

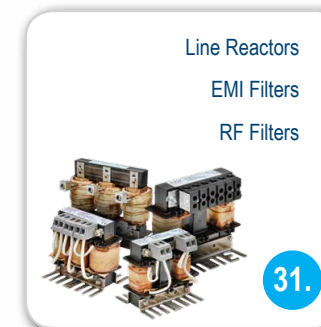
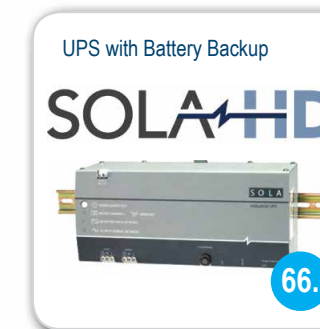
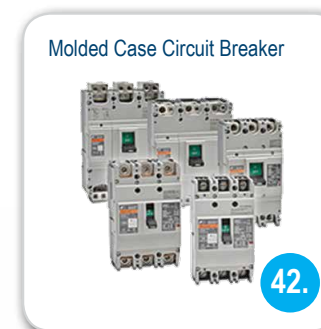
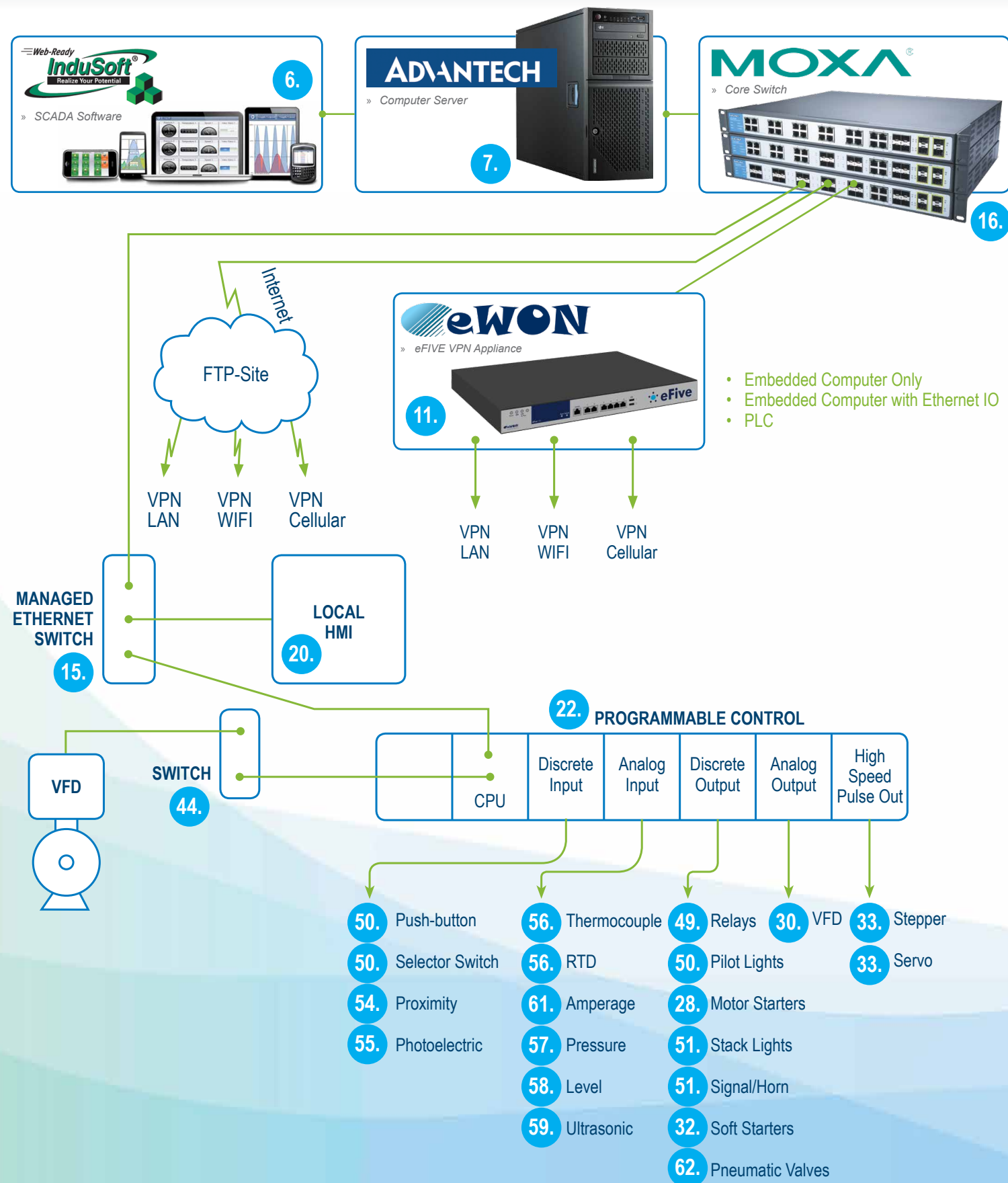
Quantum Automation

Best Value Guide

2014 - 2015

» Design your Networking & Control System

» Then, Develop a Power Budget for Electrical & Safety Products



Quantum Automation is a networking and controls distributor comprised of talented Electrical and Mechanical Engineers dedicated to understanding and delivering exactly what you need. Founded in 1991, Quantum Automation is the largest of four Value Added Resellers for AutomationDirect in America. We are also the largest distributor of Moxa networking products in America. Our other major product lines are: Advantech for industrial computers, IDEC for control products, and eWON for Remote Access Routers. Recognized for outstanding customer service, quality products, hands-on training, competitive prices, and over 30,000 Part numbers to choose from, it's no wonder thousands of OEMs, Systems Integrators, and End Users choose Quantum Automation as their #1 Value Added Reseller!

Reasons to use Quantum Automation

» Available

Our regular hours for orders and support are Monday through Friday 8am to 5pm PST. In an emergency situation we offer 24 hour technical support, will-call and emergency shipping.

» We make ordering easy:

- Phone: 714-854-0800 | Fax: 714-854-0803
- Partner Zone: www.QuantumAutomation.com
- E-mail: Sales@QuantumAutomation.com
- Will-call: 4400 East La Palma Ave, Anaheim, CA 92807

» Affordable

We offer the same price as AutomationDirect. For our other product lines, we negotiate with our vendors to offer our customers the lowest prices available. Since 1991, we have built our company on long term relationships and trust.

» Measurable

Our ISO9001:2008 Quality Policy is: "Quantum Automation is dedicated to providing the highest quality networking and control products available, on time, to the utility, petrochemical, food, maritime, water/wastewater, and related industrial industries. Customer satisfaction is achieved through employee efforts and commitment to comply with all specified requirements, and through continually improving the Quality Management System."



» Our Quality Objectives are:

- To provide order acknowledgements to our customers within one business day 98% of the time.
- To provide e-mailed/faxed invoices to customers within one business day after shipment 98% of the time.
- To achieve 92% of agreed upon on-time delivery of all products and services (FedEx/UPS guarantee 94%)
- To reduce Return Material Authorizations/Credits issued to less than 4% of total invoices per month including in warranty, 30 day money back guarantees, and any other reason.

» 30 Day Money Back Guarantee

Backed by our exceptional vendors, Quantum Automation is able to offer a 30 day money back guarantee on most AutomationDirect products and many non-custom products from our other key suppliers. Many of our products carry warranties greater than 1 year. Ask inside sales. They are knowledgeable and helpful.



» Knowledgeable

Since 1991 Quantum Automation has been servicing the automation & networking industry. We currently have four Applications Engineers and most of our Regional Sales Managers are Engineers.

» Training

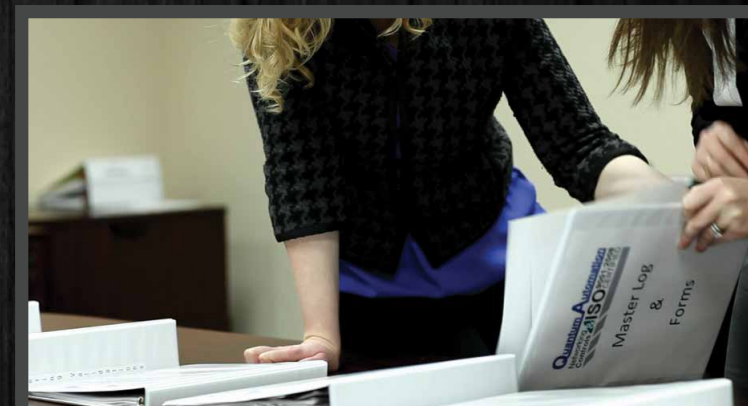
At our training facility in Southern California, we have training simulators, a systems based scripted demo room, and our engineers have written over 50 How-To TechCorner white pages. We also go to your facility. Our Regional Sales Managers do on-site demos and usually leave you with a demo script. We can provide on-site training that is specific for your application. If you need a local system integrator, we'll refer one to you. We can train you on PLCs, Operator Interfaces, Variable Speed Drives, Servo & Stepper applications, SCADA software, Redundant Managed Ethernet Rings, Cellular and WiFi, Video Surveillance systems, as well as Embedded Computers. We are well versed in C, C++ for your Linux applications.

» Custom Assemblies

Take advantage of Quantum Automation's fully integrated kitting and assembly services including custom labeling, bag and tag, cable and mechanical assembly, burning images on Solid State or Hard Drives, and much more.

» Product Availability

We provide free 2-day shipping for AutomationDirect products with invoices exceeding \$300 on most products. We stock a significant amount of the fastest moving items in Anaheim, California for all of our product lines.



InduSoft » SCADA Software

Development Software	Runtime Software	Drivers	Tags	SCADA/HMI for Desktop/Server
IND-32520-DEV	IND-32520-RT	5	32,000	Control Room Lite for small to mid-sized applications
IND-40520-DEV	IND-40520-RT	5	4,000	Operator Workstation Windows
IND-15520-DEV	IND-920NT-RT	3	1,500	Local Interface for Windows
	IND-15002NT-RT	1	150	Lite Interface for Windows
IND-USB-HK	IND-USB-HK-RT			Optional USB Hard Key

All have support for (1) Web Thin Client, (1) Secure Viewer Thin Client, and (1) SMA (Simple Mobile Access) Thin Client concurrently connected to the Runtime Server
Use Windows Desktop or Server for all the above

• Alarming	Real-time, historical, log data, use remote notification to send alarms to your inbox or smartphone
• Animation	Paste images, and even rotate them dynamically using custom rotation points.
• Database	Connect to any SQL database, or MS Access or Excel, and ERP/MES systems (including SAP)
• Drivers	Over 240 native communication drivers for PLCs, temp controllers, motion, bar code, etc...Can build your own!
• E-mail	Send e-mail to desktop computers, e-mail enabled phone, etc. Get info on alarms, PVs, & events. SSL encryption.
• Events	IWS v7.1 offers traceability for operator initiated actions or internal system activity.
• FDA Traceability	Take advantage of built-in functionality to create 21 CFR part 11 compliant projects with traceability and e-signatures.
• FTP	Automatically upload or download files during runtime to/from storage locations
• Graphics & Design Tools	Create screens - Combine built-in objects - Store graphics - Create consistent "look and feel"
• Historical Performance	Trend History Module - SQL Relational Database - Provide quick access to Statistical Process Control (SPC) values
• Intellectual Property Protection	Screens, documents, scripts, and worksheets can be individually password protected - Protect entire project.
• Multi-Language	Develop in one language and use translation tools to switch the runtime to any language - automatic font replacement
• .Net and ActiveX	Add functionality such as browsers, media players, charting, live streaming video from cameras
• OPC	OPC DA (Client/Server) - OPC.NET 3.0 (Client) - supports OPC XML as an additional add-on
• PDF Export	Send alarms, reports, or any file (including .doc or .txt) to a production supervisor, QC manager, or maintenance staff
• Recipes	Save time and maintain consistency by automating part parameters or production quantities with flexible recipe tools.
• Redundancy	IWS v7.1 supports web server, database, and overall system redundancy to protect your information
• Reports	Create clear, concise reports in plain text, RTF, XML, PDF, HTML, and CSV or integrate with MS Office Excel.
• Scalable	Develop once and deploy where you need it on any supported Microsoft Operating System - CE, Emb 7, Win7, Win8, Servers
• Scheduler	Schedule custom tag changes on date/time frequency, or any trigger - Can trigger reports, etc.
• Scripting	(2) scripting languages supported - built-in InduSoft Functions & VBScript - can be used simultaneously
• Security	Support for group and user accounts, e-signatures, and traceability, as well as ADAM Server + LDAP Servers
• Standards	Develop applications that are compatible with TCP/IP, .Net, ActiveX, OPC, ADO/ODBC, COM/DCOM, OLE, DDE, XML, SOAP, HTML
• SNMP	Easily configure managed networked devices on IP networks using the incorporated SNMP interface
• Symbols	Push Buttons, Pilot Lights, Tanks, Sliders, Meters, Motors, Pipes, Valves, and other common objects - Create your own!
• Tag Database	Object oriented database with Boolean, integer, real, strings, arrays, classes (structures), indirect tags and included system tags
• Thin Clients	Remotely view screens as web pages - Use Studio Mobile Access to monitor PVs/Alarms on tablets or smart phones
• Trends	Real-time and Historical trends are supported - Supports vertical and horizontal trending
• Troubleshooting	Debug/Verify projects using local and remote tools - status fields, DatabaseSpy and LogWin

Powerful HMI, SCADA and OEE/Dashboard Development Software designed for deployment anywhere



Advantech » Industrial Computers



The Quantum Automation/ Advantech Advantage

- 7 year long life support for the products
- 2 year standard warranty
- Up to 5 years extended warranty
- Industrial grade components
- Revision control
- Local technical support
- Assemble, test, burn-in
- System compatibility and functional validation

SCADA / NOC (Network Operating Center) Computers 2 year warranty with up to 5 years extended warranty, Industrial Grade Components, Revision Control, Local Technical Support Assembly, Test, Burn-In, System Compatibility and functional validation	
HPC7280-1	Advantech - 2U Rackmount Server, Mission Critical, Xeon 3.5GHz, 8M Cache, 4Core, 32GB RAM, (2) 2 TB 3.5" HD w/Raid1, (2) GB LAN (5) USB, (1) RS232, (1) VGA, (1) DVI-D, Windows Server 2008, Comes with (1+1) 800W PS - AC cord, 0 to 40°C
HPC7480-1	Advantech - Tower Server, Mission, Critical, Xeon 3.5GHz, 8M Cache, 4Core, 32GB RAM, (2) 2TB 3.5" HD w/Raid1, (2) GB LAN, (6) USB, (1) RS232, (1) VGA, (1) DVI-D, Windows Server 2008, Comes with 665W PS - AC cord, 0 to 40°C
UNO-2184G	Advantech - Fanless, Cableless, Panelmount, i7 2.2GHz, 8GB RAM, 160GB 2.5" SSD, (4) GB LAN, (6) USB, (2) RS232, (2) RS422, (1) DVI-I, (1) HDMI, (1) DP, Windows 7 Pro 32/64, Requires 24VDC, 40W, 2.0A Ext PS, -10 to 60°C
FPM-5152G-R2AE	Advantech - Door Mount Monitor, 15" XGA - 350 nit LCD w/Res TS, (1) USB Front & Rear accessible TS control, Requires 24VDC, 47W, 2.1A, Ext PS, 0 to 50°C
FPM03151SR-R3AE	Advantech - Sunlight Readable Door Mount Monitor, 15" XGA SR - 1000 nits LED w/Res TS, (1) VGA, (1) DVI-I + USB/RS232 combo for TS control, requires 24VDC, 57W, 2.4A Ext PS, -20 to 60°C
TPC-1571H	Advantech - Thin Client Touch Panel Computer, 15" XGA - 350 nit LED w/Res TS, ATOM 1.8GHz, 4G RAM, 160GB SSD, (2) GB LAN, (2) USB, (1) RS232, (1) RS422/485, Windows 7 Pro 32/64, Requires 24VDC, 50W, 2.3A Ext PS, 0-50°C

Moxa » Embedded Computers

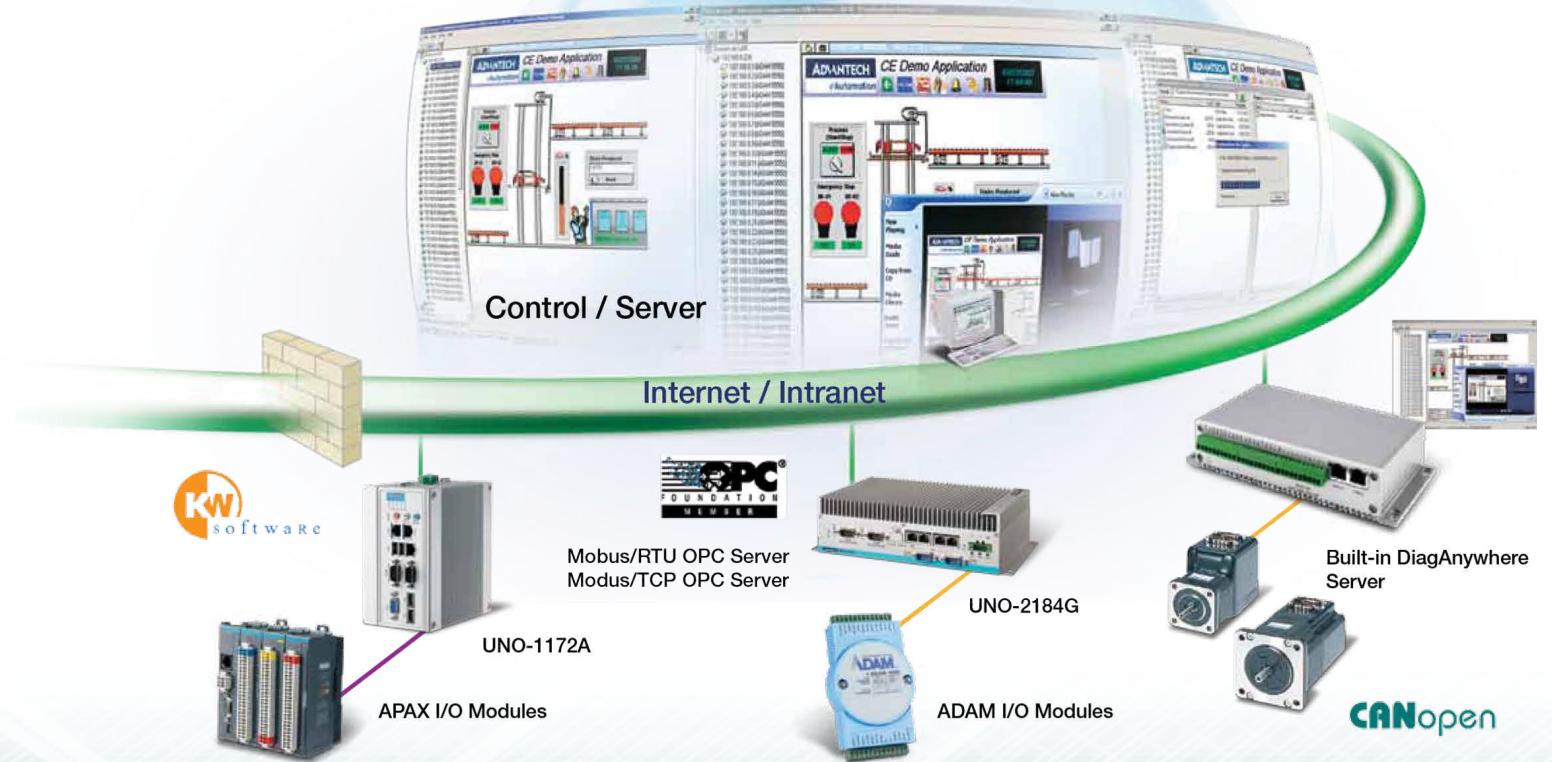


Part #	Description
DA-683-DPP-T-LX	x86 Rackmount Computer, 1.66GHz CPU, DVI-I, 6 Giga LANs, 2 UART, 4 DI + 4DO, (2) Exp Slots, CF, 4 USB, Dual Power, Linux (IEC-61850-3 certified)
DA-683-DPP-T-W7E	x86 Rackmount Computer, 1.66GHz CPU, DVI-I, 6 Giga LANs, 2 UART, 4 DI + 4DO, (2) Exp Slots, CF, 4 USB, Dual Power, (IEC-61850-3 certified) and Win Emb7
DA-683-DPP-T-XPE	x86 Rackmount Computer, 1.66GHz CPU, DVI-I, 6 Giga LANs, 2 UART, 4 DI + 4DO, (2) Exp Slots, CF, 4 USB, Dual Power, Win Emb Standard (IEC-61850-3 certified)
UC-8112-LX	RISC-base Embedded Computer, 1GHz CPU, Mini PCIe socket for cellular, (2) LAN, (2) Serial, 1GB SD, (1) USB, Debian ARM 7
UC-7124-T-CE	RISC Embedded Computer, (2) LANs, (4) Serial Ports, SD, USB, WinCE 5.0, Wide Temp
UC-8430-T-CE	RISC Embedded computer, (2) VGA, (8) serial ports, (4) DIs, (4) DOs, (3) LANs, (6) USB, CF, WinCE, -40 to 75°C
UC-8430-T-LX	RISC Embedded computer, (2) VGA, (8) serial ports, (4) DIs, (4) DOs, (3) LANs, (6) USB, CF, Linux OS, -40 to 75°C
V2400	WiFi 802.11n mPCIe module accessory package
V2402-CE	x86 Embedded Computer, VGA, DVI, (2) GB LANs, (4) COMs, (6) USB, (4) DI, (4) DO, CF, WinCE 6.0
V2402-T-LX	x86 Embedded computer, Intel Atom N270,VGA,DVI,Audio, (2) LANs, (4) serial port, (4) DIs, (4) DOs, (6) USB 2.0 ports,CF, Linux 2.6, -40 to 70°C
V2402-T-XPE	x86 Embedded computer, Intel Atom N270,VGA,DVI,Audio, (2) LANs, (4) serial port, (4) DIs, (4) DOs, (6) USB 2.0 ports, CF, Win Emb 2009, -40 to 70°C
V2426-T-LX	x86 Embedded Computer, Intel Atom N270, VGA, DVI-I, (2) LANs, (4) COMs, (3) USB, (6) DI, (2) DO, CF, (2) Exp Slots, Linux, -40 to 70°C
V2426-T-W7E	x86 Embedded computer, Intel Atom N270, VGA, DVI-I, Audio, (2) LANs, (4) serial ports, (6) DIs, (2) DOs, (3) USB 2.0 ports, CF, (2) Exp slots, Win Emb 7, -40 to 70°C (EN 50155 Class TX)
V2426-T-XPE	x86 Embedded Computer, Intel Atom N270, VGA, DVI-I, (2) LANs, (4) COMs, (3) USB, (6)DI, (2) DO, CF, (2) Exp Slots, WinXPe, -40 to 70°C
V468-CE	x86 Embedded Computer, AMD LX 800, VGA, (4) LANs, (4) Serial Ports, (8)DI, (8)DO, CF, USB, Audio, WinCE 6.0
V468-XPE	x86 ECDIS computer with IntelR Core i5 CPU processor, (4) serial ports, (12) NMEA ports, (2) GB LAN, (6) USB hosts, storage, VGA/DVI, and AC power input
W321-LX	RISC Wireless Embedded Computer with 802.11 b/g/n WLAN, (2) Serial Ports, (1) LAN, SD, Linux 2.6.38
W325A-LX	RISC Wireless Embedded Computer with GSM/GPRS, (2) serial port, (1) LAN, SD, Linux 2.6.38
W406-T-CE	RISC Wireless Embedded Computer, GSM/GPRS/EDGE, (4) DI, (4) DO, (2) Serial Ports, (1) LAN, SD, WinCE 6.0, Wide Temp
W406-T-LX	RISC Wireless Embedded Computer, GSM/GPRS/EDGE, (4) DI, (4) DO, (2) Serial Ports, (1) LAN, SD, Linux 2.6, Wide Temp
MC-4510-C23	x86 Compact and Extreme Computer with Intel Core 2 Duo 2.26GHz CPU processor, (2) GB LAN, (2) RS-232/422/485, CF, (2) SATA II, (6) USB, VGA, DVI-D, Audio I/O and PS/2
MC-5150-AC	x86 ECDIS computer with IntelR Core i5 CPU processor, (4) serial ports, (12) NMEA ports, (2) GB LAN, (6) USB hosts, storage, VGA/DVI, and AC power input
MC-5150-DC	x86 ECDIS computer with IntelR Core i5 CPU processor, (4) serial ports, (12) NMEA ports, (2) GB LAN, (6) USB hosts, storage, VGA/DVI, and DC power input
MC-5150-DC-CP	x86 Industrial computer with IntelR Core i5 CPU processor,(4) serial ports, (2) GB LAN, (6) USB hosts, storage, VGA/DVI, and DC power input
MC-5157-AC	x86 ECDIS computer, IntelR CoreR i5 CPU processor, (4) serial ports, (12) NMEA ports, (2) GB LAN, (6) USB hosts, storage, VGA/DVI, (2) PCI slots, AC power input
MC-5157-DC	x86 ECDIS computer, IntelR Core i5 CPU processor, (4) serial ports, (12) NMEA ports, (2) GB LAN, (6) USB hosts, storage, VGA/DVI, (2)PCI slots, and DC power input
MC-7130-MP	x86 Marine computer, IntelR Core i3 3120ME processor, (8) NMEA0183 ports, (4) serial ports, (4) GB LAN, (6) USB 2.0, (3) USB 3.0, (2) PCI, (1) gen 3 PCI-e x16 slots
MD-119-X1	19 marine display with 4:3 aspect ratio, LED backlighting, Multi-Power supply (AC/DC), Tape Bonding
MD-124X	24 marine display with 16:9 aspect ratio, Full HD (1920x1080), LED backlighting, Multi-Power supply (AC/DC), Tape Bonding
MD-124Y	24 marine display with 16:9 aspect ratio, Full HD (1920x1080), LED backlighting, Multi-Power supply (AC/DC), Optical Bonding.
MD-124Z	24 marine display with 16:9 aspect ratio, Full HD (1920x1080), LED backlighting, Multi-Power supply (AC/DC), with Touch.

Advantech » Embedded Computers

Advantech DiagAnywhere Utility Remote Management Software

- Monitoring & Control
- Screen Snapshot
- Screen Recording
- File Upload & Download
- Device Grouping



UNO-1100 Series - DIN-rail PC, Front I/O Accessible, Fanless, and no moving parts for Harsh Environments Battery-backup SRAM saves process data in the event of a power failure	
UNO-1110	Advantech - TI Cortex AM3505, 256MB SDRAM, (1) VGA, (5) COM, (2) LAN, (1) mPCIe, (4) DI, (2) DO, (2) SD, 10-30VDC, -10 to 70°C
UNO-1170A-A12E	Advantech - Intel Atom N270, 1GB SDRAM, 512KB Battery backed SRAM, (1) VGA, (3)COM, (2) LAN (1) USB, (1) mPCIe, (1) 2.5" SSD, 10-36VDC, -10 to 60°C
UNO-1150GHE	Advantech - AMD LX800, 256MB SDRAM, (1) VGA, (3) COM, (2) LAN, (2) USB, (1) 2.5" SSD, (1) mPCIe, 10-36VDC, -10 to 60°C, C1D2
UNO-1172A-A33E	Advantech - Intel Atom D510 1.66GHz, 2GB SDRAM, 1GB Battery-Backed SRAM, (1) VGA, (2) COM, (3) GB LAN, (4) USB, (1) mPCIe, (1) 2.5" SSD, -10 to 65°C, C1D2
UNO-2100 Series - High-performance Automation Computers with Versatile Expansion, DIN-rail, Wallmount, and VESA-mount Support High Density Cableless I/Os (COMs, USBs, LANs) with shock resistance and optional isolation	
UNO-2173AF-A13E	Advantech - Intel Atom N270 1.6GHz, 2G RAM, (1) VGA, (3) COM, (2) GB LAN, (1) mPCIe, (1) 2.5" SSD, 9-36VDC, -20 to 70°C
UNO-2184G-D45E	Advantech - Intel Core i7, 2655LE, 2.2 GHz, 8 GB RAM, (1) DVI, (4) COM, (4) GB LAN, (6) USB, (2) mPCIe, (2) SSD, 9-36VDC, -10 to 60°C
LAN Redundancy, Fault-Protected RS-485, Dual HDD/SDD Support with RAID1, Daisy Chain for Ethernet, Non-Volatile RAM, iDoor Technology Intelligent Software - Advantech WebAccess, SISI Access-Remote Device Management, Panel Express (similar to WEB OP)	
UNO-2272G-E2AE	Advantech - Intel Atom E3827, 1.75GHz Dual Core, 2GB SDRAM, (1) RS-232, (1) GB LAN, SSD, (2) mPCIe slots, WES7, WES8, Linux, -20 to 60°C
UNO-2362G-T2AE	Advantech - AMD G-series T40E 1GHz Dual Core, 2GB SDRAM, (1) RS-232, (1) RS-422, (2) GB LAN, SSD, (2) mPCIe, WES7, WES8, Linux, -20 to 60°C
UNO-2483G-744AE	Advantech - Intel Core i7-4650U ULT 1.7GHz Dual Core, 8GB SDRAM, HDMI/VGA, (4) Serial, (4) GB LAN, (2) SSD, (3) mPCIe, WES7, WES8, Linux, -20 to 60°C
PCM-26D2CA-AE	Advantech - PCM iDoor, SJA1000 CANBus, CANOpen, via (2) DB9
PCM-27D24DI-AE	Advantech - PCM iDoor, (16) DI, (8) DO via (1) DB37 port more to come including EtherCAST, EtherNet/IP, ProfiBus, ProfiNET, PoE, 3G+ GSM, 802.11 Wifi, ZigBee

