AUTOMATIONDIRECT.com

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Complete up-to-date downloadable pricelist is always available online.

- Use bookmarks to easily navigate and find products, search, print or e-mail
- Click on part #s to link directly to our online store for pricing, specs, up-to-the-minute stocking information and more

http://www.automationdirect.com/pricelist

It's all online 24/7 at our main Web site.

You can purchase products, get specs, compare prices, get a product overview or deep product info, watch product videos, or ask a question in our customer forum and much, much more . . .

http://www.automationdirect.com

"Very, very thorough site; one of the best industrial sites we've reviewed"
IEN magazine March 2009

What makes us the #1 Value in Automation?

In addition to great products with great pricing you get:

- **FREE** Shipping on orders over $300**
- **FREE** #1 Voted Technical Support
- **FREE** Product Manuals (download)
- **FREE** Software on select products
- 30-day money-back guarantee on most products
- **Order today, ships today** on most products - if ordered before 6pm ET.

* by readers of Control Design magazine, in multiple product categories

* * See Web site for details

www.automationdirect.com | 1-800-633-0405

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

This Spring 2012 Product Summary 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 CD, 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 April 18, 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 Summary?

NEW!
Volume 14

Look for this cover

NEW products added in just the last 6 months! (since October 2011)

- SR33 Basic Soft Starters
- Digital Pressure Transmitters
- Pressure Gauges
- Thermometers

- WERMA Stack Lights
- Stride Managed Ethernet Switches
- Jefferson Buck Boost Transformers
- More NITRA Tubing and Fittings

- NITRA Air Couplings and Plugs
- NITRA Blow Guns
- Crossfire Safety Eyewear
- More relays

And remember - you can get FREE 2-day (or better) delivery on orders over $300!
(see Volume 14 catalog or Web site 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 $300, 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 PLC*Direct*, our number one objective has been to deliver quality products at a practical price. We try extra hard, especially during these tough economic times when many companies are faced with tighter operating budgets.

Our customers recognize that by using a good product at a great price, taking advantage of #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 catalog or online for exclusions.)* If you're not satisfied for any reason, return your purchase within 30 days of the ship date.

VOTED #1 Best in SERVICE 11 YEARS 2001 - 2011

Sales and service just north of Atlanta, GA USA

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

A sampling of awards we've received over in just over the last decade

PAC features at a PLC price!

TOP 10 Hardware Highlights

- High-performance CPU with **50Mb memory**, fast scan time
- **Modular** rack-based footprint with 36 discrete and analog I/O option modules, up to 115K+ I/O
- Unmatched **built-in communications** capabilities, including local and remote I/O ports and networking
- Integrated 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**

and a two-year warranty to boot!

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

USB Programming Port

Ethernet Network Port

Ethernet remote I/O

USB Data port

LCD aids troubleshooting

STATION 32
SCHEDULED
LOCK-OUT
FOR MAINT.

P3-550 CPU

MENU   ESC

SEL   ENT

The built-in display can show system alarms and information, or it can be configured to display user-defined messages with instructions triggered by the program.

Serial ports for master/slave or custom device connections

One RS232 and one RS485 serial port both support Modbus or ASCII protocols to connect to other controllers or peripherals.

USB local I/O expansion

Connect up to four additional I/O bases from the USB local expansion port.

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.

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 down-time.

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

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.

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.

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.

Expand the possibilities . . .

Universal Field I/O

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

Terminator I/O features:

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

Network interfaces available:

- Profibus
- DeviceNet
- Ethernet 10 MBit or 100 MBit
- Modbus RTU
- Koyo Remote I/O

Use Terminator I/O for:

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

Network interfaces starting at $184.00

I/O modules starting at $69.00

www.automationdirect.com/fieldio

PC-based control with Think & Do

Version 8

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 *Direct*SOFT Nicknames and Descriptions

Identifies each PLC node and memory usage

Detailed real-time diagnostic window for easy troubleshooting

Setup wizard for Automatic Tag generation

KEP*Direct* OPC Data Server for Windows

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

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

Software and manual are DOWNLOAD ONLY.

