Fieldbus System
(Output device for driving 5-port solenoid valves)

Space-saving installation

- Compact Approx. 28mm
- Actual size

- IP67
  * For units with a D-sub connector, and when connected to S0700 manifolds, it is IP40.
- Drives up to 32 solenoids
- Daisy-chain wiring communication
  * Excludes the units compatible with IO-Link

<Compatible Protocols>

- PROFIBUS
- DeviceNet
- CANopen
- CC-Link
- IO-Link
- PROFINET
- EtherCAT
- EtherCAT POWERLINK
- Fieldbus System

For units with a D-sub connector, and when connected to S0700 manifolds, it is IP40.

New IO-Link compatible products have been added.
- Can be connected using a single cable
- Various types of diagnostic tests can be performed using service data.

<table>
<thead>
<tr>
<th>Diagnostic contents</th>
<th>Internal failure of the SI unit</th>
<th>Output short circuit</th>
<th>Output open circuit</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Solenoid valve power supply failure</td>
<td>Abnormal internal temperature of the SI unit</td>
<td>Output switching count value exceeded</td>
</tr>
</tbody>
</table>

EX260 Series

CAT.EU02-25C-UK
**Manifold length reduced by approx. 53 mm**

**Wiring and piping from the same direction is possible.**
(for side ported)

An external terminating resistor is not necessary. (Only available for M12 PROFIBUS DP, CC-Link communication connectors)

**Daisy-chain wiring communication is possible.**

A branch connector is not necessary/Reduced wiring space

- Excludes the units compatible with IO-Link

**An external terminating resistor is not necessary.**

ON/OFF switching is possible with an internal terminating resistor.
An external terminating resistor is not necessary.
### Fieldbus System (Output device for driving 5-port solenoid valves) **EX260 Series**

#### Product Specification Variations

<table>
<thead>
<tr>
<th>Number of outputs</th>
<th>DeviceNet</th>
<th>CC-link</th>
<th>EtherCAT</th>
<th>EtherNet/IP</th>
<th>Powerlink</th>
<th>IO-Link</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>32</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Output polarity</th>
<th>M12</th>
<th>D-sub</th>
</tr>
</thead>
<tbody>
<tr>
<td>PNP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NPN</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Communication connector examples

- **M12 communication connector x 2**
  - (For daisy-chain wiring)
- **M12 communication connector x 1**
  - (Same for the solenoid valve power supply wiring)
- **D-sub communication connector**

#### Applicable Valve Series

<table>
<thead>
<tr>
<th>Series</th>
<th>Flow rate characteristics (4/2 → 5/3)</th>
<th>Maximum number of solenoids</th>
<th>Power consumption [W]</th>
<th>Applicable cylinder size</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>C [dm³/(s·bar)]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>IP67</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SY3000</td>
<td>1.6</td>
<td>32</td>
<td>0.35</td>
<td>Ø 50</td>
</tr>
<tr>
<td>SY5000</td>
<td>3.6</td>
<td></td>
<td>0.1</td>
<td>Ø 63</td>
</tr>
<tr>
<td>SY7000</td>
<td>5.9</td>
<td></td>
<td>(With power-saving circuit)</td>
<td>Ø 80</td>
</tr>
<tr>
<td><strong>IP67</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>JSY1000</td>
<td>0.91</td>
<td>32</td>
<td>0.2</td>
<td>Ø 40</td>
</tr>
<tr>
<td>JSY3000</td>
<td>2.77</td>
<td></td>
<td>0.4</td>
<td>Ø 50</td>
</tr>
<tr>
<td>JSY5000</td>
<td>6.59</td>
<td></td>
<td>0.1</td>
<td>Ø 80</td>
</tr>
<tr>
<td><strong>IP40</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S0700</td>
<td>0.37</td>
<td>32</td>
<td>0.35</td>
<td>Ø 25</td>
</tr>
<tr>
<td><strong>IP67</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SV1000</td>
<td>1.1</td>
<td>32</td>
<td>0.6</td>
<td>Ø 40</td>
</tr>
<tr>
<td>SV2000</td>
<td>2.4</td>
<td></td>
<td></td>
<td>Ø 63</td>
</tr>
<tr>
<td>SV3000</td>
<td>4.3</td>
<td></td>
<td></td>
<td>Ø 80</td>
</tr>
<tr>
<td><strong>IP67</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VQC1000</td>
<td>1.0</td>
<td>24</td>
<td>0.4</td>
<td>Ø 40</td>
</tr>
<tr>
<td>VQC2000</td>
<td>3.2</td>
<td></td>
<td>0.3</td>
<td>Ø 63</td>
</tr>
<tr>
<td>VQC4000</td>
<td>7.3</td>
<td></td>
<td>0.95</td>
<td>Ø 160</td>
</tr>
<tr>
<td>VQC5000</td>
<td>17</td>
<td></td>
<td>0.4</td>
<td>Ø 180</td>
</tr>
</tbody>
</table>

**1** Units with a D-sub communication connector are IP40.
**2** There is no manifold part number setting for the IO-Link compatible units.
**3** IP40 for the JSY1000
**New IO-Link compatible**

**Integratable with various existing networks**

IO-Link devices can be easily connected to various networks via the IO-Link master, which acts as a gateway between IO-Link communication and various Fieldbusses. Solenoid valves can be connected for communication without relying upon a Fieldbus or PLC.

---

**Can be connected using a single general-purpose cable, resulting in a reduction in the space required for wiring**

- Connect the IO-Link master port to the device using a 1:1 configuration.
- Connect using an M12 round connector.
- Maximum cable length: 20 m
- Special communication cables are not necessary.
- In order to connect the SI unit using a single cable, use a port class B type IO-Link master.

---

**Y Branch Connector**

A special wiring Y branch connector is available.

Used when connecting to a port class A type IO-Link master, which is often used when connecting to an IO-Link sensor.
New IO-Link compatible

Features an impressive self-diagnosis function

Real-time diagnosis (Process data)
- Any event information detected by the SI unit using the process data as the diagnostic input can be transmitted to the PLC and PC in real time via the master Fieldbus.
- 3 types of event flags are transmitted to the PLC. (Error/Warning/Notification)

Request base diagnosis (Service data)
- Regarding detailed diagnostic information, the event codes can be transmitted as service data to the PLC and PC.

Fieldbus System (Output device for driving 5-port solenoid valves) EX260 Series

Real-time diagnosis (Process data)

Self-diagnosis contents

<table>
<thead>
<tr>
<th>Diagnostic contents</th>
<th>Event category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal failure of the SI unit</td>
<td>Error</td>
</tr>
<tr>
<td>Output short circuit</td>
<td>Error</td>
</tr>
<tr>
<td>Output open circuit</td>
<td>Error</td>
</tr>
<tr>
<td>Solenoid valve power supply failure</td>
<td>Warning</td>
</tr>
<tr>
<td>Abnormal internal temperature of the SI unit</td>
<td>Warning</td>
</tr>
<tr>
<td>Output switching count value exceeded</td>
<td>Notification</td>
</tr>
</tbody>
</table>

Equipped with a solenoid valve output operation count function

The number of valve operation instructions is counted for each output of the solenoid valve.

