AutomationDirect

1800-633-040

NEW PLC!

Do more!

SPEND LESS, DO MORE.

All NEW CPUs designed from the ground up!
- **More** program memory
- **Faster** program execution
- **Built-in Ethernet** on CPU(optional)
- **FREE** Do-more Designer software, all-new instruction set
- **FREE** 30 days of online video training
- plus much more. . . see page 4

30 Days of Free Training!
Your purchase of this *Do more!* PLC product qualifies you for 30 days of online training.
Visit www.do-moretraining.com and enter the code above to take advantage of this offer!

INTERCONNECTING AUTOMATION

NEW CPUs work with DL205 hardware

See page 10

Over 9,500 quality-priced products, in-stock, shipped fast and always FREE #1 rated technical support.

So why are our prices so low?

AutomationDirect offers over 9,500 high-quality industrial automation products, both name brand and private-label.

We get good prices from our suppliers because of our volume purchases; in turn, this allows us to offer good prices to our customers.

The manner in which our high-tech sales and service channels operate lets us eliminate the waste that occurs between the manufacturer's/supplier's price and the sell price.

With our direct sales approach, we do massive amounts of advertising to get potential customers to request our free CDcatalog or visit us online.

Our production cost for each DVD catalog is typically $10, compared to a personal sales call that might cost $450.

Compare this to your average local distributor, typically with low levels of stock, a bunch of sales people, company cars and expense accounts, and you start to get the picture.

Our process makes it easy to pass the savings on to you.

AUTOMATIONDIRECT

Our website is also a great resource for the most current pricing and newproducts:
For the most up-to-date price lists or shop online visit:

www.automationdirect.com.au

Customers say we have the most courteous and helpful sales team in the industry.

Take a closer look at buying direct (You'll be in good company)

Automation Direct is a direct seller of automation and industrial control products such as PLCs, sensors, pushbuttons, AC drives/motors, enclosures, operator interfaces, pneumatics and much more. Through our free CD catalog and our full-featured Web site, we are able to offer the most practical industrial automation products at the industry's lowest prices.

Tens of thousands of owners and managers at large and small companies alike have turned to Automation Direct in the past several years because we offer over 9,500 industrial automation products for electrical control systems that won't break your budget.

Award winning products

AUTOMATION DIRECT offers over 9,500 industrial automation products for your electrical control system, including PLCs, operator interfaces, AC drives, sensors, motor controls, pushbuttons, connection systems, enclosures, pneumatics and more. Whether you need to design a new system or maintain existing ones, AUTOMATION DIRECT offers the industry's best value for all the automation products you need.

Ask for your free CD catalog loaded with product overviews, full technical details and prices.

Best prices every day

Your best price is available every day when you order from us

Our direct business model allows us to offer high-quality products with minimal overhead. We pass the savings on to you with our low everyday prices, which are typically well below the list prices* of most traditional automation manufacturers.

Same-day shipping

Tight logistics ensure same-day shipping of huge in-stock inventory

We ship it super fast and accurately. We have integrated an enterprise-wide electronic order processing system and a fully stocked warehouse.

This system allows us to take your order as late as 4 p.m. EST and ship it the same day.*

* For in-stock orders shipped direct from warehouse, with company orders or paid with credit card or pre-approved credit.

Drop-shipped items may require earlier deadlines, see Terms and Conditions for complete details.

Satisfied customers

It is important for us to get feedback in order to serve our customers better, so we send out satisfaction surveys for many of the sales and technical support calls that we take.

For more detailed and complete printed information on all our products, give us a call at **1-800-633-040** or **go online** and ask for your FREE copy of our latest CDcatalog.

All the latest information, specs, pricing and more are available online at: **www.automationdirect.com.au**

www.automationdirect.com.au

Looking for a common sense way to buy industrial controls?

It's time to try AUTOMATIONDIRECT

Super service plus the extras for FREE!

Our brand is our promise to you -

Our commitment is that our products remain "great value for money, and that we will deliver quality, reliable and innovative products with fast shipping."

You are never more than a quick phone call away from the best tech support in the business!

It's no accident that our technical support team routinely demonstrates the best attitude and manners in the industry! Some of our competitors require your credit card details before they assist or you are required to sign up to support packages.

The bottom line with Automation Direct is that you get great service by design and without cost.

Are you tired of calling a local distributor to discover their "product expert" is not in? How about waiting hours for technical service to return a message? Are you tired of technical support staffs with poor attitudes that border on arrogant?

Why not try our service? Isn't it great to get better service and a better price?

For over 18 years, we've been helping customers turn a profit by keeping costs down and quality up

Since our beginning in 1994, as Aussie*Direct*, our number one objective has been to deliver quality products at a practical price. We try extra hard, especially during these tough economic times when many companies are faced with tighter operating budgets.

Our customers recognize that by using a good product at a great price, taking advantage of customer friendly rated service, and receiving the fastest delivery possible, they can rely on AUTOMATION DIRECT to help with their bottom line.

It's pretty simple. Give people what you promise and they will come back for more.

What's inside:

All Prices shown are trade prices and are Exclusive of GST

Automation Direct Pty Ltd - Serving Australia and the Asia Pacific Region

FREE Software and Manuals

www.automationdirect.com.au

Don't worry about the technical information for your products - it's all available online in PDF form - including hardware manuals, product installation inserts and quick-start guides, as well as our complete catalogue. You don't have to remember to order it, file it or try to find it - it's there when you need it.

Programming software for a complex product can be costly, so we try to help you out by offering FREE fully enabled software for a number of our most popular products, including the Productivity3000 PAC, CLICK PLC and C-more Micro HMI. No license or upgrade fees to deal with, and support is free too!

AUTOMATIONDIRECT

FREE support sites that help you before, during, and after your purchase

www.automationdirect.com.au

Technical Support is loaded with FAQs, demo programs, FREE manuals (PDF downloads), CAD drawing downloads, Customer Forum, Example programs, Application Stories, product training video's and more.

*All prices are subject to change, orders are accepted at the pricing ruling at the time of acceptance of orders and do not include GST.

NEW
205 PLC
CPU!

11 Reasons
you can do more with
this CPU on page 4
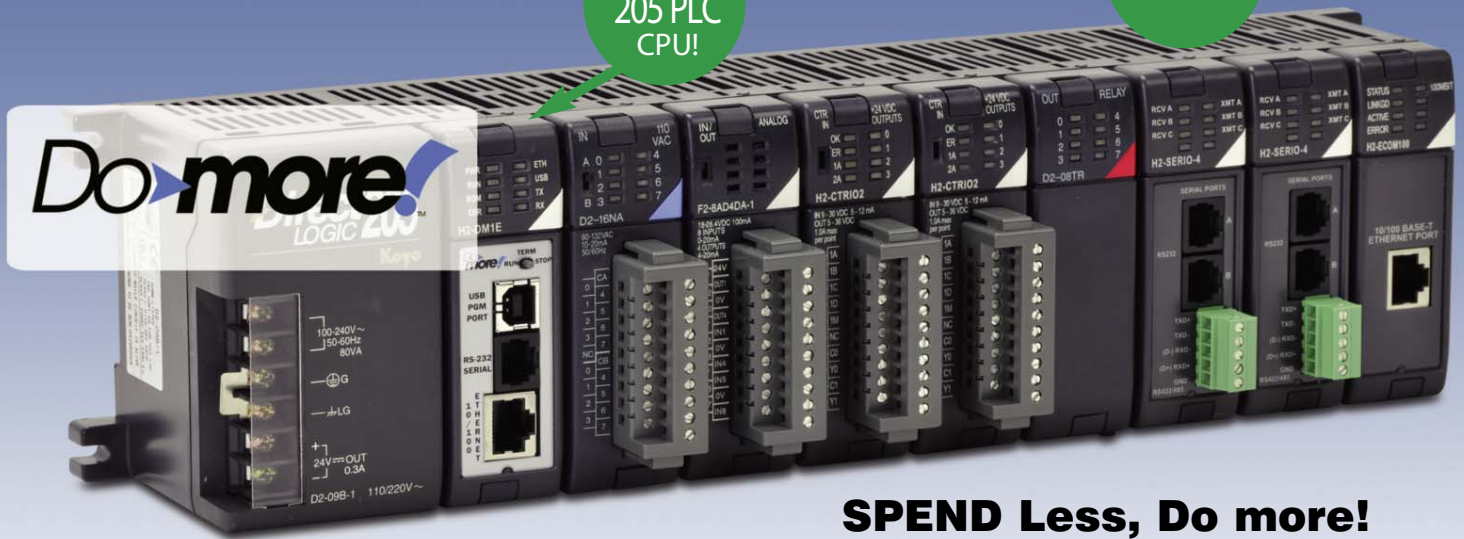
SPEND Less, Do more!

The Do-more H2 series micromodular CPUs are "superchargers" for the time-tested DL205 hardware. We started with a blank slate and included many features our customers have been asking for. It's superfast, has lots of memory, embedded Ethernet - we know, we're pretty excited ourselves!

There are two CPU options:

H2-DM1 **$495.00** (1) USB port, (1) full-duplex serial port

H2-DM1E **$595.00** (1) USB port, (1) full-duplex serial port, (1) Ethernet port

• Over 1M bytes total memory (includes program, data and documentation)
• Program/monitor/debug over any embedded communication port.
• Supports up to 256 I/O locally and thousands more with optional Ethernet remote expansion racks.
• Supports inexpensive serial port expansion options for connection to bar code readers, ASCII devices, printers, etc.
• Four base sizes with built-in power supply support 12/24 VDC, 110/220 VAC and 125VDC (six and nine-slot only) power sources.
• Over 50 option modules are available, from discrete and analog to high-speed counter and Ethernet modules.

Note: Do-more CPUs are programmed with the new Do-more Designer software. DirectSOFT, and ladder programs developed with DirectSOFT, are not compatible with these CPUs.

Get started fast with a Do-more Starter Kit - you get a prewired, 3-slot base with your choice of Do-more CPU, 8-point input simulator module, 8-point relay output module, Do-more Designer software on CD, a hard copy of the user manual, a USB programming cable, and a coupon for free online training. **With the H2-DM1 CPU, the kit is $890.00; with the H2-DM1E, the kit is $945.00**.

Do-more Starter Kit

USB port
RS-232 serial port
Ethernet port

H2-DM1   H2-DM1E

100% FREE Software!

The Do-more Designer software represents a clean break from the past (DirectSOFT). We listened to our customers to create a powerful, easy-to-use programming environment with all the features you expect from modern PLC programming software.

Discrete input/output modules

DC Input Modules

D2-08ND3	**$89.00**	8 pt. 12-24V sink/source
D2-16ND3-2	**$145.00**	16 pt. 24V sink/source
D2-32ND3-2	**$195.00**	32 pt. 5-15V sink/source
D2-32ND3	**$195.00**	32 pt. 24V sink/source

AC input modules

D2-08NA-1	**$120.00**	8 pt. 110VAC
D2-08NA-2	**$155.00**	8 pt. 220VAC
D2-16NA	**$199.00**	16 pt. 110VAC

Use Do-more CPUs with these time tested, industry-proven modules

DC output modules

D2-04TD1	**$99.00**	4 pt. 12-24V sink, 4A/pt
D2-08TD1	**$95.00**	8 pt. 12-24V sink
D2-08TD2	**$95.00**	8 pt. 12-24V source
D2-16TD1-2	**$160.00**	16 pt. 12-24V sink
D2-16TD2-2	**$160.00**	16 pt. 12-24V source
F2-16TD1P	**$175.00**	16 pt. 12-24 VDC sink
F2-16TD2P	**$175.00**	16 pt. 12-24 VDC source
D2-32TD1	**$195.00**	32 pt. 12-24V sink
D2-32TD2	**$195.00**	32 pt. 12-24V source

16-point module with removable terminal block

AC output modules

D2-08TA	**$170.00**	8 pt. 18-220VAC
F2-08TA	**$165.00**	8 pt. 20-125VAC, high current
D2-12TA	**$199.00**	12 pt. 18-110VAC

Relay output modules

D2-04TRS	**$99.00**	4 pt. 4A/pt. 8A/module
D2-08TR	**$110.00**	8 pt. 1A/pt. 4A/module
F2-08TR	**$110.00**	8 pt. form A, 10A/common
F2-08TRS	**$135.00**	8 pt. (5 form A, 3 form C, 7A/pt)
D2-12TR	**$175.00**	12 pt. form A, 1.5A/pt

Combination

D2-08CDR	**$99.00**	4 pt. DC in, 4 pt. relay out

Analog and Temperature modules

Wide range of low cost analog and thermocouple modules

Analog input modules

F2-04AD-1	**$250.00**	4-ch. 4-20mA
F2-04AD-2	**$295.00**	4-ch. 0-5V, 0-10V, -5 to +5V, -10 to +10V
F2-08AD-1	**$320.00**	8-ch. 4-20mA
F2-08AD-2	**$340.00**	8-ch. 0-5V, 0-10V, -5 to +5V, -10 to +10V