AUTOMATIONDIRECT.com

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.

CONTROL ENGINEERING

2012 ENGINEERS' CHOICE AWARDS

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-T6CL-R)

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

Touch panels at a text panel price!

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

Serial protocols supported

C-more micro

- AutomationDirect CLICK (Modbus)
- DirectLOGIC K-sequence, DirectLOGIC DirectNET, DirectLOGIC Modbus (Koyo Addressing)
- Modbus RTU
- Entivity Modbus RTU
- Allen-Bradley DF1 Full Duplex
- Allen-Bradley DF1 Half Duplex
- Allen-Bradley PLC5 DF1
- Allen-Bradley DH485

- Omron Host Link (C200 Adapter, C500),
- Omron FINS serial (CJ1, CS1),
- GE SNPX (90/30, 90/70, VersaMax Micro and Micro 90)
- Mitsubishi Melsec FX
- Mitsubishi Q and QnA
- Siemens PPI

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

atlas

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

New! 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
- $_{C}UL_{US}$ 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 communciations and make drive net work 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

STELLAR® soft starter

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

IRONHORSE®

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

- ₍c₎CSA₍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, 208-230/460 Volt 0.33 to 2 hp, TEFC enclosure**
- 1800 or 3600 RPM, electrically reversible
- Removable bolt on - bolt off base
- Industrial gauge steel motor frame and base
- Class F insulation

Two-year Warranty

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)

IRONHORSE®

Inverter-duty motors up to 100 hp

MARATHON ELECTRIC

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

Fe **Fuji Electric**
e-Front runners

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

CHECK OUT OUR PRICES

Motor Controls	AutomationDirect Fuji	VS.	Allen-Bradley	ABB
9 Amp Contactor	**$13.75** SC-E02-110VAC		**$94.94** * 100-C09D10	**$69.58** * A9-30-10-84
40 Amp Contactor	**$48.75** SC-E2-110VAC		**$212.10** 100-C37D00	**$264.92** * A40-30-10-84
10 Amp Motor Starter	**$49.00** BM3RHB-010		**$209.07** 140M-C2E-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 April 2012 Price List. Allen-Bradley prices taken from www.rockwellautomation.com/en/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.

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 $336.00 U.S. (180 amp contactor)

EATON
We also carry EATON Freedom series contactors and starters

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 $13.75 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.

BRYANT

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

prosense®

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

AC servo systems start under $1,000

The *Sure*Servo 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 *Sure*Servo drive.

Simple communications
Built-in Modbus RTU protocol

Two-year warranty

- Eight standard systems from 100 W to 3 kW
- Use with *Direct*LOGIC 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

Agency Approvals for Systems:

2-Phase Microstepping Drives

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 TLY-A130T-HK62AA
Breakout Board Kit for CN1 Control Interface	$94.00 ASD-BM-50A		$211.09 2090-U3BK-D4401
10' Motor Feedback Cable	$50.00 SVC-EFL-010		$83.22 2090-CFBM6DF-CBAA03
10' Motor Power Cable	$29.50 SVC-PFL-010		$93.62 2090-CPBM6DF-16AA03
Configuration Software	FREE SV-PRO*		$78.07 2098-UWCPRG
Complete 1-axis 100W System	**$986.50**		**$2,052.71**

*SureServo Pro software is FREE when downloaded and is also available for $9 on a CD

All prices are U.S. list prices. AutomationDirect prices are from April 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.

20-foot extension cable with locking connector

NEMA 17, 23 and 34 mounting flanges

NEMA Stepper Motors

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

High-performance Stepper Systems

The *Sure*Step 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)

Stepper Motor Power Supplies

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

Screw terminal AC Input and DC output connections

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

5 VDC ±5% at 500 mA regulated logic power

Power ON LEDs

Input and Output Fuses

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

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 120V AC 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)

Order Today, Get it Tomorrow

starting at:
$90.00

money-back **30 day** guarantee

SOLO

Signal Conditioners

The FC series signal conditioners are purpose-built units for converting process, temperature and other electrical signals into voltage or current signals for transmission or input to a PLC.

