

2012 Fall Product Summary

**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 10



**NEW
CPUs**
work with
DL205
hardware

See
page
10



Over 12,000 quality-priced products, in-stock, shipped fast and always **FREE #1** rated technical support.



- #1 rated service
 - FREE 2-day shipping*
 - Industry Best Web site
 - Painless returns
 - 30-day money back guarantee
 - and of course, great prices!
- * See Terms and Conditions for details

The #1 Value in Automation
1-800-633-0405
www.AutomationDirect.com

Why you are receiving this publication and how to use it.

This Fall 2012 Product Overview gives you a brief overview of the 12,000+ products we sell. (To receive Volume 14 technical and pricing information in print or on a DVD, you may call 1-800-633-0405, or go online to www.automationdirect.com/directrequest.) Complete product information is also available online 24/7.

The prices in this publication are effective October 17, 2012, and supercede all previous printed publications.

Our Web site is also a great resource for the most current pricing and new products:

<http://www.automationdirect.com>

For the most up-to-date price list, visit:

http://www.automationdirect.com/static/full_pl.pdf

As always, almost all products (except where noted) are backed by our 30-day money-back guarantee, plus exceptional service and delivery.

How do I check for the correct Desk Reference that accompanies this Product Overview?

NEW!
Volume 14



Look for → this cover



- Do-More PLC CPUs and H2-CTRIO2
- More Proximity and Ultrasonic sensors
- IronHorse™ Stainless Steel AC Motors
- Safety Speed Relays
- High-speed Optical Isolators
- Data Cables
- Industrial Work Gloves
- WERMA Beacons and Buzzers
- Aluminum DIN Rail
- More Wiring Devices
- Air and Stainless Steel Pressure Transmitters
- More NITRA™ Pneumatic parts and devices
- Productivity3000 High-Speed Counter Input and Pulse Output Modules
- Thermal Management for Industrial Enclosures
- Digital Counter-Timer-Tachometer
- More Foot Switches

And remember - you can get FREE 2-day (or better) delivery on orders over \$49! (see Terms and Conditions online for details)

**New to AutomationDirect?
Or just want to get more familiar
with our products and services?**

We've set up a Web site especially for you.
<http://www.automationdirect.com/info>

It's a quick start directory of information for newcomers to our company. From this site you can access our 24/7 online store, tech support site, watch videos, sign up for a Webinar, and much, much more.... check it out.

AUTOMATIONDIRECT.com

The #1 Value in Automation™



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

Tens of thousands of controls buyers at large and small companies alike have turned to AutomationDirect in the past several years because we offer over 12,000 industrial automation products for electrical control systems including PLCs, operator interfaces, AC drives, motors, stepper systems, sensors, motor controls, pilot devices, connection systems, enclosures and more. We offer a 30-day money back guarantee on almost every product that we stock.

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 50% below the list prices of traditional automation manufacturers.

Same-day shipping of huge in-stock inventory

We stock the majority of our products for **same-day shipping when you order by 6 p.m. EST**. Order over \$49, and you get **free shipping and 2-day (or better) delivery** (transit time for U.S. orders, unless required to ship LTL or drop-shipped; see Web site for details). Already the most automated warehouse in the industry, we constantly assess and improve our logistics to maintain our efficiencies and order accuracy of 99.98%.

**Call our Customer Support Team between
9 a.m. and 6 p.m. EST, Monday through Friday.**

call 1-800-633-0405
fax 770-886-3199

Have a question? Complete our online tech support request form at:
<http://support.automationdirect.com/techinquiry.html>

Here's an example of why we've won
Design News' Golden Mouse Trap award for:
"Best delivery times for Motion
Control/ Automation category"



- 5:15 pm ET:** You order parts you need
- 5:23 pm ET:** Your order is picked from our warehouse almost immediately
- 5:32 pm ET:** Order is packed and waiting on delivery carrier - next day delivery is available if you need it.

You still have time to place another order!
As late at 6 pm EST, you can order the parts you need.

**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 *PLCDirect*, 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 #1 rated service, and receiving the fastest delivery possible, they can rely on AUTOMATIONDIRECT to help with their bottom line.

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



Rated #1 in Customer Service

Here's why -

Award-winning Tech Support

Our tech service is staffed by field service veterans and is headquartered in the U.S. (just north of Atlanta, GA). Independent surveys completed by the readers of Control Design magazine placed us at the top of the list 11 years in a row for their Readers' Choice Awards. Other independent surveys by magazines such as Control and Control Engineering have echoed the results.

Great documentation

Our manuals and online Help files are written with the goal of reducing customer service calls, and customers routinely tell us that our documentation is the best in the industry.

Easy ordering with the most helpful sales team in the business

We do it your way — phone us, fax or email us, or shop online. We accept purchase orders (with preapproved credit), e-checks, and major credit cards. For customers who need regional help, we support strategically located resellers in the U.S., along with affiliated resellers in over 15 countries.

We guarantee your satisfaction

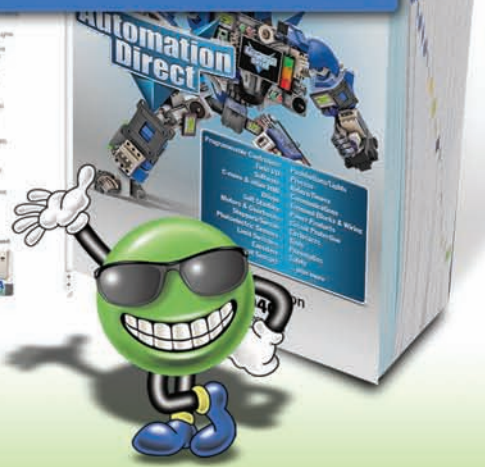
We want you to be pleased with every order. That's why we offer a 30-day money-back guarantee on almost every stock product we sell, including our software. (See *Terms and Conditions* in this pricelist or online for exclusions.) If you're not satisfied for any reason, return your purchase within 30 days of the ship date.



Sales and service just north of Atlanta, GA USA



#1 Rated Service!..and it's FREE





www.automationdirect.com
We add new products almost weekly!

- Cable Ties
- Cables (PLCs, Drives, more)
- Capacitive Proximity Sensors
- Circuit Protection (breakers, supp. protectors)
- Communications (serial, Ethernet, wireless)
- Contactors (motor control)
- Current Sensors
- DIN Rail
- Disconnects
- Drives
- Enclosure Cooling
- Enclosures (NEMA electrical)
- Encoders / Optical Transducers
- Ethernet Patch Cables
- Ethernet Products
- Fiber Optic Sensors
- Field I/O (Terminator I/O)
- Flexible Electrical Tubing
- Flexible Portable Cable
- Fuses
- Gearboxes (worm)
- HMI / Operator Interfaces
- HMI Software
- Indicator Lights
- I/O Server Software
- Junction Blocks
- Limit Switches
- Line Reactors
- Modems
- Molded Case Circuit Breakers
- Monitors (LCD)
- Motion Control
- Motors : AC & DC
- Motor Controls
- Motor Starters
- Operator Interfaces
- PACs (Programmable Automation Controllers)
- PC-Based Control
- Photoelectric Sensors
- Pilot Lights (22mm/30mm)
- PLCs (Programmable Logic Controllers)
- PLC Data Logging
- Plugs, Connectors & Receptacles
- Pneumatic Cylinders and Position Switches
- Pneumatic Fittings
- Pneumatic Flow Control Valves
- Pneumatic FRLs
- Pneumatic Solenoid Valves
- Pneumatic Tubing
- Power Distribution Blocks
- Power Products (Electrical)
- Power Supplies (DC)
- Power Transformers
- Power Transmission (Mechanical)
- Pressure Sensors
- Process Controls
- Programmable Controllers
- Proximity Sensors
- Push Buttons / Switches
- Relays
- RTDs
- Safety Components
- Safety Eyewear
- Sensors
- Server Software
- Servo Systems
- Signal Conditioners
- Soft Starters
- Software (PLC, HMI, Server)
- Stack Lights / Warning Lights
- Stepper Motors / Drives
- Temperature Controllers
- Temperature Sensors
- Terminal Blocks
- Thermocouples
- Timer Relays
- Tools (hole cutting)
- Tools (wiring, strip, crimp)
- Touch Panels
- Transformers (control)
- Ultrasonic Sensors
- Wire (MTW, TFFN, THHN)
- Wire Connectors
- Wire Duct
- Wiring Solutions
- Worm Gearboxes
- ZIPLinks (pre-wired device cables)

Practical Prices on Thousands of Products

So why are our prices so low?

AUTOMATIONDIRECT offers over 12,000 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 catalog or visit us online.

Our production cost for each catalog is typically \$10, compared to a personal sales call that might cost \$350. Once customers review the catalog in print or online, they can make purchases through our highly efficient phone-in sales department or through our online store. Once the order is placed, we ship it out of our automated warehouse. It's a simple system! Compare this to your average local distributor, typically with low levels of stock, a bunch of salespeople, company cars and expense accounts, and you start to get the picture. Our process makes it easy to pass the savings on to you.

We're adding products all the time

As a supplier of components from many manufacturers, we can add new products quickly, choosing the best-in-class for features, price and quality. Our name-brand products come from companies such as Fuji Electric, Cutler-Hammer, and Hubbell/Wiegmann. These are multi-billion dollar companies that build world-class quality products often sold through other automation companies as well.

We also buy private-label products. The manufacturers of these products are often building products for other leading automation companies and large consumer companies. We co-engineer many of these products with the manufacturer to ensure our customers are getting the features they ask for. And to assure availability, we maintain inventory at levels that consistently allow us to ship over 97% of our orders complete, the same day the order is received.

Our prices are lower than the industry average . . . time after time, when compared head-to-head.

CHECK OUT JUST A FEW OF OUR PRICES

Enclosures and Accessories	AutomationDirect Hubbell/Wiegmann or Stratus Price/Part Number	VS.	Hoffman Price/Part Number
NEMA 1 wall mount 24 x 24 x 08"	\$181.00 N1C242408LP		\$366.01 A-24N248LP
NEMA 12 wall mount 20 x 16 x 08"	\$246.00 N12201608		\$608.74 A-201608LP
Air Conditioner for NEMA 12 Type Enclosures 2,000 BTU	\$1,668.00 TA10-020-26-04		\$3,092.85 T200226G100
NEMA 4X wall mount 20 x 20 x 06"	\$749.00 SSN4202006		\$1,938.31 A-20H2006SSLP

*All prices are U.S. published prices. AutomationDirect prices from October 2012 Price List. Hoffman prices are taken from www.newark.com 2/20/12. Prices may vary by dealer. Many other part numbers are available from all vendors.

If it's in your cabinet, it's in our catalog, and online at www.automationdirect.com!



Convert a \$13,000 bill of materials to \$5,250!

The control cabinet at left depicts an actual control cabinet used at AUTOMATIONDIRECT. Designed and built in-house, this reliable control system helps manage the busy material handling system in our automated warehouse. The bill of materials (BOM) list price of a similar control system, based on the DL205 PLC, when purchased through AUTOMATIONDIRECT, is about \$5,250.

A comparable traditional automation supplier's list price is just over \$13,000. (Neither system price includes enclosure, miscellaneous parts or shipping.) All of the electrical components can be ordered by phone, fax or online from www.automationdirect.com, as late as 6 p.m. EST to ship the same day (see Terms and Conditions for details and limitations).

CHECK OUT OUR PRICES

PMDc Motors, 56C	AutomationDirect IronHorse	VS.	Baldor	Dayton
0.33 hp, 90V	\$134.00 MTPM-P33-1L18		\$646.00 CDP3320	\$470.00 2M509
1 hp, 180V	\$217.00 MTPM-001-1M18		\$1,067.00 CDP3455	\$764.50 4Z378
2 hp, 180V	\$372.00 MTPM-002-1M18		\$2,347.00 CDP3585	\$1,428.00 4Z380 (not 56C)

All prices are U.S. published prices. AutomationDirect prices are from October 2012 Price List. Baldor prices taken from www.grainger.com 2/20/12. Dayton prices taken from www.grainger.com 2/20/12. Prices and specifications may vary by dealer and configuration. Prices subject to change without notice.

The product charts on these pages are a few examples of how we compare in price to more traditional industry competitors. We have everyday low prices, not one-time sales or secret pricing for "important" customers.. You are all important to us!

Value prices, #1 rated service, fast delivery . . . every day. period.

CHECK OUT OUR PRICES ON MANUAL MOTOR CONTROLLERS

Controller/Disconnect	AutomationDirect Bryant	VS.	Grainger Leviton	Aplussupply Pass & Seymour
Disconnect switch, 30A, 2-pole, NEMA 1 enclosure	\$30.50 30102D		\$69.65 N1302-DS	\$49.22 7812PMD
Disconnect switch, 30A, 3-pole, NEMA 1 enclosure	\$65.00 30103D		\$105.70 N1303-DS	\$100.68 7813PMD
Disconnect switch, 40A, 2-pole, no enclosure	\$41.00 40002D		\$71.60 MS402-DS	\$78.92 7842MD
Disconnect switch, 40A, 3-pole, no enclosure	\$66.00 40003D		\$131.55 MS403-DS	\$117.73 7843MD

All prices are U.S. published prices. AutomationDirect prices are from October 2012 Price List. Leviton prices taken from www.grainger.com 2/20/12. Pass & Seymour prices taken from www.aplusupply.com 2/20/12. Prices and specifications may vary by dealer and configuration. Prices subject to change without notice.

CHECK OUT JUST A FEW PRICES ON CLICK

Product Description	AutomationDirect CLICK Price/Part Number
PLC CPU with 8 DC inputs / 6 DC outputs (sinking), two communication ports	\$69.00 CO-00DD1-D
PLC CPU with 4 DC inputs / 4 DC outputs (sinking), 2 analog inputs / 2 analog outputs, three communication ports, real-time clock	\$129.00 CO-02DD1-D
Auxiliary power supply (0.5A), 100-240 VAC input, 24 VDC 0.5A output	\$29.00 CO-00AC
AC input module, eight 100-120 VAC points	\$40.00 CO-08NA

AutomationDirect prices are from October 2012 Price List. Prices subject to change without notice.

