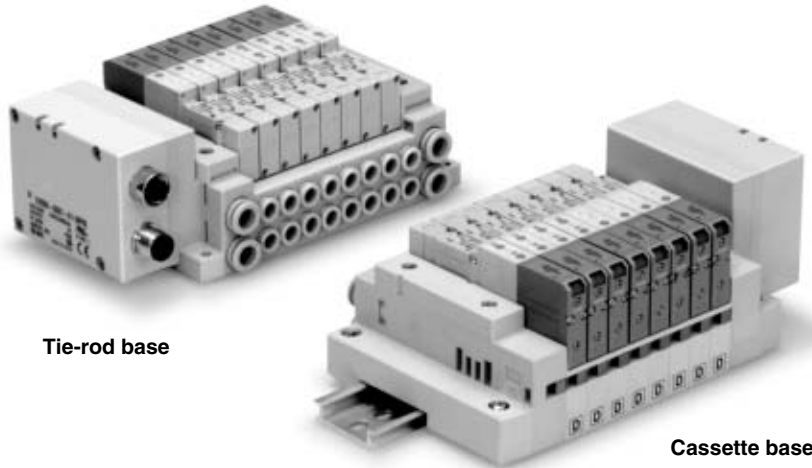


# Decentralized Serial Wiring

## Series **EX500**

IP67 compliant



Tie-rod base

Cassette base

Applicable series	Cassette base manifold SV1000/SV2000
	Tie-rod base manifold SV1000/SV2000/SV3000/SV4000
	<ul style="list-style-type: none"><li>• Number of output points: 16 points</li><li>• EX500 gateway unit communication specifications Remote I/O, DeviceNet, PROFIBUS-DP</li></ul>

SV

SZ

SY

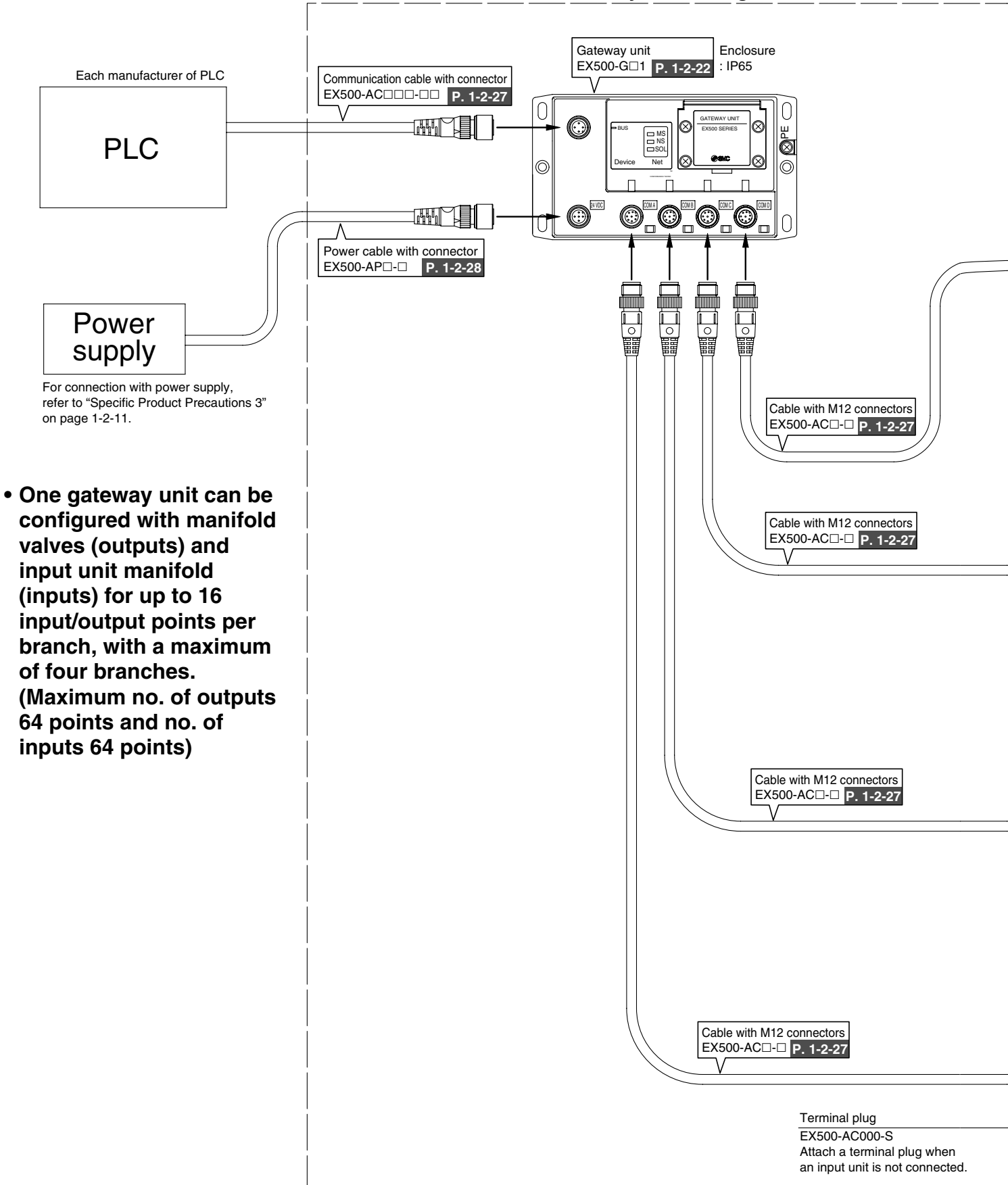
SYJ

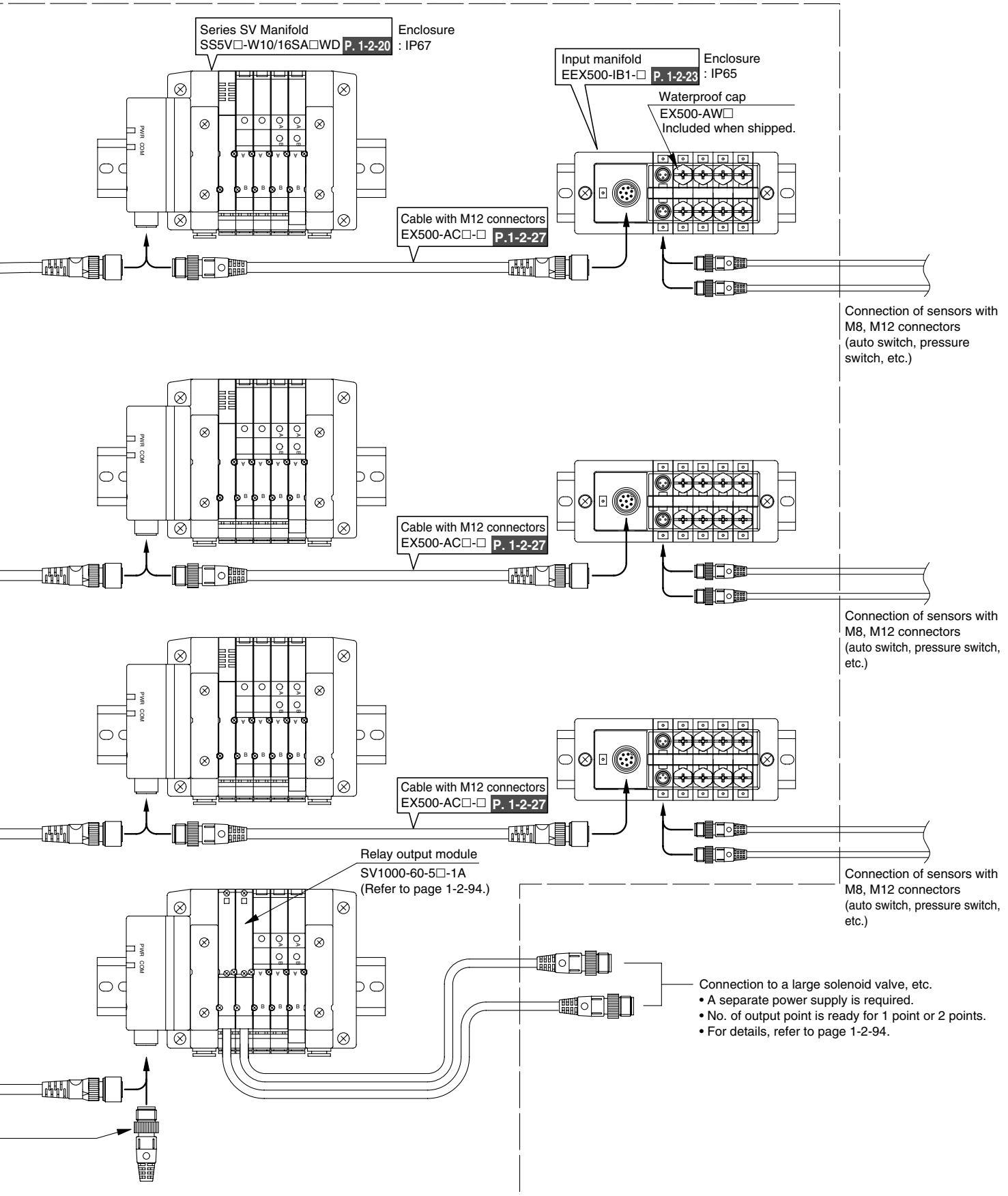
SX

# Series EX500 Decentralized Serial System Configuration

A configuration of series EX500 serial system with series SV is shown below.

## Series EX500 Decentralized Serial System Configuration





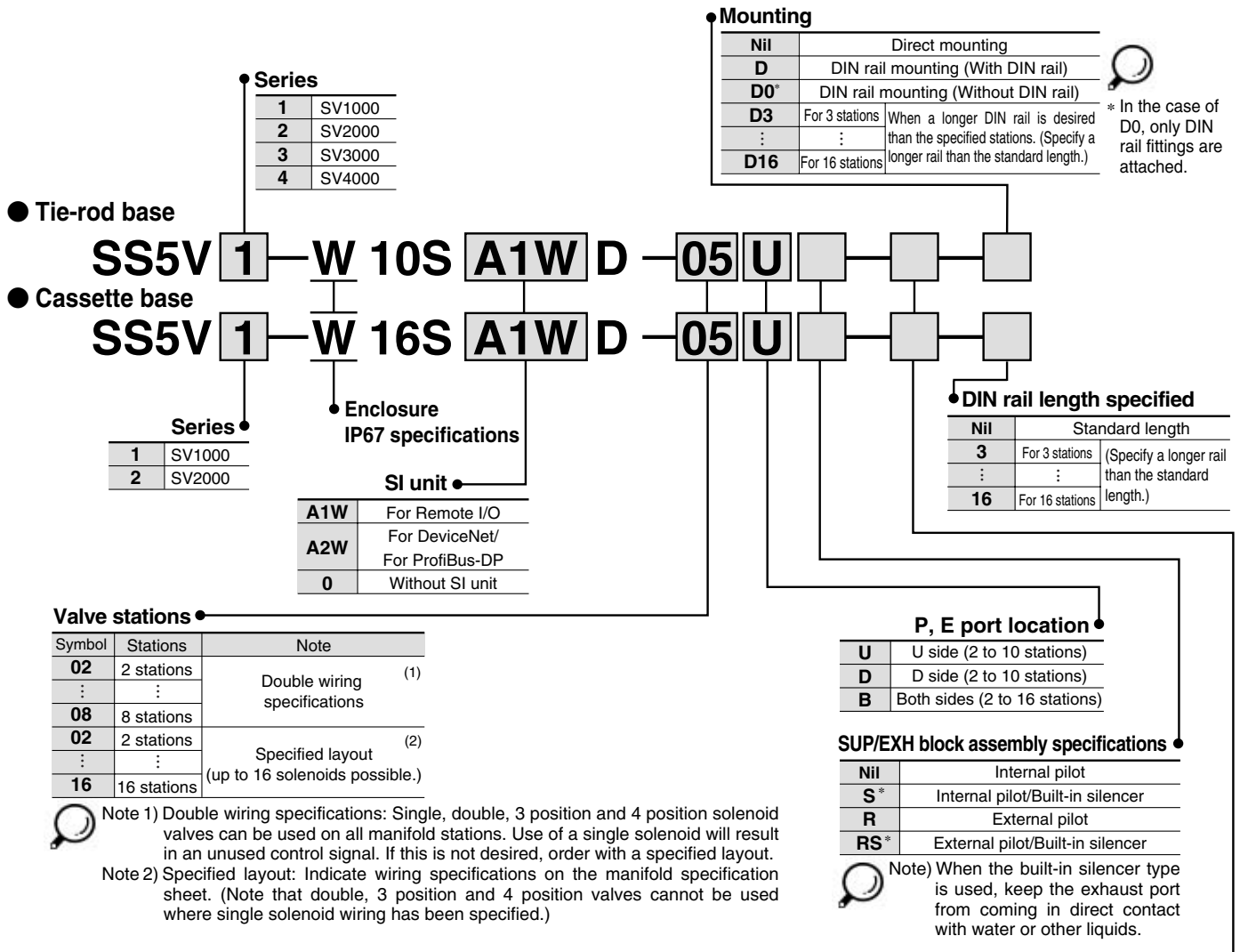
<b>SV</b>
<b>SZ</b>
<b>SY</b>
<b>SYJ</b>
<b>SX</b>

# Series EX500

## Decentralized Serial Wiring

# Series SV

### How to Order



#### A, B port size (metric)

Symbol	A, B port	P, E port	Applicable series
C3	One-touch fitting for ø3.2	One-touch fitting for ø8	SV1000
C4	One-touch fitting for ø4		
C6	One-touch fitting for ø6		
C4	One-touch fitting for ø4	One-touch fitting for ø10	SV2000
C6	One-touch fitting for ø6		
C8	One-touch fitting for ø8		
C6	One-touch fitting for ø6	One-touch fitting ø12	SV3000
C8	One-touch fitting for ø8		
C10	One-touch fitting for ø10		
C8	One-touch fitting for ø8	One-touch fitting ø12	SV4000
C10	One-touch fitting for ø10		
C12	One-touch fitting for ø12		
02	Rc 1/4	Rc 3/8	SV4000
03	Rc3/8		
02F	G 1/4		
03F	G 3/8	G 3/8	SV4000
M	A, B ports mixed		

#### A, B port size (inch)

Symbol	A, B port	P, E port	Applicable series
N1	One-touch fitting for ø1/8"	One-touch fitting for ø5/16"	SV1000
N3	One-touch fitting for ø5/32"		
N7	One-touch fitting for ø1/4"		
N3	One-touch fitting for ø5/32"	One-touch fitting for ø3/8"	SV2000
N7	One-touch fitting for ø1/4"		
N9	One-touch fitting for ø5/16"		
N7	One-touch fitting for ø1/4"	One-touch fitting for ø3/8"	SV3000
N9	One-touch fitting for ø5/16"		
N11	One-touch fitting for ø3/8"		
N9	One-touch fitting for ø5/16"	One-touch fitting for ø3/8"	SV4000
N11	One-touch fitting for ø3/8"		
02N	NPT 1/4		
03N	NPT 3/8	NPT 3/8	SV4000
02T	NPTF 1/4		
03T	NPTF 3/8		
M	A, B ports mixed		

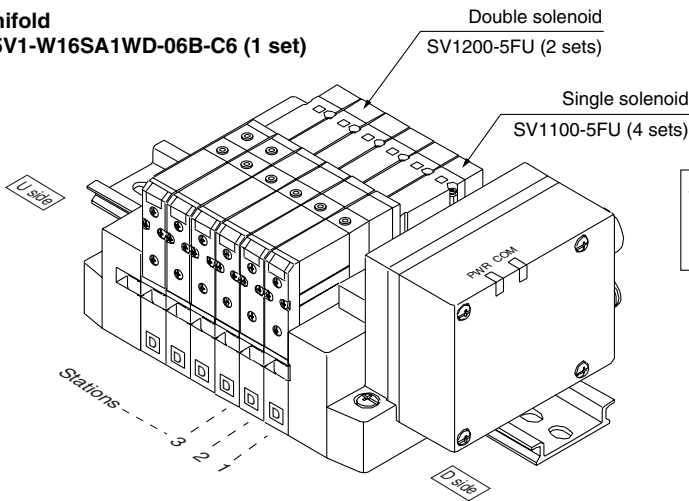
\* In the case of mixed specifications (M), indicate separately on the manifold specification sheet.  
 \* Port sizes of X, PE port for external pilot specifications (R, RS) are ø4 (metric), ø5/32" (inch) for SV1000/2000 and ø6 (metric) and ø1/4" (inch) for SV3000/4000.

