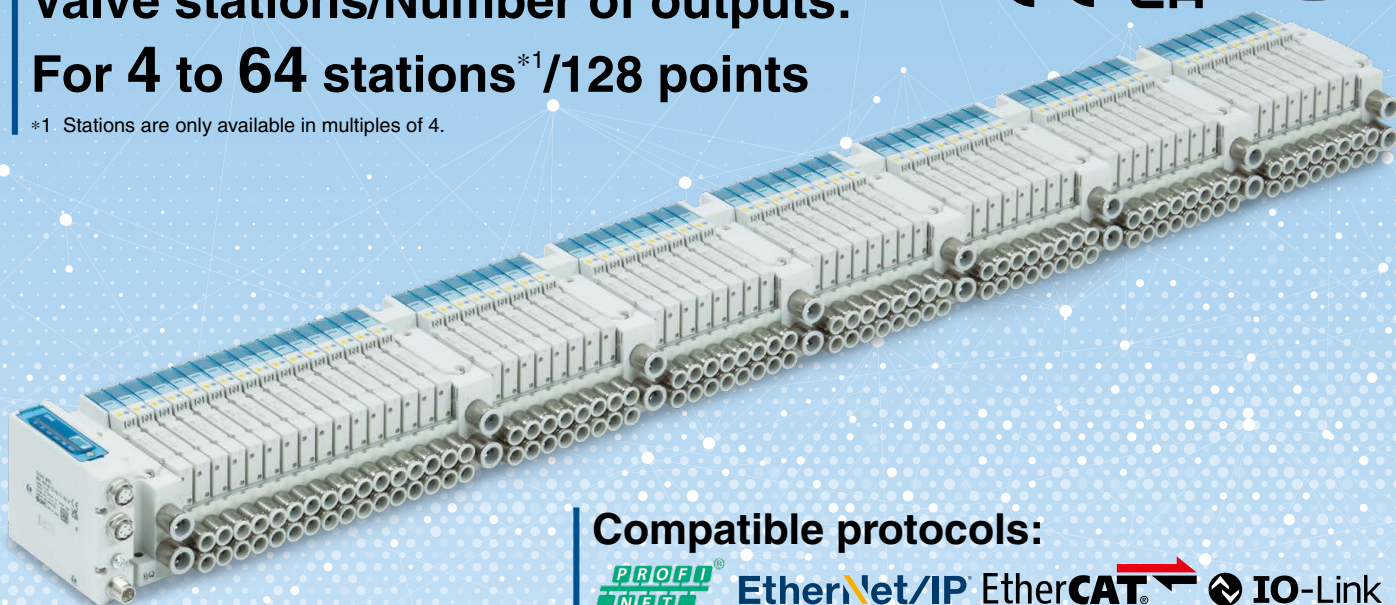


64-station Compatible Manifold

Plug-in Compact 5-Port Solenoid Valve

Valve stations/Number of outputs:
For 4 to 64 stations^{*1} /128 points

^{*1} Stations are only available in multiples of 4.



Compatible protocols:



EtherNet/IP

EtherCAT

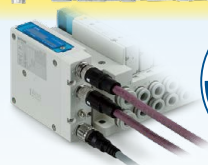
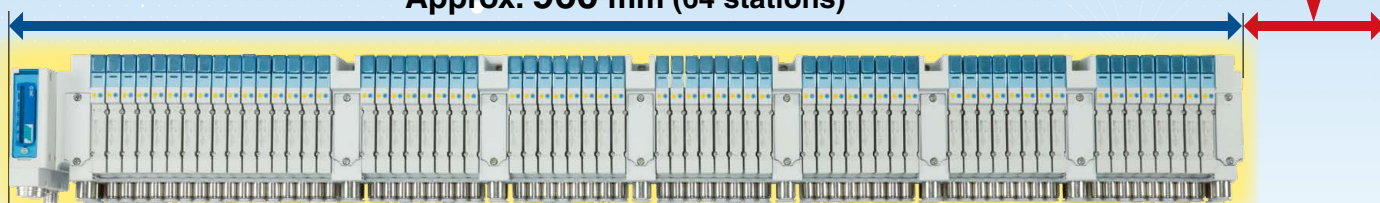
IO-Link

**Space saving, Reduced number of SI units,
Reduced wiring and wiring work**

- Installation space: Reduced by up to 110 mm

**110 mm shorter
(10% reduction)**

Approx. 960 mm (64 stations)



Number of SI units

1 set

Power supply line

1 line

Communication line (IN/OUT)

2 lines

Approx. 1070 mm (16 stations x 4 manifolds)



Number of SI units

4 sets

Power supply line

4 lines

Communication line (IN/OUT)

8 lines

JSY3000-L Series

Plug-in Connector Connecting Base

Manifold Specifications

Wiring	Serial wiring EX260 for 64-station compatible manifold	
Manifold type	Plug-in connector connecting base (64-station compatible manifold)	
SUP/EXH port type	Common SUP/EXH (Common for the 3/5 port)	
Valve stations	4 to 64 stations	
Applicable connector	—	
Internal wiring	Negative common	
Port size	1(P), 3/5(E) port	ø10 One-touch fitting
	4(A), 2(B) port	ø4 One-touch fitting, ø6 One-touch fitting, ø8 One-touch fitting
Enclosure (Based on IEC 60529)	IP67	

Formula for 64-station Compatible Manifold Weight*1 (Unit: g)

$$W = 47 \times n1 + 473 + 138 \times n2$$

n1: Valve stations*2

n2: Number of intermediate SUP/EXH blocks

*2 Stations are only available in multiples of 4, from 4 stations to 64 stations.

*1 Weight: "W" is the value for the internal pilot specification, the max. fitting size, and the manifold only. The valve weight is not included. To obtain the weight with valves mounted, add the valve weight given in the **Web Catalog** for the appropriate number of stations.