CHECK OUT OUR PRICES

Servo Systems	AutomationDirect Price/Part Number	VS.	Allen-Bradley Price/Part Number
Digital Servo Drive	\$488.00 SVA-0340		\$1,050.40 2090-DS3-015
100W Servo Motor with connectorized Leads	\$325.00 SVL-201		\$536.31 TLA-A130F-HK62AA
Breakout Board Kit for CN1 Control Interface	\$94.00 ASD-BM-50A		\$211.09 2090-USBK-G4401
10' Motor Feedback Cable	\$49.50 SVC-EFL-010		\$83.22 2090-CFBMDF-16AA03
10' Motor Power Cable	\$29.50 SVC-PFL-010		\$93.62 2090-CFBMDF-16AA03
Configuration Software	FREE SV-PRO		\$78.07 2090-AUV-010
*SureServo Pro software is FREE when downloaded and is also available for \$9 on a CD			
Complete 1-axis 100W System	\$986.00		\$2,052.71

All prices are U.S. list prices. AutomationDirect prices are from October 2012 Price List. The Allen-Bradley 100W system consists of part numbers shown in table above with prices from www.rockwellautomation.com/en/e-tools 2/20/12.

CHECK OUT OUR PRICES

AC Drives	AutomationDirect GS2 or GS3 Series	VS.	Allen-Bradley Powerflex Series
2 hp	\$251.00 GS2-22P0		\$452.48 22A-B8P0N104
5 hp	\$363.00 GS2-25P0		\$625.19 22A-B017N104
5 hp	\$410.00 GS2-45P0		\$806.99 22A-D8P7N104
10 hp	\$734.00 GS3-4010 (Durapulse)		\$1,565.50 22B-D017N104

All prices are U.S. published prices. AutomationDirect prices are from October 2012 Price List. Allen-Bradley prices taken from www.rockwellautomation.com/en/e-tools 2/20/12. Prices subject to change without notice.

PAC features at a PLC price!

TOP 10 Hardware Highlights

- High-performance CPU with **50Mb memory**, fast scan time
- High-Speed Motion Control
- **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 **GS drive communications** over Ethernet
- **LCD on CPU** and Remote Slave for diagnostics
- Patent-pending **LCD 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**

With Productivity3000, you can get all the power you need for advanced applications. The great thing is, even if you don't need every bell and whistle, you still get an easy-to-use, super-flexible machine that costs less than most traditional PLCs.

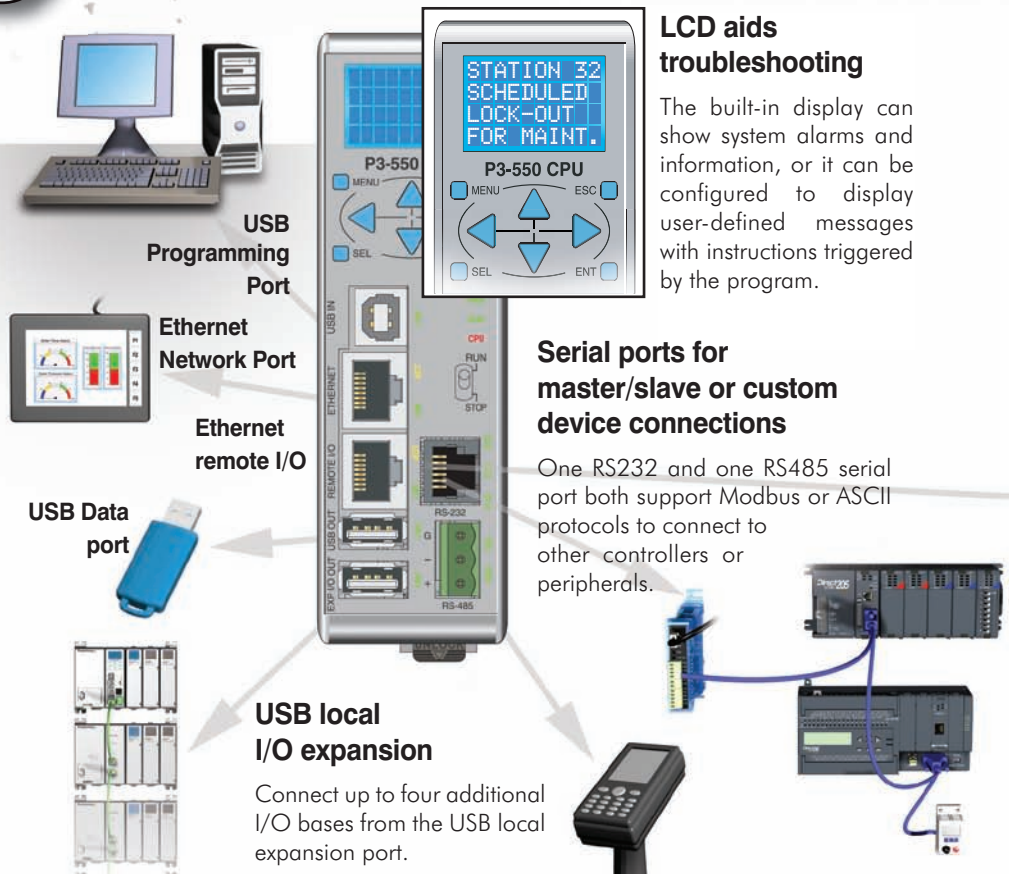
Who wouldn't want a controller with seven built-in communication ports, easy local and remote I/O connection, USB or Ethernet programming and an integrated LCD display - and that's just the CPU!



CPU just \$599, with 7 communication ports

The 50Mb of memory and fast scan time 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)
- Data logging right from the CPU with USB drive



We used technology to simplify your job

Productivity³⁰⁰⁰

Field access with display on analog modules

The patent-pending LCD on all analog modules gives you quick and easy access to field signal values - no need to drag out a multimeter or other measurement tool. Module and signal faults are also shown.

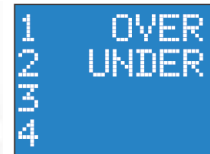
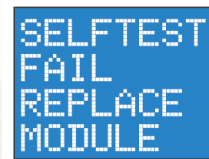
NEW! Motion Control

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



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

Modules



Plenty of discrete and analog I/O modules

Over 35 I/O modules capture and control a wide range of field signals.

- Up to 64-point DC I/O
- Up to 16-point AC I/O, isolated or non-isolated
- Up to 16-point analog I/O; voltage, current or temperature

I/O modules can be placed in any slot, in any base - no need to remember special restrictions or calculate power budgets. And for critical systems, the hot-swap feature can save you from downtime.

To make I/O wiring fast and easy, use our ZIPLink cables and connector modules.



Ethernet remote I/O like you've never seen

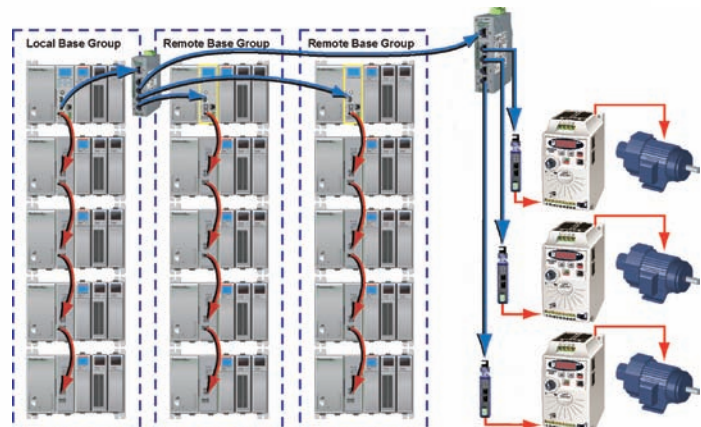
Connect up to 32 remote base groups from the Ethernet remote expansion port. Each remote group supports up to four additional local bases. You could end up with over 115,000 I/O!

The convenient USB port on the Remote Slave module lets you program and monitor from any remote I/O location; plus two serial ports support Modbus or ASCII devices.



Easy drive integration

Drive-intensive applications are a snap with this remote I/O network. Connect up to 64 AutomationDirect GS series AC drives on the Ethernet remote I/O network (using GS-EDRV option cards). Units are auto-discovered when configuration update is requested - it's that easy.



Full-featured FREE Software

TOP 10 Software Highlights

- Auto setup and discovery of hardware
- Tag name database programming
- Task management
- Advanced “fill-in-the-blank” instructions
- Seamless corporate database connectivity
- Graphical HTML-based Help File
- Run time editing
- Project file and user documentation stored in CPU
- USB data logging on the CPU
- Tag database export to C-more HMI

all in an intuitive Windows-based programming environment

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

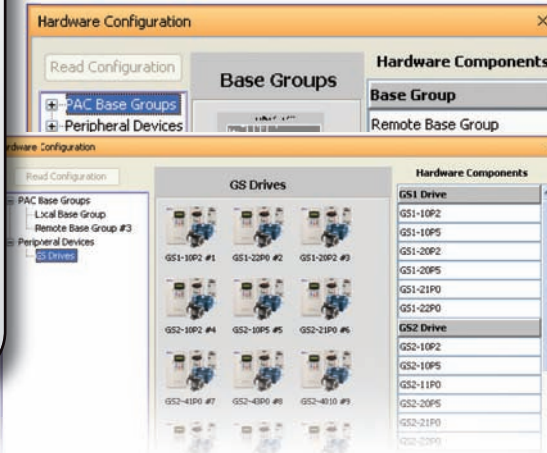
With the ample memory in the CPU, there's plenty of room for the program, tag name database and all the program documentation. This means the helpful descriptions and comments are available to anybody with a PC and Productivity Suite software. This can be pretty important when it's 1 a.m., the machine 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 and 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.

Full-featured Productivity Suite software FREE (\$495 value)

The Productivity3000 is a high-tech 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) - 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.



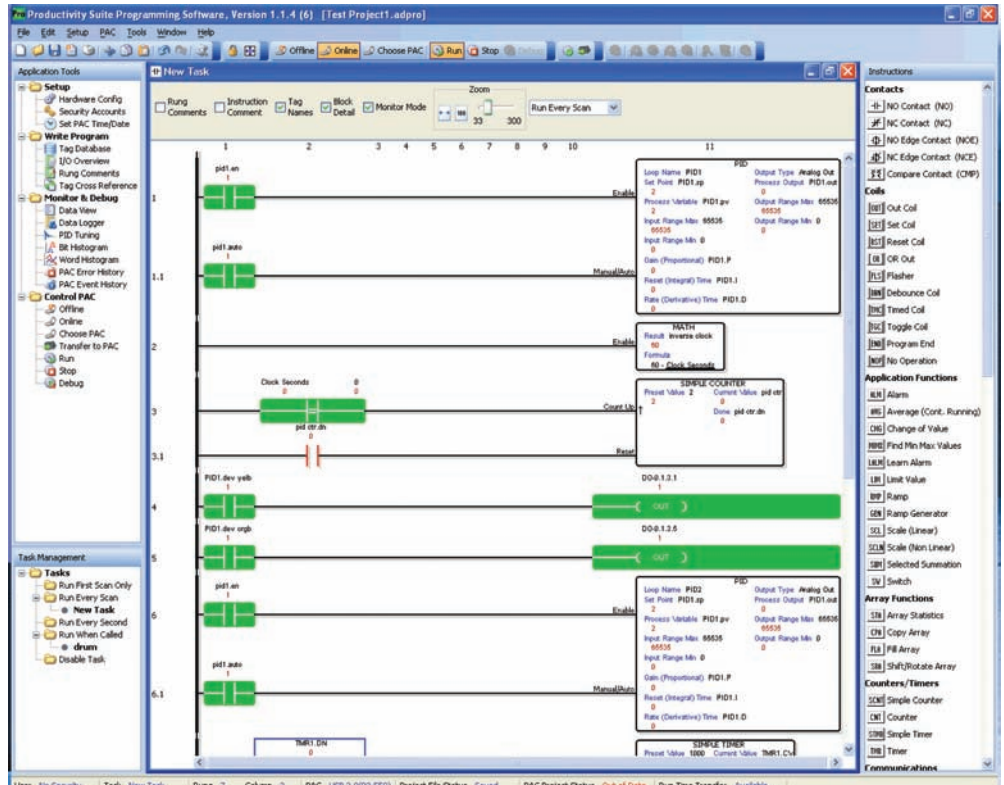
Hardware auto-discovery

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.

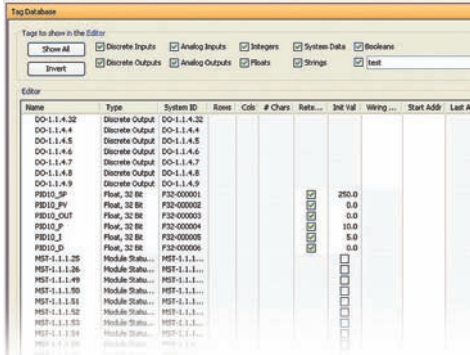
Or, configure the system offline by dragging and dropping bases and modules.

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 previously required a whole bunch of program code. Scaling, calculator-style math, statistics, send email, it goes on and on ...



Saves you time from start to finish



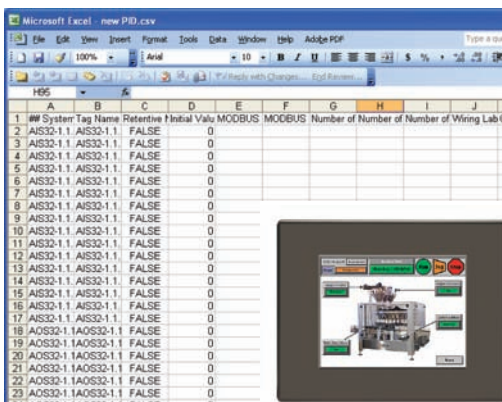
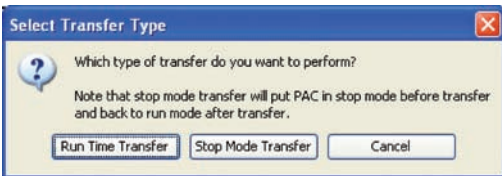
Easy data logging on CPU

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. The CPU will hold the data internally until an external device is replaced.