Set the count threshold value to be used as a guide for maintenance according to the operating conditions of the cylinder connected to the solenoid valve.

Once the threshold value is reached, notification of this fact will take place automatically.

This enables periodic maintenance to be performed before any unexpected cylinder failures occur.
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Fieldbus System
(Output device for driving 5-port solenoid valves)
EX260 Series

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Parts Description ...................................................... p. 9
LED Indicator ............................................................ p. 10

Accessories
1 Communication Cable ........................................... p. 11
2 Field-wireable Communication Connector ............... p. 17
3 Power Supply Cable (For SI unit) ......................... p. 18
4 Power Supply Cable (For SI unit/For power block) .. p. 19
5 Seal Cap (10 pcs.) ................................................. p. 19
6 Output Block ....................................................... p. 20
7 Power Block ......................................................... p. 20
8 Connector for Output Block Wiring ....................... p. 21
9 End Plate ............................................................. p. 21
10 Bracket Plate/DIN Rail Mounting Bracket .............. p. 21

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Power Supply Cable ................................................. p. 24

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Fieldbus System
For Output
EX260 Series

Compact design
Compact design for space saving

Number of outputs
32/16 digital output type available for each unit in the series
(Io-Link is only compatible with the 32-point digital output type.)

Output polarity
Negative common (PNP)/positive common (NPN) type available for each unit in the series
(Only negative common (PNP) is available for units compatible with Ethernet POWERLINK and IO-Link.)

Enclosure
IP67 (For units with a D-sub connector, and when connected with S0700 manifolds, it is IP40.)

Internal terminating resistor
ON/OFF switching is possible with an internal terminating resistor for communication.
(Only for units compatible with M12 PROFIBUS DP, CC-Link communication connectors)

Applicable Manifold

How to Order SI Units

Communication protocol

Made to Order
p. 22

EtherNet/IP™ Web server function compatible

For “How to Order Manifold Assembly,” refer to the Web Catalog of each valve.

6
**EX260 Series Specifications**

**All SI Units Common Specifications**

<table>
<thead>
<tr>
<th>Power supply for control</th>
<th>Power supply voltage</th>
<th>Internal current consumption</th>
<th>Power supply for output</th>
<th>Power supply voltage</th>
<th>Current</th>
<th>Enclosure</th>
<th>Operating temperature range</th>
<th>Operating humidity range</th>
<th>Withstand voltage</th>
<th>Insulation resistance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>21.6 to 26.4 VDC+1</td>
<td>100 mA or less</td>
<td></td>
<td>22.8 to 26.4 VDC</td>
<td></td>
<td>IPE7+2</td>
<td>-10 to +50 °C</td>
<td>35 to 85 %RH</td>
<td>500 VAC</td>
<td>10 MΩ or more (500 VDC measured via megohmmeter) between terminals and housing</td>
</tr>
</tbody>
</table>

**Standards**
- CE marking (EMC directive/RoHS directive), UL (CSA) compliant

**Weight**
- 200 g

**Accessories**
- Mounting screw: 2 pcs.
- Seal cap (for M12 connector socket): EX9-AWTS (1 pc.)

---

**Model**

|----------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|------------|

**Applicable system**

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>DeviceNet™</td>
<td></td>
<td></td>
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<td></td>
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<td>Version41</td>
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</tr>
</tbody>
</table>

**I/O occupation (Inputs/Outputs)**

| SPRI: 32 points | SPR2: 32 points | SPR3: 16 points | SPR4: 32 points | SPR5: 32 points | SPR6: 32 points | SPR7: 16 points | SPR8: 0/16 | SDN1: 0/32 | SDN2: 0/32 | SDN3: 0/16 | SDN4: 0/16 | SPR1: 32 points | SPR2: 32 points | SPR3: 16 points | SPR4: 32 points | SPR5: 32 points | SPR6: 32 points | SPR7: 16 points | SPR8: 0/16 | SDN1: 0/32 | SDN2: 0/32 | SDN3: 0/16 | SDN4: 0/16 |
|-----------------|-----------------|---------------|---------------|---------------|---------------|---------------|-----------|-----------|-----------|-----------|-----------|---------------|-----------------|---------------|---------------|---------------|---------------|---------------|---------------|-----------|-----------|-----------|-----------|-----------|
| SPRI: 32 points | SPR2: 32 points | SPR3: 16 points | SPR4: 32 points | SPR5: 32 points | SPR6: 32 points | SPR7: 16 points | SPR8: 0/16 | SDN1: 0/32 | SDN2: 0/32 | SDN3: 0/16 | SDN4: 0/16 | SPR1: 32 points | SPR2: 32 points | SPR3: 16 points | SPR4: 32 points | SPR5: 32 points | SPR6: 32 points | SPR7: 16 points | SPR8: 0/16 | SDN1: 0/32 | SDN2: 0/32 | SDN3: 0/16 | SDN4: 0/16 |

**Output type**

<table>
<thead>
<tr>
<th>Source/PNP (Negative common)</th>
<th>Sink/NPN (Positive common)</th>
<th>Source/PNP (Negative common)</th>
<th>Sink/NPN (Positive common)</th>
<th>Source/PNP (Negative common)</th>
<th>Sink/NPN (Positive common)</th>
<th>Source/PNP (Negative common)</th>
<th>Sink/NPN (Positive common)</th>
<th>Source/PNP (Negative common)</th>
<th>Sink/NPN (Positive common)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output current</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Input type**

<table>
<thead>
<tr>
<th>Source/PNP (Negative common)</th>
<th>Sink/NPN (Positive common)</th>
<th>Source/PNP (Negative common)</th>
<th>Sink/NPN (Positive common)</th>
<th>Source/PNP (Negative common)</th>
<th>Sink/NPN (Positive common)</th>
<th>Source/PNP (Negative common)</th>
<th>Sink/NPN (Positive common)</th>
<th>Source/PNP (Negative common)</th>
<th>Sink/NPN (Positive common)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output current</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Load**

<table>
<thead>
<tr>
<th>Solenoid valve with surge voltage suppressor 24 VDC (15 W or less (SMC))</th>
<th>Solenoid valve with surge voltage suppressor 24 VDC (10 W or less (SMC))</th>
<th>Solenoid valve with surge voltage suppressor 24 VDC (1.5 W or less (SMC))</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPR1: 24 A</td>
<td>SPR2: 24 A</td>
<td>SPR3: 16 A</td>
</tr>
</tbody>
</table>