## How to Order Valve Manifold Assembly

### Ordering example (SV1000)

Manifold

SS5V1-W16SA1WD-06B-C6 (1 set)



SS5V1-W16SA1WD-06B-C6.....1 set (Manifold part no.)  
 \*SV1100-5FU.....4 sets (Single solenoid part no.)  
 \*SV1200-5FU.....2 sets (Double solenoid part no.)

SV

SZ

SY

SYJ

SX

## How to Order Solenoid Valves

SV 1 1 00 [ ] [ ] — 5 F [ ] [ ] [ ]

**Series**

1	SV1000
2	SV2000
3	SV3000
4	SV4000

**Type of actuation**

1	2 position single solenoid
2	2 position double solenoid
3	3 position closed center
4	3 position exhaust center
5	3 position pressure center
A	4 position dual 3 port valve: N.C./N.C.
B	4 position dual 3 port valve: N.O./N.O.
C	4 position dual 3 port valve: N.C./N.O.

\* 4 position dual 3 port valves are applicable to Series SV1000 and SV2000 only.

**Pilot type**

Nil	Internal pilot
R	External pilot

\* External pilot specifications is not available for 4 position dual 3 port valves.

**Back pressure check valve**

Nil	None
K	Built-in

\* Built-in back pressure check valve type is applicable to series SV1000 only.

\* Back pressure check valve is not available for 3 position closed center and 3 position pressure

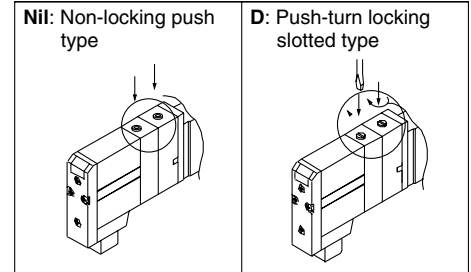
Refer to Precautions 2 on page 1-2-9.

Note)



Note) Available with manifold block for station additions. Refer to pages 1-2-89 and 1-2-93.

**Manual override**



**Light/Surge voltage suppressor**

U	With light/surge voltage suppressor
R	With surge voltage suppressor

**Rated voltage**

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

# Series SV

## Gateway (GW) unit



## Specifications

Model	EX500-GAB1-X1	EX500-GDN1	EX500-GPR1
Applicable PLC/Communication protocol	Rockwell Automation, Inc. PLC	DeviceNet Release 2.0	PROFIBUS-DP
Communication speed	57.6 Kbit/sec, 115.2 Kbit/sec 230.4 Kbit/sec	125 Kbit/sec, 250 Kbit/sec 500 Kbit/sec	9.6/19.2/93.75/187.5/500 kbit/sec 1.5/3/6/12 Mbit/sec
Rated voltage	24 VDC		
Power supply voltage range	Input and control unit power supply: 24 VDC ±10% Solenoid valve power supply: 24 VDC +10%/–5% (Power drop warning at approx. 20 V)		
Current consumption	200 mA or less		
No. of input/output points	Maximum 64 inputs/64 outputs		
No. of input/output branches	4 branches (16 inputs/16 outputs per branch)		
Branch cable	8 core heavy duty cable		
Branch cable length	5 m or less (total extension 10 m or less)		
Communication connector	M12 connector (8 pins, Socket)		
Power connector	M12 connector (5 pins, Plug)		
Ambient operating temperature/humidity	+5 to +45°C/35 to 85% RH (No condensation)		
Enclosure	IP65		
Applicable standard	UL, CSA, CE		
Weight (g)	470		



\* Communication cables and connectors are sold separately.  
Refer to options on page 1-2-27.

## How to Order

EX500 — G **DN** 1

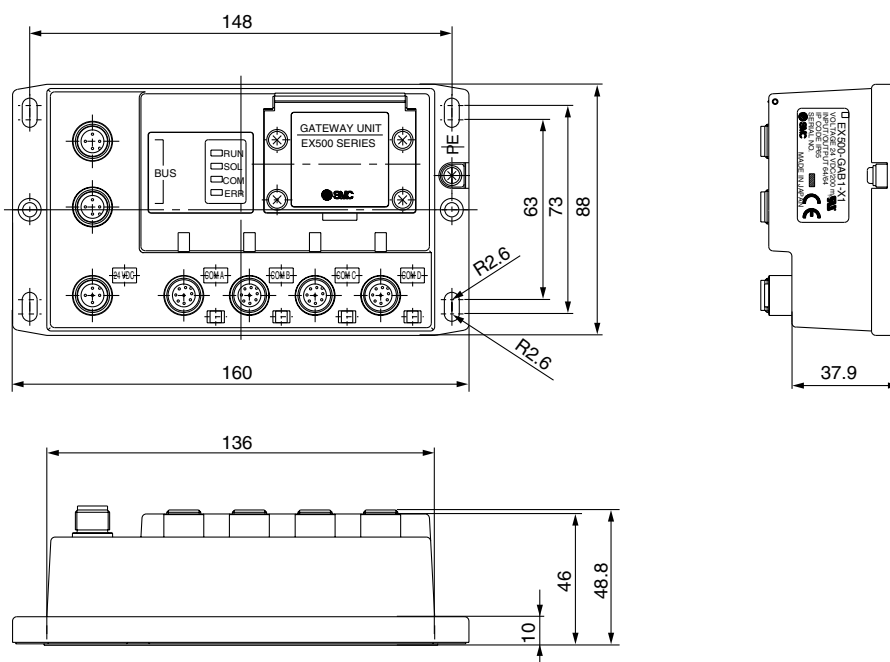
Communication protocol

DN	DeviceNet
PR	PROFIBUS-DP
AB	Remote I/O (RIO)

Applicable GW unit

Nil	DeviceNet
	PROFIBUS-DP
-X1	Remote I/O (RIO)

## Dimensions



### How to Order Input Manifold

**EEX500-IB1-E 8**

Input unit specifications

Connector type

<b>E</b>	M8 connector
<b>T</b>	M12 connector
<b>M</b>	M8, M12 mixed

Stations

<b>1</b>	1 station
<b>:</b>	<b>:</b>
<b>8</b>	8 stations

Applicable GW unit

<b>Nil</b>	DeviceNet PROFIBUS-DP
<b>-X1</b>	Remote I/O (RIO)

### How to Order Input Block

**EX500-IE 1**

Block type

<b>1</b>	M8 connector, PNP specifications
<b>2</b>	M8 connector, NPN specifications
<b>3</b>	M12 connector, PNP specifications
<b>4</b>	M12 connector, NPN specifications
<b>5</b>	8 points integrated type, M8 connector, PNP specifications
<b>6</b>	8 points integrated type, M8 connector, NPN specifications

Applicable GW unit

<b>Nil</b>	DeviceNet PROFIBUS-DP
<b>-X1</b>	Remote I/O (RIO)

Input unit manifold



### Input Unit Specifications

Connection block	Current source type input block (PNP input block) or Current sink type input block (NPN input block)
Communication connector	M12 connector (8 pins, plug)
Number of connection blocks	Maximum 8 blocks
Block supply voltage	24 VDC
Block supply current	0.65 A maximum
Current consumption	100 mA or less (at rated voltage)
Short circuit protection	Operates at 1ATyp. (Power supply cut) GW unit reset by turning power OFF and back ON.
Enclosure	IP65
Weight (g) (Note)	100 (Input block + End Block)

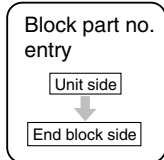
Note) Since the DIN rail weight is not included, confirm the DIN rail length to be used on page 1-2-25, and add the weight separately which is found in the DIN rail dimension table on page 1-2-97.

### Input Block Specifications

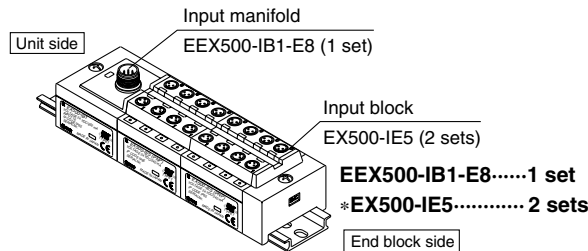
Sensor applicable	Current source type (PNP output) or Current sink type (NPN output)
Sensor connector	M8 connector (3 pins) or, M12 connector (4 pins)
Number of inputs	2 inputs/8 inputs (M8 only)
Rated voltage	24 VDC
Indication	Green LED
Insulation	None
Sensor supply current	Maximum 30 mA/Sensor
Enclosure	IP65
Weight (g)	[For M8: 20] [For M12: 40] [8 points integrated type, for M8: 55]

### How to Order Input Unit Manifold [Ordering example]

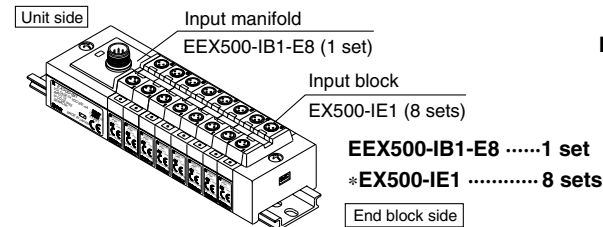
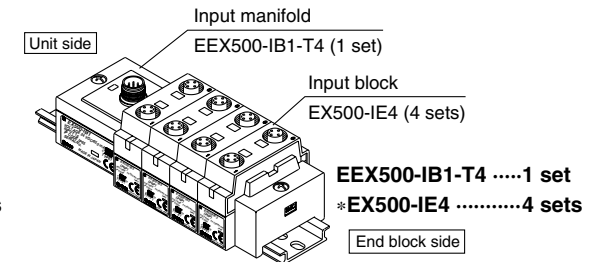
When ordering an input unit manifold, enter the **Input manifold part no.** + **Input block part no.** together. The **Input unit**, **End block** and **DIN rail** are included in the input manifold. Refer to the indications below.



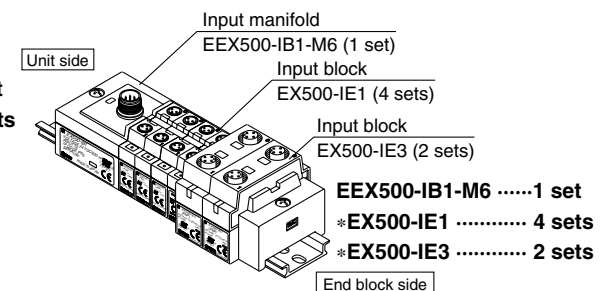
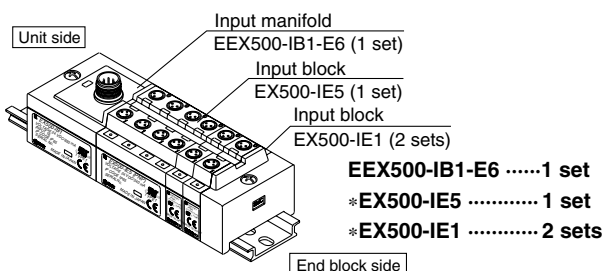
#### Example 1) M8 input block only



#### Example 2) M12 input block only

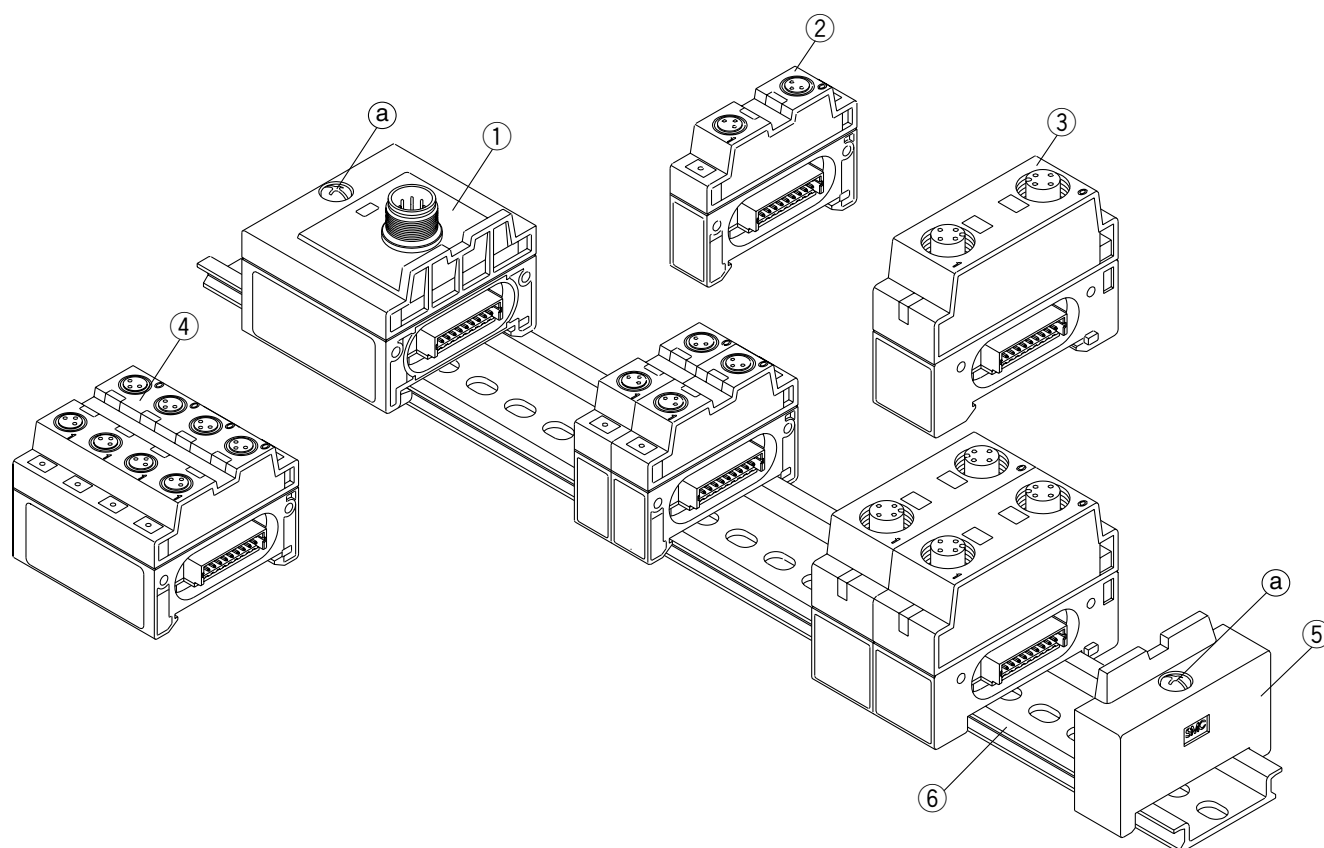


#### Example 3) M8 and M12 mixed



Note) • Since the 8 point integrated type input block is equivalent to the length of four stations on an M8 input block, pay attention to the number of stations on an input manifold.  
• When an input block layout becomes complicated, indicate on the input unit manifold specification sheet.

