NUMATICS®

580 Series

Fieldbus Electronics

Table of Contents

EMERSON™
Industrial Automation

nUMATICS®

580 Fieldbus - Electronics Made Easy!

Innovative Graphic Display is used for easy commissioning, visual status & diagnostics.

Commissioning Capabilities

- Set network address (including IP & Subnet mask for Ethernet)
- Set baud rate
- Set brightness
- Set factory defaults

Visual Diagnostics

- Shorted and open load detection
- Shorted sensor/cable detection
- Low & missing power detection
- Self-test activation
- Log of network errors

Graphic Display for
configuration & diagnostics

580 Fieldbus Communications Electronics

Why use Numatics Fieldbus communication electronics?

Modular Reality...

- No internal wiring simplifies assembly
- Power connector allows output power to be removed while inputs and communication are left active.
- IP65 protection
- 32 valve solenoids per manifold

Supported Protocols

- DeviceNet™
- Ethernet/IP
- PROFIBUS DP
- PROFINET
- EtherCAT®
- EtherNet/IP™ DLR

CE

DeviceNet™ is a trademark of ODVA.
ControlNet is a trademark of ControlNet International, Ltd.
PROFIBUS and PROFINET are registered trademarks of Profibus International.
EtherCAT is a registered trademark of Beckhoff Automation GmbH.

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DeviceNet™

DeviceNet™ is an open bus fieldbus communication system developed by Allen-Bradley based on Controller Area Network (CAN) technology. The governing body for DeviceNet™ is the Open DeviceNet™ Vendors Association (ODVA). The ODVA controls the DeviceNet™ specification and oversees product conformance testing.

Numatics' 580 nodes for DeviceNet™ have an integrated graphic display.

They have been tested and approved for conformance by the ODVA.

More information about DeviceNet™ and the ODVA can be obtained from the following website: www.odva.org

CE
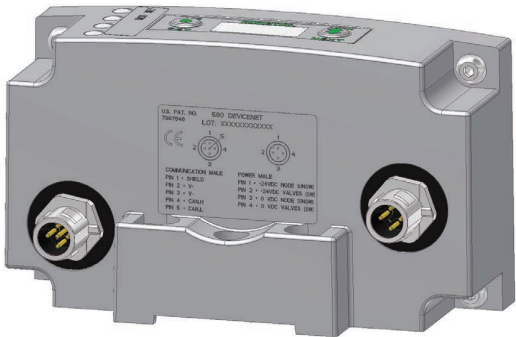
Description	Replacement Part Number
DeviceNet™ communications module (node)	P580AEDN1010A00

Technical Data

Electrical Data	Voltage	Current
Node Power	24 VDC +/- 10%	0.050 Amps
BUS Power	11-25 VDC	0.050 Amps
Valves	24 VDC +/- 10%	4 Amps Maximum
Power Connector	A-Coded 4 Pin M12 (Male)	
Communication Connector	A-Coded 5 Pin M12 (Male)	
LEDs	Module Status and Network Status	

Operating Data	
Temperature Range (ambient)	-10º to 115º F (-23º to +46ºC)
Humidity	95% relative humidity, non-condensing
Vibration / Shock	IEC 60068-2-27, IEC60068-2-6
Moisture Protection	IP65 Certified

Configuration Data	
Graphic Display	Display used for setting Node Address, Baud Rate, Fault / Idle Actions, and all other system settings.
Maximum Valve-Solenoid Outputs	32

Network Data	
Supported Baud Rates	125K Baud, 250K Baud, 500K Baud, with Auto-Baud detection
Supported Connection Type	Polled, Cyclic, Change of State (COS) and combination Message Capability
Bus Connector	A-Coded 5 pin M12 (male)
Diagnostics	Power, short, open load conditions are monitored
Special Features	Supports Auto-Device Replacement (ADR) and fail-safe device settings

Weight	
DeviceNet™ Communication Module	336g/10.8 oz.

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Ethernet/IP™

Ethernet used throughout the world to network millions of PCs has now evolved into a viable industrial network. Ethernet is an open architecture high-level communication network that meets the demands of today's industrial applications requiring high-speed (10/100 Mbit/s), high-throughput and flexibility. Additionally, Ethernet technology can integrate an on-board web server, which can make the node readily accessible to any standard web browser for configuration, testing and even retrieval of technical documentation.

Numatics' 580 nodes for Ethernet have an integrated graphic display.

The 580 Ethernet/IP nodes have been tested and approved for conformance by the ODVA.

More information about Ethernet/IP™ and the ODVA can be obtained from the following website: www.odva.org.

