameter 2124 [Pwr DeviceStatus] to determine which SCR has shorted.
3	AC Line Sync	AC line voltage has been missing for more than 2 seconds. Refer to parameter 2123 bit 3 [LineSyncLoss].
4	InstOvr Curr	Armature current feedback has exceeded 175% of the value in parameter 2184 [PMI Curr Lim].
6	Field Loss	A field loss has been detected: - Parameter 2132 [Fld Amps Fdbk] has been less than parameter 2187 [FldLos Trip Pt] for more than 5 times the electrical time constant of the field. This assumes parameter 152 [Applied LogicCmd] bit 30 [Field En] is on. - Parameter 2132 [Fld Amps Fdbk] has been less than parameter 2187 [FldLos Trip Pt] for more than 30mS after the field has been turned on. - - Parameter 2132 [Fld Amps Fdbk] has been greater than 150% of parameter 2185 [Hot Fld Cur] for more than 30mS. - Parameter 2132 [Fld Amps Fdbk] has been greater than parameter 2207 [Fld PMI Rating] for more than 30mS.
8	TachWire Opn	A sine or cosine signal being used for speed or other application feedback is missing, due to one of the following causes: - a resolver wiring connection has broken - The value in parameter 2161 [Resolver Gain] is too low. The Drive Module always performs this test if resolver feedback is selected (parameter 222 [Motor Fdbk Sel] equals "0 - Resolver"), and when parameter 168 [Drive I/O Ctrl] bit 10 [Dis Brkn Wire] equals one.
9	ResolverCard	A fuse on the Resolver & Drive I/O module has blown.
11	PwrTech Card	The watchdog timer on the D-C Power Technology module has expired. This fault disables the gate firing circuitry.

Bit	Fault Name	Fault Description
12	PMI Pwr Sply	The PMI power supply is not working correctly.
13	PMI Bus	There is a bus fault in the PMI rack. This is indicated when the Resolver and Drive I/O module and the DC Power Technology module do not respond to requests from the PMI Processor. This error indicates that there is a hardware problem in the rack.
15	PMI CommLoss	Communication between the PMI processor and the Drive Module has failed.

Parameter 2123 [MC Warnings]

This parameter indicates the occurrence of a motor-control warning event. These bits are set when a warning event is detected. They stay latched until bit 19 [Clear Fault] of parameter 152 [Applied Logic Cmd] or bit 19 [Clr Drv Wrn] of parameter 166 [Motor Ctrl Cmd] is set. If the warning event remains present, the identifying bit is set again. Refer to parameter 381 [PMI Warning Cnfg] to configure the Drive Module's response to these warnings.

Bit	Fault Name	Fault Description
0	BrdgNotFirng	Not all SCRs are carrying the same the load. A bit set in the parameter 2124 [Pwr DeviceStatus] indicates which SCR is not working properly.
1	Low AC Line	AC line voltage is less than 85% of its nominal value, which was entered as a configuration parameter. This can be caused by a low-line condition or a missing phase. The system will automatically adjust the phase angle to give the correct current amount and will continue to fire SCRs as long as zero crossings are detected. If zero crossings are no longer detected, a fault condition will result.
3	LineSyncLoss	The system is continuing to operate through a temporary loss of AC line voltage. Refer to bit 3 [AC Line Sync] of parameter 2122 [MC Fault].
4	Curr Ref Lim	The current reference has exceeded the value entered in parameter 2184 [PMI Curr Lim].
5	ID TestAbort	The drive has failed an armature identification test, field identification test or resolver balance calibration test.
6	Fld OvrCurr	Field current has exceeded 150% of the value in parameter 2185 [Hot Field Curr].
7	3Ph Fdbk Rev	Three-phase feedback wiring is reversed - the polarity of the feedback is the oposite of expected.
8	CT Fdbk Rev	Current transformer feedback is reversed - the polarity of the feedback is the oposite of expected.

Bit	Fault Name	Fault Description
12	PMI Fan Loss	Airflow through the PMI rack is not being sensed. A solid-state airflow switch in the PMI power supply monitors airflow.
13	Rail IO Comm	A rail communication warning event has occurred. Parameter 2044 [Rail Port 0 Faul] and parameter 2050 [Rail Port 0 Faul] enumerate these faults.
14	PMI CommSync	The PMI Processor and the Drive Module are momentarily not synchronized.
15	PMI Comm	A fiber-optic communication error has been detected between the PMI Processor module and the Drive Module. Communication errors in two consecutive messages will cause a fault.