## Input Unit Manifold Exploded View



### Component Parts

No.	Description	Part no.		Note
		For standard	For RIO	
①	Input unit	EX500-IB1	EX500-IB1-X1	
②	Input block (M8 connector)	EX500-IE□	EX500-IE□-X1	PNP specifications...□: 1, NPN specifications...□: 2
③	Input block (M12 connector)	EX500-IE□	EX500-IE□-X1	PNP specifications...□: 3, NPN specifications...□: 4
④	8 input block (M8 connector)	EX500-IE□	EX500-IE□-X1	PNP specifications...□: 5, NPN specifications...□: 6
⑤	End block	EX500-EB1		
⑥	DIN rail	VZ1000-11-1-□		□: Length (Refer to page 1-2-97.)

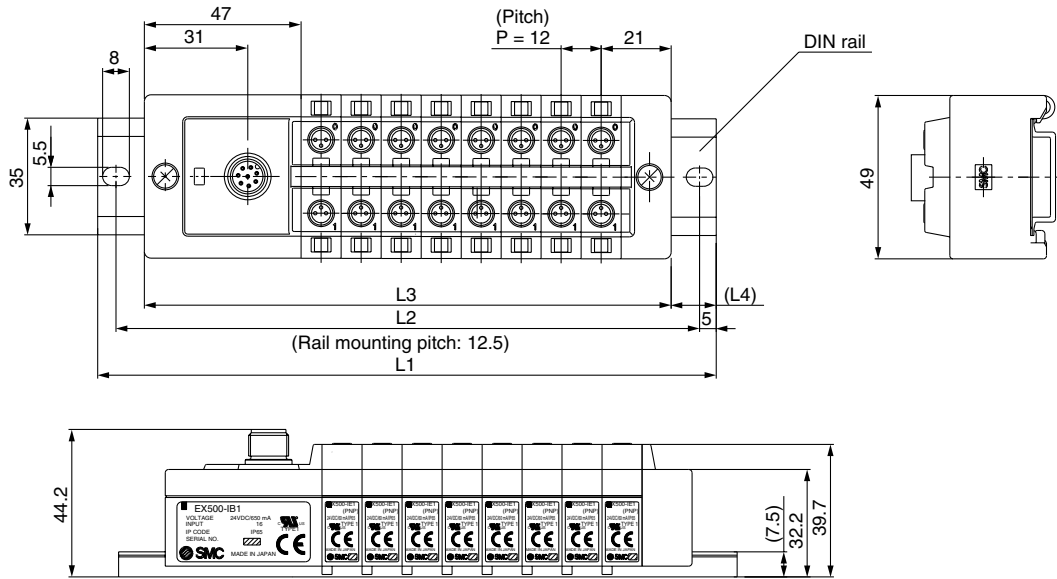
### How to add input block stations

- (1) Loosen the screws (a) (2 places) that hold the end block.
- (2) Separate the blocks at the locations where stations are to be added.
- (3) Attach the additional blocks to the DIN rail, and connect the blocks so that they fit together securely.
- (4) While holding the blocks together so that there are no gaps between them, secure them to the DIN rail by tightening the screws (a).  
Note: Be sure to tighten the round head combination screw with the prescribed tightening torque. (0.6 N·m)



## Input Unit Manifold Dimensions

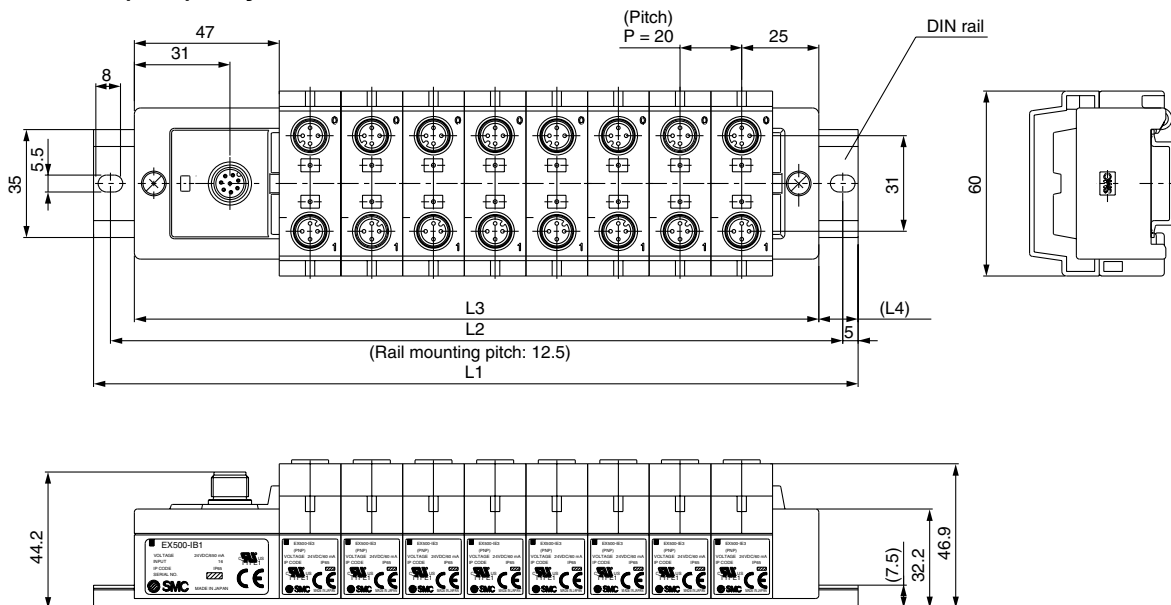
### Input block (M8) only



(mm)

Stations	1	2	3	4	5	6	7	8
Rail length L1	98	110.5	123	135.5	148	160.5	173	185.5
Mounting pitch L2	87.5	100	112.5	125	137.5	150	162.5	175
Manifold length L3	74	86	98	110	122	134	146	158
L4	12	12	12.5	12.5	13	13	13.5	13.5

### Input block (M12) only



(mm)

Stations	1	2	3	4	5	6	7	8
Rail length L1	110.5	123	148	173	185.5	210.5	223	248
Mounting pitch L2	100	112.5	137.5	162.5	175	200	212.5	237.5
Manifold length L3	82	102	122	142	162	182	202	222
L4	12	12	12.5	12.5	13	13	13.5	13.5

SV

SZ

SY

SYJ

SX

# Series SV



For valve specifications, refer to page 1-2-15.

## How to Order SI Unit

# EX500 – S001



### Applicable GW unit

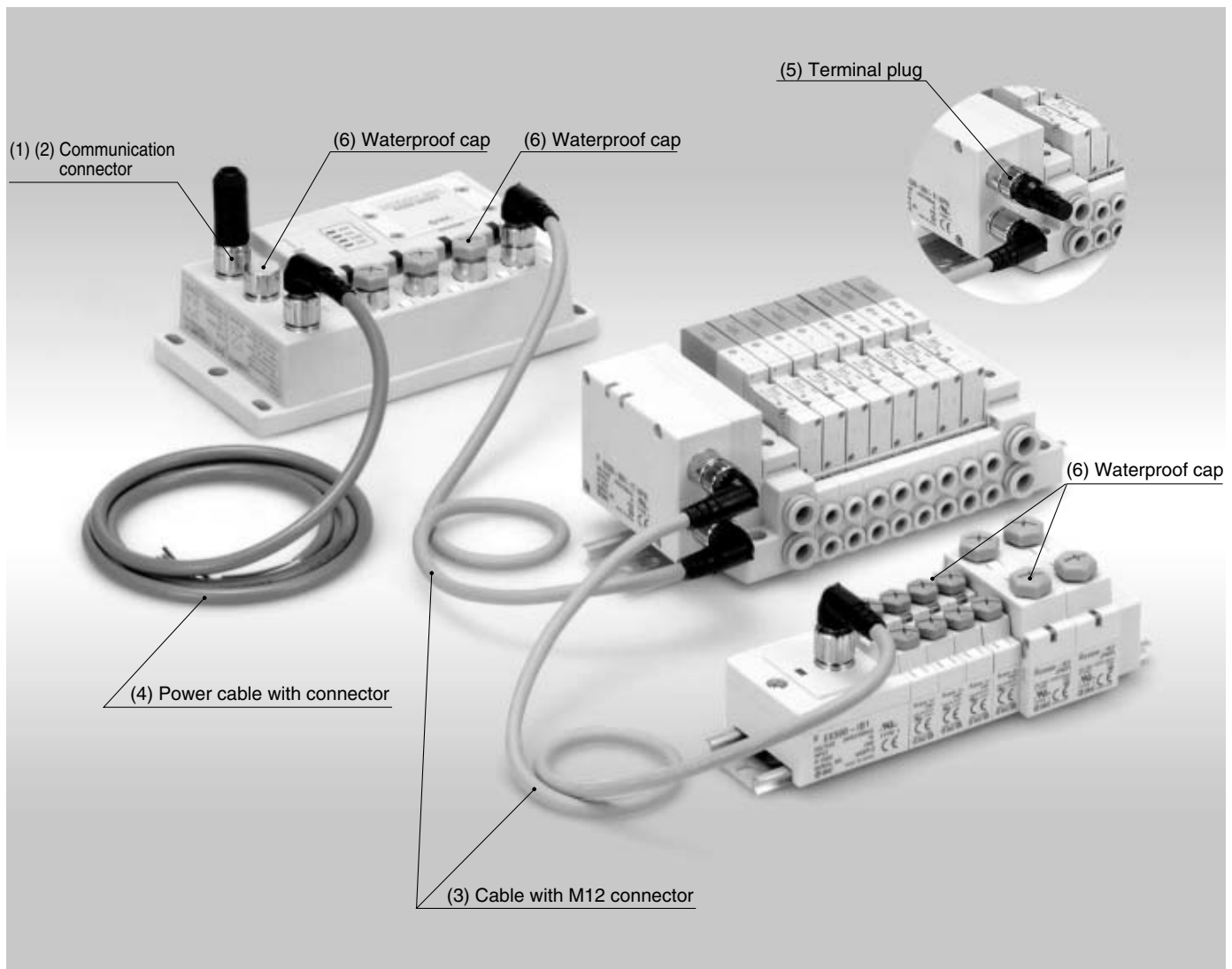
Nil	DeviceNet PROFIBUS-DP
-X1	Remote I/O (RIO)

## Specifications

Connection block	Solenoid valve (Single, Double) Relay output module (1 output, 2 outputs)
Communication connector	M12 connector (8 pins, Plug, Socket)
Connection block stations	Double solenoid valve Relay output module (2 points): Maximum 8 stations Single solenoid valve Relay output module (1 point): Maximum 16 stations
Block supply voltage	24 VDC
Block supply current	0.65 A maximum
Current consumption	100 mA or less (at rated voltage)
Enclosure <sup>Note)</sup>	IP65
Weight (g)	115

Note) A single SI unit of Series EX500 has an enclosure compliant with IP65. The IP67 protection can be achieved when it is mounted on a manifold.

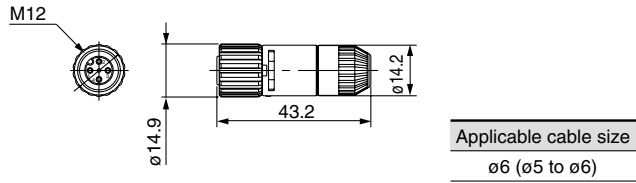
## Option



**Option**

(1) Communication connector (For RIO type GW unit)

**EX500 — AC000 — AB**

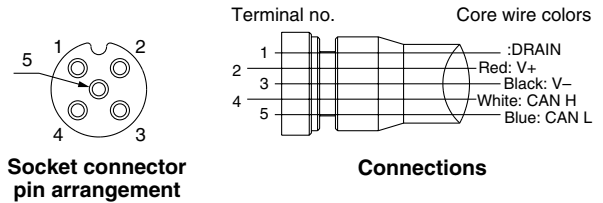
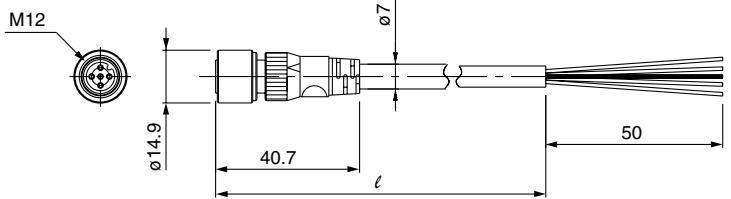


(2) Communication connector cable (For DeviceNet type GW unit)

**EX500 — AC 050 — DN**

**Cable length (l)**

010	1000 mm
050	5000 mm



(3) Cable with M12 connector

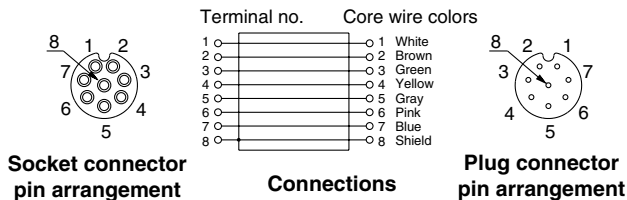
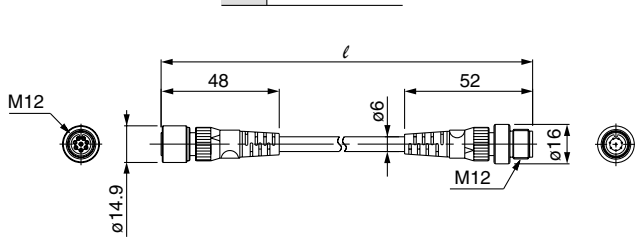
**EX500 — AC 030 — SSPS**

**Cable length (l)**

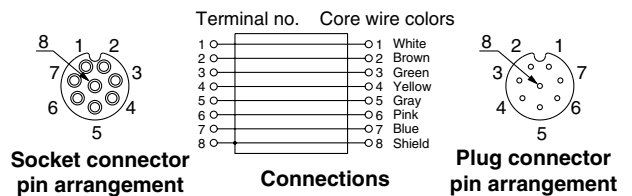
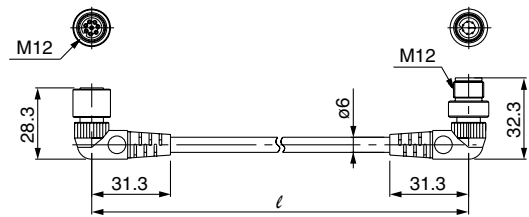
003	300 mm
005	500 mm
010	1000 mm
030	3000 mm
050	5000 mm

**Connector specifications**

<b>SSPS</b>	Socket side: Straight, Plug side: Straight
<b>SAPA</b>	Socket side: Angle, Plug side: Angle



**Straight connector type**



**Angle connector type**

**SV**  
**SZ**  
**SY**  
**SYJ**  
**SX**

# Series SV

## Option

### (4) Power cable with connector

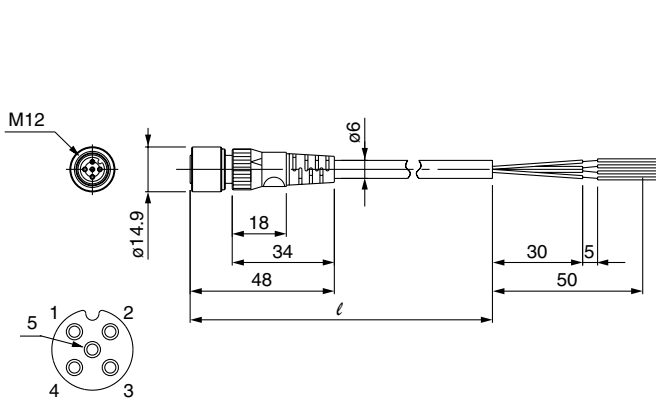
**EX500 — AP 050 — S**

Cable length (ℓ)

