Installation Instructions

ControlLogix-XT Data Highway Plus-Remote I/O Interface Module

Catalog Number 1756-DHRIOXT

ALLEN-BRADLEY • ROCKWELL SOFTWARE **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://literature.rockwellautomation.com) 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.

No patent liability is assumed by Rockwell Automation, Inc. with respect to use of information, circuits, equipment, or software described in this manual.

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Throughout this manual, when necessary, 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.
IMPORTANT	Identifies information that is critical for successful application and understanding of the product.
ATTENTION ⚠	Identifies information about practices or circumstances that can lead to personal injury or death, property damage, or economic loss. Attentions help you identify a hazard, avoid a hazard and recognize the consequences.
SHOCK HAZARD ⚡	Labels may be on or inside the equipment, for example, a drive or motor, to alert people that dangerous voltage may be present.
BURN HAZARD ♨	Labels may be on or inside the equipment, for example, a drive or motor, to alert people that surfaces may reach dangerous temperatures.

Environment and Enclosure

ATTENTION

⚠️

This equipment is intended for use in a Pollution Degree 2 industrial environment, in overvoltage Category II applications (as defined in IEC 60664-1), at altitudes up to 2000 m (6562 ft) without derating.

This equipment is considered Group 1, Class A industrial equipment according to IEC/CISPR 11. Without appropriate precautions, there may be difficulties with electromagnetic compatibility in residential and other environments due to conducted and radiated disturbances.

This equipment is supplied as open-type equipment. It must be mounted within an enclosure that is suitably designed for those specific environmental conditions that will be present and appropriately designed to prevent personal injury resulting from accessibility to live parts. The enclosure must have suitable flame-retardant properties to prevent or minimize the spread of flame, complying with a flame spread rating of 5VA, V2, V1, V0 (or equivalent) if non-metallic. The interior of the enclosure must be accessible only by the use of a tool. Subsequent sections of this publication may contain additional information regarding specific enclosure type ratings that are required to comply with certain product safety certifications.

In addition to this publication, see:

- Industrial Automation Wiring and Grounding Guidelines, for additional installation requirements, Allen-Bradley publication 1770-4.1.

- NEMA Standards 250 and IEC 60529, as applicable, for explanations of the degrees of protection provided by different types of enclosure.

North American Hazardous Location Approval

The following information applies when operating this equipment in hazardous locations:	**Informations sur l'utilisation de cet équipement en environnements dangereux:**
Products marked "CL I, DIV 2, GP A, B, C, D" are suitable for use in Class I Division 2 Groups A, B, C, D, Hazardous Locations and nonhazardous locations only. Each product is supplied with markings on the rating nameplate indicating the hazardous location temperature code. When combining products within a system, the most adverse temperature code (lowest "T" number) may be used to help determine the overall temperature code of the system. Combinations of equipment in your system are subject to investigation by the local Authority Having Jurisdiction at the time of installation.	Les produits marqués "CL I, DIV 2, GP A, B, C, D" ne conviennent qu'à une utilisation en environnements de Classe I Division 2 Groupes A, B, C, D dangereux et non dangereux. Chaque produit est livré avec des marquages sur sa plaque d'identification qui indiquent le code de température pour les environnements dangereux. Lorsque plusieurs produits sont combinés dans un système, le code de température le plus défavorable (code de température le plus faible) peut être utilisé pour déterminer le code de température global du système. Les combinaisons d'équipements dans le système sont sujettes à inspection par les autorités locales qualifiées au moment de l'installation.
WARNING **EXPLOSION HAZARD -** • Do not disconnect equipment unless power has been removed or the area is known to be nonhazardous. • Do not disconnect connections to this equipment unless power has been removed or the area is known to be nonhazardous. Secure any external connections that mate to this equipment by using screws, sliding latches, threaded connectors, or other means provided with this product. • Substitution of components may impair suitability for Class I, Division 2. • If this product contains batteries, they must only be changed in an area known to be nonhazardous.	**AVERTISSEMENT** **RISQUE D'EXPLOSION –** • Couper le courant ou s'assurer que l'environnement est classé non dangereux avant de débrancher l'équipement. • Couper le courant ou s'assurer que l'environnement est classé non dangereux avant de débrancher les connecteurs. Fixer tous les connecteurs externes reliés à cet équipement à l'aide de vis, loquets coulissants, connecteurs filetés ou autres moyens fournis avec ce produit. • La substitution de composants peut rendre cet équipement inadapté à une utilisation en environnement de Classe I, Division 2. • S'assurer que l'environnement est classé non dangereux avant de changer les piles.