Moxa » Cellular Modems & Routers



MOXA
OnCell G3150-HSPA



MOXA
OnCell 5104-HSPA

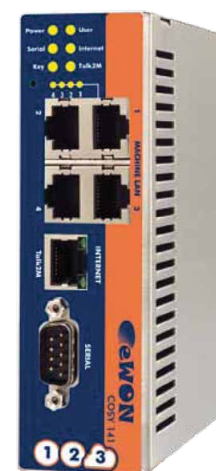


TRAB806/17103P

IP-based Cellular	Allows you to communicate with serial and Ethernet devices over a TCP/IP cellular network
OnCell G3150-HSPA	Moxa - Cellular IP Gateway - GSM/GPRS/EDGE/UMTS/HSPA+ - 14.4 Mbps upload - 5.76 Mbps download (1) 10/100 (RJ45) LAN Ethernet Port, (1) RS-232/422/485, 12-48VDC input power required (1) SIM (purchased separately) + (2) Digital Inputs & (1) Relay Output Industrial five-band HSPA high speed IP gateway with VPN
OnCell 5104-HSPA	Moxa - Cellular Router - GSM/GPRS/EDGE/UMTS/HSPA+ - 14.4 Mbps upload - 5.76 Mbps download (1) 10/100 (RJ45) WAN Ethernet Port + (4) 10/100 (RJ45) LAN Ethernet Ports, 12-48VDC input power required (2) SIM cards for redundancy (purchased separately) + (2) Digital Inputs & (1) Relay Output All in one - cellular router, firewall, & switch
TRAB806/17103P	Laird Technologies - 3dB Meg N P MN antenna - Black Phantom 806-960, 1575, 1710-2500MHz - top of enclosure
CA4NMSM002	L-com Technologies - 2 Foot Cable from the antenna connection on the Moxa or eWon to the Laird antenna
CA4NMSM010	L-com Technologies - 10 Foot Cable from the antenna connection on the Moxa or eWon to the Laird antenna
CM100-L	"Cellphone-Mate - Fiberglass Omnidirectional Antenna - 9dBi gain max Dramatically Increase Cell Phone Reception with an Omni-directional fiber glass Antenna CM100. The Cellphone-Mate 9dB gain fiberglass dual-band antenna works with all North American cellular providers. Comes with mounting equipment to allow antenna to mount to either a flat surface or a pole. Antenna has an N female connector and requires a 50 ohm cable (sold separately). Features excellent performance, easy to install for building or marine installations. Specifications Gain: 9dB 806-894MHz / 1850-1990MHz N female connector - Dimensions: 25" long x 3/4" diameter."
CA4NMSM020	L-com Technologies - 20 Foot cable - SMA-male to N-Male 240 series Assembly
Data Plan	Go Online or in the Store...Buy an AT&T SIM card... Activate a 5GB mobile hotspot data plan (call us for details)

eWON » Industrial Remote Connectivity Routers

DIN rail mount Routers	
EC51410	eWON - COSY - Industrial LAN to LAN secure Remote Access router - VPN Remote Access IP Router (WAN port) + 4 x 10/100Mb Ethernet + (1) DI + (1) DO + (1) RS232/422 port
EW26201	eWON - Industrial LAN to LAN secure Remote Access router - VPN Remote Access, Alarm Notification, & Scripting IP Router (WAN port) + 4 x 10/100Mb Ethernet + (1) DI + (1) DO + (1) RS232/422 port
EW46201	eWON - Industrial LAN to LAN secure Remote Access Router - VPN Remote Access, Alarm Notification, Scripting Historical Logging, Web HMI IP Router (WAN port) + 4 x 10/100Mb Ethernet + (1) DI + (1) DO + (1) RS232/422 port
VW20001	eWON - ViewON2 for HMI Editor SW to create animated web pages for EW46201
EW2620A	eWON - Industrial Cellular Remote Access Router w/GSM HSPA 3G+, Canned VPN Capabilities, Talk2M server to cloud. Operating Temperature rating from -20°C to + 70°C - does VPN Remote Access, Alarm Notification, & Scripting
eFive VPN Server	
When you have multiple eWons from above or Flexy's in the field and want to communicate efficiently to all of them	
E510101	eWON - eFive VPN server appliance for eWON extranets - up to 25 users - locate at Network Operating Center or SCADA Hub
E591101	eWON - eFive25 Gold Support Program 1 year
E593101	eWON - eFive25 Gold Support Program 3 years
Flexy Product Line	
Operating Temperature rating from -25°C to + 70°C - also has an SD Card for data logging and setup Alarm Management with notification (SMS, e-mail, FTP or SNMP trap) - Datalog up to 1,000,000 points	
Flexy Base Units	
Flexy20100	eWON - Flexy - Gateway, Router, VPN, (4) 10/100Mb Ethernet, (2) DI, (1) DO, SD card
Flexy20200	eWON - Flexy - Gateway, Router, VPN, (1) 10/100MB Ethernet, (4) 10/100Mb Ethernet, (1) RS232/422, (2) DI, (1) DO, SD card
Flexy20300	eWON - Flexy - Gateway, Router, VPN, (1) 10/100MB Ethernet, (1) Profibus/MPI Port - S7, (2) DI, (1) DO, SD Card
Flexy Extension Cards	
FLA3301	eWON - Flexy extension card (2) RS232/485 ports
FLA3501	eWON - Flexy extension card (1) Dialup V92 (56k)
FLB3202	eWON - Flexy extension card (1) 3G+ GSM modem
FLX3271	eWON - Flexy extension card (1) Wifi 802.11 b,g,n for client WAN
FLX3101	eWON - Flexy extension card (1) WAN Ethernet 10/100MB
FLX3401	eWON - Flexy extension card (8) DI, (4) AI, (2) DO
Cellular Antennas, Cables, Data Plan	
EW40922	eWON - 3G GSM <2dB omin directional 50 ohm antenna - SMA Male Reverse connector - 4" tall
TRAB806/17103P	Laird Technologies - 3dB Meg N P MN antenna - Black Phantom 806-960, 1575, 1710-2500MHz - mount on the top or side of enclosure
CM100-L	Cellphone-Mate - Fiberglass Omnidirectional Antenna - 9dBi gain max
CA-SMNM020	L-com Technologies - 20 Foot cable - SMA-male to N-Male 240 series Assembly
Data Plan	Go Online or in the Store... Buy an AT&T SIM card... Activate a 5GB mobile hotspot data plan (call us for details)



eWON COSY 141
Industrial VPN Router

eWON Flexy 200
Industrial M2M Router and Data Gateway



Cloud-based
Remote Connectivity

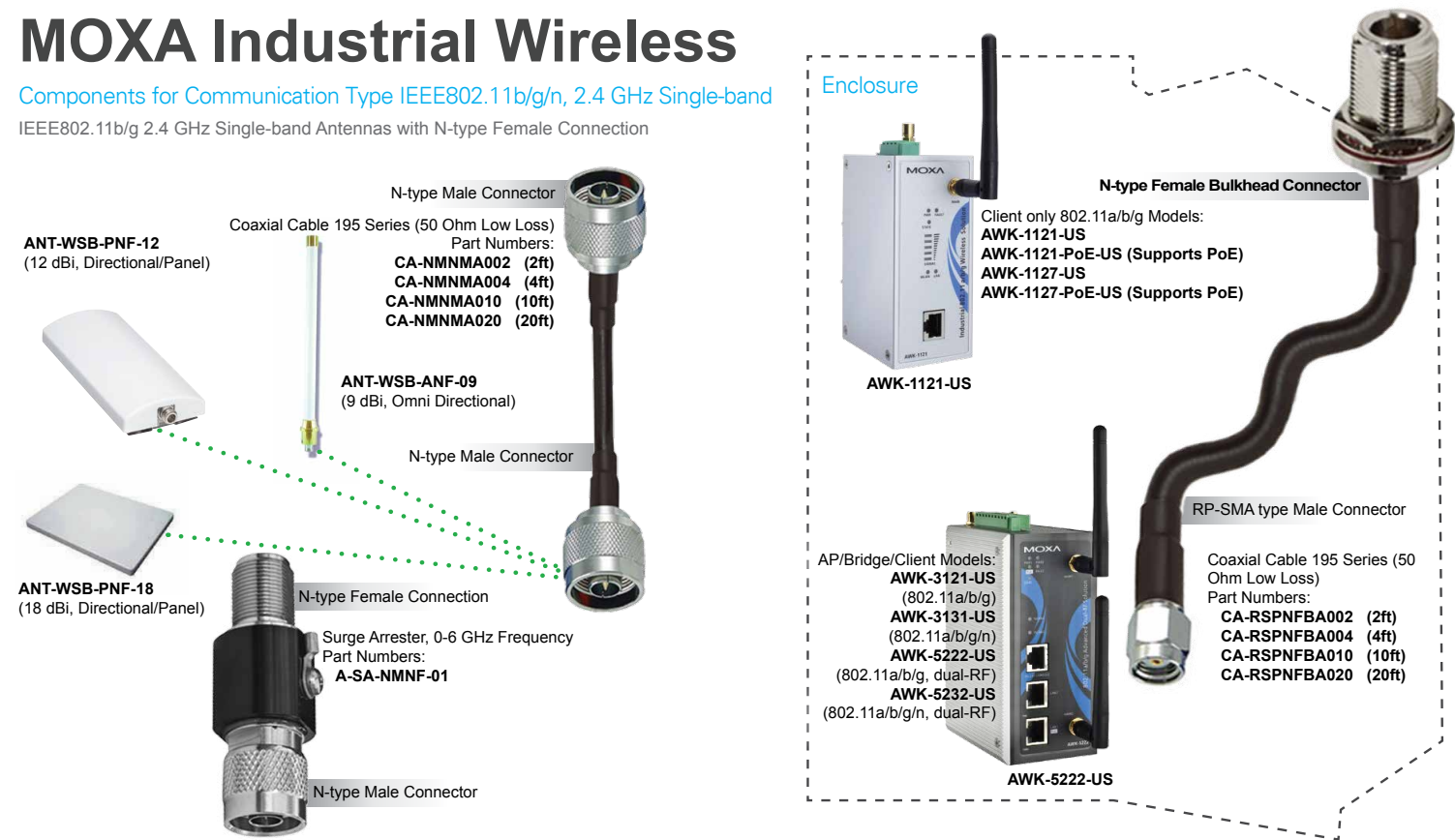


Moxa » 802.11 WiFi

Part #	Description
AWK-6232-M12-US-T	Moxa - 802.11a/b/g/n IP68 dual-RF wireless AP/bridge/client - 2.4 and/or 5GHz RF bands, -40 to +75°C
AWK-5232-US-T	Moxa - 802.11a/b/g/n Indoor dual-RF wireless AP/bridge/client - with redundant power inputs and PoE+, -40 to +75°C
AWK-4131-M12-US-T	Moxa - 802.11a/b/g/n IP68 wireless AP/bridge/client - M12 - IP68 - -40 to +75°C
AWK-4131-M12-US-T	Moxa - 802.11a/b/g/n IP68 Wireless AP/Bridge/Client, M12 Connector, -40 to 75°C
AWK-3131-US	Moxa - 802.11a/b/g/n Indoor wireless AP/bridge/client - with redundant power inputs and PoE+
AWK-3131-M12-US-T	Moxa - 802.11a/b/g/n Wireless AP/Bridge/Client, M12/QMA connectors, US band, -40 to 75°C
AWK-3131-US-T	Moxa - 802.11a/g/b/n AP/Bridge/AP Client, -40 to 75°C
AWK-1127-PoE-US-T	Moxa - 802.11a/b/g Wireless Client, with PoE support, -40 to 75°C
AWK-1121-US	Moxa - 802.11a/b/g Indoor wireless Client only - used when adding PLC/HMI to above networks
ANT-WSB-PNF-12	Moxa - 12dBi Directional Antenna
ANT-WSB-PNF-18	Moxa - 18dBi Directional Antenna
CA-RSPNFBA002	Moxa - 2Ft - Coax Cable 195 Series (50 Ohm Low Loss) for above antennas
CA-RSPNFBA004	Moxa - 4Ft - Coax Cable 195 Series (50 Ohm Low Loss) for above antennas
CA-RSPNFBA010	Moxa - 10Ft - Coax Cable 195 Series (50 Ohm Low Loss) for above antennas
CA-RSPNFBA020	Moxa - 20Ft - Coax Cable 195 Series (50 Ohm Low Loss) for above antennas
A-SA-NMNF-01	Moxa - Surge Arrestor, 0-6GHz Frequency (AWK - cable - surge arrestor - cable - ANT)
802.11n	High bandwidth 802.11 standard allows wireless communication speeds to theoretically reach 300Mbps
Wireless Security	WPA2 provides robust security for small networks
Wireless Distribution System	WDS provides an easy way for Access Points to communicate wirelessly with each other
Industrial-grade Wireless LANs	Overcomes hazards such as dust, EMI/noise, and temperature extremes - outdoor units are IP68 - all 5 year warranty
Long-Distance Communication	Using Moxa algorithms we can do point to point and point to multipoint networks >300 meters
Certified Industrial Standards	UL/cUL Class 1 Division 2 and ATEX C122 for Petrochemical + EN50155 and EN50121-3-2 for rail and ITS
Redundant Wireless	Moxa's Dual-RF solutions feature two independent wireless communication modules as well as multiple Ethernet ports. It uses two different frequencies to communicate at the same time.

MOXA Industrial Wireless

Components for Communication Type IEEE802.11b/g/n, 2.4 GHz Single-band
IEEE802.11b/g 2.4 GHz Single-band Antennas with N-type Female Connection



Moxa » Serial Device Servers

Part #	Description
NPort 5110	Moxa - 1 port device server, 10/100M Ethernet, RS-232, DB9 male, 15KV ESD, 12-48VDC
NPort 5110A	Moxa - 1 port device server, 10/100M Ethernet, RS-232, DB9 male, 15KV ESD, 0.5KV serial surge, 12-48VDC, 0-60°C
NPort 5110A-T	Moxa - 1 port device server, 10/100M Ethernet, RS-232, DB9 male, 15KV ESD, 0.5KV serial surge, 12-48VDC, -40-75°C
NPort 5110-T	Moxa - 1 port device server, 10/100M Ethernet, RS-232, DB9 male, 15KV ESD, 12-48VDC, -40-75°C
NPort 5130	Moxa - 1 port device server, 10/100M Ethernet, RS-422/485, DB9 male, 15KV ESD 110V or 230V
NPort 5130A	Moxa - 1 port device server, 10/100M Ethernet, RS-422/485, DB9 male, 15KV ESD, 0.5KV serial surge, 12-48VDC, 0-60°C
NPort 5130A-T	Moxa - 1 port device server, 10/100M Ethernet, RS-422/485, DB9 male, 15KV ESD, 0.5KV serial surge, 12-48VDC, -40-75°C
NPort 5150	Moxa - 1 port device server, 10/100M Ethernet, RS-232/422/485, DB9 male, 15KV ESD 110V or 230V
NPort 5150A	Moxa - 1 port device server, 10/100M Ethernet, RS-232/422/485, DB9 male, 15KV ESD, 0.5KV serial surge, 12-48VDC, 0-60°C
NPort 5150A-T	Moxa - 1 port device server, 10/100M Ethernet, RS-232/422/485, DB9 male, 15KV ESD, 0.5KV serial surge, 12-48VDC, -40-75°C
NPort 5210	Moxa - 2 port device server, 10/100M Ethernet, RS-232, RJ45 8pin, 15KV ESD, 110V or 230V
NPort 5210A	Moxa - 2 port device server, 10/100M Ethernet, RS-232, DB9 male, 15KV ESD, 0.5KV serial surge, 12-48VDC, 0-60°C
NPort 5210A-T	Moxa - 2 port device server, 10/100M Ethernet, RS-232, DB9 male, 15KV ESD, 0.5KV serial surge, 12-48VDC, -40-75°C
NPort 5210-T	Moxa - 2 port device server, 10/100M Ethernet, RS-232, RJ45 8pin, 15KV ESD, 110V or 230V, -40-75°C
NPort 5230	Moxa - 1 port RS-422/485 device server, 1 port RS-232, 10/100M Ethernet, terminal block, 15KV ESD, 12-30VDC
NPort 5230A	Moxa - 2 port device server, 10/100M Ethernet, RS-422/485, Terminal block, 15KV ESD, 0.5KV serial surge, 12-48VDC, 0-60°C
NPort 5230A-T	Moxa - 2 port device server, 10/100M Ethernet, RS-422/485, Terminal block, 15KV ESD, 0.5KV serial surge, 12-48VDC, -40-75°C
NPort 5230-T	Moxa - 1 port RS-422/485 device server, 1 port RS-232, 10/100M Ethernet, terminal block, 15KV ESD, 12-30VDC, -40-75°C
NPort 5232	Moxa - 2 port RS-422/485 device server, 10/100M Ethernet, terminal block, 15KV ESD, 12-30VDC
NPort 5232I	Moxa - 2 port RS-422/485 device server, 10/100M Ethernet, terminal block, 15KV ESD, 12-30VDC with 2KV isolation
NPort 5232I-T	Moxa - 2 port RS-422/485 device server, 10/100M Ethernet, terminal block, 15KV ESD, 12-30VDC with 2KV isolation, -40-75°C
NPort 5232-T	Moxa - 2 port RS-422/485 device server, 10/100M Ethernet, terminal block, 15KV ESD, 12-30VDC, -40-75°C
NPort 5250A-T	Moxa - 2 port device server, 10/100M Ethernet, RS-232/422/485, DB9 male, 15KV ESD, 0.5KV serial surge, 12-48VDC, -40-75°C
NPort 5410	Moxa - 4 port device server, 10/100M Ethernet, RS-232, DB9 male, 15KV ESD, 12-48 VDC
NPort 5430	Moxa - 4 port device server, 10/100M Ethernet, RS-422/485, terminal block, 15KV ESD, 12-48 VDC
NPort 5630-16	Moxa - 16 port device server, 10/100M Ethernet, RS-422/485, RJ-45 8pin, 15KV ESD, 100V or 240V
NPort 5650-16	Moxa - 16 port device server, 10/100M Ethernet, RS-232/422/485, RJ-45 8pin, 15KV ESD, 100V or 240V
NPort 5650-8	Moxa - 8 port device server, 10/100M Ethernet, RS-232/422/485, RJ-45 8pin, 15KV ESD, 100V or 240V
NPort 6150	Moxa - 1 port RS-232/422/485 secure device server, 12-48V, w/ adapter
NPort 6250	Moxa - 2 ports RS-232/422/485 secure device server, 12-48V, w/ adapter
NPort 6450	Moxa - 4 ports RS-232/422/485 secure device server, 12-48V, w/ adapter
NPort 6610-16	Moxa - 16 ports RS-232 secure device server, 100V-240VAC
NPort 6610-8	Moxa - 8 ports RS-232 secure device server, 100V-240VAC
NPort IA-5150	Moxa - 1-port RS-232/422/485 serial device server, 10/100MBaseT(X) (RJ45)
NPort IA-5150I	Moxa - 1-port RS-232/422/485 serial device server with 2 KV isolation, 10/100MBaseT(X) (RJ45)
NPort IA-5250	Moxa - 2-port RS-232/422/485 serial device server, 10/100MBaseT(X) (RJ45)



Moxa » Gateways

Part #	Description
MGate 5105-MB-EIP	Moxa - 1-port Modbus RTU to EtherNet/IP gateway, 0 to 60°C
MGate 5105-MB-EIP-T	Moxa - 1-port Modbus RTU to EtherNet/IP gateway, -40 to 75°C
MGate EIP3170	Moxa - 1-port DF1 to EtherNet/IP gateway, 0 to 55°C
MGate EIP3170I	Moxa - 1-port DF1 to EtherNet/IP gateway with 2 KV isolation, 0 to 55°C
MGate EIP3170-IEEX	Moxa - 1-port DF1 to EtherNet/IP gateway, 0 to 55°C, IECEx certified.
MGate EIP3170I-IEEX	Moxa - 1-port DF1 to EtherNet/IP gateway with 2 KV isolation, 0 to 55°C
MGate EIP3170I-T	Moxa - 1-port DF1 to EtherNet/IP gateway with 2 KV isolation, -40 to 75°C
MGate EIP3170I-T-IEEX	Moxa - 1-port DF1 to EtherNet/IP gateway with 2 KV isolation, -40 to 75°C
MGate EIP3170-T	Moxa - 1-port DF1 to EtherNet/IP gateway, -40 to 75°C
MGate EIP3170-T-IEEX	Moxa - 1-port DF1 to EtherNet/IP gateway, -40 to 75°C, IECEx certified.
MGate EIP3270	Moxa - 2-port DF1 to EtherNet/IP gateway, 0 to 55°C
MGate EIP3270I	Moxa - 2-port DF1 to EtherNet/IP gateway with 2 KV isolation, 0 to 55°C
MGate EIP3270-IEEX	Moxa - 2-port DF1 to EtherNet/IP gateway, 0 to 55°C, IECEx certified.
MGate EIP3270I-IEEX	Moxa - 2-port DF1 to EtherNet/IP gateway with 2 KV isolation, 0 to 55°C
MGate EIP3270-T	Moxa - 2-port DF1 to EtherNet/IP gateway, -40 to 75°C
MGate EIP3270-T-IEEX	Moxa - 2-port DF1 to EtherNet/IP gateway, -40 to 75°C, IECEx certified.
MGate MB3170	Moxa - 1 Port RS-232/422/485 advanced Modbus TCP to Serial Communication Gateway
MGate MB3170I	Moxa - 1 Port RS-232/422/485 advanced Modbus TCP to Serial Communication Gateway with 2 KV Isolation
MGate MB3170-IEEX	Moxa - 1 Port Modbus TCP - Serial Comm. Gateway advanced, 3 in 1, IECEx certified.
MGate MB3170I-IEEX	Moxa - 1 Port Modbus TCP - Serial Comm. Gateway advanced with 2 KV Isolation, 3 in 1
MGate MB3170I-T	Moxa - 1 Port Modbus TCP - Serial Comm. Gateway advanced, 3 in 1, -40 to 75°C, with 2 KV Isolation
MGate MB3170I-T-IEEX	Moxa - 1 Port Modbus TCP - Serial Comm. Gateway advanced with 2 KV Isolation, 3 in 1, -40 to 75°C
MGate MB3170-T	Moxa - 1 Port Modbus TCP - Serial Comm. Gateway advanced, 3 in 1, -40 to 75°C
MGate MB3170-T-IEEX	Moxa - 1 Port Modbus TCP - Serial Comm. Gateway advanced, 3 in 1, -40 to 75°C, IECEx certified.
MGate MB3180	Moxa - 1 Port RS-232/422/485 Modbus TCP to Serial Communication Gateway
MGate MB3270	Moxa - 2 Port RS-232/422/485 advanced Modbus TCP to Serial Communication Gateway
MGate MB3270I	Moxa - 2 Port RS-232/422/485 advanced Modbus TCP to Serial Communication Gateway with 2 KV Isolation
MGate MB3270-IEEX	Moxa - 2 Port Modbus TCP - Serial Comm. Gateway advanced, 3 in 1, IECEx certified.
MGate MB3270I-IEEX	Moxa - 2 Port Modbus TCP - Serial Comm. Gateway advanced with 2 KV Isolation, 3 in 1
MGate MB3270I-T	Moxa - 2 Port Modbus TCP - Serial Comm. Gateway advanced, 3 in 1, -40 to 75°C, with 2 KV Isolation
MGate MB3270I-T-IEEX	Moxa - 2 Port Modbus TCP - Serial Comm. Gateway advanced with 2 KV Isolation, 3 in 1, -40 to 75°C
MGate MB3270-T	Moxa - 2 Port Modbus TCP - Serial Comm. Gateway advanced, 3 in 1, -40 to 75°C
MGate MB3270-T-IEEX	Moxa - 2 Port Modbus TCP - Serial Comm. Gateway advanced, 3 in 1, -40 to 75°C, IECEx certified.
MGate MB3280	Moxa - 2 Port RS-232/422/485 Modbus TCP to Serial Communication Gateway
MGate MB3480	Moxa - 4 Port RS-232/422/485 Modbus TCP to Serial Communication Gateway



MGate 5105



MGate EIP3170



MGate EIP3270I



MGate MB3280



MGate MB3480

Moxa » Why use Managed Ethernet Switches?

Moxa provides a complete Edge-to-Core Industrial Ethernet Infrastructure

- » Core Layer (High Bandwidth 10GbE Industrial Core Switches)
- » Distribution Layer (Industrial Modular DIN-Rail and Rack-mount Switches)
- » Edge Layer (Compact, Standalone/Modular DIN-Rail Switches)
- » MX-view (Live Network Topology Visualization for Easy Troubleshooting)

Reliable Network Redundancy

- Turbo Ring for Ring and Media Redundancy
- Use Turbo Chain to Create Redundant Connections for Large-scale Networks
- Port Trunking for Flexible Network Connections - Link Aggregation Control Protocol
- Optical Bypass Unit for Linear Topology Redundancy in Fiber Networks

Efficient Network Performance

- Transition to Next Generation IPv6 Networks (128-bit IP addresses)
- QoS (Quality of Service) increases data determinism
- VLAN (Virtual Local Area Network) is a group of devices that can be located anywhere on a network, but which communicate as if they are on the same physical segment.
- IGMP Snooping and GMRP for Filtering Multicast Traffic – so data travels only to those end destinations that it requires
- IEEE 1588 PTP (Precision Time Protocol) is designed to synchronize the real-time clocks located at the nodes of a distributed system that communicates over a network.

Easy Network management

- SNMP (Simple Network Management Protocol) is used to acknowledge receipt of event notifications.
- Ethernet/IP and Modbus/TCP Easily Integrate with SCADA/HMI systems
- Automated Topology Discovery with LLDP (Link Layer Discovery Protocol – IEEE 802.1AB)
- Intelligent DHCP Option 82 IP Address Location – “DHCP Relay Agent Information Option” provides the ability to insert detailed information, such as port information and MAC addresses of relay agents, to a request being transmitted to a DHCP server
- Efficient Network Monitoring and Proactive Management with RMON (Remote Network Monitoring)
- Immediate Event Notifications with Real-time Alarms – Warning by E-mail or by Relay Output
- Versatile Configuration User Interface Options – web console, menu console, and CLI console
- SFP DDM (Digital Diagnostic Monitor) simplifies Monitoring and Diagnosis of Fiber Link Status
- ABC-01 (plugs into RS-232 port of switch) Provides a Seamless Backup Solution

Advanced Network Security

- Port-based network access control – IEEE 802.1X, HTTPS, SSH, SNMPv3, Port Security, TACACS+

Rugged Industrial Design for Outstanding Reliability

- Stable and Versatile Power Inputs for Industrial Applications – redundant power inputs (two sources)
- Designed to Withstand Extreme Temperatures – up to -40°C to +75°C on all –T products
- Outstanding Electromagnetic Immunity – surpasses requirements stipulated by EN50121-4, DNV, & IEC61000
- Network Connections Well-protected against Harsh Environmental Conditions
- ESD Testing, Surge/EFT Testing, Vibration Testing, Shock Testing
- Networking Solutions Certified to Meet Industrial Standards
- UL508 and UL60950-1 certifications for safe use in hazardous locations
- Class I Division 2, ATEX Zone 2 for use in mining and oil & gas industries
- DNV/GL/ABS/LR/NK for marine environments
- NEMA TS2 for traffic control applications
- EN50121-4 for railway wayside applications
- Relay Output Alarm, Broadcast Storm Protection, and 5 year warranty
- Power-over-Ethernet Solutions for Simple and Flexible Connections



Moxa » Ethernet Switches

Part #	Description
EDR-810-VPN-2GSFP-T	Moxa - (8) 10/100BaseT(X) ports, (2) 1000BaseSFP slots, (1) WAN, Firewall/NAT Industrial Gigabit Secure Router Switch, -40 to 75°C
EDR-G902-T	Moxa - (1)WAN, Firewall/NAT, 10VPN Tunnel, Industrial Gigabit Secure Router , -40 to 75°C
EDS-205	Moxa - (5) 10/100BaseT(X) ports, Entry-level Unmanaged Ethernet Switch, -10 to 60°C
EDS-208	Moxa - (8) 10/100BaseT(X) ports, Entry-level Unmanaged Ethernet Switch, -10 to 60°C
EDS-405A	Moxa - (5) 10/100BaseT(X) ports, Entry-level Managed Ethernet switch, 0 to 60°C
EDS-405A-EIP	Moxa - (5) 10/100BaseT(X) ports, Entry-level Managed Ethernet switch, EtherNet/IP enabled, 0 to 60°C
EDS-505A	Moxa - (5) 10/100BaseT(X) ports, Managed Ethernet switch, 0 to 60°C
EDS-G205	Moxa - (5) 10/100/1000BaseT(X) ports, Unmanaged full Gigabit Ethernet switch, 0 to 60°C
EDS-G205A-4PoE	Moxa - (4) PoE 10/100/1000BaseT(X) ports, (1) 1000BaseT port, Unmanaged Gigabit PoE switch, 0 to 60°C
EDS-G508E	Moxa - (8) 10/100/1000BaseT(X) ports, Managed full Gigabit Ethernet switch, -10°C to 60°C
EDS-G508E-T	Moxa - (8) 10/100/1000BaseT(X) ports, Managed full Gigabit Ethernet switch, -40°C to 75°C
EDS-P506A-4PoE	Moxa - (4) PoE 10/100BaseT(X) ports, (2) 10/100BaseT(X) ports, Managed PoE Ethernet switch, 0 to 60°C
ICS-G7752-4XG-HV-HV	Moxa - Layer 2 Managed Gigabit 19" Rack Mount Ethernet switch, 12 slots for (4)port 10/100/1000BaseT(X) module or (4)port 100/1000BaseSFP slot module, and (4) 10GbE SPF+ slots, (2) isolated power supplies (85 to 264 VAC), 0 to 60°C
ICS-G7852-4XG-HV-HV	Moxa - Layer 3 Managed Gigabit Ethernet switch, 12 slots for (4)port 10/100/1000BaseT(X) module or (4)port 100/1000BaseSFP slot module and (4) 10GbE SPF+ slots, 2 isolated power supplies (85 to 264 VAC), 0 to 60°C
IKS-6728-8PoE-4GTXSFP-HV-HV-T	Moxa - Modular Managed Gigabit Ethernet switch, (8) 10/100BaseT(X) PoE/PoE+ ports, (4) 10/100/1000BaseT(X) or 100/1000BaseSFP combo ports, and (2) slots for fast Ethernet modules, front cabling, (2) isolated power supply (85-264 VAC), -40 to 75°C
IKS-G6524-4GTXSFP-HV-HV-T	Moxa - Layer 2 Managed Gigabit Ethernet switch, (20) 10/100/1000BaseT(X) ports + (4) 10/100/1000BaseT(X) or 100/1000BaseSFP slot combo ports, (2) isolated power supplies (85 to 264 VAC), -40 to 75°C
IM-6700-8PoE	Moxa - IM module (8) 10/100BaseT(X) PoE/PoE+ ports for above 19" Rack mount switches
IM-G7000-4GSFP	Moxa - Gigabit Ethernet interface module, (4) 100/1000BaseSFP slots, 0 to 60°C op temp for above 19" Rack mount switches
IM-G7000-4GTX	Moxa - Gigabit Ethernet interface module, (4) 10/100/1000BaseT(X) ports, RJ45 connectors, 0 to 60°C op temp for above 19" Rack mount switches
INJ-24A-T	Moxa - Gigabit High-power PoE+ injector, max. output of 36W/60W @24 or 48VDC by 2-pair/4-pair mode, -40 to 75°C
PT-508-SS-SC-24	Moxa - IEC 61850-3 Managed Ethernet switch with (6) 10/100BaseT(X) ports + (2) 100BaseFX single-mode ports with SC connectors, (1) power supply (24 VDC), -40 to 85°C
PT-508-SS-SC-HV	Moxa - IEC 61850-3 Managed Ethernet switch, (6) 10/100BaseT(X) ports + (2) 100BaseFX single-mode ports with SC connectors, (1) power supply (88-300VDC or 85-264VAC), -40 to 85°C
PT-7528-12MSC-12TX-4GSFP-HV-HV	Moxa - IEC 61850-3 Managed 19" Rack mount Ethernet switch, (12) 10/100BaseF(X) ports(MSC), (12) 10/100BaseT(X), (4) 1000BaseSFP ports, for a total of up to 28 ports, (2) isolated power supply (88-300 VDC or 85-264 VAC), -40 to 85°C
PT-7728-PTP-R-24-HV	Moxa - IEC 61850-3 modular 19" Rack mount PTP switch, (4) slots for IEEE 1588 fast Ethernet modules, or (1) slot for Gigabit Ethernet modules, total up to 24+4G ports, cabling on rear panel, (2) isolated power supply (24 VDC and 88-300 VDC or 85-264 VAC), -40 to 85°C
PT-G7509-R-HV-HV	Moxa - IEC 61850-3 Managed Gigabit 19" Rack mount Ethernet switch, (9) combo 10/100/1000BaseT(X) or 100/1000BaseSFP slots for adding SFP-1G/1FE modules, cabling on rear panel, (2) isolated power supply (88-300VDC or 85-264VAC), -40 to 85°C
SFP-10GLRLC	Moxa - SFP+ module with (1) 10GBase-LR port for 10 km transmission, LC connector, 0 to 60°C
SFP-1G10BLC-T	Moxa - Small Form Factor pluggable transceiver with 1000Base WDM,type B, LC connector, 10 km, -40 to 85°C
SFP-1G40BLC-T	Moxa - Small Form Factor pluggable transceiver with 1000Base WDM,type B, LC connector, 40 km, -40 to 85°C
SFP-1GZXLC-T	Moxa - Small Form Factor pluggable transceiver with 1000BaseZX, LC connector, 80 km, -40 to 85°C
TN-5305-T	Moxa - (5) 10/100BaseT(X) ports with M12 connectors, Unmanaged Ethernet switch, -40 to 75°C
TN-5508-4PoE-24-T	Moxa - (4) 10/100BaseT(X) ports + (4) 10/100BaseT(X) PoE ports with M12 connectors, Managed Ethernet switch, (1) iso power inputs (24 VDC), -40 to 75°C
TN-5516-8PoE-24-HV-T	Moxa - (8) 10/100BaseT(X) ports + (8) 10/100BaseT(X) PoE ports with M12 connectors, Managed Ethernet switch, redundant power inputs (24 VDC + HV), -40 to 75°C