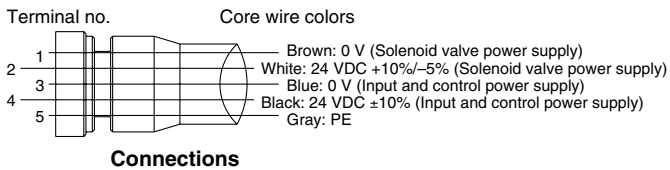
010	1000 mm
050	5000 mm

Connector specifications

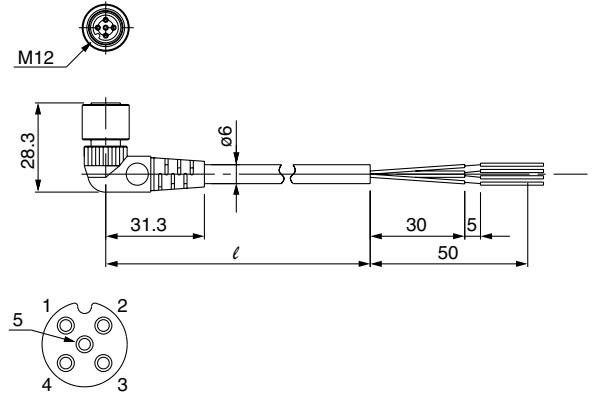
S	Straight
A	Angle



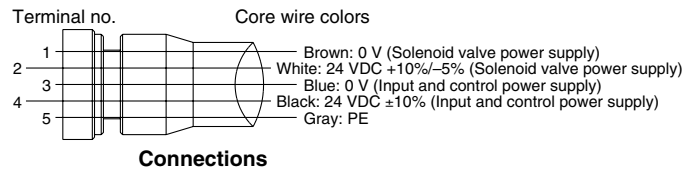
Socket connector pin arrangement



Straight connector type



Socket connector pin arrangement

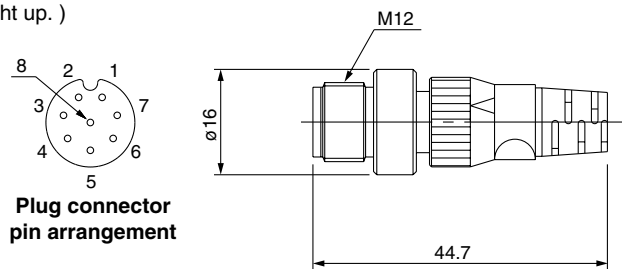


Angle connector type

### (5) Terminal plug

This is used where an input manifold (input unit/input block) is not being used.  
(If a terminal plug is not used, the GW unit is COM LED will not light up.)

**EX500 — AC000 — S**



Plug connector pin arrangement

### (6) Waterproof cap

Use this on ports that are not being used for a GW unit or input block.  
Use of this waterproof cap maintains the integrity of the IP65 enclosure.  
(Included with each input block.)

Note) Tighten the waterproof cap with the prescribed tightening torque. (For M8: 0.05 N·m, For M12: 0.1 N·m)

**EX500 — AW**

Connector type

ES	M8 connector (For socket)
TP	M12 connector (For plug)
TS	M12 connector (For socket)

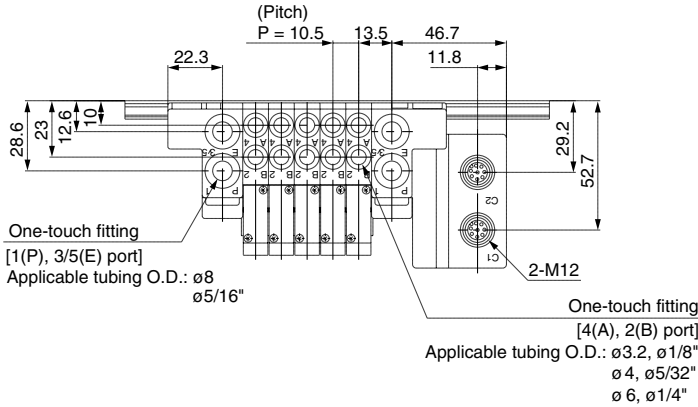


Waterproof cap

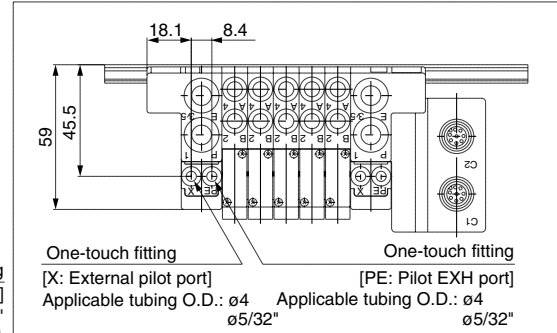
**Dimensions: Series SV1000 for EX500 Decentralized Serial Wiring**

● **Cassette base manifold: SS5V1-W16SA□WD- Stations** U D (S, R, RS) C3, N1 C4, N3 C6, N7

- When P, E port outlets are indicated on the U side or D side, the P, E ports on the opposite side are plugged.
- External pilot port positions and silencer discharge port positions are the same as P, E port outlet positions.



**With External Pilot Specifications**



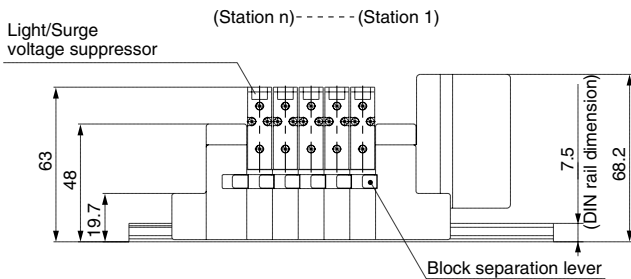
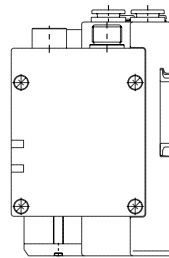
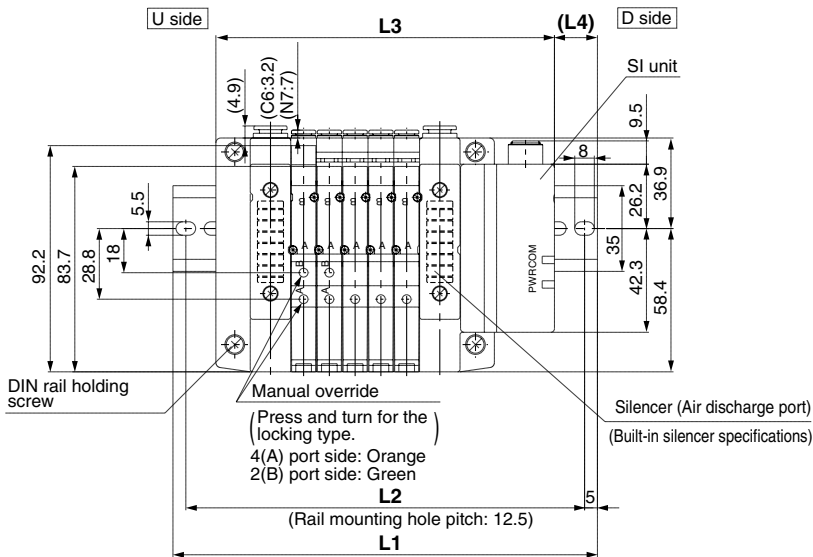
**SV**

**SZ**

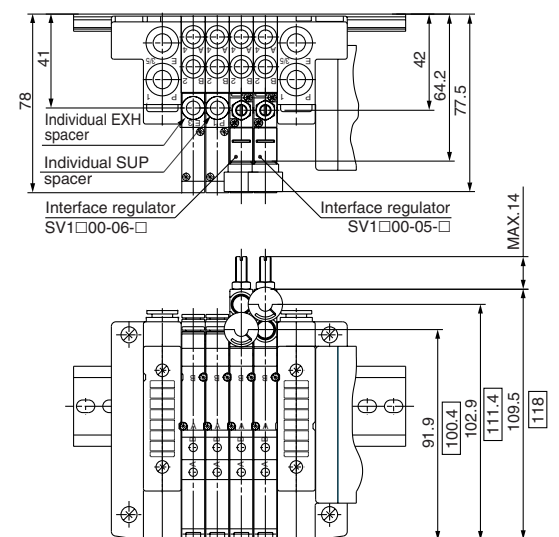
**SY**

**SYJ**

**SX**



**With option**



□ Dimensions are the ones for SV1300-□□-□.

**L Dimension**

n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L1	135.5	148	160.5	173	173	185.5	198	210.5	223	235.5	235.5	248	260.5	273	285.5
L2	125	137.5	150	162.5	162.5	175	187.5	200	212.5	225	225	237.5	250	262.5	275
L3	106.5	117	127.5	138	148.5	159	169.5	180	190.5	201	211.5	222	232.5	243	253.5
L4	14.5	15.5	16.5	17.5	12.5	13.5	14.5	15.5	16.5	17.5	12	13	14	15	16

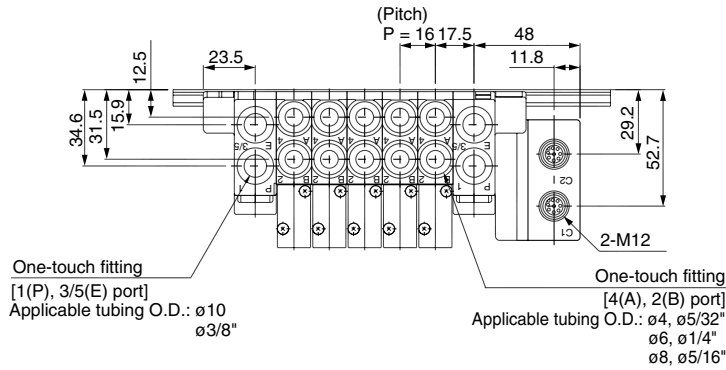
n: Stations

# Series SV

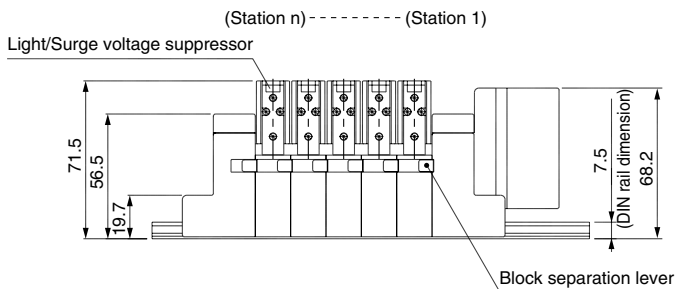
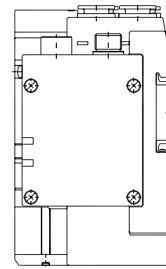
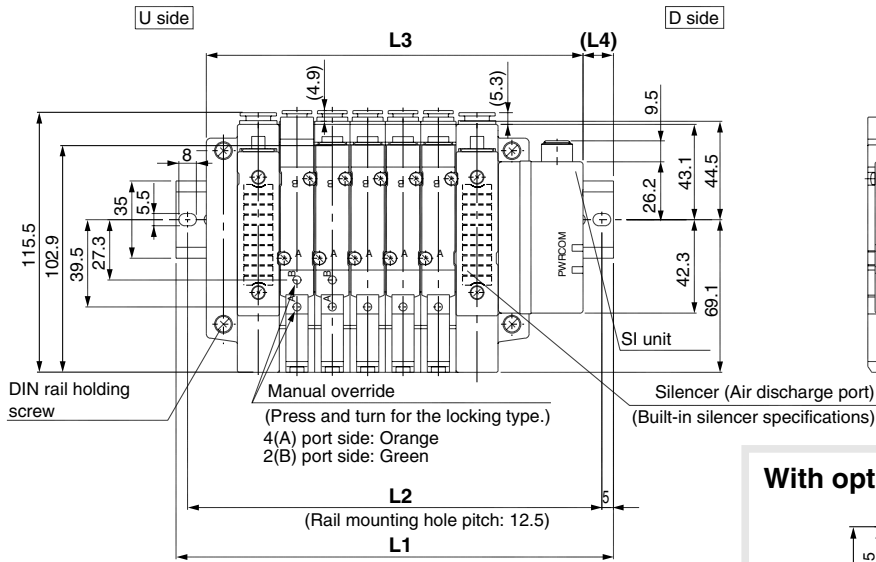
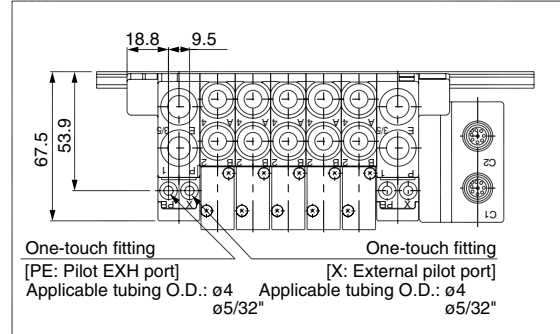
## Dimensions: Series SV2000 for EX500 Decentralized Serial Wiring

● **Cassette base manifold: SS5V2-W16SA□WD- Stations**  $\begin{matrix} U \\ D \\ B \end{matrix}$  (S, R, RS) -  $\begin{matrix} C4, N3 \\ C6, N7 \\ C8, N9 \end{matrix}$

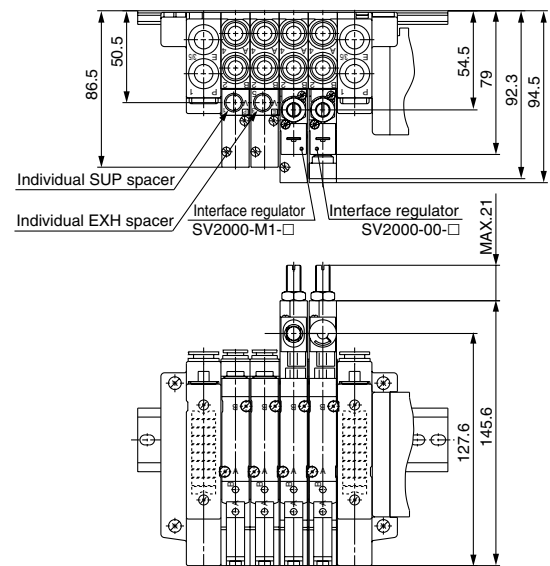
- When P, E port outlets are indicated on the U side or D side, the P, E ports on the opposite side are plugged.
- External pilot port positions and silencer discharge port positions are the same as P, E port outlet positions.