Analog output modules

F2-02DA-1	**$199.00**	2 ch. 4-20mA
F2-02DA-2	**$210.00**	2 ch. 0-5V, 0-10V, -5 to +5V, -10 to +10V
F2-02DA-1L	**$199.00**	2 ch. 4-20mA (12VDC supply)
F2-02DA-2L	**$210.00**	2 ch. 0-5V, 0-10V, -5 to +5V, -10 to +10V (uses 12VDC supply)
F2-02DAS-1	**$290.00**	2 ch. 4-20mA, 16-bit isolated
F2-02DAS-2	**$320.00**	2 ch. 0-5V, 0-10V 16-bit isolated
F2-08DA-1	**$375.00**	8 ch. 4-20mA, sink/source selectable
F2-08DA-2	**$340.00**	8 ch. 0-5V, 0-10V

Combination analog

F2-4AD2DA	**$360.00**	4-ch. in/2-ch. out 4-20mA
F2-8AD4DA-1	**$450.00**	8-ch. in/4-ch. out 4-20mA
F2-8AD4DA-2	**$450.00**	8-ch. in/4-ch. out 0-5V, 0-10V

Temperature

F2-04RTD	**$395.00**	4-ch. RTD input 0.1C resolution
F2-04THM	**$395.00**	4-ch. 16-bit thermocouple

Specialty modules

Input Simulator
F2-08SIM **$80.00** 8 pt Input Simiulator

Ethernet
H2-ECOM100 **$459.00** Master/Slave Ethernet 10/100 Mbps

Serial
H2-SERIO **$265.00** Three RS-232 ports
H2-SERIO-4 **$265.00** Two RS-232 ports & one RS-422/485 port ◄ **wow!**

High Speed Counting & Motion Control
H2-CTRIO **$460.00** Four 100 kHz inputs, and two 25 kHz pulse train outputs
H2-CTRIO2 **$520.00** Four 250 kHz inputs, or two 20-250 kHz pulse train outputs ◄ **new!**

Ethernet Remote I/O
H2-ERM **$320.00** Remote I/O 10 Base-T (Master)
H2-ERM100 **$320.00** Remote I/O 10/100 Base-T (Master) ◄ **new!**
H2-EBC100 **$449.00** Ethernet Base Controller (Slave)

Ethernet Remote I/O - Ethernet Remote Master module, for Ethernet remote I/O on a 10/100Base-T network at 10/100 Megabaud. Must beinstalled in a local base with a D2-240, D2-250(-1), D2-260, Do-more H2 series or H2-WPLCx-xx CPU module in the CPU slot. Ethernet cable (purchased separately) connects to H2/H4/T1H-EBC(100) modules directly or via Ethernet hub(s).

Four base sizes

3-slot base
D2-03B-1 110/220 VAC **$195.00**
D2-03BDC1-1 12/24 VDC **$230.00**

4-slot base
D2-04B-1 110/220 VAC **$210.00**
D2-04BDC1-1 12/24 VDC **$260.00**

6-slot base
D2-06B-1 110/220 VAC **$260.00**
D2-06BDC1-1 12/24 VDC **$295.00**
D2-06BDC2-1 125 VDC **$295.00**

9-slot base
D2-09B-1 110/220 VAC **$325.00**
D2-09BDC1-1 12/24 VDC **$395.00**
D2-09BDC2-1 125 VDC **$395.00**

Compatible products include:
- C-more and C-more Micro HMI products
- Kepware OPC Servers
- O-Ring and Sixnet Ethernet switches
- ZIPLink connector modules - relay, fuse and LED options
- Connectivity to SureServo® and SureStep® motion products
- Variable frequency drives and AC motors
- DNP3 Gateway Module

11 Ways You can *Do-more!* with this PLC

The Do-more H2 series micromodular CPUs leverage the existing line of DL205 I/O modules and base units to create an incredibly powerful PLC at a fraction of the cost of comparable PLCs and PACs.

1 Cost-effective hardware

The Do-more H2 CPUs take advantage of the industry-proven DL205 series hardware with over 50 compatible I/O modules and 4 base sizes. With our everyday list prices that are among the lowest in the industry, it's inexpensive to buy AND it's inexpensive to maintain down the road.

2 All documentation on board

Do-more stores all your project documentation on the CPU, easily retrieved by any PC with the FREE Do-more Designer software installed. You can also store your own PDF, HTML or other format files with the disk-based version of the project to aid future improvement or troubleshooting efforts.

3 This communications powerhouse includes built-in USB, serial, and (optional) Ethernet...

H2 series CPUs have built-in serial and USB ports; one version includes an Ethernet port. If you need more, Do-more can do that. Add Ethernet ports for $459.00 each, or serial ports - three for $265.00. We've filled a rack with 25 serial ports and Do-More doesn't flinch. It supports custom protocols and lets you name all your devices for easy recognition throughout your program. Connect bar code readers, scales, servo drives, etc.

4 Practical counting/pulse

At $520.00, the new high-speed counter module (H2-CTRIO2) has four independently configurable timer/counter channels (up to 250 kHz) and two pulse output generators (up to 250 kHz). All configuration and profile setup is now built in to the Do-more Designer software, so it's a snap to integrate with your other application logic. The original H2-CTRIO is also supported.

5 Expansion I/O

Do-more supports Ethernet remote I/O. Add up to 16 remote drops to each H2-ERM master installed in your local rack.

6 High-Performance Processor

The Do-more CPU is lightning fast (executing a 1k Boolean program in just 0.2ms) – about 20x faster than the DL205 processors.

7 FREE! programming software

The Do-more Designer software represents a clean break from the past (DirectSOFT)*. We listened to our customers to create a powerful, easy-to-use programming environment with all the features you expect from modern PLC programming software:

- Flexible program management supports a mix of stage and ladder logic for a best-of-both-worlds approach that simplifies your code and makes troubleshooting easier.
- Support for up to 2,000 PID loops with auto-tuning AND instruction-specific monitoring windows for PID, RAMPSOAK, and High/Low ALARM instructions
- Spreadsheet style Math instruction supports formulas, variables, nesting
- "Axis Mode" for motion
- Enhanced security
- Strong data typing

and much more…

* This required that we drop support for the old handheld programmer (good riddance!) AND there isn't a conversion utility for legacy DirectSOFT ladder programs (sorry!**)

** There was no way around it - and we thought you would like to know this fact up-front.

Built-in Simulation Tool

The Do-more Designer software includes a hyper-accurate simulator, a "virtual PLC" on your PC. It's actually the very same code that executes inside the Do-more CPU!

- **Connect and download to it just like a physical PLC.**
- **Simulates discrete and analog I/O with access to timers, counters, control bits, etc.**
- **Use the simulator with "Trend View'"for outstanding visibility into your PID process.**
- **Allows you to test and debug your logic without a PLC present!**

8 Smarter architecture

Do-more offers about nine times the data memory and four times the program memory of the DL205 processors, and you can allocate all that data memory the way you want it - no rigid, predefined blocks of wasted space!

9 Powerful control over program execution

Define execution order for your tasks and programs. Then give each a fixed timeslice, with smart "yield points" for logical pause locations. You have complete control over the order and timing of your PLC code.

10 Enhanced troubleshooting tools

Suspend tasks or programs and disable stages. Monitor program status bits. Trend data in multiple views. Turn on the Do-more Logger and log error messages right to the Network Message Viewer application on your PC. Do-more has all the troubleshooting tools you need to get your code up and running quickly and efficiently.

11 Practical high-density modules and ZipLink connections

DL205 I/O modules offer a wide range of points per module including 4, 8, 12, 16 and 32-point modules. To help you wire them fast and inexpensively, *ZIP*Link quick connection cables and terminal blocks help you connect I/O modules to terminal blocks in seconds. These easily pay for themselves by reducing wiring costs. We also offer relay, fused and LED *ZIP*Link modules.

Relay   AC Input   DC Output   Ethernet   Remote I/O

Many I/O modules have matching ZIPLink connection cables/blocks. Connect even 32-point modules in seconds!

And much more:

- **Decimal Addressing**
- **Stage Programming**
- **True Bumpless Run-time editing**

Expand the possibilities . . .

Universal Field I/O

Terminator I/O is the most practical distributed field I/O system you can buy. It combines I/O points with field terminations for a modular package that saves panel space and money. With Terminator I/O, you can distribute I/O nodes close to field devices for faster and more efficient wiring and troubleshooting.

Terminator I/O features:

- Network interface modules supporting Ethernet, Profibus, DeviceNet, Modbus RTU and Koyo remote I/O; includes an on-board serial port
- Discrete, analog, temperature and high-speed counter I/O modules with modular terminal bases
- Configuration flexibility by plugging together a network interface module with up to 16 I/O modules. No more confining I/O bases.
- AC or DC power supplies; for high power systems, combine multiple supplies on a single I/O set.

Universal I/O

Network interfaces available:
- Profibus
- DeviceNet
- Ethernet 10 MBit or 100 MBit
- Modbus RTU
- Koyo Remote I/O

Use Terminator I/O for:

- Robust PLC remote I/O with triple stack terminal bases and hot-swap I/O modules
- Allen-Bradley, Siemens, Modicon or GE systems for a lot less than the price of their comparable field I/O products
- Low-cost field I/O for your SCADA or PC-based control system

Network interfaces starting at $184.00

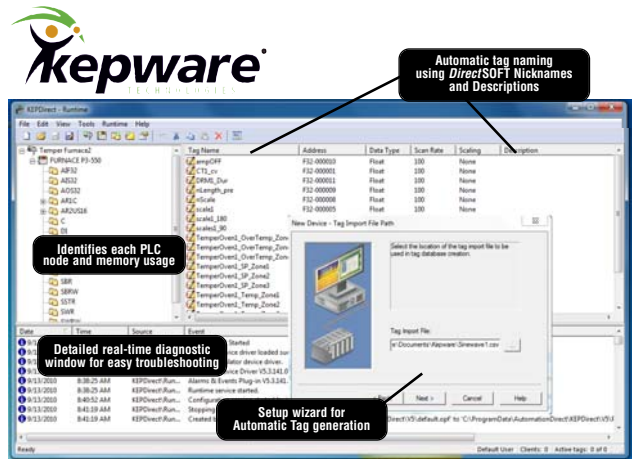*I/O modules starting at $69.00*

KEPWARE OPC Data Server for Windows

KEP*ware* OPC Server connects your favorite Windows client software to AutomationDirect I/O through our EBCs (Ethernet Base Controllers), to our *Direct*LOGIC PLCs through ECOM modules or serial ports, or the Productivity3000 Ethernet connectivity.

Any industrial HMI, SCADA, data historian, MES or ERP software package that includes an OPC client interface (most do) can connect to our PLC hardware for cost-effective data acquisition or control. You can even use Visual Basic® to create data logging or simple HMI screens. (Requires OPC DA Client Tool Kit to use OPC with Visual Basic.)

Software and manual are DOWNLOAD ONLY.

Automatic tag naming using *Direct*SOFT Nicknames and Descriptions

Identifies each PLC node and memory usage

Detailed real-time diagnostic window for easy troubleshooting

Setup wizard for Automatic Tag generation

Ethernet network support

Other Ethernet products include Cat5e cables, a PC adapter card and a switch kit.

Starting at $5.50

Serial converters and adapters

Serial products include Modbus TCP/IP to RTU Gateway, cable kits, USB to serial adapter, RS232 to RS422/485 network adapters and converters, and an industrial telephone modem.

The best value for PLCs in the industry

DirectLOGIC Programmable Logic Controllers

DL05: Offers incredible features

The DL05 series is a fixed I/O PLC with eight inputs and six outputs, and features you won't find in most bricks - six I/O combinations of AC, DC and relay I/O, and advanced programming functions such as PID and drum sequencing.

- Eight inputs and six outputs
- 2 K program memory
- 4 K data memory
- Two communication ports
- Over 250 instructions, including four PID loops

- Removable terminal block
- 12/24 VDC powered versions
- One expansion slot accepts option modules (listed below)
- Memory cartridge/real-time clock option module

starting at: $199.⁰⁰

DL06: Mighty micro with 36 I/O and four expansion slots

The DL06 series micro PLC combines fixed I/O of 20 inputs and 16 outputs with four option card slots for expansion (discrete, analog, communication modules), all in the same package. With the DL06, you can use the same PLC panel layout for all applications from 36 to 100 I/O.

starting at: $395.⁰⁰

- 20 inputs and 16 outputs
- 7.5 K program memory
- 7.3 K data memory
- Two communication ports, including built-in RS232/RS422/RS485 port
- Almost 280 instructions, including eight PID loops and ASCII
- Removable terminal blocks

- Built-in 300 mA 24 VDC auxiliary power supply for field devices (on all AC powered units)
- 12/24 VDC powered versions
- Built-in real-time clock/calendar
- Optional plug-in LCD display
- Four expansion slots

Lots of option modules for the DL05 and DL06!

- 4, 8, 10 and 16-point discrete modules
- 4-in/3-out combo I/O module

- Voltage and current analog modules
- Thermocouple and RTD temperature input modules

Specialty I/O
Starting at $260.00
(F0-CP128)

- 1-channel high-speed input/pulse output module
- 3-port BASIC CoProcessor

Communications and Networking
Starting at $175.00
(D0-DEVNETS)

- DeviceNet™ (slave) Ethernet, Profibus and serial data option modules

Ethernet connectivity to PLCs and HMI/SCADA systems

The H0-ECOM100 Ethernet Communications Modules provide a 10 Mbit or 100 Mbit Ethernet link for PLC systems and can be used for peer-to-peer PLC communication between two or more Directories DL05/06 PLCs. They also provide data serving to HMI/SCADA and information systems using OPC over Ethernet. For simple data logging, DataWorx (see Software section) easily connects the DL06 via Ethernet to standalone PCs or network servers. Collect data without the need for special PC programming or any 3rd party HMI, SCADA, or DAQ software application.