The FC series signal conditioners offer 1500V isolation between the input and output to help eliminate electrical noise. Features include easily accessible potentiometer adjustment of the output span and offset, (with the exception of FC-33), slim DIN rail or side-mount cases and removable terminal blocks.

Universal signal conditioners provide isolation and accept milliamps, volts, RTD, thermocouple or potentiometer inputs. The 884114 and 884116 models are DIN rail or wall mount and accept a removable configuration/display module.

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

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 hazardouse location, socket-mount, DIN-rail mount and panel-mount styles.
- All relays feature LED indicators for easy troubleshooting.

Timers include miniature, multi-mode, and digital models.

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 (PY/ PD1 Series)
- 8mm round (AE / PEW Series)
- 12mm round (AM/ VM1/ PMW/ PBM Series)
- 12mm round IP69K (PFM1 Series)
- 18mm round (AK/ VK1/ PKW/ PBK Series)
- 18mm round IP69K (VFK1/ PFK1 Series)
- 30mm round (AT/ VT1/ PTW/ PBT Series)
- 30mm round IP69K (VFT1/ PFT1 Series)
- Rectangular (CR/ DR/ APS / LF40 Series)
- Cables & Accessories

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

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

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: **$160.⁰⁰**

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 (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

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Sensors

starting at:
$12.⁰⁰

AcuAMP AC and DC Current Sensors

RCUAMP

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**

www.automationdirect.com/current-sensors

www.automationdirect.com/temp-sensors

proSense®

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

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

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 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.

www.automationdirect.com/pressure-sensors

Pilot Devices

www.automationdirect.com/pushbuttons-lights

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.

starting at: $4.⁷⁵

- 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

Cutler-Hammer 30 mm Pilot Devices

starting at: $13.⁵⁰

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 $19.00

Foot Switches

- **Free movement:** contact position follows pedal movement; actuated when the pedal is pushed down, released when pedal is in state of rest.
- **Foot switch locked in neutral position:** same operation as above, after unlocking the pedal with the foot.
- **Starting at $39.50**

Stacklights

WERMA modular stack lights

- Signal elements in common voltages (24V DC and 115V AC)
- Modular system
- 70 and 50mm diameters
- 5 colors available
- Wide range of 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

AUTOMATIONDIRECT.com

Power Products

www.automationdirect.com/dc-power-supplies

RHINO series switching DC power supplies start at $20.00

- 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 to18VDC 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

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Circuit Protection

Fe Fuji Electric
e-Front runners

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:
$166.00

www.automationdirect.com/mccb

Edison

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

Fuse holders available in single or multi-packs for convenience

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
- Extremley fast-acting Class T fuses (TJN, TJS) are ideal as the main fuse protection for panel boards, load centers, meter stacks, and AC drives.

www.automationdirect.com/fuses

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

Ferraz Shawmut

- SIRCO non-fusible disconnect switches are available up to 800 amp ratings, starting at $83.00
- FUSERBLOC series of fusible 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

Gladiator® *from AutomationDirect*

- 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

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

EATON

- 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

EATON

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

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 x12"	**$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-SD36248
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 April 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.

www.automationdirect.com/enclosures

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:

HUBBELL
WIEGMANN.

- 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

stratus
thermal management

Air Conditioning units for your enclosures

- For NEMA 12, 4, 4X type enclosures, starting at $1,178.00
- Digital temperature controller
- Active condensate evaporation system
- 1000 to 8000 BTU/H
- High unit efficiency
- Tough industrial construction
- Compressor protection system

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.

HUBBELL
WIEGMANN.

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

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

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

Buy just a little if you need…
Popular models available in smaller quantities - check price list or online.

Standard Screw DIN Rail Terminal Blocks

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

Screwless DIN Rail Terminal Blocks

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

www.automationdirect.com/terminal-blocks

Power Distribution Blocks

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

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

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.