Manifold Flow Rate Characteristics

Model	Port size		Valve flow rate characteristics			
	1, 3/5 (P, E)	4, 2 (A, B)	1 → 4/2 (P → A/B)		4/2 → 3/5 (A/B → E)	
			C [dm ³ /(s·bar)]	b	C [dm ³ /(s·bar)]	b
JJ5SY3-L10 (Side ported)	C10	C8	2.23	0.30	2.77	0.27

* Calculation of effective area "S" and sonic conductance "C": $S = 5.0 \times C$

* Values measured in accordance with ISO 6358:1989, JIS B 8390:2000

⚠ Caution

Securing the DIN Rail Mounting Type Manifold

- When mounting the manifold to a DIN rail using bolts, be sure that the bottom surface of the DIN rail is in contact with the manifold installation surface (in a horizontal state), then secure both ends of the DIN rail with the bolts. However, for other mounting methods or for side facing or upside down orientations, use the formula below to calculate the number of bolts to use at even intervals along the DIN rail.

Formula: Number of bolts = (Manifold stations + 5) / 5

(Round up to the nearest whole number)

Example) For 28 stations, secure in 7 locations as a guide.

- When using the manifold with a DIN rail in an environment where any vibration or impact is applied to it, the DIN rail itself may break. In particular, if the installation surface vibrates when mounting the manifold on the wall, or if a load is directly applied to the manifold, the DIN rail may break, causing the manifold to drop. When any vibration, impact, or load will be applied to the manifold, be sure to use a direct mounting manifold.

Type 10
Side Ported

64-station Compatible Manifold

Plug-in Connector Connecting Base EX260

JSY3000-L Series

RoHS

Internal Pilot

How to Order Manifolds

* Only the dedicated SI unit can be mounted on the 64-station compatible manifold.

JJ5SY 3-L 10 S F N-24 B 1-C8

64-station compatible manifold identification symbol

1 Series

3	JSY3000
---	---------

2 Type

10	Side ported
----	-------------



Made to Order
(For details, refer to the Web Catalog.)

Specification
External pilot (SUP/EXH block and Intermediate SUP/EXH block)

3 SI unit

Symbol	Protocol	Connector
0*1	Without SI unit	
F	PROFINET	M12
E	EtherNet/IP™	M12
D	EtherCAT	M8
K	IO-Link	M12

*1 Not compatible with the DIN rail mounting type

4 Manifold polarity

N	Negative common
---	-----------------

5 Valve stations

Symbol	Stations	Note
04	4 stations	Double wiring*2
08	8 stations	
⋮	⋮	
60	60 stations	
64	64 stations	

*2 Double wiring: 2-position single, 2-position double, 3-position, and 4-position valves can be used on all manifold stations.

The use of a single solenoid will result in an unused control signal.

This also includes the number of blanking plates.

* For stations, only multiples of 4, from 4 stations to 64 stations, can be selected.

The 4 boards inside the manifold are integrated.

6 Manifold 1 (P) on both ends, 3/5(E) port exit position

U	U side (4 to 8 stations)
D	D side (4 to 8 stations)
B	Both sides (4 to 64 stations)

7 SUP/EXH block, Intermediate SUP/EXH block

Nil	Internal pilot
S	Internal pilot, Built-in silencer
R	External pilot

* The 3/5(E) port is plugged for the built-in silencer type.

Do not allow the air outlet to come into direct contact with water, etc.

* The external pilot specification should be ordered as Made to Order.

For details, refer to the Web Catalog.

8 Number of intermediate SUP/EXH blocks, mounting position

Symbol	Quantity	Mounting position
0	0	—
1	1	Specify the mounting position on the manifold specifications sheet.
⋮	⋮	
6	6	

* A block can be installed for every 4 valve stations, but as a guideline, it is recommended that one be installed for every 8 to 12 stations.

9 4(A), 2(B) port size (Metric/One-touch fitting)

Symbol	A, B port	P, E port
C4	Straight ø4	Straight ø10
C6	Straight ø6	
C8	Straight ø8	
CM*3	Straight port, mixed sizes	

*3 Indicate the sizes on the manifold specification sheet for "CM."

10 Mounting

Symbol	Mounting
Nil	Direct mounting
D*4	DIN rail mounting (With DIN rail)
D0*5	DIN rail mounting (Without DIN rail)

*4 Option "D" with DIN rail mounting is not compatible with the product without an SI unit.

*5 Order the DIN rail separately, referring to dimension L3.
(Refer to the Web Catalog for DIN rail product numbers and lengths.)

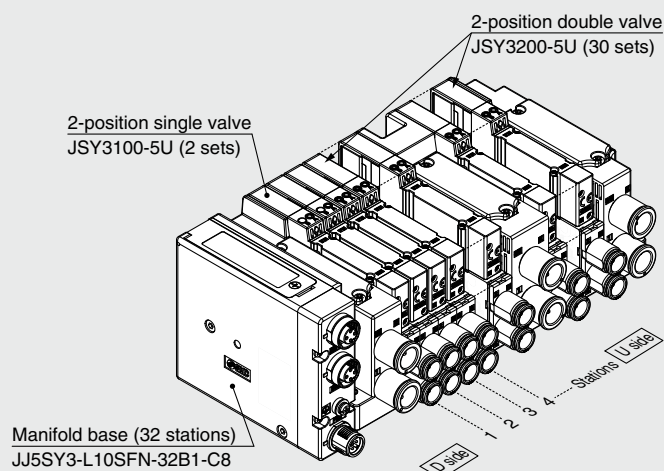
* Refer to page 1 for details on securing the DIN rail mounting type manifold.

For details on the EX260 Integrated Type (For Output) Serial Transmission System, refer to the Web Catalog and the Operation Manual. For the part numbers of the SI units to be mounted, refer to page 5. Please download the Operation Manual via the SMC website: <https://www.smcworld.com>

JSY3000-L Series

How to Order Manifold Assembly

Example (JJ5SY3-L10SFN-□)



JJ5SY3-L10SFN-32B1-C8...1 set (32-station manifold base part no.)

***JSY3100-5U2 sets (2-position single part no.)**

***JSY3200-5U30 sets (2-position double part no.)**

→ The asterisk denotes the symbol for the assembly.
Prefix it to the part numbers of the valve, etc.

- For the valve arrangement, the valve closest to the D side is considered the 1st station.
- Under the manifold part number, state the valves to be mounted in order starting with the 1st station as shown in the figure. If the arrangement becomes too complicated, specify the details on a manifold specification sheet.
- Use the manifold specifications sheet to specify the mounting position of the intermediate SUP/EXH blocks.
- * Stations are only available in multiples of 4.