Fill-in-the-blank instructions for

ASCII and Modbus

The DL06 includes some cool communication instructions for ASCII operations and Modbus. Using *Direct*SOFT version 4.0 or higher, you can implement your communication requirements more easily than ever.

7

Some call it a PAC.

Some call it a PLC.

We call it ...

Productivity3000!

What's a PAC?

A programmable automation controller* (PAC) is a compact controller that combines the features and capabilities of a PC-based control system with that of a typical programmable logic controller (PLC).

PLC Feel
- Modular footprint
- Industrial reliability
- Wide array of I/O modules and system configurations

PC Power
- Large memory and high-speed processing
- High-level data handling and enterprise connectivity
- Extensive communications capability, multiple protocols and field networks

PACs are most often used for advanced machine control, process control, data acquisition and equipment monitoring.

More Productive
when troubleshooting

Run-time editing, hot-swappable I/O and onboard program documentation are tools that help you commission and troubleshoot your system more quickly and conveniently.

Use the built-in LCD display on the CPU and Remote Slave modules for system diagnostics, configuration and troubleshooting.

The patent-pending LCD interface built into each analog module allows you to view field signal levels without the hassle of an external meter.

ADVANCED DIAGNOSTICS

NEW!
Motion Control

P3-HSO
High-Speed Pulse Output Module
2 channels @ 1MHz/channel

P3-HSI
High-Speed Input / Counter Module
2 channels @ 1MHz/channel

Modules

High-performance CPU $599, with 7 communication ports

The 50Mb of memory and fast scan time (266MHz processor) is just for starters - this CPU does the work of at least four or five pieces of hardware compared to other controllers. With its seven built-in communication ports, it does the usual CPU stuff like storing and running the program, plus -
- Plug-and-play USB programming (uses standard A-B cable)
- Tag database and program documentation storage in CPU (Program pre-loaded on PC not necessary)
- USB local I/O expansion (no local I/O expansion master module needed)
- Ethernet remote I/O expansion (no Ethernet remote master module needed)
- High-speed Ethernet port for HMI and peer-to-peer or business system networking (no Ethernet communications module needed)
- Two serial ports for peripheral device interface or controller networking (no serial port module or ASCII module needed)
- USB data logging right from the CPU

Basic CPU only $419, with 5 communication ports

The P3-530 CPU has a few less features than the P3-550, but it's a top performer in its own class and a great value!
- 25Mb memory, 266MHz processor

TOP 10
Hardware Highlights

- High-performance CPU with **50Mb memory**, fast scan time
- **Modular** rack-based footprint with 36 discrete and analog I/O option modules, up to 115K+ I/O
- Unmatched **built-in communications** capabilities, including local and remote I/O ports and networking
- Integrated **drive communications** over Ethernet
- **LCD display on CPU** and Remote Slave for configuration and diagnostics
- Patent-pending **LCD display on ALL analog modules** - Helpful in troubleshooting and reading process values
- **Hot-swappable** I/O
- No module placement restrictions - **any module in any slot**, any base
- **No power budget** limitations
- Optional I/O terminal blocks or easy ZIPLink **plug-and-play wiring**

STATION 32 SCHEDULED LOCK-OUT FOR MAINT.
P3-550 CPU
MENU   ESC

SELFTEST FAIL REPLACE MODULE

Full-featured FREE Software

Full-featured ProductivitySuite software FREE ($725 value)

The Productivity3000 is a brand-new controller, and we want everyone to see just how feature-packed it is and how productive it can make you.

That's why we're offering the software for FREE (downloadable online) right now - check out the tools, instruction set and programming/debug environment that will let you configure and program a system in less time than you can imagine.

Hardware auto-discovery

One click is all it takes to detect and auto-configure the hardware connected to the system, including local and remote bases and I/O. GS drives on the internal Ethernet network are also discovered during any configuration update. This can save you literally hours and hours of setup time.

Or, configure the system offline by dragging and dropping bases and modules.

Advanced instructions are timesavers

There are so many time-saving instructions, and they all have one thing in common - their "fill-in-the-blank" approach makes it easy to configure even the more complex tasks that used to require a whole bunch of program code. Scaling, calculator-style math, statistics, send email, it goes on and on ...

Tag name database is friendly and flexible

Data memory ranges in the Productivity3000 are not fixed by data type, which is more efficient because you have the freedom to define the data types you need instead of having wasted memory for ones you do not.

Also, a tag name database means no more confusing and ambiguous memory and I/O references - add descriptive names as you program or enter all the tags before you even write one line of code. The data is stored in true database format so you can search, filter and sort; import a .csv file or use the one created every time you save the project for importing into other databases.

All project files in CPU means it's not all Greek to you

With the ample memory in the CPU, there's plenty of room for the program, tag name database and all the program documentation. This means the helpful descriptions and comments are available to anybody with a PC and ProductivitySuite software. This can be pretty important when it's 1 a.m, the machine is down and you're the one that has to look at the program and figure out what's wrong.

Task management boosts program speed & efficiency

The Task Manager helps organize program code and execute it for maximum speed and efficiency. Create functional tasks, name them and schedule their execution frequency - every scan, every second, or when called. A "First Scan only" task lets you initialize values and conditions. Store specialized tasks that help debug and troubleshoot in the Disabled Tasks section.

Import tags into C-more database

C-more HMI software has a direct import feature for the Productivity3000 tag database. No duplicating work - bring in all the tag names from the controller program right into C-more's database with just a few keystrokes.

Easy data logging on CPU

Easily log data to a removable mass storage device (USB) on an event or time basis. Track up to 64 data values and system errors through the Data Logger tool. And the CPU will hold the data internally until an external device is replaced.

VAUTOMATIONDIRECT

The #1 **Value** in **automation**
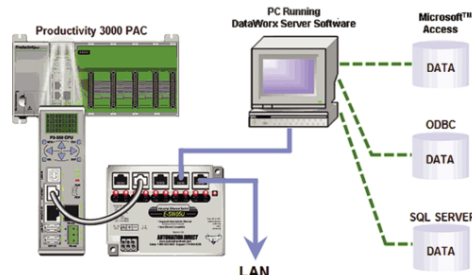
Seamless database connectivity

With the integrated DataWorx instruction, connectivity to Microsoft Access, SQL or ODBC databases has never been easier (DataWorx P3K server for PC sold separately). The controller can retrieve, add, delete and update data records in the remote database.

9

Automation Direct CLICK® Series Programmable Logic Controllers (PLCs)

Why buy a smart relay when you can have a real PLC for less?   CLICK micro PLC prices start at only $99.00

Simply CLICK to get started...

The CLICK PLC offers a scalable solution
The stand-alone CLICK CPUs can compete on size, price and ease of use with hardware designed for micro-projects, even programmable relays. But, they are also expandable and have features you'd expect in a practical PLC.
 Easy Installation
•The CLICK PLC progammable control system does not require a mounting base, which saves on space.
•The CLICK CPU and I/O modules are connected together via an expansion port on the sides of the modules.

CPUs to Fit Your Needs
•Basic and Standard CPU modules have discrete I/O - DC input / DC output (sink or source), DC input/relay output, and AC input/relay output.
•Analog CPU modules have additional built-in analog I/O (2-channel analog inputs and 2-channel analog outputs . Each channel can be separately set for voltage (0 to 5 VDC) or current (4 to 20 mA).

Expandable I/O
•A powered CLICK CPU module can be used as a complete standalone PLC control system with eight input points and six output points built-in,
•Or, the PLC controller can be expanded with the addition of up to eight I/O modules.
•A variety of CLICK I/O modules are available for flexible and optimal PLC system configuration. The I/O numbering system is decimal.

Built-in Communications
•CLICK Basic CPUs have two built-in RS-232 communications ports that can be configured for either MODBUS RTU or ASCII networks.
•CLICK Standard and Analog CPUs have an additional built-in RS-485 communications port

Calendar / Clock & Battery Backup
•Standard and Analog CPU modules include the real time clock and battery backup for the internal SRAM.
•Battery allows data to be stored for 5 years.

 CLICK PLC CPU Units
•Basic CPUs - Built-in Discrete I/O
•Standard CPUs - Built-in Discrete I/O, Additional Communications, Clock/Calendar & Battery Backup
•Analog CPUs - Built-in Discrete & Analog I/O, Added Communications, Clock/Calendar & Battery Backup
•Starting at only $99.00
  CLICK DC I/O Modules
•8-pt 12-24 VDC Sink/Source DC Input
•8-pt 3.3-5 VDC Sink/Source DC Input
•16-pt 24 VDC Sink/Source DC Input
•8-pt 3.3-27 VDC Current Sink Output

•8-pt 12-24 VDC Current Source Output
•16-pt 5-27 VDC Current Sink Output
•16-pt 12-24 VDC Current Source Output
•Combination DC I/O Modules ... New!
•DC I/O modules from $55.00
 AC I/O & Relay Output Modules
•8-Point Sink/Source AC/DC input
•16-Point Sink/Source AC/DC input
•8-pt 100-240 VAC input
•8-pt 17-240 VAC triac output
•4-pt 6-240 VAC/6-27 VDC Isolated 7A relay output
•8-pt 6-240 VAC/6-27 VDC Isolated 1A relay output
•AC I/O modules from $59.00
  Analog I/O Modules ... New!
•4-channel analog current & voltage input modules
•4-channel RTD & thermocouple input modules
•4-channel analog current and voltage output modules
•4-channel analog current input / 2-channel analog current output module
•4-channel analog voltage input / 2-channel analog voltage output module
•Analog I/O modules start at $119.00

10

FREE PLC Programming Software

• The CLICK PLC supports a very simple, but useful set of 21 easy to use instructions.
• The 21 instructions cover most applications that are suitable for this class of programmable logic controller.
• Download FREE CLICK PLC Programming Software Now!

CLICK to configure the hardware...
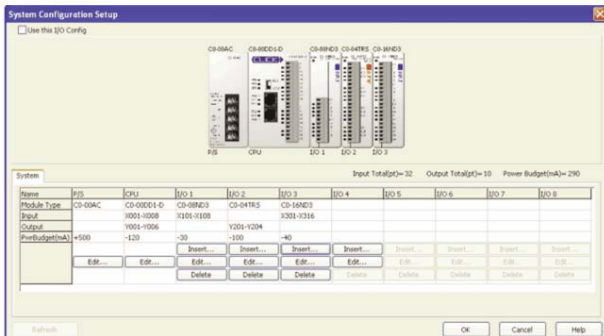
System Configuration

The CLICK software includes a configuration tool that helps you configure a CLICK PLC quickly and easily. Select the CPU, power supply, and modules you need - the software calculates your I/O count, address list, and Power Budget automatically.
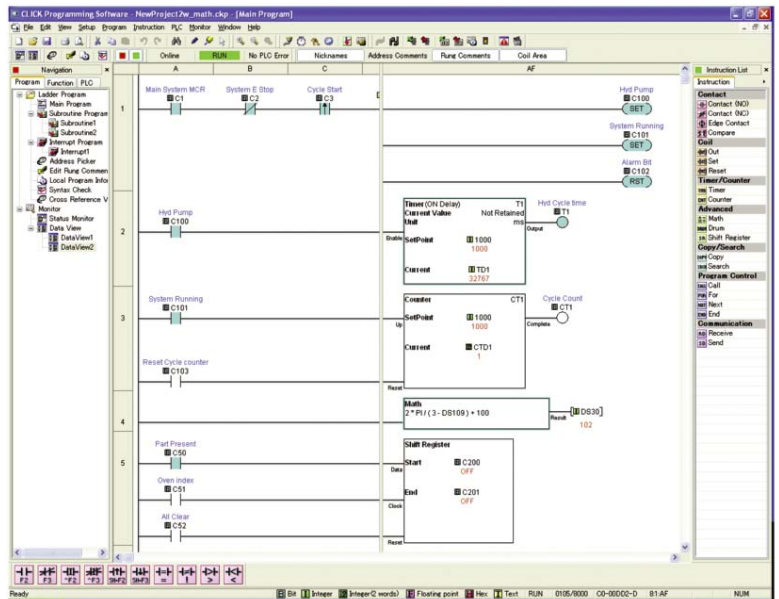
CLICK to get FREE Programming Software
www.automationdirect.com.au

The CLICK PLC is rapidly becoming one of the industry's favorite control systems in the 142 I/O or less category.

CLICK also has practical accessories

CLICK PLC ZIPLink Connection Modules/Cables
The ZIPLink wiring system eliminates the normally tedious process of wiring PLC I/O to terminal blocks. Simply plug one end of a ZIPLink pre-wired terminal block cable into your CPU or I/O module and the other end into a ZIPLink connector module.

- One ZIPLink connector module ZL-RTB20 ($25) works with all CLICK CPU and I/O modules

- Six cables are available in three different lengths, starting at $25:
  0.5m (1.6ft.), 1.0m (3.3ft.), and 2.0m (6.6ft.)

Starts from $25.00 Cable sold separately

The CLICK PLC and C-more Micro HMI were made for each other - literally!

Both are made by Koyo

They have the same DNA!
CLICK programming software is based on the popular C-more Micro programming interface - and both are free downloads.