EDR-810-2GSFP EDS-405A EDS-G508E ICS-G7752-4XG-HV-HV TN-5308-4PoE

Advantech » Ethernet Switches

Part #	Description
EKI-3525-AE	Advantech - (5) 10/100BaseT Smart Ethernet Switch, (2) 12-48VDC, -10 to 60°C, Energy Efficient, QoS VIP port setting
EKI-3528-AE	Advantech - (8) 10/100BaseT Smart Ethernet Switch, (2) 12-48VDC, -10 to 60°C, Energy Efficient, QoS VIP port setting
EKI-3725-AE	Advantech - (5) 1000BaseT Smart Ethernet Switch, (2) 12-48VDC, -10 to 60°C, Energy Efficient, QoS VIP port setting
EKI-3728-AE	Advantech - (8) 1000BaseT Smart Ethernet Switch, (2) 12-48VDC, -10 to 60°C, Energy Efficient, QoS VIP port setting
EKI-5525-AE	Advantech - (5) 10/100BaseT Smart Ethernet Switch, (2) 12-48VDC, -10 to 60°C, Efficient, SNMP, QoS, Modbus/TCP, C1D2/ATEX
EKI-5529-AE	Advantech - (8) 10/100BaseT Smart Ethernet Switch, (2) 12-48VDC, -10 to 60°C, Efficient, SNMP, QoS, Modbus/TCP, C1D2/ATEX
EKI-5725-AE	Advantech - (5) 1000BaseT Smart Ethernet Switch, (2) 12-48VDC, -10 to 60°C, Efficient, SNMP, QoS, Modbus/TCP, C1D2/ATEX
EKI-5728-AE	Advantech - (8) 1000BaseT Smart Ethernet Switch, (2) 12-48VDC, -10 to 60°C, Efficient, SNMP, QoS, Modbus/TCP, C1D2/ATEX
EKI-4524I-AE	Advantech - (24) 10/100BaseT RJ45, Smart 1U 19" Rack mount Ethernet Switch, 100-240VAC/VDC, -40 to 75°C
EKI-2548I-AE	Advantech - (8) 10/100BaseT Managed Ethernet Switch, 12-48VDC, -40 to 85°C
EKI-2748FI-AE	Advantech - (4) 1000BaseT, (4) 1000Base-SFP Managed Ethernet Switch, 12-48VDC, -40 to 75°C
EKI-7659CI-AE	Advantech - (8) 10/100BaseT, (2) Gigabit SFP ports Managed Ethernet Switch, (2) 12-48VDC, -40 to 75°C
EKI-7659CPI-AE	Advantech - (2) 1000BaseT Copper/SFP combo ports, (8) PoE injector ports, Managed Ethernet Switch, (2) 48VDC, -40 to 75°C
EKI-4654R-AE	Advantech - (24) 10/100BaseT, (2) 1000Base-SFP Ports, 1U 19" Rack mount Managed Ethernet switch, (2)100-240VAC/VDC, -40 to 85°C
EKI-6558TI-AE	Advantech - (8) M12, 10/100BaseT, Managed Ethernet Switch, (2) 12-48VDC, -40 to 75°C, EN50155, IP67
EKI-2701HPI	Advantech - Injector - (1)Gigabit PoE+ Out, (1)Data IN, IEEE 802.3af/at compliant, 30 watt output, (2)24-48VDC, -40 to 75°C
SFP-GLX/LC-10E	Advantech - 1000Base-LX Single mode SFP module (10km)
SFP-GLX/LC-40E	Advantech - 1000Base-LX single-mode SFP module (40km)
SFP-GTX/RJ45-AE	Advantech - 1000Base-T RJ45 SFP module



EKI-45241-AE EKI-7659CI-AE EKI-3525-AE EKI-2548I-AE EKI-6558TI-AE

Moxa » IP Cameras & Software

Part #	Description
SoftNVR-IA	32-channel IP video surveillance software for industrial automation systems Live View, Video Record, Playback & Search, Schedule, e-Map, Alarm Events, Remote Access, OPC
Cameras are IP66 rated, IK10(EN 62262) vandal-resistant form factor, no heaters or fans, PoE or direct wiring options	
VPort P06-1MP-M12-CAM36-T	EN50155, HD, H.264/MJPEG compact IP camera, M12 connector, 1 audio input, PoE, 3.6mm Lens, -40 to 75°C
VPort P06-1MP-M12-CAM42-T	EN50155, HD, H.264/MJPEG compact IP camera, M12 connector, 1 audio input, PoE, 4.2mm Lens, -40 to 75°C
VPort P06-1MP-M12-CAM60-T	EN50155, HD, H.264/MJPEG compact IP camera, M12 connector, 1 audio input, PoE, 6.0mm Lens, -40 to 75°C
VPort 16-DO-M12-CAM3L54160N	EN50155 H.264/MJPEG Compact IP camera, 1/3"CCD, 16.0mm lens, NTSC, Dome
VPort 16-DO-M12-CAM3L54160P	EN50155 H.264/MJPEG Compact IP camera, 1/3"CCD, 16.0mm lens, PAL, Dome
VPort 16-DO-M12-CAM3L5430N	EN50155 H.264/MJPEG Compact IP camera, 1/3"CCD, 3.0mm lens, NTSC, Dome
VPort 16-DO-M12-CAM3L5430P	EN50155 H.264/MJPEG Compact IP camera, 1/3"CCD, 3.0mm lens, PAL, Dome
Vport 26	Outdoor H.264/MJPEG fixed dome IP camera, 12/24VDC or 24VAC power input, -40 to +50°C, 800x600 max
VPort P26A-1MP-T	Outdoor H.264/MJPEG HD fixed dome IP camera, PoE, -40 to 75°C operating temperature
VP-MK2	Mounting Kit for the Vport 26 series
VP-520L	Wall mounting Kit for mounting Vport 26 series on wal
VP-520HB	Pendant mounting kit for mounting the Vport 26 on ceiling
VP-CPM	Pole/corner mounting kit for mounting the Vport 26 on a pole or corner with the VP-520L
Vport 36-1MP-T	H.264/MJPEG fixed box IP camera, 12/24VDC or 24VAC or Power-over-Ethernet, -40 to +75°C, 1280 x 800 max
Vport 36-1MP-IVA-T	H.264/MJPEG fixed box IP camera, 12/24VDC or 24VAC or Power-over-Ethernet, -40 to +75°C, (1) IVA license IVA Alarms and Smart Surveillance - Camera Tamper, Virtual Fence, Alert Zone, Removed object, Unattended objects
VP-CI701	IP68 indoor/outdoor housing for the Vport 26-1MP series
VP-CI800	Wall mount bracket for Vport 36 series
VP-CI815	Pole mount bracket for Vport 36 series
VP-3112MPIR	CS mount, 3.1mm-8mm, f1.2, DC auto iris, day & night lens
VPort 56-2MP-CAM10X	Full HD zoom IP camera, RJ45, 24VAC/VDC/PoE, 0 to 60°C
VPort 66	IP66, 18X, 1080P, PTZ Dome IP camera, 110VAC, -40 to 50°C

The World's First -40~75°C HD IP Camera

- HD 720P (1280x720) resolution real time video
- Triple H.264 and MJPEG video streams
- Industrial rugged design with industry certificates
- Complete optional accessory plan
- ONVIF compatible



EN 50155 IP Cameras



Advantech » WebOP & WebAccess

Part #	Description
WOP-2040T-N1AE	Advantech - 4.3", Color TFT, IP66, 480 x 272 WQVGA, 400 nits, Ethernet, Scripting
WOP-2070T-N2AE	Advantech - 7.0", Color TFT, IP66, 800 x 480 WVGA, 300 nits, Ethernet, Scripting
WOP-2080T-N2AE	Advantech - 8.0", Color TFT, IP66, 800 x 600 SVGA, 250 nits, Ethernet, Scripting
WOP-2100T-N2AE	Advantech - 10.1", Color TFT, IP66, 1024 x 600 WSVGA, 250 nits, Ethernet, Scripting
WebOP-Designer	Advantech - Programming Software - Free

What is the best application for WebOP?

- In-door - dry or wet - IP66 is great for indoor and outdoor, but it has a lower nit rating
- Where the wide screen aspect is more pleasing
- Where scripting is needed to solve the application
- Where speed of Ethernet comes into play
- Where low price is needed

WebOP Designer/Panel Express

HMI Runtime Development Software

- Provides password protection of designs, macros and upload/download operations
- Index registers for modifying device addresses at runtime
- Collects data from many devices with various methods
- Supports over 350 industrial communication protocols

Advantech WebAccess

- **Browser-based HMI/SCADA Software**
- View, control, configure systems through a web browser
- Redundant SCADA and COM ports
- Supports dynamic DNS and acts as OPC server & client
- Supports LonWorks LNS and BACnet IP
- Multi-touch gesture support
- Web-enabled video, audio, and Google Maps and GPS Location Tracking
- WebAccess Express - The Auto-Configuration Tool



AutomationDirect » EA9 C-more

All-new hardware at lower prices!

- New C-more EA9 series touch panels in 6" to 15" screen sizes are a practical way to give plant personnel easy access to controls and data.
- Faster 800MHz processor
- Increased project memory, up to 82MB
- 1 LAN + 3 serial ports for more connectivity
- Clear TFT 65K color LED displays

Our 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.



NEW EA9 series touch panels

1. Built-in SD Card ports*
2. RS-232, RS-422/485 port
3. Audio Line in*
4. Audio Line out*
5. 10/100 Base-T Ethernet Auto MDI/MDI-X*
6. USB Port-A
7. HDMI Video out*
8. USB Port-B
9. 3-pin RS485 communication port
10. RJ12 RS232 communication port

*Specifications vary depending on model and size:
Some panels have more memory, port options and SD slots



Key Features

- Easiest of all the HMIs that we offer to program
- 64K colors, 50,000 hour at 25°C LED backlights, 800MHz CPU
- Project Memory is 26MB up through 10.4" & 82MB on 12.1" & 15"
- Built in Real-time Clock with 30 day backup - no battery required, 12 to 24VDC powered, 0-50°C Op Temp
- Over 50 objects including 16 pen trends, switches, PID trend faceplate, PID bar graph
- Multi-language, Project Simulator, Bitmap animation, Popup windows
- Event Manager allows for Logging and Notifications, Data logging to USB/SD Flash Drive
- E-mail messaging, Built-in FTP server/Web server, Remote HMI feature with smart phone / tablet / PC

Part #	Size	Color	Rating	Resolution	Brightness	Networking	Scripting
EA9-T6CL	5.7"	Color TFT	IP65	320 x 240 QVGA	280 nits	Ethernet	
EA9-T6CL-R	5.7"	Color TFT	IP65	320 x 240 QVGA	280 nits		
EA9-T8CL	8.4"	Color TFT	IP65	800 x 600 SVGA	310 nits	Ethernet	
EA9-T10C	10.4"	Color TFT	IP65	800 x 600 SVGA	280 nits	Ethernet	
EA9-T12CL	12.1"	Color TFT	IP65	800 x 600 SVGA	280 nits	Ethernet	
EA9-T15C	15.0"	Color TFT	IP65	1024 x 768 XVGA	280 nits	Ethernet	
EA9-PGMSW	Programming Software						

IDEC » Operator Interface

Part #	Size	Color	Rating	Resolution	Brightness	Networking	Scripting
HG2G-SB22TF-B	5.7"	Mono	IP66	320 x 240 QVGA	550 nits	Ethernet	Scripting
HG2G-5ST22TF-B	5.7"	Color TFT	IP66	320x 240 QVGA	400 nits	Ethernet	Scripting
HG2G-5FT22TF-B	5.7"	Color TFT	IP66	640 x 480 VGA	800 nits	Ethernet	Scripting
HG3G-8JT22MF-B	8.4"	Color TFT	IP66	800 x 600 SVGA	600 nits	Ethernet	Scripting
HG3G-AJT22MF-B	10.4"	Color TFT	IP66	800 x 600 SVGA	700 nits	Ethernet	Scripting
HG4G-CJT22MF-B	12.1"	Color TFT	IP66	800 x 600 SVGA	550 nits	Ethernet	Scripting

Key Features

- Great for Outdoor applications with both IP66 rating and higher brightness
- Maritime ABS & Lloyds Type Approval
- Petrochemical C1D2 Approval
- Mounts Portrait or Landscape
- Remote Access for Monitor & Control
- Serial, Ethernet, and USB Ports

12.1" HG4G



10.4" HG3G



5.7" HG2G



8.4" HG3G



Ask For An On-Site Demonstration!
(714) 854-0800
QuantumAutomation.com

AutomationDirect » 05/06 PLC

Part #	Description	Ziplink Cable	Connector Feedthrough
D0-05AR	PLC CPU with - 8 AC in / 6 Relay out - 120VAC power	ZL-D05-CBL18*	ZL-RTB20
D0-05DD	PLC CPU with - 8 DC in / 6 DC out - 120VAC power	18 Terminal for 05	
D0-05DD-D	PLC CPU with - 8 DC in / 6 DC out - 24VDC ext power supply req		
D0-05DR	PLC CPU with - 8 DC in / 6 Relay out - 120VAC power		
D0-05DR-D	PLC CPU with - 8 DC in / 6 Relay out - 24VDC ext power supply req		
D0-06AR	PLC CPU with - 20 AC in / 16 Relay out - 120VAC power	ZL-D06X-CBL20*	ZL-RTB20
D0-06DD1	PLC CPU with - 20 DC in / 16 DC out - sinking	20 Input Side for 06	
D0-06DD1-D	PLC CPU with - 20 DC in / 16 DC out - sinking - 24VDC ext power supply req		
D0-06DD2	PLC CPU with - 20 DC in / 16 DC out - sourcing	ZL-D06Y-CBL20*	ZL-RTB20
D0-06DD2-D	PLC CPU with - 20 DC in / 16 DC out - sourcing - 24VDC ext power supply req	20 Output Side for 06	
D0-06DR	PLC CPU with - 20 DC in / 16 Relay out - 120VAC power		
D0-06DR-D	PLC CPU with - 20 DC in / 16 Relay out - 24VDC ext power supply req		
D0-10ND3F	(10) DC DI - sinking/sourcing - 5pts/common, 2 commons	ZL-D0-CBL13*	ZL-RTB20
D0-10TD2	(10) DC DO - sourcing - 0.3A/pt, 5pts/common, 2 commons, 1.5A/common	ZL-D0-CBL13*	ZL-RTB20
D0-08TR	(8) Relay Output - 1A/pt, 4pts/common, 2 commons, 4A/common	ZL-D0-CBL10*	ZL-RTB20
F0-04AD-1	(4) AI - 12 Bit - 4-20mA	ZL-D0-CBL8*	ZL-RTB20
F0-04RTD	(4) RTD input module	NA	
F0-04THM	(4) Thermocouple input module	NA	
F0-08ADH-1	(8) AI - 16 Bit - 0-20mA	ZL-D0-CBL13*	ZL-RTB20
F0-08ADH-2	(8) AI - 16 Bit - 0-5V or 0-10V	ZL-D0-CBL13*	ZL-RTB20
F0-08DAH-1	(8) AO 16 Bit - 0-20mA	ZL-D0-CBL13*	ZL-RTB20
F0-08DAH-2	(8) AO 16 Bit - 0-5 or 0-10V	ZL-D0-CBL13*	ZL-RTB20
H0-CTRIO2	High Speed Pulse Input Module - 1 ch Quad Enc up to 100kHz + 1 ch Pulse output 25kHz	NA	
H0-ECOM100	10/100 Base T - Ethernet Communications Module - Modbus/TCP	NA	
D2-DSCBL	Programming Cable		
PC-DSOFT5	Programming & Documentation Ladder Logic Software		

IDEC » Pentra & SmartAXIS

Part #	Description
SW1A-W1C	IDEC - Automation Organizer Software Suite - Free to OEMs
FC5A-D12S1E	IDEC - Slim CPU, 8DC DI, 4DC DO Source, 4HSC, 3HSO, Ethernet
FC5A-D16RS1	IDEC - Slim CPU, 8DC DI, 2DC DO Source, 6 Relay out, 4HSC, 3HSO
FC4A-PC1	IDEC - Communication Connector for non Ethernet PLCs
HG9Z-AC501	IDEC - Communications Cable to IDEC OI for non Ethernet PLCs
FC4A-HPC3	IDEC - RS485 Comm module for slim CPU - Config as Port 2
FC4A-PM128	IDEC - 128KB EEPROM
FC4A-PT1	IDEC - Real-time clock cartridge
FC4A-N08B1	IDEC - (8) DC DI Module
FC4A-N16B1	IDEC - (16) DC DI module
FC4A-N08A11	IDEC - (8) AC DI module
FC4A-T16S3	IDEC - (16) DC DO Sourcing module
FC4A-R081	IDEC - (8) Relay Output module
FC4A-R161	IDEC - (16) Relay Output module
FC4A-J2A1	IDEC - (2) AI 0-10VDC or 4-20MA
FC4A-J8C1	IDEC - (8) AI 16bit 0-10VDC or 4-20mA
FC4A-J4CN1	IDEC - (4) AI 16bit 0-10VDC, 4-20mA, T/C, or RTD
FC4A-K1A1	IDEC - (1) AO 12bit 0-10VDC or 4-20MA
FC4A-K4A1	IDEC - (4) AO 12bit 0-10VDC or 4-20mA
FC4A-L03AP1	IDEC - (2) T/C or RTD inputs + (1) AO 0-10VDC or 4-20mA
FT1A-H40RSA	IDEC - SmartAXIS 40 I/O PLC
FT1A-C12RA-B	IDEC - SmartAXIS Touch HMI 12 I/O PLC



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.

- 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
- Note: * Select the cable length by replacing the * with: Blank = 0.5m, -1 = 1.0m, or -2 = 2.0m
- 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



MicroSmart Pentra highlights:

- Embedded Ethernet CPU
- Modbus TCP, RTU and ASCII
- 1MB User Web Page
- E-mail/Text Message Alerts
- USB Programming Port
- Integrated 100KHz High-speed I/O
- Up to 7 Communication Ports
- Max. 512 I/Os

Take Control

MicroSmart Pentra is the fastest micro-PLC on the market. It incorporates all the latest features, a fast processing speed, up to 512 I/Os, built-in Modbus Master/Slave, 32-bit data processing and floating point math in a compact housing. Plus, new MicroSmart Pentra with embedded Ethernet offer everything from Modbus TCP and e-mail/text messaging functionality, to web server functions and an interactive user web page with dynamic data.

FC5A



FT1A-H40RSA SmartAXIS 40 I/O PLC



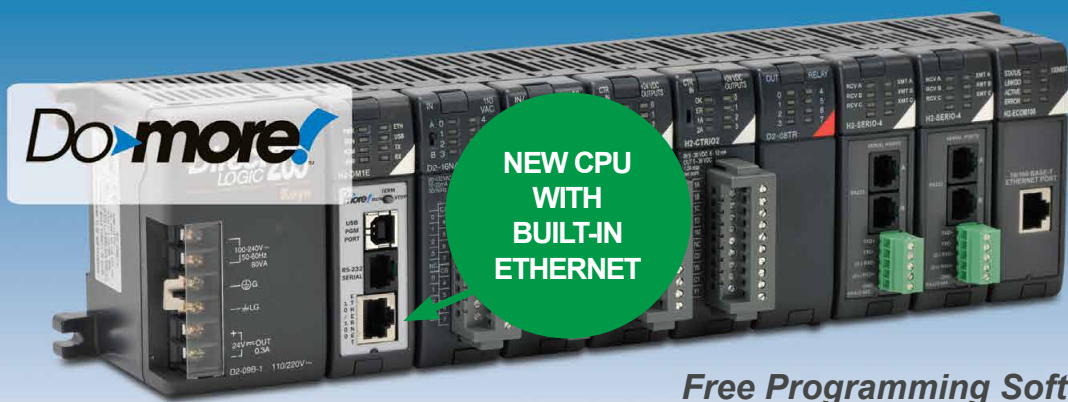
- Available in 100-240 VAC and 24 VDC power
- Available with/without embedded LCD
- 10 Amp Relay contacts
- USB Mini-B Programming Port
- Embedded 6-pt analog inputs (0-10VDC, 10-bit, DC power)
- Integrated 4 x 100KHz high-speed counter
- Embedded Ethernet port
- Supports Modbus TCP and RTU
- SD Memory card for data logging and program storage
- Optional RS232C/RS485 adapter
- 100KHz high-speed outputs

FT1A-C12RA-B SmartAXIS Touch HMI 12 I/O PLC



- 3.8" (3.7" monochrome) HMI with embedded 12 I/O PLC
- Available in Monochrome or 65K TFT color
- 740 cd/m2 monochrome, 400 cd/m2 color
- 8 inputs, 4 relay outputs
- Embedded 2pt 0-10V analog input
- 10 Amp Relay contacts
- Vertical or horizontal orientation
- Embedded Ethernet port
- USB Mini-B Programming Port
- USB Type A port for data logging and recipe functions
- RS232C/RS485 interface
- IP66f (water and oil tight)





Free Programming Software!

AutomationDirect » Terminator Do-more

- Discrete and analog 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 in a single I/O set.
- Horizontal or vertical DIN rail mounting



Part #	Do-More Programmable Controller Description	Ziplink Cable	Connector Feedthrough
H2-DM1	CPU, 192K LL, 128K Data, RS-232, USB, Battery Included		
H2-DM1E	CPU, 192K LL, 128K Data, RS-232, USB, Battery Included + 10/100BaseT Ethernet		
D2-04B-1	4 slot base with AC power supply		
D2-06B-1	6 slot base with AC power supply		
D2-06BDC1-1	6 slot base with 12-24VDC power supply		
D2-09B-1	9 slot base with AC power supply		
D2-09BDC1-1	9 slot base with 12-24VDC power supply		
D2-08ND3	(8) DI - 12-24VDC sinking/sourcing - 1 common	ZL-D2-CBL10*	ZL-RTB20
D2-16ND3-2	(16) DI - 24VDC sinking/sourcing - 2 commons	ZL-D2-CBL19*	ZL-RTB20
D2-32ND3	(32) DI - 24VDC sinking/sourcing - 4 commons	ZL-D24-CBL40*	ZL-RTB40
D2-08NA-1	(8) DI - 110VAC - 1 common	ZL-D2-CBL10*	ZL-RTB20
D2-16NA	(16) DI - 110VAC - 2 commons	ZL-D2-CBL19*	ZL-RTB20
D2-08TD1	(8) DO - 12-24VDC sinking - 0.3A/point, 2.4A/module - 1 common	ZL-D2-CBL10*	ZL-RTB20
D2-08TD2	(8) DO - 12-24VDC sourcing - 0.3A/point, 2.4A/module - 1 common	ZL-D2-CBL10*	ZL-RTB20
D2-16TD1-2	(16) DO - 12-24VDC sinking - 0.1A/point, 1.6A/module - 2 commons	ZL-D2-CBL19*	ZL-RTB20
D2-16TD2-2	(16) DO - 12-24VDC sourcing - 0.1A/point, 1.6A/module - 2 commons	ZL-D2-CBL19*	ZL-RTB20
D2-32TD1	(32) DO - 12-24VDC sinking - 0.1A/point, 3.2A/module - 4 commons	ZL-D24-CBL40*	ZL-RTB40
D2-32TD2	(32) DO - 12-24VDC sourcing - 0.1A/point, 3.2A/module - 4 commons	ZL-D24-CBL40*	ZL-RTB40
F2-08TA	(8) DO - 24-140VAC - 1.5A/point, 4.0A/common - 2 commons	ZL-D2-CBL10*	ZL-RTB20
D2-12TA	(12) DO - 18-110VAC - 0.3A/point, 1.8A/common - 2 commons	ZL-D2-CBL19*	ZL-RTB20
D2-04TRS	(4) RO - 5-30VDC or 5-240VAC isolated - 4 Form A (SPST) relays - 4A/point, 8.0A/module - 4 commons		
D2-08TR	(8) RO - 5-30VDC or 5-240VAC - 8 Form A (SPST) relays - 1A/point, 4.0A/module - 1 common	ZL-D2-CBL10*	ZL-RTB20
F2-08TR	(8) RO - 12-28VDC or 12-240VAC - 8 Form A (SPST) relays - 10A/common - 2 commons		
F2-08TRS	(8) RO - 12-28VDC or 12-240VAC - 5 Form A (SPST) + 3 Form C (SPDT) relays - 7A/point - 8 commons isolated		
D2-12TR	(12) RO - 5-30VDC or 5-240VAC - 12 Form A (SPST) relays - 1.5A/point, 3.0A/common - 2 commons	ZL-D2-CBL19*	ZL-RTB20
F2-04AD-1	(4) AI - 12Bit - 4-20mA - ext 24VDC req	ZL-D2-CBL10*	ZL-RTB20
F2-04AD-2	(4) AI - 12Bit - 0-5V, 0-10V, -5 to +5V, -10 to +10V - ext 24VDC req	ZL-D2-CBL10*	ZL-RTB20
F2-08AD-1	(8) AI - 12Bit - 4-20mA - ext 24VDC req	ZL-D2-CBL10*	ZL-RTB20
F2-08AD-2	(8) AI - 12Bit - 0-5V, 0-10V, -5 to +5V, -10 to +10V - ext 24VDC req	ZL-D2-CBL10*	ZL-RTB20
F2-04RTD	(4) RTD - Pt100, Pt100, Pt1000, Cu10, Cu25 - no ext 24VDC req		
F2-04THM	(4) Thermocouple Input Module - Type J,E,K,R,S,T,B,N,C - ext 24VDC req		
F2-02DAS-1	(2) AO - 16Bit - 4-20mA isolated - ext 12/24VDC req	ZL-D2-CBL10*	ZL-RTB20
F2-02DAS-2	(2) AO - 16Bit - 0-5V, 0-10V isolated - ext 24VDC req	ZL-D2-CBL10*	ZL-RTB20
F2-08DA-1	(8) AO - 12Bit - 4-20mA - ext 24VDC req	ZL-D2-CBL10*	ZL-RTB20
F2-08DA-2	(8) AO - 12Bit - 0-5V, 0-10V - ext 24VDC req	ZL-D2-CBL10*	ZL-RTB20
H2-CTRIO2	High Speed Counter - (8) 9-30VDC In, (4) 5-36VDC Out, (2) 250kHz Quad In, (2) 250kHz Pulse Out		
H2-SERIO-4	(2) RS-232 ports + (1) RS-422/485 port module		
D2-FILL	Filler Module		
Note	* Select the cable length by replacing the * with: Blank = 0.5m, -1 = 1.0m, or -2 = 2.0m		

Part #	(Terminator) Do-More Programmable Controller Description
T1H-DM1	CPU, 192K LL, 128K Data, RS-232, USB, Battery Included
T1H-DM1E	CPU, 192K LL, 128K Data, RS-232, USB, Battery Included + 10/100BaseT Ethernet
T1K-01AC	Terminator I/O Power Supply 120/240 VAC
T1K-01DC	Terminator I/O Power Supply 12/24 VDC
T1K-08B	1/2 SIZE Terminal Base 3-ROW Screw Clamp
T1K-08B-1	1/2 SIZE Terminal Base 3-ROW Spring Clamp
T1K-16B	Full Size Terminal Base 3 - Row Screw Clamp
T1K-16B-1	Full Size Terminal Base 3-Row Spring Clamp
T1K-10CBL	Base Expansion Cable w/o 24VDC 100cm
T1K-10CBL-1	Base Expansion Cable with 24VDC - 100cm
T1H-EBC100	100BaseT Ethernet I/O Slave
T1K-08ND3	(8) DI - 12-24VDC - sinking/sourcing - 2 commons
T1K-16ND3	(16) DI - 12-24VDC - sinking/sourcing - 4 commons
T1H-08TDS	(8) DI - 12-24VDC - sinking/sourcing - 8 commons
T1K-08NA-1	(8) DI - 110VAC - 2 commons
T1K-16NA-1	(16) DI - 110VAC - 4 commons
T1K-08TD1	(8) DO - 12-24VDC - 1A/point, 4A/common - 2 commons
T1K-08TD2-1	(8) DO - 12-24VDC - Sourcing - 1A/point, 4A/common - 2 commons
T1K-16TD1	(16) DO - Sinking - 12-24VDC - 1A/point, 4A/common - 4 commons
T1K-16TD2-1	(16) DO - Sourcing - 12-24VDC - 1A/point, 4A/common - 4 commons
T1K-08TA	(8) DO - 110-240VAC - 1A/point, 4A/common - 2 commons
T1K-08TAS	(8) DO - 110-240VAC - 2A/point, 8 commons
T1K-16TA	(16) DO - 110-240VAC - 1A/point, 4A/common - 4 commons
T1K-08TR	(8) Relay Output 5-30VDC or 5-240VAC - 2A/point, 8A/common, 2 commons
T1K-08TRS	(8) RO - 5-30VDC OR 5-240VAC - 7A/point, 8 commons
T1K-16TR	(16) Relay Output - 5-30VDC or 5-240VAC - 2A/point, 6A/common - 4 commons
T1F-08AD-1	(8) AI - 14Bit - 4-20mA - ext 24VDC req
T1F-08AD-2	(8) AI - 14Bit - 0-5V, 0-10V, +/-5V, +/-10V - ext 24VDC req
T1F-16AD-1	(16) AI - 14Bit - 4-20mA - ext 24VDC req
T1F-16AD-2	(16) AI - 14Bit - 0-5V, 0-10V, +/-5V, +/-10V - ext 24VDC req
T1F-14THM	(14) Thermocouple Input - 16Bit - Type J,E,K,R,S,T,B,N,C - ext 24VDC req
T1F-16RTD	(16) RTD Input module - Pt100, Pt1000, Cu10, CU25, 120 ohm Nickel - no ext 24VDC req
T1F-08DA-1	(8) AO - 12Bit - 4-20mA - ext 24VDC req
T1F-08DA-2	(8) AO - 12Bit - 0-5V, 0-10V, +/-5V, +/-10V - ext 24VDC req
T1F-16DA-1	(16) AO - 12Bit - 4-20mA - ext 24VDC req
T1F-16DA-2	(16) AO - 12Bit - 0-5V, 0-10V, +/-5V, +/-10V - ext 24VDC req
T1F-8AD4DA-1	(8) AI - 14Bit - 4-20mA / (4) AO - 12Bit - 4-20mA - ext 24VDC req
T1F-8AD4DA-2	(8) AI - 14Bit - 0-5V,0-10V,+/-5V,+/-10V / (4) AO - 12Bit - 0-5V,0-10V,+/-5V, +/-10V - ext 24VDC req

Productivity3000™



LCD Display | USB Programming Port
Ethernet Network Port | Ethernet Remote I/O Port
USB Data Port | USB Local I/O Port
RS232 and RS485 Ports

The Productivity3000 automation controller offers you a more powerful industrial control solution that is easier to use and more cost effective than any control solution in the market.



P3000.QuantumAutomation.com

ETHERNET CHOICES:

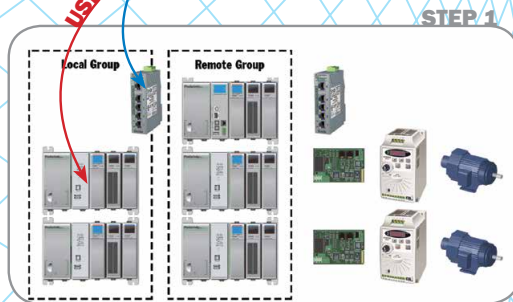
- » MODBUS/TCP
- » ETHERNET /IP



Productivity3000 programmable controller

What used to take hours now takes minutes

The Productivity3000 programmable controller's flexible design and integration tools make it easy to get your system configured in no time:



Fill I/O bases and connect with USB or Ethernet cables

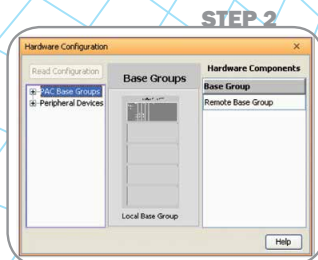
Modules can go in any I/O slot, there's no power budget to worry about, and local USB and remote Ethernet I/O groups are connected with industry-standard communications cabling.

Auto-discover the hardware

One click is all it takes to detect and auto-configure the hardware connected to the system. This can save you literally hours of setup time.

Integrating drives is just as easy

Drive-intensive applications are a snap - connect up to 64 of AutomationDirect's 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.