Internal Pilot

How to Order Valves (With mounting screw)

Refer to the Web Catalog
for valve specifications.

JSY3000 Series

JSY 3 1 0 0 - 5 U

1 2 3 4 5 6 7

• Base mounted



Made to Order
(For details, refer to the
Web Catalog.)

Specification
External pilot

1 Series

3	JSY3000
---	---------

3 Pilot valve exhaust method

0	Pilot valve individual exhaust
---	--------------------------------

4 Coil specifications

Symbol	Coil specifications
Nil	Standard
T	With power saving circuit (Continuous duty type)

* Be careful of the energizing time when the power-saving circuit is selected.

5 Rated voltage

5	24 VDC
---	--------

2 Type of actuation

1	2-position	Single
2		Double
3	3-position	Closed center
4		Exhaust center
5		Pressure center
A	4-position	N.C./N.C.
B	dual 3-port	N.O./N.O.
C		N.C./N.O.

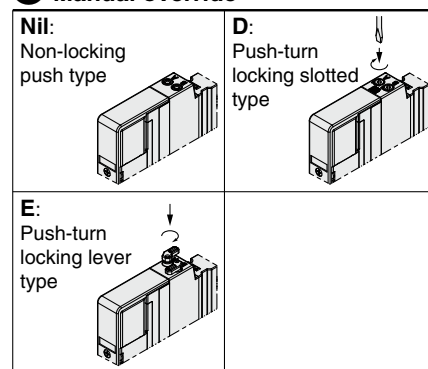
6 Light/surge voltage suppressor and common specification

Symbol	With light	Surge voltage suppressor	Common specification
U			Non-polar
NZ	●	●	Polar Negative common

* Only "NZ" type is available with a power saving circuit.

* When the non-polar common specification type is selected, take measures to prevent surge voltage. For details, refer to the Web Catalog.

7 Manual override



* **When ordering a valve individually, the base gasket is not included.**

Since the base gasket is attached to the manifold, please order the base gasket separately if it is needed for maintenance. Refer to the Web Catalog for base gasket and mounting screw part numbers.

⚠ Caution

If the product is to be continuously energized, please be sure to select the power-saving circuit (continuous duty type) specification.

* Refer to the "With power-saving circuit" section in the "Specific Product Precautions" of the plug-in type JSY series Web Catalog for details.

⚠ Protective class
class III (Mark: ⚡)

Dimensions: JSY3000-L Series

Type 10/Side Ported

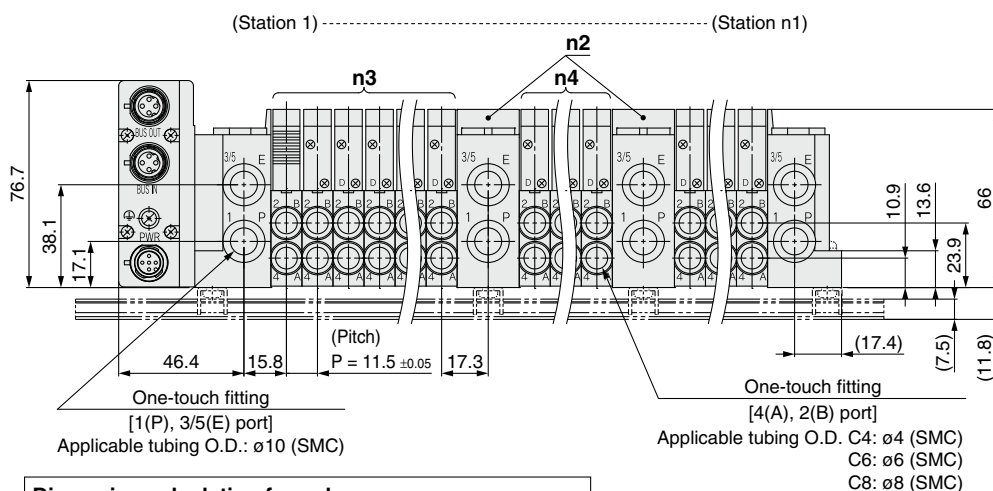
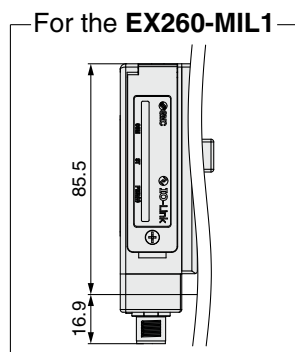
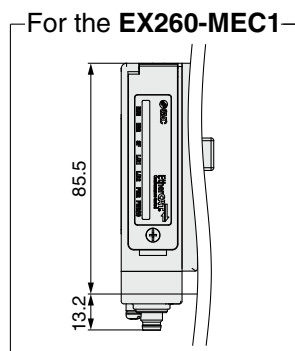
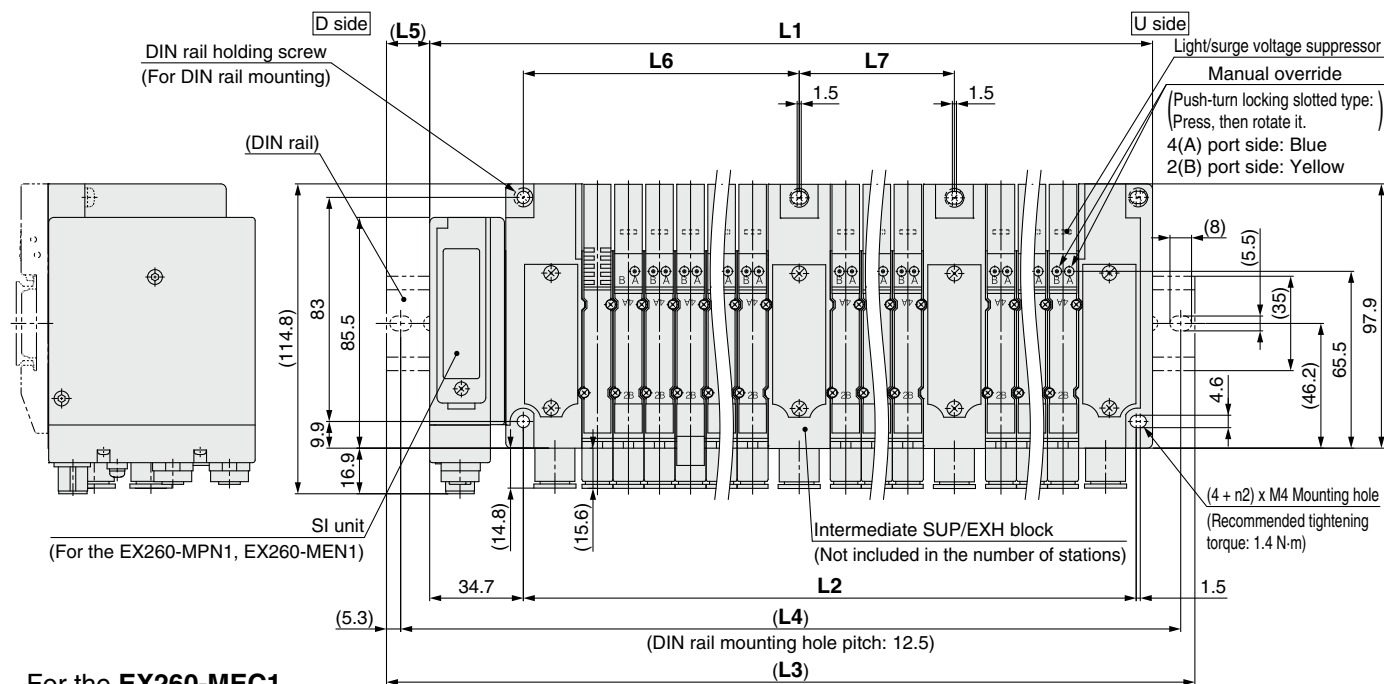
EX260/64-station Compatible Manifold