- Type MTW is used in control cabinets, machine tool applications and appliance wiring applications.
- Type TFFN conductors are primarily used as fixture wire.
- Type THHN building wire is intended for general purpose 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 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
- **Bryant** straight blade and locking electrical plugs, connectors and receptacles; 15, 20, 30 amp devices

www.automationdirect.com/wiring-devices

Wiring and Tools

ZIPport Multi-Wire Connectors, 3 to 108 Terminals

ZIPport

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

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 the risks of working with an open electrical panel.

ZIPport

- 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

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

Hole Saws

Hole Cutting Tools

RUKO

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:
$2.⁰⁰
BM-B1025 100/pack

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

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 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 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

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

NITRA™ PNEUMATICS

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

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

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

CHECK OUT OUR PRICES

Pneumatics	AutomationDirect NITRA	vs.	McMaster-Carr	Grainger	MSC
Union Tee fitting, 1/4" OD tube	$1.60 [1] UT14		$4.16 [2] 5111K51	$3.02 [4] M20600400	
90-degree elbow, 1/4" OD x 1/8" NPT	$1.25 [1] ME14-18N		$2.73 [2] 5111K21	$2.09 [4] M24470418	
Polyurethane tubing, 6mm OD, black, 100 ft.	$18.50 PU6MBLK100		$26.00 [3] 50315K242	---	$59.24 [4] HUM-6-BLK-0100-P
Nylon tubing, 1/4" OD, black, 100 ft.	$17.00 N14BLK100		$56.00 [3] 5097T411	---	$78.74 [4] 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 April 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.mscdirect.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.**

- Emergency Stop Relays / Gate Safety Relays
- Time Delay Safety Relays

- Two-Hand Safety Control Relays
- Light Curtain Controllers

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 Eyewear

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

Crossfire is committed to providing excellence in technology and construction and 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. **Prices start at $2.75 for a single pair; multi-packs also available.**

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

CROSSFIRE
Z87+ PROTECTIVE EYEWEAR

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and mega-warehouse,
just north of
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11 YEARS

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30 day

FREE shipping - orders over $300

Keep it simple, pass along the value.

Saving you money every day since 1994 . . .

We were originally **founded as PLCDirect in 1994** and have grown from a tiny PLC company to one of the **best value choices in the industry**.

As the **first industrial controls company to successfully use a telephone supported direct sales catalog for PLC products,** we learned that "the way it's always been done" approach is not necessarily the most efficient way. So we worked smarter to develop in-house processes that maximized productivity to keep costs low. Then we passed those savings on to our customers.

In 1999, we changed our name to AutomationDirect.com, and brought that "pass along the value" philosophy online. We have been serving tens of thousands of satisfied customers ever since.

Whether the economy is up or down, we are prepared to serve our customers efficiently, with better service and   value than traditional suppliers.

. . . and always #1 rated service for FREE

OEMs spoke, and they spoke our name 11 years in a row! **The Reader's Choice survey hosted by Control Design magazine** aims to identify the best products and service in the industry. Results for every year going back to 2001 indicate we consistently provide top-notch support to our customers in several product categories.

And we've been voted tops in service by several other independent industry sources as well.

2011 Control Design magazine Readers' Choice Awards

IEN Web Reviews March 2009 Automation Direct: Overall Rating 94% "Very, very thorough site; one of the best industrial sites we've reviewed."

2010 Control Design magazine Readers' Choice Awards

2009 Control Design magazine Readers' Choice Awards

2008 Control Design magazine Readers' Choice Awards

IEN Best Brands Winners 2007

2007 Control Design magazine Readers' Choice Awards

2006 Control Design magazine Readers' Choice Awards

2006 Design News magazine Readers' Choice Awards

2005 Control Design magazine Readers' Choice Awards

2005 Control magazine Readers' Choice Awards

2004 Control Engineering's Editors' Choice Awards

2004 Control Readers' Choice Awards

2004 Control Design Readers' Choice Awards

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Programmable Controllers & I/O

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Software

Operator Interface

AC Drives and Soft Starters

Motors and Motor Controls

Motion Control

Safety Components

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Process

Relays and Timers

Sensors

Pushbuttons, Switches and Lights

Terminal Blocks and Wiring

Communications and I/O Wiring

Communications

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Tools