Parameter 2124 [Pwr Device Status]

The bits of this parameter indicate which SCR has shorted or not firing. If an SCR is shorted parameter 2122 [MC Faults] bit 0 [SCR Fault] will be set. If an SCR is not firing correctly parameter 2123 [MC Warnings] bit 0 [BrdgNotFirng] will be set.

For a regenerative drive, this parameter indicates the pair of SCRs that has faulted. For a non-regenerative drive, this parameter indicates the specific SCR that has faulted.

The bits of this parameters are set when a fault event is detected. They stay latched until bit 19 [Clear Fault] of parameter 152 [Applied Logic Cmd] or bit 19 [Clr Drv Wrn] of parameter 166 [Motor Ctrl Cmd] is set. If the fault event remains present, the identifying bit is set again.

Bit	Fault Name	Fault Description
0	SCR 1 Fault	SCR 1 Fault (Forward Bridge)
1	SCR 2 Fault	SCR 2 Fault (Forward Bridge)
3	SCR 3 Fault	SCR 3 Fault (Forward Bridge)
4	SCR 4 Fault	SCR 4 Fault (Forward Bridge)
5	SCR 5 Fault	SCR 5 Fault (Forward Bridge)
6	SCR 6 Fault	SCR 6 Fault (Forward Bridge)
7	SCR 11 Fault	SCR 11 Fault (Reverse Bridge)
8	SCR 12 Fault	SCR 12 Fault (Reverse Bridge)
9	SCR 13 Fault	SCR 13 Fault (Reverse Bridge)

Bit	Fault Name	Fault Description
10	SCR 14 Fault	SCR 14 Fault (Reverse Bridge)
11	SCR 15 Fault	SCR 15 Fault (Reverse Bridge)
12	SCR 16 Fault	SCR 16 Fault (Reverse Bridge)

Parameter 2125 [Interlock Code]

The PMI processor performs interlock tests in response to parameter 2100 [Drive Ctrl Word]. If any of the diagnostics fail the PMI processor sets the bit in parameter 2125 [Interlock Code] that corresponds to the first failed diagnostic. The bit stays latched until bit 19 [Clear Fault] of parameter 152 [Applied Logic Cmd] or bit 19 [Clr Drv Wrn] of parameter 166 [Motor Ctrl Cmd] is set. Refer to Reliance Electric publication S-3001-1, *Distributed Power System SD3000 Drive Diagnostics, Troubleshooting and Start-Up Guidelines*, for information about the interlock diagnostics.

Bit	Fault Name	Fault Description
0	Bad CML Req	More than one incompatible CML operating mode has been requested at a time in parameter 166 [Motor Ctrl Cmm]. The following operating modes are mutually exclusive: • Armature Alpha Test • Armature Identification Test • CML Run This bit is also set if you have attempted to restart the drive without resetting the appropriate command bits from parameter 166. Note that the bits in register 166 are edge-sensitive.
1	3PhPrmNotLod	Three-phase configuration parameters have not been downloaded into the PMI module from the Drive Module
2	3PhGnsNotLod	Three-phase configuration parameters have not been downloaded into the PMI module from the Dive Module.
3	3PhFltRstRq	The CML Faults Need to be Reset bit is set if previous armature faults (parameter 2122 [MC Faults]) have not been cleared.
4	RPI Missing	The run permissive input on the Resolver & Drive I/O module is not on.
5	Fld Not Rdy	The single-phase field is not on. Note that the CML can-not be executed if the field is not on.
6	Fld NotAlwd	The single-phase field has been requested when the armature identification test or the armature alpha test is running.
7	M-Con NotCls	The M-Contactor did not close at the expected time.

Bit	Fault Name	Fault Description
8	Bad FML Req	More than one incompatible Field operating mode is requested at a time in parameter 166 [Motor Ctrl Cmmnd]. The following operating modes are mutually exclusive: • Field Alpha Test • Field Identification Test • Field Run This bit is also set if you have attempted to restart the drive without resetting the appropriate command bits from parameter 166. Note that the bits in register 166 are edge-sensitive.
9	F Par NotLod	Field configuration parameters have not been downloaded into the PMI module from the Dive Module.
10	F Gns NotLod	Field configuration parameters have not been downloaded into the PMI module from the Dive Module.
11	F Flt Rst Rq	Previous field faults (parameter 2122 [MC Faults]), e.g., field loss and line synchronization loss faults, have not been cleared.
14	F FB or CFG	A field current feedback fault or configuration error has occurred: • The drive has sensed field current feedback when the field is off. • You have attempted to turn on the field without setting parameter 2200 [PMI Drive Config] bit 12 [Fld Reg Used].

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