JJ5SY3-L10S ☐ N - Stations

U	D	B
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

 -

C4	C6	C8
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

 (D)

Dimension calculation formulas

$$L1 = 11.5 \times n1 + 23 \times n2 + 83.8$$

$$L2 = 11.5 \times n1 + 23 \times n2 + 43.1$$

$M = L1 / 12.5 + 1$ Round down to the nearest whole number.

$$L3 = 12.5 \times M + 23$$

$$L4 = L3 - 10.5$$

$L5 = (L3 - L1) / 2$ Round up to the nearest whole number.

$$L6 = 11.5 \times n^3 + 33.2$$

$$L7 = 11.5 \times n4 + 23$$

n1: Number of JSY3000 valve stations (Multiples of 4)

n2: Number of intermediate SUP/EXH blocks

n3: Stations from the D side to the first intermediate SUP/EXH block

n4: Stations between the intermediate SUP/EXH blocks

* These figures show the JJ5SY3-L10SFN-□B2-C8.

* Refer to the **Web Catalog** for the dimensions of the external pilot and silencer.

Caution

There will be slight variations in the width of manifold blocks due to tolerance.

As the manifold is made up of a combination of manifold blocks, there will be slight variations between the actual pitch dimensions of the mounting holes used to secure the manifold and the values stated in the catalog due to tolerance.

L: Dimensions When the intermediate SUP/EXH block count is “n2 = 0”^{*1}

n1: Stations

L \ n1	4	8	12	16	20	24	28	32	36	40	44	48	52	56	60	64
L1	129.8	175.8	221.8	267.8	313.8	359.8	405.8	451.8	497.8	543.8	589.8	635.8	681.8	727.8	773.8	819.8
L2	89.1	135.1	181.1	227.1	273.1	319.1	365.1	411.1	457.1	503.1	549.1	595.1	641.1	687.1	733.1	779.1
L3	160.5	210.5	248	298	348	385.5	435.5	485.5	523	573	623	660.5	710.5	760.5	798	848
L4	150	200	237.5	287.5	337.5	375	425	475	512.5	562.5	612.5	650	700	750	787.5	837.5
L5	16	18	14	16	18	13	15	17	13	15	17	13	15	17	13	15

*1 When the number of intermediate SUP/EXH blocks is "n2 = 1 to 6," calculate the respective dimensions using the various dimension calculation formulas above.

EX260 Series SI Unit



How to Order SI Units

EX260 – M PN1

Communication protocol

Symbol	Protocol	Output	Communication connector	Power supply connector	Manifold symbol	Applicable manifold
PN1	PROFINET	For the 64-station compatible manifold	M12	M12	F	JSY3000-L (64 stations specification)
EN1	EtherNet/IP™		M12	M12	E	
EC1	EtherCAT		M8	M8	D	
IL1	IO-Link		M12		K	

Specifications

Common Specifications for All SI Units

Power supply for control	Power supply voltage	24 VDC +20%, -15%
	Internal current consumption	100 mA or less*1
Power supply for output*2	Power supply voltage	24 VDC +20%, -15%
	Max. supply current	3 A
	Voltage drop to valve supply	Max. 1.2 V (at 24 VDC)
Environmental resistance	Enclosure (Based on IEC 60529)	IP67
	Operating temperature range	-10 to +50°C
	Operating humidity range	35 to 85% RH (No condensation)
	Withstand voltage	500 VAC for 1 min between external terminals and FE
	Insulation resistance	500 VDC, 10 MΩ or more between external terminals and FE
Standards		CE/UKCA marking
Weight		200 g

*1 150 mA or less for the EX260-MPN1

*2 This is the SI unit power supply voltage. Supply power according to the type of solenoid valve used.

SI Unit Specifications by Model

Model		EX260-MPN1
Applicable system	Protocol	PROFINET*1
	Configuration file*2	GSD file
Applicable functions		MRP function, MRPD function, Fast Startup function, Shared Device function, System Redundancy S2 function, PROFIenergy function, Conformance Class C, NET Load Class III
Communication speed		100 Mbps
Communication connector specification		M12
Output	Number of outputs	Max. 128 outputs
	Load	Solenoid valve with surge voltage suppressor, 24 VDC, 0.4 W or less (SMC)
Accessories	Mounting screw	Hexagon socket head cap screw M3 x 30 (2 pcs.)
	Seal cap (for M12 connector socket)	EX9-AWTS (1 pc.)