Both are an excellent value
(CLICK starts at $99, Micro at $265)

Use a single cable for communications and power for Micro

Use the same programming cable

C-more Touch Panels

The most practical touch panel performs Remote Access and Control! With a Web browser on any PC, remote users can operate and monitor a local **C-more** HMI system from anywhere on the Internet or on a local network. The **C-more** Remote Access feature resides in all panels with Ethernet support and requires no option modules. **Access real-time data or initiate an action on a control system from anywhere, any time.** *(This feature requires software and firmware version 2.4 or later and an Ethernet-capable C-more panel.)*

REMOTE ACCESS AND CONTROL

Our new **C-more remote HMI application, for iPad®, iPhone® or iPod touch®, is available on the App Store** for $4.99. It provides remote access and control to a C-more panel for mobile users who have a wi-fi or cellular connection.

Full-featured* C-more models offer:

Check out our Prices

Great-looking displays
- Super-crisp TFT screens with 65,536 colors available in all sizes (6, 8, 10, 12, 15-inch)
- Cost-conscious grayscale STN screens available on 6-inch units
- Analog resistive touch screen (no touch cells)
- High resolution:
  12-inch: 800 x 600 pixels
  15-inch: 1024 x 768 pixels

High-speed communications
- Download program to panel
- Communicate to PLCs/PCs
- Send e-mail
- Access FTP server
- Act as a Web server

Practical objects
- Over 50 standard objects
- Build your own objects and store in library
- Symbol Factory™ 4,000-symbol library
- Wide range of color gradients
- Wide choice of fonts

Large project capacity
- Built-in 10MB project memory (6, 8,10-inch)
- Built-in 40MB project memory (12, 15-inch)

High end features
- Pop up touch screens within a screen
- Overlapping objects
- Bitmap animation
- Historical alarms
- Fill in the blank event manager triggers e-mails, messages, sound bites, screen changes, etc.

Recipe function
- 99 source recipe sheets
- 1000 recipes per recipe sheet
- 255 possible values per recipe sheet
- Operator editing of recipes while running

Flexible interfaces
- USB Port-A (memory and input devices)
- USB Port-B (programming)
- Compact Flash port
- Audio output port (line level)

Allen-Bradley Tag Import
Import tags directly from the RSLogix 5000 L5K file. Perform direct insertion of ControlLogix, CompactLogix and FlexLogix tags from the PLC into C-more (no mapping or translations).

Basic models are also available which do not support Ethernet, audio or CompactFlash functions.

Supported PLCs/Drivers:
Serial drivers for:
- AutomationDirect controllers
- Allen-Bradley
  - ControlLogix®
  - CompactLogix®
  - MicroLogix™ 1100/1400 Ethernet
  - ENI Adapter for SLC Series
  - FlexLogix
  - SLC® 5/05 Ethernet™
  - MicroLogix™
- Modbus RTU and TCP/IP Ethernet
- GE 90/30 SNPX (90/30, 90/70, Micro90, VersaMax Micro)
- Omron Host Link Adapter (C200/C500), FINS Serial and Ethernet
- Selected Mitsubishi FX Series, Q Series
- Siemens S7-200 PPI and S7-200/300 Ethernet (ISO over TCP/IP)

Built-in 10/100BaseT Ethernet port* with drivers for:
- Allen Bradley EtherNet/IP™ Client (for MicroLogix
- 1100, SLC5/05/ENI Adapter, ControlLogix/ CompactLogix/FlexLogix)
- Allen Bradley EtherNet/IP™ Server (ControlLogix/ CompactLogix/ FlexLogix)
- Modbus TCP
- Siemens Ethernet
- AUTOMATIONDIRECT PLCs

full-featured 15" color
$3,995
TFT screen (EA7-T15C)

full-featured 12" color
$3,100
TFT screen (EA7-T12C)

full-featured 10" color
$2,590
TFT screen (EA7-T10C)

full-featured 8" color
$1,595
TFT screen (EA7-T8C)

full-featured 6" color TFT
$1,195
TFT screen (EA7-T6CL)

6" TFT Touch Panel
starting at
$890
Basic, TFT screen (EA7-T6CL-R)

grayscale
starting at
$695
Basic, STN screen (EA7-S6M-R)

C-more™

Great value!
Starting at just $695.00, **C-more** is designed to give you one of the best costs of ownership, considering initial price, features, ease of use, reliability and free award winning technical support.

C-more™

Easy compatibility
with more drivers

Remote access and control

With a Web browser on any PC, remote users can operate and monitor a local C-more HMI system from anywhere on the Internet or on a local network.

iPhone / iPad / iPod touch

New! ... The C-more Remote HMI App allows remote access and control for mobile users who have a wi-fi or cellular connection.

Premium feature at no cost!

No Additional Hardware required

The C-more Remote Access feature resides in all panels with Ethernet support, and requires no option modules.

Access real-time data or initiate an action on a control system from anywhere, any time.

(This feature requires software and firmware version 2.4 or later*, and an Ethernet-enabled C-more panel to function.)

Web browser based

Since applications can be downloaded from the C-more panel through a PC's Web browser, authorized users can access and control the panel remotely without purchasing or downloading additional software packages.**

The most practical touch panel now supports several additional protocols for the Allen- Bradley® PLC brand.

The Allen-Bradley Ethernet drivers allow simple connection of multiple panels and/or multiple Allen-Bradley PLCs. And ControlLogix® Ethernet/IP Tag Messaging support is a real time-saver that simplifies tag database migration.

You can import the RSLogix™ 5000 L5K file directly, or with just a few clicks you can directly enter your ControlLogix®/ CompactLogix® tags from the PLC into C-more - no mapping or translation required!

E-mail

Send e-mail messages to any device connected on the Internet, including PCs, cell phones, pagers or even Blackberry™ devices!

E-mails can be initiated automatically by *C-more*'s Event Manager, or manually via a pushbutton. Operators can even key in a message and then press "Send".

Your machine can actually call for help!

Data logging

Collect large amounts of data or play back long historical records on trend graphs. Insert CompactFlash cards or a USB memory device for data logging storage.

Web connectivity

The FTP server (File Transfer Protocol) allows transfer of data files between *C-more* and any connected FTP compatible device (usually a PC). Your HMI can collect data and pass it to the PC on your desk, or to your corporate headquarters.

Authorized users have the ability to remotely:

• Monitor and control screen operations of the C-more panel as if touching the panel itself

• Test and troubleshoot the C-more project

• View, zoom, print and save screen captures of active screens

CompactFlash Card

PAC

USB Flash Drive

C-more panel

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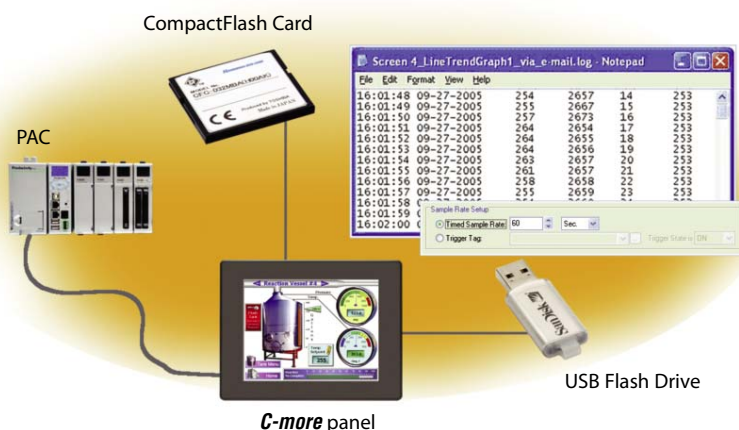
C-more Micro
It's a touch panel... at text panel Price!

Do more with C-more Micro-Graphic!

C-more Micro-Graphic panels are fast becoming one of the most popular and most reliable value packed operator interfaces in the industrial market. After all, the **C-more** Micro-Graphic panels are packed with features yet still priced for the tightest of budgets. With the addition of the larger 6-inch sizes, you can display even more text, graphics, or bitmaps to effectively communicate and display data to the operator. Touch and non-touch screen models are available, and the low prices allow customers with tight budgets to take advantage of graphic control panel features that are most often found in more expensive touch screen products.

Both TFT Color and STN Monochrome panels are now available. The 3-inch, 4 inch and 6-inch STN monochrome versions each offer five selectable background colors that allow you to use color to convey meaning. The 6-inch TFT full color version offers up to 32,767 colors for more vibrant and colorful project screens. Several options, including plug-and-play keypad bezels, are available for both the 3-inch and 6-inch models.

FREE Configuration Software!

C-more Micro-Graphic Programming Software is based on its powerful sibling, the **C-more** Touch Panel. It offers high end features designed to reduce your configuration time. Simply drag and drop the objects from the Object list (right side of screen) on to the screen construction area.

Then configure your PLC tags and assign them to the objects. Use the built-in simulator to review your work on your PC before ever downloading your project! The time saving benefits of the **C-more** Micro configuration software could easily pay for the panel.

C-more Micro-Graphic Panels (All Sizes)

The touch screen and non-touch operator panels offer the same basic features, while the micro panels with built-in touch capabilities expand application possibilities for only a few dollars more. All graphic control HMI panel versions have 5 function keys with status indicators. Key functions can be configured differently for every screen and the indicator LEDs can programmed for alarms or status indication.

The 4-inch and 6-inch touch screen units support either portrait or landscape mounting positions.

The low price allows customers with tight budgets to take advantage of graphic control panel features that are most often found in more expensive touch screen products.
5 function Keys with LED indicators
5 software-selectable screen colors on STN panels (3 and 6-inch)
32,768 colors with LED backlight on color TFT panels (4 and 6-inch)
Optional snap-on keypad bezels
Monochrome STN panels require no extra power needed when connecting to AutomationDirect PLCs. Color TFT models require an external power supply.
Optional power adapter for other configurations
Available PLC drivers for all AutomationDirect PLCs
UL, cUL, CE approvals
NEMA 4, 4X indoor ratings

CHECK OUT OUR PRICES

C-More Micro Panels	AutomationDirect Price/Part Number
3-inch C-more Micro-Graphic STN Monochrome Panels and Bezels	**$265** EA1-S3MLN
4-inch C-more Micro-Graphic TFT 32K Color Panels	**$575** EA1-T4CL
6-inch C-more Micro-Graphic STN Monochrome Panels and Bezels	**$530** EA1-S6ML
6-inch C-more Micro-Graphic TFT 32K Color Panels and Bezels	**$720** EA1-T6CL
3-inch C-more Micro-Graphic STN Monochrome Touch Panels	**$330** EA1-S3ML
C-More MICRO SOFTWARE	**FREE** Download

Available PLC drivers

C-More Micro-Graphic panels have the following drivers available for connection to many PLCs:
- AutomationDirect CLICK (Modbus)
- DirectLOGIC K-sequence, DirectLOGIC DirectNET, DirectLOGIC Modbus (Koyo Addressing)
- Modbus RTU
- Entivity Modbus RTU
- Allen-Bradley DF1 Full Duplex
- Allen-Bradley DF1 Half Duplex
- Allen-Bradley PLC5 DF1
- Allen-Bradley DH485
- Omron Host Link (C200 Adapter, C500),
- Omron FINS serial (CJ1, CS1),
- GE SNPX (90/30, 90/70, VersaMax Micro and Micro 90)
- Mitsubishi Melsec FX
- Mitsubishi Q and QnA
- Siemens PPI

VIEWMARQ
LED MESSAGE DISPLAY

New! ... ViewMarq™ Industrial LED Message Displays

ViewMarq LED message boards can display preformatted and real-time factory floor data messages sent by a PLC, PC, or other master device. The text message display can be controlled by any of the following:
• ASCII input strings through the RS-232 or RS-485 port
• Modbus RTU messages through the RS-232 or RS-485 port
• Modbus TCP messages through the Ethernet port (Ethernet cable included)

ViewMarq electronic message boards are ideal for use to display process and equipment status such as tank level, pressure level, oven temperature, pump or motor status (ON/ OFF), equipment failures, conveyor line error conditions, production output levels, and

6 Models: 1, 2 and 4-line text message displays, 12 and 24 characters
Quality tri-color Green, Amber, and Red LEDs in all models
Supports Scrolling Lines (up, down, left, right) and Blinking options
FREE Configuration Software for ViewMarq industrial LED message boards
Rugged Extruded Aluminum Housing for use in harsh environments
NEMA 4 (wash down) and NEMA 12 (dust, oil, water, and dirt)

Industrial LED Messaging Made Easy ...

ViewMarq is a series of LED message displays that uses the latest LED and communications technologies for industrial applications. These industrial text message displays utilize both serial and Ethernet communications.

The display can be connected to a PLC (programmable logic controller), PC, or any device capable of serial ASCII, Modbus RTU, or Modbus TCP communications. • **Free, easy-to-use ViewMarq™ Configuration Software**

Download the Software

The ViewMarq Configuration Software can be downloaded at no charge from the AutomationDirect Web site, Help files are included in the software.