Run time editing

Commissioning or troubleshooting a system can be less time-consuming if you can make program edits on the fly. Download edits to the CPU without pausing I/O updates or stopping/restarting the program. From melting rubber to making paper, you can keep your process running, avoiding downtime and product waste.



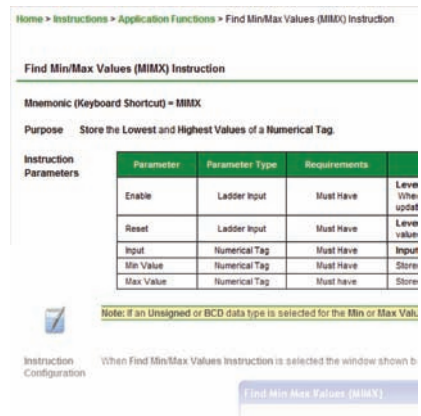
Tag name database is friendly and flexible

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.

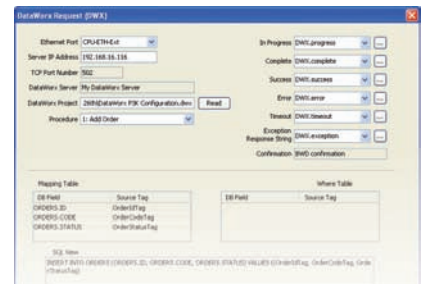
Help File really does help

Detailed hardware and software information is at your fingertips with the exhaustive HTML-based Help file. From "Getting Started" to detailed program instruction descriptions, it's all there when you need it. Find the help you need on a specific topic quickly, and read only what's relevant to you at the time.

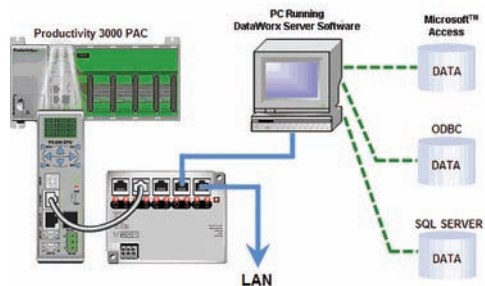


Seamless corporate database connectivity

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.

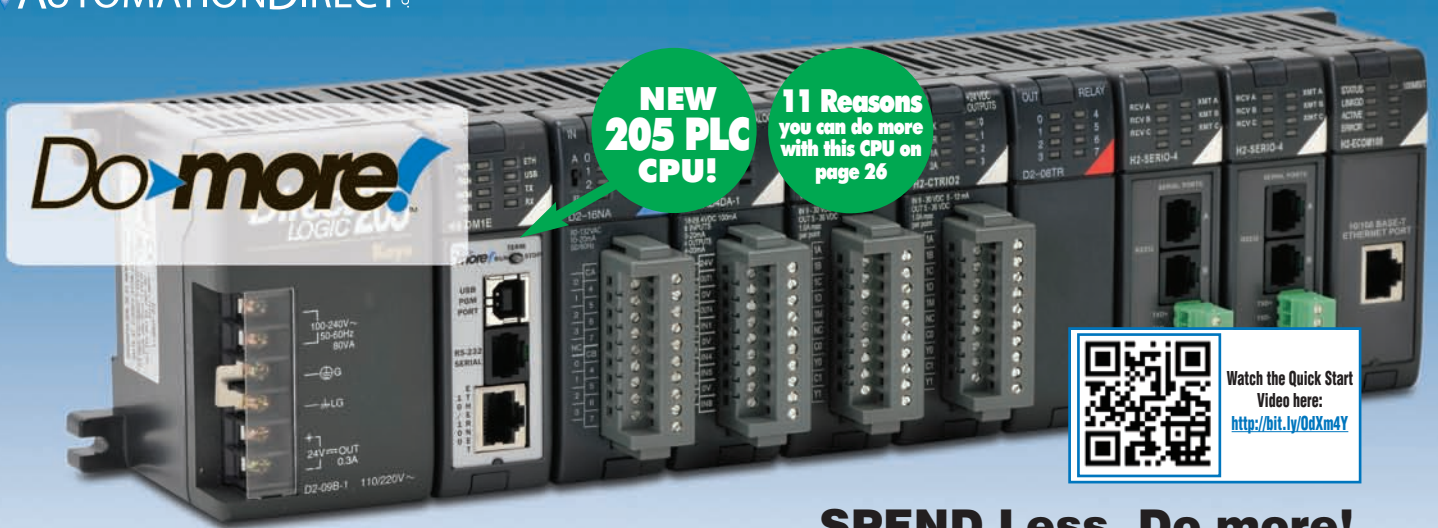


Starts at \$595 (PC-DATP3K-1)



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.



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 super-fast, has lots of memory, embedded Ethernet - we know, we’re pretty excited ourselves!

There are two CPU options:

- H2-DM1 **\$299.00** (1) USB port, (1) full-duplex serial port
- H2-DM1E **\$399.00** (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 \$536.00; with the H2-DM1E, the kit is \$626.00.**



SPEND Less, Do more!



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 **\$55.00** 8 pt. 12-24V sink/source
- D2-16ND3-2 **\$91.00** 16 pt. 24V sink/source
- D2-32ND3-2 **\$126.00** 32 pt. 5-15V sink/source
- D2-32ND3 **\$126.00** 32 pt. 24V sink/source

AC input modules

- D2-08NA-1 **\$77.00** 8 pt. 110VAC
- D2-08NA-2 **\$99.00** 8 pt. 220VAC
- D2-16NA **\$135.00** 16 pt. 110VAC



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

DC output modules

D2-04TD1	\$68.00	4 pt. 12-24V sink, 4A/pt
D2-08TD1	\$58.00	8 pt. 12-24V sink
D2-08TD2	\$58.00	8 pt. 12-24V source
D2-16TD1-2	\$99.00	16 pt. 12-24V sink
D2-16TD2-2	\$99.00	16 pt. 12-24V source
F2-16TD1P	\$119.00	16 pt. 12-24 VDC sink
F2-16TD2P	\$99.00	16 pt. 12-24 VDC source
D2-32TD1	\$129.00	32 pt. 12-24V sink
D2-32TD2	\$129.00	32 pt. 12-24V source



16-point module with removable terminal block

AC output modules

D2-08TA	\$110.00	8 pt. 18-220VAC
F2-08TA	\$120.00	8 pt. 20-125VAC, high current
D2-12TA	\$135.00	12 pt. 18-110VAC

Relay output modules

D2-04TRS	\$69.00	4 pt. 4A/pt. 8A/module
D2-08TR	\$69.00	8 pt. 1A/pt. 4A/module
F2-08TR	\$77.00	8 pt. form A, 10A/common
F2-08TRS	\$100.00	8 pt. (5 form A, 3 form C, 7A/pt)
D2-12TR	\$110.00	12 pt. form A, 1.5A/pt



Combination

D2-08CDR	\$66.00	4 pt. DC in, 4 pt. relay out
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Analog and Temperature modules

Analog input modules

F2-04AD-1	\$201.00	4-ch. 4-20mA
F2-04AD-2	\$221.00	4-ch. 0-5V, 0-10V, -5 to +5V, -10 to +10V
F2-08AD-1	\$247.00	8-ch. 4-20mA
F2-08AD-2	\$266.00	8-ch. 0-5V, 0-10V, -5 to +5V, -10 to +10V



Wide range of low cost analog and thermocouple modules

Analog output modules

F2-02DA-1	\$157.00	2 ch. 4-20mA
F2-02DA-2	\$164.00	2 ch. 0-5V, 0-10V, -5 to +5V, -10 to +10V
F2-02DA-1L	\$150.00	2 ch. 4-20mA (12VDC supply)
F2-02DA-2L	\$156.00	2 ch. 0-5V, 0-10V, -5 to +5V, -10 to +10V (uses 12VDC supply)
F2-02DAS-1	\$221.00	2 ch. 4-20mA, 16-bit isolated
F2-02DAS-2	\$247.00	2 ch. 0-5V, 0-10V 16-bit isolated
F2-08DA-1	\$301.00	8 ch. 4-20mA, sink/source selectable
F2-08DA-2	\$271.00	8 ch. 0-5V, 0-10V

Combination analog

F2-4AD2DA	\$281.00	4-ch. in/2-ch. out 4-20mA
F2-8AD4DA-1	\$352.00	8-ch. in/4-ch. out 4-20mA
F2-8AD4DA-2	\$352.00	8-ch. in/4-ch. out 0-5V, 0-10V

Temperature

F2-04RTD	\$301.00	4-ch. RTD input 0.1C resolution
F2-04THM	\$301.00	4-ch. 16-bit thermocouple

Specialty modules

Input Simulator

F2-08SIM **\$59.00** 8 pt Input Simulator

Ethernet

H2-ECOM100 **\$301.00** Master/Slave Ethernet 10/100 Mbps

Serial

H2-SERIO **\$176.00** Three RS-232 ports

H2-SERIO-4 **\$176.00** Two RS-232 ports & one RS-422/485 port



High Speed Counting & Motion Control

H2-CTRIO **\$291.00** Four 100 kHz inputs, and two 25 kHz pulse train outputs

H2-CTRIO2 **\$299.00** Four 250 kHz inputs, or two 20-250 kHz pulse train outputs



Ethernet Remote I/O

H2-ERM **\$201.00** Remote I/O 10 Base-T (Master)

H2-EBC100 **\$301.00** Ethernet Base Controller (Slave)

Ethernet Remote I/O - Use an Ethernet Remote Master module (H2-ERM \$201.00) in the local Do-more base and add up to 16 additional drops of rack-based I/O (with an H2-EBC100 in the CPU slot of each), or 16 Terminator I/O drops.

Four base sizes

3-slot base

D2-03B-1 110/220 VAC	\$132.00
D2-03BDC1-1 12/24 VDC	\$150.00

6-slot base

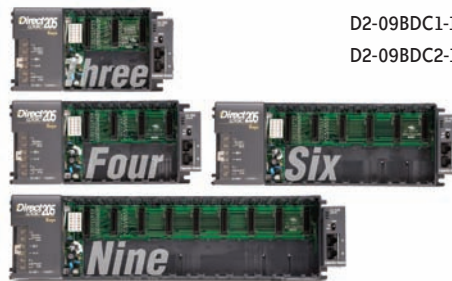
D2-06B-1 110/220 VAC	\$176.00
D2-06BDC1-1 12/24 VDC	\$194.00
D2-06BDC2-1 125 VDC	\$184.00

4-slot base

D2-04B-1 110/220 VAC	\$143.00
D2-04BDC1-1 12/24 VDC	\$171.00

9-slot base

D2-09B-1 110/220 VAC	\$220.00
D2-09BDC1-1 12/24 VDC	\$238.00
D2-09BDC2-1 125 VDC	\$238.00



Compatible products include:

- C-more and C-more Micro HMI products
- Stride® Ethernet switches
- ZIPLink connector modules - relay, fuse and LED options
- Connectivity to SureServo® and SureStep® motion products
- Variable frequency drives and AC motors
- Discrete and process sensors



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. And 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 \$301.00 each, or serial ports - three for \$176.00. 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 \$299.00, 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.



Watch the Overview Video here:
<http://bit.ly/TZcmEw>



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, RAMP/SOAK, 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, ZIPLink 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 ZIPLink modules. For information on our 5-second wiring solution, see ZIPLinks in the Terminal Blocks and Wiring section.



- And much more:**
- Decimal Addressing
 - Stage Programming
 - True Bumpless Run-time editing



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

Just CLICK! for discrete and analog I/O

At \$69.00, you get a ton of application control for your automation buck. The CLICK PLC was designed for novice and expert users alike.

Download the FREE programming software and see for yourself!

Basic CPUs starting at: **\$69.00**



Optional power supply

PLC unit

Optional I/O modules (8 max per CPU)



Mighty as a stand-alone unit, or expand to 142 total I/O

CPUs

Eleven stand-alone DIN-rail mountable DC-powered CPU combinations including:

Basic CPUs

- 8 DC In / 6 DC Out (sinking) (\$69.00)
- 8 DC In / 6 DC Out (sourcing) (\$69.00)
- 8 DC In / 6 Relay Out (\$79.00)
- 8 AC In / 6 Relay Out (\$79.00)

Standard CPUs

- 8 DC In / 6 DC Out (sinking) (\$99.00)
- 8 DC In / 6 DC Out (sourcing) (\$99.00)
- 8 DC In / 6 Relay Out (\$109.00)
- 8 AC In / 6 Relay Out (\$109.00)

Analog CPUs

- 4 DC In / 4 DC Out (sinking), 2 Analog In, 2 Analog Out (current/voltage selectable) (\$129.00)
- 4 DC In / 4 DC Out (sourcing), 2 Analog In, 2 Analog Out (current/voltage selectable) (\$129.00)
- 4 DC In / 4 Relay Out, 2 Analog In, 2 Analog Out (current/voltage selectable) (\$139.00)

Features

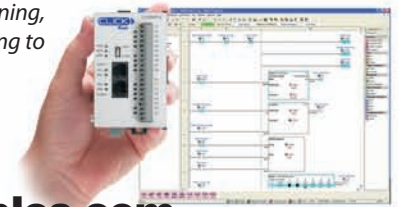
- Built-in communication ports (two in Basic CPUs, three in Standard and Analog CPUs)
- Optional battery backup (Standard and Analog CPUs only)
- Real time clock/calendar (Standard and Analog CPUs only)
- Removable terminal blocks for easy wiring
- Thirteen stackable, discrete I/O option modules (DIN-rail or panel mountable)
- Program AND documentation stored in CPU
- Decimal memory addressing
- 21 easy to use instructions
- 8,000 steps of program memory
- Supported by FREE, high-feature programming software

FREE Software

The CLICK PLC programming software is based on the **C-more** and **C-more** Micro programming environments. We leveraged these two great programming packages to create CLICK's intuitive programming tool, and then made it a FREE download from our Web site. So you now have free software for your practically free PLC! But don't let the \$0 price tag fool you - you'll find this software loaded with options that you would normally expect to pay extra for!

This includes a more intuitive instruction set that is easier to use and extremely functional at the same time. We used Decimal

Addressing and preassigned Modbus addresses. We created one of the best help files of any software in the industry and we strived to provide the user enough options to easily address all phases of programming (*from learning, coding and commissioning to troubleshooting*).