European Hazardous Location Approval

European Zone 2 Certification (The following applies when the product bears the Ex or EEx Marking)

This equipment is intended for use in potentially explosive atmospheres as defined by European Union Directive 94/9/EC and has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of Category 3 equipment intended for use in potentially explosive atmospheres, given in Annex II to this Directive.

Compliance with the Essential Health and Safety Requirements has been assured by compliance with EN 60079-15 and EN 60079-0.

WARNING ⚠	• This equipment must be installed in an enclosure providing at least IP54 protection when applied in Zone 2 environments.
	• This equipment shall be used within its specified ratings defined by Allen-Bradley.
	• Provision shall be made to prevent the rated voltage from being exceeded by transient disturbances of more than 40% when applied in Zone 2 environments.
	• This equipment must be used only with ATEX certified backplanes.
	• Secure any external connections that mate to this equipment by using screws, sliding latches, threaded connectors, or other means provided with this product.
	• Do not disconnect equipment unless power has been removed or the area is known to be nonhazardous.
ATTENTION ⚠	This equipment is not resistant to sunlight or other sources of UV radiation.

ATTENTION ⚠	Personnel responsible for the application of safety-related programmable electronic systems (PES) shall be aware of the safety requirements in the application of the system and shall be trained in using the system.

Preventing Electrostatic Discharge

ATTENTION

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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 wriststrap.
- Do not touch connectors or pins on component boards.
- Do not touch circuit components inside the equipment.
- Use a static-safe workstation, if available.
- Store the equipment in appropriate static-safe packaging when not in use.

About the 1756-DHRIOXT Module

You can use the 1756-DHRIOXT module to communicate on a DH+ or remote I/O network.

The 1756-DHRIOXT module functions in the same way as the traditional 1756-DHRIO module. For information about configuring and using both the 1756-DHRIOXT and 1756-DHRIO module, see the ControlLogix Data Highway Plus-Remote I/O Communication Interface Module User Manual, publication 1756-UM514.

Use this diagram to identify external features of the module.
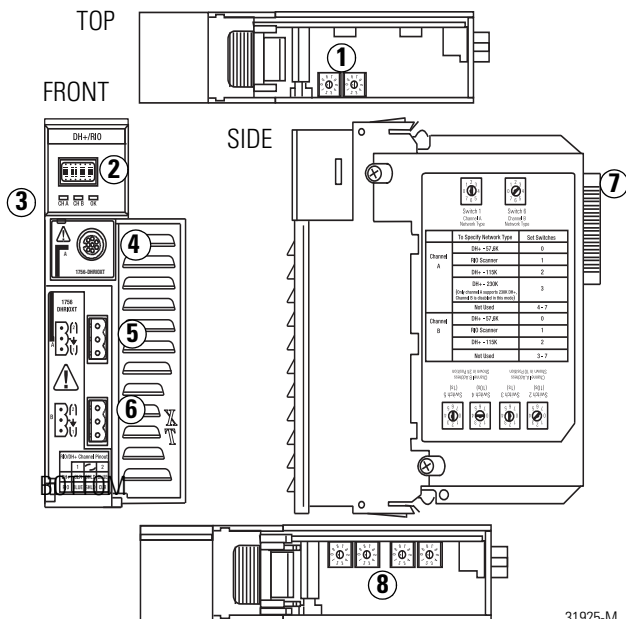
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Item	Description
1	Network type switches
2	Alphanumeric display
3	Status Indicators
4	8-pin mini DIN port for programming terminal
5	Channel A connector
6	Channel B connector
7	Backplane connector
8	Node address switches

About ControlLogix-XT Systems

The ControlLogix-XT products include control and communication system components that, when used with FLEX I/O-XT products, provide a complete control system solution that can be used in environments where temperatures range from -20...70 °C (-4...158 °F).