### With External Pilot Specifications



### With option



### L Dimension

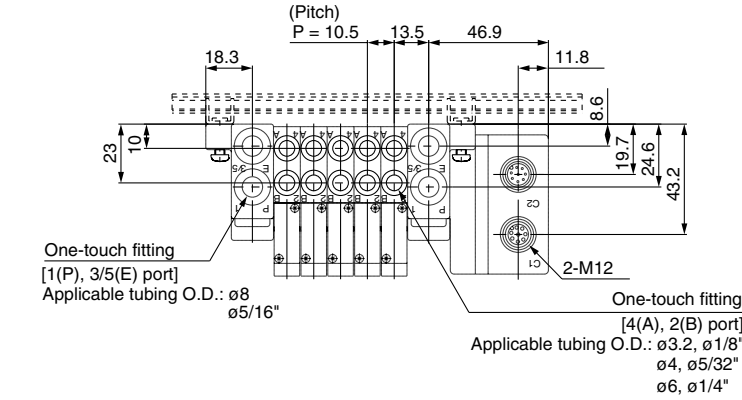
n: Stations

L \ n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L1	148	173	185.5	198	210.5	235.5	248	260.5	285.5	298	310.5	323	348	360.5	373
L2	137.5	162.5	175	187.5	200	225	237.5	250	275	287.5	300	312.5	337.5	350	362.5
L3	122.5	138.5	154.5	170.5	186.5	202.5	218.5	234.5	250.5	266.5	282.5	298.5	314.5	330.5	346.5
L4	13	17.5	15.5	14	12	16.5	15	13	17.5	16	14	12.5	17	15	13.5

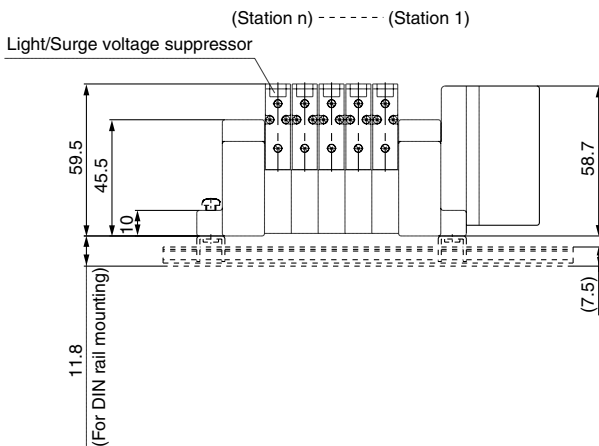
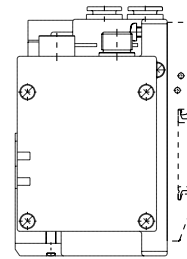
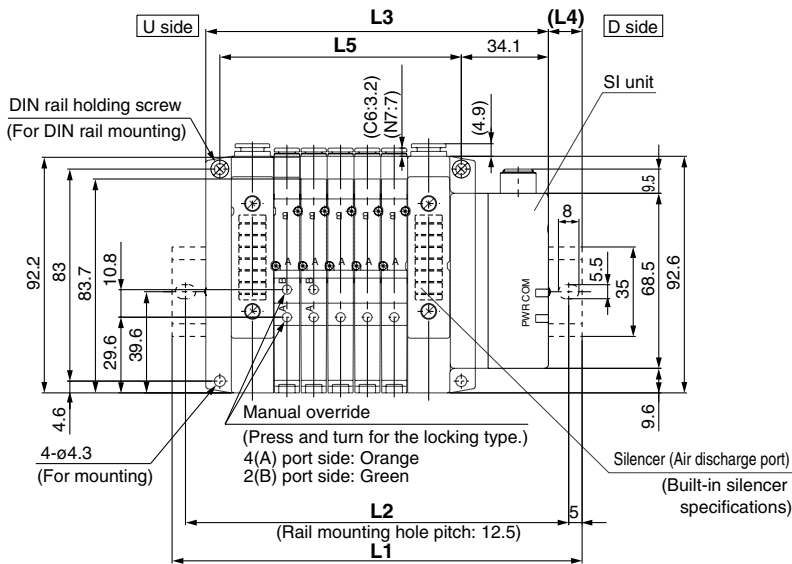
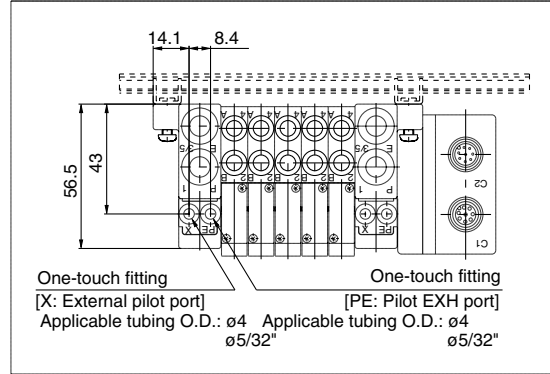
**Dimensions: Series SV1000 for EX500 Decentralized Serial Wiring**

● Tie-rod base manifold: SS5V1-W10SA□WD- Stations  $\frac{U}{D}$  (S, R, RS)-C4, N3(-D)  
C3, N1  
C6, N7

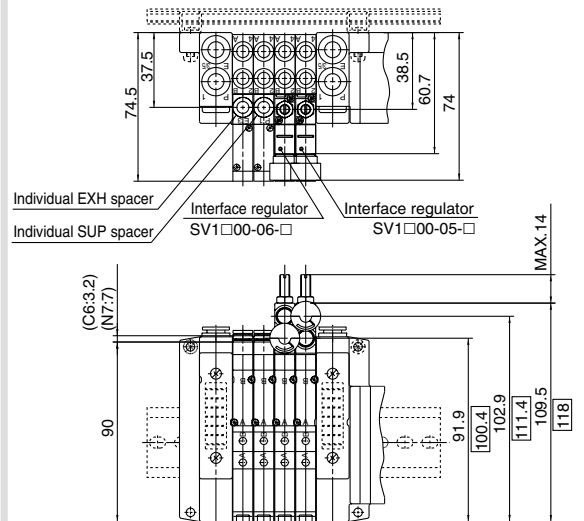
- When P, E port outlets are indicated on the U side or D side, the P, E ports on the opposite side are plugged.
- External pilot port positions and silencer discharge port positions are the same as P, E port outlet positions.



**With External Pilot Specifications**



**With option**



Dimensions are the ones for SV1300-□□-□.

**L Dimension**

n: Stations

L \ n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L1	135.5	148	148	160.5	173	185.5	198	210.5	210.5	223	235.5	248	260.5	273	273
L2	125	137.5	137.5	150	162.5	175	187.5	200	200	212.5	225	237.5	250	262.5	262.5
L3	102.6	113.1	123.6	134.1	144.6	155.1	165.6	176.1	186.6	197.1	207.6	218.1	228.6	239.1	249.6
L4	16.5	17.5	12	13	14	15	16	17	12	13	14	15	16	17	11.5
L5	63	73.5	84	94.5	105	115.5	126	136.5	147	157.5	168	178.5	189	199.5	210

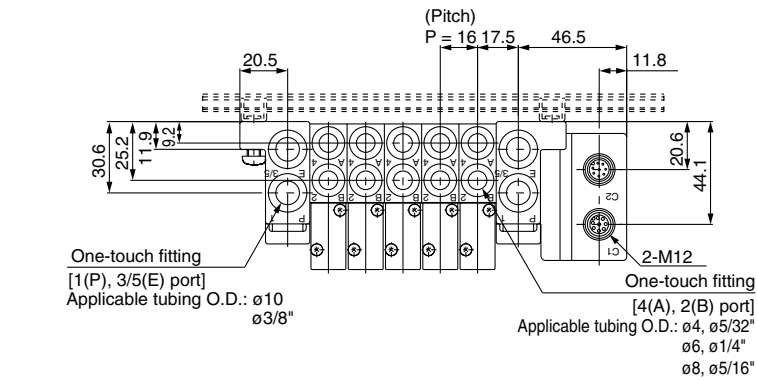
SV  
SZ  
SY  
SYJ  
SX

# Series SV

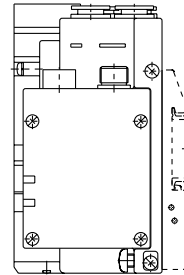
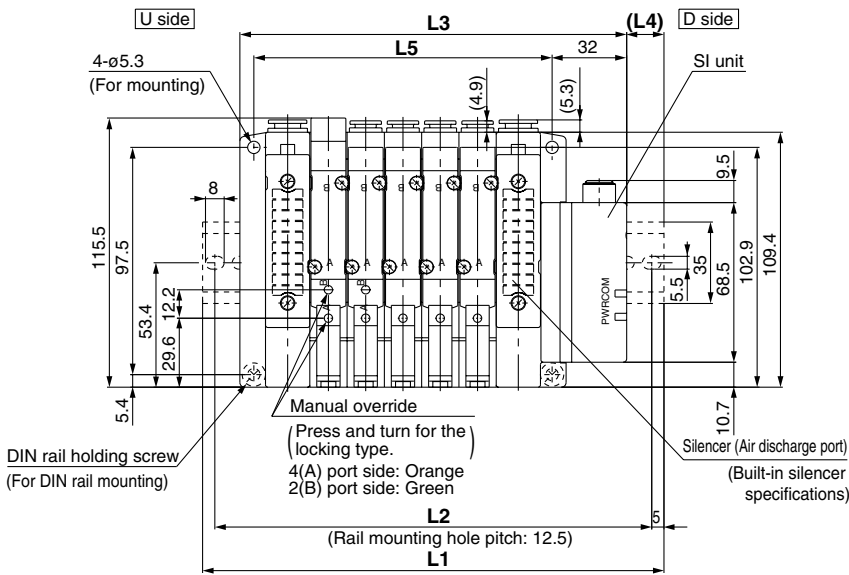
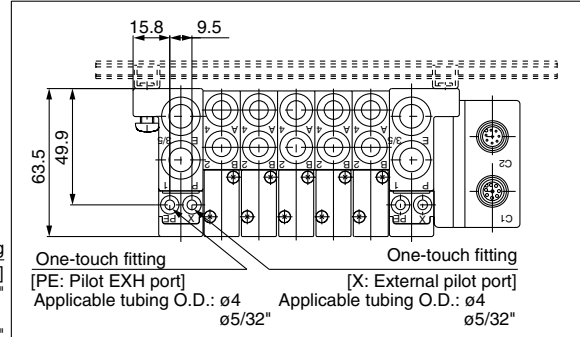
## Dimensions: Series SV2000 for EX500 Decentralized Serial Wiring

● Tie-rod base manifold: SS5V2-W10SA□WD- Stations  $\begin{matrix} U \\ D \end{matrix}$  (S, R, RS)-  $\begin{matrix} C4, N3 \\ C6, N7 \\ C8, N9 \end{matrix}$  (-D)

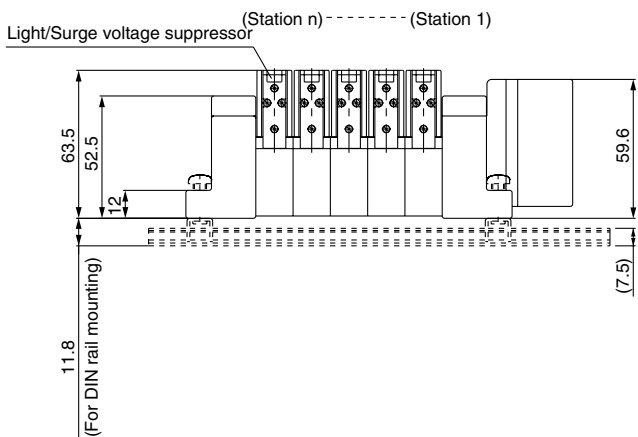
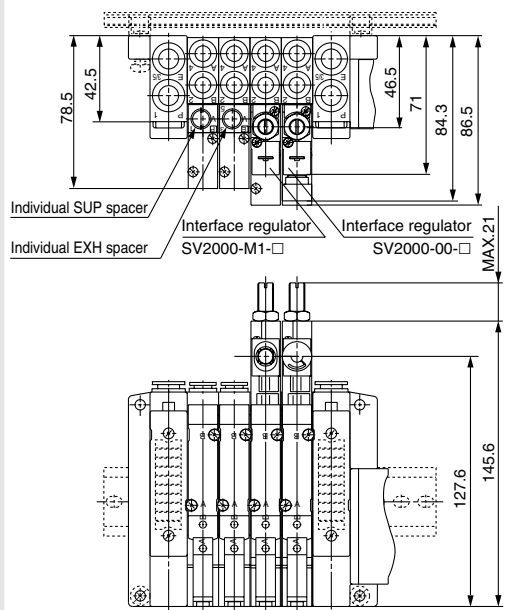
- When P, E port outlets are indicated on the U side or D side, the P, E ports on the opposite side are plugged.
- External pilot port positions and silencer discharge port positions are the same as P, E port outlet positions.



### With External Pilot Specifications



### With option



### L Dimension

L \ n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L1	148	160.5	185.5	198	210.5	223	248	260.5	273	285.5	310.5	323	335.5	360.5	373
L2	137.5	150	175	187.5	200	212.5	237.5	250	262.5	275	300	312.5	325	350	362.5
L3	118	134	150	166	182	198	214	230	246	262	278	294	310	326	342
L4	15	13.5	18	16	14.5	12.5	17	15.5	13.5	12	16.5	14.5	13	17.5	15.5
L5	80	96	112	128	144	160	176	192	208	224	240	256	272	288	304

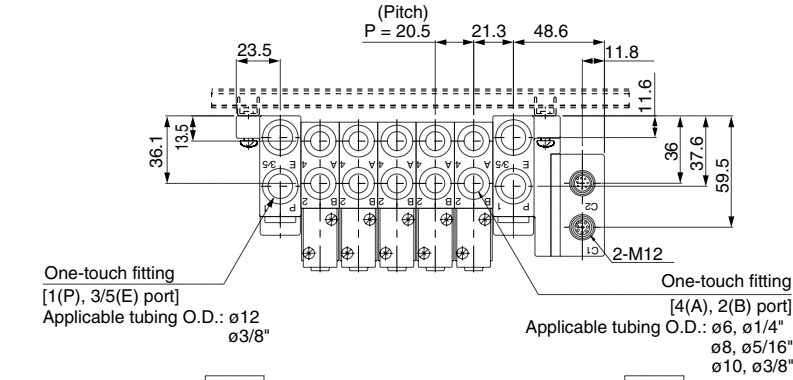
n: Stations



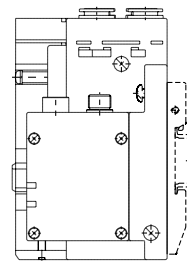
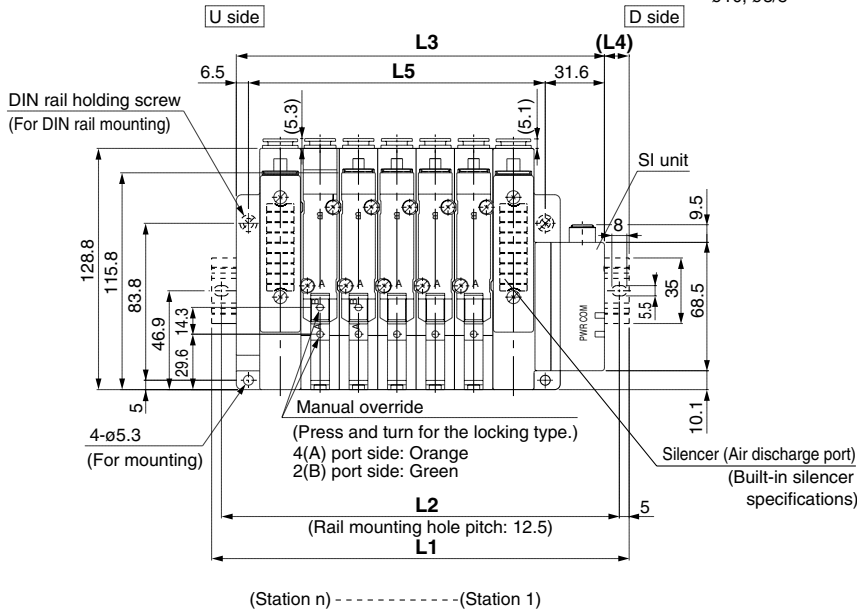
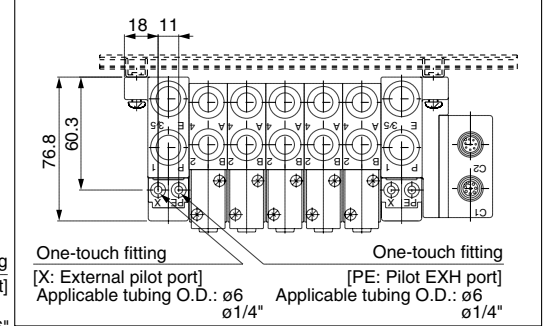
**Dimensions: Series SV3000 for EX500 Decentralized Serial Wiring**