Download the FREE software at: www.clickplcs.com

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:
\$125.00



www.automationdirect.com/dl05

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:
\$251.00



- 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



www.automationdirect.com/dl06

Lots of option modules for the DL05 and DL06!

Discrete I/O
Starting at \$83.00
(F0-04TRS)

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

Analog I/O
Starting at \$83.00
(F0-04AD-1)

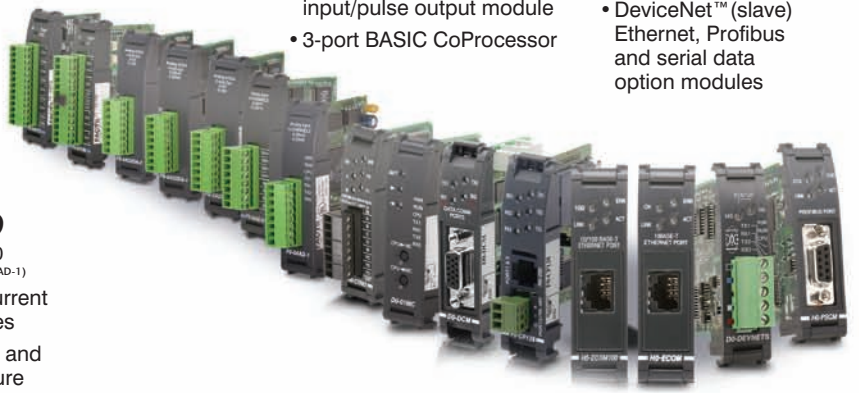
- Voltage and current analog modules
- Thermocouple and RTD temperature input modules

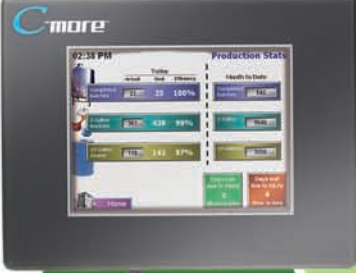
Specialty I/O
Starting at \$192.00
(F0-CP128)

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

Communications and Networking
Starting at \$100.00
(D0-DEVNETS)

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





Four CPUs from 2.4K to 30.4K memory, and up to 16,384 I/O. Four base sizes with built-in power supply, including 12/24 VDC, 110/220 VAC and 125 VDC powered bases.

DL205: A practical micro-modular PLC - wide range of I/O and communication modules

- AC/DC input/output modules, up to 32 points
- 10 A relay outputs
- 12-bit and 16-bit analog inputs and outputs
- Thermocouple and RTD inputs
- Data communications, including serial and Ethernet modules
- 16 built-in PID loops using D2-260 CPU
- Counter input/pulse output
- Remote I/O master and slave
- H2-CTRIO high speed-counter/pulse output
- H2-EBC, Ethernet slave base controller
- H2-SERIO-4, triple port serial module for WinPLCs or PC I/O
- Local expansion up to 4 bases plus CPU base

If your application requires the flexibility of a modular control system, a DL205 PLC is the lowest cost, most versatile solution you'll find. Check out all our modules, bases and communication options.



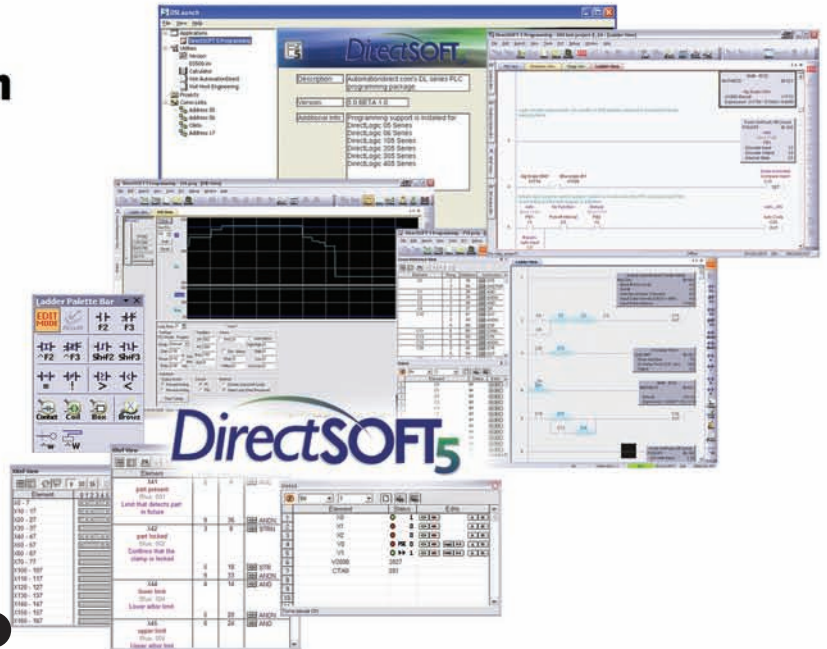
www.automationdirect.com/dl205

Complete *DirectLOGIC* product line overview at:

www.ABOUTPLCs.com

One software package programs all of our *DirectLOGIC* PLCs.

The full support PC-DSOFT5 package (\$395) programs all of our *DirectLOGIC* PLCs, and the PC-DS100 package is a full-featured FREE version with a 100-word limitation. (DS100 is only available by download from our Web site.)



www.automationdirect.com/directsoft

More *DirectLOGIC* families:

The DL305: A legend in the industry since 1983

The DL105: The original brick PLC, with 10 inputs and 8 outputs; high-current relays, and hard-to-find AC in/AC out



The DL405:
A Workhorse PLC



Expand the possibili-

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:

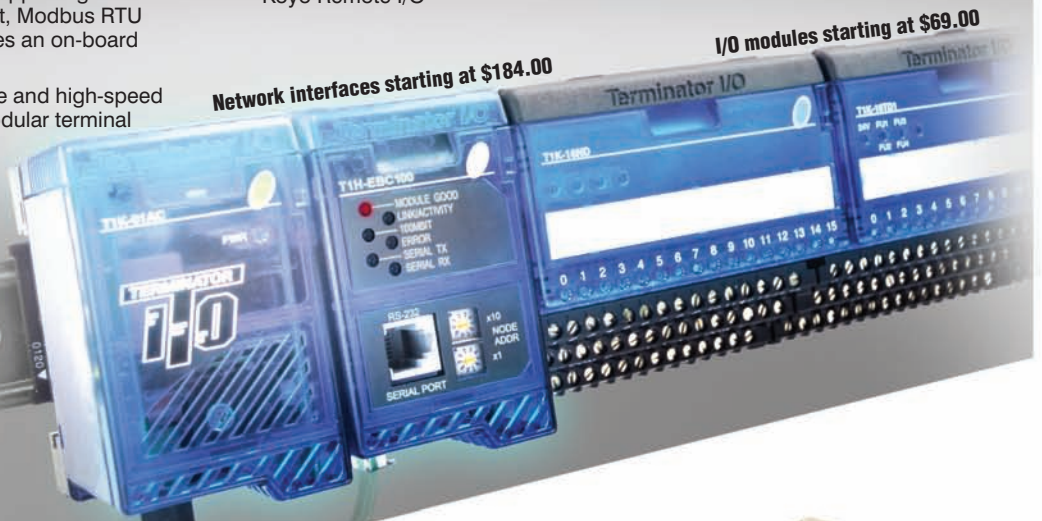
- Network interface modules supporting Ethernet, Profibus, DeviceNet, Modbus RTU and Koyo remote I/O; includes an on-board serial port
- Discrete, analog, temperature and high-speed counter I/O modules with modular terminal bases
- Configuration flexibility by plugging together a network interface module 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.

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



www.automationdirect.com/fieldio

PC-based control with Think & Do



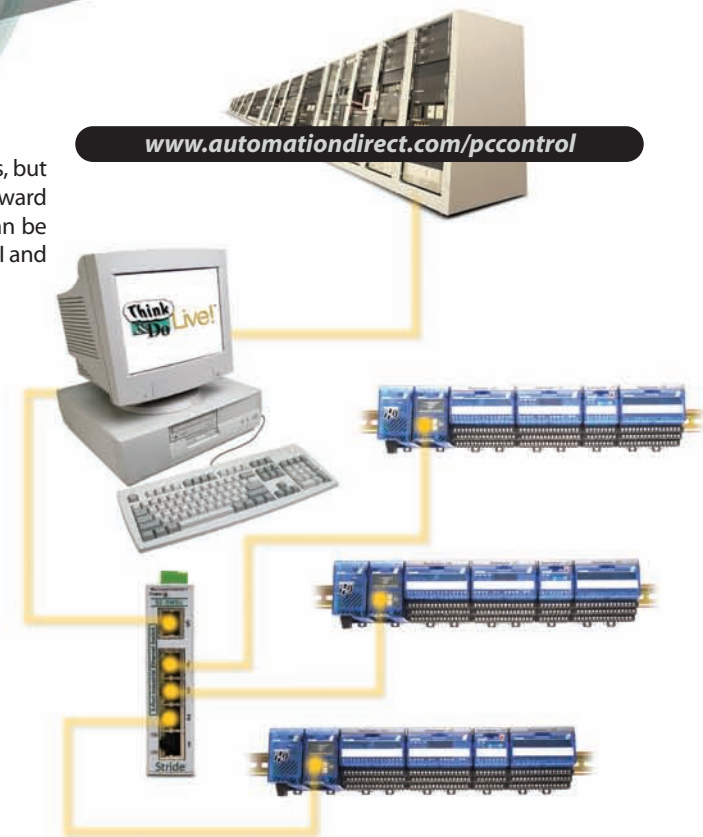
PLCs provide a great solution for many applications, but when your application goes beyond straight-forward ladder logic controlling simple I/O, PC control can be the smarter way to go. With Think & Do, your HMI and control share the same database, so there is no duplication. Intuitive flowcharting makes coding the control logic as easy as sketching out the control algorithm. The powerful

graphics tools and readily-accessible data tags enable you to create a quality HMI so fast you'll have to experience it to truly believe it.

Think & Do includes the math functions and data types found in high-level programming languages, so complex algorithms and data management are a snap. PC architecture allows Think & Do to seamlessly support a variety of specialty motion, vision systems, and field network interface PC cards. The PC and Windows allow Think & Do to provide simple communication links on serial or Ethernet networks. Think & Do simplifies connecting everything from SQL databases to barcode readers with your control application.

For PC control in a PLC form factor, check out the WinPLC, a controller module that works with DL205 PLC hardware. The FREE WinPLC programming pack helps make this system an attractive and very affordable solution (where HMI is not required).

www.automationdirect.com/pccontrol



Software for data collection

DataWorx™ and DataWorx P3K™: Connect Ethernet-enabled controllers for data collection

DataWorx easily connects your Ethernet-enabled controllers or Think & Do WinPLCs to standalone PCs or network servers for simple data logging. Collect PLC or WinPLC data without the need for special PC programming or any 3rd party HMI, SCADA, or DAQ software application.

DataWorx P3K data logging software provides an easy and inexpensive way to collect data from the Productivity3000 controller by connecting it to enterprise database systems powered by Microsoft Access, SQL or ODBC compatible servers.

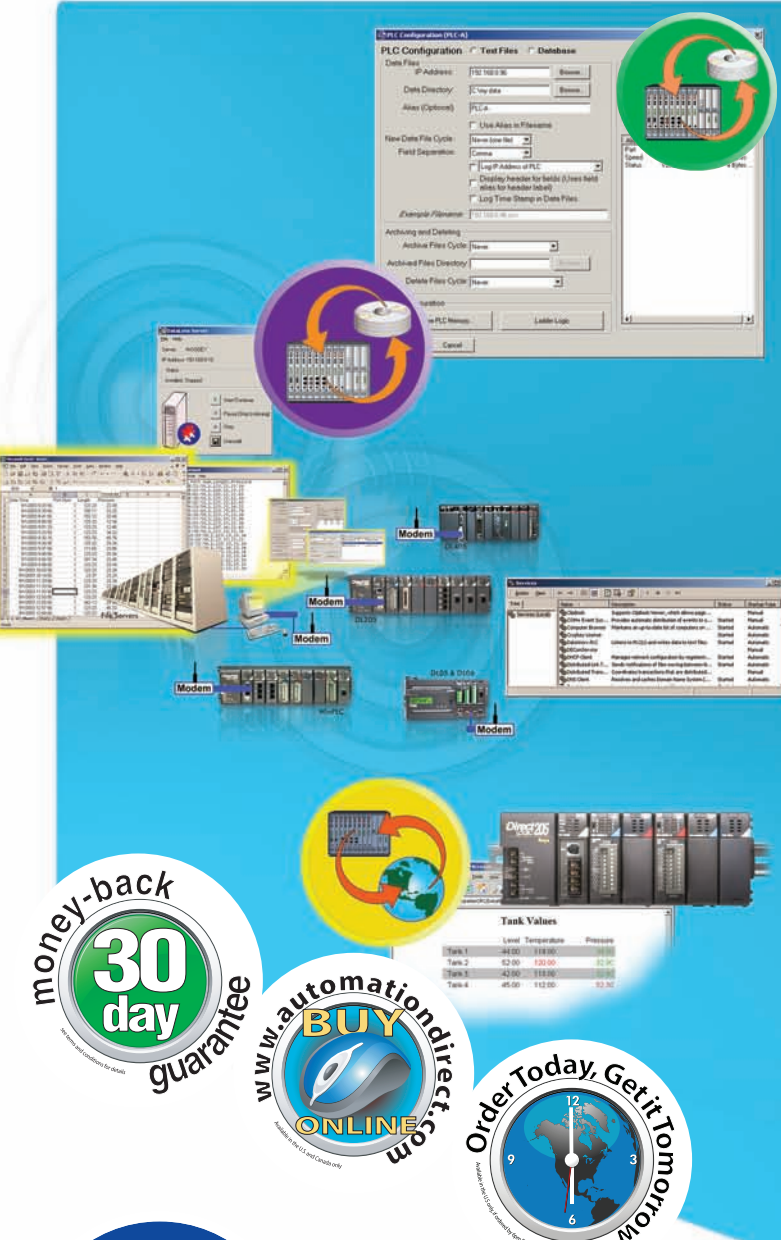
DataLynx™: Remote data collection over modems

DataLynx is an inexpensive data logging and storage package for remotely located PLCs or other devices that support Modbus and a modem connection. DataLynx can collect data from remote locations or relay data from multiple locations back to a single location to be stored. The software offers easy setup with no programming or SCADA system required.