When used independently, the ControlLogix-XT system can withstand environments where the temperature ranges from -25...70 °C (-13...158 °F).

ControlLogix-XT with Traditional ControlLogix Components

IMPORTANT	**ControlLogix-XT system components are rated for extreme environmental conditions only when used properly with other Logix-XT system components.** The use of ControlLogix-XT components with traditional ControlLogix system components nullifies extreme-environment ratings.
	If a ControlLogix-XT module is used with traditional ControlLogix products, that is, ControlLogix products not designed for extreme environments, the ControlLogix-XT module can withstand only the environments specified for the traditional ControlLogix version of the module. For example, if a 1756-DHRIOXT module is used in a traditional 1756-A10 chassis, the 1756-DHRIOXT module can withstand only the environment specified for the traditional 1756-DHRIO module.
	The ControlLogix-XT system components are designed to meet the same and greater operational and environmental requirements as traditional ControlLogix products.
	When a ControlLogix-XT component is used as a replacement for a traditional ControlLogix component, the functional and environmental requirements of the traditional ControlLogix component apply.

For more information about standard ControlLogix component specifications and installation requirements, see the resources listed in the Additional Resources table on .

Before You Begin

Before you install your module, complete these tasks:

- Set the Network Type and Node Address Switches,
- Prepare the Chassis for Module Installation,
- Determine Module Slot Location,

Set the Network Type and Node Address Switches

Before you install the module, set the network type switches for each channel.

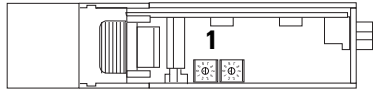| IMPORTANT	If your module uses the 230k DH+ network, that is, Channel A switch set to 3, Channel B is disabled.
	Also, node address switches do not apply if you are using remote I/O.

1. Using this image or the module label as a reference, set the network type switches on the top of the module.

Label

TOP

To Specify Network Type table:

	To Specify Network Type	Set Switches
Channel A	DH+ - 57.6K	0
	RIO Scanner	1
	DH+ - 115K	2
	DH+ - 230K (Only channel A supports 230K DH+, Channel B is disabled in this mode)	3
	Not Used	4 - 7
Channel B	DH+ - 57.6K	0
	RIO Scanner	1
	DH+ - 115K	2
	Not Used	3 - 7

Switch 1 — Channel A Network Type

Switch 6 — Channel B Network Type

Switch 5 — Channel B Address Shown in 24 Position (10s)

Switch 4 — Channel B Address Shown in 24 Position (1s)

Switch 3 — Channel A Address Shown in 10 Position (10s)

Switch 2 — Channel A Address Shown in 10 Position (1s)

If you set the network type to Data Highway Plus (DH+), also set the node address switches for that channel to a unique address within the range of 0…77.

2. Set the node address switches on the bottom of the module to a unique node address.

BOTTOM
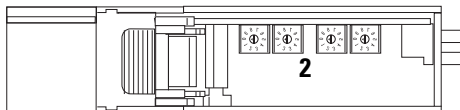
Prepare the Chassis for Module Installation

Before you install the module, you must install and connect a ControlLogix-XT chassis and power supply. Use these resources as references to install your chassis and power supply before you install your controller.