CE

Description	Replacement Part Number
Ethernet/IP™ communications module (node)	P580AEEP1010A00

Technical Data

Electrical Data	Voltage	Current
Node Power	24 VDC +/- 10%	0.070 Amps
Valves	24 VDC +/- 10%	4 Amps maximum
Power Connector	A-Coded 4 pin M12 (male)	
Communication Connector	D-coded 4 pin M12 (female)	
LEDs	Module Status, Network Status and Activity/Link	

Operating Data	
Temperature Range (ambient)	-10º to 115º F (-23º to +46ºC)
Humidity	95% relative humidity, non-condensing
Vibration / Shock	IEC 60068-2-27, IEC60068-2-6
Moisture Protection	IP65 Certified

Configuration Data	
Graphic Display	Display used for setting IP Address, Subnet mask, Fault / Idle Actions, DHCP / BootP and all other system settings.
Maximum Valve-Solenoid Outputs	32

Network Data	
Supported Baud Rates	10 Mbit / 100 Mbit
Bus Connector	D-coded 4 pin M12 (female)
Diagnostics	Power, short, open load conditions
Special Features	Integrated web server, fail-safe device settings, HTTP, FTP, and UNICAST (for EtherNet/IP)

| Weight	
Ethernet Communication Module	336 g/10.8 oz.

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PROFIBUS DP

PROFIBUS DP is a vendor-independent, open fieldbus protocol designed for communication between automation control systems and distributed I/O at the device level.

Numatics' 580 nodes for PROFIBUS DP have an integrated graphic display.

The 580 nodes for PROFIBUS DP have been designed and tested to conform to the PROFIBUS standard EN50170. Certification has been done by the PROFIBUS Interface Center (PIC) according to the guidelines determined by the PROFIBUS Trade Organization (PTO). The certification process ensures interoperability for all PROFIBUS devices.

More information regarding PROFIBUS can be obtained from the following website: www.profibus.com.

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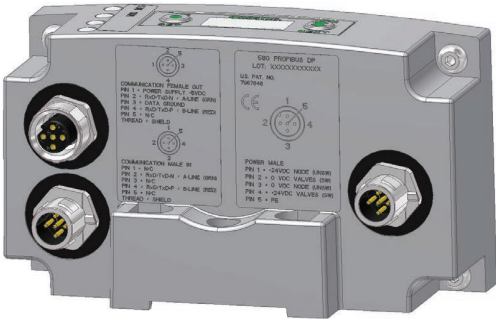
Description	Replacement Part Number
PROFIBUS DP communications module (node)	P580AEPT1010A00

Technical Data

Electrical Data	Voltage	Current
Node Power	24 VDC +/- 10%	0.080 Amps
Valves	24 VDC +/- 10%	4 Amps Maximum
Power Connector	A-Coded 5 pin M12 (male)	
Communication Connector	Single reverse key (B-Coded) 5 pin M12 (1 male and 1 female)	
LEDs	Module Status and Network Status	

Operating Data	
Temperature Range (ambient)	-10º to 115º F (-23º to +46ºC)
Humidity	95% relative humidity, non-condensing
Vibration / Shock	IEC 60068-2-27, IEC60068-2-6
Moisture Protection	IP65 Certified

Configuration Data	
Graphic Display	Display used for setting Node Address, Fault / Idle Actions, and all other system settings.
Maximum Valve-Solenoid Outputs	32

Network Data	
Supported Baud Rates	Auto-Baud (From 9.6k to 12M Baud)
Bus Connector	Single reverse key (B-coded) 5 pin M12 (1 male and 1 female)
Diagnostics	Power, short, open load conditions and module health are monitored

| Weight	
PROFIBUS DP Communication Module	342 g/11.0 oz.

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PROFINET

PROFINET is the innovative open standard for Industrial Ethernet, developed by Siemens and the Profibus User Organization (PNO). PROFINET complies to IEC 61158 and IEC 61784 standards. PROFINET products are certified by the PNO user organization, guaranteeing worldwide compatibility.

Numatics' 580 nodes for PROFINET IO (PROFINET RT) have an integrated graphic display.

PROFINET is based on Ethernet and uses TCP/IP and IT standards and complements them with specific protocols and mechanisms to achieve Real Time performance.

More information regarding PROFINET can be obtained from the following website: www.profibus.com.

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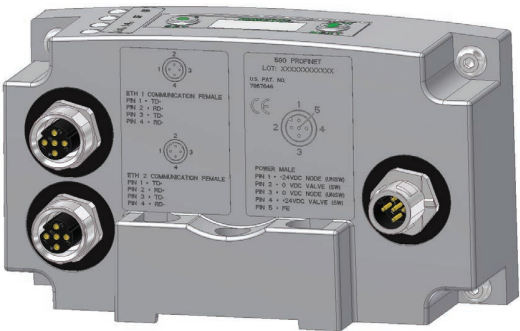
Description	Replacement Part Number
PROFINET communications module (node)	P580AEPN1010A00

Technical Data

Electrical Data	Voltage	Current
Node Power	24 VDC +/- 10%	0.110 Amps
Valves	24 VDC +/- 10%	4 Amps Maximum
Power Connector	A-Coded 5 pin M12 (male)	
Communication Connector	Two D-coded 4 pin M12 (female)	
LEDs	System Fault, Bus Fault, and Activity/Link	

Operating Data	
Temperature Range (ambient)	-10° to 115° F (-23° to +46° C)
Humidity	95% relative humidity, non-condensing
Vibration / Shock	IEC 60068-2-27, IEC60068-2-6
Moisture Protection	IP65 Certified

Configuration Data	
Graphic Display	Display used for setting IP Address, Subnet Mask, Fault / Idle Actions, and all other system settings.
Maximum Valve-Solenoid Outputs	32

Network Data	
Supported Baud Rates	10 Mbit / 100 Mbit
Bus Connector	Two D-coded 4 pin M12 (Female)
Diagnostics	Power, short, open load conditions and module health and configuration are monitored
Special Features	Integrated web server, Integrated 2 port switch, fail-safe device settings

| Weight	
PROFINET Communication Module	342 g/11.0 oz.