**Supplied voltage**

<table>
<thead>
<tr>
<th>24 VDC</th>
<th>24 VDC</th>
<th>24 VDC</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPR1: 24 A</td>
<td>SPR2: 24 A</td>
<td>SPR3: 16 A</td>
</tr>
</tbody>
</table>

---

1. To serve as the power supply for communication, the power supply voltages are 11 to 25 VDC for the EX260-SEC3 and 18 to 30 VDC for the EX260-SIL1.
2. IP40 applies to EX260-SPR5/6/7/8.
Dimensions

**M12 communication connector type**

- For PROFINET™
- For DeviceNet™
- For CC-Link
- For EtherCAT
- For PROFINET
- For EtherNet/IP™
- For Ethernet POWERLINK

**D-sub communication connector type**

(Ex260-SPR5/6/7/8)

- For PROFINET

**For IO-Link**

**For EtherCAT**

- For PROFINET
- For PROFINIT
- For DeviceNet™
- For EtherCAT
- For EtherNet/IP™
- For Ethernet POWERLINK

**Fieldbus System**

- For Output

Ex260 Series
The communication line, SI unit power supply line, and the solenoid valve power supply line are connected using the same cable.

Part no. EX260-SIL1
Communication protocol IO-Link
Communication/Power connector (M12) 5 pins, plug, A code (SPEEDCON)
Ground terminal M3

* The setting switch varies depending on the model. Refer to the operation manual for details. It can be downloaded via the SMC website: https://www.smcworld.com
LED Indicator

**For DeviceNet™**
**EX260-SDN**

- NS: Network state
- MS: SI unit state
- PWR: Power supply for control
- L/A: BUS OUT state
- L/A IN: BUS IN state
- L/A OUT: BUS OUT state

**For EtherCAT**
**EX260-SEC**

- NS: Network state
- MS: SI unit state
- L/A IN: BUS IN state
- L/A OUT: BUS OUT state
- RUN: Operation state
- COM: Communication state

**For EtherNet/IP™**
**EX260-SEN**

- L/A1: BUS IN state
- L/A2: BUS OUT state
- NS: Network state
- MS: SI unit state
- PWR (V): Power supply for solenoid valve

**For CC-Link**
**EX260-SMJ**

- L ERR: Communication error
- PWR: Power supply for control
- L RUN: Communication state

**For PROFINET**
**EX260-SPN**

- L/A 1: BUS IN state
- L/A 2: BUS OUT state
- NS: Network state
- MS: SI unit state
- SF: SI unit diagnosis
- BF: Communication state
- PWR (V): Power supply for solenoid valve

**For PROFIBUS DP**
**EX260-SPR DP**

- SF: System fault
- BF: Bus fault
- PWR (V): Power supply for solenoid valve

**For Ethernet POWERLINK**
**EX260-SPL**

- ST: SI unit state
- S/E: Network state
- PWR (V): Power supply for solenoid valve

**For IO-Link**
**EX260-SIL1**

- COM: Network state
- PWR (V): Power supply for solenoid valve
Communication Cable

For CC-Link

PCA-1567720
(Socket)

Socket connector pin arrangement
A-coded (Normal key)
+1 Number of holes: 5.
Total number of pins: 4

PCA-1567717
(Plug)

Plug connector
pin arrangement
A-coded (Normal key)
+1 Number of holes: 5.
Total number of pins: 4

EX9-AC 005 MJ-SSPS
(With connector on both sides (Socket/Plug))

Cable length (L)
005 500 mm
010 1000 mm
020 2000 mm
030 3000 mm
050 5000 mm
100 10000 mm

EX9-AC 005 MJ-SAPA
(With angled connector on both sides (Socket/Plug))

Cable length (L)
005 500 mm
010 1000 mm
020 2000 mm
030 3000 mm
050 5000 mm
100 10000 mm

Item Specifications
Cable O.D. Ø 7.7 mm
Conductor nominal cross section 0.5 mm²/AWG20
Drain 0.34 mm²/AWG22
Wire O.D. (Including insulator) 2.55 mm
Min. bending radius (Fixed) 77 mm

Made to Order
Cable length 10000 mm p. 22

EX260 Series
Accessories

For CC-Link

PCA-1567720
(Socket)

Socket connector pin arrangement
A-coded (Normal key)
+1 Number of holes: 5.
Total number of pins: 4

PCA-1567717
(Plug)

Plug connector
pin arrangement
A-coded (Normal key)
+1 Number of holes: 5.
Total number of pins: 4

EX9-AC 005 MJ-SSPS
(With connector on both sides (Socket/Plug))

Cable length (L)
005 500 mm
010 1000 mm
020 2000 mm
030 3000 mm
050 5000 mm
100 10000 mm

EX9-AC 005 MJ-SAPA
(With angled connector on both sides (Socket/Plug))

Cable length (L)
005 500 mm
010 1000 mm
020 2000 mm
030 3000 mm
050 5000 mm
100 10000 mm

Item Specifications
Cable O.D. Ø 7.7 mm
Conductor nominal cross section 0.5 mm²/AWG20
Drain 0.34 mm²/AWG22
Wire O.D. (Including insulator) 2.55 mm
Min. bending radius (Fixed) 77 mm

EX9-AC 005 MJ-SSPS
(With connector on both sides (Socket/Plug))

Cable length (L)
005 500 mm
010 1000 mm
020 2000 mm
030 3000 mm
050 5000 mm
100 10000 mm

EX9-AC 005 MJ-SAPA
(With angled connector on both sides (Socket/Plug))

Cable length (L)
005 500 mm
010 1000 mm
020 2000 mm
030 3000 mm
050 5000 mm
100 10000 mm

Item Specifications
Cable O.D. Ø 7.7 mm
Conductor nominal cross section 0.5 mm²/AWG20
Drain 0.34 mm²/AWG22
Wire O.D. (Including insulator) 2.55 mm
Min. bending radius (Fixed) 77 mm
Communication Cable

For DeviceNet™

PCA-1557633 (Socket)

PCA-1557646 (Plug)

EX9-AC [005] DN-SSPS (With connector on both sides (Socket/Plug))

EX9-AC [005] DN-SAPA (With angled connector on both sides (Socket/Plug))

EX260 Series

Made to Order

Cable length 10000 mm p. 22

Item Specifications

<table>
<thead>
<tr>
<th>Item</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cable O.D.</td>
<td>Ø 6.7 mm</td>
</tr>
<tr>
<td>Conductor nominal cross section</td>
<td>0.34 mm²/AWG22</td>
</tr>
<tr>
<td>Wire O.D. (Including insulator)</td>
<td>1.4 mm</td>
</tr>
<tr>
<td>Min. bending radius (Fixed)</td>
<td>67 mm</td>
</tr>
</tbody>
</table>