FREE PROGRAMMING SOFTWARE



- Free "Tag Based" Programming Software
- High-performance CPU w/ 50Mb memory (P3-550), or lower-cost model w/ 25Mb (P3-530)
- High-speed motion control
- Modular rack-based footprint with 36 discrete and analog I/O option modules
- 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
- LCD on ALL analog modules
- Hot-swappable I/O
- No module placement restrictions
- No power budget limitations
- Optional I/O terminal blocks or easy ZIPLink plug-and-play wiring

Part #	Description	Ziplink Cable	Connector Feedthrough
P3-530	CPU, 25MB, USB-A, USB-A, RS-232, RS-422/485, 10/100 Base T		
P3-550	CPU, 50MB, (2) USB-A, USB-B, RS-232, RS-422/485, (2) 10/100 Base T, LCD Display		
P3-RS	Remote Slave, 10/100BaseT, USB-A, USB-B, RS-232, RS-422/485		
P3-EX	Local Expansion via USB-A + USB-B (max 4 EX bases/system)		
P3-03B	3 Slot Base		
P3-05B	5 Slot Base		
P3-08B	8 Slot Base		
P3-11B	11 Slot Base		
P3-01AC	AC Base Power Supply (100-240VAC)		
P3-01DC	DC Base Power Supply (24-48VDC)		
P3-08ND3S	(8) DI - 12-24VDC isolated - sinking or sourcing - 8 commons	ZL-P3-CBL20*	ZL-RTB20
P3-16ND3	(16) DI - 12-24VDC sinking or sourcing - 4 commons	ZL-P3-CBL20-*L	ZL-RTB20
P3-32ND3	(32) DI - 24VDC sinking or sourcing - 4 commons	ZL-CBL40*	ZL-RTB40
P3-64ND3	(64) DI - 24VDC sinking or sourcing - 8 commons	ZL-CBL40*	ZL-RTB40
P3-08NAS	(8) DI - 100-240VAC isolated - 8 commons	ZL-P3-CBL20*	ZL-RTB20
P3-16NA	(16) DI - 100-240VAC - 4 commons	ZL-P3-CBL20-*L	ZL-RTB20
P3-08TD1S	(8) DO - 6-27VDC sinking - 2A/point - 4 commons	ZL-P3-CBL20-*L	ZL-RTB20
P3-08TD2S	(8) DO - 6-27VDC sourcing - 2A/point - 4 commons	ZL-P3-CBL20-*L	ZL-RTB20
P3-16TD1	(16) DO - 6-27VDC sinking - 0.5A/point - 2 commons	ZL-P3-CBL20*	ZL-RTB20
P3-16TD2	(16) DO - 6-27VDC sourcing - 0.5A/point - 2 commons	ZL-P3-CBL20*	ZL-RTB20
P3-32TD2	(32) DO - 6-27VDC sourcing - 0.2A/point - 1.6A/common - 4 commons	ZL-CBL40*	ZL-RTB40
P3-64TD2	(64) DO - 6-27VDC sourcing - 0.1A/point - 0.8A/common - 8 commons	ZL-CBL40*	ZL-RTB40
P3-08TAS	(8) DO - 80-288VAC - 1A/point - isolated = 8 commons	ZL-P3-CBL20*	ZL-RTB20
P3-16TA	(16) DO - 80-288VAC - 0.5A/point - 4A/common - 2 commons	ZL-P3-CBL20*	ZL-RTB20
P3-08TRS	(8) RO - 6-27VDC or 6-240VAC - 2A/point - isolated - 8 commons	ZL-P3-CBL20*	ZL-RTB20
P3-08TRS-1	(8) RO - 5-30VDC or 5-240VAC - 6.3A/point - isolated = 8 commons	P3-RTB	
P3-16TR	(16) RO - 6-27VDC or 6-240VAC - 1.25A/point - 6.3A/common - 2 commons	ZL-P3-CBL20*	ZL-RTB20
P3-04ADS	(4) AI Isolated - 16Bit - 0-5VDC or 0-20ma - no ext 24VDC req	ZL-P3-CBL20-*L	ZL-RTB20
P3-08AD	(8) AI - Selectable 0-5VDC or 0-20ma each point - 16Bit - ext 24VDC req	ZL-P3-CBL20-*L	ZL-RTB20
P3-16AD-1	(16) AI - 16Bit - 0-20mA - ext 24VDC req	ZL-P3-CBL20-*L	ZL-RTB20
P3-16AD-2	(16) AI - 16Bit - 0-10VDC - ext 24VDC req	ZL-P3-CBL20-*L	ZL-RTB20
P3-08THM	(8) Thermocouple Input Module - 16Bit - Types J,E,K,R,S,T,B,N,C - no ext 24VDC req	NA	
P3-08RTD	(8) RTD Input Module - 16Bit - Types Pt100, Pt1000, etc. - no ext 24VDC req	NA	
P3-04DA	(4) AO - Selectable 0-5VDC or 0-20ma each point - 16 Bit - ext 24VDC req	ZL-P3-CBL20-*L	ZL-RTB20
P3-08DA-1	(8) AO - 16Bit - 4-20mA - ext 24VDC req	ZL-P3-CBL20-*L	ZL-RTB20
P3-08DA-2	(8) AO - 16Bit - +/-10VDC - ext24VDC req	ZL-P3-CBL20-*L	ZL-RTB20
P3-06DAS-1	(6) AO - 16Bit - Isolated Channel - Channel 4-20mA - no ext 24VDC req	ZL-P3-CBL20-*L	ZL-RTB20
P3-06DAS-2	(6) AO - 16Bit - Isolated Channel - Channel +/-10VDC - ext 24VDC req	ZL-P3-CBL20-*L	ZL-RTB20
P3-16DA-1	(16) AO - 16Bit - 4-20mA - ext 24VDC req	ZL-P3-CBL20-*L	ZL-RTB20
P3-16DA-2	(16) AO - 16Bit - +/-10VDC - ext 24VDC req	ZL-P3-CBL20-*L	ZL-RTB20
P3-8AD4DA-1	(8) AI - 16Bit 0-20mA + (4) AO - 16Bit - 4-20mA - ext 24VDC req	ZL-P3-CBL20-*L	ZL-RTB20
P3-8AD4DA-2	(8) AI - 16Bit 0-5/0-10VDC + (4) AO - 16Bit - 0-5/0-10VDC - ext 24VDC req	ZL-P3-CBL20-*L	ZL-RTB20
P3-HSI	High Speed Counter Input - (2) 1MHz each + (2) 5-24VDC DI + (4) 5-24VDC DO	ZL-CBL40*S	ZL-RTB40
P3-HSO	High Speed Pulse Output - (2) 1MHz each + (6) 5-24VDC DI + (4) 5-24VDC DO	ZL-CBL40*S	ZL-RTB40

Note: Select the cable length by replacing the * with: Blank = 0.5m, -1 = 1.0m, or -2 = 2.0m

AutomationDirect » Manual Motor Starters

Fuji Manual Motor Starters	Adj Current Range	3-Ph HP Rating 200-240VAC	3-Ph HP Rating 440-480VAC	Instantaneous Trip Current (A)	Short Circuit Rating 240VAC	Short Circuit Rating 480VAC
BM3RHB-1P6	1.0-1.16	NA	0.75	20.8	100	50
BM3RHB-2P5	1.6-2.5	0.5	1	32.5	100	50
BM3RHB-004	2.5-4.0	0.75	2	52	100	50
BM3RHB-6P3	4.0-6.3	1	3	81.9	100	50
BM3RHB-010	6.3-10.0	2	5	130	100	50
BM3RHB-013	9.0-13.0	3	7.5	169	100	50
BM3RHB-016	11.0-16.0	3	10	208	100	50
BM3RHB-020	14.0-20.0	5	10	260	100	50
BM3RHB-025	19.0-25.0	7.5	15	325	100	50
BM3RHB-032	24.0-32.0	10	20	416	100	50
BM3RHB-040	28.0-40.0	10	30	520	100	50
BM3VHB-050	35-50	15	30	650	100	50
BM3VHB-063	45-63	20	40	819	100	50
BZOWIA	1NO Aux Contact Block (Front)					
BZOWUABL	1NO + 1NC Aux Contact Block (Left Side)					
BZOBPRE22A	Base Plate - For Combination Starter - AC/DC					
BZOLRE22AA	Link Module - For Combination Starter - SC-E02 & E03 series - AC coil					
BZOLRE22GA	Link Module - For Combination Starter - SC-E02G & E03G series - DC coil					
Adjustable thermal-magnetic trip, 45mm frame size, on/off and trip state indicators, rated insulation voltage: 690V						
3 poles, rotary handle, maximum 25 motor start-ups/hour, phase-loss protection, trip indicator, test trip function						
IEC 60947-1, 60947-2, 60947-4-1, UL 508 file E163944						

MMS reversing starter
Build your MMS reversing starter from these Fuji components. Reversing busbars and mechanical interlocks are designed to integrate with the MMS and SC-E series contractors.

- Front-mount optional contact blocks
- DIN-rail mountable base plate
- Fuji MMS
- Link module
- Reversing bar
- SC-E series contractor
- Reversing bar
- Left side-mount optional auxiliary, alarm or short-circuit contact block
- Right side-mount optional shunt or under voltage trip device

Partners in Technology with **AutomationDirect**

AutomationDirect » Motor Starters

Part #	Description	Coil Voltage	HP Rating 230V 3Ph	HP Rating 460V 3Ph	Motor Rating Amps	Resistive Rating Amps
SC-E02G-24VDC	Fuji Contactor	24VDC	2	5	9	20
SC-E02-24VAC	Fuji Contactor	24VAC	2	5	9	20
SC-E02-110VAC	Fuji Contactor	110VAC	2	5	9	20
SC-E02-220VAC	Fuji Contactor	220VAC	2	5	9	20
SC-E03G-24VDC	Fuji Contactor	24VDC	3	7.5	12	20
SC-E03-110VAC	Fuji Contactor	110VAC	3	7.5	12	20
SC-E04G-24VDC	Fuji Contactor	24VDC	5	10	18	25
SC-E04-110VAC	Fuji Contactor	110VAC	5	10	18	25
SC-E05G-24VDC	Fuji Contactor	24VDC	7.5	10	18	25
SC-E05-110VAC	Fuji Contactor	110VAC	7.5	15	25	32
SZ-A11T	1NO + 1NC Front Mount Aux Contact					
SZ-AS1T	1NO + 1NC Side Mount Aux Contact					
SZ-RM	Reversing Mechanical Interlock					
SZ-ERW1A	Line side reversing connection kit					
SZ-ERW1D	Load side reversing connection kit					
SZ-Z1	Coil Surge Suppression 24-48V AC/DC					
SZ-Z2	Coil Surge Suppression 100-250V AC/DC					
TK-E02-145	Fuji Overload Relays			0.5	0.95 - 1.45	
TK-E02-220	Fuji Overload Relays			0.75	1.4 - 2.2	
TK-E02-260	Fuji Overload Relays		0.5	1	1.7 - 2.6	
TK-E02-340	Fuji Overload Relays				2.2 - 3.4	
TK-E02-420	Fuji Overload Relays		0.75	1.5 & 2	2.8 - 4.2	
TK-E02-600	Fuji Overload Relays		1	3	4.0 - 6.0	
TK-E02-800	Fuji Overload Relays		1.5		5.0 - 8.0	
TK-E02-900	Fuji Overload Relays		2	5	6.0 - 9.0	
TK-E02-1800	Fuji Overload Relays		5	10	12.0 - 18.0	
TK-E2-2600	Fuji Overload Relays		7.5	15	18-26	



Build a reversing starter with DUO line components

SC-E Contactor

- SZ-Z coil surge suppression unit
- SZ-AS1T auxiliary contact block
- SZ-AS1T auxiliary contact block
- SZ-A22T auxiliary contact block

Hitachi » Variable Frequency Drives (VFD/VSD/Inverter)

Hitachi Vector VFD	Voltage / Phase	Rated HP	Rated Amps	Line Reactor	Lapp Cable	Inverter 10:1 Duty Motors	Inverter 1800:1 Duty Motors
						Variable Torque	Constant Torque
SJ700-110HFUF2	480 VAC / 3ph	15	25	HRL120H	731204	E206 - 1800 RPM - 256T	Y552 - 1800RPM - 256TC
SJ700-150HFUF2	480 VAC / 3ph	20	32	HRL120H	731004	E207 - 1800 RPM - 284T	Y553 - 1800 RPM - 284TC
SJ700-185HFUF2	480 VAC / 3ph	25	38	HRL130H	730804	E208 - 1800 RPM - 286T	Y393 - 1800 RPM - 286TC
SJ700-220HFUF2	480 VAC / 3ph	30	48	HRL140H	730604	E209 - 1800 RPM - 324T	Y513 - 1800 RPM - 324TC
SJ700-300HFUF2	480 VAC / 3ph	40	58	HRL150H	730404	E210 - 1800 RPM - 326T	Y514 - 1800 RPM - 326TC
SJ700-370HFUF2	480 VAC / 3ph	50	75	HRL150H	730204	E211 - 1800 RPM - 364T	Y515 - 1800 RPM - 364TC
SJ700-450HFUF2	480VAC / 3ph	60	91	HRL175H	760103	E212 - 1800 RPM - 365T	Y516 - 1800 RPM - 365TC
SJ700-550HFUF2	480 VAC / 3ph	75	112	HRL1100H	761103	E213 - 1800 RPM - 405T	Y517 - 1800 RPM - 405TC
SJ700-750HFUF2	480VAC / 3ph	100	149	HRL1125H	763303		
SJ700-900HFUF2	480 VAC / 3ph	125	176	HRL1150H	764403		
SJ700-1100HFUF2	480 VAC / 3ph	150	217	HRL1200H	763503		
SJ700-1500HFUF2	480 VAC / 3ph	200	260	HRL1250H	765003		
SJ700-1850HFUF2	480 VAC / 3ph	250 / 300	370	HRL1303H			
SJ700-2200HFUF2	480 VAC / 3ph	300 / 350	440	HRL1400H			
SJ700-3150HFUF2	480 VAC / 3ph	350/400/450	600	HRL1500H			

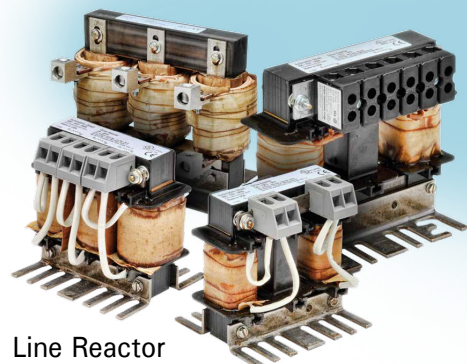
- All drives include a RS-485 **Modbus-RTU** port standard
- All drives can add a SJ-EN card for **Modbus/TCP** Ethernet Protocol
- SJ700 drives can add a SJ-FB for **Encoder Feedback** option
- All drives can use ProDriveNext **PC-base configuration software (FREE)** + use USB-CONVERTERCABLE
- All drives should add a WOP - **Enhanced Digital Operator** - 5-line LCD display - stores 4 sets data

Hitachi SJ700 Series AC Variable Speed Drives



HITACHI
Inspire the Next

Inverter-duty AC motors



Line Reactor



AutomationDirect » Variable Frequency Drives up to 100HP

Part #	HP	Voltage	Phase	Rated Amps	Line Reactor	Inverter Duty Motors
GS2 VFD or VSD						Marathon microMAX
GS2 Inverter						Constant Torque 20:1 TEFC
2 year warranty					10 year warranty	3 year warranty
GS2-10P2	0.25	115/230	1ph in - 3ph out	1.6		Y500 - 1800RPM - 56C
GS2-10P5	0.5	115/230	1ph in - 3ph out	2.5		Y360 - 1800RPM - 56C
GS2-20P5	0.5	230	1ph or 3ph in - 3ph out	2.5		Y360 - 1800RPM - 56C
GS2-21P0	1	230	1ph or 3ph in - 3ph out	4.2		Y364 - 1800RPM - 56C
GS2-22P0	2	230	1ph or 3ph in - 3ph out	7	LR-22P0	Y368 - 1800RPM - 145TC
GS2-23P0	3	230	1ph or 3ph in - 3ph out	11	LR-23P0	Y1999 - 1800RPM - 182TC
GS2-25P0	5	230	3ph in - 3ph out	17	LR-25P0	Y1372 - 1800RPM - 184TC
GS2-27P5	7.5	230	3ph in - 3ph out	25	LR-27P5	Y994 - 1800RPM - 213TC
GS2-41P0	1	460	3ph in - 3ph out	2.7	LR-41P0	Y364 - 1800RPM - 56C
GS2-42P0	2	460	3ph in - 3ph out	4.2	LR-42P0	Y368 - 1800RPM - 145TC
GS2-43P0	3	460	3ph in - 3ph out	5.5	LR-43P0	Y1999 - 1800RPM - 182TC
GS2-45P0	5	460	3ph in - 3ph out	8.5	LR-45P0	Y1372 - 1800RPM - 184TC
GS2-47P5	7.5	460	3ph in - 3ph out	13	LR-47P5	Y994 - 1800RPM - 213TC
GS2-4010	10	460	3ph in - 3ph out	18	LR-4010	Y996 - 1800RPM - 215TC

- Use LAPP Cable Part # 731604 for all of the above drives for Load Side EMI Rated Cabling to the Inverter Duty Motors
- GS2 drives are for simple Volts/Hertz control - PWM - IGBT - 150% rated current for 1 minute
- All GS2 drives have RS-232/485 Modbus RTU communications
- Electronic overload protection - Adjustable accel and decel ramps - Dynamic and DC braking circuit
- Input Line Reactors protect the AC drive from transient overvoltage conditions and reduces harmonics.
- Output Line Reactors are recommended for operating "non-inverter-duty" motors
- Output Line Reactors protect the motor insulation against drive short circuits & IGBT reflective wave damage
- Output Line Reactors "smooth" the motor current waveform allowing the motor to run cooler



AutomationDirect » STELLAR Soft Starters

Stellar - SR44 Soft Starter	O/L Trip Class
Default	10
Heavy	20
Agitator	10
Air Compressor - Equalized	10B
Air Compressor - Loaded	20
Ball Mill	20
Centrifuge - extended start	Size
Chiller	10B
Conveyor - Unloaded	10B
Conveyor - Loaded	20
Crusher	30
Escalator	10B
Fan - Low inertia <85A	10
Fan - High inertia >85A	30
Feeder - Screw	10
Grinder	20
Hammer Mill	20
Lathe Machine	10B
Mills - Flour, etc.	20
Mixer - Unloaded	10B
Mixer - Loaded	20
Pelletizer	20
Plastic and Textile Machines	10B
Press - Flywheel	20
Pump - Centrifugal	10B
Pump - Positive Displacement - Unloaded	10
Rolling Mill	20
Saw - Band	10
Saw - Circular	20
Screen - Vibrating	20
Transformer, Voltage Regulator	10B
Tumbler	10
Wood Chipper	30

Stellar SR44 Full-Featured Soft Starters										
Motor Size								SR44 Soft Starter		
In-Line Connection				In-Delta Connection**				Application Trip Class		
I (A)	HP @ 208V*	HP @ 230V	HP @ 460V	I (A)	HP @ 208V	HP @ 230V	HP @ 460V	Class	Class	Class
9	2	3	5	15	2	3	7.5	SR44-9	SR44-16	SR44-23
16	3	5	10	27	3	5	15	SR44-16	SR44-23	SR44-30
23	5	7.5	15	39	5	7.5	25	SR44-23	SR44-30	SR44-44
30	7.5	10	20	51	7.5	10	30	SR44-30	SR44-44	SR44-59
44	10	15	30	76	10	15	50	SR44-44	SR44-59	SR44-72
59	15	20	40	102	15	20	60	SR44-59	SR44-72	SR44-85
72	20	25	50	124	20	25	75	SR44-72	SR44-85	SR44-105
85	25	30	60	147	25	30	100	SR44-85	SR44-105	SR44-146
105	30	40	75	181	30	40	125	SR44-105	SR44-146	SR44-174
146	50	60	100	252	50	60	150	SR44-146	SR44-174	SR44-202
174	60	75	150	301	60	75	250	SR44-174	SR44-202	SR44-242
202	60	75	150	349	60	75	300	SR44-202	SR44-242	SR44-300
242	75	100	200	419	75	100	300	SR44-242	SR44-300	SR44-370
300	100	100	250	519	100	100	350	SR44-300	SR44-370	N/A
370	125	150	300	640	125	150	350	SR44-370	N/A	N/A



AC Motor Soft Starters

STELLAR® SR22, SR33 and SR44 series solid state soft starters provide many advantages when used instead of electro-mechanical contactors to control 3-phase AC induction motors.

- SR44 series energy-optimizing full-featured 3-phase soft starters feature:
 - 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
 - Can be connected 'in-the-delta'
 - Full digital control with keypad, I/O, or optional serial communication
- Thyristors in all three motor phases
- SR33 series basic 3-phase soft starters:
 - Fits in similar footprint to Star/Delta starter
 - 3-potentiometer setup makes installation easy
- SR22 series compact 3-phase soft starters:
 - Easy potentiometer setup
 - Includes six error conditions/fault indications: AC Supply, Control Supply, OverHeat, Bypass Failure, Shear Pin, and OverCurrent alarms

AutomationDirect » Advanced Microstepping Solutions

Motor	Amps	Cable	Input Fusing	Advanced Microstepping Drive	Unregulated Linear Power Supply
STP-MTR-17040	1.7	STP-EXT-020	DN-F6L110	STP-DVR-4850	0.1 to 5A/phase
STP-MTR-17048	2	STP-EXT-020	MDL4	STP-DVR-4850	18-53VDC
STP-MTR-17060	2	STP-EXT-020		STP-DVR-4850	
STP-MTR-23055	2.8	STP-EXT-020		STP-DVR-4850	
STP-MTR-23079	2.8	STP-EXT-020		STP-DVR-4850	
STP-MTR-34066	2.8	STP-EXT-020		STP-DVR-4850	
STP-MTRH-23079	5.6	STP-EXTH-020	DN-F6L110	STP-DRV-80100	0.1 to 10A/phase
STP-MTRH-34066	6.3	STP-EXTH-020	MDL6-25	STP-DRV-80100	18-88VDC
STP-MTRH-34097	6.3	STP-EXTH-020		STP-DRV-80100	
STP-MTRH-34127	6.3	STP-EXTH-020		STP-DRV-80100	
Configuration Software				STP-PRO	
Programming/Communication Cable				SPP-232RJ11-CBL	

Drives do step & direction, CW, CCW step, A/B quadrature, Serial indexing, Analog input 0-5VDC for velocity speed control

» Sure Step/Servo/Gear



» Low Inertia Servo Motors & Gearbox Options

Power	Servo Drive	Servo Motor	20' Power Cable	20' Encoder Cable	Gear Ratio	Motor Torque lb in	Output Torque lb in	Gearbox
100 W	SVA-2040	SVL-201	SVC-PFL-020	SVC-EFL-020	5	2.8	14.1	PGA070-05A1
100 W	SVA-2040	SVL-201	SVC-PFL-020	SVC-EFL-020	10	2.8	28.1	PGA070-10A1
100 W	SVA-2040	SVL-201	SVC-PFL-020	SVC-EFL-020	15	2.8	42.2	PGA070-15A1
200 W	SVA-2040	SVL-202	SVC-PFL-020	SVC-EFL-020	5	5.7	28.3	PGA070-05A2
200 W	SVA-2040	SVL-202	SVC-PFL-020	SVC-EFL-020	10	5.7	56.6	PGA070-10A2
200 W	SVA-2040	SVL-202	SVC-PFL-020	SVC-EFL-020	15	5.7	85	PGA070-15A2
400 W	SVA-2040	SVL-204	SVC-PFL-020	SVC-EFL-020	5	11.2	56.2	PGA070-05A2
400 W	SVA-2040	SVL-204	SVC-PFL-020	SVC-EFL-020	10	11.2	112.4	PGA070-10A2
400 W	SVA-2040	SVL-204	SVC-PFL-020	SVC-EFL-020	15	11.2	168.6	PGA070-15A2
750W	SVA-2100	SVL-207	SVC-PFL-020	SVC-EFL-020	5	21.2	105.8	PGA070-05A3
750W	SVA-2100	SVL-207	SVC-PFL-020	SVC-EFL-020	10	21.2	211.5	PGA090-10A3
750W	SVA-2100	SVL-207	SVC-PFL-020	SVC-EFL-020	15	21.2	317.3	PGA090-15A3
1000W	SVA-2100	SVL-210	SVC-PHM-020	SVC-EHH-020	5	29.2	146	PGA090-05A4
1000W	SVA-2100	SVL-210	SVC-PHM-020	SVC-EHH-020	10	29.2	292.1	PGA090-10A4
1000W	SVA-2100	SVL-210	SVC-PHM-020	SVC-EHH-020	15	29.2	438.1	PGA120-15A4
Ziplink Cable Kit		ASD-BM-50A						
Configuration Software	SV-PRO							
Cable	SVC-PCCFG-CBL							

IronHorse GSD Series DC drives

Input voltages of 12/24/36 VDC, 12/24 VAC, 120/240 VAC

- Output voltages of 12/24/90/180 VDC
- Output current up to 20A!
- Available in open frame and NEMA 4/12 or 4X enclosed versions

GSD1 Series DC Drives: High-performance Pulse-Width-Modulated (PWM) controllers for 12 to 36 volt battery/solar-powered equipment - up to 1/2 hp

GSD3 Series DC Drives: Compact, economical variable speed SCR controllers for small DC and universal motor applications - up to 2/3 hp

GSD4 Series DC Drives: Cost efficient, reliable SCR control for permanent magnet, shunt wound, and universal motors - up to 2 HP

GSD5 Series DC Drives: General purpose line of SCR drives rated to 2 hp

GSD6 Series DC Drives: Most fully-featured IronHorse analog DC SCR drive with standard features offered as options by other DC drives - up to 3 hp

GSD7 Series DC Drives: Instant reversing, quick stopping and rapid cycling SCR drive utilizing unique zero-speed detect and dynamic braking circuits - up to 2 hp



IRONHORSE®

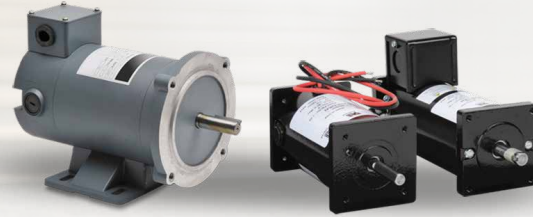
IronHorse Permanent Magnet DC Motors (SCR Rated)

DC Motors (up to 2 hp)

IronHorse DC motors are designed for use on unfiltered SCR (Thyristor) type and PWM (pulse width modulated) type DC adjustable speed drives, and on across-the-line DC controls.

The IronHorse line of DC motors features:

- Replacement brush sets
- Simple two-lead connection
- Class F insulation Small-frame motors (1/4 hp and under), available models: 12VDC, 24VDC, 90VDC (110 VAC DC drive), and 180VDC (230 VAC DC drive)
- Motors 1/3 hp and above:
 - NEMA 56C flange mount
 - 90 VDC (0.33 - 1.5 hp)
 - 180 VDC (0.33 - 2.0 hp)



DC Gearmotors (up to 0.25 hp)

IronHorse industrial grade DC gearmotors offer excellent torque output ratings.

- 386:1 to 11:1 gear ratios
- Available in 12, 24, and 90 VDC
- 1/31 to 1/4 hp
- Models available with parallel or right-angle gear shafts
- Replacement brush sets
- Simple two-lead connection
- Class F insulation



AutomationDirect » DC Drives & DC Motors

DC Drive Frame	Input Voltage	Amps	DC Motor Horsepower	Drive Part #	Notes	IronHorse DC Motors	DC Volt - HP - RPM - Torque
Enclosed - NEMA 4X	12VDC	10	1/50-1/8 (0-12V)	GSD1-12-10N4X		MTPM-P10-1JK43	12 - 1/20 - 1746 - 28 oz-in
Enclosed - NEMA 4	12/24VAC	3	1/50-1/25 (12V); 1/25-1/12 (24V)	GSD3-24A-3N4		MTPM-P10-1JK43	24 - 1/10 - 4252 - 28 oz-in
Enclosed - NEMA 4X	24/36VDC	10	1/50-1/4 (0-24/36V)	GSD1-24-10N4X		MTPM-P25-1JK44	24 - 1/4 - 4375 - 70 oz-in
Enclosed - NEMA 4	120/240VAC	3	1/50-1/3 (90V); 1/25-2/3 (180V)	GSD3-240-3N4		MTPM-P33-1L18	90 - 1/3 - 1800 - 0.97 lb-ft
Enclosed - NEMA 4X	120/240VAC	10	1/8-1 (90V); 1/4-2 (180V)	GSD4-240-10N4X		MTPM-P50-1L18	90 - 1/2 - 1800 - 1.46 lb-ft
Enclosed - NEMA 4/12	120/240VAC	10	1/8-1 (90V); 1/4-2 (180V)	GSD5-240-10N4		MTPM-P75-1L18	90 - 3/4 - 1800 - 2.19 lb-ft
Enclosed - NEMA 4/12	120/240VAC	10	1/8-1 (90V); 1/4-2 (180V)	GSD5-240-10N4-R	Manual Reversing	MTPM-001-1L18	90 - 1.0 - 1800 - 2.92 lb-ft
Enclosed - NEMA 4/12	120/240VAC	10	1/8-1 (90V); 1/4-2 (180V)	GSD5-240-10N4-A	Current Follower	MTPM-1P5-1M18	180 - 1.5 - 1800 - 4.38 lb-ft
Enclosed - NEMA 4/12	120/240VAC	10	1/8-1 (90V); 1/4-2 (180V)	GSD5-240-10N4-V	Voltage Follower	MTPM-002-1M18	180 - 2.0 - 1800 - 5.84 lb-ft
Open	12VDC	10	1/50-1/8 (0-12V)	GSD1-12-10C		MTPM-P13-1JK42	12 - 1/17 - 1825 - 32 oz-in
Open	12VDC	20	1/25-1/4 (0-12V)	GSD1-12-20C		MTPM-P17-1JK43	12 - 1/13 - 1841 - 42 oz-in
Open	12/24VAC	2	1/50-1/40 (12V); 1/25-1/20 (24V)	GSD3-24A-2CL	3.97" H x 1.28" D	N/A	
Open	12/24VAC	2	1/50-1/40 (12V); 1/25-1/20 (24V)	GSD3-24A-2CJ	3.33" H x 1.97" D	N/A	
Open	24/36VAC	.15 - 5.5	1/50-1/6 (0-24/36V)	GSD4-24A-5C		MTPM-P17-1JK43	24 - 1/6 - 4290 - 42 oz-in
Open	24/36VDC	10	1/50-1/4 (0-24/36V)	GSD1-24-10C		MTPM-P25-1JK40	24 - 1/4 - 3996 - 80 oz-in
Open	24/36VDC	20	1/25-1/2 (0-24/36V)	GSD1-24-20C		MTPM-P25-1JK44	24 - 1/4 - 4375 - 70 oz-in
Open	120/240VAC	1.2	1/50-1/8 (90); 1/25-1/4 (180V)	GSD4-240-1C		MTPM-P13-1L19	90 - 1/8 - 1917 - 73 oz-in
Open	120/240VAC	15	1/8-1.5 (90V); 1/4-3 (180V)	GSD6-240-15C		MTPM-002-1M18	180 - 2.0 - 1800 - 5.84 lb-ft
Open	120/240VAC	2	1/50-1/6 (90V); 1/25-1/3 (180V)	GSD3-240-2CL		MTPM-P14-1L19	90 - 1/7 - 1740 - 86 oz-in
Open	120/240VAC	2	1/50-1/6 (90V); 1/25-1/3 (180V)	GSD3-240-2CJ		MTPM-P14-1L19	90 - 1/7 - 1740 - 86 oz-in
Open	120/240VAC	5.5	1/8-1/2 (90V); 1/4-1 (180V)	GSD4-240-5C		MTPM-P50-1M18	180 - 1/2 - 1800 - 1.46 lb-ft
Open	120/240VAC	10	1/8-1 (90V); 1/4-2 (180V)	GSD5-240-10C		MTPM-001-1M18	180 - 1.0 - 1800 - 2.92 lb-ft
Open - Auto Reversing	120VAC	1.2	1/15-1/8 (0-90V)	GSD7-120-1CR3	3 cycles/min	MTPM-P13-1L19	90 - 1/8 - 1917 - 73 oz-in
Open - Auto Reversing	120VAC	5.5	1/8-1/2 (0-90V)	GSD7-120-5CR3	3 cycles/min	MTPM-P14-1L19	90 - 1/7 - 1740 - 86 oz-in
Open - Auto Reversing	120VAC	1.2	1/15-1/8 (0-90V)	GSD7-120-1CR30	30 cycles/min	MTPM-P14-1L19	90 - 1/7 - 1740 - 86 oz-in
Open - Auto Reversing	120VAC	10	1/8-1.0 (0-90)	GSD7-120-10CR30	30 cycles/min	MTPM-001-1L18	90 - 1.0 - 1800 - 2.92 lb-ft
Open - Auto Reversing	240VAC	1.2	1/25-1/4 (0-180V)	GSD7-240-1CR3	3 cycles/min	MTPM-P14-1M18	180 - 1/7 - 1828 - 84 oz-in
Open - Auto Reversing	240VAC	5.5	1/8-1.0 (0-180V)	GSD7-240-5CR3	3 cycles/min	MTPM-001-1M18	180 - 1.0 - 1800 - 2.92 lb-ft
Open - Auto Reversing	240VAC	10	1/4 - 2.0 (0-180V)	GSD7-240-10CR30	30 cycles/min	MTPM-002-1M18	180 - 2.0 - 1800 - 5.84 lb-ft
				GSDA-DP	Digital Potentiometer		
				GSDA-5K	Replacement Pot		

DC motors and drives provide several advantages and benefits over AC-powered devices:

- Inexpensive - DC drives are typically less expensive than AC drives
- Low speed performance - DC drives and motors provide excellent low speed control and stability
- Low speed power - DC motors provide exceptional low speed torque and power
- Simple - our DC drives are typically configured with potentiometers - no parameters or programming needed
- If required... Check out the IronHorse DC GearMotors to go with some of the above

Typical Applications

- Auger Feeders
- Automated door actuators
- Commercial cooking equipment
- Commercial lift
- Food production
- Industrial Pumping Systems
- Measurement Instruments
- Miniature lathes and mills
- Packaging / material handling
- Printing and labeling machines
- Small shop machine tools
- Spray / print reciprocating head

Saginaw » Enclosures



Your Enclosure Source®



Tahoe-Reno Industrial Center

Saginaw Control & Engineering, has been serving the electrical industry since 1963. We specialize in manufacturing both standard stock and custom designed enclosures as well as precision sheet metal fabrications. Our 265,000 square foot manufacturing facility, located in Saginaw, Michigan, uses state of the art fabricating equipment including the newest laser technology. All products are protected with the highest quality paint and powder finishes available in today's market. SCE supplies top quality products built to accurate dimensions. From concept to completion, the SCE staff will work with you to satisfy your enclosure requirements. Whether you require a standard stock enclosure or a custom built enclosure, SCE can be Your Enclosure Source®.