DataNET™: Instant access to operational data from anywhere

DataNet OPC easily connects your PLC or other OPC enabled device to a live Web page. The data is then available for viewing, logging and printing reports. The data is displayed in an easy to read table format with color coded text (for alarming) and with absolutely no HTML programming required.

www.automationdirect.com/software



money-back
30 day
guarantee

www.automationdirect.com
BUY
ONLINE

Order Today, Get it Tomorrow

starting at:
\$399.00
Includes all drivers and large number of node support

Automatic tag naming using DirectSOFT Nicknames and Descriptions

Identifies each PLC node and memory usage

Detailed real-time diagnostic window for easy troubleshooting

Setup wizard for Automatic Tag generation

KEPDirect OPC Data Server for Windows

KEPDirect OPC Server connects your favorite Windows client software to AutomationDirect I/O through our EBCs (Ethernet Base Controllers), to our DirectLOGIC 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.

Industrial Communications

Use AutomationDirect's communication products to provide a link via phone, Ethernet or serial connection to your industrial controllers and plant PCs.

Managed Models
Starting at \$445.00
Gigabit Ethernet (on select models)

Unmanaged Models
Starting at \$99.00

Metal Models (-WT)
Starting at \$199.00

**Performance and Quality
choose from 23 models**

(Managed models only featured in photograph)

Stride

* Product images not to scale

Stride Ethernet switches start at \$99.00

Stride is our line of managed and unmanaged industrial grade Ethernet switches and media converters. Designed with our PLC, HMI and drive customers in mind, Stride Ethernet switches are specifically built for industrial environments. With a Stride industrial Ethernet switch on an isolated control LAN, you can reduce data collisions that slow down your network. Stride Ethernet switches automatically determine and remember the devices connected to each port and route messages only through the appropriate ports. Install Stride switches and your Ethernet control network will maintain more consistent cycle times even under heavy I/O and data exchange.

- All 10/100 RJ45 ports are auto-detecting, auto-crossover and auto-polarity
- Redundant power inputs with industrial surge and spike protection
- Models with 100Mbps multimode fiber optic port for distances up to 4km
- Store and forward wire speed switching
- Full-duplex operation with flow control (no collisions!)
- Fiber optic ports available on certain models

www.automationdirect.com/communications

Ethernet network support

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



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.

C-more Touch Panels

Two-year Warranty

c-more.automationdirect.com

Panels starting at: **\$432.00**

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: 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

\$2,484
TFT screen (EA7-T15C)

full-featured 12" color

\$2,051
TFT screen (EA7-T12C)

full-featured 10" color

\$1,727
TFT screen (EA7-T10C)

full-featured 8" color

\$1,081
TFT screen (EA7-T8C)

full-featured 6" color TFT

\$757
TFT screen (EA7-T6CL)

6" TFT Touch Panel

starting at \$540
Basic, TFT screen (EA7-T6CLR)

grayscale

starting at \$432
Basic, STN screen (EA7-S6M-R)



Touch panels at a text panel price!

6" TFT starting at
\$432.00
EA1-T6CL

4" TFT priced at
\$356.00
EA1-T4CL

6" panels starting at
\$324.00
EA1-S6ML

Some panels shown above with option bezel available at additional cost

A full lineup of affordable HMI plus FREE fully functional software (download only)!

Feature	3-inch STN Monochrome Models	6-inch STN Monochrome Models	6-inch TFT Color Models	4-inch TFT Color Models
Display Resolution & Type	128 x 64, touch or non-touch	320 x 240, touch	320 x 240, touch	320 x 240, touch
Ports	1 serial (RJ12) and Optional DSUB15	2 serial (RJ12 and DSUB15)	1 USB (Port 1: USB Type B) 1 Serial (Port 2: DSUB15)	1 USB (Port 1: USB Type B) 1 Serial (Port 2: DSUB15)
User Project Memory	768KB	1,792KB	3.2MB	3.2MB
Portrait Mode	NO	YES	YES	YES
Colors	Monochrome; backlight can be configured per screen and/or per alarm as: red, green, amber, lime, or yellow (standard); or red, white or three shades of pink (high-contrast)	Monochrome; backlight can be configured per screen and/or per alarm as: red, green, amber, lime, or yellow (standard); or red, white or three shades of pink (high-contrast)	32,768 colors	32,768 colors

3" panels starting at
\$161.00
EA1-S3ML-N

Serial protocols supported



- 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 Melex FX
- Mitsubishi Q and QnA
- Siemens PPI

c-moremicro.automationdirect.com

More HMI choices ...

**Optimates:
Another low cost text alternative**

Optimate panels offer a variety of pushbutton/light and text display configurations for simple applications.

Atlas Industrial Monitors

The ATLAS series includes 15" XGA, 17" SXGA, and 19" SXGA LCD monitors, all with NEMA 4/4X/12 panel-mountable front bezels. All units provide Analog Video (VGA) and Digital Visual Interface (DVI) connections; 5-wire analog resistive touchscreen ("T" models) connects via either a USB or RS-232 port.

starting at:
\$995.00



#1 Value in AC Drives

from AUTOMATIONDIRECT.com



www.automationdirect.com/drives

www.durapulse.com

GS1 AC minidrive

- 1/4 and 1/2 hp, 115 VAC (single-phase input)
- 1/4, 1/2 and 1 hp, 230 VAC (single/three-phase input)
- 2 hp, 230 VAC
 - 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
 - Starting at \$99

GS2 AC microdrive

- 1/4 hp to 1 hp, 115 VAC (single-phase input)
- 1/2 hp to 3 hp, 230 VAC (single/three-phase input)
- 5 hp to 7.5 hp, 230 VAC
- 1 to 10 hp, 460 VAC
- 1 to 10 hp, 575 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
 - 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
 - CE Listed (except 575V model)

DURAPULSE AC sensorless vector drives

- 1 hp to 3 hp, 230VAC (single/three-phase input)
- 5 hp to 50 hp, 230VAC
- 1 hp to 100 hp, 460 VAC

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

- 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



Simple programming
On-board keypads or Windows®-based software that configures all GS and DURAPULSE drives

Simple communications
Built-in Modbus or optional Ethernet

Two-year warranty

FREE Configuration Software!

GSOFT, the configuration software for AutomationDirect's GS Series variable frequency drives, allows a personal computer to be connected to either the GS1, GS2 or DURApulse series AC drives. You can perform a variety of functions using GSOFT, including:

- Create new variable frequency drive configurations using Quick Start, Detailed or Schematic Views
- Upload/ download drive configurations
- Edit AC drive configuration
- Archive/ store multiple drive configurations on your personal computer (PC)
- Trend AC drive operational parameters
- Tune the VFD drive PID loop
- View AC drive faults
- Print a schematic representation of the drive configurations
- CD also available for \$9.00



<http://support.automationdirect.com/products/gsoft.html>

Ethernet Communications



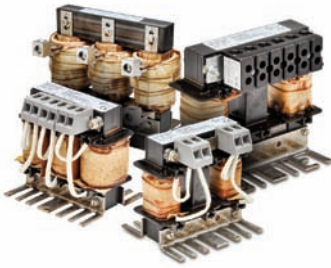
New! ... Ethernet Drive Module (GS-EDRV100)

- The GS-EDRV100 processes signals to and from the drive, mounts on 35mm DIN rail, and connects the drive to an Ethernet hub or PC.
- It formats drive signals to conform with the Ethernet standard and transmits these signals to the H2-ERM or H4-ERM, Productivity3000, KEPDirect OPC Server, KEPDirect EBC I/O Server, or independent controller with a Modbus TCP/IP driver. This allows for greater connectivity to many control system architectures.

- An additional feature is the built-in Web browser which allows users to configure and control the drive from any Web browser via the IP address of the GS-EDRV100 module.
- The GS series drives have a provision for shutting down control or power to the inverter in the event of a communications time-out.

RS485 communications modules also available

LR Series Line Reactors



- 0.25 to 300 hp, starting at \$56.00
- Compatible with most manufacturers' drives
- Universal mounting feet with multiple mounting slots; can replace most reactors using existing mounting holes
- 10-year warranty
- RoHS
- CULUS listed (E197592), CE marked



ZipLink Pre-wired Modules and Connector Cables

- Reduce drive wiring time
- Pre-made communication cables and Communication Distribution Modules take the guesswork out of communications and make drive network wiring plug and play.

Current Limiting High-Speed Class J Drive Fuses



New! ... JHL series fuses combine the performance of high-speed semiconductor fuses and the convenience of Class J branch-circuit fuses in one small package, allowing maximum protection for AC and DC drives and controllers.

- Space saving Class J dimensions allow the use of readily available Class J fuse blocks, holders, and switches
- 1 to 600A ratings
- Prices start at \$13.00 for single fuses, \$117.00 for 10-pack

Plus ...

- Input Fuse Kits for GS Series
- Spare Input Fuses for GS Series
- Braking Units & Resistors for GS Series
- EMI / RF Filters for GS Series
- DURApulse - GS3 Series Replacement Fans

Stellar™ family of AC Motor Soft Starters

Energy Optimizing Full-Featured 3-Phase Soft Starters SR44 Series, 9A - 370A, starting at \$769.00 (SR44-9)

- 9-370A @ 230 - 460VAC
- Advanced energy saving Optimizing Mode improves motor efficiency and power factor; prolongs motor life
- Applications Menu programs your starter with one entry (crusher, conveyor, fan, pump, etc.)
- Can be connected 'in-the-delta'
- Full Digital Control with keypad, I/O, or optional serial communication
- Thyristors in all three motor phases

Basic 3-Phase Soft Starters SR33 Series, 22A - 482A, starting at \$490.00 (SR33-22)

- Fits in similar footprint to Star/Delta starter
- 3-potentiometer setup makes installation easy.

Compact 3-Phase Soft Starters SR22 Series, 5A - 40A, starting at \$119.00 (SR22-05)

- Easy potentiometer setup.
- Includes six error conditions/fault indications: AC Supply, Control Supply, OverHeat, Bypass Failure, Shear Pin, and OverCurrent alarms.

www.automationdirect.com/soft-starters

AC and DC Motors



Premium Efficiency starting at: **\$155.00**

AC T-Frame, Premium Efficiency, Cast Iron, Industrial Duty, three-phase, 208-230/460 Volt up to 200 hp, TEFC enclosure

AC TC-Frame (C-Face), Premium Efficiency, Cast Iron, Industrial Duty, three-phase, 208-230/460 Volt up to 100 hp, TEFC enclosure

1200 RPM, 1800 RPM, and 3600 RPM premium efficiency motors

- Meets or exceeds Premium Efficiency standards (EISA 2007)
- Cast iron frame has ribbed design for maximum cooling
- NSK/NTN/SKF brand premium quality ball or roller bearings
- Maintenance free bearings (10 hp and below)
- V-ring shaft seals on drive end and on opposite drive end
- Class F insulation
- Class I, Div 2 hazardous locations
- cCSA_{US} certified, CE
- Inverter ratings: 10:1 (variable torque); 4:1 (constant torque)
- Available in 1200, 1800, and 3600 RPM, electrically reversible
- Two year warranty

AC 56C Frame Rolled Steel single-phase, 115/208-230 Volt 0.33 - 1.5 hp, TEFC enclosure

- Capacitor start (1.5 hp is also capacitor run)
- 1800 RPM, electrically reversible
- Removable bolt on - bolt off base
- Industrial gauge steel motor frame and base
- Class F insulation

AC 56C Frame Rolled Steel three-phase, 56C Stainless Steel three-phase 208-230/460 Volt 0.33 to 2 hp, TEFC enclosure

- 1800 or 3600 RPM, electrically reversible
- Removable bolt on - bolt off base (rolled steel)
- Welded base or round body (stainless steel)
- Industrial gauge steel motor frame and base
- Class F insulation
- Stainless Steel motors designed for IP56 washdown applications! Case, JBox and fan shroud are made of 304 stainless and the shaft is 303 stainless.

DC 56C Frame Permanent Magnet DC motors with rolled steel frames, flange mount and removable mounting bases; 0.33 to 2 hp, TENV or TEFC enclosure

- Rolled steel frame/cast aluminum end bells
- Large brushes for longer brush life
- Compatible with SCR (thyristor) DC drives
- 1800 RPM; 90 VDC and 180 VDC models
- Easy access to DC motor brushes (DC motors ship with one set of brushes installed and one set of spare brushes in the box)



Inverter-duty motors up to 100 hp

The Marathon® Electric motor lines have been carefully selected to be performance-matched with the DURApulse and GS series AC drives. The offering includes microMax™, Black Max®, Blue Max® 2000 and Blue Chip® XRI® models ranging from ¼ hp to 100 hp, that feature dual 230/460 and 575 VAC voltages and base speeds of 1,200 or 1,800 RPM. Factory-mounted encoders are available on select models.

The Marathon Electric NEMA Premium Efficiency XRI series motors, from 1 to 10 hp, are compliant with the Energy Independence and Security Act of 2007, giving you a low purchase price and long-term energy savings.



Worm Gearboxes and Motor Bases for IronHorse and Marathon motors



STABLE™ Motor Bases

- Mounting slide bases for use with 56 to 449T NEMA motors

IronHorse Worm Gearboxes

- Right angle gearboxes with right-hand output shafts
- Dual shaft gearboxes (both right and left output shafts)
- Hollow shaft worm gearboxes (all the way through both sides)

Motor Controls



AUTOMATIONDIRECT offers a complete line of Fuji Electric 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 Manual Motor Starter (MMS) to create starters for a variety of applications. The conventional starters in the DUO line can accommodate motors up to 100 horsepower at 480 VAC.