Task	Resource
Install a ControlLogix-XT chassis	ControlLogix XT Chassis, Series B Installation Instructions, publication 1756-IN637
Install a ControlLogix-XT power supply	ControlLogix XT Power Supply Installation Instructions, publication 1756-IN639

Determine Module Slot Location

You can use the ControlLogix-XT chassis that suits your application requirements. The 1756-DHRIOXT modules can be:

- installed in any open chassis slot.
- used in multiples in one chassis, within the limits of the ControlLogix-XT power supply.

Slot 0   Slot 1   Slot 2   Slot 3   Slot 4

31918--M
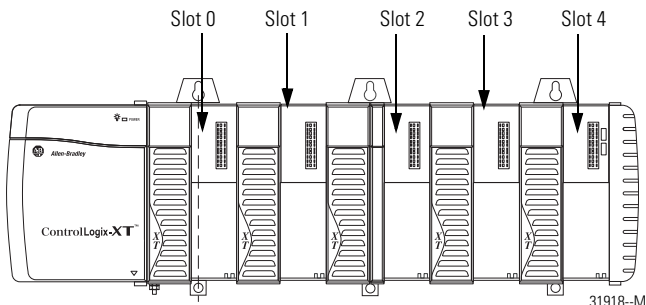
Installing and Removing the Module Under Power

WARNING

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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. 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.

Install the Module

Complete these steps to install the 1756-DHRIOXT module.

> **ATTENTION**
>
> Do not force the module into the backplane connector. If you cannot seat the module with firm pressure, check the alignment. Forcing the module into the chassis can damage the backplane connector or the module.

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

2. Slide the module into the chassis.
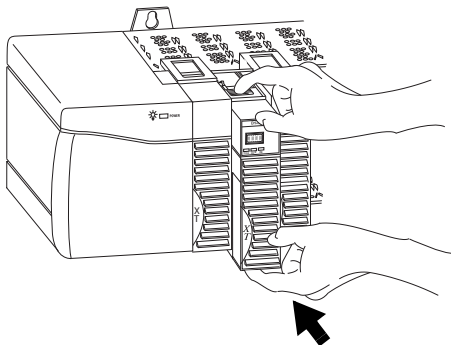
3. Verify that the module backplane connector properly connects to the chassis backplane.

   The module is properly installed when it is flush with the power supply or other installed modules.

Remove or Replace the Module

Complete these steps to uninstall the 1756-DHRIOXT module.

1. Push on upper and lower module tabs to disengage them.

2. Slide the module out of the chassis.
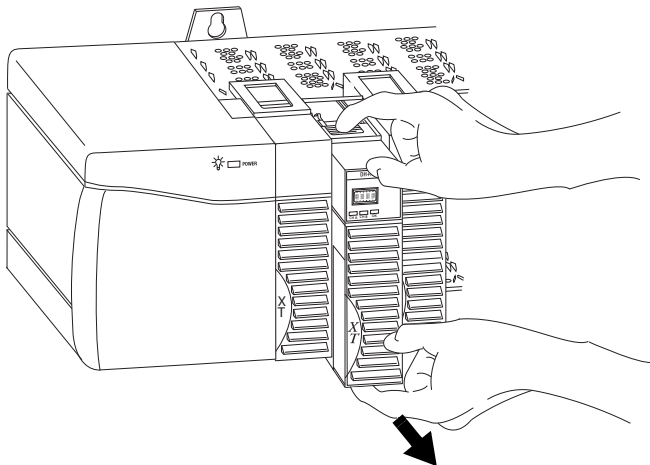
If you are replacing an existing module with an identical one, and you want to resume identical system operation, you must install the new module in the same slot.

Wire the Connectors for the Module Channels

Use these tables as a reference when wiring the network cable to the connectors.