Saginaw Control & Engineering (SCE)

HeadQuarters in Saginaw, MI - West Coast Distribution Center in Reno, Nevada

Wall-Mount

- Pushbutton
- Enviroline
- Type 3R
- Two-Door
- Clamp Fastened
- Type 1

Stainless Steel Wall-Mount Enviroline Sloping Top

- Enviroline

Free-Standing & Floor Mount

Free- Standing Single and Dual Access

- Two-Door
- Multi-Door
- Heavy Duty Disconnect
- Free-Standing / Wall-Mount Disconnect
- Stainless Steel Free-Standing
- Enviroline Sloping Top

Stainless Steel Free-Standing & Floor Mount

- Enviroline

Modular Enclosures

- Modular
- IMS
- Operator System Enclosures
- Stainless Steel

CSE Program

- Customized Standard Enclosures
- Many colors
- Laser cut-outs and holes with CAD drawing
- Accessories
- Thermal Management
- Mounting Options
- Door Hardware
- Mounting Panels
- Protective Access Enclosures
- General Accessories (Lights, etc.)

Integra » Polycarbonate Enclosures

- Alternative Energy - UV Resistant
- Marine - Corrosion & Leakage Resistant
- Water - Strong, Durable, & NEMA 4X
- Oil & Gas - Chemical Resistant
- Communications - UV Light and Strong



Headquarters
Mentor, OH

Outdoor Applications
NEMA 4X & 6P

Sizes	Sizes
6 x 6 x 3	10 x 8 x 6
6 x 6 x 4	12 x 10 x 4
8 x 6 x 3	12 x 10 x 6
8 x 6 x 4	14 x 12 x 6
8 x 8 x 4	16 x 14 x 7
9 x 8 x 2	18 x 16 x 10
10 x 8 x 2	24 x 24 x 10
10 x 8 x 4	
Choose Cover Type	Screw, Screw Hinged, Hinged
Choose Mounting System	Mounting Feet, Flange Kit
Choose Locking System	Locking Latch, Three Point, Quarter Turn
	Stainless Steel Locking Latch, None
Choose Backpanel	Aluminum, PVC, Steel
Accessories	Cord Grips, DIN Rails, Pole Mount Kit
	Swing Out Panels, Vents & Fan Shroud Kit



CSE PROGRAM (Customized Standard Enclosures)

NEMA-Type Electrical Enclosures
Integra enclosures are offered in three basic product lines: the Premium Line, the JIC Line, and the Telecom Line. All non-metallic enclosures are injection-molded, engineered thermoplastics, designed to provide the best combinations of strength, durability, design features, and aesthetics.



Thermal Edge » Enclosure Air Conditioners



Enclosure Cooling	
Natural Convection Cooling	Make sure that there is proper space between components, therefore larger enclosure required
Forced Convection Cooling	Fan blowing cold air into enclosure usually bottom left and louver or fan blowing hot air out usually top right
Closed Loop Cooling	Air Conditioner that forces cold air in and sucks hot air back into the air conditioner to cool it down
What causes the heat?	Internal Sources such as: Power Supplies, AC Drives/Inverters, Transformers, Communication products, Battery back-up system, Servos, Soft Starters, PLCs, & HMIs External Sources such as: Industrial Ovens, Foundry Equipment, Solar heat gain, Blast Furnaces
Fan Selection (CFM) - Determine Heat	CFM - Cubic Feet per Minute $P = \text{Power to be dissipated in watts}$ $CFM = (3.17 \times P_{\text{watts}}) / \Delta T \text{ in Deg. F}$ $\Delta T = \text{maximum allowable internal enclosure temp (Deg. F) minus the maximum outside ambient temp}$
Air Conditioner Selection	Internal Heat Load = BTU per Hour = Watts x 3.413 (example get watt loss from VFD chart) Heat Load Transfer = BTU/H = 1.25 x surface area (sq ft) x (max outside ambient air (Deg. F) - maximum allowable internal enclosure temperature air (Deg. F)) Surface Area (sqft) = 2 [(HxW) + (HxD)] / 144 sq inches BTU/Hour from 1000 to 20,000 offered by Thermal Edge
Thermal Edge - Standard Options	Condensate evaporation package Fully programmable digital controller Thermal expansion valve Full product line available in NEMA Types 12, 4, & 4X UL Listed under Standard 484, file number SA32252 ON/Off switch as mandated by UL Standard 484 Rigid chassis and seam welded shroud Manufactured in USA
Thermal Edge - Options	Protective Coil Coating to prevent corrosion caused by salt or chemical laden environment Enclosure door kill switch Integrated Heat Packages to provide total temperature control for your enclosure year round Dry Contact Options to allow the use of alarms, lights, and notifications Remote monitoring options External Heat Control to allow for customers to use a separately mounted heater in their enclosure Vibration Package allows for enclosure cooling on cranes, moving vehicles, etc. 2" Deep Extended Filter Media for applications like flour, cement, or coal when a standard filter loads too quickly OD Remote Controller Option to place our digital controller inside the electrical enclosure - more secure UL Listed Hazardous Location option - Class 1 Div 2 - Groups B,C,&D

AutomationDirect » Control Power Transformers

Hammond HPS Imperator control transformers are specifically designed for high inrush applications requiring reliable output voltage stability. Get years of reliable service from quality industrial control transformers at practical prices.



Control Power Transformer "CPT"	VA 50/60Hz	Primary Voltage	Secondary Voltage	Output Amps	Primary Side Fuse Kit Use HCTR Fuses	Fuse Cover
PH50MQMJ	50 VA	240x480	120x240	0.42/0.21	FG1	PFK1
PH75MQMJ	75 VA	240x480	120x240	0.63/0.31	FG2	PFK1
PH100MQMJ	100 VA	240x480	120x240	0.83/0.42	FG2	PFK1
PH150MQMJ	150 VA	240x480	120x240	1.25/0.63	FG3	PFK2
PH250MQMJ	250 VA	240x480	120x240	2.08/1.04	FG3	PFK2
PH350MQMJ	350 VA	240x480	120x240	2.92/1.46	FG4	PFK3
PH500MQMJ	500 VA	240x480	120x240	4.17/2.08	FG4	PFK3
PH750MQMJ	750 VA	240x480	120x240	6.25/3.13	FG4	PFK3
PH1000MQMJ	1000 VA	240x480	120x240	8.33/4.17	FG5	PFK3
PH1500MQMJ	1500 VA	240x480	120x240	12.5/6.25	FG5	PFK3
PH50MGJ	50 VA	208/277/380	120x240	0.42/0.21	FG2	PFK4
PH75MGJ	75 VA	208/277/380	120x240	0.63/0.31	FG2	PFK5
PH100MGJ	100 VA	208/277/380	120x240	0.83/0.42	FG2	PFK5
PH150MGJ	150 VA	208/277/380	120x240	1.25/0.63	FG3	PFK6
PH250MGJ	250 VA	208/277/380	120x240	2.08/1.04	FG4	PFK6
PH350MGJ	350 VA	208/277/380	120x240	2.92/1.46	FG4	PFK7
PH500MGJ	500 VA	208/277/380	120x240	4.17/2.08	FG4	PFK7
PH50PG	50 VA	120x240	12x24	4.17/2.08	FG1	PFK1
PH75PG	75 VA	120x240	12x24	6.25/3.13	FG2	PFK1
PH100PG	100 VA	120x240	12x24	8.33/4.17	FG2	PFK1
PH150PG	150 VA	120x240	12x24	12.5/6.25	FG3	PFK2
PH250PG	250 VA	120x240	12x24	20.8/10.4	FG3	PFK2
PH350PG	350 VA	120x240	12x24	29.2/14.6	FG4	PFK3
PH500PG	500 VA	120x240	12x24	41.7/20.8	FG4	PFK3
PH750PG	750 VA	120x240	12x24	62.5/31.3	FG4	PFK3
PH1000PG	1000 VA	120x240	12x24	83.3/41.7	FG5	PFK3

Secondary Fuse Kits utilizing 13/32" x 1 1/2" fuse clips included on all CPTs (Use MEN Fuses)

HPS Commercial Transformers	kVA 60 Hz	Primary Voltage	Secondary Voltage	Output Amps
C1FC50LE	0.5	240x480	120x240	4.17/2.08
C1FC75LES	0.75	240x480	120x240	6.25/3.13
C1F1C0LES	1	240x480	120x240	8.33/4.17
C1F1C5LES	1.5	240x480	120x240	12.5/6.25
C1F002LES	2	240x480	120x240	16.7/8.33
C1F003LES	3	240x480	120x240	25.0/12.5
C1F005LES	5	240x480	120x240	41.7/20.8
C1F007LES	7.5	240x480	120x240	62.5/31.3
C1F010LES	10	240x480	120x240	83.3/41.6
C1F015LES	15	240x480	120x240	125/62.5

AutomationDirect » Eaton Miniature Circuit Protectors

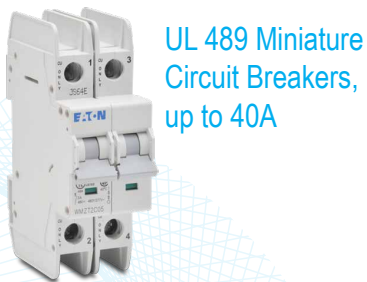
AutomationDirect » Circuit Protection

UL 1077 Supplementary Protectors

- DIN rail mountable
- Full line of auxiliary switches, alarm switches and padlock lockout accessories
- B trip curve 6 to 60 amps
- C trip curve 0.5 to 60 amps
- D trip curve 0.5 to 40 amps



WMZS Series Supplementary Protectors



UL 489 Miniature Circuit Breakers, up to 40A

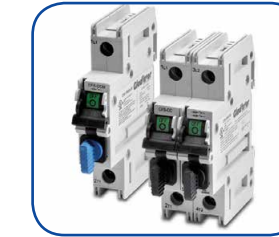
Amp	Curve	1 Pole UL1077	2 Pole UL1077	3 Pole UL1077	1 Pole UL489	2 Pole UL489	3 Pole UL489
0.5	B	N/A	N/A	N/A	N/A	N/A	N/A
0.5	C	WMZS1C00	WMZS2C00	WMZS3C00	WMZT1CX0	WMZT2CX0	WMZT3CX0
0.5	D	WMZS1D00	WMZS2D00	WMZS3D00	WMZT1DX0	WMZT2DX0	WMZT3DX0
1	B	N/A	N/A	N/A	N/A	N/A	N/A
1	C	WMZS1C01	WMZS2C01	WMZS3C01	WMZT1C01	WMZT2C01	WMZT3C01
1	D	WMZS1D01	WMZS2D01	WMZS3D01	WMZT1D01	WMZT2D01	WMZT3D01
2	B	N/A	N/A	N/A	N/A	N/A	N/A
2	C	WMZS1C02	WMZS2C02	WMZS3C02	WMZT1C02	WMZT2C02	WMZT3C02
2	D	WMZS1D02	WMZS2D02	WMZS3D02	WMZT1D02	WMZT2D02	WMZT3D02
3	B	N/A	N/A	N/A	N/A	N/A	N/A
3	C	WMZS1C03	WMZS2C03	WMZS3C03	WMZT1C03	WMZT2C03	WMZT3C03
3	D	WMZS1D03	WMZS2D03	WMZS3D03	WMZT1D03	WMZT2D03	WMZT3D03
5	B	N/A	N/A	N/A	N/A	N/A	N/A
5	C	WMZS1C05	WMZS2C05	WMZS3C05	WMZT1C05	WMZT2C05	WMZT3C05
5	D	WMZS1D05	WMZS2D05	WMZS3D05	WMZT1D05	WMZT2D05	WMZT3D05
6	B	WMZS1B06	WMZS2B06	WMZS3B06	N/A	N/A	N/A
6	C	WMZS1C06	WMZS2C06	WMZS3C06	WMZT1C06	WMZT2C06	WMZT3C06
6	D	WMZS1D06	WMZS2D06	WMZS3D06	WMZT1D06	WMZT2D06	WMZT3D06
7	B	WMZS1B07	WMZS2B07	WMZS3B07	N/A	N/A	N/A
7	C	WMZS1C07	WMZS2C07	WMZS3C07	WMZT1C07	WMZT2C07	WMZT3C07
7	D	WMZS1D07	WMZS2D07	WMZS3D07	WMZT1D07	WMZT2D07	WMZT3D07
8	B	WMZS1B08	WMZS2B08	WMZS3B08	N/A	N/A	N/A
8	C	WMZS1C08	WMZS2C08	WMZS3C08	WMZT1C08	WMZT2C08	WMZT3C08
8	D	WMZS1D08	WMZS2D08	WMZS3D08	WMZT1D08	WMZT2D08	WMZT3D08
10	B	WMZS1B10	WMZS2B10	WMZS3B10	N/A	N/A	N/A
10	C	WMZS1C10	WMZS2C10	WMZS3C10	WMZT1C10	WMZT2C10	WMZT3C10
10	D	WMZS1D10	WMZS2D10	WMZS3D10	WMZT1D10	WMZT2D10	WMZT3D10
13	B	WMZS1B13	WMZS2B13	WMZS3B13	N/A	N/A	N/A
13	C	WMZS1C13	WMZS2C13	WMZS3C13	WMZT1C13	WMZT2C13	WMZT3C13
13	D	WMZS1D13	WMZS2D13	WMZS3D13	WMZT1D13	WMZT2D13	WMZT3D13
15	B	WMZS1B15	WMZS2B15	WMZS3B15	N/A	N/A	N/A
15	C	WMZS1C15	WMZS2C15	WMZS3C15	WMZT1C15	WMZT2C15	WMZT3C15
15	D	WMZS1D15	WMZS2D15	WMZS3D15	WMZT1D15	WMZT2D15	WMZT3D15
16	B	WMZS1B16	WMZS2B16	WMZS3B16	N/A	N/A	N/A
16	C	WMZS1C16	WMZS2C16	WMZS3C16	WMZT1C16	WMZT2C16	WMZT3C16
16	D	WMZS1D16	WMZS2D16	WMZS3D16	WMZT1D16	WMZT2D16	WMZT3D16
20	B	WMZS1B20	WMZS2B20	WMZS3B20	N/A	N/A	N/A
20	C	WMZS1C20	WMZS2C20	WMZS3C20	WMZT1C20	WMZT2C20	WMZT3C20
20	D	WMZS1D20	WMZS2D20	WMZS3D20	WMZT1D20	WMZT2D20	WMZT3D30
25	B	WMZS1B25	WMZS2B25	WMZS3B25	N/A	N/A	N/A
25	C	WMZS1C25	WMZS2C25	WMZS3C35	WMZT1C25	WMZT2C25	WMZT3C25
25	D	WMZS1D25	WMZS2D25	WMZS3D25	WMZT1D25	WMZT2D25	WMZT3D25
30	B	WMZS1B30	WMZS2B30	WMZS3B30	N/A	N/A	N/A
30	C	WMZS1C30	WMZS2C30	WMZS3C30	WMZT1C30	WMZT2C30	WMZT3C30
30	D	WMZS1D30	WMZS2D30	WMZS3D30	WMZT1D30	WMZT2D30	WMZT3D30
32	B	WMZS1B32	WMZS2B32	WMZS3B32	N/A	N/A	N/A
32	C	WMZS1C32	WMZS2C32	WMZS3C32	WMZT1C32	WMZT2C32	WMZT3C32
32	D	WMZS1D32	WMZS2D32	WMZS3D32	WMZT1D32	WMZT2D32	WMZT3D32
40	B	WMZS1B40	WMZS2B40	WMZS3B40	N/A	N/A	N/A
40	C	WMZS1C40	WMZS2C40	WMZS3C40	WMZT1C40	WMZT2C40	WMZT3C40
40	D	WMZS1D40	WMZS2D40	WMZS3D40	WMZT1D40	WMZT2D40	WMZT3D40
50	B	WMZS1B50	WMZS2B50	WMZS3B50	N/A	N/A	N/A
50	C	WMZS1C50	WMZS2C50	WMZS3C50	N/A	N/A	N/A
50	D	N/A	N/A	N/A	N/A	N/A	N/A
63	B	WMZS1B63	WMZS2B63	WMZS3B63	N/A	N/A	N/A
63	C	WMZS1C63	WMZS2C63	WMZS3C63	N/A	N/A	N/A
63	D	N/A	N/A	N/A	N/A	N/A	N/A

UL 489 MCCBs



- Rated current up to 800A, max 600V
- Standard and high-interrupting capacity types

UL 248 Current Limiting Fuses



- Class T, RK5, RK1 and Class J current limiting short circuit protection up to 600A

UL 489 Miniature Circuit Breakers, up to 40A



- DIN-rail mounted
- Up to 40 amps
- 1, 2, or 3-pole available
- 10kAIC @ 277/480VAC

UL 98 Disconnect Switches



- Non-fusible and fusible rotary disconnect switches
- Make/break loads up to 800 amps

Bryant Manual Motor Controllers



- Lockout / Tagout capability
- 30, 40 and 60A up to 600 VAC
- 2-pole and 3-pole switches
- Quick make, slow break design
- UL Listed as "Suitable as Motor Disconnect" under UL 508

UL 508 Load Switches



- 35mm DIN rail mountable or direct mountable
- Loads from 16 to 125 amps
- IP20 degree of protection

UL 98 and UL 508 Compact Fusible Disconnect Switches



- Up to 30A, utilizing Class CC or Midget fuses
- 1, 2 and 3-pole models
- Open fuse indication
- Lockout/Tagout capability

UL 1077 Supplementary Protectors



- DIN rail mountable
- Full line of auxiliary switches, alarm switches and padlock lockout accessories
- B trip curve 6 to 63 amps
- C trip curve 0.5 to 63 amps
- D trip curve 0.5 to 40 amps

UL 248 General Fuses



- DIN rail mountable
- Full line of auxiliary switches, alarm switches and padlock lockout accessories
- B trip curve 6 to 60 amps
- C trip curve 0.5 to 60 amps
- D trip curve 0.5 to 40 amps

AutomationDirect » Fuji Molded Case

Fuji Circuit Breakers	Molded Case UL489 3-Pole Line and Load Lugs included Non-Adjustable Thermal magnetic trip		Accessories - Not Pre-Installed - Sold Separately
BW125JAGU-3P015SB	15A, 240/480/600VAC & 250VDC		BW125 & BW250 Frame Accessory Selection Guide
BW125JAGU-3P020SB	20A, 240/480/600VAC & 250VDC	BW9W1SG0	Field installable Auxiliary Contact - SPDT - 20AWG - 19.69" leads - Left side mount only
BW125JAGU-3P030SB	30A, 240/480/600VAC & 250VDC	BW9FRG0	Field installable DC shunt trip - 24VDC/AC, 20AWG - 19.69" leads - left & right side mount
BW125JAGU-3P040SB	40A, 240/480/600VAC & 250VDC	BW9FAG0	Field installable AC shunt trip - 100-120VAC, 20AWG - 19.69" leads - left & right side mount
BW125JAGU-3P050SB	50A, 240/480/600VAC & 250VDC	BW9RGAR	Field installable DC undervoltage release - 24VDC, 20AWG - 19.69" leads - left side mount only
BW125JAGU-3P060SB	60A, 240/480/600VAC & 250VDC	BW9RGAT	Field installable AC undervoltage release - 110-130VAC - 20AWG - 19.69" leads - left side mount only
BW125JAGU-3P070SB	70A, 240/480/600VAC & 250VDC	BW9V0CA	NEMA 12 rotary handle for BW125-Frame. Position indicating; lock-off feature. Shaft length 0.39"
BW125JAGU-3P075SB	75A, 240/480/600VAC & 250VDC	BW9V0GA	NEMA 12 rotary handle for BW250-Frame. Position indicating; lock-off feature. Shaft length 0.39"
BW125JAGU-3P080SB	80A, 240/480/600VAC & 250VDC	BW9VSG0	NEMA 12 rotary handle for BW9V0CA & BW9V0GA. Steel shaft length 6.06"
BW125JAGU-3P090SB	90A, 240/480/600VAC & 250VDC	BW9VSG0-24	NEMA 12 rotary handle for BW9V0CA & BW9V0GA. Steel shaft length 24"
BW125JAGU-3P100SB	100A, 240/480/600VAC & 250VDC	BW9FOCA-15A	NEMA 12 flexible shaft handle for BW125-Frame - Flange mount - Lockable - Flex cable shaft length - 1.5m
BW125JAGU-3P125SB	125A, 240/480/600VAC & 250VDC	BW9FOCA-20A	NEMA 12 flexible shaft handle for BW125-Frame - Flange mount - Lockable - Flex cable shaft length - 2m
BW250JAGU-3P125SB	125A, 240/480/600VAC & 250VDC	BW9FOGA-15A	NEMA 12 flexible shaft handle for BW250-Frame - Flange mount - Lockable - Flex cable shaft length - 1.5m
BW250JAGU-3P150SB	150A, 240/480/600VAC & 250VDC	BW9FOGA-20A	NEMA 12 flexible shaft handle for BW250-Frame - Flange mount - Lockable - Flex cable shaft length - 2m
BW250JAGU-3P160SB	160A, 240/480/600VAC & 250VDC	BW9Q1CA	Lockout attachment for BW125/250 series MCCBs. Lock not included.
BW250JAGU-3P175SB	175A, 240/480/600VAC & 250VDC		
BW250JAGU-3P200SB	200A, 240/480/600VAC & 250VDC		
BW250JAGU-3P225SB	225A, 240/480/600VAC & 250VDC		
BW250JAGU-3P250SB	250A, 240/480/600VAC & 250VDC		
			BW400, 630 & 800 Frame Accessory Selection Guide
BW400SAGU-3P250SB	250A, 240/480VAC & 250VDC	BW9W1SHA	Field installable Auxiliary Contact - SPDT - 20AWG - 19.69" leads - Left side mount only
BW400SAGU-3P300SB	300A, 240/480VAC & 250VDC	BW9FHA-R	Field installable DC shunt trip - 24VDC/AC, 20AWG - 19.69" leads - left & right side mount
BW400SAGU-3P350SB	350A, 240/480VAC & 250VDC	BW9FHA-A	Field installable AC shunt trip - 100-120VAC, 20AWG - 19.69" leads - left & right side mount
BW400SAGU-3P400SB	400A, 240/480VAC & 250VDC	BW9RHA-R	Field installable DC undervoltage release - 24VDC, 20AWG - 19.69" leads - left side mount only
BW630RAGU-3P500SB	500A, 240/480VAC & 250VDC	BW9RHA-1	Field installable AC undervoltage release - 110-130VAC - 20AWG - 19.69" leads - left side mount only
BW630RAGU-3P600SB	600A, 240/480VAC & 250VDC	BW9BTHA-L3W	Terminal Cover for BW400-frame MCCBs, line and load side, package of 2
BW800RAGU-3P700SB	700A, 240/480VAC & 250VDC	BW9BTJA-L3W	terminal Cover for BW630 & 800-frame MCCBs, line and load side, package of 2
BW800RAGU-3P800SB	800A, 240/480VAC & 250VDC	BW9V0HA	NEMA 12 rotary handle for BW400-Frame. Position indicating; lock-off feature. Shaft length 0.39"
		BW9V0JA	NEMA 12 rotary handle for BW630 & 800 Frame. Position indicating; lock-off feature. Shaft length 0.39"
		BZ-VS2	NEMA 12 rotary handle shaft for BW400,630,&800-frames. Steel shaft length: 3.48"
		BZ-VS2-24	NEMA 12 rotary handle shaft for BW400,630,&800-frames. Steel shaft length: 24"
		BW9FOHA-15A	NEMA 12 flexible shaft handle for BW400-Frame - Flange mount - Lockable - Flex cable shaft length - 1.5m
		BW9FOHA-20A	NEMA 12 flexible shaft handle for BW400-Frame - Flange mount - Lockable - Flex cable shaft length - 2m
		BW9FOJA-15A	NEMA 12 flexible shaft handle for BW630/800-Frame - Flange mount - Lockable - Flex cable shaft length - 1.5m
		BW9FOJA-20A	NEMA 12 flexible shaft handle for BW630/800-Frame - Flange mount - Lockable - Flex cable shaft length - 2m
		BW9QNHA	Lockout attachment for BW400/630/800 series MCCBs. Lock not included.

AutomationDirect » Eaton Molded Case



UL 489 MCCBs

- Rated current up to 800A, max 600V
- Standard and high-interrupting capacity types

Partners in Technology



Eaton Circuit Breakers	Molded Case UL489 3-pole Line and Load Lugs included Non-Adjustable thermal magnetic trip		G-Frame Accessory Selection Guide
G3P-015	15A, 240/480VAC	GHMVD06B	NEMA 1/12 rotary handle for G-Frame. Position indicating; lock-off feature. Shaft length: 6"
G3P-020	20A, 240/480VAC	GHMVD12B	NEMA 1/12 rotary handle for G-Frame. Position indicating; lock-off feature. Shaft length: 12"
G3P-025	25A, 240/480VAC	F0S03C	NEMA 1/12 flexible shaft handle for G-Frame. Flange mounted. Lockable. Shaft length: 3Ft
G3P-030	30A, 240/480VAC	F0S06C	NEMA 1/12 flexible shaft handle for G-Frame. Flange mounted. Lockable. Shaft length: 6Ft
G3P-040	40A, 240/480VAC	3TA100G6K	Multi-wire conductor to allow 6 wires to be connected to the G-Frame. UL for copper only. 14-6 AWG. PKG of 3
G3P-050	50A, 240/480VAC	GDIN	DIN rail clip adapter to allow mounting of G-Frame unit on 35mm DIN rail. Pkg of 1 includes mtg hdwr
G3P-060	60A, 240/480VAC		
G3P-070	70A, 240/480VAC		
G3P-080	80A, 240/480VAC		
G3P-090	90A, 240/480VAC		
G3P-100	100A, 240/480VAC		
			F-Frame Accessory Selection Guide
F3P-060	60A, 240/480/600VAC & 250VDC	FHMVD12B	NEMA 1/12 rotary handle for F-frame. Position indicating. Lock-off feature. Shaft length: 12"
F3P-070	70A, 240/480/600VAC & 250VDC	HM1R12X	NEMA 4/4X rotary handle for F-frame. Position indicating. Lock-off feature. Shaft length: 12"
F3P-080	80A, 240/480/600VAC & 250VDC	HM1R24X	NEMA 4/4X rotary handle for F-frame. Position indicating. Lock-off feature. Shaft length: 24"
F3P-090	90A, 240/480/600VAC & 250VDC	F1S03C	NEMA 1/12 flexible shaft handle for F-frame. Flange mount. Lockable. Shaft length: 3Ft
F3P-100	100A, 240/480/600VAC & 250VDC	F1S06C	NEMA 1/12 flexible shaft handle for F-frame. Flange mount. Lockable. Shaft length: 6Ft
F3P-125	125A, 240/480/600VAC & 250VDC	3TA150F6K	Multi-wire connector to allow 6 wires to be connected to the F-frame. UL for copper only. 14-6 AWG.v PKG of 3
F3P-150	150A, 240/480/600VAC & 250VDC	3TA225FD	Replacement lug kit for F-frame. Package of 3
F3P-175	175A, 240/480/600VAC & 250VDC		
F3P-200	200A, 240/480/600VAC & 250VDC		
F3P-225	225A, 240/480/600VAC & 250VDC		
			K-Frame Accessory Selection Guide
K3P-250	250A, 240/480/600VAC & 250VDC	KHMVD12B	NEMA 1/12 rotary handle for K-Frame. Position indicating. Lock-off feature. Shaft length: 12"
K3P-300	300A, 240/480/600VAC & 250VDC	HM3R12X	NEMA 4/4X rotary handle for K-Frame. Position indicating. Lock-off feature. Shaft length: 12"
K3P-350	350A, 240/480/600VAC & 250VDC	HM3R24X	NEMA 4/4X rotary handle for K-Frame. Position indicating. Lock-off feature. Shaft length: 24"
K3P-400	400A, 240/480/600VAC & 250VDC	F3S03C	NEMA 1/12 flexible shaft handle for K-Frame. Flange mount. Lockable. Shaft Length: 3Ft
		F3S06C	NEMA 1/12 flexible shaft handle for K-Frame. Flange mount. Lockable. Shaft Length: 6Ft
	Note: may save money with buying kits initially	A1X3PK	Field installable auxiliary contact for K-Frame MCCB, SPDT, 18" pigtail leads
		SNT3P11K	Field installable 110-240VAC/110-125VDC shunt trip for K-Frame, 18" pigtail leads
		SNT3P04K	Field installable 12/24VDC/VAC shunt trip for K-Frame, 18" pigtail leads
		3TA401K	Replacement lug kit for K-Frame. Package of 3
		UVH3LP08K	Field installable 110-127VAC undervoltage release for K-Frame, 18" pigtail leads
		UVH3LP21K	Field installable 24VDC undervoltage release for K-Frame, 18" pigtail leads



AutomationDirect » Mersen Non Fused Load Switches



Non-Fused Load Switches - Rotary Handle		
600VAC - 5k AIC		
Amps	Black Handle	Red Handle
16	SD1-016-BR	SD1-016-RR
25	SD1-025-BR	SD1-025-RR
32	SD1-032-BR	SD1-032-RR
40	SD1-040-BR	SD1-040-RR
63	SD2-063-BR	SD2-063-RR
80	SD2-080-BR	SD2-080-RR
100	SD2-100-BR	SD2-100-RR
125	SD2-125-BR	SD2-125-RR

Part #	Accessories for SD1 and SD2 Non-Fused Load Switches
SD1-4P	Additional 4th pole for SD1 non-fused load switches; 40A rating
SD2-4P	Additional 4th pole for SD2 non-fused load switches; 125A rating
SD1-GP	Ground pole for SD1 non-fused load switches
SD2-GP	Ground pole for SD2 non-fused load switches
SD1-AUX	Aux contact for SD1 - 1NO1NC
SD2-AUX	Aux contact for SD2 - 1NO1NC
SD-CON	Connect 2 non-fused load switches to 1 remote operator (use SD-S200)
SD-S100	Remote operator shaft for 100mm length, purchase handle separately
SD-S200	Remote operator shaft for 200mm length, purchase handle separately
SD-S300	Remote operator shaft for 300mm length, purchase handle separately
SD-HB	Remote Black handle, non-defeatable, IP65 when properly installed
SD-HRY	Remote red-yellow handle, non-defeatable, IP65 when properly installed