Item Specifications

<table>
<thead>
<tr>
<th>Item</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
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<tr>
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<td>1.4 mm</td>
</tr>
<tr>
<td>Min. bending radius (Fixed)</td>
<td>67 mm</td>
</tr>
</tbody>
</table>

Cable length (L)

005 500 mm
010 1000 mm
020 2000 mm
030 3000 mm
050 5000 mm
100 10000 mm

Cable length (L)

005 500 mm
010 1000 mm
020 2000 mm
030 3000 mm
050 5000 mm
100 10000 mm

Cable length (L)

005 500 mm
010 1000 mm
020 2000 mm
030 3000 mm
050 5000 mm
100 10000 mm

EX9-AC [005] DN-SSPS (With connector on both sides (Socket/Plug))

EX9-AC [005] DN-SAPA (With angled connector on both sides (Socket/Plug))

EX260 Series

Made to Order

Cable length 10000 mm p. 22
**Communication Cable**

**For PROFIBUS DP**

PCA-1557688 (Socket)

PCA-1557691 (Plug)

**For EtherCAT** **For PROFINET** **For EtherNet/IP™** **For Ethernet POWERLINK**

EX9-AC [020] EN-PSRJ (Plug/RJ-45 connector)

EX260 Series
### Communication Cable

**For EtherCAT** | **For PROFINET** | **For EtherNet/IP™** | **For Ethernet POWERLINK**

**EX9-AC 005 EN-PSPS** (With connector on both sides (Plug/Plug))

<table>
<thead>
<tr>
<th><strong>Cable length (L)</strong></th>
<th><strong>Specifications</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>005 500 mm</td>
<td>Ø 6.5 mm</td>
</tr>
<tr>
<td>010 1000 mm</td>
<td>0.34 mm²/AWG22</td>
</tr>
<tr>
<td>020 2000 mm</td>
<td>1.55 mm</td>
</tr>
<tr>
<td>030 3000 mm</td>
<td>19.5 mm</td>
</tr>
<tr>
<td>050 5000 mm</td>
<td></td>
</tr>
<tr>
<td>100 10000 mm</td>
<td></td>
</tr>
</tbody>
</table>

**EX9-AC 005 EN-PAPA** (With angled connector on both sides (Plug/Plug))

<table>
<thead>
<tr>
<th><strong>Cable length (L)</strong></th>
<th><strong>Specifications</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>005 500 mm</td>
<td>Ø 6.5 mm</td>
</tr>
<tr>
<td>010 1000 mm</td>
<td>0.34 mm²/AWG22</td>
</tr>
<tr>
<td>020 2000 mm</td>
<td>1.55 mm</td>
</tr>
<tr>
<td>030 3000 mm</td>
<td>19.5 mm</td>
</tr>
<tr>
<td>050 5000 mm</td>
<td></td>
</tr>
<tr>
<td>100 10000 mm</td>
<td></td>
</tr>
</tbody>
</table>

---

**Item** | **Specifications**
---|---
Cable O.D. | Ø 6.5 mm
Conductor nominal cross section | 0.34 mm²/AWG22
Wire O.D. (Including insulator) | 1.55 mm
Min. bending radius (Fixed) | 19.5 mm
Communication Cable

For IO-Link

Example of Connection

Port class B
IO-Link master (Commercially available)

Port class A
IO-Link master (Commercially available)

Communication Cable

EX9-AC 005-SSPS (With connector on both sides (Socket/Plug))

- Cable length (L)
  - 005: 500 mm
  - 010: 1000 mm
  - 020: 2000 mm
  - 030: 3000 mm
  - 050: 5000 mm
  - 100: 10000 mm

EX9-AC 005-SAPA (With connector on both sides (Socket/Plug))

- Cable length (L)
  - 005: 500 mm
  - 010: 1000 mm
  - 020: 2000 mm
  - 030: 3000 mm
  - 050: 5000 mm
  - 100: 10000 mm

Item Specifications

- Cable O.D.: Ø 6 mm
- Conductor nominal cross section: 0.3 mm²/AWG22
- Wire O.D. (Including insulator): 1.5 mm
- Min. bending radius (Fixed): 40 mm
**Communication Cable**

**For IO-Link**

2. Y branch connector

This connector is used to supply power to the valve manifold by branching the IO-Link communication cable in cases where a port class A IO-Link master is used.

EX9-ACY02-S

**Communication cable**

EX500-AP [050] - S

- **Connector specification**
  - Connector specifiation
  - **Straight connector type**
  - **Angled connector type**

**Made to Order**

- **Cable length (L)**
  - Straight connector type
  - Angled connector type

**Item Specifications**

- **Cable O.D.**
  - Ø 6 mm
  - Ø 5 mm

- **Conductor nominal cross section**
  - 0.3 mm²/AWG22
  - 0.34 mm²/AWG22

- **Wire O.D. (Including insulator)**
  - 1.5 mm
  - 1.27 mm

- **Min. bending radius (Fixed)**
  - 40 mm
  - 21.7 mm

**Connections (IO-Link)**

- **Terminal no.**
  - 1
  - 2
  - 3
  - 4
  - 5

- **Core wire colour**
  - Brown: 18 to 30 VDC (Power supply for control)
  - White: 24 VDC +10%/-5% (Solenoid valve power supply)
  - Blue: 0 V (Power supply for control)
  - Black: IO-Link communication
  - Green/Yellow: 0 V (Solenoid valve power supply)

- **Core wire colour**
  - White: 24 VDC +10%/-5% (Solenoid valve power supply)
  - Black: IO-Link communication
  - Grey: 0 V (Solenoid valve power supply)

**Connections (IO-Link)**

- **Item Specifications**
  - **Cable O.D.**
    - Ø 5 mm
  - **Conductor nominal cross section**
    - 0.34 mm²/AWG22
  - **Wire O.D. (Including insulator)**
    - 1.27 mm
  - **Min. bending radius (Fixed)**
    - 21.7 mm

**PCA-1401804**

- **Cable length (L)**
  - 1500 mm
  - 3000 mm
  - 5000 mm

- **Solenoid valve power supply cable side pin arrangement when using a branch connector**

<table>
<thead>
<tr>
<th>Terminal no.</th>
<th>Core wire colour</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Unused</td>
</tr>
<tr>
<td>2</td>
<td>SV24V For solenoid valve</td>
</tr>
<tr>
<td>3</td>
<td>Unused</td>
</tr>
<tr>
<td>4</td>
<td>Unused</td>
</tr>
<tr>
<td>5</td>
<td>SV0V 0 V for solenoid valve</td>
</tr>
</tbody>
</table>