8-pin Mini DIN Connector

Channel A and B Connectors
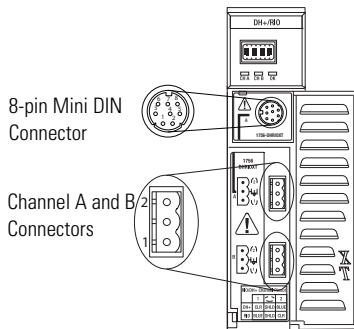
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8-pin Mini DIN Connection

The 8-pin mini DIN programming terminal connection is parallel to channel A when channel A is configured for DH+ communication.

Pin No.	Wire
1	Blue
3	Shield
6	Clear

Channel A and B Connections

Use the wiring specific to your application of the 1756-DHRIOXT module.

DH+		Remote I/O	
Pin No.	**Wire**	**Pin No.**	**Wire**
1	Clear	1	Blue
	Shield		Shield
2	Blue	2	Clear

Connect the Programming Terminal

Connect the programming terminal by using the 8-pin mini DIN connector.

WARNING	The local programming terminal port is intended only for temporary use and must not be connected or disconnected unless the area is assured to be nonhazardous.
⚠	If you connect or disconnect the communications connector with power applied to this module or any device on the network, 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.

WARNING	For hazardous locations, use the following cable for the programming terminal connection:
⚠	• Supplier: Huan Yu
	• Part Number: GCMD08P050062000
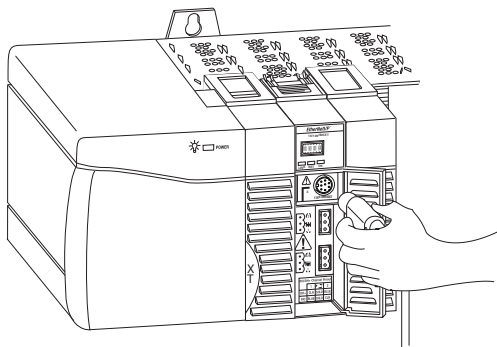
Connect the DH+ or Remote I/O Network

WARNING

⚠️

If you connect or disconnect the communications cable with power applied to this module or any device on the network, 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.

Connect the DH+ or Remote I/O network to the channel A or B connector as appropriate.
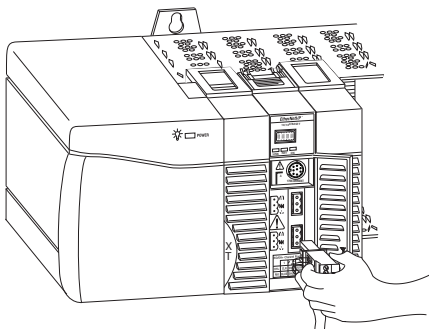
Apply Chassis Power

Apply power to the ControlLogix-XT power supply to provide power to the 1756-DHRIOXT module installed in the chassis.

Check Power Supply and Module Status

After you apply chassis power, check the power supply and module status indicators to verify the module is working properly.

31931-M
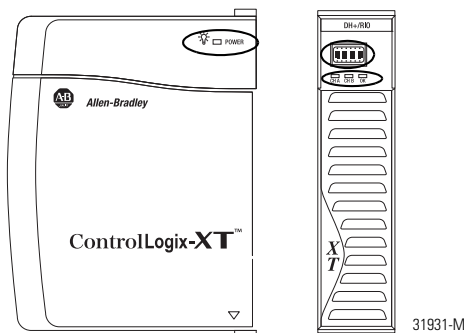
See the section titled Status Indicators, page 24 for more information about interpreting module status.

Alphanumeric Display Startup Sequence

At powerup, the module's alphanumeric display cycles through this sequence.

- Channel A and the network used for channel A - DH+ or RIO
- Channel A node address, if used for DH+
- Channel A status
- Channel B and the network used for channel B - DH+ or RIO
- Channel B node address, if used for DH+
- Channel B status

That sequence runs continuously during normal module operation. For example, if your module uses the following:

- Channel A for DH+ with node address 14
- Channel B for RIO

and the channels are operating properly, you see the following sequence:

- A DH, A#14, A OK, B IO, SCAN, B OK

For more information about the codes displayed on the alphanumeric display, see the Alphanumeric Display Codes () and the Status Indicators () sections for more information

Power Supply Status

If the alphanumeric indicator on the 1756-DHRIO module does not cycle through alphanumeric messages on powerup, use this table, along with the sections Alphanumeric Display Codes (page 21) and Status Indicators (page 24) to determine a cause.