Model		EX260-MEC1
Applicable system	Protocol	EtherCAT*1
	Configuration file*2	ESI file
Applicable functions		CoE, FoE*3, DC synchronous
Communication speed		100 Mbps
Communication connector specification		M8
Output	Number of outputs	Max. 128 outputs
	Load	Solenoid valve with surge voltage suppressor, 24 VDC, 0.4 W or less (SMC)
Accessories	Mounting screw	Hexagon socket head cap screw M3 x 30 (2 pcs.)
	Seal cap (for M8 connector socket)	EX9-AWES (2 pc.)

Model		EX260-MEN1
Applicable system	Protocol	EtherNet/IP™
	Configuration file*2	EDS file
Applicable functions		Quickconnect, DLR, Web server
Communication speed		100 Mbps
Communication connector specification		M12
Output	Number of outputs	Max. 128 outputs
	Load	Solenoid valve with surge voltage suppressor, 24 VDC, 0.4 W or less (SMC)
Accessories	Mounting screw	Hexagon socket head cap screw M3 x 30 (2 pcs.)
	Seal cap (for M12 connector socket)	EX9-AWTS (1 pc.)

Model		EX260-MIL1
Applicable system	Protocol	IO-Link
	Configuration file*2	IODD file
Applicable functions		ISDU, Data Storage
Communication speed		COM3 (230.4 kbps)
Communication connector specification		M12
Output	Number of outputs	Max. 128 outputs
	Load	Solenoid valve with surge voltage suppressor, 24 VDC, 0.4 W or less (SMC)
Accessories	Mounting screw	Hexagon socket head cap screw M3 x 30 (2 pcs.)

*1 Use a CAT5 or higher communication cable for EtherCAT, Ethernet/IP™, and PROFINET.

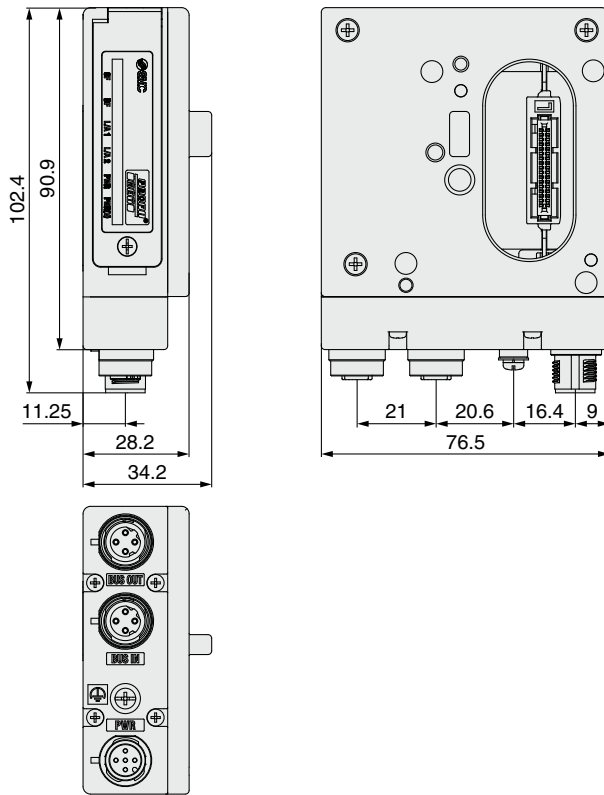
*2 The configuration file can be downloaded from the SMC website: <https://www.smcworld.com>

*3 There is a firmware update function using FoE, but depending on the product's hardware and firmware versions, it may not be possible to use the firmware update function.