**1** When used as an IO-Link communication cable

**2** When used as a solenoid valve power supply cable
EX260 Series

Field-wireable Communication Connector

Plug

For CC-Link
PCA-1075526
For DeviceNet™
PCA-1075528

A-coded
(Normal key)

≈
Ø 1
9
Width across flats 16

≈
Ø 1
9
Width across flats 16

B-coded
(Reverse key)

≈
60
Ø 1
9
Width across flats 16

≈
60
Ø 1
9
Width across flats 16

Applicable Cable

<table>
<thead>
<tr>
<th>Item</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cable O.D.</td>
<td>4.0 to 8.0 mm</td>
</tr>
<tr>
<td>Wire gauge (Stranded wire cross section)</td>
<td>0.14 to 0.34 mm²/AWG26 to 22</td>
</tr>
</tbody>
</table>

For PROFIBUS DP
PCA-1075530

For EtherCAT
For PROFINET
For EtherNet/IP™
For Ethernet POWERLINK
PCA-1446553

D-coded

≈
61
Ø 1
9
Width across flats 13

≈
61
Ø 1
9
Width across flats 13

Applicable Cable

<table>
<thead>
<tr>
<th>Item</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cable O.D.</td>
<td>4.0 to 8.0 mm</td>
</tr>
<tr>
<td>Wire gauge (Stranded wire cross section)</td>
<td>0.14 to 0.75 mm²/AWG26 to 18</td>
</tr>
<tr>
<td>(Solid cable/Flexible cable)</td>
<td>0.08 to 0.5 mm²/AWG28 to 20</td>
</tr>
<tr>
<td>(With ferrule)</td>
<td></td>
</tr>
</tbody>
</table>

The table above shows the specifications for the applicable cable. Adaptation for the connector may vary on account of the conductor construction of the electric wire.

Socket

For CC-Link
PCA-1075527
For DeviceNet™
PCA-1075529

A-coded
(Normal key)

≈
58
Ø 1
9
Width across flats 16

≈
58
Ø 1
9
Width across flats 16

B-coded
(Reverse key)

≈
58
Ø 1
9
Width across flats 16

≈
58
Ø 1
9
Width across flats 16

Applicable Cable

<table>
<thead>
<tr>
<th>Item</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cable O.D.</td>
<td>4.0 to 8.0 mm</td>
</tr>
<tr>
<td>Wire gauge (Stranded wire cross section)</td>
<td>0.14 to 0.75 mm²/AWG26 to 18</td>
</tr>
<tr>
<td>(Solid cable/Flexible cable)</td>
<td>0.08 to 0.5 mm²/AWG28 to 20</td>
</tr>
<tr>
<td>(With ferrule)</td>
<td></td>
</tr>
</tbody>
</table>
**Power Supply Cable (For SI unit)**

**EX500-AP 050**

### Connector specification

<table>
<thead>
<tr>
<th>Cable length (L)</th>
<th>S</th>
<th>S</th>
<th>Straight</th>
</tr>
</thead>
<tbody>
<tr>
<td>010</td>
<td></td>
<td></td>
<td>1000 mm</td>
</tr>
<tr>
<td>050</td>
<td></td>
<td></td>
<td>5000 mm</td>
</tr>
</tbody>
</table>

**Straight connector type**

<table>
<thead>
<tr>
<th>Terminal no.</th>
<th>Core wire colour</th>
<th>Core wire colour</th>
<th>Core wire colour</th>
<th>Core wire colour</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Brown: 24 VDC +10 %/-5 % (Solenoid valve power supply)</td>
<td>White: 0 V (Solenoid valve power supply)</td>
<td>Black: 0 V (Power supply for control)</td>
<td>Grey: Not connected</td>
</tr>
<tr>
<td>2</td>
<td>Brown: 24 VDC +10 %/-5 % (Solenoid valve power supply)</td>
<td>White: 0 V (Solenoid valve power supply)</td>
<td>Black: 0 V (Power supply for control)</td>
<td>Grey: Not connected</td>
</tr>
<tr>
<td>3</td>
<td>White: 24 VDC +10 %/-5 % (Solenoid valve power supply)</td>
<td>Black: 0 V (Power supply for control)</td>
<td>Grey: Not connected</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Black: 0 V (Solenoid valve power supply)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Grey: Not connected</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Angled connector type**

<table>
<thead>
<tr>
<th>Terminal no.</th>
<th>Core wire colour</th>
<th>Core wire colour</th>
<th>Core wire colour</th>
<th>Core wire colour</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Brown: 24 VDC +10 %/-5 % (Solenoid valve power supply)</td>
<td>White: 0 V (Solenoid valve power supply)</td>
<td>Black: 0 V (Power supply for control)</td>
<td>Grey: Not connected</td>
</tr>
<tr>
<td>2</td>
<td>Brown: 24 VDC +10 %/-5 % (Solenoid valve power supply)</td>
<td>White: 0 V (Solenoid valve power supply)</td>
<td>Black: 0 V (Power supply for control)</td>
<td>Grey: Not connected</td>
</tr>
<tr>
<td>3</td>
<td>White: 24 VDC +10 %/-5 % (Solenoid valve power supply)</td>
<td>Black: 0 V (Power supply for control)</td>
<td>Grey: Not connected</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Black: 0 V (Solenoid valve power supply)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Grey: Not connected</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Made to Order**

- Cable length 10000 mm  
  p. 23

**PCA-1401804**

<table>
<thead>
<tr>
<th>Cable length (L)</th>
<th>1401804</th>
<th>1500 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>1401805</td>
<td>3000 mm</td>
<td></td>
</tr>
<tr>
<td>1401806</td>
<td>5000 mm</td>
<td></td>
</tr>
</tbody>
</table>

**Socket connector pin arrangement A-coded**

**Item Specifications**

<table>
<thead>
<tr>
<th>Item</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cable O.D.</td>
<td>Ø 6 mm</td>
</tr>
<tr>
<td>Conductor nominal cross section</td>
<td>0.3 mm²/AWG22</td>
</tr>
<tr>
<td>Wire O.D. (Including insulator)</td>
<td>1.5 mm</td>
</tr>
<tr>
<td>Min. bending radius (Fixed)</td>
<td>40 mm</td>
</tr>
</tbody>
</table>

**Connections (PROFIBUS DP/EtherCAT/PROFINET/Ethernet POWERLINK)**

**EX260 Series**

For PROFIBUS DP  For DeviceNet™  For EtherCAT  For PROFINET  For EtherNet/IP™  For Ethernet POWERLINK

**Item Specifications**

<table>
<thead>
<tr>
<th>Item</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cable O.D.</td>
<td>Ø 6 mm</td>
</tr>
<tr>
<td>Conductor nominal cross section</td>
<td>0.3 mm²/AWG22</td>
</tr>
<tr>
<td>Wire O.D. (Including insulator)</td>
<td>1.5 mm</td>
</tr>
<tr>
<td>Min. bending radius (Fixed)</td>
<td>40 mm</td>
</tr>
</tbody>
</table>