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EtherCAT®

EtherCAT® is an open ethernet based fieldbus protocol developed by Beckhoff. EtherCAT® sets new standards for real-time performance and topology flexibility with short data update/cycle times and low communication jitter.

Numatics' 580 EtherCAT® node has an integrated graphic display for simplified commissioning and diagnostics.

The 580 nodes for EtherCAT® have been designed and tested to conform with EtherCAT® specifications set forth by the ETG.

More information regarding EtherCAT® can be obtained from the following website: www.ethercat.org.

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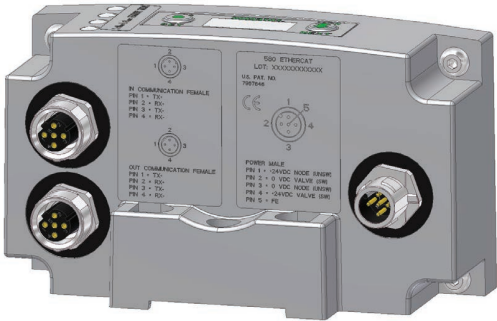
Description	Replacement Part Number
EtherCAT® communications module	P580AEEC1010A00

Technical Data

Electrical Data	Voltage	Current
Node Power	24 VDC +/- 10%	0.110 Amps
Valves	24 VDC +/- 10%	4 Amps Maximum
Power Connector	A-Coded 5 pin M12 (male)	
Communication Connector	Two D-coded 4 pin M12 (female)	
LEDs	Error, Run	

Operating Data	
Temperature Range	-10º to 115º F (-23º to +46º C)
Humidity	95% relative humidity, non-condensing
Vibration / Shock	IEC 60068-2-27, IEC 60068-2-6
Moisture	IP65 Certified

Configuration Data	
Graphic Display	Display used for Subnet Mask, Fault / Idle Actions, and all other system settings.
Maximum Valve Solenoid Outputs	32

Network Data	
Supported Baud Rates	10 Mbit / 100 Mbit
Bus Connector	Two D-coded 4 pin M12 (female)
Diagnostics	Power, short, open load conditions and module health and configuration are monitored
Special Features	Integrated web server, fail-safe device settings.

Weight	
EtherCAT® communications module	342 g/11.0 oz.

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EtherNet/IP™ DLR

EtherNet/IP™ DLR used throughout the world to network millions of PCs has now evolved into a viable industry network. EtherNet/IP™ is an open architecture high-level communication network that meets the demands of today's industrial applications requiring high-speed (10/100 Mbit/s), high-throughput and flexibility. Additionally, EtherNet/IP™ technology can integrate an on-board web server, which can make the node readily accessible to any standard web browser for configuration, testing and even retrieval of technical documentation.

Numatics' 580 EtherNet/IP™ DLR (Device Level Ring) node with integrated display, has an embedded switch which allows the unit to be used in simplified networks with linear topology configurations (daisy chain). This technology alleviates the need for an external Ethernet switch device in a single subnet configuration. Additionally, the DLR compatibility allows the node to be used in a fault tolerant "ring" network, when using appropriate EtherNet/IP™ DLR scanners. DLR configuration allows communication recovery from a single point failure on the network ring (e.g. failed network connection or cable).

Description	Replacement Part Number
EtherNet™/IP DLR communications module (node)	P580AEED1010A00

The 580 EtherNet/IP™ nodes have been tested and approved for conformance by the ODVA. More information about EtherNet™ and the ODVA can be obtained from the following website: Open Device Vendors Association (ODVA) www.odva.org.

CE

Technical Data

Electrical Data	Voltage	Current
Node Power	24 VDC +/- 10%	0.110 Amps
Valves	24 VDC +/- 10%	4 Amps Maximum
Power Connector	A-Coded 4 pin M12 (male)	
Communication Connector	Two D-coded 4 pin M12 (female)	
LEDs	Module Status, Network Status and Activity / Link	

Operating Data	
Temperature Range	-10˚ to 115˚ F (-23˚ to +46 C)
Humidity	95% relative humidity, non-condensing
Vibration / Shock	IEC 60068-2-27, IEC 60068-2-6
Moisture	IP65 Certified

Configuration Data	
Graphic Display	Display used for setting IP address, Subnet Mask, Fault / Idle Actions, and all other system settings.
Maximum Valve Solenoid Outputs	32

Network Data	
Supported Baud Rates	10 Mbit / 100 Mbit
Bus Connector	Two D-coded 4 pin M12 (female)
Diagnostics	Power, short, open load conditions and module health and configuration are monitored
Special Features	Embedded two port switch, Device Level Ring (DLR) compatibility, Linear network topology, fail-safe device settings, integrated web server, HTTP, TFTP, UNICAST

Weight	
EtherCAT® communications module	342 g/11.0 oz.