Dimensions

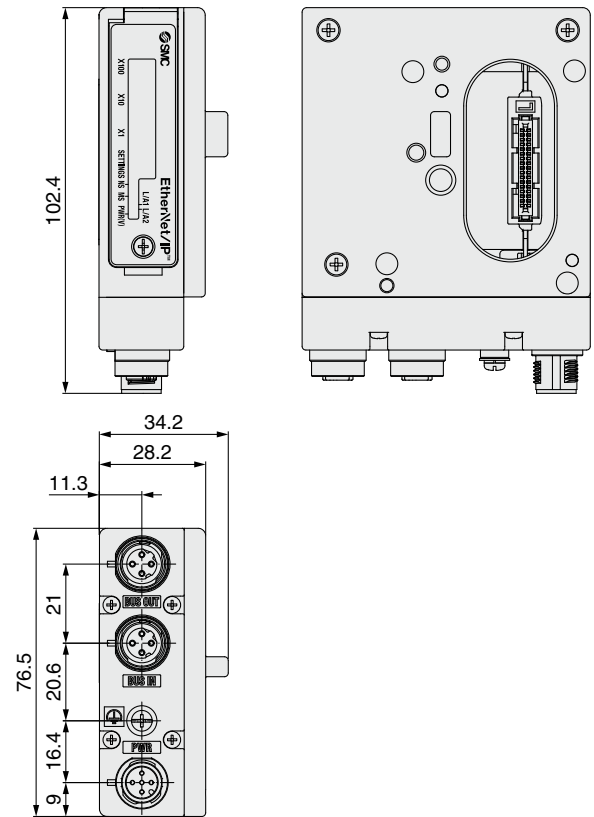
M12 communication connector type

For PROFINET



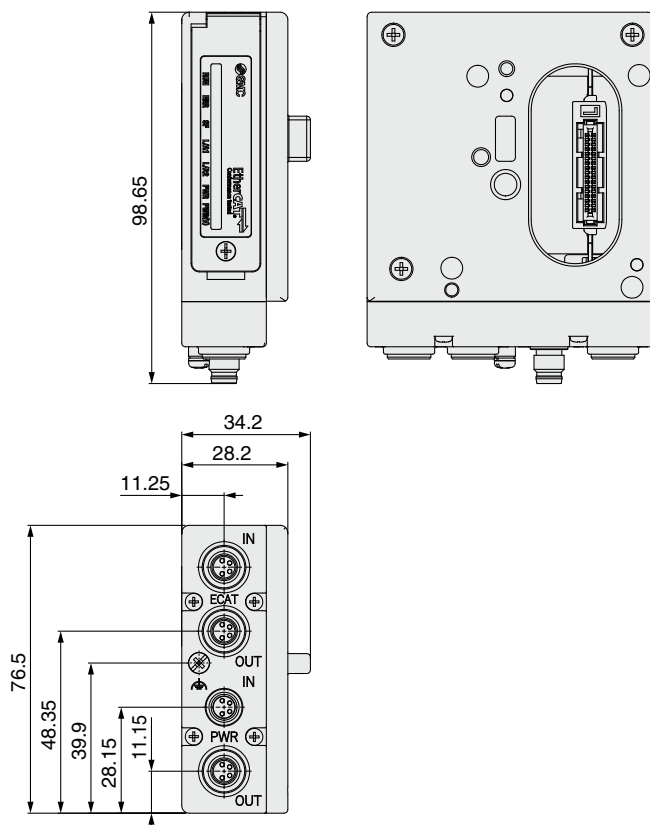
M12 communication connector type

For EtherNet/IP™



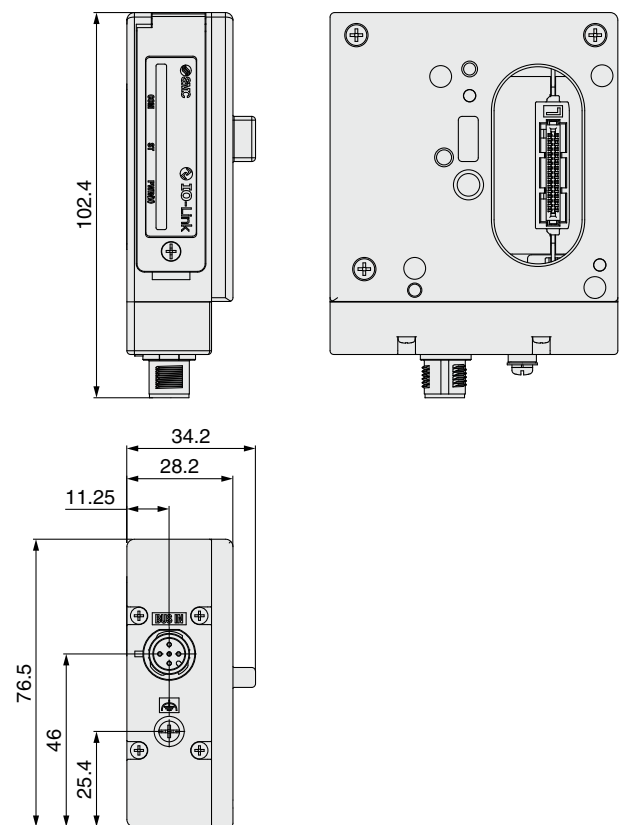
M8 communication connector type

For EtherCAT



M8 communication/Power supply connector type

For IO-Link



JSY3000-L Series

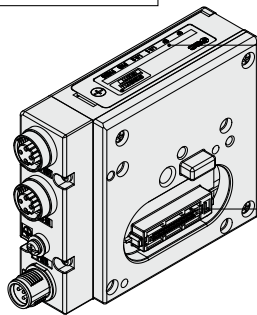
EX260 Series

Manifold Options


EX260 Series

Parts Description

For PROFINET

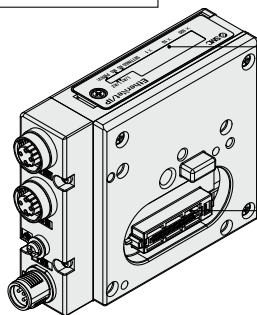


Indicator LED
Connector

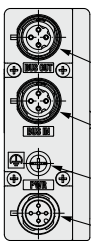


Part no.	EX260-MPN1
Protocol	PROFINET
Communication connector (M12) BUS OUT	4 pins, socket, D code
Communication connector (M12) BUS IN	4 pins, socket, D code
Ground terminal	M3
Power connector (M12) PWR	4 pins, plug, A code

For EtherNet/IP™

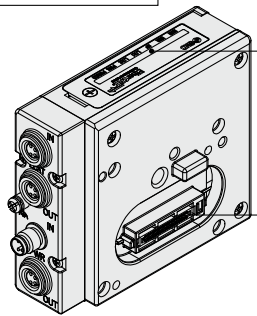


Indicator LED
Connector

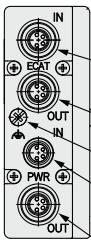


Part no.	EX260-MEN1
Protocol	EtherNet/IP™
Communication connector (M12) BUS OUT	4 pins, socket, D code
Communication connector (M12) BUS IN	4 pins, socket, D code
Ground terminal	M3
Power connector (M12) PWR	4 pins, plug, A code

For EtherCAT

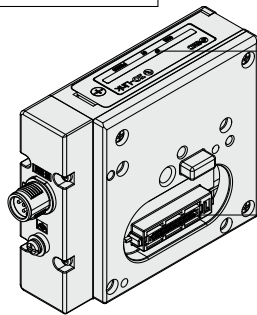


Indicator LED
Connector

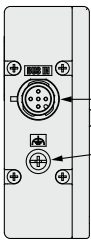


Part no.	EX260-MEC1
Protocol	EtherCAT
Communication connector (M8) Port1	4 pins, socket, A code
Communication connector (M8) Port2	4 pins, socket, A code
Ground terminal	M3
Power connector (M8) PWR IN	4 pins, plug, A code
Power connector (M8) PWR OUT	4 pins, socket, A code

For IO-Link



Indicator LED
Connector

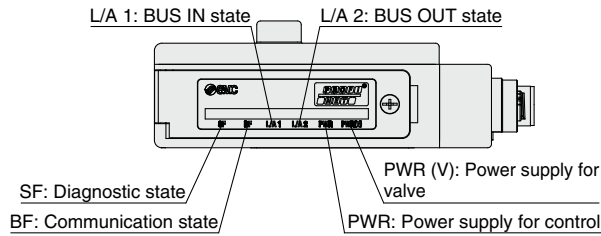


Part no.	EX260-MIL1
Protocol	IO-Link
Communication/Power connector (M12)*1	5 pins, plug, A code
Ground terminal	M3

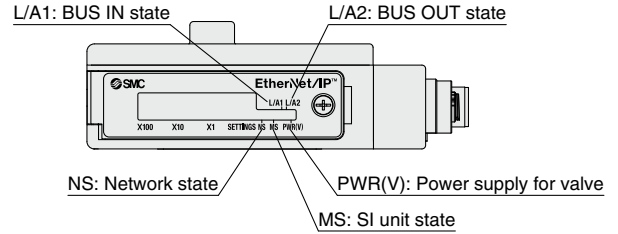
*1 The communication line, control/sensor power supply line, and the valve power supply line are connected using the same cable.