One-Line Displays
• 1-1/4" , 2" characters
• Models with 12 or 24 characters per line
• Approximate viewing distance up to 100 ft

Two-Line Displays
• 1-1/4" , 2", 4" characters
• Models with 12 or 24 characters per line
• Approximate viewing distance up to 200ft

Four-Line Displays
• 1-1/4" , 2", 4", 6", 8" characters
• Models with 12 or 24 characters per line
• Approximate viewing distance up to 400 ft

ViewMarq Configuration Software is designed to help you create messages with ease. Simply type your message in the text editor and immediately see the results in the included simulator. Change character colors and sizes or add features such as scrolling and blinking. This software utility gives you multiple functionality, allowing you to:
• Create and preview messages on your PC
• Send messages to the ViewMarq LED display
• Configure the ViewMarq to communicate with a PLC
• Create ASCII string commands that may be used in the PLC instructions to control the ViewMarq.
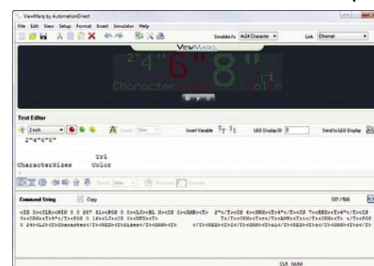
The software generates the required ASCII command string from your message and then allows you to copy and paste the string into your ladder logic program in your PLC.
Requires Windows XP (Service Pack 3), Vista or Windows 7 (32 and 64-bit) and a serial or Ethernet connection to the ViewMarq Display.
Purchase cables separately. (An Ethernet cable comes packaged with each ViewMarq LED message display.)

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Low-cost, rugged valves and cylinders other pneumatic solutions

Automation Direct has been providing advanced automation control solutions for over 15 years, customers include manufacturers of machines and industrial equipment, OEMs, distributors, panel-builders, installers and system integrators

Pneumatic Directional Control Valves and accessories

Pneumatic directional control solenoid, pilot and manual valves are available in a wide variety of configurations to meet a broad range of pneumatic control applications.

- LDW Series 3-Port, 2-Position, Body Ported / M5 & 1/8 Solenoid Air Valves
- AZ Series 3-Port, 2-Position, Body Ported 1/8, 1/4 & 1/2G Solenoid Air Valves
- LDW Series 5-Port, 2-Position, Body Ported / Manifold Solenoid Valves
- AZ Series 5-Port, 3-Position, Body Ported / Manifold Solenoid Valves

- BVS, BVM Series 3-port, 2-position, Modular Solenoid Valves / Manifolds
- Air Pilot Valves
- Manual Air Valves
- Solenoid Valve Exhaust Silencers and Accessories
- Solenoid Valve Cables & Air Valve Connectors

Two-Hand Safety Valve

(part no 08.156.4)

This valve is used to pilot high-flow directional control valves connected to machines which have a high risk of injuries to the hands.

The machine operator must simultaneously operate, in a safe area, two three-way manual valves for correct operation.

The safety valve will ignore a single depression of one of the manual valves. To repeat the cycle both pilot signals must be exhausted and the manual valves simultaneously actuated again.

The two-hand safety valve is sold with CE-certification (compliant to Machinery Directives EEC 89/392, 91/368, 93/44, 96/68 and to Norm EN 574, level 1).

Speed Code N696
Model No 08.156.4
Safety Valve

Two-way Solenoid Valves

These valves are used with air, water and liquids for on/off control valves, they are either direct lift or pilot assisted depending on the size available form 1/8 to 2"G ports.

Pneumatic Air Preparation (FRL - Filters, Regulators, Lubricators)

Lidding pneumatic air filters, regulators and lubricators are available in a wide variety of port sizes to meet a broad range of pneumatic air supply filtration, regulation and lubrication applications. Modular design allows stand-alone applications and also enables easy field assembly for combining Lidding pneumatic filters, regulators and lubricators

- LAF Series Filters
- LAR Series Regulators
- LAL Series Lubricators
- LAC Series Combination Filter Lubricator and Regulators

- LAW Series Filter/Regulators Combimation
- Pneumatic Air Preparation (FRL) Accessories

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Quality with Automation Direct's Pneumatic components

Fittings and Flow Control

Fittings include:

- Bulkhead unions
- Union straight
- Union reducers
- Union Tee
- Union elbow
- Union Y
- Union cross
- Union triple branch
- Quick-disconnect straight and swivel hose couplings
- Brass adapter fittings

Flow Control includes:

- Manual hand valve
- Stop
- Check
- Meter-in flow control
- Meter-out flow control
- Inline flow control

Modular Solenoid Control Valves with Manifolds and Pre-Wired Connections

Automation Direct's NITRA™ pneumatic BVS series modular solenoid valves are body ported 3-port (3-way) poppet valves available in 2-position, normally open or normally closed configurations.

Models are available with removable flying leads or with 8 mm Micro DIN connectors. Units are DIN rail mountable when used with the BVM series solenoid valve manifolds.

The NITRA™ pneumatic BVM series modular solenoid valve manifolds simplify the mounting and wiring of BVS series solenoid valves.

The manifolds are available in 4- and 8-station models with push-to-connect inlet and outlet connections and a 9- pin D-sub connector for quick and easy tubing and wiring. Backed by a 2-year warranty, BVS series solenoid valves are priced at **$45.00** and the BVM series manifolds start at **$79.00**.

Pneumatic Controls
by Automation Direct

Pneumatic Air Cylinders and Position Switches

MA-Series non-repairable stainless steel round body cylinders

These cylinders are an ideal choice for a host of applications in a broad range of industries. Dimensionally interchangeable with leading cylinder manufacturers, the MA-Series is perfect for replacement applications as well as new designs. There's no maintenance required with these non-repairable cylinders, just millions of trouble-free cycles. High quality is assured with made to ISO 6432 Standards.

The **CPS series of position switches** offers a robust, yet cost-effective interface between magnetic piston cylinders and electrical control systems.

LSF-Series heavy duty air cylinders ISO for abusive conditions

These heavy duty cylinders combine ISO interchangeability and high quality components to offer excellent performance and long service life, even in the most severe conditions. Bore sizes range from 40mm to 100mm and stroke lengths from 25mm to 500mm. High quality is assured with made to High quality is assured with made to ISO 15552:2004 Standards.

Sensors

AutomationDirect carries a wide range of sensors at practical prices.

Inductive Proximity Sensors

Inductive sensors detect metallic objects. Models available include round and rectangular; 2, 3, and 4-wire output configurations; analog output models.

- 3mm / 4mm / 5mm round prox sensors (PY/ PD1 Series)
- 8mm round prox sensors (AE / PEW Series)
- 12mm round prox sensors (AM/ VM1/ PMW/ PBM Series)
- 12mm round - IP69K food grade/ harsh duty prox sensors (PFM1 Series)
- 18mm round prox sensors (AK/ VK1/ PKW/ PBK Series)
- 18mm round - IP69K food grade/ harsh duty prox sensors (VFK1/ PFK1 Series)
- 30mm round prox sensors (AT/ VT1/ PTW/ PBT Series)
- 30mm round - IP69K food grade/ harsh duty prox sensors (VFT1/ PFT1 Series)
- Rectangular proximity switches (CR/ DR/ APS/ LF40 Series)
- Cables & accessories for proximity sensors

starting at: $29.⁰⁰

Capacitive Proximity Sensors

Inductive sensors detect metallic objects, while capacitive sensors detect all other materials.

- 30 mm DC-powered (CT1 Series) plus accessories

Photoelectric Sensors

Photoelectric sensors allow non-contact detection of objects using red or InfraRed guided light. Diffuse, retro-reflective, through-beam and background suppression models are available.

- High Performance AC/DC
- Light Screens (BX Series)
- DC rectangular (QX/ CX/ FE Series)
- AC rectangular (FG Series)
- 5mm round - Stainless (C5 Series)
- 8mm round - Metal (HEE/ HER Series)
- 12mm round - Metal (DM Series)
- 18mm round - Metal (C18 Series)
- 18mm round - IP69K (FF Series)
- 18mm round -NonMetal (MS/SS/FA/FARS/FB)
- 18mm cube - NonMetal (GX Series) ... New!
- 18mm AC powered (MQ / MV Series)

starting at: $62.⁰⁰

starting at: $175.⁰⁰

Ultrasonic Sensors

Ultrasonic sensors are ideal for applications in which the sensed object is made of clear, transparent or varying surface color materials.

- 18 mm round (UK and SU Series)
- 30 mm round (TU Series)
- Analog output models available
- 100 mm to 2500 mm sensing ranges (adjustable)
- Miniature rectangular sensors for limited mounting spaces

Save on energy costs
with AC drives

GS1 AC minidrive
.18, .37 and .75 Kw, 230 VAC single-phase/3-phase, 1.5Kw, 230 VAC 3-phase

- Simple Volts/Hertz control
- 130% starting torque at 5 Hz
- Electronic overload protection
- Use of integrated potentiometer or keypad for local speed setting
- External analog input (0-10V, 0-20 mA or 4-20 mA)
- Three preset speeds

- Four programmable digital inputs
- One programmable relay output
- RS485 Modbus communications up to 19.2K
- Optional Ethernet communications DIN-rail mountable
- Two-year replacement warranty*
- UL, CUL,CE-listed

GS2 AC microdrive
½ hp to 5.5 Kw, 230 VAC, 1 to 7.5 Kw, 460 VAC

- Simple Volts/Hertz control
- 150% starting torque
- Dynamic braking circuit
- Electronic overload protection
- Use of integrated potentiometer or keypad for local speed setting
- External analog input (0-10V, 0-20 mA or 4-20 mA)
- Removable keypad
- Seven preset speeds

- CE Listed (except 575V model)
- Six programmable digital inputs
- Two programmable relay outputs
- PID control
- RS-232/RS-485 Modbus communications up to 38.4K
- Optional Ethernet communications
- Two-year replacement warranty*
- UL, CUL

DURAPULSE AC sensorless vector drives
3-phase only, 0.75 to 75 Kw, 460 VAC

The **DURAPULSE** seres is a line of autotuning and sensorless vector control AC drives. All parameters are programmable via a removable keypad that will store up to four different application programs.

The PWM output of the drive is controlled by a 16-bit microprocessor with an output frequency from 0.1 to 400 Hz.

- V/Hz or sensorless vector control modes
- 150% starting torque
- Removable keypad
- Three analog inputs - (0-10V, -10 to +10 VDC or 4-20 mA/0 - 20 mA)
- 16 preset speeds
- 11 programmable digital inputs
- Four programmable outputs

- Optional encoder feedback card
- RS-485 Modbus communications up to 38.4K
- Optional Ethernet communications
- Two-year replacement warranty*
- UL, CE listed

High-quality AC drives pay for themselves in a hurry
Variable speed drives can improve your bottom line by reducing your application's energy consumption. An investment of as little as $159 can start paying off immediately.

- GS1 AC drives (0.18 to 1.5 Kw) offer simple Volts/Hertz control for general purpose applications. Built-in I/O, Modbus communications capability and programmable preset speeds increase its flexibility.
- GS2 AC drives (0.37 to 7.5 Kw) feature built-in PID control, dynamic braking and Modbus communications.
- DuraPULSE AC drives (0.75 to 75 Kw) add sensorless vector control, a removable keypad that stores up to four different application programs, and built-in discrete and analog I/O. Communicate via built-in Modbus or an optional Ethernet connection.

www.automationdirect.com.au

CHECK OUT OUR PRICES

VS Drives	AutomationDirect Price/Part Number
0.18kw 240v 1ph GS1 Drive Including controller and Manual	**$159** GS1-20P2
0.75Kw 240v GS1 Drive Including controller and Manual	**$195** GS1-21P0
3.7Kw 415v GS2 Drive Including controller and Manual	**$540** GS2-45P0
22 Kw 415v GS3 Drive Including controller and manual	**$1995** GS3-4030
37 Kw 415v GS3 VS Drive Including controller	**$3600** GS3-4050
SOFTWARE configuration software for use with GS1, GS2, and GS3 drives	**$15** GSOFT

Stellar™ Series Soft Starters

STELLAR™ SR22 Series

Compact AC motor soft starter prices start at **$190.00** (SR22-05)

- 5A to 40A rated current versions @ 208–460V
- Easy potentiometer setup
- Six error/trip indicators (including over temp, shear pin)
- 45 mm and 55 mm standard sizes
- Built-in Bypass for added efficiency

STELLAR™ SR44 Series Full-Featured 3-Phase Soft Starters (9A - 370A @ 208-460V)

- SR44 series solid state starters have an Automatic Application Setup that fully configures the motor soft starter for a specific application with one entry
- SR44 series solid state motor starters also have a built-in "Optimizing" mode that reduces energy costs when used on lightly loaded and oversized AC motors, and external bypass capability for efficient running at rated speed

Full-featured AC motor soft starter prices start at **$1350** (SR44-9)

The **#1 Value** in **automation**

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Machine Safety Products

A superb line of machine safety devices ...

Don't let price stand in the way of making a machine or process as safe as possible. You need to be in compliance with national and international standards, but don't overpay to get reliability and high performance for maximum machine safety.

Automation Direct now offers a superb line of machine safety devices with prices that let you do even more to protect what's important. Choose from our certified offering of brand name machine safety components to meet your protection needs, including safety switches, and safety relays.

A safety switch is typically an electromechanical switch used to detect unsafe conditions and isolate power from the hazard. Safety relays are coils and contacts that are designed to be positively driven and assure a reliable opening and closing for safety applications.

Safety Relay Modules

Dold safety relay devices are now available for use in industrial applications.

LG5924 Series relays are single-channel E-stop relays designed to protect people and machines in applications with emergency stop buttons. Available with 24 VDC, 110 VAC, and 230 VAC coil voltages, LG5924 series safety relays start at $143.