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Dimensional Drawing - 580 Fieldbus Manifold Assembly

503 Series Valve Manifold Assembly with 580 Electronics

6.3 Wide Slot
(2) Places
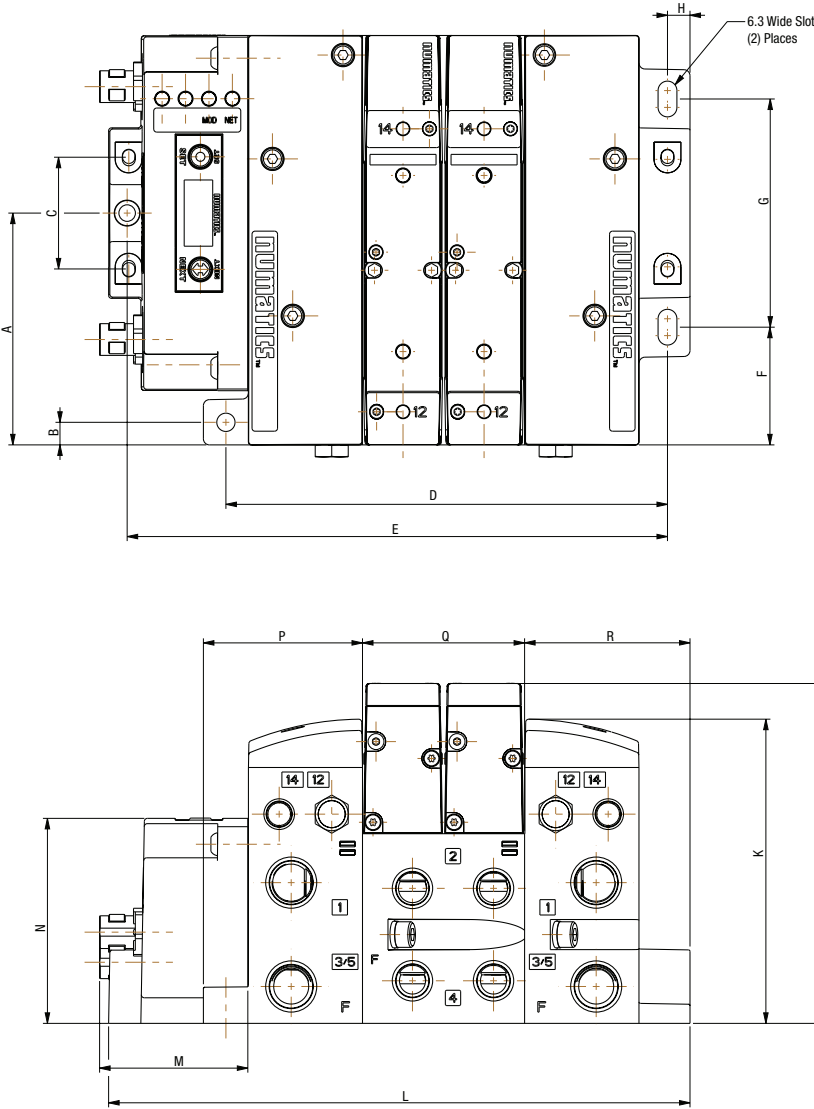
A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R
77 (3.032)	7.5 (0.295)	38 (1.5)	147.1 (5.79)	180 (7.087)	39.1 (1.539)	75.8 (2.984)	7.5 (0.295)	113 (4.449)	101 (3.976)	194 (7.638)	49.4 (1.945)	68.1 (2.681)	53 (2.087)	54 (2.13)	55.1 (2.169)

* - For valve manifold dimensions refer to Valve Series product catalogs.

Manifold Assembly How to Order

8 503 A V 3 B 2 0 0 V A00

Port Type
8 = NPTF[1]
G = ISO228/1-G[1]
K = Push-In Fittings

Product Series
501 = 11 mm Valve
503 = 26 mm Valve

Revision
A = Initial Release

Product Type
V = Valve Manifold Assembly

Electronics
3 = G3 Fieldbus Electronics

Number of Valve Stations
B = 2   N = 14   Z = 26
D = 4   P = 16   3 = 28
F = 6   R = 18   5 = 30
H = 8   T = 20   7 = 32
J = 10   V = 22
L = 12   X = 24

Options
A00 = Standard (No Options)
MUF = Muffler in End Plates
DRM = DIN Rail Mount
DWM = DIN Rail with MUF
14X = External Pilot Supply from Port # 14
D12 = (14X) External Pilot Supply from Port # 14
          and (MUF) Muffler in End Plates
D14 = (14X) External Pilot Supply from Port # 14
          and (DRM) DIN Rail Mount
F06 = (14X) External Pilot Supply from Port # 14,
          (MUF) Muffler in End Plates, and (DRM) DIN Rail Mount