AutomationDirect » Mersen Front Operated Non-Fusible & Fusible Disconnects



Part #	Description	Non-Fusible	Fusible
SCV30	30A (15HP @ 480V) Non-Fusible Disconnect		
SCV60	60A (30HP @ 480V) Non-Fusible Disconnect		
SCV100	100A (60HP @ 480V) Non-Fusible Disconnect		
SCV200	200A (125HP @ 480V) Non-Fusible Disconnect		
SCV400	400A (250HP @ 480V) Non-Fusible Disconnect		
FBCC30CDT	30A (15HP @ 480V) Fusible Disconnect (Compact)		Class CC Fuses
FBJ30CDT	30A (15HP @ 480V) Fusible Disconnect (Compact)		Class CC Fuses
FBJ30	30A (15HP @ 480V) Fusible Disconnect (Standard Frame)		Class J Fuses
FBJ60	60A (30HP @ 480V) Fusible Disconnect (Standard Frame)		Class J Fuses
FBJ100	100A (60HP @ 480V) Fusible Disconnect (Standard Frame)		Class J Fuses
FBJ200	200A (125HP @ 480V) Fusible Disconnect (Standard Frame)		Class J Fuses

SG120-5	Operator Shaft, type G, 120mm, 5x5mm thick, purchase handle separately	SCV30	FBCC30CDT, FBJ30CDT
SG200-10	Operator Shaft, type G, 200mm, 10x10 thick, purchase handle separately	SCV60 - SCV400	FBJ30 - FBJ200
SG200-5	Operator Shaft, type G, 200mm, 5x5mm thick, purchase handle separately	SCV30	FBCC30CDT, FBJ30CDT
SG320-10	Operator Shaft, type G, 320mm, 10x10 thick, purchase handle separately	SCV60 - SCV400	FBJ30 - FBJ200
SG320-5	Operator Shaft, type G, 320mm, 5x5mm thick, purchase handle separately	SCV30	FBCC30CDT, FBJ30CDT
SG400-10	Operator Shaft, type G, 400mm, 10x10mm thick, purchase handle separately	SCV60 - SCV400	FBJ30 - FBJ200

HADB6	Direct operation handle, 315mm, padlocking on the switch, NFPA 79 compliant	SCV30	FBCC30CDT, FBJ30CDT
HADB8	Direct operation handle, 315mm, padlocking on the switch, NFPA 79 compliant	SCV60 - SCV400	FBJ30 - FBJ200
HDPB	Black Pistol handle, NEMA 12, 63mm, Type D, defeatable & lockable	SCV30	
HDPR	Red & Yellow Pistol handle, NEMA 12, 63mm, Type D, defeatable & lockable	SCV30	
HGPB	Black Pistol handle, NEMA 12, 71mm, Type G, defeatable & lockable	SCV30	FBCC30CDT, FBJ30CDT
HGPB4	Black Pistol handle, NEMA 4X, 71mm, Type G, defeatable & lockable	SCV30	FBCC30CDT, FBJ30CDT
HGPB4L	Black Pistol handle, NEMA 4X, 126mm, Type G, defeatable & lockable	SCV60 - SCV400	FBJ30 - FBJ200
HGPBL	Black Pistol handle, NEMA 12, 126mm, Type G, defeatable & lockable	SCV60 - SCV400	FBJ30 - FBJ200
HGPR	Red & Yellow Pistol handle, NEMA 12, 71mm, Type G, defeatable & lockable	SCV30	FBCC30CDT, FBJ30CDT
HGPR4	Red & Yellow Pistol handle, NEMA 4X, 71mm, Type G, defeatable & lockable	SCV30	FBCC30CDT, FBJ30CDT
HGPR4L	Red & Yellow Pistol handle, NEMA 4X, 127mm, Type G, defeatable & lockable	SCV60 - SCV400	FBJ30 - FBJ200
HGPR4L	Red & Yellow Pistol handle, NEMA 12, 127mm, Type G, defeatable & lockable	SCV60 - SCV400	FBJ30 - FBJ200

ACHCD	Auxiliary contact holder (accommodates up to 4 auxiliary contacts)	SCV30	FBCC30CDT, FBJ30CDT
ACH	Auxiliary contact holder (accommodates up to 8 auxiliary contacts)	SCV60 - SCV400	FBJ30 - FBJ200
AC3	Aux contact for non-fused - 1NO, 10A, 600VAC	All Non-Fused	All FB Series Switches
AC4	Aux contact for non-fused - 1NC, 10A, 600VAC	All Non-Fused	All FB Series Switches
TL100	Terminal Lug Kit, Aluminum, tin-plated, 2/0 to #14, 6 lugs per kit		FBJ100
TL200	Terminal Lug Kit, Aluminum, tin-plated, 3/0 to #6, 6 lugs per kit	SCV200	FBJ200
TL400	Terminal Lug Kit, Aluminum, tin-plated, 600Mcm to #2, 6 lugs per kit	SCV400	

AutomationDirect » Fuses



Fuse Holders



Fuse Blocks



Fuse

Fuse Series	Class	Amp Range	Description	Application
JDL	J	1A to 600A	Most popular current limiting dual element time delay fuses available. Small physical size and high performance characteristics makes the class J ideal for any space limited applications	All general purpose circuits with high inrush inductive loads including motor branch circuits and transformers. Also suited for lighting loads. Recommended for type 2 (no damage) protection of IEC style motors, starters, and contactors.
JHL			JHL Class J fuses combine the performance of high-speed semiconductor fuses and the convenience of Class J branch-circuit fuses in one small package. Ideal for AC and DC drives and controllers.	AC and DC drives, electronic motor controllers, power semiconductor devices that utilize diodes, GTOs, SCRs, or SSRs.
ECNR	RK5	1A to 600A	The dual element time delay characteristics of these fuses typically allows them to be sized closer to the running ampacity of inductive loads to reduce cost and improve over current protection	Use in AC power distribution system mains, feeders, and branch circuits. Recommended for high inrush inductive loads, like motors and transformers, and non inductive loads like lighting, and heating loads.
ECSR		3A to 600A		
LENRK	RK1	10A to 600A	These dual element time delay fuses have up to 40% more current limitation and up to 350% more I2t limitation under fault conditions than the ECNR and ECSR fuses, reducing the potential for damage.	Use in AC power distribution system mains, feeders, and branch circuits. Recommended for high inrush inductive loads, like motors and transformers, and non inductive loads like lighting, and heating loads
LESRK		5A to 600A		
TJN	T	1A to 600A	These fuses are extremely fast-acting fuses in a compact, space-saving size.	These fuses are ideal as the main fuse protection for panel boards, load centers, meter stacks, and AC drives.
TJS				
HCTR	CC	0.5A to 30A	Fast acting characteristics with 200kA Interrupting Rating, and compact design are an excellent choice for inductive loads as well as resistive loads	Recommended for branch circuit protection, resistive heating loads, and lighting loads
EDCC	CC	0.25A to 30A	Time delay characteristics with 200kA Interrupting Rating, and compact design are an excellent choice for high inductive loads. Meets the requirements of the NEC® 430.72 and UL508	Recommended for Motor Branch protection, short circuit protection required by NEC® 430.52 and for Primary protection for control transformer loads.
MCL	Midget	0.5A to 50A	Provides supplemental protection to end-use equipment with a 100KA interruption rating, 600VAC. Fast acting design responds quickly to both overloads and short-circuit protection	Recommended for control circuits, street lighting, HID lighting, and electronic equipment protection
MOL	Midget	0.5A to 30A	Provides supplemental protection to end-use equipment with a 10,000A interruption rating, economical laminated paper tube	Recommended to use as supplemental protection for non inductive control loads and lighting circuit
MEQ	Midget	0.25 to 30A	Provides supplemental protection to high inrush loads has a 10,000A interruption rating, 500VAC. Fiber tube construction	Recommended to use as supplemental protection for inductive control loads such as transformers and solenoids.
MEN	Midget	0.5A to 30A	Provides supplemental protection to high inrush loads has a 10,000A interruption rating, fiber tube construction. Dual element allows harmless inductive surges to pass without opening.	Recommended to use as supplemental protection for inductive control loads such as transformers and solenoids, and other high inrush electronics circuits.
ABC	1 1/4" x 1/4" Ceramic	0.5A to 30A	Fast acting 1/4" x 1-1/4" ceramic tube construction. Small dimension electronic fuses."	Recommended as supplemental protection for electronic applications
AGC	1 1/4" x 1/4" Glass	0.5A to 30A	Fast acting 1/4" x 1-1/4" glass tube construction. Small dimension electronic fuses."	Recommended as supplemental protection for electronic applications
GMA	5mm x 20mm Glass	0.063A to 15A	Fast acting 5mm x 20mm glass tube construction. Small dimension electronics fuses"	Recommended as supplemental protection for electronic applications
GMC	5mm x 20mm Glass	0.5A to 10A	Medium Time Delay 5mm x 20mm glass tube construction. Small dimension electronics fuses."	Recommended as supplemental protection for electronic applications
MDA	1 1/4" x 1/4" Ceramic	0.5A to 20A	Time Delay 1/4" x 1-1/4" ceramic tube construction. Small dimension electronics fuses."	Recommended as supplemental protection for electronic applications
MDL	1 1/4" x 1/4" Glass	0.0625A to 20A	Time Delay 1/4" x 1-1/4" glass tube construction. Small dimension electronics fuses."	Recommended as supplemental protection for electronic applications
S500	5mm x 20mm Glass	0.032A to 10A	Fast acting 5mm x 20mm glass tube construction. Small dimension electronics fuses."	Recommended as supplemental protection for electronic applications
S506	5mm x 20mm Glass	0.25A to 6.3A	Time Delay 5mm x 20mm glass tube construction. Small dimension electronics fuses"	Recommended as supplemental protection for electronic applications



SOLO® Temperature Controllers / Process Controllers

AutomationDirect's SOLO single-loop temperature controllers offer dual output control ideal for heating/cooling loops.

- Simple pushbutton operation and a dual 4-digit 7-segment display for Process Variable and Setpoint
- 1/32 DIN, 1/16 DIN, 1/8 DIN, or 1/4 DIN sizes available
- Four types of control modes: PID with autotune, ON/OFF, Ramp / Soak and Manual
- Output types include relay, voltage pulse, current, and linear voltage (depending upon controller model)
- Universal inputs on all models, including thermocouple, RTD, and analog current or voltage
- Built-in RS-485 interface using Modbus slave (ASCII or RTU) communication protocol
- FREE configuration / monitoring software (SL-SOFT, downloadable from our Web site)

AutomationDirect » Solo Controllers

Part #	Size	Input Voltage	Control Output 1	Control Output 2	Event Inputs	Alarm Outputs	RS-485 Port
SL4824-RR	1/32 DIN	120/240VAC	3A SPST Relay	3A SPST Relay	N/A	Use Control Out 2	Yes
SL4824-VR	1/32 DIN	120/240VAC	Voltage Pulse	3A SPST Relay	N/A	Use Control Out 2	Yes
SL4824-CR	1/32 DIN	120/240VAC	Current	3A SPST Relay	N/A	Use Control Out 2	Yes
SL4848-RR	1/16 DIN	120/240VAC	3A SPST Relay	3A SPST Relay	N/A	3A SPST	Yes
SL4848-VR	1/16 DIN	120/240VAC	Voltage Pulse	3A SPST Relay	N/A	3A SPST	Yes
SL4848-CR	1/16 DIN	120/240VAC	Current	3A SPST Relay	N/A	3A SPST	Yes
SL4848-RR-D	1/16 DIN	24VDC	3A SPST Relay	3A SPST Relay	N/A	3A SPST	Yes
SL4896-RRE	1/8 DIN	120/240VAC	5A SPST Relay	5A SPST Relay	Event 1&2	3A SPST (2)	Yes
SL9696-RRE	1/4 DIN	120/240VAC	5A SPST Relay	5A SPST Relay	Event 1&2	3A SPST (2)	Yes
SL9696-VRE	1/4 DIN	120/240VAC	Voltage Pulse	5A SPST Relay	Event 1&2	3A SPST (2)	Yes
SL9696-CRE	1/4 DIN	120/240VAC	Current	5A SPST Relay	Event 1&2	3A SPST (2)	Yes
SL9696-LRE	1/4 DIN	120/240VAC	Linear Voltage	5A SPST Relay	Event 1&2	3A SPST (2)	Yes



Signal Conditioners / Signal Isolators

Signal conditioners convert process, temperature and other electrical signals into voltage or current signals for use with PLCs, loop controllers, encoders, digital displays or any application requiring an isolated or analog signal.

AutomationDirect » Signal Conditioners

Signal Conditioner	Input Ranges	Output Ranges	Ext Power	Isolation (1 second)
FC-33	0-5V, 0-10V, 0-20ma, 4-20mA	0-5V, 0-10V, 0-20mA, 4-20mA	24VDC	1500 VDC (input - output, power - input, power-output)
FC-11	4-20mA (3.5ma to 20.6mA +/-1%)	4-20mA (3.5mA to 20.6mA +/-1%)	24VDC	1500 VDC Input - Output
FC-T1	Type - J,K,E,R,S,T,B,N,C	4-20mA	24VDC	1500 VDC Input - Output commons
FC-R1	CU10, PT100, PT1000	4-20mA (linearized)	24VDC	
FC-P3	0-100 ohms 3-wire potentiometer	0-5V, 0-10V, 0-20mA, 4-20mA	24VDC	1500VDC (Input -output) 1000VDC (Power-In, Power-out)
FC-35B	0-5V, 0-10V, 0-20ma, 4-20mA	Bipolar +/- 5V, 10V, or 15V	24VDC	1800VDC (input-output, power - input, power - output)
FC-B34	Bipolar +/-5V,10V,15V, 50mV	0-5V, 0-10V, 0-20mA, 4-20mA	24VDC	1800VDC (input-output, power - input, power - output)
FC-ISO-C	Encoder	Optical Isolator - Open Collector	24VDC	1800VDC (input-output)
FC-ISO-D	Encoder	Differential Line Driver	24VDC	1800VDC (input-output)
884116	mA, V, RTD, T/C, Potentiometer	16 ranges of Analog Output	24VDC	Universal Signal Conditioner
		2 programmable Form A relay outputs	24VDC	2A AC or 1A DC maximum - 0 to 3600 sec On-Off delay
884501	Programming/display module	Detachable		Required for configuring the Universal Signal Conditioner

AutomationDirect & IDEC » Power Supplies

Part #	Input Power	Volts	Amps	Watts	Mounting	Housing	Op Temp	Derating	Approvals	Comment
PS5R-SB24	85-264VAC - 100-350VDC	24V DC	0.65A	15	DIN or Panel	Plastic	-10C to +60C	None	UL508 - CL1D2	IDEC
PS5R-SC24	85-264VAC - 100-350VDC	24V DC	1.3A	30	DIN or Panel	Plastic	-10C to +60C	None	UL508 - CL1D2	IDEC
PS5R-SD24	85-264VAC - 100-350VDC	24V DC	2.5A	60	DIN or Panel	Plastic	-10C to +60C	None	UL508 - CL1D2	IDEC
PS5R-SE24	85-264VAC - 100-350VDC	24V DC	3.75A	90	DIN or Panel	Plastic	-10C to +60C	None	UL508 - CL1D2	IDEC
PS5R-SF24	85-264VAC - 100-350VDC	24V DC	5.0A	120	DIN or Panel	Plastic	-10C to +60C	None	UL508 - CL1D2	IDEC
PS5R-SG24	85-264VAC - 100-350VDC	24V DC	10A	240	DIN or Panel	Plastic	-10C to +60C	None	UL508 - CL1D2	IDEC
PSB24-060S-P	85-264VAC	24VDC	2.5A	60	DIN rail	Plastic	-25C to +80C	>50C	UL508	ADC
PSB24-060S	85-264VAC - 120-375VDC	24VDC	2.5A	60	DIN rail	Aluminum	-25C to +80C	>50C	UL508 - CL1D2	ADC
PSB24-120S	85-264VAC - 120-375VDC	24VDC	5.0A	120	DIN rail	Aluminum	-20C to +80C	>50C	UL508 - CL1D2	ADC
PSB24-240S	85-264VAC - 120-375VDC	24VDC	10A	240	DIN rail	Aluminum	-20C to +80C	>50C	UL508 - CL1D2	ADC
PSB24-480S	85-264VAC - 120-375VDC	24VDC	20A	480	DIN rail	Aluminum	-20C to +80C	>50C	UL508 - CL1D2	ADC
PSB60-REM20S	24-48VDC (redundancy or parallel module for both 1ph and 3ph PSB)		20A		DIN rail	Aluminum	-25C to +80C		UL508 - CL1D2	Redundancy & Parallel
PSB60-REM40S	24-48VDC (redundancy or parallel module for both 1ph and 3ph PSB)		40A		DIN rail	Aluminum	-25C to +80C		UL508 - CL1D2	Redundancy & Parallel
PSB24-060S-3	320 to 600VAC - 3 phase (use 3 pole 16A B-curve breaker)	24-28VDC	2.5A	60	DIN rail	Aluminum	-25C to +80C	>50C	UL 508	ADC
PSB24-120S-3	320 to 600VAC - 3 phase (use 3 pole 16A B-curve breaker)	24-28VDC	5A	120	DIN rail	Aluminum	-25C to +80C	>50C	UL 508	ADC
PSB24-240S-3	320 to 600VAC - 3 phase (use 3 pole 16A B-curve breaker)	24-28VDC	10A	240	DIN rail	Aluminum	-25C to +80C	>50C	UL 508	ADC
PSB24-480S-3	320 to 600VAC - 3 phase (use 3 pole 16A B-curve breaker)	24-28VDC	20A	480	DIN rail	Aluminum	-25C to +80C	>50C	UL 508	ADC
PSB24-960S-3	320 to 600VAC - 3 phase (use 3 pole 16A B-curve breaker)	24-28VDC	40A	960	DIN rail	Aluminum	-25C to +80C	>50C	UL 508	ADC
PSM24-090S	100-240VAC - 85-264VDC (most rugged power supply)	24VDC	3.75A	90	DIN rail	Aluminum	-25C to +70C	>40C	UL508	Rem On/OFF - Power Good
PSM24-180S	100-240VAC - 85-264VDC (most rugged power supply)	24VDC	7.5A	180	DIN rail	Aluminum	-25C to +70C	>40C	UL508	Rem On/OFF - Power Good
PSM24-REM360S	2 x 24VDC - 2 x Control Input (Two 0.5m cables included)	24VDC		up to 360	DIN rail	Aluminum	-25C to +70C	>40C	UL508	Redundancy Module
PSM24-BCM360S	24VDC PS + 24VDC battery (charge & monitor external lead acid battery)	24VDC		up to 360	DIN rail	Aluminum	-25C to +70C	>40C	UL508	Battery Control Module
PSP12-060S	85-264VAC - 85-375VDC	12VDC	4.0A	60	DIN or Panel	Plastic	-10C to +70C	>40C	UL508	ADC
PSP12-120S	85-264VAC - 85-375VDC	12VDC	8.0A	120	DIN or Panel	Plastic	-10C to +70C	>40C	UL508	ADC
PSP24-DC12-1	9.5-18VDC	24VDC	1.0A	24	DIN or Panel	Plastic	-10C to +70C	>40C	UL508	DC Converter
PSP24-024S	85-264VAC - 85-375VDC	24VDC	1.0A	24	DIN or Panel	Plastic	-10C to +70C	>40C	UL508	Power Good Signal
PSP24-060S	85-264VAC - 85-375VDC	24VDC	2.5A	60	DIN or Panel	Plastic	-10C to +70C	>40C	UL508	Power Good Signal

AutomationDirect & IDEC » Relays

Part #	Configuration	Amps	Type	Coil	Base
RS4N-DE	ADC - (4) SPST Relays included in card holder	5A	Panel Mount	24VDC	None
RV8H-L-AD110	IDEC - SPDT Relay	6A	6mm DIN Rail	120VAC	None
RV8H-L-D24	IDEC - SPDT Relay	6A	6mm DIN Rail	24VDC	None
QL2N1-A120	ADC - DPDT Relay	10A	Cube	120VAC	SQL08D
QL2N1-D24	ADC - DPDT Relay	10A	Cube	24VDC	SQL08D
781-1C-120A	ADC - SPDT Relay	15A	Cube	120VAC	781-1C-SKT
781-1C-24A	ADC - SPDT Relay	15A	Cube	24VAC	781-1C-SKT
781-1C-24D	ADC - SPDT Relay	15A	Cube	24VDC	781-1C-SKT
782-2C-120A	ADC - DPDT Relay	15A	Cube	120VAC	782-2C-SKT
782-2C-24D	ADC - DPDT Relay	15A	Cube	24VDC	782-2C-SKT
783-3C-120A	ADC - 3PDT Relay	15A	Cube	120VAC	783-3C-SKT
783-3C-24D	ADC - 3PDT Relay	15A	Cube	24VDC	783-3C-SKT
784-4C-120A	ADC - 4PDT Relay	15A	Cube	120VAC	784-4C-SKT-1
784-4C-24A	ADC - 4PDT Relay	15A	Cube	24VAC	784-4C-SKT-1
784-4C-24D	ADC - 4PDT Relay	15A	Cube	24VDC	784-4C-SKT-1
RSSDN-25A	IDEC - Solid State Relay	25A	Panel Mount	4-32VDC	None
AD-SSR225-DC	ADC - Solid State Relay	25A	DIN Rail	3-32VDC	None
RSCDN-45A	IDEC - Solid State Relay	45A	DIN Rail	4-32VDC	None
LG5924-02-61-24	Dold - 1Ch E-Stop Safety Relay - SIL2-Cat2	4A	DIN Rail - Output 2NO	24VDC	None
LG5924-48-61-24	Dold - 1Ch E-Stop Safety Relay - SIL2-Cat2	15A	DIN Rail - Output 2NO+1NC	24VDC	None
LG5925-48-61-24	Dold - 2Ch E-Stop & Safety Gates - SIL3-CAT4	4A	DIN Rail - Output 3NO+1NC	24VAC/DC	None
LG5925-48-61-110	Dold - 2Ch E-Stop & Safety Gates - SIL3-CAT4	3A	DIN Rail - Output 3NO+1NC	110VAC	None
LG5925-48-900-61	Dold - 2Ch Light Curtain Controller - SIL3-CAT4	5A	DIN Rail - Output 3NO+1NC	24VDC	None
LG5929-60-100-61	Dold - Safety Relay Extension Module - SIL3-CAT4	4A	DIN Rail - Output 5NO+1NC	24VAC/DC	None



PSP24-120S



PSP24-060S



PSP24-024S



Rhino PSM Series Power Supplies



PSM24-REM360S



IDEC PS5R Series



Rhino PSB Series Power Supplies



RV8H Series



781-1C-120A



Safety Relay Modules



AD-SSR640 Solid State Relays



781-1C-SKT

AutomationDirect » Pilot Devices

Pilot Devices	22mm ADC Plastic	22mm ADC Metal	30mm Eaton
Black Pushbutton (1NO)	GCX3100	GCX1100	HT8AAHA
Legend Plate - Power On	E22NS80	E22NS80	HT8SP80
Red Pushbutton (1NC)	GCX3101	GCX1101	HT8AARB
Legend Plate - Stop	E22NS34	E22NS34	HT8SP34
Green Pushbutton (1NO)	GCX3102	GCX1102	HT8AAGA
Legend Plate - Start	E22NS33	E22NS33	HT8SP33
Yellow Pushbutton (1NO)	GCX3103	GCX1103	
Blue Pushbutton (1NO)	GCX3104	GCX1104	
Legend Plate - Reset	E22NS29	E22NS29	HT8SP29
Red Mushroom Head - Emergency Stop - Twist to release	GCX3131	GCX1131	HT8CBRB (1NC) Push-Pull
Red Mushroom Head - Emergency Stop - Key Operated	GCX3141	GCX1141	HT8CBRAB (1NO1NC) Push-Pull
Legend Plate - Emergency Stop - Oversized Yellow Circular	ECX1651	ECX1651	HT8RP79 ("ESTOP")
2-position Black Selector Switch - Knob	GCX3300	GCX1300	HT8JAH3AA5
2-position Black Selector Switch - Key-op - Maintained	GCX3420	GCX1420	
2-position Black Selector Switch - Key-op - Spring ret fr right	GCX3420	GCX1430	
Legend Plate - Off On	E22NS42	E22NS42	HT8SP42
3-position Black Selector Switch Maintained - Knob	GCX3320-22	GCX1320-22	HT8JBH1DAA5
3-position Black Selector Switch Spring Return to Ctr - Knob	GCX3330-22	GCX1330-22	HT8JXH1DAA5
3-position Black Selector Switch Spring Return to Ctr - Lever	GCX3380-22	GCX1380-22	HT8JYH1DAA5
3-position Black Selector Switch - Key-operated - Maintained	GCX3470-22	GCX1470-22	
Legend Plate - Hand Off Auto	E22NS51	E22NS51	HT8SP51
Potentiometer with 5K ohm resistance		ECX2300-5K	
Potentiometer with 10k ohm resistance		ECX2300-10K	
Legend Plate - Potentiometer		ECX2640	
Hole Plug		ECX1490	
	LED	LED	Incandescent
Green Indicating Light - 24VDC	ECX2052-24L	GCX1232-24L	HT8HFGV3
Red Indicating Light - 24VDC	ECX2051-24L	GCX1231-24L	HT8HFRV3
Yellow / Amber Indicating Light - 24VDC	ECX2053-24L	GCX1233-24L	HT8HFAV3
Blue Indicating Light - 24VDC	ECX2054-24L	GCX1234-24L	HT8HFBV3
Clear Indicating Light - 24VDC	ECX2055-24L	GCX1235-24L	HT8HFCV3
Green Indicating Light - 120VAC	ECX2052-127L	GCX1232-120L	HT8HFGV7
Red Indicating Light - 120VAC	ECX2051-127L	GCX1231-120L	HT8HFRV7
Yellow / Amber Indicating Light - 120VAC	ECX2053-127L	GCX1233-120L	HT8HFAV7
Blue Indicating Light - 120VAC	ECX2054-127L	GCX1234-120L	HT8HFBV7
Clear Indicating Light - 120VAC	ECX2055-127L	GCX1235-120L	HT8HFCV7

Featured Products



Selector Switches, and Indicator Lights



22mm Plastic Pushbuttons, Selector Switches, and Indicator Lights

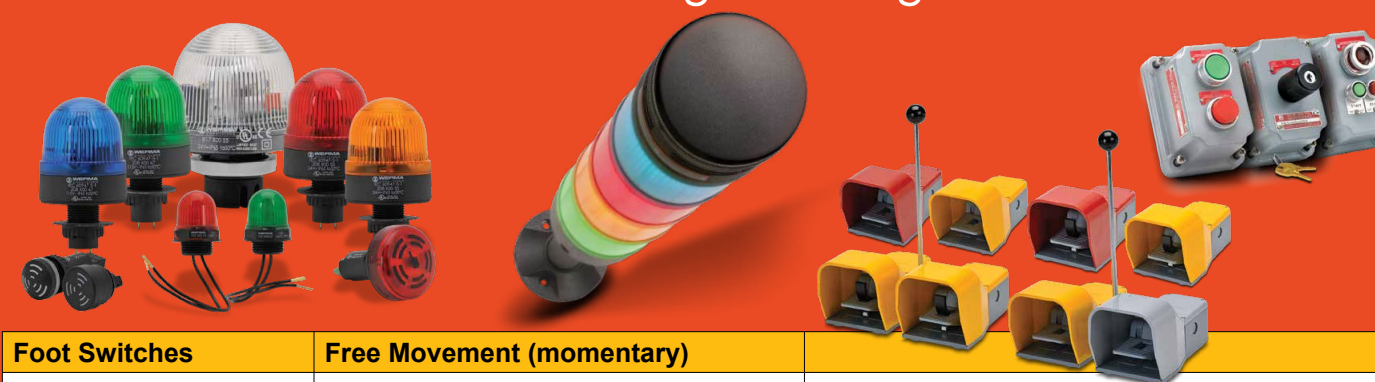


Eaton Cutler-Hammer 22mm Non-metal Pushbuttons, Switches and Lights



Eaton Cutler-Hammer 30mm Metal Pilot Devices - NEMA HT800 Series

AutomationDirect » Stacklights & Signal Devices



Foot Switches	Free Movement (momentary)	
Shearing, Spinning, Spinning Lathes, Wrapping	Locked in neutral position (safety anti-trip momentary)	
Riveting machines, & Riveting Presses	Latched in low position (maintained)	
	Plastic or Aluminum Units - Red, Yellow, or Gray	
ABS Plastic - Example System	APS1211-V0	Yellow, Single, ABS plastic, safety actuating lever, 1NO and 1NC
Die-cast Aluminum - Example System	APS1214-V0-M	Yellow, Single, die-cast, safety anti-trip momentary, 2NO and 2NC

Plastic Enclosures for 22mm Pilot Devices		
Single-hole - Gray	SA100SL (51mm deep)	SA103SL (74mm deep)
Single-hole - Gray body / Yellow Top	SA101SL (51mm deep)	SA104SL (74mm deep)
Two-hole - Gray	SA105-40SL (51mm deep)	SA106-40SL (74mm deep)
Three-hole - Gray	SA107-40SL (51mm deep)	SA108-40SL (74mm deep)
Four-hole - Gray	SA109-40SL (51mm deep)	SA110-40SL (74mm deep)
Five-hole - Gray		SA111 (74mm deep)
Six-hole - Gray		SA112 (74mm deep)

KILLARK Hazardous Location Pilot Devices	FXB Splice/Device Box - Dead End or Feed Through	
Class I Division 1 & 2, Groups C,D	Control Station Covers - 1PB,2PB,1PL,2PL,1SS,1Key	
	Sealing Compound, Packing Fiber, & Legend Plates	
FXCS - Example System - 2PB	FXB-2 + FXCS-0B4U	Single gang - Dead-End 3/4" + Green/Red - 1NO1NC Momen - Start Stop
FXCS - Example System - 2PL - 110VAC	FXB-5 + FXCS-0B30RLD-GLD	Single gang - Feed-Through 3/4" - Red/Green - 2 Blank Plates

Werma Modular Stack Lights	Step 1 - Optical Signal Elements	Inc, LED, LED Flashing, LED Blinking, LED Rotating, Xenon Flashing
KS 71 Elements - IP65 - 70mm diameter - standard	Step 2 - Audible Signal Elements	Buzzer or Siren
KS 50 Elements - IP54 - 50mm diameter - small	Step 3 - Plain or Tube Base Mount	Screw or Cage Clamp
24VDC & 115VAC - 5 colors, audible elements	Step 4 - Select a base and desired tube length	Only for tube mounting - skip step if no tube required
	Step 5 - Select the bracket and the contact box	
KS71 - Example System 1	64310067 + 64320067 + 64082000	Red & Green Xenon Flashing 115VAC w/Plain Base Screw Terminal
KS50 - Example System 2	84811067 + 84821067 + 84500000	Red & Green LED Blinking Light 115VAC w/Plain Base Screw Terminal

WERMA Signal Devices	Step 1 - Optical Signal Elements - 5 colors	Inc, LED, LED Flash, LED Blink, LED Rotate, LED DF/EVS, XenonFlash
Panel/Through Mount Beacons and Buzzers	Step 1a - Audible Signal Elements	Buzzer or Buzzer with Acknowledgment Function
Base, Bracket, Tube Mount Beacons	Step 2 - Select height/depth - Installation Beacons	Series 230,231,206,207/208,815/816/817,107,109,110,150/450
	Step 2a - Select height/depth - Freestanding Beacons	Series 200,201/202,210,211/212,209,219,220/221/222,826/827/828
	Step 3 - Select Mounting	Panel, PG29, Base, Bracket, Tube
	Step 4 - Where appropriate - mounting accessories	Brackets, Surface mounting enclosures, Galvanized Wire Guards