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

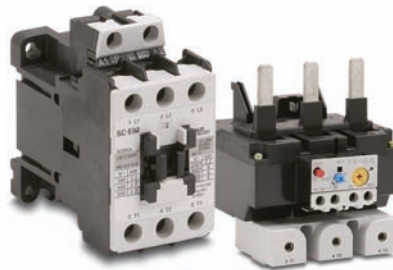
The Odyssey Series of contactors and overloads also features the SUPER-MAGNET™ coil and are available in four sizes with overloads to match any motor to 300 horsepower. Both the DUO and Odyssey lines are available in 24VAC, 24VDC, 120VAC, and 240VAC coil versions. For certain models, new coil voltages have been added up to 575V. The contactors are rated up to 600VAC, 3-phase.

www.automationdirect.com/motorcontrols



Fuji Electric Odyssey 3N series IEC motor contactors and overload relays up to 300 hp (at 575V)

- Controls from 60 to 300 hp
- 138 mm to 148 mm frames
- IEC-947, UL, CSA, CE approvals
- Starting at \$361.50 (180 amp contactor)



Fuji Electric DUO series IEC motor contactors and overload relays up to 100 hp (at 480V)

- Controls from 1/2 to 100 hp
- 45 mm to 115 mm frames
- IEC-947, UL, CSA, CE approvals
- Starting at \$15.00 U.S. (9 amp contactor)



Fuji Electric manual motor starters

The DUO series of manual motor starters are circuit breakers for motors that provide optimal protection by integrating the functions of a molded case circuit breaker and thermal overload relay into a compact unit.

EAT•N We also carry EATON Freedom series contactors and starters



Bryant Manual AC Motor Controllers

- UL Listed as "Suitable as "Motor Disconnect" under UL 508
- Sizes in 30, 40 and 60 Amps up to 600 VAC
- 2-pole and 3-pole configurations
- Available NEMA 1, 3/3R and 4X enclosures



CHECK OUT OUR PRICES

Motor Controls	AutomationDirect Fuji	US	Allen-Bradley	ABB
9 Amp Contactor	\$15.00 SC-E02-110VAC		\$94.94 * 100-C09D10	\$69.58 * A9-30-10-84
40 Amp Contactor	\$52.50 SC-E2-110VAC		\$212.10 100-C37D00	\$264.92 * A40-30-10-84
10 Amp Motor Starter	\$52.50 DM3RHD-010		\$209.07 140M-CZE-C10	\$171.03 MS325-12.5

* This product includes 1 N.O. Aux contact

All prices are U.S. published prices. AutomationDirect prices are from October 2012 Price List. Allen-Bradley prices taken from www.rockwellautomation.com/enr/e-tools 2/20/12. ABB prices taken from www.galco.com 2/20/12. Prices and specifications may vary by dealer and configuration. Prices subject to change without notice.



ProSense Motor Monitoring Relays

Phase monitor relays provide protection against premature equipment failure caused by voltage faults on 3-phase systems. AUTOMATIONDIRECT offers three types of monitor relays for motor control.

- **Phase Monitoring Relays** for phase loss protection
- **Alternating Relays** for motor load protection
- **Pump Seal Failure Relays** for seal failure detection

www.automationdirect.com/motor-control-relays

Motion Control

www.sureservo.com

Sure
servo

AC servo systems start under \$1,000

The SureServo family of brushless servo systems is fully digital and offers a rich set of features at dynamite prices. Beginners to experienced users can take advantage of this easy-to-use family for as little as \$965 (100W system, including motor cables and break-out board). All components are sold separately.



Simple programming
On-board keypad or Windows®-based software that configures SureServo drive.

Simple communications
Built-in Modbus RTU protocol

Two-year warranty

- Eight standard systems from 100 W to 3 kW
- Use with **DirectLOGIC** PLCs or any other host control
- Adaptive, auto and manual tuning modes
- Free SureServoPro sizing and set-up software
- Control modes include analog (torque, velocity), pulse input, preset (torque, velocity), built-in indexer and commands via Modbus communication
- Two-year warranty

CHECK OUT OUR PRICES

Servo Systems	AutomationDirect Price/Part Number	VS.	Allen-Bradley Price/Part Number
Digital Servo Drive	\$488.00 SVA-2040		\$1,050.40 2098-DSD-005
100W Servo Motor with connectorized Leads	\$325.00 SVL-201		\$536.31 1LY-A130T-HK62A
Breakout Board Kit for CN1 Control Interface	\$94.00 ASB-BM50A		\$211.09 2090-UBBK-04401
10' Motor Feedback Cable	\$49.50 SVC-EF-010		\$83.22 2090-CFMB0F-CBA003
10' Motor Power Cable	\$29.50 SVC-PL-010		\$93.62 2090-CFPM0F-16A003
Configuration Software	FREE SV-PRO2		\$78.07 2098-UW0P02
Complete 1-axis 100W System	\$986.00		\$2,052.71

*SureServo Pro software is FREE when downloaded and is also available for \$9 on a CD
100W system consists of part numbers shown in table above with prices from www.rockwellautomation.com/en-us/tools/2/2012.

2-Phase Microstepping Drives



NEMA Stepper Motors

20-foot extension cable with locking connector

NEMA 17, 23 and 34 mounting flanges



Square frame style produces high torque and achieves best torque to volume ratio

Sure
step

Stepper Motor Power Supplies

32 VDC, 48 VDC, and 70 VDC unregulated step motor power supplies

5 VDC ±5% at 500 mA regulated logic power



Screw terminal AC input and DC output connections

120 or 240 VAC, 50/60 Hz power input (switch selectable)

Power ON LEDs

Input and Output Fuses

High-performance Stepper Systems

The SureStep open-loop stepping system includes high-performance microstepping drives, linear power supplies, and high-torque motors.

Bi-polar stepping motors start at \$18.00

- Now available from 61 oz-in to 1,291 oz-in
- Multiple stack lengths in NEMA sizes 17, 23, and 34
- 200 steps per revolution, or 1.8° per full step
- Locking connectors for easy hookup

Traditional microstepping drive for \$149.00

- 1/2, 1/5, 1/10, 1/50 step resolutions
- 3.5A @ 40 VDC rating
- Step and direction input

Advanced microstepping drives start at \$199.00

- 5A @ 48 VDC and 10A @ 80 VDC models
- Step/Dir, CW/CCW, Quadrature, Analog Velocity (0 - 5V) modes
- Built-in indexer
- Serial communication (point-to-point moves via PC/PLC)

Linear Power Supplies

- 32V @ 4A, 48V @ 5A, 48V @ 10A, 70V @ 5A
- Onboard input and output fuses included
- Includes 5 VDC logic supply for all low voltage signals

Process Control and Industrial Components

SOLO® Process and Temperature Controllers

SOLO temperature controllers are powerful control tools, but offer very simple operation. Starting at just \$90.00, they are ideal for stand-alone operation or in coordination with PLCs.

- Choose from any of four standard DIN sizes, each with a dual 4-digit, 7-segment display for Process Variable and Setpoint
- 24VDC or 120VAC powered models
- Dual output control ideal for heating/cooling loops
- Built-in Autotuning (AT) function with PID control for fast and easy startups
- Universal inputs on all models, including T/C, RTD, mA, mV and DC voltage
- Flexible control modes to fit your process, including PID, Ramp/Soak, On/Off and Manual
- FREE! Configuration and monitoring software (SL-SOFT, downloadable from our Web site)



starting at:
\$90.00

money-back
30 day
guarantee



www.automationdirect.com/process-controllers

SOLO

Signal Conditioners/Optical Isolators

FC series and Universal signal conditioners are the perfect solution for converting process, temperature and other electrical signals into voltage or current signals for transmission or input to a PLC.

New! ... FC-ISO series high-speed signal conditioners/optical isolators for encoders have open collector outputs or differential line driver outputs.

The **FC series signal conditioners** offer isolation between the input and output to help eliminate electrical noise.

Universal isolated signal conditioners provide signal/ground loop isolation and accept milliamps, volts, RTD, thermocouple or potentiometer inputs.

These AutomationDirect signal conditioners are ideal for use with PLCs, loop controllers, digital displays and many other applications requiring analog isolation or other isolated signal.



www.automationdirect.com/signal-conditioners

Relays and Timers

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

- Electromechanical relays are available in cube, open and card styles for a diverse range of installation requirements. Cube relays are available with standard linear or octal base connection patterns.
- Solid state relays available include hazardous location, socket-mount, DIN-rail mount and panel-mount styles.
- All relays feature LED indicators for easy troubleshooting.



Timers include miniature, multi-mode, digital models and multi-function Counter/timer/tach unit.



www.automationdirect.com/relays

Sensors

www.automationdirect.com/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:
\$13.50

Capacitive Proximity Sensors

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

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

www.automationdirect.com/proximity

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:
\$21.50

www.automationdirect.com/photoelectric

IP69K proximity and photoelectric sensors

Rated for harsh duty / food and beverage applications

The use of 316L stainless steel and FDA approved PMMA and PEEK type plastics make our IP69K rated sensors compatible with harsh environments. These sensors and quick connection cables all meet the stringent demands of the IP69K test standards and have been tested by third parties such as Ecolab and Johnson Diversey to ensure proper chemical compatibility during their use in harsh environments.

- Made of FDA approved materials
- Able to withstand 1500psi of 80°C water jet at varying angles, 4-6" away
- 12, 18, 30 mm **proximity sensors starting at \$35.50**
- 18 mm **photoelectric sensors starting at \$66.00**

IP69K



Sensors

Fiber Optic Sensors starting at \$45.50

For supreme noise protection and in small sizes for tough applications, these fiber optic sensors fit higher-performance needs.

- 18mm round amplifiers (SSF Series)
- DIN rail mount amplifiers (DFP/DFT Series)
- Cuttable fiber sensors (CF Series)
- Cables and accessories

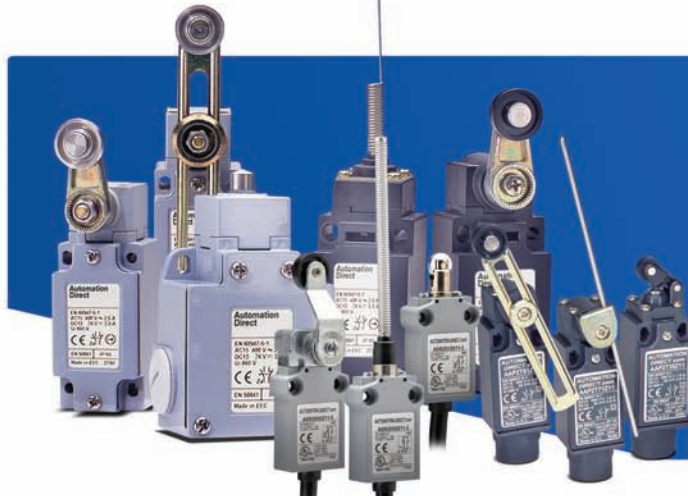


starting at:
\$14.50

Limit Switches

- Compact limit switches (AEM2G Series)
- Heavy duty IEC limit switches (ABM Series)
- Double insulated (PBT) limit switches (ABP Series)
- Miniature double insulated (PBT) limit switches (AAP Series)
- Additional lever arms/ spare parts & accessories

www.automationdirect.com/limitswitch



starting at:
\$99.00

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

www.automationdirect.com/ultrasonic-sensors



Koyo

Incremental and absolute encoders starting at \$90.00

Open Collector, Totem-Pole, and Line Driver outputs are available. Use these encoders with our PLC high-speed counter modules, servos, steppers, and our variable frequency drives with encoder feedback, or any other motion application.

- Light Duty (standard or hollow shaft) from 100 to 2,500 pulses/revolution
- Medium Duty (standard or hollow shaft) from 3 to 2,500 pulses/revolution
- Heavy Duty (standard shaft) from 30 to 5,000 pulses/revolution
- Absolute Medium Duty (standard shaft) from 32 to 1,024 pulses/revolution
- Encoder accessories (couplings, mounting brackets)

www.automationdirect.com/encoders



AcuAMP AC and DC Current Sensors



Current Transducers, Current Switches and Current Indicator

- **AC Current Transducers** (Current transformer with signal conditioner)
- **AC Current Transducers** (True RMS current sensing)
- **DC Current Transducers** (Hall effect sensor with signal conditioner)
- **Single Range AC Current Switches**
- **Multi-Range AC Current Switches** (Current transformer, signal conditioner and limit alarm)
- **Multi-Range DC Current Switches** (Hall effect sensor, signal conditioner and limit alarm)
- **AC Current Indicator**

starting at:
\$12.00

Sensors



www.automationdirect.com/current-sensors

www.automationdirect.com/temp-sensors

Temperature Sensors

starting at \$65.00

- TSD25 Series temperature switches sense from -4 to 284 deg. F
- TTD Series temperature transmitters sense from 0-100 deg. C or -40 to 300 deg. F



Thermocouples

starting at \$15.25

Models available

- Probes with Connection Head
- Probes Spring-loaded with Connection Head
- Probes with Hex Nipple
- Probes Spring-loaded with Hex Nipple
- Probes with Attached Plug
- Probes with Lead Wire Transition
- Adjustable Immersion Sensors
- Bolt-on RingSensors

Common features

- All thermocouples are pre-built stock items
- Probes have type J or K thermocouple elements to meet many temperature sensing applications
- Made in the USA
- RoHS

Thermowells

starting at \$23.50

Models available

- Thermowells for RTD probes with M12 cable connector
- Thermowells for spring-loaded thermocouple and RTD probes

Common features

- All thermowells are pre-built stock items

Bi-Metal Thermometers

starting at \$65.00

- Bi-metallic sensing element for reliable readings
- 3 and 5-inch dials
- Back or adjustable angle connection
- 304 stainless steel
- ± 1% accuracy
- 5 year warranty

RTDs starting at \$29.00

Models available

- Probes with Connection Head
- Spring-Loaded Probes with Connection Head
- Probes with Hex Nipple
- Spring-Loaded Probes with Hex Nipple
- Probes with Attached Plug
- Probes with Lead Wire Transition
- Bolt-On Ring Sensors
- Probes with M12 Cable Connector
- Sanitary Clean-in-Place (CIP) Probes

Common features

- All RTDs are pre-built stock items
- 100 ohm platinum RTD 3-wire or 4-wire elements
- Class A accuracy

Also:

- Compression fittings for temperature probes
- Thermocouple and RTD extension wire



Mechanical Dial Pressure Gauges

starting at \$5.75

- 1.5", 2.0" and 2.5" Diameter Dials
- Durable steel or stainless steel cases, dry or liquid filled models



Pressure Sensors starting at \$89.00

PSD series electronic pressure switches with strain gauge technology are an ideal alternative to mechanical piston pressure switches. Mechanical adjustment dials quickly establish setpoint and resetpoint; switches detect pressure ranges up to 5,800 psi.