LG5925 Series relays are dual-channel E-stop/safety gate relays designed for applications with emergency stop buttons and safety gates. Available with 24 VAC/DC, 110 VAC, and 230 VAC coil voltages, the Category 4-rated relays are designed with three normally-open positive guided safety contacts and one normally-closed monitoring contact. Prices for LG5925 series safety relays start at $187.

The BH5928 Series relays are also designed for applications with emergency stops and safety gates. This dual-channel series provides one or two channels which can be monitored with the time delay function. Output configuration options include either three normally-open time delay positive guided safety contacts, or two instantaneous positive guided safety contacts and one normally-closed instantaneous monitoring contact. Three time delay options with potentiometer adjustment are available (depending on model) ranging from 0.1 to 30 seconds. The 24 VDC Category 4 relays can be wired with or without cross-fail monitoring in the E-stop loop.

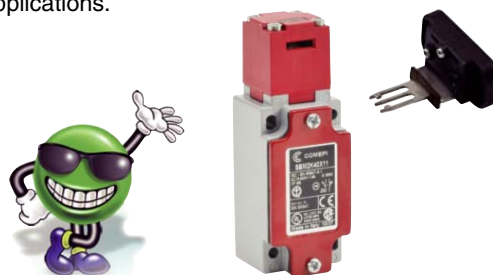Prices for the BH5928 series safety relays start at $322.

The BG5933 and BH5933 Series relays offer protection for applications with two-hand buttons or production machinery with dangerous closing movements. Available with 24 VAC/DC, 110 VAC, and 230 VAC coil voltages, the Category 4-rated relays are equipped with internal positive temperature coefficient resistor short circuit and voltage-dependent resistor overvoltage protection. These safety relays provide inputs for two push-buttons.

Prices for BG5933 and BH5933 series safety relays start at $226.

Safety Interlock Switches

AutomationDirect has also added a line of machine guarding safety switches to detect unsafe conditions and isolate power. Normally-closed contacts are used for a positive break and redundant normally-closed contact and normally-open feedback outputs are available.

The safety switches cannot be easily defeated and all units have CE, UL and CSA approvals.

Four bases are available: 30mm plastic, 50mm zinc alloy, 40mm aluminim and 60mm aluminim.

Four types of interlocks are available for common safety applications including tongue (key), shaft hinge, lever hinge interlocks and pull cord actuators with reset for emergency stop or without reset for simple stop.

Safety interlock switches start at $25.00 and safety limit switches start at $22.00.

CHECK OUT OUR PRICES

Safety Relays	AutomationDirect Price/Part Number
single channel operation for emergency stop circuits, 24 VDC coil voltage, 2 N.O. positive guided safety contacts	$143 Y401
single channel operation for emergency stop circuits, 230 VAC 50/60 Hz coil voltage, 3 N.O. positive guided safety contacts and 1 N.C. monitoring contact	$182 Y404
dual channel operation for emergency stop and gate safety circuits, 230 VAC 50/60 Hz coil voltage, 3 N.O. positive guided safety contacts and 1 N.C. monitoring contact	$203 Y407
dual channel operation for emergency stop and gate safety circuits, 24 VAC/DCcoil voltage, 3 N.O. time delay (3 to 30) second positive guided safety contacts,	$322 Y410
Safety relay module, two-hand control, 24 VDC coil, 2 N.O. positive guided safety contacts and 1 N.C. monitoring contact	$226 Y412
light curtain controller with dual channel operation, 24 VDC coil, 3 N.O. positive guidedsafety contacts and 1 N.C. monitoring contact, manual or automatic restart	$187 Y415

CHECK OUT OUR PRICES

Safety Switches	AutomationDirect Price/Part Number
Safety switch, tongue (key) interlock operated, 90 degree adjustable head, 1 N.O. and 1 N.C. contact with slow action break before make	$25 Y301
Actuator tongue (key) for safety switches, 22mm mounting hole spacing Key13	$2 Y357
Safety switch, tongue (key) interlock operated, 90 degree adjustable head, 1 N.O. and 1 N.C. contact with slow action break before make	$45 Y333
Safety switch, tongue (key) interlock operated, 90 degree adjustable head, 1 N.O. and 2 N.C. contact with slow action break before make	$45 Y335
Safety switch, tongue (key) interlock operated, 90 degree adjustable head, 3 N.C. contact with slow action break before make	$45 Y336
Safety switch, lever hinge interlock operated, 90 degree adjustable head, 1 N.O. and 1 N.C. contact with slow action break before make,	$25 Y307

Fuji Electric motor control solutions

Fe

AUTOMATIONDIRECT has partnered with Fuji Electric to offer a complete line of IEC motor controls.

The DUO line (SC-E contactors and TK-E overloads) is fully integrated so multiple motor control solutions are possible with a minimum number of components. The SC-E contactors work with either the conventional adjustable overloads or the BM3 series MMS to create starters for a variety of applications. The conventional starters in the DUO line can accommodate motors up to 75 kilowatts at 415 VAC.

The larger contactors feature the SUPER-MAGNET™ coil for greater reliability and positive pick-up and drop-out.

The Odyssey Series of contactors and overloads also feature the SUPER-MAGNET™ coil and come in sizes up to 225 kilowatts .

The Odyssey Series contactors are available in four sizes with overloads to match any motor to 225 kilowatts.

Both the DUO and Odyssey line are available in 24 VAC, 24 VDC, and 240 VAC coil versions.

Contactor Features
- .75 to 75 Kw
- 45 mm, 54 mm, 67 mm, 88 mm, 100 mm and 115 mm frame widths
- 60 to 300 hp
- 154 mm (180 - 221A models), 169 mm (285 - 361A models) frame widths
- AC and DC coils with a wide range of voltages
- Finger protection terminals
- Fuji SUPERMAGNET™ technology employed on the larger contactors for greater reliability
- IEC-947, UL, CSA, CE

Overload Features
- Overload, open phase protection
- Isolated NO and NC contacts
- Ambient temperature compensation
- Trip indicator
- Finger protection terminals
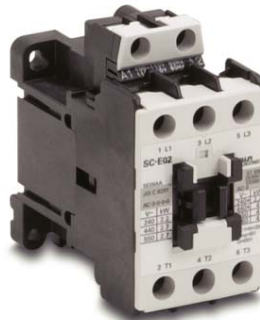- IEC-947, UL, CSA, CE

CHECK OUT OUR PRICES

Contactors & Overloads	AutomationDirect Price/Part Number
9A contactor, non-reversing, 3-pole, 43 mm frame width	**$24** F502
32A contactor, non-reversing, 3-pole, 54 mm frame width	**$61** F518
12A contactor, non-reversing, 3-pole, 43 mm frame width, 24 VDC coil	**$45** F507
125A contactor, non-reversing, 3-pole, 100 mm frame width	**$381** F541
thermal overload relay, 53 mm frame width, FLA range 2.2 to 3.0 amps.	**$41** F587
thermal overload relay, 77 mm frame width, FLA range 65 to 95 amps	**$89** F623

4 Kw Contactor

SC-E02-220VAC (Speed Code F502)
Fuji IEC 9A contactor, non-reversing, 3-pole, 43 mm frame width, 220-240 VAC coil (purchase auxiliarycontacts separately)
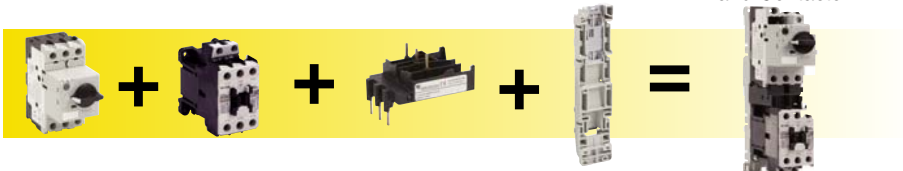
Price $24.00

CHECK OUT OUR PRICES

Manual Motor Starter	AutomationDirect Price/Part Number
Manual motor starter BM3RH, 45 mm frame width, rotary actuator, 4 to 6.3 FLA	**$63** F708
9A contactor, non-reversing, 3-pole, 43 mm frame width	**$24** N502
Link module for electrically connecting BM3RH MMS to SC-E02 (F757)	**$15** F799
Baseplate for mounting MMS and contactor for a combination starter	**$20** F808
Auxiliary contact block for MMS, 1 N.O. contact mounts into the front of the MMS	**$11** F760
Shunt trip device used to remotely trip the MMS, 24 VAC 50/60 Hz.	**$28** F769

A combination starter can be constructed and wired in less time and at a lower cost while minimizing enclosure space requirements.

Manual Motor Starter + Contactor + Link Module + Base Plate = UL Type E Self-Protected Manual Motor Controller and Contactor

BM3 Manual Motor Starter Series
- Rated Current: 0.16 to 32A, 10 to 63A
- Short Circuit Current Rating: 100kA at 240V, 50kA at 480V, 10kA at 600V
- Widths: 45mm and 55mm

Fe

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Low-cost stepping systems, plug and play...it's that easy

Surestep™

Starting at $30

Four standard motors with connectorized pigtail

The SureStep™ stepping family has four standard motors to handle a wide range of automation applications such as woodworking, assembly, and test machines. Our square frame or "high torque" style stepping motors are the latest technology, resulting in the best torque to volume.

We have **NEMA 17, 23, and 34** mounting flanges and holding **torque ranges from 83 oz-in to 434 oz-in.** A 20 foot extension cable with locking connector is a standard option to interface any of the four stepping motors to the stepping drive.

The extension cable can be easily cut to length if desired.

One-size-fits-all microstepping drive

STP-DRV-4035 $260

- Ultimate in simplicity
- One standard microstepping drive to operate any of four standard motors
- Onboard screw terminals for easy hook-up
- Optically-isolated inputs ready for +5 VDC logic from DirectLOGIC PLCs
- **No software** or add-on resistors required for drive configuration -

9-position dipswitch set up

- Dipswitch used for built-in self-test, step angle selection, current level selection, and optional idle current reduction.

Power Supply

$195

- Standard power supply available to operate at least two stepping systems of any size with an auxiliary +5 VDC supply to facilitate DirectLOGIC PLCs and stepping drive interfaces.

STP-PWR-3204

Incremental and absolute encoders

Encoders are used in all types of angle, length-measuring, and position sensing applications, including machine tooling, semi-conductor positioning and multi-axis positioning. Use these encoders with our PLC high-speed counter modules for accurate position monitoring and control.

Availability: All the most commonly used encoders are in stock and available for immediate shipment. (We also offer non-stock encoders that have lead times of four to six weeks.)

Cost: Our prices are often 50% below the list prices of traditional automation suppliers. Our direct business model allows us to operate more efficiently and pass the savings on to you.

Industrial limit switches

Our limit switches offer great features that make them perfect for many applications. Heavy-Duty Metal, Double-Insulated Plastic, Miniature Double-Insulated Plastic, and Compact Limit Switches

New! ... AEM2G Series Compact Limit Switches

Our AEM2G series compact limit switches have die cast metal housings that are epoxy resin filled for IP67 rating. These compact sized metal limit switches have standard U.S. 25mm mounting hole spacing. Models offered include a variety of actuator types: plunger, lever, rod and spring actuators. Contact types include both snap-action and slow-make/slow-break limit switches.

- Heavy-duty metal or PBT (plastic) models available
- Eight actuator types
- Interchangeable contact block for six configurations
- Gasket seals for IP66 protection
- UL, CUL and CE approval
- Mechanical life of 30 million operations

CHECK OUT OUR PRICES

Encoders & Limit Switches	AutomationDirect Price/Part Number
Encoder, incremental, 50mm diameter body, 100 pulses per revolution, 5-30 VDC, push-pull output	$193 TRDN100RZWD
Encoder, incremental 360 Pulse, 4.75 to 30 VDC, 2 Ph Output, 8mm shaft	$230 TRDJ360RZ
Limit switch, compact, metal plunger actuator, 1 N.O. and 1 N.C. contact with snap action	$39 AEM2G11X113
Limit switch, compact, lever with 14mm metal roller actuator, 1 N.O, 1 N.C. contact with snap action	$42 AEM2G42X113
Limit switch, IEC, side rotary, adjustable lever with polyamide roller, 1 N.O., 1 N.C. contact	$25 AAP2T51Z11
Limit switch, IEC, adjustable lever with stainless steel roller actuator, 1 N.O, 1 N.C. contact	$69 ABM1E52Z11

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Relays, Timers and Temperature Controls

Full lineup of control relays

Our general purpose industrial relays are a low-cost way of adding control and isolation relays to any application.

Electromechanical relays are available in cube and card styles for a diverse range of installation requirements. Cube relays are available with standard linear or octal base connection patterns. The QM and QL series cube relays, available in 24 VDC, 120 VAC and 240 VAC coil voltages, plug into DIN-rail mountable relay sockets (one per socket). The QM series switches up to 5 amps, while the QL series can handle up to 10 amps. The RS series uses slim plug-in 24 VDC card relays to create a bank of four or six 5 amp units in DIN-rail mountable terminal modules. Many models offer push to test function.

Solid state relays available include DIN-rail and panel-mount styles. The AD series solid state relays plug into a DIN-rail mountable relay socket or can be wired with the quick-connect terminals. The SSR series are 10 and 25 A relays , integral heat sinks and finger-safe covers with no moving parts.

All relays feature LED indicators for easy troubleshooting.