**Connections (DeviceNet™, EtherNet/IP™)**

- *1 For DeviceNet™
- *2 For EtherNet/IP™

**Socket connector pin arrangement A-coded**

**Accessories**

**EX260 Series**

**Power Supply Cable (For SI unit)**

**PCA-1401804**

<table>
<thead>
<tr>
<th>Cable length (L)</th>
<th>1401804</th>
<th>1500 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>1401805</td>
<td>3000 mm</td>
<td></td>
</tr>
<tr>
<td>1401806</td>
<td>5000 mm</td>
<td></td>
</tr>
</tbody>
</table>

**Socket connector pin arrangement A-coded**

**Item Specifications**

<table>
<thead>
<tr>
<th>Item</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cable O.D.</td>
<td>Ø 5 mm</td>
</tr>
<tr>
<td>Conductor nominal cross section</td>
<td>0.34 mm²/AWG22</td>
</tr>
<tr>
<td>Wire O.D. (Including insulator)</td>
<td>1.27 mm</td>
</tr>
<tr>
<td>Min. bending radius (Fixed)</td>
<td>21.7 mm</td>
</tr>
</tbody>
</table>
EX260 Series

Power Supply Cable (For SI unit/For power block)

For CC-Link

Straight connector type

EX9-AC 050 - 1

- Cable length (L)
  - 010 1000 mm
  - 030 3000 mm
  - 050 5000 mm

Socket connector pin arrangement
B-coded

Cable length (L)
- 010 1000 mm
- 030 3000 mm
- 050 5000 mm

EX9-AW TS

Connector specification
- TS  For M12 connector socket (10 pcs.)

EX260 Series

For Power block

Made to Order

Cable length 10000 mm  p. 23

EX9-AW TS

For M12 connector socket

Seal Cap (10 pcs.)

Use this on ports that are not being used for communication connector (M12 connector socket).

Use of this seal cap maintains the integrity of the IP67 enclosure.

- Tighten the seal cap with the prescribed tightening torque. (For M12: 0.1 N·m)

EX9-AW TS

For M12 connector socket

Connector specification
- TS  For M12 connector socket (10 pcs.)

EX260 Series

For CC-Link

Made to Order

Cable length 10000 mm  p. 23

EX9-AW TS

For M12 connector socket

Connector specification
- TS  For M12 connector socket (10 pcs.)
You are requested to connect it to an SI unit and a valve manifold. For detailed specifications, refer to the operation manual that can be downloaded from SMC website, https://www.smcworld.com

Output Block

EX9-OE

- **Output specification**
  1. Source/PNP (Negative common)
  2. Sink/NPN (Positive common)

- **Power supply type**
  - T: Internal power supply method (for low-wattage load)
  - P: Integrated power supply method (for high-wattage load)

- Required to connect with a power block

Dimensions/Parts Description

- Connector for output device connection (M12, 5 pins, socket, A-coded)
- Position indicator LED

Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>EX9-OET1</th>
<th>EX9-OET2</th>
<th>EX9-OEP1</th>
<th>EX9-OEP2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal current consumption</td>
<td>40 mA or less</td>
<td>40 mA or less</td>
<td>40 mA or less</td>
<td>40 mA or less</td>
</tr>
<tr>
<td>Output type</td>
<td>Source/PNP (Negative common)</td>
<td>Sink/NPN (Positive common)</td>
<td>Source/PNP (Negative common)</td>
<td>Sink/NPN (Positive common)</td>
</tr>
<tr>
<td>Number of outputs</td>
<td>2 outputs</td>
<td>2 outputs</td>
<td>2 outputs</td>
<td>2 outputs</td>
</tr>
<tr>
<td>Power supply method</td>
<td>Internal power supply method</td>
<td>Integrated power supply method (Power block: supplied from EX9-PE1)</td>
<td>Internal power supply method</td>
<td>Integrated power supply method (Power block: supplied from EX9-PE1)</td>
</tr>
<tr>
<td>Output device supply voltage</td>
<td>24 VDC</td>
<td>24 VDC</td>
<td>24 VDC</td>
<td>24 VDC</td>
</tr>
<tr>
<td>Output device supply current</td>
<td>Max. 42 mA/point (12 W/point)</td>
<td>Max. 42 mA/point (12 W/point)</td>
<td>Max. 42 mA/point (12 W/point)</td>
<td>Max. 42 mA/point (12 W/point)</td>
</tr>
<tr>
<td>Environmental resistance</td>
<td>IP67</td>
<td>IP67</td>
<td>IP67</td>
<td>IP67</td>
</tr>
<tr>
<td>Operating temperature range</td>
<td>-10 to 50 °C</td>
<td>-10 to 50 °C</td>
<td>-10 to 50 °C</td>
<td>-10 to 50 °C</td>
</tr>
<tr>
<td>Operating humidity range</td>
<td>35 to 85 %RH (No condensation)</td>
<td>35 to 85 %RH (No condensation)</td>
<td>35 to 85 %RH (No condensation)</td>
<td>35 to 85 %RH (No condensation)</td>
</tr>
<tr>
<td>Standards</td>
<td>CE marking (EMC directive/RoHS directive), UL (CSA)</td>
<td>CE marking (EMC directive/RoHS directive), UL (CSA)</td>
<td>CE marking (EMC directive/RoHS directive), UL (CSA)</td>
<td>CE marking (EMC directive/RoHS directive), UL (CSA)</td>
</tr>
<tr>
<td>Weight</td>
<td>120 g</td>
<td>120 g</td>
<td>120 g</td>
<td>120 g</td>
</tr>
</tbody>
</table>

Power Block

EX9-PE1

- **Connection block**
  - Output block: Max. 8 stations

- **Power supply to output and internal control**
  - Power supply voltage: 22.8 to 26.4 VDC
  - Internal current consumption: 20 mA or less

- **Supply current**
  - Max. 3.1 A

- **Environmental resistance**
  - Enclosure: IP67
  - Operating temperature range: -10 to 50 °C
  - Operating humidity range: 35 to 85 %RH (No condensation)

- **Standards**
  - CE marking (EMC directive/RoHS directive), UL (CSA)

- **Weight**
  - 120 g

- **Enclosed parts**
  - Seal cap (for M12 connector) 1 pc.

- When using with 3.0 to 3.1 A, the ambient temperature should not exceed 40 °C, and do not bundle the cable.
**EX260 Series**

### Connector for Output Block Wiring

Field-wireable connector for connecting an output device to an output block.