PTD Series compact pressure switches and vacuum transmitters provide an analog output for reliable indication of pressures up to 5,000 psi or 100 inches of water column, and vacuums to -14.5 psi.

Digital Pressure Switches/Transmitters

starting at \$69.00

- 1.2" by 1.2" by 1.7" deep
- Two digital outputs (NPN or PNP)
- 4-20 mA analog output
- Vacuum to pressure ranges: -14.5 to 14.5 psi and -14.5 to 145 psi



Differential and Stainless Steel Pressure Transmitters

SPT25 Series Features

- All stainless steel wetted parts
- Pressure ranges: vacuum to 5000 psi
- 6.6 ft. cable or DIN connector

DPTA Series Features

- Differential pressure measurement
- Pressure ranges from 0.1" w.c. to 25" w.c.
- Accuracy is +/-1% of span maximum



www.automationdirect.com/pressure-sensors

Pilot Devices

www.automationdirect.com/pushbuttons-lights

starting at:
\$4.75



22 mm Pilot Devices: metal and non-metal

We carry 22 mm metal and non-metal IEC pilot devices that offer you a wide choice of cost-effective components for control panels.

The rugged yet economical line of metal pilot devices is ideal for all your operator panel designs.

- Flush, extended, illuminated or non-illuminated, and mushroom pushbuttons
- Pilot lights and push-to-test models
- Two or three-position selector and keyed switches
- **Metal:** IP65 Rating (after installation), RoHS compliant
- **Non-metal:** (IP65, IP66 ratings to IEC 529) UL Listed (NEMA) Types 1, 2, 3, 3R, 4, 4X, 12, and 13 when installed, RoHS Compliant

starting at:
\$22.50

Cutler-Hammer 30 mm Pilot Devices

We carry a full line of 30 mm metal NEMA pilot devices that offer you a large selection of pushbuttons, selector switches and indicating lights.

- Flush, extended, illuminated or non-illuminated, mushroom and guarded pushbuttons, many available in seven colors
- Pilot lights and push-to-test models in seven colors
- Selector switches in knob or lever versions
- NEMA 1, 2, 3, 3R, 4, 4X, 12 and 13 rated



Fuji 30 mm Pilot Devices

These Fuji Command pushbuttons feature **65mm diameter plastic operators** and mount in a standard 30.5mm hole.

- All mushroom switches include operator, support base and contact block(s)
- All colors are available with N.O. & N.C. contacts or 1 N.O. contact, except Red which is available with 1 N.C. contact
- Contact blocks can be arranged up to four deep by two wide
 - Starting at \$20.50



Single and Double Foot Switches with ABS Plastic or Die-Cast Aluminum Foot Guards

- **Free movement, momentary actuating pedal:**
Freely moving pedal - contact position follows pedal movement; actuated when the pedal is pushed down, released when pedal is released.
- **Safety anti trip, free movement, momentary actuating pedal:**
Operator must insert foot, pushing lever forward to actuate pedal. Then, same operation as free movement.
- **Free movement, maintained actuating pedal**
- **Starting at \$39.50**



Stacklights



WERMA modular stack lights, beacons, and buzzers

- Signal elements in common voltages (24V DC and 115V AC)
- Modular system
- 5 colors available
- Wide range of visual and audible elements



Eaton Cutler-Hammer Pre-Assembled Stack Light Units

- Two-unit incandescent or LED light stack, green/red, in 24 V or 120 VAC/VDC
- Three-unit incandescent or LED light stack, green/amber/red, in 24 V or 120 VAC/VDC

Eaton Cutler-Hammer Stack Light Components

- Use various stack light components to create units



www.automationdirect.com/stacklights

Power Products

www.automationdirect.com/dc-power-supplies



RHINO series switching DC power supplies start at \$17.75

- PSM metal series (12 and 24VDC), DIN rail mount, power ratings from 78W to 600W, up to 25A output current; 115/230 VAC universal input
- PSP Series - Plastic slim-line case, DIN rail mount; 5, 12 and 24 V DC models
- PS Series - Metal case, DIN rail mount; 12 and 24 VDC models
- PSC Series - NEC Class 2, DIN rail mount; 5, 12, 24 VDC models
- PSS Series - Low cost, panel mount, 12 and 24 VDC models
- PSB Series - Low cost, 12 and 24 VDC, single or three phase input
- PSE Series - Encapsulated power supplies; DIN or panel mount; 5, 12, 15, 24 VDC single output, +/-12 and +/-15 VDC dual output models
- FA Series - Open-frame, DIN rail mount, 24 VDC output

RHINO DC to DC Converters

starting at \$76.50

PSP Series - Wide input ranges of 9.5 to 18VDC and 18 to 75VDC for operation with all popular DC supply voltage systems. Offering 5, 12 and 24 VDC adjustable output ranges. Overload and short circuit protection included.

FA-DCDC-1 - Isolated ±10VDC, ±5VDC multiple outputs. 12-24VDC input voltage range.



www.automationdirect.com/dc-converters

Transformers start at \$37.50



HPS Fortress™ Encapsulated Transformers

- Industry standard sizes
- 10 year warranty
- NEMA 3R rated commercial wall-mounted encapsulated transformer
- Sizes range from 100VA to 25kVA
- Input voltage ranges - 208 to 480 VAC
- Output voltages of 240 and 120 VAC



Jefferson Electric Buck-Boost Transformer

- Ratings: Single-phase from 50VA to 2kVA; 60 Hz
- Encapsulated with electrical grade resin
- Cores of high-quality electrical steel
- Aluminum/copper windings
- NEMA 3R rated commercial wall-mounted enclosure
- 10-year limited warranty (limited to mfg. defects)

HPS Imperator™ Compact Control Transformers

- MQMJ Series** - 480x240 VAC to 240x120 VAC
- MGJ Series** - 380x277x208 VAC to 240x120 VAC
- PG Series** - 240x120 VAC to 24x12 VAC
- MLI Series** - 480x240 VAC to 120x25 VAC



www.automationdirect.com/power-transformers



Cutler-Hammer powerline filters starting at \$180.00

The Automation Powerline Filter (APF) is a high-performance surge filter designed to protect electronic loads from surges, transients and noise. The APF diverts these disturbances away from the load with a low impedance path to ground.

This compact unit is ideal for PLCs, industrial PCs, robotics and other automation equipment.

- 120 or 230 VAC input single phase
- 1 to 5 amps
- Filter bandwidth 10 kHz to 50 mHz
- Five-year warranty

www.automationdirect.com/powerfilter

Circuit Protection



Fuji Electric UL489 Rated Compact Molded Case Circuit Breakers

- Suitable for branch and feeder circuit protection
- 5 frame sizes, rated current of 15 to 800A, max 600V
- Small size saves panel space

3P Series Molded Case Circuit Breakers for branch and feeder circuit protection

- G, F, K and L frame sizes, from 15 to 600 amps
- High-speed "blow-open" action
- UL489 listing



Manufactured by Eaton Corporation

starting at:
\$179.00

www.automationdirect.com/mccb



Edison current-limiting and dual-element fuses

- Class CC for lighting and heating loads, small motor circuits
- Class J for inductive loads, including motor and motor branch circuits
- High-speed Class J (JHL) offers fast response in a small package for protecting drives
- Class RK1 and Class RK5 for AC power distribution, lighting

Edison time-delay and fast-acting general purpose fuses

- For control and electronic needs
- Small dimension glass and ceramic fuses ideal for protecting circuits such as PLC outputs and pilot lights
- Class M Midget fuses for supplemental protection of transformers, solenoids; motor branch circuit protection
- Extremely fast-acting Class T fuses (TJN, TJS) are ideal as the main fuse protection for panel boards, load centers, meter stacks, and AC drives.

Fuse holders available in single or multi-packs for convenience

www.automationdirect.com/fuses



WMZT miniature circuit breakers meet UL 489 requirements to protect feeder, branch and control circuits



- 1, 2 and 3-pole models
- C and D trip curves
- Break from 0.5 to 40 amps, starting at \$17.50

www.automationdirect.com/mini-circuit-breakers



WMZS series supplementary protectors protect against short circuits and overloads starting at \$8.75

- 1, 2 and 3-pole models
- UL 1077 recognized
- B, C, and D trip curves
- Full line of accessories

www.automationdirect.com/supp-protectors



Ferraz Shawmut heavy-duty fusable and non-fusable UL disconnect switches



- SIRCO non-fusable disconnect switches are available up to 800 amp ratings, starting at \$83.00
- FUSERBLOC series of fusable disconnects start at \$123.00, break up to 200 amps; use with class CC or J fuses
- UL, CSA, CE, and IEC rated
- Accessories include handles and shafts, terminal lugs and shrouds, auxiliary contacts
- NFPA79 options available

www.automationdirect.com/disconnect-switches

Gladiator Series UL 98 and UL 508 Rated Fusible Disconnect Switches



- UL 98 version, Class CC fuse, 30A, DIN rail mount
- UL 508 version, Midget class fuse, 30A, DIN rail mount
- 1, 2 and 3-pole models
- Provide open fuse indication for faster troubleshooting and reduced downtime
- Lockout / Tagout capability and finger safe construction

- Positive visible circuit isolation via the disconnect switch
- Uses only 1/3 the space of a molded circuit breaker and 2/3 the space of a traditional fusible switch
- Starting at \$18.00

CHECK OUT OUR PRICES

Enclosures	AutomationDirect Hubbell/Wiegmann Price/Part Number	VS.	Hoffman Price/Part Number
NEMA 1 wall mount 24 x 24 x 08"	\$181.00 N1C242408LP		\$366.01 A-24N24BLP
NEMA 12 wall mount 20 x 16 x 08"	\$246.00 N12201608		\$608.74 A-201608LP
NEMA 12 free-standing mount 60 x 60 x 12"	\$1,588.00 N12606012		\$2,012.99 A-606012LP
NEMA 4 wall mount 20 x 20 x 06"	\$318.00 N4202006		\$789.76 A-20H20ALP
NEMA 4X wall mount 20 x 20 x 06"	\$749.00 SSN4202006		\$1,938.31 A-20H2006SSLP
NEMA 4/12 wall mount 36 x 24 x 08"	\$315.00 N412362408C		\$470.17 C-S036248
3-hole 30 mm NEMA 12 pushbutton enclosure	\$55.00 PB3		\$134.11 E-3PB

*All prices are U.S. published prices. AutomationDirect prices from October 2012 Price List. Hoffman prices are taken from www.newark.com 2/20/12. Prices may vary by dealer. Many other part numbers are available from all vendors.

Enclosures

Hubbell-Wiegmann, one of the largest enclosure manufacturers in North America, produces NEMA type enclosures designed to house and protect your valuable electrical components from harsh, dirty environments. We carry a wide array of their products:



- Over 1,500 part numbers
- NEMA 1, 3, 3R, 3S, 4, 4X, 6P, 12, and 4/12 types
- Wall-mount, floor-mount and free-standing
- Control enclosures, JIC boxes, wiring trough, pushbutton enclosures and operator consoles
- Metal and non-metal

www.automationdirect.com/enclosures



Enclosure Cooling

- Enclosure Air Conditioners
- Cooling Fans and Exhaust Grilles (WPF Series)
- Vortex Coolers (W7 Series)



Enclosure Heating and Climate Controls ... New!

- Enclosure Heaters (PTC Heaters)
- Setpoint Thermostats
- Humidistats (Hygrostats)



Enclosure Lights / Control Panel Lighting

- Enclosure Lighting (LED) ... New!
- Enclosure Lighting (Fluorescent)
- Enclosure Lighting Accessories

Enclosure Cooling, Heating, Lighting & Climate Controls

Disconnect Enclosures

We offer over 100 models of steel and stainless steel flanged enclosures for mounting disconnects. These enclosures are designed to house disconnects from AutomationDirect, Allen-Bradley, ABB Controls, Cutler-Hammer/ Westinghouse, General Electric, I-T-E and Square D.



Metal & Non-metal Enclosures

NEMA type enclosures house all kinds of electrical components from simple terminal blocks to industrial automation systems. Foamed-in-place gaskets, powder coating, and smooth plasma corner welding are product innovations that make Hubbell/Wiegmann enclosures a great value.

When environmental requirements dictate the use of non-metal enclosures, you'll find what you need among our Premier, Slimline, JIC, Pushbutton and Control series. Carbon steel, fiberglass, stainless steel and aluminum subpanels are available for most models.

Terminal Blocks and Wiring Solutions

Terminal Blocks



DINnectors DIN-rail mount terminal blocks are available in both screw-type and screwless spring-clamp styles at prices you'll love. DINnectors 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 DINnectors 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.

Standard Screw DIN Rail Terminal Blocks

- Thermocouple, plug-in and supplementary protector DINnectors
- 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

Buy just a little if you need...

Popular models available in smaller quantities - check price list or online



www.automationdirect.com/terminal-blocks

Power Distribution Blocks

We carry Edison finger-safe and open-style power distribution blocks for your power distribution needs.

- SCCR ratings up to 200kA
- Meets UL 1939

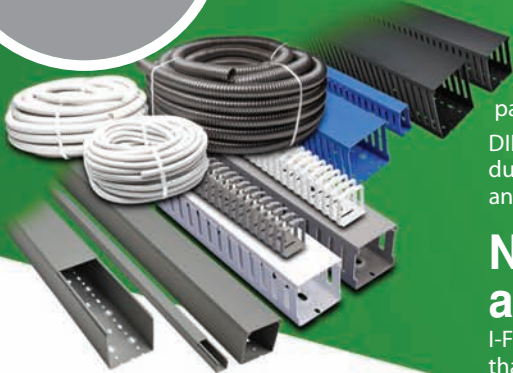


Wire duct in wide range of sizes in both single and convenience packs

Wire Duct

AUTOMATIONDIRECT offers rigid wiring duct in a variety of sizes and styles for all your panel wiring needs.