CHECK OUT OUR PRICES

Directional Valves	AutomationDirect Price/Part Number
Multi-mode timer with selectable timing range from 0.05 seconds to 60 hours	$75 MS4SM-AP
Cube Relay 5A DPDT 24VDC Coil LED Indicator	$8 QM2N1-D24
Cube Relay 2PDT 10 Amp 24VDC LED Indicator	$17 QL2N1-D24
Solid state plug-in relay, 3-30 VDC coil voltage, 24-280 VAC load voltage, 4A contact rating	$33 AD-70S2-04
on-delay timer with timing range of 0.4 secs to 5 seconds, 24 VDC input power,	$59 ST7P-2DE5S
Digital timer with fully selectable timing range. LED display, 100-240 VAC input power	$165 KT-V4SD

Full-featured timers

AUTOMATIONDIRECT offers solid-state timers from two leaders in the industry, FUJI Electric and Koyo.

FUJI miniature DIN timers are small and easy to operate, with repeatable accuracy of +/- 1% of the setting. FUJI 1/16 DIN multi-mode timers have four output modes, selectable timing ranges and LED indicators.

Koyo's powerful digital timers offer full programmability, seconds to hours time ranges with decimal selection, and up and down timing modes. Five output modes, from on-delay to one-shot, use a reliable 2 A relay to operate the controlled device.

SOLO Digital Temperature Controllers

Powerful temperature controllers

AutomationDirect's SOLO digital temperature controller is a single loop dual output temperature limit controller that can control both heating and cooling simultaneously.

Four types of control modes: PID, ON/OFF, Ramp / Soak and Manual.

Available outputs include relay, voltage pulse, current, and linear voltage (depending upon controller model)

Up to three alarm outputs available (The SL4824 series supports only one)

Seventeen alarm types available in the initial setting mode

Accepts thermocouple, RTD, or analog inputs

Built in RS-485 interface using Modbus slave (ASCII or RTU) communication protocol. **Prices start at $159.00 (SL4824-RR)**

Signal conditioners

FC-33 DC Selectable Signal Conditioner with 3-way isolation

Field configurable input and output ranges of 0-5V, 0-10V, 0-20 mA and 4-20 mA with 1500 VDC isolation between input and output, and 1500 VDC isolation from 24 volt power and input/output. LED indicates normal operation and is used in conjunction with the calibration pushbutton for the internal calibration process. • 3-way 1500V isolation • Push button calibration

FC-11 4-20 mA Isolated Signal Conditioner

Loop powered 4-20 mA input/output signal with 1500 VDC isolation between input and output. • 1500V isolation • Loop powered

FC-T1 Thermocouple/mV Isolated Signal Conditioner

Field configurable input for several different types of thermocouple or mV inputs with 1500 VDC isolation between input and output. Cold junction compensation and burnout detection. Alarm/run LED. • 1500V isolation • Cold junction compensation (CJC) • Internal diagnostics (burnout detection or calibration errors)

FC-R1 RTD Input Signal Conditioner

Loop powered, non-isolated, 3-wire unit converts an RTD input to a linear 4-20 mA signal. User selectable CU10, PT100 or PT1000 input.

FC-ISO-C Encoder Signal Conditioner

The FC-ISO-C Encoder signal conditioner and optical isolator with open collector output is ideal for use with single-ended (open collector, NPN, pull-up, push-pull, totem pole) or differential line driver encoders. Optical isolation separates the input signals from three complementary open collector outputs (A, B, Z, A-not, B-not, Z-not) rated for 5-36 VDC that can be used in single-ended configurations.

CHECK OUT OUR PRICES

Signal Conditioners	AutomationDirect Price/Part Number
Signal conditioner and isolator for voltage/current signals	$149 FC-33
3 Loop-powered signal conditioner for RTD signal	$149 FC-R1
Loop-powered signal conditioner and isolator for 4-20mA signal	$119 FC-11
Thermocouple/mV Isolated Signal Conditioner	$149 FC-T1
DC Converter, +/-5VDC & +/-10VDC out, 12-24VDC in,0.125A, Isolated outputs	$95 FA-DCDC1
Encoder signal conditioner and optical isolator	$119 FC-ISO-C

AutomationDirect for the most Practical Process Controls

Fork Level Limit Switches

·No calibration necessary, user friendly
·Large vibrating range and the amplitude up to 8mm for the weak sticky materials hanging on the fork.
·Adjustable amplitude for distinguishing from the density of different substances.
·Ultra red LED offers a immediate warming for the operator to control the measurement.
·Suitable for measurement of level of liquid, particulate and dense materials.
·Available to detect solid substances in liquid.

VR4000114S4 Vibrating Fork level limit switches, 127 mm Length Material S304, Relay Output, **$269**

Rotating Paddle Level Switches

The temperature can reach up to 400 deg C(SR2000)
- Special shaft sealing for dust-proof Rotating torque can be adjustable
·Small and compact design for simple mounting
·Stainless steel mechanical parts and robust
·Gear motor, Maintenance free
·Easy installation at container
·Can detect very light bulk solids

SR1000A80 length 80mm 24V-240VAC **$149**

Pressure Transmitters

The **PB series** electronic pressure transmitters sense gas , liquid and steam pressure and feature your choice of 0-10V or 4-20mA output.
The switch withstands aggressive media and detects pressure ranges up to 5800 psi (400 bar).

PB1106 Pressure Sensors Sensing range 0-10 bar Analog output 0-10V 3-wire Thread connection: G1/4 **$129**

The compact **PA Series** pressure transmitters feature PROGRAMMABLE options via LED Display including PNP or NPN N/O-N/C digital Output AND 4 to 20 mA or 0 to 10 Volts Analog Output - all on the one unit !

PA1102 Programmable Pressure Sensors Sensing range 0…5 bar Analog 0-10v, 4-20Ma & N/O N/C outputs programmable 4-wire Thread connection: G1/4 **$390**

04 Series Float Level Switches

These float level switches are a simple and are a reliable working float level switch with up to two millions operations Anticorrosive, high resistance to acid Protection classification: IP67

LS1001   Stainless Steel   19-60VC/14V-240VAC   **$225**

LS0001 PBT M18 Thread, -20*C ~ 80*C, NO/NC Output   **$20**

Temperature Sensors

The compact TA Series temperature sensors. The user can set the temperature range and warning signal discretionary LED Display makes control of this sensor easy, including PNP or NPN N/O-N/C digital Output AND 4 to 20 mA or 0 to 10 Volts Analog Output - all on the one unit !

TA1001   Programmable Temperature transmitter 4…20mA, 0-10v Analog output, NO/NC PNP, NO/NC NPN outputs Measuring range -40 -+150 LED Display **$347**

Ultrasonic Level Sensors

Wide sensing range; High accuracy; low energy depletion
Non-contact measurement; fixed components
Capable to detect liquid and solid
Adopts echo tracking technique to capture the real echo precisely
Adopts temperature compensation technique (on speed and frequency) to make the measurement more precise and reliable
With both digital and analogue outputs

VS0001 Sensing range 0.3 - 10M, -40 - +80, 3 Wire,4~20mA **$595**

Flow+Temperature Sensors

The compact FL Series Flow sensors feature programmable settings for flow range and alarm via LED Display including PNP or NPN N/O-N/C digital Output

FL0004   Smart Flow + Temp Sensor with N/O and N/c DC PNP 20-36VDC   **$360**

Top quality pushbuttons... at low everyday prices

22mm Metal Push Buttons, LED Indicator Lights, Selector Switches, Industrial Joysticks, Mushroom Push Buttons, Emergency Stop Buttons, Potentiometers and Accessories at Discount Prices

Flush or extended pushbuttons
- Available in six colours: black, red, yellow, blue, white and green
- One contact block included
- Illuminated and push-on/push-off models also available

Key/selector switches
- Two and three positions
- Knob and lever selectors
- Spring return and maintained
- Non-illuminated and illuminated selectors

Indicating lights
- Available in six colours: red, clear, yellow, blue, white and green
- 24 and 120 volt models
- Frosted diffuser for even lighting
- Lamp replacement from the front

Mushroom pushbuttons
- Available in black, red and yellow
- 24 and 120 volt models
- Momentary, twist-to-release and key release models
- One contact block included
- Illuminated models also available

GCX series 22mm plastic pilot devices
22mm plastic pushbuttons - a rugged yet economical line of plastic pilot devices for your operator panel designs. These are made with fiberglass reinforced thermoplastic and can be used as a direct replacement for existing 22mm metal pilot devices.

GCX series 22mm metal pilot devices
We have teamed up with European partners to offer you the best value in high-quality 22mm metal operator switches and pushbuttons. From the attractive chrome plating on the operator to the self-cleaning silver contacts, nothing has been sacrificed to offer you the highest quality switches at great prices. Most lighted devices are available in both incandescent and LED versions.

Joystick Selector Switches
These joystick switches are made with fiberglass reinforced thermoplastic and can be used as a direct replacement for the existing 22mm Metal Pilot Devices.

LED light towers
LED light towers are available in 70mm dia and easier to install, thanks to the modular design which is simply twist and lock. LED light towers offers a variety of mounting stands and adjustable buzzer element which can be fitted anywhere in the light tower making this more flexible installation.

Single Stack **$33.00**
Double Stack **$55.00**
Triple Stack **$86.00**
complete with light modules, caps and mounting bracket

Foot Switches
Starting at **$59**
APS1151-V0 Foot switch, single, ABS plastic, half red cover, 1 N.O. and 1 N.C. contact block **$59**

CHECK OUT OUR PRICES

22mm Pushbuttons	AutomationDirect Price/Part Number
22 mm metal, black, flush operator, 1 N.O. contact block	$10 P600
22 mm metal, black, flush operator, 1 N.O. contact block	$10 P601
22 mm metal, red 40mm mushroom, twist-to-release, 1 N.C. contact block	$20 P630
22 mm metal, 2-position, maintained, black knob, 1 N.O. contact block	$15 P780
3-position, maintained, black lever, 2 N.O. and 2 N.C. contact blocks.	$31 P786
Two-hole plastic enclosure for 22 mm devices	$14 P865

CHECK OUT OUR PRICES

Disconnect Switches	AutomationDirect Price/Part Number
Load switch, non-fused, 16A rating, with rotary handle,	$39 SD1-016-BR
Load switch, non-fused, 40A rating, with rotary handle,	$45 SD1-040-BR
Load switch, non-fused, 125A rating, with rotary handle,	$79 SD1-125-BR
Remote operator shaft, for SD series switches	$10 SD-S300
Additional 4th pole for SD2 non-fused load switches, 125A rating	$25 SD-4P
Remote red-yellow handle for SD series	$12 SD-HRY

Non-fused disconnects added to AutomationDirect product offering
The SD1 series non-fused disconnects allow breaking and disconnecting on equipment loads of up to 600 VAC, at a nominal current range from 16 A to 40 A. SD2 series non-fused disconnects allow breaking and disconnecting on equipment loads of up to 600 VAC, at a nominal current range from 63 A to 125 A.

Both series are DIN rail or panel-mountable and feature high breaking capacity, double break contacts, high electrical and mechanical endurance, and are resistant to damp heat.
The non-fused disconnects have an IP20 degree of protection and are HACR rated.
Both series include an integrated rotary handle, and an optional extension shaft and remote rotary handle for outside the panel/door mounting applications.
Prices for the non-fused disconnects start at $39. A complete line of standard accessories is also available, including an optional auxiliary contact (one N.O. and one N.C. contact), or an additional fourth pole can be added.

FLOWLINE®
We Do Your Level Best

EchoPod® & EchoSonic® II Ultrasonic Liquid Level Sensors

The EchoPod and EchoSonic II are innovative ultrasonic liquid level sensor families that replace float, conductance and pressure sensors that fail due to contact with dirty, sticky and scaling media in small, medium and large capacity tanks. Applied in chemical, water and wastewater applications, these general purpose sensors are available with single and multi-function capabilities including continuous level measurement, switching and control.

For input to a PLC or other controller, measurement outputs include current, voltage and frequency. Models with four relays can be configured for level alarms and/or stand-alone level control such as automatic fill or empty functions using the embedded level controller. PC configuration is simple with WebCal™ software.

Model	DL34-00	DL24-00	DL14-00	DS14-00	DX10-00	DL10-00	LU27-00	LU23-00	LU28-00	LU29-00
Price	$790	$595	$495	$495	$435	$690	$690	$820	$950	$1100
Type	Ultrasonic									
Class	General Purpose (non-hazardous)									
Range	8 in to 18.0 ft (20 cm to 5.5m)	4 in to 9.8 ft (10 cm to 3m)	2 in to 4.1 ft (5 cm to 1.25m)				4 in to 9.8 ft (10 cm to 3m)	8 in to 18.0 ft (20 cm to 5.5m)	8 in to 26.2 ft (20 cm to 8m)	8 in to 32.8 ft (20 cm to 10m)
Output Types	4-20 mA and (4) SPST relays			(4) SPST relays	0-5V, 0-10V, 976-2000 Hz	4-20 mA				
Install	Top Wall									
Mounting	2" NPT	1" NPT						2" NPT		
Relays	(4) SPST				No Relay					
Configuration	WebCal Software (free download) and LI99-1001 Fob USB Adapter (purchased separately)									
Ambient Temperature	-31° to 140°F (-35° to 60°C)									
Process Temperature	20° to 140°F (-7° to 60°C)					-4° to 140°F (-20° to 60°C)				
Pressure	30 PSI (2 bar) max.									
Material	PVDF transducer / NEMA Type 6P polycarbonate enclosure IP67									
Weight (lbs)	1.8	0.9	0.5	0.5	0.5	0.5	1.4	1.8	1.8	1.8

EchoPod & EchoSonic II Ultrasonic Liquid Level Sensors General Specifications

WebCal Software

WebCal PC software is a utility program that allows users to easily configure their EchoSonic II and EchoPod level transmitters, switches, and controllers. Download your free copy of WebCal at www.AutomationDirect.com, and connect your sensor through our Fob USB adapter (LI99-1001). Develop your configuration using pre-programmed function menus as the tank graphic and set point fields automatically change to match your configuration. Then, input your level set point values and click the Write to Unit button. Your configuration will be downloaded into the sensor and verified in less than a second. Last, click the Wiring Diagram button to open a wiring schematic of your configuration in PDF format. Print the document, disconnect the sensor and wire it per the schematic. It's that simple.