End Plate Style
V = Vertical

End Plate Port Size
1 = 1/8
2 = 1/4
3 = 3/8
4 = 1/2
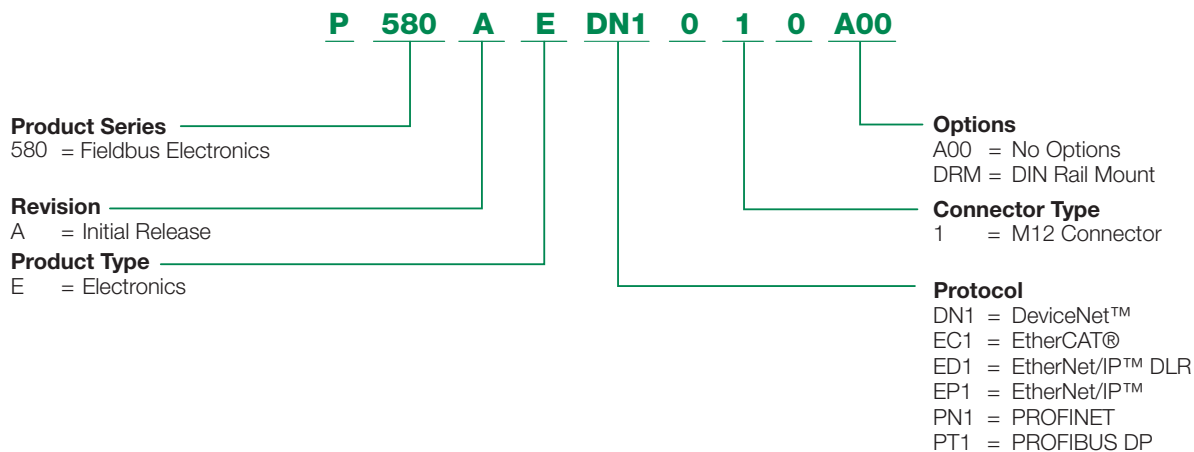H = 8 mm (5/16)
K = 10 mm
M = 12 mm

[1] Port Type '8' + 'G' only available in Port Size 3/8

[2] Horizontal end plates only available with Electroincs option 'O' - No Electronics

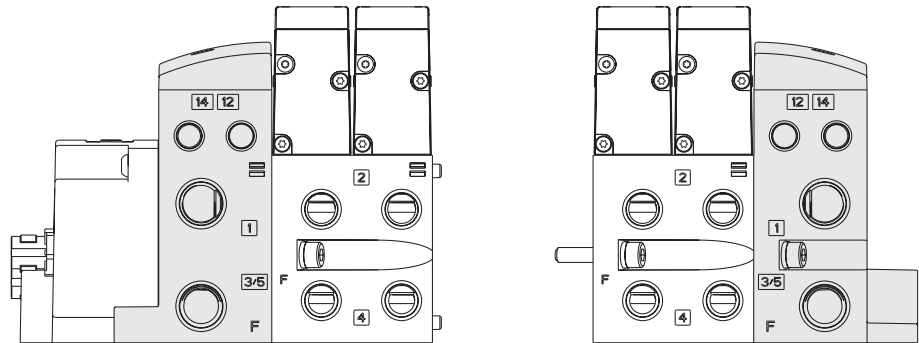*NOTE: 501 Valve Series Available with 4, 8, 12, 16, 20, 24, 28 and 32 Stations Only

How To Order

580 Electronics

P 580 A E DN1 0 1 0 A00

Product Series
580 = Fieldbus Electronics

Revision
A = Initial Release

Product Type
E = Electronics

Options
A00 = No Options
DRM = DIN Rail Mount

Connector Type
1 = M12 Connector

Protocol
DN1 = DeviceNet™
EC1 = EtherCAT®
ED1 = EtherNet/IP™ DLR
EP1 = EtherNet/IP™
PN1 = PROFINET
PT1 = PROFIBUS DP

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Ordering Valve Manifold Assemblies with 580 Electronics

For valve series

Shaded components are described by the manifold assembly number (see page 10). The communication module is described by the Electronic Interface model number designation (see page 10).

Each valve station is listed in sequential order from left to right when facing the port side of the manifold as shown.

NOTE:

1. A total of 32 solenoid outputs are available. Either 32 single solenoid valves or 16 double solenoid valves or any combination of singles and doubles not to exceed 32 outputs can be specified.