DINOSAUR flexible wiring duct can be bent and twisted without breaking. Wiring duct accessories include spiral wrap, braided sleeving, replacement rigid duct covers, and mounting and labeling accessories.



Non-metallic Liquid-tight Tubing and Connectors

I-Flex leak-proof, flexible electrical tubing can be used in extremely tight quarters, thanks to its flexibility. All models are available in light gray or black.

Hookup Wire

Available in 500 and 2,500 ft. reels / spools, AUTOMATIONDIRECT offers three insulation types of electrical hookup wiring for industrial applications.

Multiple wire sizes and colors are available:

- 10 to 18 gauge MTW
- 4 to 14 gauge THHN
- 16 and 18 gauge TFFN
- All in a variety of colors



www.automationdirect.com/wire

Cord and Connectors

Portable power cable and connectors can be used in a variety of industrial environments both indoors and outdoors.

- SJEOOW cable, 300V, 18 to 10 AWG
- SEOOW cable, 600V, 18 to 10 AWG
- W cable, 2kV, 8 AWG

Data Cables for RS-232/RS-422 and RS-485 applications

Wiring Devices: Straight blade and locking electrical plugs, connectors and receptacles; 15, 20, 30 amp devices, watertight devices, field wireable connectors, wiring cord grips, plus much more



www.automationdirect.com/wiring-devices

Wiring and Tools

www.automationdirect.com/wiring

ZIPport Multi-Wire Connectors, 3 to 108 Terminals



Multi-Wire connectors make it possible to easily connect signal, power, and data connections. These heavy-duty connectors provide a secure, simple and time-saving assembly of machinery and facilities.



- Available in 3A, 6B, 10B, 16B and 24B Rectangular Connector Sizes
- Heavy duty metal (die cast aluminum) or thermoplastic housings
- Single and double locking systems
- Screw termination or crimp termination inserts
- UL and CE approvals, NEMA certified
- Multi-Pole connector accessories (NPT adapters, plugs, cable glands, DIN-rail mounting kit, crimp tools)

ZIPport Multi-port Interconnection Junction Blocks

- Four, six and eight-pole port configurations
- Choice of one or two I/O per port
- Standard M12-style cable connections
- IP67, UL, RoHS
- Reduces wiring errors
- Saves time and space
- Reduces installation cost
- Starting at \$40.50



ZIPport Panel Interface Connectors

ZIPport™ panel interface connectors (PICs) are pass-through units that mount to the outside of electrical control panels containing PLCs or other programmable devices. Using PICs allow access to those devices without the risks of working with an open electrical panel.

starting at:
\$42.50
No Outlet /
Comm Ports Only
(ZP-PNA-06-100)



- Aluminum housing with gasket
- Over 30 configurations
- Single, duplex, or GFCI power outlets plus communication ports
- Communication connectors available include D-sub, RJ45, RJ12, Ethernet and Allen-Bradley Data Highway
- NEMA and UL rated; RoHS compliant

Hole Saws



Hole Cutting Tools



www.automationdirect.com/tools

starting at:
\$4.00
Pack of 10



Jobber-length Drill Bits

starting at:
\$21.00



Knockout punches

starting at:
\$15.00



Split point/ step drill bits

starting at:
\$6.50



Machine taps



Wire Strip & Crimp Tools

Cable Ties

- Resistant to oils, grease, solvents and petroleum products
- We offer standard, lashing, releasable, mounting head, and UV-resistant cable ties; identification tags, cable tie mounts, and cable tie hand tools

starting at:
\$1.75

BM-B1025 100/pack



www.automationdirect.com/cable-ties

Screwdrivers & Torque Tools

Wera top quality at an AUTOMATIONDIRECT price!

Wera is one of the world's leading manufacturers of screwdriving tools.

They are known for their attention to quality, ease of use, and a safety-friendly design.

They know you want to get the job done without having to fight your own tools for a good grip or tight hold.

AutomationDirect sells Wera tools in North America, bringing you quality tools at incredible prices.

Sets starting at: **\$29.50**



Single piece starting at: **\$3.50**

Limited Lifetime Warranty on screwdrivers

Hex Keys: 13-Piece hex key set with holder includes inch sizes from 0.05 inch to 3/8 inch. Nine-piece metric hex key set includes sizes from 1.5mm to 10mm, with holder.

Insulated Screwdrivers: Each insulated screwdriver is tested for safe operation up to 1,000 volts.

Standard Screwdrivers: Handle markings include a screw symbol and the size of the tip to easily find the right screwdriver. Lasertip laser treatment creates a microrough surface on the tip of the blade.

Bit Drivers and Screwdriver Bits: Bit drivers and bits are designed for demanding applications, are extremely durable and are able to transfer high torque loads.

Torque Tools: Torque tools permit controlled tightening to prevent damage to screws and work pieces.

Miniature Screwdrivers: The hand support on the easy-turning cap and the fast-turning zone below the cap accelerate the screw driving process.



Pneumatics - order today, install tomorrow!

Great prices and same-day shipping - the pneumatic parts you need, when you need them!

Pneumatic Directional Control Valves and accessories

NITRA™ 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.

- AVP Series 3-Port, 2-Position, Body Ported / Stacking Solenoid Air Valves
- AVS-3 Series 3-Port, 2-Position, Body Ported Solenoid Air Valves
- AVS-5 Series 5-Port, 2-Position, Body Ported / Manifold Solenoid Valves
- AVS-5 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



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

NITRA™ 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 NITRA pneumatic filters, regulators and lubricators (using modular assembly brackets purchased separately).

- AF Series Filters
- AR Series Regulators
- AL Series Lubricators
- AFR Series Combination Filter and Regulators
- ARV Series Manual Shut-off Pressure Relief Valves
- Pneumatic Air Preparation (FRL) Accessories

Pneumatic Air Cylinders and Position Switches

A-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 NITRA A-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 in North America construction.

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

NEW! Mounting options and harsh-environment duty sensors are now available.

C-Series compact pneumatic air cylinders

This series of compact stainless steel round body cylinders includes bore sizes from 9/16" to 3" and stroke lengths from 1/4" to 4" that meet applications where space is a concern.

D-Series heavy duty air cylinders (NFPA) for abusive conditions

These heavy duty cylinders combine NFPA interchangeability and high quality components to offer excellent performance and long service life, even in the most severe conditions. Bore sizes range from 1 1/2" to 4" and stroke lengths from 1" to 24".



Polyurethane (PUR) Tubing



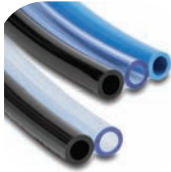
- Inch and metric tubing sizes available
- Six colors – black, blue, clear, red, yellow, and clear blue
- 100 foot and 500 foot package sizes
- Shore A 98 hardness
- Strong, flexible and kink resistant
- Made in the USA

Nylon 12 Tubing



- Inch and metric tubing sizes available
- Five colors – black, blue, natural, red and yellow
- 100 foot and 500 foot package sizes
- High working pressure and temperature/chemical resistance
- Made in the USA

Bonded Straight Polyurethane Tubing



- Inch and metric sizes available
- Contrasting colors
- Bonding process maintains tubing geometry
- 50-foot package size
- Shore A 98 hardness
- Strong, flexible and kink resistant
- Made in the USA

Polyurethane Coiled Tubing - Single and Bonded Multi-Tube



- Inch and metric sizes available
- Contrasting colors on double and triple coils
- Three working lengths for each size
- Shore A 98 hardness
- Strong, flexible and kink resistant
- Made in the USA

Polyurethane Coiled Hose



- 1/4" and 3/8" inside diameters
- 8, 12 and 16-foot working lengths
- Clear blue color
- Shore A 98 hardness
- Strong, flexible and kink resistant
- Made in the USA

Reinforced Polyurethane Hose



- 1/4" and 3/8" inside diameters
- 25 and 50-foot package lengths available
- Clear blue color
- Lighter weight compared to rubber hose
- Strong, flexible and kink resistant
- Made in the USA

Reinforced Polyurethane Coiled Hose



- 1/4" and 3/8" inside diameters and two fitting sizes available
- 8, 12, and 16-foot working lengths
- Clear blue color
- Shore A 85 hardness
- Strong, flexible and kink resistant
- Made in the USA

Pneumatic Air Blow Guns



- Maximum input pressure 120 psi
- Connection: 1/4 female NPT thread size on inlet (pocket model has 1/4" male industrial interchange quick-disconnect)
- 30-day return
- 12-month warranty

NITRA™
PNEUMATICS



CHECK OUT OUR PRICES

Pneumatics	AutomationDirect NITRA	US	McMaster-Carr	Grainger	MSC
Union Tee fitting, 1/4" OD tube	\$1.60 ¹ UT4		\$4.16 ² S111K51	\$3.02 ⁴ M20500400	
90-degree elbow, 1/4" OD x 1/8" NPT	\$1.25 ¹ ME14-18N		\$2.73 ² S111K21	\$2.09 ⁴ M24470418	
Polyurethane tubing, 6mm OD, black, 100 ft.	\$18.50 ¹ PUBMBLK100		\$26.00 ³ 50315K242	---	\$59.24 HUM-6-BLK-0100-P
Nylon tubing, 1/4" OD, black, 100 ft.	\$17.00 ¹ N14BLK100		\$56.00 ³ 5097T411	---	\$78.74 NB-4-035-0100-P

¹ Sold in 5-pack, price shown is per each ² Price per each, up to 9' ³ Sold by foot, price shown for 100 feet ⁴ Sold in 10-pack, price shown is per each
All prices are U.S. published prices. Many other part numbers are available from all vendors. AutomationDirect prices are from October 2012 Price List. McMaster-Carr prices are from www.mcmaster.com 2/20/12. Grainger prices are from www.grainger.com 2/20/12. MSC prices are from www.mscldirect.com 2/20/12. Prices subject to change without notice.

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



A superb line of machine safety devices ... at incredible prices!

www.automationdirect.com/safety



Safety Interlock Switches

These safety switches are developed and manufactured according to IEC and EN European standards for Type 4 machine safety/ OSHA machine guarding. **Prices start at \$13.00.**

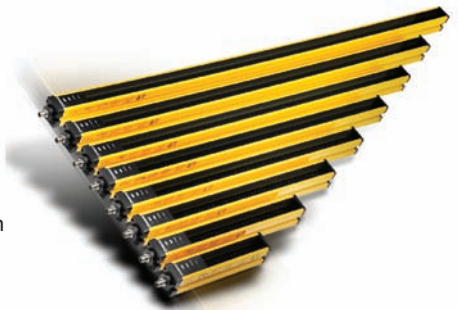
- SP2 Series - 30mm safety interlock switches with tongue keys, shaft hinge, or lever hinge
- SDM Series - 50mm safety interlock switches with tongue keys, shaft hinge, lever hinge or cable-pull
- SBM Series - 40mm safety interlock switches with tongue keys or cable-pull
- SCM Series - 60mm safety interlock switches with tongue keys or cable-pull
- AP2 Series - 30mm safety limit switches with pull button reset

Safety Light Curtains

AutomationDirect offers two series of safety light curtains; the YBB-14 series with 14mm resolution for finger protection, and the YBB-30 series with 30mm resolution for hand protection.

Prices start at \$582.00 for a sender/receiver pair.

- YBB-14 Series - Safety light curtain with 14mm resolution - Finger Safe protection
- YBB-30 Series - Safety light curtain with 30mm resolution - Hand Safe protection



Safety Relays

These dependable relays are designed to protect people and machines in applications requiring safety interlocks and controls.

Prices start at \$88.00.



- Speed Monitor
- Standstill Monitor
- Single-channel E-Stop
- Dual-channel E-Stop/Safety Gate
- Dual-channel E-Stop/Safety Gate with Time Delay
- Two-hand Controllers
- Light Curtain Controllers
- **All Models:** cULus, RoHS, CE, TUV* approvals

*No TUV on BH5932 models

Warning: Machine safety products sold by AutomationDirect are Safety components only.

The purchaser/installer is solely responsible for the application of these components and ensuring all necessary steps have been taken to assure each application and use meets all performance and applicable safety requirements and/or local, national and/or international safety codes as required by the application. AutomationDirect cannot certify that our products used solely or in conjunction with other AutomationDirect or other vendors products will assure safety for any application.

Any person using or applying any safety products sold by AutomationDirect is responsible for learning the safety requirements for their individual application and applying them, and therefore assumes all risks, and accepts full and complete responsibility for the selection and suitability of the product for their respective application.

AutomationDirect does not provide design or consulting services, and cannot advise whether any specific application or use of our products would ensure compliance with the safety requirements for any application.

Protective Safety Gear

From general purpose working gloves to puncture, cut and impact protection; with sizes ranging from extra small to extra-extra large, the selection of safety protective gloves includes:

- General purpose work gloves
- Anti-static, pre-washed white seamless nylon knit
- Puncture and cut resistant gloves
- Puncture resistant with metacarpal and knuckle padding for impact protection
- Cut resistant knit, polyurethane-coated or black nitrile rubber-coated gloves
- Arc flash-rated, cut resistant, full leather gloves
- Mechanics style, cowhide leather palm glove with black knit back

starting at: **\$7.00**
TTP-NYPU-6 for a package of 6 pair



AUTOMATIONDIRECT's safety glasses from Crossfire Safety Eyewear combine required eye protection and comfortable fit in a lightweight non-industrial look.

Every style meets American National Standards Institute (ANSI) requirements, and is marked with the ANSI Z87 2010 markings to meet the requirements of the industrial workplace.

- Safety Glasses
- Polarized Safety Glasses
- Safety Glasses with Foam Lining
- ES5 Series Reading Safety Glasses
- OG3 Series Over-the-Glasses (OTG) Safety Glasses

starting at: **\$2.75**
a pair*

*multi-packs also available





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2012 Fall Product Summary

Over 12,000 high-quality industrial automation products



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Controllers & I/O**



Universal Field I/O



Software



Operator Interface



**AC Drives and
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**Motors and
Motor Controls**



Motion Control



Safety



Pneumatics



Process



Relays and Timers



Sensors



**Pushbuttons,
Switches and Lights**



**Terminal Blocks
and Wiring**



**Communications
and I/O Wiring**



Communications



Power Products



Enclosures



Circuit Protection



Tools