AutomationDirect » Terminal Blocks

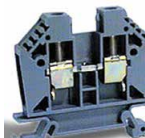
Part #	Box Qty	AWG	Screw Type Terminal Blocks	Multipole Jumper	Separator	End Cover	Tags Numbers	Tag Blank
DN-T12-A	100	24 - 12	Feed Through	DN-24J2Y	DN-S1210	DN-EC1210	DN-LA100	DN-LAB
DN-T10-A	100	24 - 10	Feed Through	DN-24J4Y	DN-S1210	DN-EC1210	DN-L50	DN-LB
DN-T8	50	22 - 8	Feed Through	DN-24J8	SN-S86	DN-EC86	DN-L50	DN-LB
DN-D10-A	50	24 - 10	Double	DN-24J4Y	NA	DN-DEC10	DN-L50	DN-LB
DN-D10X-A	50	24 - 10	Double Jumpered	DN-24J4Y	NA	DN-DEC10	DN-L50	DN-LB
DN-TL14-A	25	26 - 14	Triple Level	DN-2JL14B-A	NA	DN-EC14	DN-LAT100-A	DN-LATB-A
DN-G10	50	24 - 10	Grounding	NA	NA	NA	DN-L50	DN-LB
DN-F10	50	24 - 10	Fuse Block - 5mm	NA	NA	Included	DN-L50	DN-LB
DN-F10L24	10	24 - 10	Fuse Block w/LED 24VDC	NA	NA	Included	DN-L50	DN-LB
DN-F10L110	10	24 - 10	Fuse Block w/LED 110 VAC	NA	NA	Included	DN-L50	DN-LB
DN-F6	25	20 - 6	Fuse Block - 1/2in	NA	NA	Included	DN-L50	DN-LB
DN-F6L24	10	20 - 6	Fuse Block w/LED 24VDC	NA	NA	Included	DN-L50	DN-LB
DN-F6L110	10	20 - 6	Fuse Block w/LED 110 VAC	NA	NA	Included	DN-L50	DN-LB
DN-EB35	50		End Blocks for all above					
DN-R35S1	20		DIN rail for all above					



DN-D12-A



DN-D10-A



DN-T8



DN-D10-A



DN-D10X-A



DN-TL14-A



DN-F6



DN-F6L



DN-F10



DN-F10L



DN-G10



Wiring Duct

AutomationDirect » Wiring Duct

Other Sizes & Quantity Packs Available

Part #	Gray Slotted Wiring Duct (Including Cover)	Slot Width	Finger Width	Maximum Numbers Wires Per Duct Based on 50% Fill Capacity				
				12AWG	14AWG	16AWG	18AWG	22AWG
T1-1010G-1	1.00" W x 1.00" H	0.2	0.3	22	29	36	44	134
T1-1015G-1	1.00" W x 1.50" H	0.31	0.47	31	39	48	59	180
T1-1022G-1	1.00" W x 2.25" H	0.31	0.47	45	57	71	85	261
T1-1030G-1	1.00" W x 3.00" H	0.31	0.47	59	75	92	113	341
T1-1522G-1	1.50" W x 2.25" H	0.31	0.47	77	98	121	148	449
T1-1530G-1	1.50" W x 3.00" H	0.31	0.47	102	130	160	196	593
T1-2230G-1	2.25" W x 3.00" H	0.31	0.47	156	199	246	302	912
T1-2240G-1	2.25" W x 4.00" H	0.31	0.47	194	247	306	375	1132
Gray Thin Finger Series (including cover)								
T1E-1015G-1	1.00" W x 1.50" H	0.16	0.24	31	39	48	59	180
T1E-1022G-1	1.00" W x 2.25" H	0.16	0.24	45	57	71	85	261
T1E-1530G-1	1.50" W x 3.00" H	0.16	0.24	102	130	160	196	593
T1E-2230G-1	2.25" W x 3.00" H	0.16	0.24	156	199	246	302	912
T1E-3030G-1	3.00" W x 3.00" H	0.16	0.24	214	272	337	412	1246

Advantech & Moxa » Ethernet Remote IO

					Advantech	Advantech	Advantech	Moxa
					<ul style="list-style-type: none"> Modbus/TCP 1 Ethernet -10 to 70°C 	<ul style="list-style-type: none"> Ethernet/IP ProfiNet 2 Ethernet Auto Bypass -10 to 70°C 	<ul style="list-style-type: none"> Modbus/TCP 2 Ethernet Auto Bypass -10 to 70°C 	<ul style="list-style-type: none"> Modbus/TCP 2 Ethernet UL 508 -10 to 60°C -40 to 75°C (-T) Class 1 Div 2 ATEX Zone 2 5 Year Warranty
DI	DO	RO	AI	AO				
			(6) V, mA, or T/C				ADAM-6218	
			(6) RTD					ioLogik E1260
			(7) RTD		ADAM-6015			
			(8) V or mA		ADAM-6017	ADAM-6117	ADAM-6217	ioLogik E1240
				(4) V or mA				ioLogik E1241
			(8) T/C					ioLogik E1262
	8 Sinking		(8) T/C		ADAM-6018			
2 Sinking			(6) V or mA	(2) V or mA	ADAM-6024			
4				(4) V or mA		ADAM-6124	ADAM-6224	
4	4		(4) V or mA					ioLogik E1242
12	6 Sinking				ADAM-6050			
12+2HSC	2 Sinking				ADAM-6051			
8	7					ADAM-6150	ADAM-6250	
8	8 Sourcing				ADAM-6052			ioLogik E1212
16						ADAM-6151	ADAM-6251	ioLogik E1210
	16 Sinking					ADAM-6156	ADAM-6256	ioLogik E1211
6		6 at 1/2A/pt			ADAM-6060			ioLogik E1214
6		6 at 3A/pt			ADAM-6066			
		6 at 3A/pt				ADAM-6160	ADAM-6260	
4		4 at 5A/pt					ADAM-6266	



AutomationDirect » Proximity Sensors



AE Series DC AK Series DC AT Series DC AM Series DC V Series AC UT Series

Proximity Sensor Series	Description	Sensing	Output	Logic	Connection	Supply	Switching	Protection
		Distance	State	Output		Voltage	Frequency	Degree
PY Stainless Steel - DC	3 mm & 4 mm	0.6 - 1 mm	NO	NPN/PNP	Axial Cable	10-30 VDC	5kHz	IP67
PB Stainless Steel - DC	5 mm	0.8 - 1.5 mm	NO	NPN/PNP	Axial Cable / M8	10-30 VDC	5kHz	IP67
AE Series - DC	8 mm	0 - 3 mm	NO	NPN/PNP	Axial Cable / M8 / M12	10-30 VDC	3kHz - 1kHz	IP67
AM Series - DC	12 mm	0 - 8 mm	NO	NPN/PNP	Axial Cable / M12	10-30 VDC	2kHz - 800Hz	IP67
AK Series - DC	18 mm	5 - 12 mm	NO	NPN/PNP	Axial Cable / M12	10-30 VDC	600Hz - 300Hz	IP67
AT Series - DC	30 mm	10 - 20 mm	NO	NPN/PNP	Axial Cable / M12	10-30 VDC	150Hz	IP67
PB Series - DC	12,18,30 mm	2 - 15 mm	NO	NPN/PNP	M12	15-30 VDC	800Hz - 200Hz	IP67
PEW Stainless Steel - DC	8 mm	2 mm	NO	PNP	M12 / M8	10-36 VDC	100Hz	IP67 & IP68
PMW Stainless Steel - DC	12 mm	2 - 6 mm	NO/NC	NPN/PNP	Axial Cable / M12	10-30 VDC	2kHz - 400Hz	IP67 & IP68
PKW Stainless Steel - DC	18 mm	5 - 10 mm	NO/NC	NPN/PNP	Axial Cable / M12	10-36 VDC	1kHz - 200Hz	IP67 & IP68
PTW Stainless Steel - DC	30 mm	10 - 20 mm	NO	NPN/PNP	Axial Cable / M12	10-36 VDC	100Hz - 50Hz	IP67 & IP68
PFM Stainless F&B - DC	12 mm	2-8 mm	NO/NC	NPN/PNP	M12	10-30 VDC	800Hz - 2kHz	IP68 & IP69
PFK Stainless F&B - DC	18 mm	5-12 mm	NO/NC	NPN/PNP	M12	10-30 VDC	600Hz - 1.5kHz	IP68 & IP69
PFT Stainless F&B - DC	30 mm	14-22 mm	NO	PNP	M12	10-36 VDC	50Hz - 100Hz	IP68 & IP69
MAF Stainless F&B - DC	12,18 mm	60-70 mm	NO	PNP	M12	10-30VDC	5kHz	IP68 & IP69
V Series - AC	12,18, & 30 mm	2 - 15 mm	NO	-	Axial Cable / M12	20-253 AC	25Hz	IP67
VF Stainless F&B - AC	18,30 mm SS	5-22 mm	NO	-	1/2" micro AC	20-140 AC / DC	AC - 25Hz	IP68 & IP69
CR5 Rectangular - DC	5x5 mm	0.8 - 1.5 mm	NO	NPN/PNP	Axial Cable / M8	10-30 VDC	5kHz - 3kHz	IP67
CR8 Rectangular - DC	8x8 mm	0 - 3 mm	NO	NPN/PNP	Axial Cable / M8	10-30 VDC	1kHz	IP67
LF40 Rectangular - DC	40x40x66 mm	20 - 30 mm	NO	PNP	M12	10-36 VDC	100Hz - 80Hz	IP67
DR10 Rectangular - DC	10x16 mm	3 - 6 mm	NO	NPN/PNP	Axial Cable / M8	10-30 VDC	3kHz	IP67
APS4 Rectangular - DC	12x27 mm	4mm	NO	NPN/PNP	Axial Cable	10-30 VDC	200Hz	IP67
CM Capacitive - DC	12 mm	6-12 mm	NO	PNP	M12	10-36 VDC	50Hz	IP65
CK Capacitive - DC	18 mm	6-12 mm	NO/NC	NPN/PNP	M12	10-36 VDC	10Hz	IP65 & IP67
CT Capacitive - DC, AC/DC	30 mm	15-40 mm	NO/NC	NPN/PNP	M12	DC & AC	100Hz - 10Hz	IP65 & IP67
CR Capacitive - DC	Rectangular	12 mm	NO/NC	NPN/PNP	Axial Cable	10-36 VDC	10Hz	IP65 & IP67
AW Analog Prox	8 mm	4 mm		0-10VDC	Axial Cable / M8	15-30 VDC		IP67
AM Analog Prox	12 mm	6 mm		0-5VDC & 4-20mA	Axial Cable / M12	10-30 VDC		IP67
AK Analog Prox	18 mm	10 mm		0-5VDC & 4-20mA	Axial Cable / M12	10-30 VDC		IP67
AT Analog Prox	30 mm	20 mm		0-5VDC & 4-20mA	Axial Cable / M12	10-30 VDC		IP67
UK1 Ultrasonic Sensor	18 mm	50-2200 mm	NO/NC	NPN/PNP or 0-10,4-20	Axial Cable / M12	15-30 VDC		IP67
UK6 Ultrasonic Sensor	18 mm	40-900 mm	NO/NC	NPN/PNP or 0-10,4-20	Axial Cable / M12	15-30 VDC		IP67
UT1 Ultrasonic Sensor	30 mm	250-3500 mm	NO/NC	NPN/PNP or 0-10,4-20	Axial Cable / M12	15-30 VDC		IP67
UT2 Ultrasonic Sensor	30 mm	350-6000 mm	NO/NC	NPN/PNP or 0-10,4-20	Axial Cable / M12	15-30 VDC		IP67
SU Ultrasonic Sensor	18 mm	100-1500 mm	NO	PNP or 0-10VDC	Axial Cable / M12	15-30 VDC		IP67
TU Ultrasonic Sensor	30 mm	300-2500 mm	NO	PNP or 0-10VDC	M12	19-30 VDC		IP67
UHZ Ultrasonic Sensor	30x20mm	300mm	NO/NC	NPN/PNP	Axial Cable	18-30 VDC		IP67

AutomationDirect » Photoelectric Sensors



FA Series FARS Series C18 Series GX Rectangular OPT Short Range Laser Series DFT Fiber Amplifier with Teach Mode

Photoelectric Sensors Series	Description	Sensing Distance			Output	Logic	Connection	Supply	Switching	Rating
		Diffuse	Reflective	Through Beam						
FA - Series LED - DC	18 mm	1 m	3 m	20 m	NO/NC	NPN/PNP	Axial Cable / M12	10-30 VDC	250Hz	IP67
FA - Series Laser - DC	18 mm	300 mm	20 m	50 m	NO/NC	NPN/PNP	Axial Cable / M12	10-30 VDC	800Hz - 1kHz	IP67
FB - Series - DC	18 mm	400 mm	2.5 m	8 m	Light-On, Dk-On	NPN/PNP	M12	10-30 VDC	1kHz	IP65 & IP67
SS - Series - DC	18 mm	100-400 mm	2 m	8 m	NO/NC	NPN/PNP	Axial Cable / M12	10-30 VDC	250Hz - 25Hz	IP67
MS - Background Suppression - DC	18 mm	50-100 mm BS			NO/NC	NPN/PNP	Axial Cable / M12	10-30 VDC	80Hz	IP67
FARS - Background Suppression - DC	18 mm	30-130 mm BS			NO/NC	NPN/PNP	Axial Cable / M12	10-30 VDC	1kHz	IP67
FF - Submersible - DC	18 mm	100-800 mm	1 m	20 m	NO/NC	NPN/PNP	M12	10-30 VDC	500Hz - 250Hz	IP58 & IP69K
FFRS - Background Suppression - DC	18 mm	30-130 mm BS	Shiny	60-100 mm	NO/NC	NPN/PNP	M12	10-30 VDC	1kHz - 400Hz	IP68 & IP69K
MQ - Background Suppression - AC	18 mm 90 deg radial	50-100mm BS			NO/NC	Triac	M12	20-253 VAC	25Hz	IP67
MV - Series - AC	18 mm	100-400 mm	3 m	16 m	NO	Triac	Axial Cable / M12	20-253 VAC	25Hz	IP67
C5 - Stainless Steel - DC	5 mm	50 mm		250 mm	NO	NPN/PNP	Axial Cable / M8	10-30 VDC	250Hz	IP67
HE/HER Series - DC	8 mm			1000 mm	NO/NC	NPN/PNP	Axial Cable / M8	10-30 VDC	10kHz	IP67
DM - Teach Function - DC	12 mm	100, 300 mm	2 m	4 m	NO/NC	NPN/PNP	Axial Cable / M12	10-30 VDC	400Hz - 250Hz	IP67
C18 Series - DC	18 mm	600 mm	2 m	6 m	Light-On, Dk-On	NPN/PNP	Axial Cable / M12	10-36 VDC	1kHz	IP67
GX - Rectangular - DC	18 mm Rectangular	150 mm BS	4 m	20 m	Light-On, Dk-On	NPN/PNP	M12	10-30 VDC	1kHz	IP67
FE - Mini Rectangular - DC	Mini Rectangular	800 mm	4 m	12 m	Light-On, Dk-On	NPN/PNP	Axial Cable / M8	10-30 VDC	1kHz	IP67
CX - Mini Rectangular - DC	Mini Rectangular	600 mm	2 m	6 m	NO	NPN/PNP	Axial Cable / M8	10-30 VDC	1kHz	IP65
QX - Rectangular - DC	Rectangular			8 m	NO	NPN/PNP	Axial Cable / M12	10-30 VDC	500Hz	IP65
OPT - Short Range Laser Series	50x50 mm Rectangular	80-660 mm			NO/NC	NPN/PNP	M12	10-30 VDC	100Hz	IP67
OPT - Long Range Laser Series	50x50 & 50x81 mm	3m - 10.1m	100.2 m		NO/NC (2)	NPN/PNP	M12	10-30 VDC	50Hz - 1kHz	IP68
FG - Series AC/DC	Rectangular	550 mm	9 m	20 m	NO/NC	SPDT 3A Relay	Axial Cable	AC / DC	33Hz	IP67
FW - Series - DC	30 mm mount	50-800 mm BS	15 m		Light-On, Dk-On	NPN/PNP	M12	10-30 VDC	300Hz - 1kHz	IP67
CH - Enhanced 50 Series	Fiberglass	3 m	5 m	152 m	Light-On, Dk-On	NPN/PNP	Cable or Mini Micro	AC / DC	Various	IP67
DFT - Fiber Amplifier w/Teach Mode - DC	Compact Rectangular	Teach Mode			Light-On, Dk-On	NPN/PNP	Axial Cable / M8	10-30 VDC	1.5kHz	IP64
DFF - Fiber Amplifier - DC	Compact Rectangular	12 turn pot			Light-On, Dk-On	NPN/PNP	Axial Cable / M8	10-30 VDC	1.5kHz	IP64
SSF - Fiber Optic Amplifier - DC	18 mm				Light-On, Dk-On	NPN/PNP	Axial Cable / M12	10-30 VDC	800Hz	IP67
CF - Fiber Optic										IP67
BX - 70 mm height Light Screen	Rectangular			2 m	NO/NC	NPN/PNP	M12	12-24 VDC		IP67

AutomationDirect » Temperature Sensors



ProSense Temperature Sensors and Temperature Transmitters

- Temperature switches
- Thermocouple probes and sensors
- RTD temperature probes and sensors
- Temperature transmitters with integral sensors, thermocouple or RTD input
- Programmable temperature transmitters with thermocouple or RTD input, DIN-rail or head mounted
- TTD-20 series temperature transmitters with M12 quick-disconnect for fast mounting
- Thermowells and fittings
- Thermocouple wire and RTD extension wire

TSD25 Series Temperature Switches - 9.6 - 32VDC power required	
Compact temperature switch with simple setup using mechanical adjustment dials	
Temperature setting range: - 4 to 284 Deg. F (- 20 to 140°C)	
TSD25N - 0P - 0284 - H	(2) PNP (1NO/1NC) switching DC outputs, 316SS, LEDs - 1/4" NPT male port, 4 - pin micro M12 DC plug, probe length: 35mm
TSD25N - AP - 0284 - H	(2) PNP (NO) switching DC outputs, 316SS, LEDs - 1/4" NPT male port, 4 - pin micro M12 DC plug, probe length: 35mm
TTD25 Series 316SS Temperature Transmitters - 10 - 30VDC power required	
2 - wire Pt1000 Class A RTD with 4 - 20mA output temperature transmitter	
TTD25N - 20 - 0100C - H	0 - 100°C (accuracy +/- 0.3°C) - 1/4" NPT male port, 4 - pin micro M12 plug, 8.3mm diameter probe
TTD25N - 20 - 0300F - H	0 - 300 Deg. F (accuracy +/- 0.4 Deg. F) - 1/4" NPT male port, 4 - pin micro M12 plug, 8.3mm diameter probe
TTD25C - 20 - 0100C - H	0 - 100°C (accuracy +/- 0.3°C) - 4 - pin micro M12 plug (use CF06 - 25N), 6mm diameter probe
TTD25C - 20 - 0300F - H	0 - 300 Deg. F (accuracy +/- 0.4 Deg. F) - 4 - pin micro M12 plug (Use CF06 - 25N), 6mm diameter probe
XTD Series DIN Rail Mounted Temperature Transmitters - 12 - 35VDC power required	
Non - programmable models for J or K T/C or Pt100 RTD - 4 - 20mA output w/2kVAC isolation	
XTD - xxxxF - y	xxxx = 0 to 100, 200, 300, 500, 800, 1000 F - y = PT1 (Pt100), J (T/C), K (T/C)
Programmable models - 4 - 20mA output w/2kVAC isolation	
XTD - 0 - UNV	Thermocouple Type J, K, T, E, N, R, S, U, B, C, D, L - RTD Types Pt100, Pt500, Pt1000, Pt50, Ni100, Ni500, Ni1000, Cu50, Cu100 (2, 3, 4 Wire)
XTH Series Head Mount Temperature Transmitters - 8 - 35VDC power required	
Non - programmable models for J or K T/C or Pt100 RTD - 4 - 20mA output w/2kVAC isolation	
XTH - xxxxF - y	xxxx = 0 to 100, 200, 300, 500, 800, 1000 F - y = PT1 (Pt100), J (T/C), K (T/C)
Programmable models - 4 - 20mA output w/2kVAC isolation	
XTH - 0 - UNV	Thermocouple Type J, K, T, E, N, R, S, U, B, C, D, L - RTD Types Pt100, Pt500, Pt1000, Pt50, Ni100, Ni500, Ni1000, Cu50, Cu100 (2, 3, 4 Wire)
Thermocouples - pre - built stock items - J, K, or T	
THMy - Cxx - 01 - Probes with connection head	y = J (0 - 720C) or K (0 - 927C) , xx = 06, 12, 18 for probe length - Integral 1/2" x 1/2" NPT Hex Nipple, 316 SS
THMy - Cxx - 03 - Probes spring - loaded with connection head	y = J (0 - 720C) or K (0 - 927C) , xx = 04, 06, 12 for probe length - Integral 1/2" x 1/2" NPT Hex Nipple, 316 SS
THMy - HxxL01 - 01 - Probes with hex nipple	y = J (0 - 720C) or K (0 - 927C) , xx = 06, 12, 18 for probe length - Integral 1/2" x 1/2" NPT Hex Nipple, 316 SS
THMy - HxxL01 - 02 - Pobes spring - loaded with Hex Nipple	y = J (0 - 720C) or K (0 - 927C) , xx = 04, 06, 12 for probe length - Integral 1/2" x 1/2" NPT Hex Nipple, 316 SS
THMy - Pxx - 0z - Probes with attached plug	y = J (0 - 521C) or K (0 - 927C) or T (- 200 to +371C) - xx = 06, 12, 18" for probe length
THMy - TxxL06 - 01 - 1/8" OD Probes (316 SS) with 6' lead wire transition	y = J (0 - 521C) or K (0 - 927C) or T (- 200 to +371C) - xx = 06, 12, 18" for probe length
THMy - D08Lzz - 01 - (D) Spring Adjustable immersion sensors	y = J, K - zz = 04, 06, 10 for lead wire length - 0 - 482C, 1/4"L x 3/16" OD sensing tip, 8" length x 0.263" diameter spring
THMy - A01Lzz - 01 - (A) Armor Adjustable immersion sensors	y = J, K - zz = 04, 06, 10 for lead wire length - 0 - 482C, 1/4"L x 3/16" OD sensing tip, 0.275"OD flexible armor
THMy - BxxL06 - zz - Bolt - on ring sensors (nozzles, extruder barrels, die heads, molds, etc.)	y = J, K - xx = #6 - #10 (4 - 5mm) screw or bolt - 0 - 482C, zz = 01 (grounded 316SS) or 02 (ungrounded brass)
THMJ - R01 - 01 - Room temperature sensors	Type J (32 - 185C) Single element, ungrounded junction, plastic ventilated housing
RTD sensors - pre - built stock items - Class A accuracy (most models)	
RTD1 - Cxx - yy - Pt100 3 - wire 1/4"OD Probes with connection head, - 50 to 300C	xx = 06, 12, 18" probe - yy = 01 (Integral 1/2" x 1/2" NPT Hex nipple 316SS) 02 (Compression)
RTD1 - Cxx - 03 - Pt100 3 - wire 1/4"OD Spring - loaded probes with connection head, - 50 to 300C	xx = 04, 06, 12" probe - Integral 1/2" x 1/2" NPT Hex nipple 316SS, Note: mount in thermowell
RTD1 - HxxL01 - 01 - Pt100 3 - wire 1/4"OD Probes with Hex nipple, - 50 to 300C	xx = 06, 12, 18" probe - Integral 1/2" x 1/2" NPT Hex nipple 316SS
RTD1 - HxxL01 - 02 - Pt100 3 - wire 1/4"OD Spring - loaded probes with hex nipple, - 50 to 300C	xx = 04, 16, 12" probe - Integral 1/2" x 1/2" NPT Hex nipple 316SS
RTD1 - Pxx - 01 - Pt100 3 - wire 1/4"OD Probes with attached plug, - 50 to 300C, see accessories	xx = 06, 12, 18" probe - Prosense compression fitting, need 3 - pin plug, and mounting jack RTD - SJ
RTD1 - TxxL06 - 01 - Pt100 3 - wire 1/4"OD Probes with lead wire transition, - 50 to 300C	xx = 06, 12, 18" probe - Prosense compression fitting (see accessories sold separately)
RTD1 - D08L10 - 01 - Pt100 3 - wire, Adjustable immersion sensors, - 50 to 300C, 10' lead wire	Bayonet fitting cap 7/16" ID - 1/4"L x 3/16"OD sensing tip, 8"L x 0.263 diameter spring
RTD0100 - xx - 0yy - H - Pt100 3/4 - wire Probe w/M12, needs mtg fitting & thermowell, - 40 to 150C	xx = (06) 3 - wire or (10) 4 - wire - yy = (10) 160mm (20) 260mm (30) 360mm
RTD1 - BxxL06 - 01 - Pt100 3 - wire Brass Ring Bolt - On Ring Sensors, - 50 to 300C	xx = (01) Bolt on size #6 - #10 (4 - 5mm) or (02) Bolt on size #12 (5mm - 8mm)
RTD1 - S04 - xx - Pt100 3 - wire 1/4"OD Sanitary Clean - in - Place (CIP) probes, - 50 to 204C	xx = (01) 1" or 1.5" tri - clamp and (02) 2" tri - clamp
Thermowells - for RTD probes with M12 cable connector	
Bi - Metal Thermometers - 3" & 5" dials, back or adjustable angle connection, 304 stainless	
Extension wire - available in 50, 100, & 200 foot lengths	
Accessories - Thermocouple and RTD connectors and panel jacks	

AutomationDirect » Pressure Sensors

Prosense PSD Series - Pressure Switch - 316 Stainless IP67 - No moving parts - LEDs - Easy Set-up dials - Vibration & shock-resistant, 500mA max load	
All 1/4" NPT male ports - M12 Quick Disconnect cables are available	
PSD25-0P-0145H	9.6 to 32VDC, PNP, NO/NC, 7.5 to 145 psi range
PSD25-0P-1450H	9.6 to 32VDC, PNP, NO/NC, 75 to 1450 psi range
PSD25-0P-5800H	9.6 to 32VDC, PNP, NO/NC, 290 to 5800 psi range
PSD-CV	Transparent plastic protective cap for PSD series
Prosense PTD Series - Pressure & Vacuum Transmitters - 316 Stainless IP68 if > 1000psi or IP65 if <500psi	
All 1/4" NPT male ports - M12 Quick Disconnect cables are available	
Process control & automation, Pump & compressor control, Hydraulic systems, pneumatic systems, engine monitoring, presses, machine tools	
PTD25-10-VH	Vacuum transmitter, 6-32VDC, 10 to 0VDC output, -14.5 to 0 psi range vacuum
PTD25-10-0100WCH	Pressure transmitter, 6-32VDC, 0-10V output, 0 to 100 inches water column range
PTD25-10-0015H	Pressure transmitter, 6-32VDC, 0-10V output, 0 to 15 psi range
PTD25-10-0030H	Pressure transmitter, 6-32VDC, 0-10V output, 0 to 30 psi range
PTD25-10-0100H	Pressure transmitter, 6-32VDC, 0-10V output, 0 to 100 psi range
PTD25-10-0200H	Pressure transmitter, 6-32VDC, 0-10V output, 0 to 200 psi range
PTD25-10-0500H	Pressure transmitter, 6-32VDC, 0-10VDC output, 0 to 500 psi range
PTD25-10-1000H	Pressure transmitter, 6-32VDC, 0-10VDC output, 0 to 1000 psi range
PTD25-10-3000H	Pressure transmitter, 6-32VDC, 0-10VDC output, 0 to 3000 psi range
PTD25-10-5000H	Pressure transmitter, 6-32VDC, 0-10VDC output, 0 to 5000 psi range
PTD25-20-VH	Vacuum transmitter, 9.6-32VDC, 20-4mA output, -14.5 to 0 psi range vacuum
PTD25-20-0100WCH	Pressure transmitter, 9.6-32VDC, 4-20mA output, 0 to 100 inches water column range
PTD25-20-0015H	Pressure transmitter, 9.6-32VDC, 4-20mA output, 0 to 15 psi range
PTD25-20-0030H	Pressure transmitter, 9.6-32VDC, 4-20mA output, 0 to 30 psi range
PTD25-20-0100H	Pressure transmitter, 9.6-32VDC, 4-20mA output, 0 to 100 psi range
PTD25-20-0200H	Pressure transmitter, 9.6-32VDC, 4-20mA output, 0 to 200 psi range
PTD25-20-0500H	Pressure transmitter, 9.6-32VDC, 4-20mA output, 0 to 500 psi range
PTD25-20-1000H	Pressure transmitter, 9.6-32VDC, 4-20mA output, 0 to 1000 psi range
PTD25-20-3000H	Pressure transmitter, 9.6-32VDC, 4-20mA output, 0 to 3000 psi range
PTD25-20-5000H	Pressure transmitter, 9.6-32VDC, 4-20mA output, 0 to 5000 psi range
Prosense DPTA Series - Differential Air Pressure Transmitters - all 4-20mA output with 1/4" brass barbed connections	
LED loop power status indicator - HVAC duct static pressure, Air filter monitoring, Building pressurization, Isolation & clean rooms, fume hoods, furnace, oven, dryer draft pressure, air flow measurement.	
DPTA-20-P1	0 to 0.1 inches water column range
DPTA-20-P1B	-0.1 to +0.1 inches water column range
DPTA-20-P25	0 to 0.25 inches water column range
DPTA-20-P25B	-0.25 to +0.25 inches water column range
DPTA-20-P5	0 to 0.5 inches water column range
DPTA-20-P5B	-0.5 to +0.5 inches water column range
DPTA-20-01	0 to 1.0 inches water column range
DPTA-20-01B	-1.0 to +1.0 inches water column range
DPTA-20-02	0 to 2.0 inches water column range
DPTA-20-02B	-2.0 to +2.0 inches water column range
DPTA-20-03	0 to 3.0 inches water column range
DPTA-20-03B	-3.0 to +3.0 inches water column range
DPTA-20-05	0 to 5.0 inches water column range
DPTA-20-05B	-5.0 to +5.0 inches water column range
DPTA-20-10	0 to 10.0 inches water column range
DPTA-20-10B	-10.0 to +10.0 inches water column range
DPTA-20-15	0 to 15.0 inches water column range
DPTA-20-15B	-15.0 to +15.0 inches water column range
DPTA-20-25	0 to 25.0 inches water column range
Prosense Precision Digital Pressure Switch / Transmitter with 2 meter cable for air (non-corrosive/non-flammable gases only), 3-color digital LCD display lockable keypad, fast zero reset, selectable response times to eliminate output chattering, 6 pressure unit conversions, 3 - operation modes: Easy, Window, and Hysteresis - selectable response times from 2ms to 5000ms on Digital outputs	
QPSL-AN-42	10.8-26.4VDC input power (-14.5 to 14.5 psi) 2 NPN output, 4-20mA output, cable included
QPSL-AP-42	10.8-26.4VDC input power (-14.5 to 14.5 psi) 2 PNP output, 4-20mA output, cable included
QPSH-AN-42	10.8-26.4VDC input power (-14.5 to 145 psi) 2 NPN output, 4-20mA output, cable included
QPSH-AP-42	10.8-26.4VDC input power (-14.5 to 145 psi) 2 PNP output, 4-20mA output, cable included
QPS-FMK	Bracket mount kit for QPS series
QPS-PMK	Panel mount kit for QPS series



ProSense Pressure Switches/Transmitters

ProSense pressure switches and sensors are designed to monitor relative system pressure in many applications such as hydraulics and pneumatics.

- ProSense pressure sensing solutions use a variety of sensing technologies to meet most any industrial pressure sensing application.
- Vacuum sensors provide an accurate readout of increases and decreases in vacuum systems.
- The ProSense DPTA differential pressure transmitters are available in ranges from 0.1 to 25 inches of water column to measure positive, negative, and bi-directional pressures with the ability to withstand 15 psi overpressure without damage or calibration shift.