LED Indicator

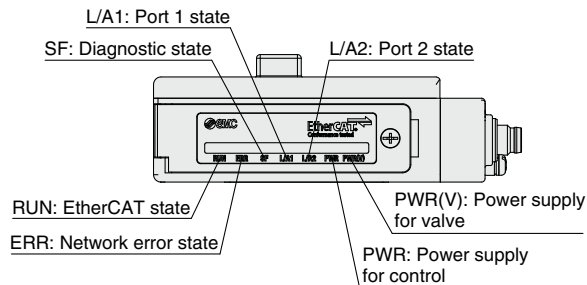
For PROFINET EX260-MPN1



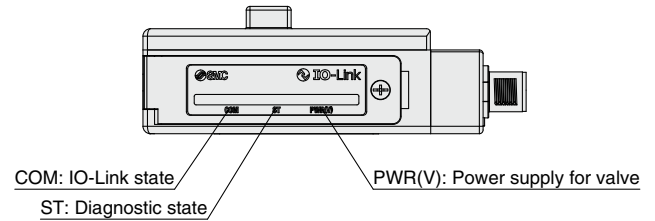
For EtherNet/IP™ EX260-MEN1



For EtherCAT EX260-MEC1



For IO-Link EX260-MIL1



Accessories

For details, refer to the **Web Catalog** (EX260 series).

* SMC does not provide cables for the EtherCAT compatible type (M8 connector). Order a cable from another cable manufacturer.

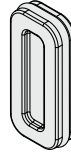
■ SUP/EXH blocking disk

[SUP blocking disk]

Inserting an SUP blocking disk in the pressure supply passage of a manifold valve can allow for the use of 2 different pressures (high and low) in 1 manifold.

[EXH blocking disk]

Inserting an EXH blocking disk in the exhaust passage of a manifold valve can separate the exhaust from the valve so it does not affect the other valves. It can also be used in positive pressure and vacuum pressure mixed manifolds. (2 pieces are required to block both the EA and EB sides of the EXH.)



⚠ Caution

The manifold base cannot be disassembled by the customer. Specify the locations of any blocking disks on the manifold specification sheet.

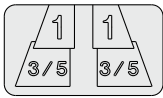
* Each manifold block is made up of 4 stations, so blocking disks can only be mounted every 4 stations.

Series	SUP blocking disk	EXH blocking disk
JSY3000	JSY31M-40P-1A	JSY31M-40P-2A

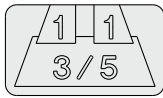
■ Labels for blocking disks

These labels can be used to indicate and confirm where on the manifold the SUP/EXH blocking disk assemblies were inserted. (3 labels of each)

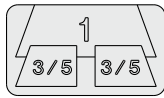
SUP/EXH blocking disk label



SUP blocking disk label



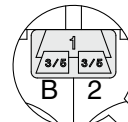
EXH blocking disk label



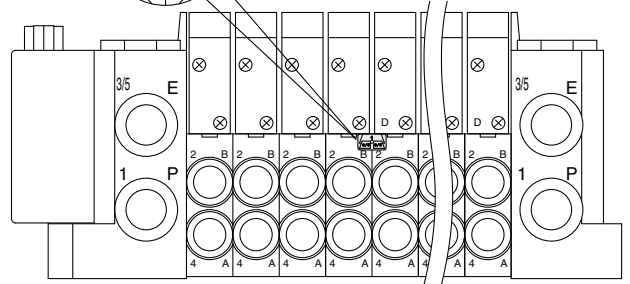
Series	Part no.
JSY3000	SJ3000-155-1A

⚠ Caution

The manifold base cannot be disassembled by the customer.



* If the blocking disk is ordered using the manifold specification sheet and ordered at the same time as the manifold, the position where the blocking disk is inserted will be labeled and shipped out.



■ Intermediate SUP/EXH block assembly

JSY31M – 125P – 1A **– C10**

● Mounting

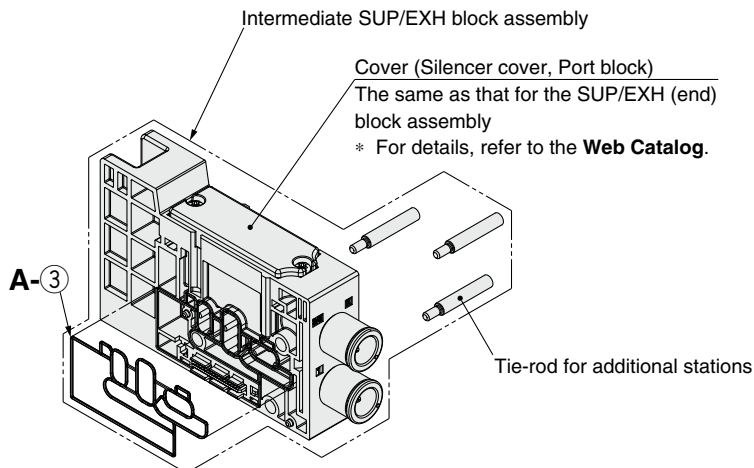
Nil	Direct mounting
D0	DIN rail mounting (Without DIN rail)

● Pilot, Silencer type

Symbol	Pilot type		Built-in silencer
	Internal	External (Made to Order)	
Nil	●	—	—
S	●	—	●
R	—	●	—

● P, E port size (One-touch fitting)

Symbol	P, E port	JSY3000
C10	ø10 One-touch fitting	●



Intermediate SUP/EXH block assembly accessories and the number of accessories

Accessories	Quantity
Tie-rod for additional stations	3 pcs.
A-③ Manifold block gasket	1 pc.

* Gasket is mounted.

Clamp bracket

Series	Part no.
JSY3000	SY30M-15-1A

⚠ Caution

The manifold base cannot be disassembled by the customer. Specify the mounting location of the intermediate SUP/EXH block assembly on the manifold specification sheet.

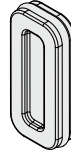
■ SUP/EXH blocking disk

[SUP blocking disk]

Inserting an SUP blocking disk in the pressure supply passage of a manifold valve can allow for the use of 2 different pressures (high and low) in 1 manifold.