● Tie-rod base manifold: SS5V3-W10SA□WD-**Stations**  $\frac{U}{D}$  (S, R, RS)- $\frac{C6, N7}{C8, N9}$  (-D)  $\frac{C10, N11}{C10, N11}$

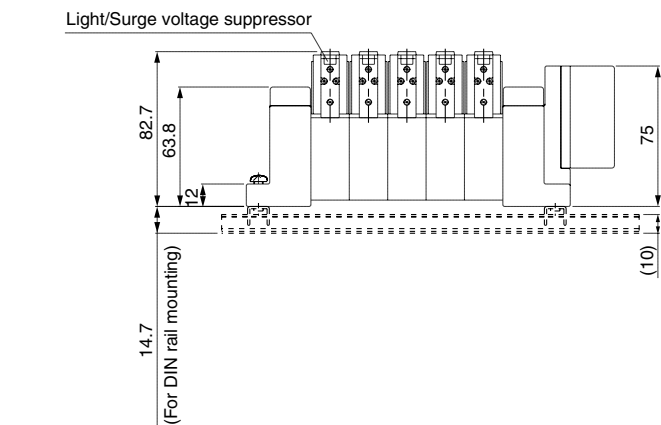
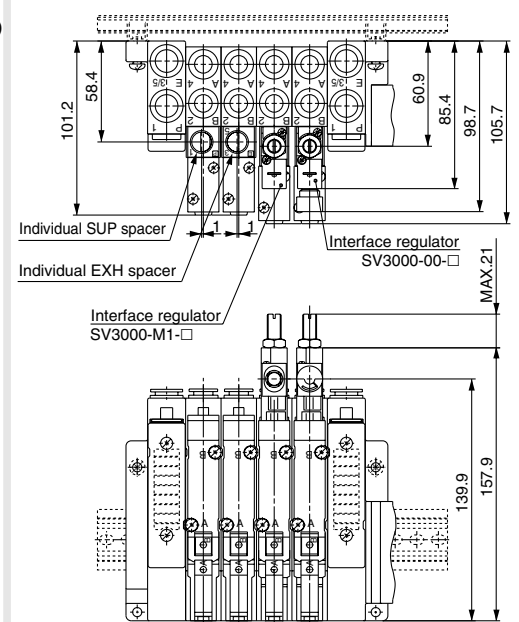
- When P, E port outlets are indicated on the U side or D side, the P, E ports on the opposite side are plugged.
- External pilot port positions and silencer discharge port positions are the same as P, E port outlet positions.



**With External Pilot Specifications**



**With option**



**L Dimension**

n: Stations

$\frac{L}{n}$	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L1	160.5	185.5	210.5	223	248	273	285.5	310.5	323	348	373	385.5	410.5	435.5	448
L2	150	175	200	212.5	237.5	262.5	275	300	312.5	337.5	362.5	375	400	425	437.5
L3	135.1	155.6	176.1	196.6	217.1	237.6	258.1	278.6	299.1	319.6	340.1	360.6	381.1	401.6	422.1
L4	12.5	15	17	13	15.5	17.5	13.5	16	12	14	16.5	12.5	14.5	17	13
L5	97	117.5	138	158.5	179	199.5	220	240.5	261	281.5	302	322.5	343	363.5	384

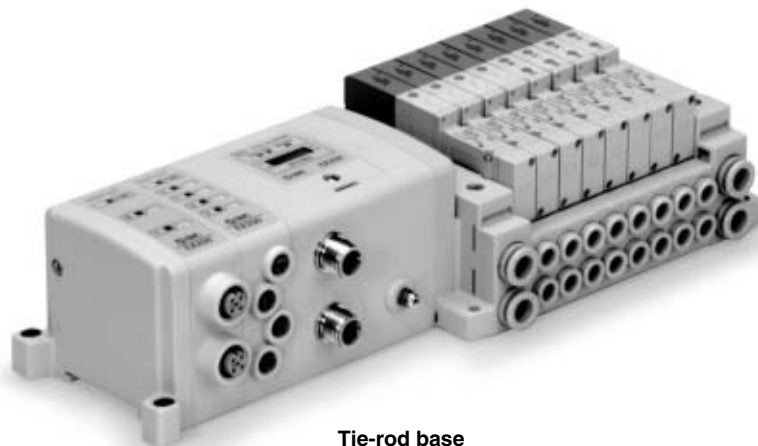
SV  
SZ  
SY  
SYJ  
SX



# Serial Wiring with Input/Output Unit

## Series *EX250*

IP67 compliant



Tie-rod base

Applicable series	Tie-rod base manifold SV1000/SV2000/SV3000
	• Number of inputs/outputs: 32 each

SV

SZ

SY

SYJ

SX

# Series EX250

## Serial Wiring with Input/Output Unit

# Series SV

### How to Order

#### ● Tie-rod base

**SS5V 1** — **W10S1** **QW** [ ] [ ] [ ] **D** — **05** **U** [ ] [ ] [ ]

**Series**

1	SV1000
2	SV2000
3	SV3000

**Enclosure**  
IP67 specifications

**SI unit**

<b>QW</b>	For DeviceNet
<b>0</b>	Without SI unit

- Input blocks cannot be mounted without SI unit.
- When the DIN rail is included without an SI unit, the DIN rail length will accommodate an SI unit and one input block.

**Input block stations**

Nil	None
1	1 station
⋮	⋮
8	8 stations

Note) Without SI unit, the symbol is nil.

**Input block type**

Nil	Without input block
1	M12: 2 inputs
2	M12: 4 inputs
3	M8: 4 inputs (3 pins)

Note) Without SI unit, the symbol is nil.

**Input block common specifications**

Nil	+COM
N	-COM

#### ● Valve stations

Symbol	Stations	Note
02	2 stations	Double wiring specifications (1)
⋮	⋮	
16	16 stations	
02	2 stations	Specified layout (2) (up to 32 solenoids possible.)
⋮	⋮	
20	20 stations	

Note 1) Double wiring specifications: Single, double, 3 position and 4 position solenoid valves can be used on all manifold stations. Use of a single solenoid will result in an unused control signal. If this is not desired, order with a specified layout.

Note 2) Specified layout: Indicate wiring specifications on the manifold specification sheet. (Note that double and 3 position valves cannot be used where single solenoid wiring has been specified.)

#### ● P, E port location

U	U side (2 to 10 stations)
D	D side (2 to 10 stations)
B	Both sides (2 to 20 stations)

#### ● SUP/EXH block assembly specifications

Nil	Internal pilot
S*	Internal pilot/Built-in silencer
R	External pilot
RS*	External pilot/Built-in silencer

Note) When the built-in silencer type is used, keep the exhaust port from coming in direct contact with water or other liquids.

#### ● Mounting

Nil	Direct mounting
D	DIN rail mounting (With DIN rail)
D0*	DIN rail mounting (Without DIN rail)
D3	For 3 stations
⋮	⋮
D20	For 20 stations

\* In the case of D0, only DIN rail fittings are attached.

#### ● A, B port size (metric)

Symbol	A, B port	P, E port	Applicable series
C3	One-touch fitting for ø3.2	One-touch fitting for ø8	SV1000
C4	One-touch fitting for ø4		
C6	One-touch fitting for ø6		
C4	One-touch fitting for ø4	One-touch fitting for ø10	SV2000
C6	One-touch fitting for ø6		
C8	One-touch fitting for ø8		
C6	One-touch fitting for ø6	One-touch fitting for ø12	SV3000
C8	One-touch fitting for ø8		
C10	One-touch fitting for ø10		
M	A, B ports mixed		

#### ● A, B port size (inch)

Symbol	A, B port	P, E port	Applicable series
N1	One-touch fitting for ø1/8"	One-touch fitting for ø5/16"	SV1000
N3	One-touch fitting for ø5/32"		
N7	One-touch fitting for ø1/4"		
N3	One-touch fitting for ø5/32"	One-touch fitting for ø3/8"	SV2000
N7	One-touch fitting for ø1/4"		
N9	One-touch fitting for ø5/16"		
N7	One-touch fitting for ø1/4"	One-touch fitting for ø3/8"	SV3000
N9	One-touch fitting for ø5/16"		
N11	One-touch fitting for ø3/8"		
M	A, B ports mixed		

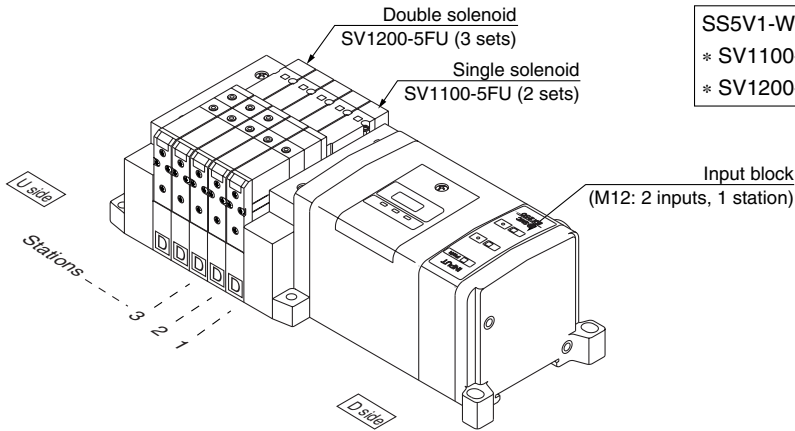
\* In the case of mixed specifications (M), indicate separately on the manifold specification sheet.

\* Port sizes of X, PE port for external pilot specifications (R, RS) are ø4 (metric), ø5/32" (inch) for SV1000/2000 and ø6 (metric) and ø1/4" (inch) for SV3000/4000.

## How to Order Valve Manifold Assembly

### Ordering example (SV1000)

Manifold  
SS5V1-W10S1QW11ND-05B-C6 (1 set)



SS5V1-W10S1QW11ND-05B-C6....1 set (manifold part no.)  
 \* SV1100-5FU.....2 sets (Single solenoid part no.)  
 \* SV1200-5FU.....3 sets (Double solenoid part no.)

- SV
- SZ
- SY
- SYJ
- SX

## How to Order Solenoid Valves

SV 1 1 00 [ ] [ ] - 5 F [ ] [ ] - [ ]

**Series**

1	SV1000
2	SV2000
3	SV3000

**Type of actuation**

1	2 position single solenoid
2	2 position double solenoid
3	3 position closed center
4	3 position exhaust center
5	3 position pressure center
A	4 position dual 3 port valve: N.C./N.C.
B	4 position dual 3 port valve: N.O./N.O.
C	4 position dual 3 port valve: N.C./N.O.

\* 4 position dual 3 port valves are applicable to Series SV1000 and SV2000 only.

**Pilot type**

Nil	Internal pilot
R	External pilot

\* External pilot specifications is not available for 4 position dual 3 port valves.

**Back pressure check valve**

Nil	None
K	Built-in

\* Built-in back pressure check valve type is applicable to series SV1000 only.  
 \* Back pressure check valve is not available for 3 position closed center and 3 position pressure center.

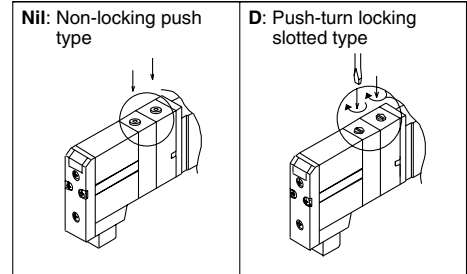


Refer to Precautions 2 on page 1-2-9.



Note) Available with manifold block for station additions. Refer to page 1-2-93.

**Manual override**



**Light/Surge voltage suppressor**

U	With light/surge voltage suppressor
R	With surge voltage suppressor

**Rated voltage**

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

### Applicable network: DeviceNet

The serial transmission system reduces wiring work, while minimizing wiring and saving space.

### DeviceNet compatible SI unit

As a DeviceNet slave unit, it is capable of solenoid valve ON/OFF control up to a maximum of 32 points. In addition, by connecting an input block a maximum of 32 sensor signal inputs are possible.

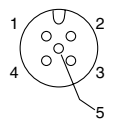
### Input block

This is an expansion block which connects to an SI unit to perform sensor input from auto switches, etc. Two or four sensor inputs can be accommodated by one input block, and the common can be matched to the sensor by an NPN/PNP switch.<sup>Note)</sup> Input connectors are available in both M8 and M12 types.

Note) COM is set at the shipment. Please contact SMC for alteration after shipment.

### Details in connector

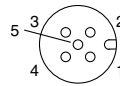
Input connector: M12 5 pins (socket)  
Cable side connector example:  
OMRON Corporation: XS2G 2 input block (EX250-IE1)



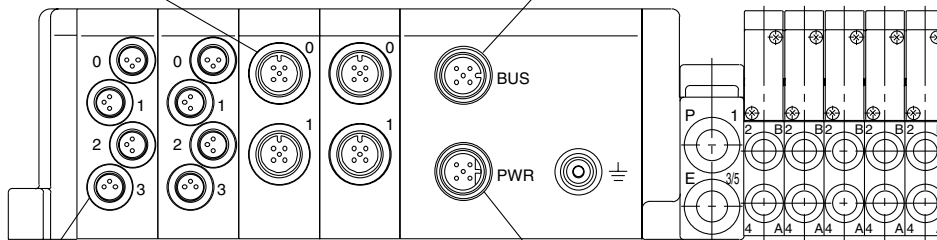
No.	Description	Function
1	SW+	Sensor power supply +
2	N.C (SIGNAL)	Open*
3	SW-	Sensor power supply -
4	SIGNAL	Sensor input signal
5	E	Sensor ground

\* In the case of a 4 input block (EX250-IE2), this is the sensor input signal.

Communication connector: M12 ... 5 pins (socket)  
Example of corresponding cable assemblies with connector:  
OMRON Corporation: DCA1-5CN05F1  
Karl Lumberg GmbH & Co. KG: RKT5-56



No.	Description	Function
1	Drain	Drain/Shield
2	V+	Circuit power supply +
3	V-	Circuit power supply -
4	CAN_H	Signal H
5	CAN_L	Signal L

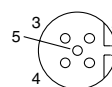


Input connector: M8 3 pins (socket)  
Cable side connector example:  
Franz Binder GmbH: 718, 768 series



No.	Description	Function
1	24V	Sensor power supply +
3	0V	Sensor power supply -
4	IN	Sensor input signal

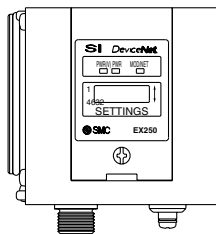
Power connector: M12 ... 5 pins (plug) (boss configuration differs from communication connector)  
Example of corresponding cable assemblies with connector:  
Hans Turck FmbH & Co. KG: WAKW4. 5T-2



No.	Description	Function
1	SV24V	For solenoid valve +24 V
2	SV0V	For solenoid valve 0 V
3	SW24V	For input block +24 V
4	SW0V	For input block 0 V
5	E	Ground

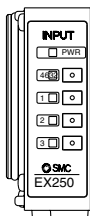
### Indicator unit (LED) descriptions and functions

#### SI unit



Description	Function
PWR(V)	ON when solenoid valve power supply is turned ON
PWR	ON when DeviceNet circuit power supply input is turned ON
MOD/NET	OFF: Power supply off, on line, or when checking duplication of MAC_ID
	Green blinking: Waiting for connection (On line)
	Green ON: Connection established (On line)
	Red blinking: Connection time out (Minor communication abnormality occurs)
	Red ON: MAC_ID duplication error, or BUSOFF error (Major communication abnormality occurs)

#### Input block



Description	Function
PWR	ON when sensor power is turned ON
0 to 3	ON when each sensor input goes ON

#### Weight

Description	weight (g)
SI unit	225
Input block	85
End plate assembly	30

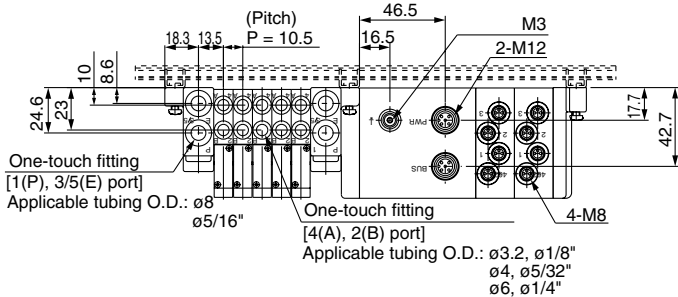
\* For parts composition, refer to page 1-2-90.