POWER Indicator State	Means	Recommended Actions
Off	Not operating	• Turn power switch ON. • Check power wiring connections. • Check fuse.
On/Solid green	Operating	None - this is normal operation.

Configure Your 1756-DHRIOXT Module

After installing your 1756-DHRIOXT module, you must configure it. The 1756-DHRIOXT module is configured using the same methods and considerations as the traditional 1756-DHRIO module. For more information about configuring and using the 1756-DHRIOXT and 1756-DHRIO modules, refer to the ControlLogix Data Highway Plus-Remote I/O Communication Interface Module User Manual, publication 1756-UM514.

Alphanumeric Display Codes

Your 1756-DHRIOXT module displays alphanumeric codes that provide diagnostic information. The alphanumeric display flashes the codes at approximately 1-second intervals. These tables describe codes and interpretations specific to the application of the module.

Data Highway Plus Codes and Interpretations

Code	Description	Recommended Action
OFF LINE	Data Highway Plus link is in STOP state.	Correct the configuration. Refer to the 1756-DHRIO User Manual, publication 1756-UM514.
DUPL NODE	Data Highway Plus Duplicate node address.	Choose another node address and reset switches.
ONLY NODE	Only node on Data Highway Plus link.	Check the cables.
CNFG FALT	Incorrect DH+ routing table configuration. Incorrect Data Highway object configuration.	• Correct the configuration. Refer to the 1756-DHRIO User Manual, publication 1756-UM0514. • Verify that the module is inserted in the correct slot.
OK	Normal operation for that channel.	None.
LINK OFF	Channel B is disabled because Channel A is used for 230k DH+ operation.	None.

Remote I/O Codes and Interpretations

Code	Description	Recommended Actions
MUTE LINK	No adapters found on remote I/O.	Add an adapter to the remote I/O network.
RACK OVER	Rack overlap on remote I/O.	Reconfigure remote I/O racks.
DUPL SCAN	Duplicate scanner on remote I/O.	Check remote I/O adapter settings.
MAX_ DEV_	Maximum devices exceeded on remote I/O.	Remove devices to meet limitations on remote I/O network.
CHAT LINK	Babble detected on remote I/O.	Check remote I/O device and network connections.
OFF_ LINE	Not trying to communicate.	None. Normal state if controller is not controlling remote I/O.
OK	Normal operation.	None.
MUTE LINK	No adapters found on remote I/O.	Add an adapter to the remote I/O network.
RACK OVER	Rack overlap on remote I/O.	Reconfigure remote I/O racks.
DUPL SCAN	Duplicate scanner on remote I/O.	Check remote I/O adapter settings.
MAX_ DEV_	Maximum devices exceeded on remote I/O.	Remove devices to meet limitations on remote I/O network.
CHAT LINK	Babble detected on remote I/O.	Check remote I/O device and network connections.
OFF_ LINE	Not trying to communicate.	None. Normal state if controller is not controlling remote I/O.

Remote I/O Codes and Interpretations

Code	Description	Recommended Actions
OK	Normal operation.	None.
MUTE LINK	No adapters found on remote I/O.	Add an adapter to the remote I/O network.
RACK OVER	Rack overlap on remote I/O.	Reconfigure remote I/O racks.

Status Indicators

Three status indicators on the module provide information about your module and the status of each channel. The following tables outline the indicator condition and the corresponding status, and explain what each condition means.