[EXH blocking disk]

Inserting an EXH blocking disk in the exhaust passage of a manifold valve can separate the exhaust from the valve so it does not affect the other valves. It can also be used in positive pressure and vacuum pressure mixed manifolds. (2 pieces are required to block both the EA and EB sides of the EXH.)

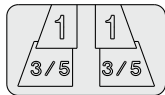


Series	SUP blocking disk	EXH blocking disk
JSY3000	JSY31M-40P-1A	JSY31M-40P-2A

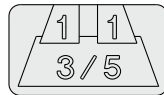
■ Labels for blocking disks

These labels can be used to indicate and confirm where on the manifold the SUP/EXH blocking disk assemblies were inserted. (3 labels of each)

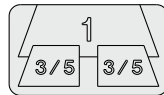
SUP/EXH blocking disk label



SUP blocking disk label



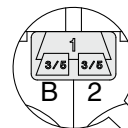
EXH blocking disk label



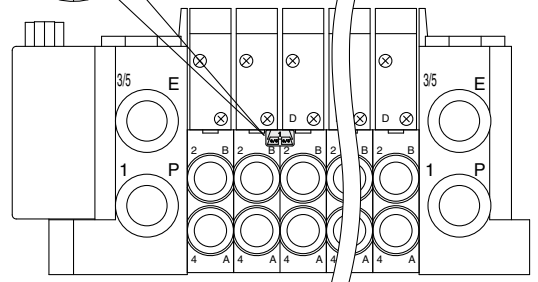
Series	Part no.
JSY3000	SJ3000-155-1A

⚠ Caution

The manifold base cannot be disassembled by the customer. Specify the mounting location of the intermediate SUP/EXH block assembly on the manifold specification sheet.



* If the blocking disk is ordered using the manifold specification sheet and ordered at the same time as the manifold, the position where the blocking disk is inserted will be labeled and shipped out.



■ Intermediate SUP/EXH block assembly

JSY31M – 125P – 1A **– C10**

● Mounting

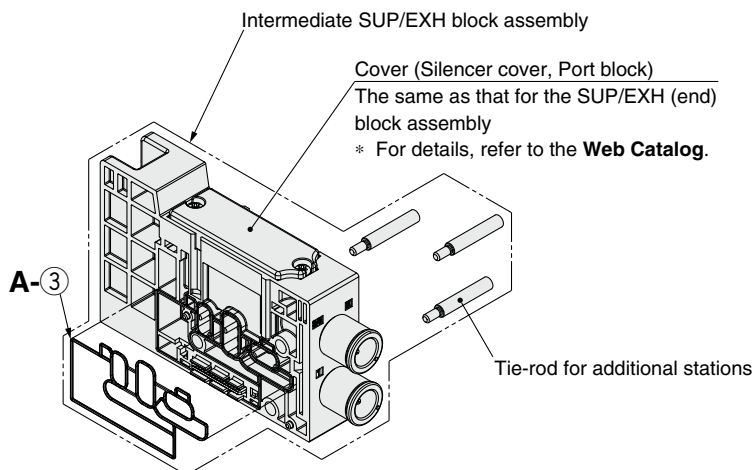
Nil	Direct mounting
D0	DIN rail mounting (Without DIN rail)

● Pilot, Silencer type

Symbol	Pilot type		Built-in silencer
	Internal	External (Made to Order)	
Nil	●	—	—
S	●	—	●
R	—	●	—

● P, E port size (One-touch fitting)

Symbol	P, E port	JSY3000
C10	ø10 One-touch fitting	●



Intermediate SUP/EXH block assembly accessories and the number of accessories

Accessories	Quantity
Tie-rod for additional stations	3 pcs.
A-③ Manifold block gasket	1 pc.

* Gasket is mounted.

Clamp bracket

Series	Part no.
JSY3000	SY30M-15-1A

⚠ Caution

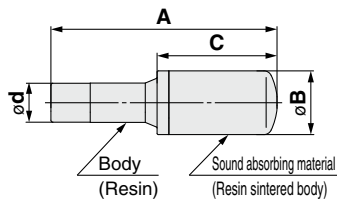
The manifold base cannot be disassembled by the customer. Specify the mounting location of the intermediate SUP/EXH block assembly on the manifold specification sheet.

JSY3000-L Series

■ Silencer (One-touch fitting connection type)

This silencer can be mounted to the 3/5 (E: EXH) port of the manifold in one step.

* Shipped together with the product

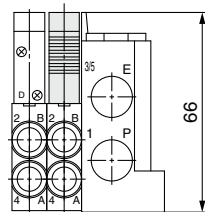
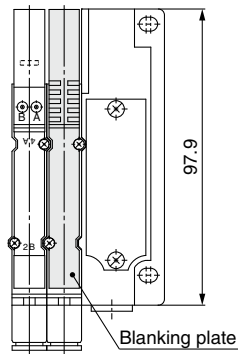


Series (ød)	Model	Effective area	A	B	C
For JSY3000 (ø10)	AN20-C10	30 mm ²	57.5	16.5	30.5

Dimensions

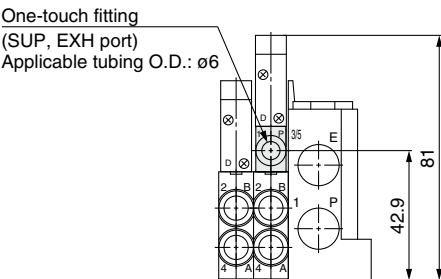
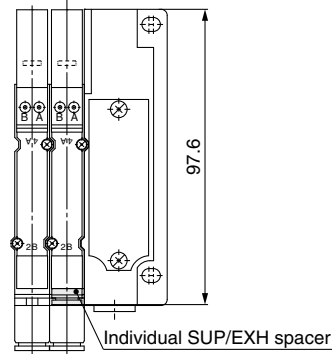
■ Blanking plate

JSY3000 series



■ Individual SUP/EXH spacer

JSY3000 series




■ Trademark

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

64-station Compatible Manifold

Plug-in Compact 5-Port Solenoid Valve

 **Safety Instructions** Be sure to read the “Handling Precautions for SMC Products” (M-E03-3) and “Operation Manual” before use.

SMC Corporation

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D-G