Example Order - 503 Shown

Assembly Kit	8503AV8H100VMUF
Valve Station #1	R503A2B40MA00F1
Valve Station #2	R503A2B40MA00F1
Mounting # 1	8503AMM22MA0010
Valve Station #3	R503A2B40MA00F1
Valve Station #4	R503A2B40MA00F1
Mounting # 2	8503AMM22MA0010
Valve Station #5	R503A2B40MA00F1
Valve Station #6	R503A2B40MA00F1
Mounting #3	8503AMM22MA0010
Valve Station #7	R503A2B40MA00F1
Valve Station #8	R503A2B40MA00F1
Mounting #4	8503AMM22MA0010
Electronics	P580AEDN1010A00
Assembled	

M12 A-Coded Cables

M12 Straight 4 Pin Female Single Ended Cable, Euro Color Code

TC0405MAE0000000 – 5 Meter

TC0410MAE0000000 – 10 Meter

M12 Straight 5 Pin Female Single Ended Cable, Euro Color Code

TC0505MAE0000000 – 5 Meter

TC0510MAE0000000 – 10 Meter

M12 90° 4 Pin Female Single Ended Cable, Euro Color Code

TD0405MAE0000000 – 5 Meter

TD0410MAE0000000 – 10 Meter

M12 90° 5 Pin Female Single Ended Cable, Euro Color Code

TD0505MAE0000000 – 5 Meter

TD0510MAE0000000 – 10 Meter

M12 A-Coded Field Wireable Connectors

M12 Straight 4 Pin Female Field Wireable Connector

TC04F10000000000 – PG 7 Cable Gland

TC04F20000000000 – PG 9 Cable Gland

M12 Straight 5 Pin Female Field Wireable Connector

TC05F10000000000 – PG 7 Cable Gland

TC05F20000000000 – PG 9 Cable Gland

M12 90° 4 Pin Female Field Wireable Connector

TD04F10000000000 – PG 7 Cable Gland

TD04F20000000000 – PG 9 Cable Gland

M 12 90° 5 Pin Female Field Wireable Connector

TD05F10000000000 – PG 7 Cable Gland

TD05F20000000000 – PG 9 Cable Gland

Technical Data	Cable	Field Wireable	Pin Out / Color Code
Molded Body / Insert	PVC / Polyamide	Polyamide	
Coupling Nut	Nickel Copper Alloy		Female View
Cable Jacket Material	PVC	NA	
Cable O.D.	7.4mm	NA	
Voltage Rating	125 V Max. @ 105° C		1 — BN
Current Rating	4.0 Amps		2 — WH
Degree of Protection	IP65 (mated)		3 — BU
Operating Temperature	-25° C - 85° C		4 — BK
Conductor Gauge	18 AWG	NA	1 — BN
Bend Radius	74mm	NA	2 — WH
Maximum Wire AWG	NA	18 AWG	4 — BK
Wire Connection	NA	Screw Terminal	3 — BU
PG 7 Range	NA	4-6 mm	5 — GN/YE
PG 9 Range	NA	6-8 mm	

NUMATICS®
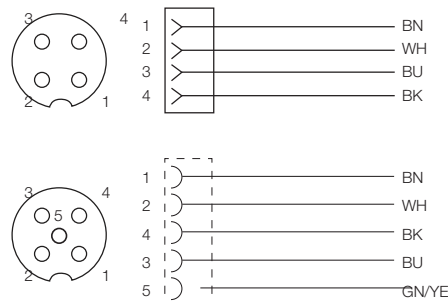
M12 A-Coded Cables

M12 Straight 5 Pin Female Single Ended Cable - Shielded
TA0505MGD0000000 – 5 Meter – MALE
TA0510MGD0000000 – 10 Meter – MALE
TC0505MGD0000000 – 5 Meter - FEMALE
TC0510MGD0000000 – 10 Meter - FEMALE

M12 90° 5 Pin Male & Female Single Ended Cable - Shielded
TB0505MGD0000000 – 5 Meter – MALE
TB0510MGD0000000 – 10 Meter – MALE
TD0505MGD0000000 – 5 Meter - FEMALE
TD0510MGD0000000 – 10 Meter - FEMALE

3 Way M12 "T"
TC0500000TT05000 – 12mm

Terminating Resistor - Male
TA05TR0000000000 – 12mm

M12 A-Coded Field Wireable Connectors

| M12 90° 5 Pin Male & Female Field Wireable Connector – Spring Cage |
| --- |
| TB05F2000000071V – PG 9 Cable Gland – Spring Cage Male |
| TD05F2000000071V – PG 9 Cable Gland – Spring Cage Female |

M12 Straight 5 Pin Male & Female Field Wireable Connector – Spring Cage
TA05F2000000071V – PG 9 Cable Gland – Spring Cage Male
TC05F2000000071V – PG 9 Cable Gland – Spring Cage Female

Technical Data	Cable	M12 Field Wireable	"T"	Pin Out / Color Code
Molded Body / Insert	PVC / Polyamide	Nickel Plated Zinc / TPU	TPU / TPU GF	Female View
Coupling Nut	Nickel Plated Brass	Nickel Plated Brass	Nickel Plated Zinc	Pin 1=Shield
Cable Jacket Material	PVC	NA	NA	Pin 2= V+
Cable O.D.	7 mm	4.0 to 8 mm	NA	Pin 3= V-
Voltage Rating	300 Volts	60 Volts	60 Volts	Pin 4= CAN_H
Current Rating	4.0 Amps	4.0 Amps	4.0 Amps	Pin 5= CAN_L
Degree of Protection	IP65 (mated)	IP 65 (mated)	IP 65 (mated)	
Operating Temperature	-40° C - 80° C	-40° C - 85° C	-25° C - 90° C	
Conductor Gauge	24 AWG (power & data)	26-20 AWG	NA	
Minimum Bend Radius	74 mm	NA	NA	
Wire Connection	NA	Spring Cage	NA	