OK Status Indicator

State	Description	Recommended Actions
Off	The module is not operating.	• Apply chassis power. • Verify module is completely inserted into chassis and backplane.
Flashing green	The module is operational, but either: – is not routing messages – the controller is not transferring I/O.	None if no messages are actively being routed through the module and no controller transferring I/O. To route messages or transfer I/O, use module default configuration or configure module.
Green	Operational and is routing messages.	None - this is normal operation.
Red, then off	Performing a self-test.	None - this is normal operation.
Red	In major fault	Reboot module. If red reoccurs, then replace module.
Flashing red	In major fault or configuration fault.	Check alphanumeric indicator and take action described in alphanumeric display message table on page 21.

Channel A and B Indicators

State	Channel Mode	Description	Recommended Actions
Off	All	Not on line.	Place channel on line.
Green	RIO scanner	Active RIO link. All adapter modules are present and not faulted.	None - this is normal operation.
	DH+	Operating.	None - this is normal operation.
Green flashing	RIO scanner	One or more nodes faulted or failed.	Check power at other racks.
	DH+	No other node on the network.	Check cables.
Red	All	Hardware fault.	Reboot module. If red reoccurs, replace module.
Red flashing	RIO scanner	Faulted adapters detected.	• Check cables. • Check power at other chassis.
	DH+	Duplicate node detected.	Check node address.

General Specifications - 1756-DHRIOXT

Attribute	Value
Module location	1756 ControlLogix-XT chassis, any slot
Backplane current (mA) at 24V	1.7 mA
Backplane current (mA) at 5V	850 mA
Power dissipation, max	4.5 W
Thermal dissipation, max	15.4 BTU/hr
Baud rate	57.6 Kbaud 115.2 Kbaud 230.4 Kbaud
Isolation voltage	30V (continuous), Basic Insulation Type Type tested at 853V AC for 60 s, DHRIO to system and DHRIO port to DHRIO port.
North American temp code	T4A
IEC temp code	T4
Enclosure type rating	None (open-style)
Wire size	0.2...2.0 mm^2 (24...14 AWG) Copper twinaxial; Belden 9463 recommended.
Wiring category	2 - on communications ports[1]

[1] Use this conductor category information for planning conductor routing as described in system level installation manual. Also refer to Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1.

Environmental Specifications - 1756-DHRIOXT

Attribute	Value

Temperature, Operating
    IEC 60068-2-1 (Test Ad, Operating Cold),
    IEC 60068-2-2 (Test Bd, Operating Dry Heat),
    IEC 60068-2-14 (Test Nb, Operating Thermal Shock)
	-25…70 °C (-13…158 °F)

Temperature, Nonoperating
    IEC 60068-2-1 (Test Ab, Unpackaged
    Nonoperating Cold),
    IEC 60068-2-2 (Test Bb, Unpackaged
    Nonoperating Dry Heat),
    IEC 60068-2-14 (Test Na, Unpackaged
    Nonoperating Thermal Shock)
	-40…85 °C (-40…185 °F)

Relative Humidity IEC 60068-2-30 (Test Db, Unpackaged Damp Heat)	5…95% noncondensing
Vibration IEC 60068-2-6 (Test Fc, Operating)	2 g @ 10…500 Hz
Operating Shock IEC 60068-2-27 (Test Ea, Unpackaged Shock)	30 g
Shock, Non-operating IEC 60068-2-27 (Test Ea, Unpackaged Shock)	50 g
Emissions CISPR 11	Group 1, Class A
ESD Immunity IEC 61000-4-2	• 6 kV contact discharges • 8 kV air discharges

Attribute	Value
Radiated RF Immunity IEC 61000-4-3	• 10V/m with 1 kHz sine-wave 80% AM from 80…2000 MHz • 10V/m with 200 Hz 50% Pulse 100% AM at 900 MHz • 10V/m with 200 Hz 50% Pulse 100% AM at 1890 MHz • 3V/m with 1 kHz sine-wave 80% AM from 2000…2700 MHz
EFT/B Immunity IEC 61000-4-4	±4 kV at 5 kHz on communication ports
Surge Transient Immunity IEC 61000-4-5	±2 kV line-earth(CM) on communication ports
Conducted RF Immunity IEC 61000-4-6	10V rms with 1 kHz sine-wave 80% AM from 150 kHz…80 MHz