AutomationDirect » Level Switches

Part #	Description - Level Switch (ON/OFF)	Temp Range	Pressure	Specific Gravity
FLS-VS-100	Float level SW top MNT 0.58in DIA PP float/stem 3/8-16 UNC	[-40 to 105C]	50psig	0.7
FLS-VS-200	Float level SW top MNT 0.58in DIA PP float/stem 1/8in MNPT	[-40 to 105C]	50psig	0.7
FLS-VM-100	Float level SW top MNT 1in DIA PP float/stem 1/8in MNPT	[-40 to 105C]	100psig	0.8
FLS-VM-200	Float level SW top MNT 1in DIA BUNA-N float/PBT STEM 1/8in MNPT	[-40 to 105C]	150psig	0.45
FLS-VM-300	Float level SW top MNT 1in DIA BUNA-N Float/BRASS STEM 1/8in MNPT	[-40 to 105C]	150psig	0.45
FLS-VM-400	Float level SW top MNT 1.13in DIA 316SS float/stem 1/8in MNPT	[-40 to 200C]	300psig	0.7
FLS-VM-500	Float level SW top MNT 1in DIA PVDF float/stem 1/8in MNPT	[-40 to 105C]	15psig	0.85
FLS-VM-600	Float level SW top MNT 1.12in DIA TEFLON float/stem 1/8in MNPT	[-40 to 150C]	25psig	0.69
FLS-VL-010	Float level SW top MNT 1.5in DIA PP Shield/float/stem 1/8in MNPT	[-40 to 105C]	100psig	0.8
FLS-VL-020	Float level SW top MNT 1.5in DIA PBT Shield/STEM BUNA-N Float 1/8in MNPT	[-40 to 105C]	150psig	0.45
FLS-VL-030	Float level SW top MNT 1.9in DIA 316SS Shield/float/stem 1/8in MNPT	[-40 to 200C]	300psig	0.7
FLS-VL-040	Float level SW top MNT 2.38in DIA 316SS Shield/float/stem 1/4in MNPT	[-40 to 200C]	200psig	0.55
FLS-VL-100	Float level SW top MNT 1.5in DIA PP float/stem 1/4in MNPT	[-40 to 105C]	100psig	0.75
FLS-VL-200	Float level SW top MNT 1.25in DIA BUNA-N Float/PBT STEM 1/4in MNPT	[-40 to 105C]	150psig	0.45
FLS-VL-300	Float level SW top MNT 1.25in DIA BUNA-N Float/BRASS STEM 1/4in MNPT	[-40 to 105C]	150psig	0.45
FLS-VL-400	Float level SW top MNT 2.13in DIA 316SS float/stem 1/4in MNPT	[-40 to 200C]	200psig	0.55
FLS-VL-500	Float level SW top MNT 2.15in DIA teflon float/stem 1/4in MNPT	[-40 to 150C]	40psig	0.63
FLS-VL-600	Float level SW top MNT 2.05in DIA 316SS float/stem 1/4in MNPT	[-40 to 200C]	500psig	0.7
FLS-VL-900	Float level SW SUBMERSIBLE 1.44in DIA PBT Shield BUNA-N float brass system	[-40 to 105C]	50psig	0.45
FLS-VK-100	Float level SW KIT TOP MNT PP	[-40 to 105C]	100psig	0.75
FLS-VK-200	Float level SW KIT TOP MNT BRASS	[-40 to 105C]	150psig	0.45
FLS-VK-300	Float level SW KIT TOP MNT 316SS	[-40 to 200C]	200psig	0.55
FLS-HS-100	Float level SW Side MNT 2.75in Long PP float/stem 1/2in MNPT	[-40 to 105C]	100psig	0.6
FLS-HS-200	Float level SW Side MNT 2.84in Long PP float/stem 5/8-11 UNC	[-40 to 105C]	100psig	0.6
FLS-HS-300	Float level SW Side MNT 3.31in Long PP float/stem 5/8-11 UNC	[-40 to 105C]	100psig	0.6
FLS-HM-100	Float level SW Side MNT 2.75in Long PBT float/stem 1/2in MNPT	[-40 to 130C]	100psig	0.7
FLS-HM-200	Float level SW Side MNT 4.6in Long 316SS float/stem 1/2in MNPT	[-40 to 200C]	300psig	0.6
FLS-HM-300	Float level SW Side MNT 2.75in Long PVDF float/stem 1/2in MNPT	[-40 to 105C]	100psig	0.93
FLS-HL-010	Float level SW Side MNT 2.84in Long PP shield/float/stem 1in x 1/2in MNPT	[-40 to 105C]	100psig	0.6
FLS-HL-200	Float level SW Side MNT 3.19in Long 316SS float/stem 1/2-13 UNC	[-40 to 200C]	100psig	0.7
FLS-BM-100	Float level SW Side MNT 2.11in Long PP float/316SS BENT STEM 3/8-24 UNC	[-40 to 105C]	100psig	0.8
FLS-BM-200	Float level SW Side MNT 2.11in long BUNA-N float/brass bent stem 3/8-24UNC	[-40 to 105C]	150psig	0.45
FLS-BM-300	Float level SW Side MNT 2.18in Long 316SS Float/bent stem 3/8-24 UNC	[-40 to 200C]	300psig	0.7
FLS-BL-100	Float level SW Side MNT 6.25in Long 316SS Float/bent stem 1/2in MNPT	[-40 to 200C]	50psig	0.6
FLS-HT-100	Float Level tilt SW RECT shape EPDM Rubber 16A 250VAC 7m PVC CBL	[0 to 70C]	14.5psig	0.9 to 1.3
FLS-HT-200	Float Level tilt SW OVAL shape EPDM Rubber 16A 250VAC 7m PVC CBL	[0 to 70C]	14.5psig	0.7 to 1.3

proSense®



ProSense® Float Level Switches (Liquids)

ProSense float level switches provide a low-cost general purpose solution for single point monitoring of liquid level in a variety of applications. Designed for shock and vibration resistance, ProSense float level switches ensure long and trouble-free service. Powerful permanent magnets within the float actuate a highly reliable and repeatable hermetically sealed reed switch as the float rises and lowers with liquid level.- general purpose, low-cost!

- Vertical Top-Mount
- Vertical Suspensible / Submersible
- Horizontal Side-Mount
- Float Level Switch Kits
- Float Level Tilt Switches

AutomationDirect » Ultrasonic Level Sensors

Part #	Description (+/- 100%)	Range / Depth	Analog Output	Relay outputs
DL14-00	EchoPod Multi-Function Ultrasonic liquid level sensor	4.1 Ft (1.25m)	4-20ma	(4) SPST relays
DL24-00	EchoPod Multi-Function Ultrasonic liquid level sensor	9.8 Ft (3m)	4-20ma	(4) SPST relays
DL34-00	EchoPod Multi-Function Ultrasonic liquid level sensor	18.0 Ft (5.5m)	4-20ma	(4) SPST relays
DL10-00	EchoPod Ultrasonic Liquid Level Transmitter	4.1 Ft (1.25m)	4-20ma	
DX10-00	EchoPod Ultrasonic Liquid Level Transmitter	4.1 Ft (1.25m)	0-5VDC / 0-10VDC	
DS14-00	EchoPod Ultrasonic Liquid Level Switch	4.1 Ft (1.25m)		(4) SPST relays
LI40-1001	PodView Digital Level Indicator - displays engineering units for level or volume			
LU27-00	EchoSonic II Ultrasonic liquid level transmitter	9.8 Ft (3m)	4-20ma	
LU23-00	EchoSonic II Ultrasonic liquid level transmitter	18.0 Ft (5.5m)	4-20ma	
LU28-00	EchoSonic II Ultrasonic liquid level transmitter	26.2 Ft (8m)	4-20ma	
LU29-00	EchoSonic II Ultrasonic liquid level transmitter	32.8 Ft (10m)	4-20ma	
LI99-1001	Flowline USB Adapter required with WEBCAL software to configure Flowline EchoPod and EchoSonic II sensors			
WEBCAL	Level Sensor Programming Software CD - 169 level sensor configurations with pull down menu selections			
LM50-1001	Side Mount Bracketed 2in FNPT with Reducer DL34, LU23, LU28, & LU29			
LM50-1001-1	Side Mount Bracket 2in FNPT with Reducer DL14, DL24, DS14, DL10, DX10 & LU27			
LM52-1400	Reducer Bushing 2in MNPT x 1in FNPT DL14, DL24, DS14, DL10, DX10 & LU27			
LM52-2400	Reducer Bushing 3in MNPT x 2in FNPT DL34, LU23, LU28, & LU29			
LM52-1890	Bulkhead Fitting 1in FNPT x SLIP SKT DL14, DL24, DS14, DL10, DX10, & LU27			
LM52-2890	Bulkhead Fitting 2in FNPT x SLIP SKT DL34, LU23, LU28, LU29			
LM52-1850	Mounting Flange 1in FNPT x SLIP SKT DL14, DL24, DS14, DL10, DX10 & LU27			
LM52-2850	Mounting Flange 2in FNPT DL34, LU23, LU28, LU29			

FLOWLINE®



Ultrasonic Liquid Level Sensors

The Flowline series are innovative ultrasonic liquid level sensor families that replace float, conductance and pressure sensors that fail due to contact with dirty, sticky and scaling liquids in small, medium and large capacity tanks. These liquid level sensors can be used in either open or enclosed tanks. PC software configured or pushbutton configured models are available.

- Available with single and multi-function capabilities including continuous level measurement, switching and level control
- PVDF transducer and NEMA Type 6P polycarbonate enclosure for corrosive liquids
- Automatic temperature compensation for accurate measurement
- Measurement outputs include current, voltage, frequency and relays
- PC configuration of software configured units is simple using the FREE WebCal™ software and a programming fob with a USB adapter
- Pushbutton configured units are easily configured using the built-in pushbuttons (no PC required)

AutomationDirect » Amperage Sensors



Current Sensors (AC and DC)

The AcuAMP family of high performance AC and DC current sensors offers outstanding features, flexibility and durability at incredible prices.

- AC single-phase current transducers, standard or true RMS
- DC current transducers
- AC current switches, single and multi-range
- AC current switches with time delay
- DC current switches
- AC current indicator

Part #	Input Range	Output	Frequency Range	Response Time	Diameter Aperture
ACT current transducers combine a current transformer and signal conditioner into a single package - linear or sinusoidal AC loads (non-VFD) Automation Systems (analog current reading for remote monitoring & software alarms)					
ACT050-10-F	Self-powered	Fixed-core - 0-10VDC, 0-50A field selectable	50-60Hz	100ms	0.74"
ACT050-10-S	Self-powered	Split-core - 0-10VDC, 0-50A field selectable	50-60Hz	100ms	0.85"
ACT200-10-F	Self-powered	Fixed-core - 0-10VDC, 0-200A field selectable	50-60Hz	100ms	0.74"
ACT200-10-S	Self-powered	Split-core - 0-10VDC, 0-200A field selectable	50-60Hz	100ms	0.85"
ACT005-42L-F	24VDC loop nominal	Fixed-core - 4-20mA, 0-5A field selectable	20-100Hz	300ms	3.0"
ACT005-42L-S	24VDC loop nominal	Split-core - 4-20mA, 0-5A field selectable	20-100Hz	300ms	3.0"
ACT050-42L-F	24VDC loop nominal	Fixed-core, 4-20mA, 0-50A field selectable	20-100Hz	300ms	3.0"
ACT050-42L-S	24VDC loop nominal	Split-core, 4-20mA, 0-50A field selectable	20-100Hz	300ms	3.0"
ACT200-42L-F	24VDC loop nominal	Fixed-core, 4-20mA, 0-200A field selectable	20-100Hz	300ms	3.0"
ACT200-42L-S	24VDC loop nominal	Split-core, 4-20mA, 0-200A field selectable	20-100Hz	300ms	3.0"
ACT750-42L-F	24VDC nominal	Fixed-Core, 4-20mA, 0-750A field selectable	50-60Hz	600ms - 375-2000A	3.0"
ACT2000-42L-F	24VDC nominal	Fixed-Core, 4-20mA, 0-2000A field selectable	50-60Hz	600ms - 375-2000A	3.0"
ACTR current transducer with "True RMS" for VFD and SCR applications that have numerous spikes and dips in each cycle VFD Controlled Loads (VFD output indicates how the motor and attached load are operating) SCR (Accurate measurement of phase angle fired SCRs)					
ACTR005-42L-F	24VDC nominal	Fixed-core, 4-20mA, 0-5A field selectable	10-400Hz	600ms	0.74"
ACTR005-42L-S	24VDC nominal	Split-core, 4-20mA, 0-5A field selectable	10-400Hz	600ms	0.85"
ACTR050-42L-F	24VDC nominal	Fixed-core, 4-20mA, 0-50A field selectable	10-400Hz	600ms	0.74"
ACTR050-42L-S	24VDC nominal	Split-core, 4-20mA, 0-50A field selectable	10-400Hz	600ms	0.85"
ACTR200-42L-F	24VDC nominal	Fixed-core, 4-20mA, 0-200A field selectable	10-400Hz	600ms	0.74"
ACTR200-42L-S	24VDC nominal	Split-core, 4-20mA, 0-200A field selectable	10-400Hz	600ms	0.85"
ACTR750-42L-F	24VDC nominal	Fixed-core, 4-20mA, 0-750A field selectable	10-400Hz	600ms	3.0"
ACTR2000-42L-F	24VDC nominal	Fixed-core, 4-20mA, 0-2000A field selectable	10-400Hz	600ms	3.0"
ACS150 Series current operated switches combine a current transformer, signal conditioner, and limit alarm into a single package for monitoring or proof of operation Proof of Flow, Conveyors (detects jams), Heating Circuits (detects ON/OFF status), Loss of Load (detect belt or coupling breaks) Lighting Circuits (faster than photocells)					
ACS150-AE-F	Self-powered	Fixed-core, AC/DC N.O., 1-150A adjustable	6-100Hz	120ms	0.74"
ACS150-AE-S	Self-powered	Split-core, AC/DC, N.O., 1.75-150A adjustable	6-100Hz	120ms	0.85"
ACS150-CE-F	Self-powered	Fixed-core, AC/DC, N.C., 1-150A adjustable	6-100Hz	120ms	0.74"
ACS150-CE-S	Self-powered	Split-core, AC/DC, N.C., 1.75-150A adjustable	6-100Hz	120ms	0.85"
ACS200 Series current operated switches provide the same dependable status indication as the ACS150 series, but with added resolution					
ACS200-AA-F	Self-powered	Fixed-core, AC, N.O., 1-6A or 6-40A or 40-175A adjustable	6-100Hz	40-120ms	0.55"
ACS200-AA-S	Self-powered	Split-core, AC, N.O., 1.75-6A or 6-40A or 40-200A adjustable	6-100Hz	40-120ms	0.86"
ACS200-CA-F	Self-powered	Fixed-core, AC, N.C., 1-6A or 6-40A or 40-175A adjustable	6-100Hz	40-120ms	0.55"
ACS200-CA-S	Self-powered	Split-core, AC, N.C., 1.75-6A or 6-40A or 40-200A adjustable	6-100Hz	40-120ms	0.86"
ACS200-AD-F	Self-powered	Fixed-core, DC, N.O., 1-6A or 6-40A or 40-175A adjustable	6-100Hz	40-120ms	0.55"
ACS200-AD-S	Self-powered	Split-core, DC, N.O., 1.75A-6A or 6-40A or 40-200A adjustable	6-100Hz	40-120ms	0.86"
ACS200-CD-F	Self-powered	Fixed-core, DC, N.C., 1-6A or 6-40A or 40-175A adjustable	6-100Hz	40-120ms	0.55"
ACS200-CD-S	Self-powered	Split-core, DC, N.C., 1.75A-6A or 6-40A or 40-200A adjustable	6-100Hz	40-120ms	0.85"

AutomationDirect » Amperage Sensors

Part #	Input Range	Output	Frequency Range	Response Time	Diameter Aperture
ACSX AC Current Switches - Motor Protection - detects current draw changes in motors when pumps run dry or impending bearing failure High Inrush or Temporary Overload Current - Adjustable start-up/delay timer allows 0-15 second delay to eliminate nuisance trips					
ACSX200-AA-S	AC	Split-core - N.O. solid state switch	50-100Hz	0.2 to 15 sec - adjustable	0.85"
ACSX200-CA-S	AC	Split-core - N.C. solid state switch	50-100Hz	0.2 to 15 sec - adjustable	0.85"
ACSX200-AE-F	AC/DC	Fixed-core - N.O. solid state switch	50-100Hz	0.2 to 15 sec - adjustable	0.74"
ACSX200-AE-S	AC/DC	Split-core - N.O. solid state switch	50-100Hz	0.2 to 15 sec - adjustable	0.85"
ACSX200-CE-F	AC/DC	Fixed-Core - N.C. solid state switch	50-100Hz	0.2 to 15 sec - adjustable	0.74"
ACSX200-CE-S	AC/DC	Split-core - N.C. solid state switch	50-100Hz	0.2 to 15 sec - adjustable	0.85"
"Provide indication of current draw on monitored loads in a panel Provides confirmation of operation for critical lighting equipment - Identify open heater circuit connection"					
ACL1	120VAC	0.5-100A, red flashing LED, slides over conductor	50-400Hz		0.30"
"DCT Current Transducers combine a Hall effect sensor and signal conditioner int a single package for use in DC current applications up to 400A Battery Banks (monitor load current, monitor charging current, verify operation) Electric Heating Elements (Monitor heater loads - faster response than temp sensors!)"					
DCT100-42-24-F	24VAC/DC	Fixed-core - 0-50, 0-75, 0-100A, 4-20MA	DC	20ms	0.75"
DCT200-42-24-F	24VAC/DC	Fixed-core - 0-100, 0-150, 0-200A, 4-20MA	DC	20ms	0.75"
DCT100-42-24-S	24VAC/DC	Split-core - 0-50, 0-75, 0-100A, 4-20mA	DC	100ms	0.85"
DCT200-42-24-S	24VAC/DC	Split-core - 0-100, 0-150, 0-200A, 4-20mA	DC	100ms	0.85"
DCT400-42-24-S	24VAC/DC	Split-core - 0-200, 0-300, 0-400A, 4-20mA	DC	100ms	0.85"
DCT100-10B-24-S	24VAC/DC	Split-core - Bidirectional 100A - +/-10VDC	DC	100ms	0.85"
DCT200-10B-24-S	24VAC/DC	Split-core - Bidirectional 200A - +/-10VDC	DC	100ms	0.85"
DCT300-10B-24-S	24VAC/DC	Split-core - Bidirectional 300A, +/- 10VDC	DC	100ms	0.85"
"DCS100 Current Switches combina a Hall effect sensor, signal conditioner, and limit alarm into a single package (Solar Panel - Current Drop) Welders (indication of equip status) Power Supplies (detect over-current), Battery Systems (Monitor state of critical backup batteries)"					
DCS100-AE-24-F	24VAC/DC	5-15A, 10-50A, 20-100A, N.O. Jumper selectable	DC	100ms (10% above SP)	0.75"
DCS100-1C-24-F	24VAC/DC	5-15A, 10-50A, 20-100A, SPDT relay, jumper-selectable trip ranges	DC	100ms (10% above SP)	0.75"
"The GFS (Ground Fault Sensor) series monitors all current-carrying conductors in grounded single and three-phase delta or wye systems - Fixed-core models only Personnel & Equipment Protection - helps eliminate nuisance tripping while still providing adequate GF detection to protect machine electronics"					
GFS30-M1A-24-F	24VAC/DC	SPST-NO, Manual Reset 5/10/30 mA Trip	50-400Hz	200ms @ 50% above SP	0.75"
GFS30-M1B-24-F	24VAC/DC	SPST-NC, Manual Reset 5/10/30 mA Trip	50-400Hz	200ms @ 50% above SP	0.75"
GFS30-D1C-24-F	24VAC/DC	SPDT, De-energized Auto Reset 5/10/30 mA Trip	50-400Hz	200ms @ 50% above SP	0.75"
GFS30-E1C-24-F	24VAC/DC	SPDT, Energized Auto Reset 5/10/30 mA Trip	50-400Hz	200ms @ 50% above SP	0.75"
GFS30-M1A-120A-F	120VAC	SPST-NO, Manual Reset 5/10/30 mA Trip	50-400Hz	200ms @ 50% above SP	0.75"
GFS30-M1B-120A-F	120VAC	SPST-NC, Manual Reset 5/10/30 mA Trip	50-400Hz	200ms @ 50% above SP	0.75"
GFS30-D1C-120A-F	120VAC	SPDT, De-energized Auto Reset 5/10/30 mA Trip	50-400Hz	200ms @ 50% above SP	0.75"
GFS30-E1C-120A-F	120VAC	SPDT, Energized Auto Reset 5/10/30 mA Trip	50-400Hz	200ms @ 50% above SP	0.75"
DRA-2	DIN rail adapter	For the whole ACUAMP series			

AutomationDirect » Pneumatics

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
- ASD Series Soft-Start/Dump 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.

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". Cushioned cylinders are also available to provide end-of-stroke deceleration at both ends.

E-Series dual guide rod air cylinders

This series has pneumatic guided actuator with dual guide rods, bronze bushings, extruded aluminum housing and switch mounting tracks. Eight bore sizes range from 12 mm to 63 mm and stroke lengths from 10mm to 250mm

F-Series all stainless steel cylinders

This series of non-repairable stainless steel round body cylinders includes bore sizes from 3/4" to 2" and stroke lengths from 1/2" to 18" to meet a broad range of applications. These high quality cylinders are constructed with stainless steel bodies and end caps with full flow ports. All cylinders are factory lubricated for optimum performance and long, reliable life. Nose mount and double end mount available.

CPS Series of universal position switches

With nine styles (including IP69K) that fit most major cylinder brands, these switches are manufactured with solid state reliability for a longer life. Compact and easy to mount on round body, tie rod, and extruded body cylinders, they have LED switch status indication



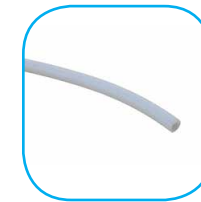
AutomationDirect » Pneumatics

Polyurethane (PUR) Tubing



- Inch and metric tubing sizes available
- Six standard colors: Black, blue, clear, red, yellow, and clear blue
- Plus UV stabilized available in dark green
- 100 foot and 500 foot package sizes
- Shore A 98 hardness
- Strong, flexible and kink resistant

PTFE Pneumatic Tubing



- Inch and metric sizes available
- Natural color
- 100 foot package size
- Shore D 55 hardness
- High working pressure and temperature/chemical resistance

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

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



Nylon 12 Tubing



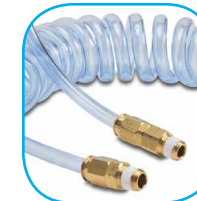
- Inch and metric tubing sizes available
- Five colors – black, blue, natural, red and yellow
- 100 foot and 500 foot package sizes
- High working pressure and temperature/chemical resistance

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

Polyurethane and Reinforced Polyurethane Coiled Hose



- 1/4" and 3/8" inside diameters
- 8, 12 and 16-foot working lengths
- Clear blue color
- Strong, flexible and kink resistant

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

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
- Union straight and swivel hose couplings
- Brass adapter fittings

Many popular styles also available in stainless steel

» Flow Control includes:

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

AutomationDirect » Safety Light Curtains

Contrinex Safety Light Curtain - 14mm	Part #		"Protective Protective"			
Height mm(inch)"	"Total Height mm(inch)"	# Beams				
Finger Protection - Cat 4 - Type 4	YBB-14S4-0150-G012	Sender	142 (5.59)	251 (9.81)	17	
N.C., Dual PNP outputs	YBB-14R4-0150-G012	Receiver				
M12 connector, 24VDC power required, IP65	YBB-14S4-0250-G012	Sender	271 (10.67)	380 (23.94)	33	
Must use Safety Relay Light Curtain Controllers	YBB-14R4-0250-G012	Receiver				
	YBB-14S4-0400-G012	Sender	400 (15.75)	509 (20.04)	49	
	YBB-14R4-0400-G012	Receiver				
	YBB-14S4-0500-G012	Sender	529 (20.83)	638 (25.12)	65	
	YBB-14R4-0500-G012	Receiver				
	YBB-14S4-0700-G012	Sender	658 (25.91)	767 (30.20)	81	
	YBB-14R4-0700-G012	Receiver				
	YBB-14S4-0800-G012	Sender	787 (30.98)	896 (35.28)	97	
	YBB-14R4-0800-G012	Receiver				
	YBB-14S4-0900-G012	Sender	916 (36.06)	1025 (40.35)	113	
	YBB-14R4-0900-G012	Receiver				
Contrinex Safety Light Curtain - 30mm	YBB-14S4-1000-G012	Sender	1045 (41.14)	1154 (45.43)	129	
	YBB-14R4-1000-G012	Receiver				
	YBB-30S4-0250-G012	Sender	279 (10.98)	380 (23.94)	17	
	YBB-30R4-0250-G012	Receiver				
	Hand Protection - Cat 4 - Type 4	YBB-30S4-0400-G012	Sender	408 (16.06)	509 (20.04)	25
	N.C., Dual PNP outputs	YBB-30R4-0400-G012	Receiver			
	M12 connector, 24VDC power required, IP65	YBB-30S4-0500-G012	Sender	537 (21.14)	638 (25.12)	33
	Must use Safety Relay Light Curtain Controllers	YBB-30R4-0500-G012	Receiver			
		YBB-30S4-0700-G012	Sender	666 (26.22)	767 (30.20)	41
		YBB-30R4-0700-G012	Receiver			
YBB-30S4-0800-G012		Sender	795 (31.30)	896 (35.28)	49	
YBB-30R4-0800-G012		Receiver				
YBB-30S4-0900-G012		Sender	924 (36.38)	1025 (40.35)	57	
YBB-30R4-0900-G012		Receiver				
YBB-30S4-1000-G012		Sender	1053 (41.46)	1154 (45.43)	65	
YBB-30R4-1000-G012		Receiver				
YBB-30S4-1200-G012		Sender	1182 (46.54)	1283 (50.51)	73	
YBB-30R4-1200-G012		Receiver				
YBB-30S4-1300-G012		Sender	1311 (51.61)	1412 (55.59)	81	
YBB-30R4-1300-G012		Receiver				
YBB-30S4-1400-G012		Sender	1440 (56.69)	1541 (60.67)	89	
YBB-30R4-1400-G012		Receiver				
YBB-30S4-1600-G012		Sender	1569 (61.77)	1670 (65.75)	97	
YBB-30R4-1600-G012		Receiver				
YBB-30S4-1700-G012	Sender	1698 (66.85)	1799 (70.83)	105		
YBB-30R4-1700-G012	Receiver					
YBB-30S4-1800-G012	Sender	1827 (71.93)	1928 (75.91)	113		
YBB-30R4-1800-G012	Receiver					
Light Curtain Accessories						
Mounting brackets for top and bottom mounting. 2/pk	YXW-0001-000					
Sliding T-nuts for side mounting. Metal. 2/pk	YXW-0003-000					
Protective Column. Aluminum profile with steel floor plates. 1/pk	YXC-1060-F00			974mm		
Protective Column. Aluminum profile with steel floor plates, 1/pk	YXC-1360-F00			1274mm		
Protective Column. Aluminum profile with steel floor plates, 1/pk	YXC-1660-F00			1574mm		
Protective Column. Aluminum profile with steel floor plates, 1/pk	YXC-1960-F00			1874mm		
2 meter - Axial - M12 Quick Disconnect Cable	CD12L-0B-020-A0					
2 meter - Right-Angle - M12 Quick Disconnect Cable	CD12L-0B-020-C0					
7 meter - Axial - M12 Quick Disconnect Cable	CD12M-0B-070-A1					
7 meter - Right-Angle - M12 Quick Disconnect Cable	CD12M-0B-070-C1					
Dold Safety Relay - Multi-Function						
Protective, Muting, & Stepping Functions						
Light Curtain Controller - Cat 4 SIL 3	BH5902-22-01MF2-61	24VDC	2NO + 2NC	2-channel		
Dold Safety Relay						
Light Curtain Controller - Cat 4 SIL 3	LG5925-48-900-61	24VDC	3NO + 1NC	2-channel		

AutomationDirect » Control Wire, Power Cord & Patch Cable

Control Cable	250 Foot Lengths - Flexible Unshielded
V40166-250	18AWG - 3 Conductor
V40168-250	18AWG - 4 Conductor
V40170-250	18AWG - 5 Conductor
V40172-250	18AWG - 7 Conductor
V40174-250	18AWG - 9 Conductor
V40176-250	18AWG - 12 Conductor
V40178-250	18AWG - 18 Conductor
V40180-250	18AWG - 25 Conductor
V50196-250	16AWG - 3 Conductor
V50198-250	16AWG - 4 Conductor
V50200-250	16AWG - 5 Conductor
V50202-250	16AWG - 7 Conductor
V50206-250	16AWG - 9 Conductor
V50208-250	16AWG - 12 Conductor
V50212-250	16AWG - 18 Conductor
V50214-250	16AWG - 25 Conductor
V50216-250	16AWG - 41 Conductor
V60127-250	14AWG - 3 Conductor
V60129-250	14AWG - 4 Conductor
V60131-250	14AWG - 5 Conductor
V60133-250	14AWG - 7 Conductor
V60135-250	14AWG - 9 Conductor
V60137-250	14AWG - 12 Conductor
V60139-250	14AWG - 18 Conductor
V60141-250	14AWG - 25 Conductor
V70107-250	12AWG - 4 Conductor
V80059-250	10AWG - 4 Conductor

Serial Cable	500 Foot Lengths
L19772-500	RS232/422 - 2 TWISTED PAIRS 24AWG PVC
L19853-500	RS232/422 - 3 TWISTED PAIRS 24AWG PVC
L19827-500	RS485 - 1 TWISTED PAIR 24AWG PVC
L19773-500	RS485 - 3 TWISTED PAIRS 24AWG PVC
L19954-500	RS485 - 2 TWISTED PAIRS 24AWG PVC

Flexible SEOOOW Cord	250 Foot Lengths - Black 600 Volts
SEOOOW-10-2BK250	10AWG - 2 Conductor
SEOOOW-10-3BK250	10AWG - 3 Conductor
SEOOOW-10-4BK250	10AWG - 4 Conductor
SEOOOW-12-2BK250	12AWG - 2 Conductor
SEOOOW-12-3BK250	12AWG - 3 Conductor
SEOOOW-12-4BK250	12AWG - 4 Conductor
SEOOOW-14-2BK250	14AWG - 2 Conductor
SEOOOW-14-3BK250	14AWG - 3 Conductor
SEOOOW-14-4BK250	14AWG - 4 Conductor
SEOOOW-16-2BK250	16AWG - 2 Conductor
SEOOOW-16-3BK250	16AWG - 3 Conductor
SEOOOW-16-4BK250	16AWG - 4 Conductor
SEOOOW-18-2BK250	18AWG - 2 Conductor
SEOOOW-18-3BK250	18AWG - 3 Conductor
SEOOOW-18-4BK250	18AWG - 4 Conductor

Ethernet Patch Cables	Cat5e
C5E-STPBK-S10	10FT (3.0m), BLACK
C5E-STPBK-S3	3FT (0.9m), BLACK
C5E-STPBL-S10	10FT (3.0m), BLUE
C5E-STPBL-S3	3FT (0.9m), BLUE
C5E-STPGN-S10	10FT (3.0m), GREEN
C5E-STPGN-S3	3FT (0.9m), GREEN
C5E-STPGY-S10	10FT (3.0m), GRAY
C5E-STPGY-S3	3FT (0.9m), GRAY
C5E-STPPL-S10	10FT (3.0m), PURPLE
C5E-STPPL-S3	3FT (0.9m), PURPLE
C5E-STPRD-S10	10FT (3.0m), RED
C5E-STPRD-S3	3FT (0.9m), RED
C5E-STPYL-S10	10FT (3.0m), YELLOW
C5E-STPYL-S3	3FT (0.9m), YELLOW

Ethernet Crossover Cable	
CSE-STPOR-C3	10FT (3.0m), ORANGE
CSE-STOR-C10	3FT (0.9m), ORANGE



Flexible Portable Cord

- Type SJEOOW, 300 Volt, 18 to 10 AWG
- Type SEOOOW, 600 Volt, 18 to 10 AWG
- Type W, 2000 Volt, 8 AWG





Productivity³⁰⁰⁰

- LCD Display | USB Programming Port
- Ethernet Network Port | Ethernet Remote I/O Port
- USB Data Port | USB Local I/O Port
- RS232 and RS485 Ports



- The Productivity3000 automation controller offers you a more powerful industrial control solution that is easier to use and more cost effective than any control solution in the market.



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» Industrial Remote Connectivity Routers



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» SCADA Software



» Polycarbonate Enclosures



» OLFEX® Control Cables



» Variable Speed Drives



» Safety Products



» Enclosure Cooling Systems



» Industrial Computers & HMIs



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» Power Supplies, Transformers & UPS



» Automation & Control



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