**PCA-1557743**

<table>
<thead>
<tr>
<th>A-coded</th>
<th>Plug pin arrangement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

**Applicable Cable**

<table>
<thead>
<tr>
<th>Item</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cable O.D.</td>
<td>3.5 to 6.0 mm</td>
</tr>
<tr>
<td>Wire gauge (Stranded wire cross section)</td>
<td>0.14 to 0.34 mm²/AWG26 to 22</td>
</tr>
<tr>
<td>Core wire diameter (including insulating material)</td>
<td>0.7 to 1.3 mm</td>
</tr>
</tbody>
</table>

**PCA-1557756**

<table>
<thead>
<tr>
<th>A-coded</th>
<th>Plug pin arrangement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

**Applicable Cable**

<table>
<thead>
<tr>
<th>Item</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cable O.D.</td>
<td>4.0 to 8.0 mm</td>
</tr>
<tr>
<td>Wire gauge (Stranded wire cross section)</td>
<td>0.34 to 0.75 mm²/AWG22 to 18</td>
</tr>
<tr>
<td>Core wire diameter (including insulating material)</td>
<td>1.3 to 2.5 mm</td>
</tr>
</tbody>
</table>

Refer to page 19 for the power supply cable for power block.

### End Plate

Use when an output block is being used and a valve manifold is not connected.

**EX9-EA03**

- **Example of use**

### Bracket Plate/DIN Rail Mounting Bracket

A reinforcing brace used to mount an output block or power block onto an SI unit. To prevent connection failure between products due to deflection, use this bracket plate whenever an output block or power block is mounted.

**EX9-BP1**

- **For VQC, S0700, SV**

**EX9-BD1**

**Accessory**

<table>
<thead>
<tr>
<th>Description</th>
<th>Qty.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domed cap nut (M4)</td>
<td>1</td>
</tr>
<tr>
<td>Round head combination screw (M4 x 6)</td>
<td>1</td>
</tr>
<tr>
<td>Round head combination screw (M4 x 10)</td>
<td>1</td>
</tr>
</tbody>
</table>

<Example of use>
EX260 Series
Made to Order
Please contact SMC for detailed specifications and lead times.

SI Unit
Prepare the SI unit and valve manifold (without SI unit) separately, and combine them before use.

1. IO-Link compatible

EX260-SIL1-X207

- IO-Link port class
- X207: IO-Link port class A, supplied from another connector
- Output specification
  - 32 outputs, PNP (Negative common)/Source
- Communication protocol
  - IL: IO-Link

EX260-SIL1-X207

- Send and receive ON/OFF signals + unit information/status
- Supports data update cycles of 1 ms or less
- IO-Link master and SI unit can be connected with one cable (Port class B compliant: X210 specifications)
- Uses 4-wire or 5-wire unshielded cables

EtherNet/IP™ Web server function compatible
EX260-SEN1-X194

- Web server compatible: Can conduct a solenoid valve operation test (ON/OFF), check communication state, set QuickConnect™, etc.
- Applicable to the power supply taken from Rockwell Automation's safe output module with pulse test function
- Compliant with QuickConnect™ class A specifications
- The gateway address is set to 192.168.0.01 when the IP address is set by the rotary switch.
- Dimensions are the same as those of the standard type.

Web server screen (Example)
## Communication Cable

**For CC-Link**

EX9-AC100 MJ-X12

### Applicable protocol

<table>
<thead>
<tr>
<th>MJ</th>
<th>CC-Link</th>
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<tbody>
<tr>
<td>DN</td>
<td>DeviceNet™</td>
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</tbody>
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**Socket connector pin arrangement**

A-coded (Normal key)

- Number of holes: 5
- Total number of pins: 4

**Connections**

<table>
<thead>
<tr>
<th>Terminal no.</th>
<th>Core wire colour</th>
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<tbody>
<tr>
<td>1</td>
<td>Blue</td>
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<tr>
<td>2</td>
<td>White</td>
</tr>
<tr>
<td>3</td>
<td>White</td>
</tr>
<tr>
<td>4</td>
<td>Yellow</td>
</tr>
<tr>
<td>5</td>
<td>Red</td>
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### Specifications

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<th>Specifications</th>
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<tr>
<td>Cable O.D.</td>
<td>Ø 7.7 mm</td>
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<tr>
<td>Conductor nominal cross section</td>
<td>Data pair 0.5 mm²/AWG20</td>
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<tr>
<td></td>
<td>Drain 0.34 mm²/AWG22</td>
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<tr>
<td>Wire O.D. (Including insulator)</td>
<td>2.55 mm</td>
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<tr>
<td>Min. bending radius (Fixed)</td>
<td>77 mm</td>
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---

## For DeviceNet™

### Socket connector pin arrangement

A-coded (Normal key)

- Number of holes: 5
- Total number of pins: 4

**Connections**

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<thead>
<tr>
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<td>Red</td>
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### Specifications

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<th>Specifications</th>
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<tr>
<td>Cable O.D.</td>
<td>Ø 6.7 mm</td>
</tr>
<tr>
<td>Conductor nominal cross section</td>
<td>Power pair 0.34 mm²/AWG22</td>
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<tr>
<td></td>
<td>Data pair 0.25 mm²/AWG24</td>
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<tr>
<td>Wire O.D. (Including insulator)</td>
<td>Power pair 1.4 mm</td>
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<td></td>
<td>Data pair 2.05 mm</td>
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<tr>
<td>Min. bending radius (Fixed)</td>
<td>67 mm</td>
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</table>

---
Power Supply Cable

1. With connector on one side (Socket)
   Cable length: 10000 mm

   **For CC-Link**  **For Power block**
   EX9-AC100-1-X1

   Connections (PROFIBUS DP/EtherCAT/PROFINET/Ethernet POWERLINK)
   *1 For CC-Link
   *2 For Power block

   Connections (DeviceNet™, EtherNet/IP™)
   *1 For DeviceNet™
   *2 For EtherNet/IP™

   Connections (IO-Link)
   *1 When used as an IO-Link communication cable
   *2 When used as a solenoid valve power supply cable

---

2. With connector on one side (Socket)
   Cable length: 10000 mm

   **For PROFINET**  **For EtherCAT**  **For PROFINET**  **For EtherCAT**  **For Ethernet POWERLINK**  **For IO-Link**
   EX500-AP100-S-X1

   Item Specifications
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<th>Item</th>
<th>Specifications</th>
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<tbody>
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<td>Cable O.D.</td>
<td>Ø 6 mm</td>
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<tr>
<td>Conductor nominal cross section</td>
<td>0.3 mm²/AWG22</td>
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<tr>
<td>Wire O.D. (Including insulator)</td>
<td>1.5 mm</td>
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<tr>
<td>Min. bending radius (Fixed)</td>
<td>40 mm</td>
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Socket connector pin arrangement B-coded (Reverse key)
EX260 Series
Specific Product Precautions

Be sure to read this before handling the products. Refer to the back cover for safety instructions. For fieldbus system precautions, refer to the “Handling Precautions for SMC Products” and the “Operation Manual” on the SMC website: https://www.smc.eu

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### Wiring

**Caution**

1. Select connectors that are Ø 1.6 or less if mounting valve manifolds directly using field-wireable connectors for SI unit power supply wiring.