Configuration files can be named, saved, emailed, printed, opened and used again under revision control. The advanced feature page enables you to change the measurement signal, output filtering and invert relay states from NO to NC. As new software or firmware becomes available, they can be downloaded and updated through WebCal. Take control of your level process with WebCal software, and experience the future of level automation today.

Part No.	Item Photo	Description	Quantity	Weight (lbs)	Price
LI99-1001		Flowline Fob USB adapter, required for use with WebCal software to configure Flowline EchoPod and EchoSonic II ultrasonic level sensors.	1	0.1	**$70**
WebCal		Configuration software CD for Flowline EchoPod and EchoSonic II ultrasonic level sensors (also available as a free download from the AutomationDirect Web site). Requires an LI99-1001 Fob USB adapter (purchased separately).	1	0.1	**$15**

WebCal Ultrasonic Level Sensor Software and USB Adapter

*ZIP*Link five-second
PLC wiring system

The **ZIPLink** system eliminates the normally tedious process of wiring I/O to terminal blocks. Simply plug one end of a ZIPLink cable into a controller I/O module and the other end into a ZIPLink connector module. It's that easy! ZIPLinks use half the space, at a fraction of the total cost of terminal blocks.

ZIPLinks are available in a variety of styles to suit your needs. Some are designed exclusively for DirectLogic, CLICK and Productivity3000 controllers, while others may be used with various other brands. ZIPLinks are available for our most popular discrete and analog input and output modules.

DirectLOGIC , CLICK, Productivity3000 controllers: Whether you want the ability to quickly wire simple point-to-point connections, or the ability to fuse, switch, or isolate your outputs, or the convenience of LED device status indication for monitoring your inputs, we have a ZIPLink module that is right for you.

Other controller brands: Use ZIPLink "pigtail" cables and connector modules to wire to most brands of PLCs or controllers. These cables are supplied with a "plug and play" connector on one end, and an unwired, color-coded wire bundle on the other end for user connection to the PLC or controller terminal block.

D-subminiature connectors: For PLCs, controllers, operator interfaces, or other devices utilizing D-subminiature connectors, we have standard ZIPLink cables and connector modules in 9, 15, and 25-pin male/female configurations for fast, convenient wiring.

Specialty ZipLink connector modules:

Got an RJ12 connector that you need to wire to? Use our RJ12 connector module. Need just a couple of additional relays in your PLC system? Try our relay modules. Having system problems due to transient noise generated from switching inductive loads? Try our transorb diode modules to clear up those problems fast.
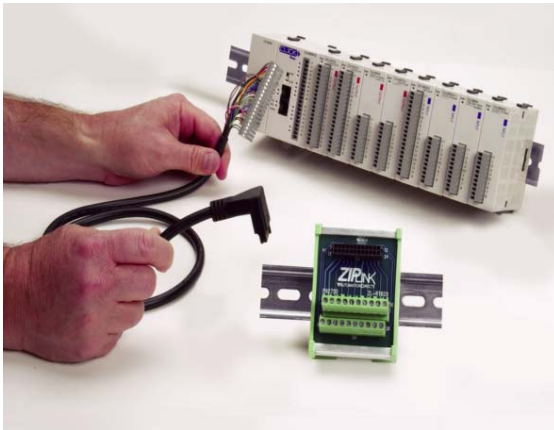
Pop on a *ZIP*Link and be done in seconds! — OR — Hand-wire and connect each individual wire, over and over for each module

Use ZIPLinks for easy wiring of DirectLOGIC PLC I/O modules. Feed-through modules provide low-cost and compact field wiring screw terminations. AC and DC-powered relay modules provide electrical isolation between the PLC and output devices, and can switch high-current loads. Fuse modules provide easily-replaceable fuse protection for PLC output devices. AC and DC LED/sensor modules provide simple termination for 2 or 3-wire sensors or other devices, and offer visual indication of device input status for quick troubleshooting. D-subminiature and communications adapters are also available.

Cut your PLC wiring time down to minutes instead of hours!

The ZIPLink system eliminates the normally tedious process of wiring PLC I/O to terminal blocks. Simply plug one end of a ZIPLink cable into a DirectLOGIC I/O module and the other end into a ZIPLink connector module. It's that easy! ZIPLinks use half the space, at a fraction of the total cost of terminal blocks.

24V DC-Powered Relay Modules

Our DC-powered relay module provides isolation, switches high current (10A) loads, is offered in 16 points, and includes diode protection to prevent voltage spikes at the relay coil from damaging connected PLC I/O modules. Relays are included with the module.
Module mounts on 35 mm DIN rail part #DN-R35S1.

CHECK OUT OUR PRICES

Ziplinks	AutomationDirect Price/Part Number	
ZIPLink .5m cable used to connect CLICK PLC I/O modules with 11 terminals	**$25** ZL-C0-CBL11	
ZIPLink .5m cable used to connect DL05/06 I/O modules with 8 terminals	**$25** ZL-D0-CBL8	
ZIPLink 1 m cable used to connect DL205 I/O modules with 10 terminals	**$35** ZL-D2-CBL101	
ZIPLink 1 m cable used to connect DL405 I/O modules with 20 terminals	**$135** ZL-D4-CBL201	
ZIPLink .5m cable used to connect 8/16 Pt Productivity 3000 PAC I/O modules	**$45** ZL-P3-CBL20	
ZIPLink 20-pole feedthrough connector module	**$25** ZL-RTB20	

Industrial Ethernet Communications

3ONEDATA is the AutomationDirect line of rugged unmanaged and managed Ethernet switches and media converters. Designed with our PLC, HMI and drive customers in mind, 3ONEDATA Ethernet switches are specifically built for industrial environments. With a 3ONEDATA industrial Ethernet switch on an isolated control LAN, you can reduce data collisions that slow down your network.

The IES205 series of industrial Ethernet switches

are entry-level industrial 5-port Ethernet switches that provide an economical solution for your industrial Ethernet connection, support IEEE802.3/802.3u/802.3x. Dustproof and full close structure and Â the IP30 case with LED indicators make the plug-and-play IES205 switches easy to use and reliable. These switches have been designed for harsh industrial environments with rugged high-strength metal case. Operating temperature ranges from -40 to 75 Deg°C

IES205 Supports 5 ports 10/100Base-T(X), Full/Half duplex mode, and auto MDI/MDI-X connection.

$ IES205 5 ports 10/100Base-T(X), DC12-36V Operating temperature ranges from -40 to 75Â℃ Price $79.00

Smart▸PAK! only $69.00 ea for a pack of 10

ES608 Industrial Ethernet Switch(8TP Web Managed)

IES608 series are a type of plug-and-play industrial managed redundant Ethernet switch, which supports 8 X 10/100Base-T(x). The 7 and 8 ports are used to establish SW-Ring for the purpose accomplishing redundancy for Ethernet ring network (self-recovery time <20ms) to enhance the reliability of the network.Â

Furthermore, IES608 series can also support numerous intelligent network management functions, including QoS, VLAN, Port Trunking, velocity configuration and alarm enabling functions. To satisfy applications in different industrial environments, IES608 series can also provide wide temperature type in accommodation with limit temperature (-40 ~ 75°C).

$ IES205 5 ports 10/100Base-T(X), DC12-36V Operating temperature ranges from -40 to 75℃ Price $399.00

Smart▸PAK! only $349.00 ea for a pack of 10

Ethernet Converters and Gateways

Modbus TCP/IP to RTU Gateway (MB-GATEWAY)
The AutomationDirect MB-GATEWAY is a single port Modbus Gateway module that converts Modbus TCP to Modbus RTU.

•This Ethernet to serial converter supports up to 12 simultaneous Modbus TCP Clients (masters) Ethernet connections, and up to 128 RTU Servers (slaves) serial connections.
•This Modbus gateway supports NetEdit or Web Browser based configuration tools.
•Automatic read function
•RJ45 10/100 Mbps Ethernet port
•RS-422/485 2 or 4 wire serial port
•35mm DIN rail mount

Terminal Blocks and Wiring Solutions

Terminal Blocks

▢DINnectors®

DIN*nectors* DIN-rail mount terminal blocks are available in both screw-type and screwless spring-clamp styles at prices you'll love. DIN*nectors* can terminate solid or stranded wires ranging from 18 to 3/0 AWG, and offer fusing, grounding or disconnecting capability within the terminal block itself.

Most **DIN***nectors* are modular in design, so you can mix as many combinations of types, wire sizes and quantities as can fit on the universal DIN rail.

Terminal block, gray, 12 AWG, 20A, 600V, Box Qty 100
DN-T12-A **$60**

Standard Screw DIN Rail Terminal Blocks
• Thermocouple, plug-in and supplementary protector *DIN*nectors
• Single-level, multilevel, ground and fuse blocks also available
• Terminal block accessories include end brackets, end covers, separators, top covers, jumpers, marking tags, mounting rail

Screwless DIN Rail Terminal Blocks
• Faster installation than standard screws with easy clamp-system connection
• Vibration-proof connection
• NEW plug-in models
• Meets UL, CSA and IEC standards

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DC Power Supplies ... Quality Power Products at great Prices

AutomationDirect offers switching power supplies at linear power supply prices. You also asked us for low cost, basic DC power supplies and we listened.

We offer some of the most practical industrial power supplies available, including DIN rail power supplies, enclosed panel mount power supplies, encapsulated mini power supplies, open frame power supplies and linear stepper power supplies.

RHINO PSB Series

AutomationDirect's RHINO PSB series of DIN rail power supplies is perfect for applications that require a basic DC voltage power supply. These low cost power supplies offer high performance and reliability without all the additional features of higher cost full-featured power supplies.

The RHINO PSB series is available with universal single- and three-phase input and with output voltages of 12 and 24 VDC from 15 to 480 Watts.

The rugged plastic and aluminim housings easily install with integral 35mm DIN rail mounting adapters. These high-quality power supplies include overload, overvoltage and thermal protection, and are UL 508 listed, UL 60950 recognized, CSA certified, CE marked and RoHS compliant.

Switching power supplies at linear supply prices

The PS Series power supplies give you consistent, reliable, switched DC power at linear power supply prices.

These power supplies use efficient switching technology to produce the most power in the smallest space, while generating a minimum amount of heat. The constant-current short circuit protection limits the output current as the voltage is reduced to safely protect your control components from direct shorts and device failures. Once the short is corrected, the PS Series power supplies automatically resume supplying full voltage power. Precisely regulated output power is suitable for battery charging applications. Extra-sturdy DIN rail mounts and removable plug connections make installation a breeze.

Meeting UL/cUL 60950, 508 and 1604* (Class I, Div. 2), our PS-D (DIN-rail mounted) power supplies meet the standards required for practically any industrial control application.applications. Extra-sturdy DIN rail mounts and removable plug connections make installation a breeze.

Meeting UL/cUL 60950, 508 and 1604* (Class I, Div. 2), our PS-D (DIN-rail mounted) power supplies meet the standards required for practically any industrial control application.

RHINO DC to DC Converters

Four models for DC input voltage are available in the PSP series of DIN-rail DC-to-DC converters. Wide input ranges of 9.5 to 18VDC and 18 to 75VDC allow these models to be operated from all popular DC supply voltage systems.

With tightly regulated output voltage these DC/DC converters provide a reliable power source for sensitive loads in industrial process controls, factory automation and other equipment exposed to a critical industrial environment. They can be used to isolate a specific load from the 24 volt bus voltage, and offer easy installation with snap-on mounting on DIN rails and detachable screw terminal block.

The FA-DCDC-1 is a DIN-rail mount, ±10VDC, ±5VDC isolated power supply, with each output rated at 125mA. The ±10V and ± 5V outputs are fixed at 1.0% regulation. The input voltage range is 12-24V DC ±15% at approximately 6.7 Watts.

CHECK OUT OUR PRICES

Power Supplies	AutomationDirect Price/Part Number
Power supply, 24 VDC (adjustable), 2.5A (60W) output	$45 PSB24-060-P
Power supply, 24 VDC (adjustable), 10A (240W) output,	$205 PSB24-240
Power supply, 12 VDC (adjustable), 1.25A (15W) output,	$35 PSB12-015P
DC to DC converter, 18-75 VDC in, 5 VDC at 5.0 amps out,	$129 PSP05-DC24-5
power supply, 24 VDC, 2A (50W) output, DIN rail mounting, metal case	$159 PS24-050D
DC Converter, +/-5VDC & +/-10VDC Out, 12-24VDC In, 0.125A, Isolated outputs	$95 FA-DCDC-1