**Dimensions: Series SV1000 for EX250 Serial Wiring with Input/Output Unit**

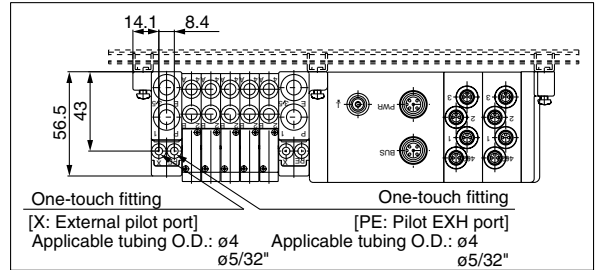
● Tie-rod base manifold: SS5V1-W10S1□□□□□D- Stations  $\frac{U}{D}$  (S, R, RS) - C3, N1  
C4, N3 (-D)  
C6, N7

- When P, E port outlets are indicated on the U side or D side, the P, E ports on the opposite side are plugged.
- External pilot port positions and silencer discharge port positions are the same as P, E port outlet positions.

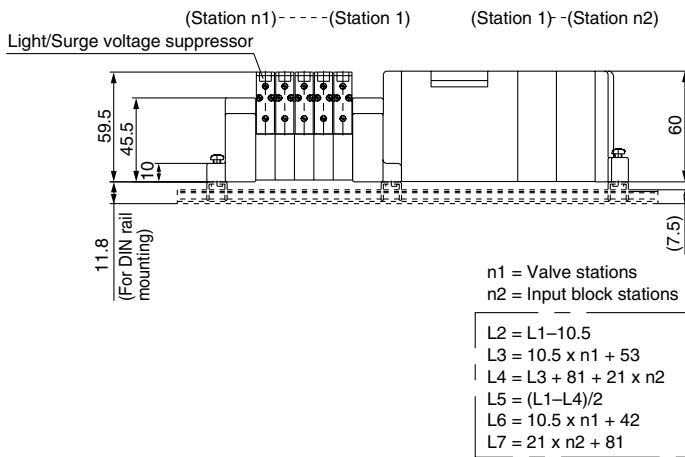
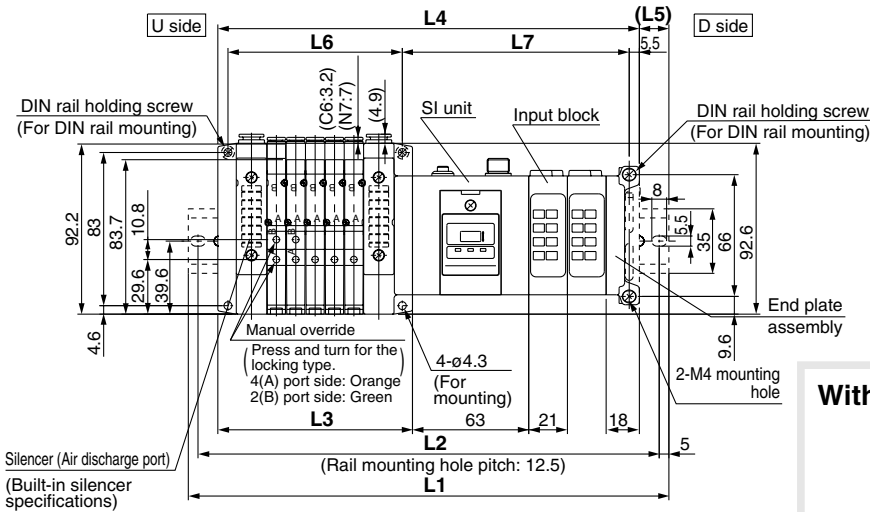
(With 2 input blocks)



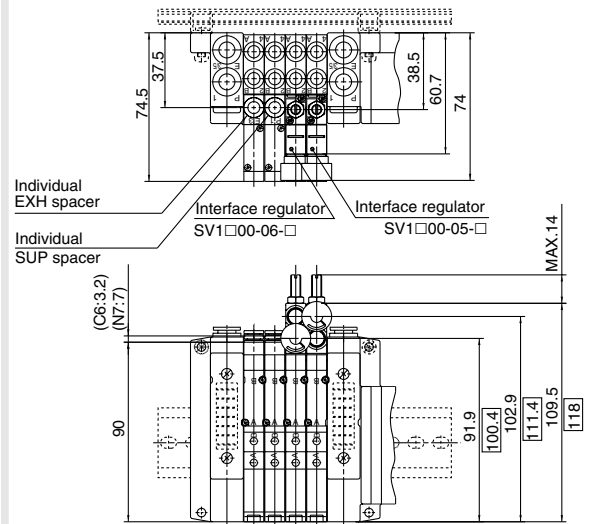
With External Pilot Specifications



SV  
SZ  
SY  
SYJ  
SX



With option



Dimensions are the ones for SV1300-□□-□.

**L1: DIN Rail Overall Length**

Valve stations Input block Stations (n2)	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0	185.5	198	210.5	210.5	223	235.5	248	260.5	273	273	285.5	298	310.5	323	335.5	348	348	360.5	373
1	210.5	210.5	223	235.5	248	260.5	273	273	285.5	298	310.5	323	335.5	348	348	360.5	373	385.5	398
2	223	235.5	248	260.5	273	273	285.5	298	310.5	323	335.5	348	348	360.5	373	385.5	398	410.5	410.5
3	248	260.5	273	273	285.5	298	310.5	323	335.5	348	348	360.5	373	385.5	398	410.5	410.5	423	435.5
4	273	273	285.5	298	310.5	323	335.5	348	348	360.5	373	385.5	398	410.5	410.5	423	435.5	448	460.5
5	285.5	298	310.5	323	335.5	348	348	360.5	373	385.5	398	410.5	410.5	423	435.5	448	460.5	473	473
6	310.5	323	335.5	348	348	360.5	373	385.5	398	410.5	410.5	423	435.5	448	460.5	473	473	485.5	498
7	335.5	348	348	360.5	373	385.5	398	410.5	410.5	423	435.5	448	460.5	473	473	485.5	498	510.5	523
8	348	360.5	373	385.5	398	410.5	410.5	423	435.5	448	460.5	473	473	485.5	498	510.5	523	535.5	535.5

(mm)

# Series SV

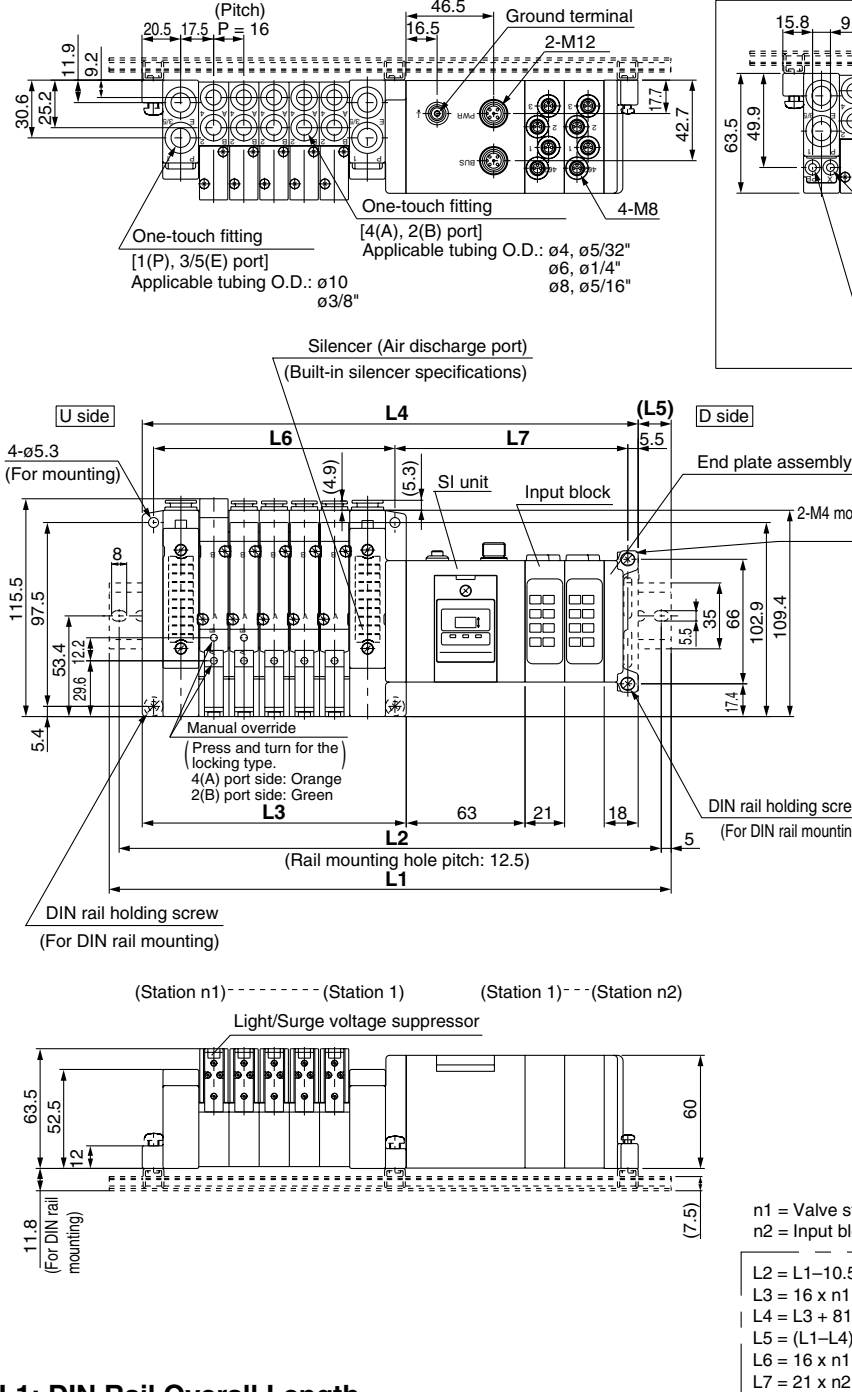
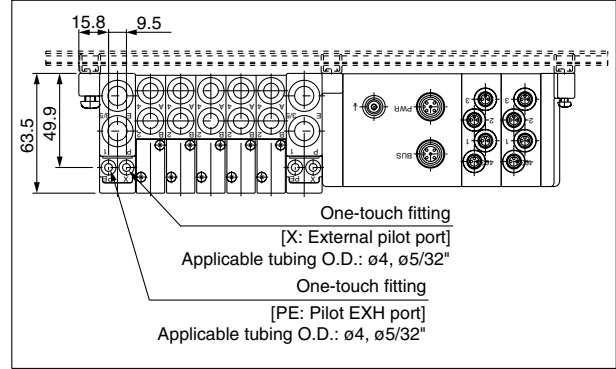
## Dimensions: Series SV2000 for EX250 Serial Wiring with Input/Output Unit

● Tie-rod base manifold: SS5V2-W10S1 □ □ □ □ D- Stations  $\frac{U}{D}$  (S, R, RS)-  $\frac{C4, N3}{C6, N7}$  (-D)  
 $\frac{C8, N9}$

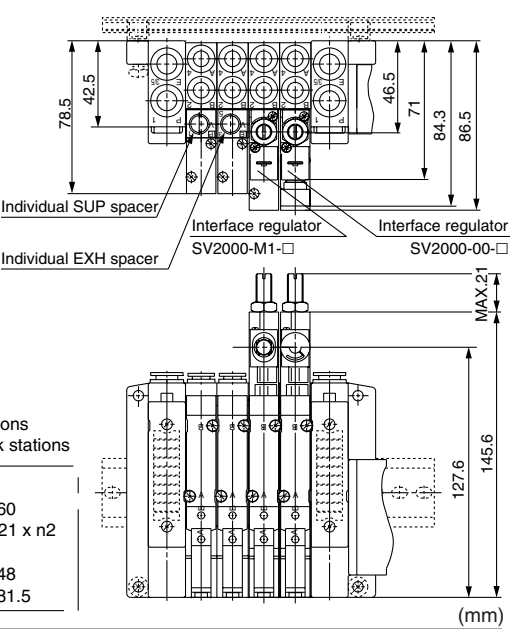
(With 2 input blocks)

- When P, E port outlets are indicated on the U side or D side, the P, E ports on the opposite side are plugged.
- External pilot port positions and silencer discharge port positions are the same as P, E port outlet positions.

### With External Pilot Specifications



### With option



- n1 = Valve stations
- n2 = Input block stations
- L2 = L1 - 10.5
- L3 = 16 x n1 + 60
- L4 = L3 + 81 + 21 x n2
- L5 = (L1 - L4) / 2
- L6 = 16 x n1 + 48
- L7 = 21 x n2 + 81.5

### L1: DIN Rail Overall Length

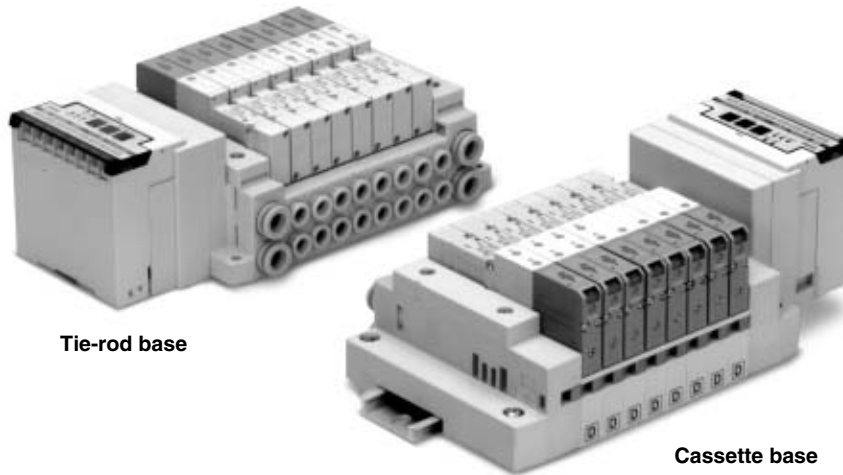
Valve stations (n1) Input block Stations (n2)	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0	198	223	235.5	248	260.5	285.5	298	310.5	335.5	348	360.5	373	398	410.5	423	448	460.5	473	485.5
1	223	235.5	260.5	273	285.5	298	323	335.5	348	373	385.5	398	410.5	435.5	448	460.5	485.5	498	510.5
2	248	260.5	273	298	310.5	323	335.5	360.5	373	385.5	410.5	423	435.5	448	473	485.5	498	510.5	535.5
3	260.5	285.5	298	310.5	335.5	348	360.5	373	398	410.5	423	435.5	460.5	473	485.5	510.5	523	535.5	548
4	285.5	298	323	335.5	348	360.5	385.5	398	410.5	435.5	448	460.5	473	498	510.5	523	548	560.5	573
5	310.5	323	335.5	360.5	373	385.5	398	423	435.5	448	473	485.5	498	510.5	535.5	548	560.5	585.5	598
6	323	348	360.5	373	398	410.5	423	435.5	460.5	473	485.5	510.5	523	535.5	548	573	585.5	598	610.5
7	348	360.5	385.5	398	410.5	435.5	448	460.5	473	498	510.5	523	535.5	560.5	573	585.5	610.5	623	635.5
8	373	385.5	398	423	435.5	448	460.5	485.5	498	510.5	535.5	548	560.5	573	598	610.5	623	648	660.5





# Dedicated Output Serial Wiring

## Series *EX120*



Tie-rod base

Cassette base

Applicable series	Cassette base manifold SV1000/SV2000
	Tie-rod base manifold SV1000/SV2000/SV3000/SV4000
• Number of outputs points: 16 points	

SV

SZ

SY

SYJ

SX



# Series EX120 Dedicated Output Serial Wiring Series SV

## How to Order

**Series**

1	SV1000
2	SV2000
3	SV3000
4	SV4000

**Tie-rod base**

**Cassette base**

**Series**

1	SV1000
2	SV2000

**SI unit**

Symbol	Specifications
0	Without SI unit
A*	With general type SI unit (Series EX300)
B	Mitsubishi Electric Corp.: MELSECNET/MINI-S3 Data Link System
C	OMRON Corp.: SYSBUS Wire System
D	SHARP Corp.: Satellite I/O Link System
E	Matsushita Electric Works: MEWNET-F System
F1	NKE Corp.: Uni-wire System (16 output points)
G	Rockwell Automation: Allen Bradley Remote I/O (RIO) System
H	NKE Corp.: Uni-wire H System
J1	SUNX Corp.: S-LINK System (16 output points)
J2	SUNX Corp.: S-LINK System (8 output points)
K	Fuji Electric Co.: T-LINK Mini System
Q	DeviceNet, CompoBus/D (OMRON Corp.)
R1	OMRON Corp.: CompoBus/S System (16 output points)
R2	OMRON Corp.: CompoBus/S System (8 output points)
U	JEMANET (JPCN-1)
V	Mitsubishi Electric Corp.: CC-LINK System

\* For the general purpose type, a transmission unit is require on the CPU side.