Certifications - 1756-DHRIOXT

Certification[1] [2]	Value
c-UL-us	UL Listed Industrial Control Equipment, certified for US and Canada. See UL File E65584.
	UL Listed for Class I, Division 2 Group A,B,C,D Hazardous Locations, certified for U.S. and Canada. See UL File E194810.
CE	European Union 2004/108/EC EMC Directive, compliant with:
	• EN 61326-1; Meas./Control/Lab., Industrial Requirements
	• EN 61000-6-2; Industrial Immunity
	• EN 61000-6-4; Industrial Emissions
	• EN 61131-2; Programmable Controllers (Clause 8, Zone A & B)
C-Tick	Australian Radiocommunications Act, compliant with: AS/NZS CISPR 11; Industrial Emissions
Ex	European Union 94/9/EC ATEX Directive, compliant with:
	• EN 60079-15; Potentially Explosive Atmospheres, Protection "n" (II 3 G Ex nA IIC T4 X)
	• EN 60079-0; General Requirements (Zone 2)
TÜV	TÜV Certified for Functional Safety: up to and including SIL 2

[1]   When the product is marked.

[2]   See the Product Certification link at http://www.ab.com for Declarations of Conformity, Certificates, and other certification details.

Additional Resources

These documents contain additional information concerning related Rockwell Automation products.

Resource	Description
ControlLogix Data Highway-Plus Remote I/O Communication Interface Module Installation Instructions, publication 1756-IN003	Contains installation instructions and specifications specific to the standard ControlLogix Data Highway Plus Remote I/O module.
ControlLogix-XT Chassis Installation Instructions, publication 1756-IN637	Contains information on how to install a ControlLogix-XT chassis.
ControlLogix Power Supplies Installation Instructions, publication 1756-IN639	Contains information on how to install the ControlLogix-XT power supply.
ControlLogix Data Highway Plus-Remote I/O Communication Interface Module User Manual, publication 1756-UM514	Contains information about configuring and using 1756-DHRIO and 1756-DHRIOXT modules. Use this manual when configuring and using your 1756-DHRIOXT module.
Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1	Provides general guidelines for installing a Rockwell Automation industrial system.
Product Certifications website, http://www.ab.com	Provides declarations of conformity, certificates, and other certification details.

You can view or download publications at http://literature.rockwellautomation.com. To order paper copies of technical documentation, contact your local Rockwell Automation distributor or sales representative.

Notes:

Rockwell Automation Support

Rockwell Automation provides technical information on the Web to assist you in using its products. At http://support.rockwellautomation.com, you can find technical manuals, a knowledge base of FAQs, technical and application notes, sample code and links to software service packs, and a MySupport feature that you can customize to make the best use of these tools.

For an additional level of technical phone support for installation, configuration, and troubleshooting, we offer TechConnect support programs. For more information, contact your local distributor or Rockwell Automation representative, or visit http://support.rockwellautomation.com.

Installation Assistance

If you experience a problem within the first 24 hours of installation, please review the information that's contained in this manual. You can also contact a special Customer Support number for initial help in getting your product up and running.

United States	1.440.646.3434 Monday – Friday, 8 a.m. – 5 p.m. EST
Outside United States	Please contact your local Rockwell Automation representative for any technical support issues.

New Product Satisfaction Return

Rockwell Automation tests all of its products to ensure that they are fully operational when shipped from the manufacturing facility. However, if your product is not functioning and needs to be returned, follow these procedures.

United States	Contact your distributor. You must provide a Customer Support case number (call the phone number above to obtain one) to your distributor in order to complete the return process.
Outside United States	Please contact your local Rockwell Automation representative for the return procedure.

www.rockwellautomation.com