EtherNet/IP™ Communication Cables & Connectors

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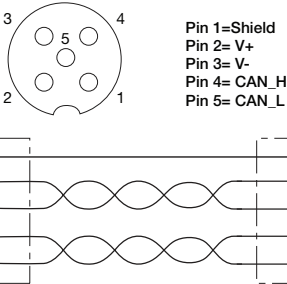
M12 D-Coded Cables

M12 Straight 4 Pin Male D-Coded Single Ended Cable

QA0405MK00000000 – 5 Meter

QA0410MK00000000 – 10 Meter

M12 Straight 4 Pin Male D-Coded to Male RJ45 Cable

QA0405MK0VA04000 – 5 Meter

QA0410MK0VA04000 – 10 Meter

M12 90° 4 Pin Male D-Coded Single Ended Cable

QB0405MK00000000 – 5 Meter

QB0410MK00000000 – 10 Meter

M12 Straight 4 Pin Male D-Coded Double Ended Cable

QA0405MK0QA04000 – 5 Meter

QA0410MK0QA04000 – 10 Meter

M12 Straight 4 Pin Male D-Coded to RJ45 Female Socket Convertor

QA04D2MK0VC04000 – 0.2 Meter

M12 D-Coded Field Wireable Connectors

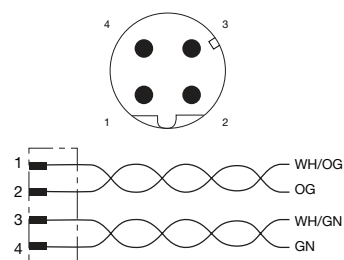**M12 90° 4 Pin Male D-Coded Field Wireable Connector w/IDC**

QB04F2000000071N – PG 9 Cable Gland – IDC

M12 Straight 4 Pin Male D-Coded Field Wireable Connector w/IDC

QA04F2000000071N – PG 9 Cable Gland – IDC

Technical Data	Cable	M12 Field Wireable	Pin Out / Color Code
Molded Body / Insert	PUR / Polyamide	Nickel Plated Zinc / PA 66	Male View
Coupling Nut	Nickel Plated Brass	Nickel Plated Brass	
Cable Jacket Material	PUR	NA	
Cable O.D.	5.6 mm	4.0 to 8 mm	
Voltage Rating (Nominal)	300 Volts	60 Volts	
Current Rating	2.0 Amps	1.75 Amps	
Degree of Protection	IP65 (mated)	IP 65 (mated)	
Operating Temperature	-40° C - 75° C	-40° C - 85° C	
Conductor Gauge	24 AWG	IDC 26-22 AWG	
Bend Radius	61mm	NA	
Wire Connection	NA	IDC	

Pin Out:
1 – WH/OG
2 – OG
3 – WH/GN
4 – GN

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M12 D-Coded Cables

M12 Straight 4 Pin Male D-Coded Single Ended Cable

QA0405MR00000000 – 5 Meter

QA0410MR00000000 – 10 Meter

M12 90° 4 Pin Male D-Coded Single Ended Cable

QB0405MR00000000 – 5 Meter

QB0410MR00000000 – 10 Meter

M12 Straight 4 Pin Male D-Coded Double Ended Cable

QA0405MR0QA04000 – 5 Meter

QA0410MR0QA04000 – 10 Meter

M12 Straight 4 Pin Male D-Coded to Male RJ45 Cable

QA0405MR0VA04000 – 5 Meter

QA0410MR0VA04000 – 10 Meter

M12 Straight 4 Pin Male D-Coded to RJ45 Female Socket Convertor

QA04D2MK0VC04000 – 0.2 Meter

M12 D-Coded Field Wireable Connectors

M12 90° 4 Pin Male D-Coded Field Wireable Connector w/IDC

QB04F200R000071N – PG 9 Cable Gland – IDC

M12 Straight 4 Pin Male D-Coded Field Wireable Connector w/IDC

QA04F200R000071N – PG 9 Cable Gland – IDC

Technical Data	Cable	M12 Field Wireable	Pin Out / Color Code
Molded Body / Insert	PUR / PUR or PE	Nickel Plated Zinc / PA 66	Male View
Coupling Nut	Nickel Plated Zinc and Brass	Nickel Plated Brass	
Cable Jacket Material	PVC	NA	
Cable O.D.	6.5mm / 7.4mm	4.0 to 8.0 mm	
Voltage Rating (Nominal)	42 Volts	60 Volts	
Current Rating	1.5 Amps	1.75 Amps	
Degree of Protection	IP65 (mated)	IP 65 (mated)	1 — YE
Operating Temperature	-25° C - 60°	-40° C - 85° C	2 — WH
Conductor Gauge	24 & 22 AWG	26-22 AWG	3 — OG
Bend Radius	19.5 mm	NA	4 — BU
Wire Connection	NA	IDC	