   Using large diameter connectors causes interference with the mounting surface.

   The following cables with connectors are recommended.

   - **For EX260-SPR□/-SDN□/-SEC□/-SPN□/-SEN□/-SPL□**
     - <Cable with connector>
     - EX500-AP□□□
     - PCA-1401804/-1401805/-1401806

   - **For EX260-SMJ□**
     - <Cable with connector>
     - EX9-AC□□□-1
     - PCA-1401807/-1401808/-1401809

### Adjustment / Operation

**Caution**

1. For details on programming and address setting, refer to the manual from the PLC manufacturer.

   The content of programming related to protocol is designed by the manufacturer of the PLC used.

2. For the EX260-SPN□, the side of the SI unit may become hot.

   It may cause burns.

---

### Operating Environment

**Caution**

1. Select the proper type of enclosure according to the operating environment.

   IP67 is achieved when the following conditions are met.

   1) Provide appropriate wiring between all units using electrical wiring cables, communication connectors and cables with M12 connectors.

   2) Appropriately mount each unit and valve manifold.

   3) Be sure to mount a seal cap on any unused connectors.

   If using in an environment that is exposed to water splashes, please take measures such as using a cover.

   When the enclosure is IP40, do not use in an operating environment or atmosphere where it may come in contact with corrosive gas, chemical agents, seawater, water, or water vapour.

   When connected to the EX260-SPR5/6/7/8, manifold enclosure is IP40.

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**Trademark**

DeviceNet™ is a trademark of ODVA.

EtherNet/IP™ is a trademark of ODVA.

EtherCAT® is registered trademark and patented technology, licensed by Beckhoff Automation GmbH, Germany.

Modbus® is a registered trademark of Schneider Electric, licensed to the Modbus Organization, Inc.

QuickConnect™ is a trademark of ODVA.
Safety Instructions

Caution
- Indicates a hazard with a low level of risk which, if not avoided, could result in minor or moderate injury.

Warning
- Indicates a hazard with a medium level of risk which, if not avoided, could result in death or serious injury.

Danger
- Indicates a hazard with a high level of risk which, if not avoided, will result in death or serious injury.

Warning

1. The compatibility of the product is the responsibility of the person who designs the equipment or decides its specifications. Since the product specified here is used under various operating conditions, its compatibility with specific equipment must be decided by the person who designs the equipment or decides its specifications based on necessary analysis and test results. The expected performance and safety assurance of the equipment will be the responsibility of the person who has determined its compatibility with the product. This person should also continuously review all specifications of the product referring to its latest catalogue information, with a view to giving due consideration to any possibility of equipment failure when configuring the equipment.

2. Only personnel with appropriate training should operate machinery and equipment. The product specified here may become unsafe if handled incorrectly. The assembly, operation and maintenance of machines or equipment including our products must be performed by an operator who is appropriately trained and experienced.

3. Do not service or attempt to remove product and machinery/equipment until safety is confirmed.
   1. The inspection and maintenance of machinery/equipment should only be performed after measures to prevent falling or runaway of the driven objects have been confirmed.
   2. When the product is to be removed, confirm that the safety measures as mentioned above are implemented and the power from any appropriate source is cut, and read and understand the specific product precautions of all relevant products carefully.
   3. Before machinery/equipment is restarted, take measures to prevent unexpected operation and malfunction.

4. Contact SMC beforehand and take special consideration of safety measures if the product is to be used in any of the following conditions.
   1. Conditions and environments outside of the given specifications, or use outdoors or in a place exposed to direct sunlight.
   2. Installation on equipment in conjunction with atomic energy, railways, air navigation, space, shipping, vehicles, military, medical treatment, combustion and recreation, or equipment in contact with food and beverages, emergency stop circuits, clutch and brake circuits in press applications, safety equipment or other applications unsuitable for the standard specifications described in the product catalogue.
   3. An application which could have negative effects on people, property, or animals requiring special safety analysis.
   4. Use in an interlock circuit, which requires the provision of double interlock for possible failure by using a mechanical protective function, and periodical checks to confirm proper operation.

Caution

1. The product is provided for use in manufacturing industries. The product herein described is basically provided for peaceful use in manufacturing industries. If considering using the product in other industries, consult SMC beforehand and exchange specifications or a contract if necessary. If anything is unclear, contact your nearest sales branch.

Limited warranty and Disclaimer/Compliance Requirements

The product used is subject to the following “Limited warranty and Disclaimer” and “Compliance Requirements”. Read and accept them before using the product.

Limited warranty and Disclaimer

1. The warranty period of the product is 1 year in service or 1.5 years after the product is delivered, whichever is first. Also, the product may have specified durability, running distance or replacement parts. Please consult your nearest sales branch.

2. For any failure or damage reported within the warranty period which is clearly our responsibility, a replacement product or necessary parts will be provided. This limited warranty applies only to our product independently, and not to any other damage incurred due to the failure of the product.

3. Prior to using SMC products, please read and understand the warranty terms and disclaimers noted in the specified catalogue for the particular products.

4) Vacuum pads are excluded from this 1 year warranty.

A vacuum pad is a consumable part, so it is warranted for a year after the product is delivered. After the warranty period, warranty applies only to our product independently, and not to any other damage incurred due to the failure of the product.

Compliance Requirements

1. The use of SMC products with production equipment for the manufacture of weapons of mass destruction (WMD) or any other weapon is strictly prohibited.

2. The exports of SMC products or technology from one country to another are governed by the relevant security laws and regulations of the countries involved in the transaction. Prior to the shipment of a SMC product to another country, assure that all local rules governing that export are known and followed.

Caution

SMC products are not intended for use as instruments for legal metrology. Measurement instruments that SMC manufactures or sells have not been qualified by type approval tests relevant to the metrology (measurement) laws of each country. Therefore, SMC products cannot be used for business or certification ordained by the metrology (measurement) laws of each country.

Caution: Be sure to read “Handling Precautions for SMC Products” (M-E03-3) before using.
Revision History

**Edition B**
- EtherNet/IP™ has been added to applicable Fieldbus protocols.

**Edition C**
- The IO-Link compatible EX260-SIL1 has been added.
- Accessories and made-to-order specifications have been added.
- "How to Order Manifold" and "Dimensions" pages have been deleted.
- Number of pages has been decreased from 52 to 28.

SMC Corporation (Europe)

<table>
<thead>
<tr>
<th>Country</th>
<th>Phone</th>
<th>Email</th>
<th>Website</th>
</tr>
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<tr>
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