PROFIBUS DP Communication Cables & Connectors

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M12 B-Coded (Reverse Key) Cables

M12 Straight 5 Pin Male & Female Single Ended Cables
RA0505MHP0000000 – 5 Meter – MALE
RA0510MHP0000000 – 10 Meter – MALE
RC0505MHP0000000 – 5 Meter – FEMALE
RC0510MHP0000000 – 10 Meter – FEMALE

M12 Straight 5 Pin Male – to – Female Double Ended Cables
RC0505MHPRA05000 – 5 Meter
RC0510MHPRA05000 – 10 Meter

M12 90° 5 Pin Male & Female Single Ended Cable
RB0505MHP0000000 – 5 Meter – MALE
RB0510MHP0000000 – 10 Meter – MALE
RD0505MHP0000000 – 5 Meter – FEMALE
RD0510MHP0000000 – 10 Meter – FEMALE

M12 B-Coded (Reverse Key) Field Wireable Connectors

M12 90° 5 Pin Male & Female Field Wireable Connectors, w/IDC
RB05F200P000071V – PG9 Cable Gland – IDC MALE
RD05F200P000071V – PG9 Cable Gland – IDC FEMALE

| M12 Straight 5 Pin Male & Female Field Wireable Connectors |
|---|
| RA05F200P0000000 – PG7 Cable Gland – MALE |
| RC05F200P0000000 – PG7 Cable Gland – FEMALE |

M12 Straight 5 Pin Terminating Resistor
RA05TR0000000000 – MALE

M12 Bus "T"
RA050000PRT05000

Technical Data	Cable	Field Wireable	"T"	Pin Out / Color Code
Molded Body	PUR	Nickel Plated Zinc / Brass	Aluminum	
Insert	Polyamide	TPU/PVC	Nylon	
Coupling Nut	Nickel Plated Brass	Nickel Plated Brass / Stainless Steel	Nickel Plated Brass	Male View
Cable Jacket Material	PVC	NA	NA	
Cable O.D.	8.5 mm	4.0 to 8.0 mm / 3.0 to 6.5 mm	NA	
Voltage Rating	300 Volts	60 Volts	250 Volts	
Current Rating	4.0 Amps	4.0 Amps	4.0 Amps	
Degree of Protection	IP65 (mated)	IP 65 (mated)	IP 65 (mated)	
Operating Temperature	-40° C - 80° C	-40° C - 85° C	-40° C - 80° C	
Conductor Gauge	22 AWG	26-20 AWG / 24-18 AWG	NA	
Minimum Bend Radius	74 mm	NA	NA	
Wire Connection	NA	IDC / Screw Terminal	NA	

nUMATICS
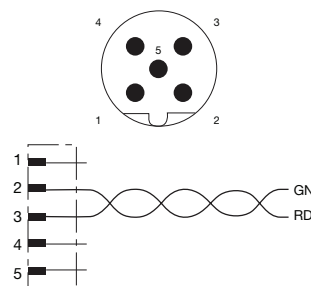
M12 D-Coded Cables

M12 Straight 4 Pin Male D-Coded Single Ended Cable

QA0405MT00000000 – 5 Meter

QA0410MT00000000 – 10 Meter

M12 90° 4 Pin Male D-Coded Single Ended Cable

QB0405MT00000000 – 5 Meter

QB0410MT00000000 – 10 Meter

M12 Straight 4 Pin Male D-Coded Double Ended Cable

QA0405MT0QA04000 – 5 Meter

QA0410MT0QA04000 – 10 Meter

M12 Straight 4 Pin Male D-Coded to Male RJ45 Cable

QA0405MT0VA04000 – 5 Meter

QA0410MT0VA04000 – 10 Meter

M12 Straight 4 Pin Male D-Coded to RJ45 Female Socket Convertor

QA04D2MK0VC04000 – 0.2 Meter

M12 D-Coded Field Wireable Connectors

M12 90° 4 Pin Male D-Coded Field Wireable Connector w/IDC

QB04F200R000071N – PG 9 Cable Gland – IDC

M12 Straight 4 Pin Male D-Coded Field Wireable Connector w/IDC

QA04F200R000071N – PG 9 Cable Gland – IDC

Technical Data	Cable	M12 Field Wireable	Pin Out / Color Code
Molded Body / Insert	PVC / PE	Nickel Plated Zinc / PA 66	Male View
Coupling Nut	Nickel Plated Zinc	Nickel Plated Brass	
Cable Jacket Material	PUR	NA	
Cable O.D.	6.5 mm	4.0 to 8.0 mm	
Voltage Rating (Nominal)	300 Volts	60 Volts	
Current Rating	2.0 Amps	1.75 Amps	
Degree of Protection	IP65 (mated)	IP 65 (mated)	
Operating Temperature	-5° C - 50° C	-40° C - 85° C	
Conductor Gauge	22 AWG	26-22 AWG	1 YE
Bend Radius	46 mm	NA	2 WH
Wire Connection	NA	IDC	3 OG
			4 BU