**Mounting**

Nil	Direct mounting
D	DIN rail mounting (With DIN rail)
D0*	DIN rail mounting (Without DIN rail)
D3	For 3 stations
:	:
D16	For 16 stations

When a longer DIN rail is desired than the specified stations. (Specify a longer rail than the standard length.)

\* In the case of D0, only DIN rail fittings are attached.

**DIN rail length specified**

Nil	Standard length
3	For 3 stations
:	:
16	For 16 stations

(Specify a longer rail than the standard length.)

**Valve stations**

Symbol	Stations	Note
02	2 stations	Double wiring specifications (1)
:	:	
08	8 stations	
02	2 stations	Specified layout (2) (up to 16 solenoids possible.)
:	:	
16	16 stations	

• Since J2 and R2 type SI units have 8 outputs note that up to 8 solenoids can be accommodated.  
• This also includes the number of blanking plate assemblies.

Note 1) Double wiring specifications: Single, double, 3 position and 4 position solenoid valves can be used on all manifold stations. Use of a single solenoid will result in an unused control signal. If this is not desired, order with a specified layout.

Note 2) Specified layout: Indicate wiring specifications on the manifold specification sheet. (Note that double and 3 position valves cannot be used where single solenoid wiring has been specified.)

**P, E port location**

U	U side (2 to 10 stations)
D	D side (2 to 10 stations)
B	Both sides (2 to 16 stations)

**SUP/EXH block assembly specifications**

Nil	Internal pilot
S	Internal pilot/Built-in silencer
R	External pilot
RS	External pilot/Built-in silencer

### SI Unit Part No.

Symbol	Specifications	For SS5V□□□S3
A*	With general type SI unit (Series EX300)	EX320-S001
B	Mitsubishi Electric Corp.: MELSECNET/MINI-S3 Data Link System	EX120-SMB1
C	OMRON Corp.: SYSBUS Wire System	EX120-STA1
D	SHARP Corp.: Satellite I/O Link System	EX120-SSH1
E	Matsushita Electric Works: MEWNET-F System	EX120-SPA1
F1	NKE Corp.: Uni-wire System (16 output points)	EX120-SUW1
G	Rockwell Automation: Allen Bradley Remote I/O (RIO) System	EX120-SAB1

Symbol	Specifications	For SS5V□-□□S3
H	NKE Corp.: Uni-wire H System	EX120-SUH1
J1	SUNX Corp.: S-LINK System (16 output points)	EX120-SSL1
J2	SUNX Corp.: S-LINK System (8 output points)	EX120-SSL2
K	Fuji Electric Co.: T-LINK Mini System	EX120-SFU1
Q	DeviceNet, CompoBus/D (OMRON Corp.)	EX120-SDN1
R1	OMRON Corp.: CompoBus/S System (16 output points)	EX120-SCS1
R2	OMRON Corp.: CompoBus/S System (8 output points)	EX120-SCS2
U	JEMANET (JPCN-1)	EX120-SJN1
V	Mitsubishi Electric Corp.: CC-LINK System	EX120-SMJ1

\* For terminal LED descriptions for each SI unit and cable wiring, etc., refer to pages 1-2-46 to 1-2-48.

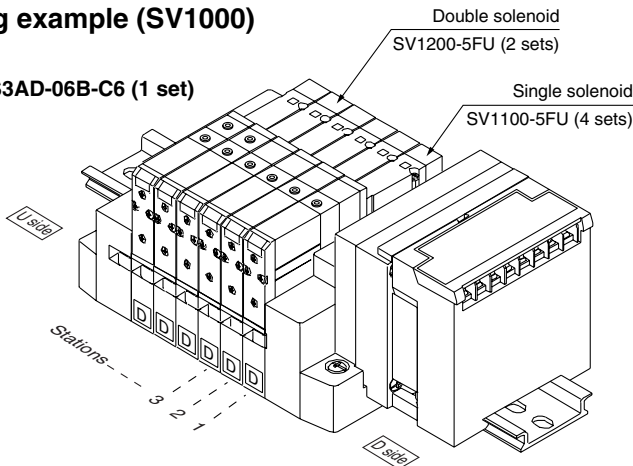


## How to Order Valve Manifold Assembly

### Ordering example (SV1000)

**Manifold**

SS5V1-16S3AD-06B-C6 (1 set)



SS5V1-16S3AD-06B-C6.....1 set (manifold part no.)  
 \*SV1100-5FU.....4 sets (Single solenoid part no.)  
 \*SV1200-5FU.....2 sets (Double solenoid part no.)

- SV
- SZ
- SY
- SYJ
- SX

## How to Order Solenoid Valves

SV 1 1 0 0 — 5 F

**Series**

1	SV1000
2	SV2000
3	SV3000
4	SV4000

**Type of actuation**

1	2 position single solenoid
2	2 position double solenoid
3	3 position closed center
4	3 position exhaust center
5	3 position pressure center
A	4 position dual 3 port valve: N.C./N.C.
B	4 position dual 3 port valve: N.O./N.O.
C	4 position dual 3 port valve: N.C./N.O.

\* 4 position dual 3 port valves are applicable to Series SV1000 and SV2000 only.

**Pilot type**

Nil	Internal pilot
R	External pilot

\* External pilot specifications is not available for 4 position dual 3 port valves.

**Back pressure check valve**

Nil	None
K	Built-in

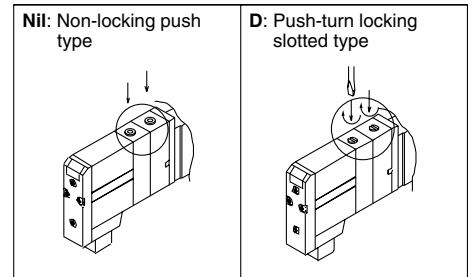
\* Built-in back pressure check valve type is applicable to Series SV1000 only.  
 \* Back pressure check valve is not available for 3 position closed center and 3 position pressure center.



Refer to Precautions 2 on page 1-2-9.

Note) Available with manifold block for station additions. Refer to pages 1-2-89 and 1-2-93.

**Manual override**



**Rated voltage**

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

**Light/Surge voltage suppressor**

U	With light/surge voltage suppressor
R	With surge voltage suppressor

**A, B port size (Metric)**

Symbol	A, B port	P, E port	Applicable series
C3	One-touch fitting for ø3.2	One-touch fitting for ø8	SV1000
C4	One-touch fitting for ø4		
C6	One-touch fitting for ø6		
C4	One-touch fitting for ø4	One-touch fitting for ø10	SV2000
C6	One-touch fitting for ø6		
C8	One-touch fitting for ø8		
C6	One-touch fitting for ø6	One-touch fitting for ø12	SV3000
C8	One-touch fitting for ø8		
C10	One-touch fitting for ø10		
C8	One-touch fitting for ø8	One-touch fitting for ø12	SV4000
C10	One-touch fitting for ø10		
C12	One-touch fitting for ø12		
02	Rc 1/4	Rc 3/8	SV4000
03	Rc 3/8		
02F	G 1/4		
03F	G 3/8	G 3/8	
M	A, B ports mixed		

**A, B port size (Inch)**

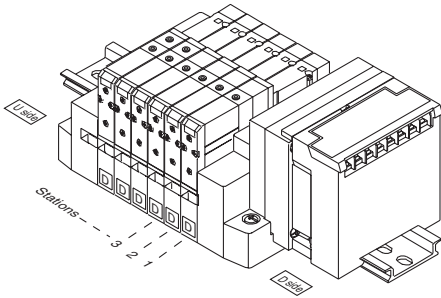
Symbol	A, B port	P, E port	Applicable series
N1	One-touch fitting for ø1/8"	One-touch fitting for ø5/16"	SV1000
N3	One-touch fitting for ø5/32"		
N7	One-touch fitting for ø1/4"		
N3	One-touch fitting for ø5/32"	One-touch fitting for ø3/8"	SV2000
N7	One-touch fitting for ø1/4"		
N9	One-touch fitting for ø5/16"		
N7	One-touch fitting for ø1/4"	One-touch fitting for ø3/8"	SV3000
N9	One-touch fitting for ø5/16"		
N11	One-touch fitting for ø3/8"		
N9	One-touch fitting for ø5/16"	One-touch fitting for ø3/8"	SV4000
N11	One-touch fitting for ø3/8"		
02N	NPT 1/4		
03N	NPT 3/8	NPT 3/8	
02T	NPTF 1/4	NPTF 3/8	
03T	NPTF 3/8		
M	A, B ports mixed		

\* In the case of mixed specifications (M), indicate separately on the manifold specification sheet.

\* Port sizes of X, PE port for external pilot specification (R, RS) are ø4 (metric), ø5/32" (inch) for SV1000/2000 and ø6 (metric) and ø1/4" (inch) for SV3000/4000.

# Series SV

- The serial transmission system reduces wiring work, while minimizing wiring and saving space.
- Maximum 16 stations (Specify a model with more than 9 stations by means of the manifold specification sheet.)

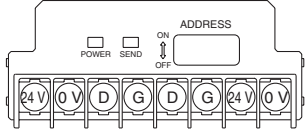
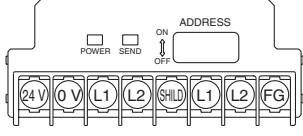
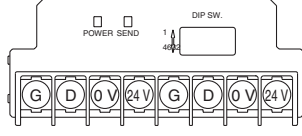
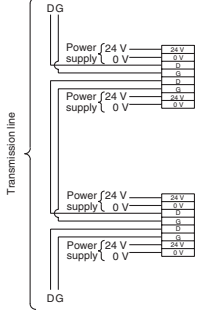
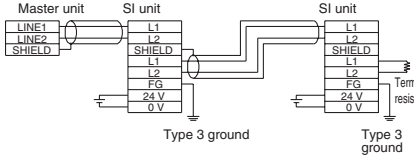
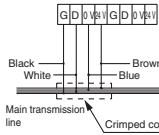
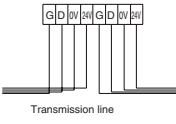


- Stations are counted from D side as the 1st.
- A maximum of 16 solenoids is possible (16 stations with single solenoids).

Item	Specifications
External power supply	24 VDC + 10%/- 5%
Current consumption (Internal unit)	0.1 A A, B, D, E, F1, G, J1, J2, K, R1, R2, H, U, V
	0.3 A C, Q

	Type A Series EX300	Type B Mitsubishi Electric Corporation MELSECNET/mini-S3 Data Link System																		
Name of terminal block, LED	<table border="1"> <thead> <tr> <th>LED</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>TRD</td> <td>ON during data reception</td> </tr> <tr> <td>RUN/ERR</td> <td>Blinks for normal data reception, ON for abnormal</td> </tr> </tbody> </table>	LED	Description	TRD	ON during data reception	RUN/ERR	Blinks for normal data reception, ON for abnormal	<table border="1"> <thead> <tr> <th>LED</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>POWER</td> <td>ON for power supply input</td> </tr> <tr> <td>RUN</td> <td>ON for normal data traffic with master unit</td> </tr> <tr> <td>RD</td> <td>ON during data reception</td> </tr> <tr> <td>SD</td> <td>ON during data transmission</td> </tr> <tr> <td>ERR</td> <td>ON for data reception error, OFF when normal</td> </tr> </tbody> </table>	LED	Description	POWER	ON for power supply input	RUN	ON for normal data traffic with master unit	RD	ON during data reception	SD	ON during data transmission	ERR	ON for data reception error, OFF when normal
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Note	<ul style="list-style-type: none"> <li>• Connection to T unit PLC manufacturer's I/O card enables serial transmission. EX300-TMB1..... for Mitsubishi Electric Corporation EX300-TTA1..... for OMRON Corporation EX300-TFU1..... for Fuji Electric Co., Ltd. EX300-T001..... General purpose</li> <li>* Each T unit has 32 control points.</li> <li>• No. of output points, 16 points</li> </ul>	<ul style="list-style-type: none"> <li>• MELSECNET/mini-S3 Data Link System Master unit : AJ71PT32-S3 AJ71T32-S3 A1SJ71PT32-S3</li> <li>• No. of output points, 16 points, No. of stations occupied, 2 stations</li> </ul>																		
Cable wiring	<p>* Ground either the reception side or the transmission side of the shielding wire shield.</p>	<p>SI manifold solenoid valve</p> <p>* Ground either the reception side or the transmission side of the shielding wire shield.</p>																		

	Type C OMRON Corporation SYSBUS Wire System	Type D SHARP Corporation Satellite I/O Link System	Type E Matsushita Electric Works, Ltd. MEWNET-F System																								
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Note	<ul style="list-style-type: none"> <li>• SYSBUS Wire System Master unit : Type C500-RM201 Type C200H-RM201</li> <li>• No. of output points, 16 points</li> </ul>	<ul style="list-style-type: none"> <li>• Satellite I/O Link System JW-23LM, JW-23LMH Master unit : ZW-31LM JW-31LM, JW-31LMH</li> <li>• No. of output points, 16 points</li> </ul>	<ul style="list-style-type: none"> <li>• MEWNET-F System Master unit : AFP3740, AFP3742 AFP5740, AFP5742</li> <li>• No. of output points, 16 points</li> </ul>																								
Cable wiring		<p>a) 2-wire type Wiring does not include signal ground line (SG).</p> <p>b) 3-wire type Wiring does not include signal ground line (SG).</p>																									

	Type F1 NKE Corporation Uni-wire System	Type G Rockwell Automation, Inc. Allen Bradley Remote I/O (RIO) System	Type J1, J2 SUNX Corporation S-LINK System																				
Name of terminal block, LED	 <table border="1" style="width: 100%; margin-top: 10px;"> <thead> <tr> <th>LED</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>POWER</td> <td>ON for power supply input (ON when normal, flickers when voltage drops)</td> </tr> <tr> <td>SEND</td> <td>Transmission indication: Blinks when normal, OFF or ON when abnormal</td> </tr> </tbody> </table>	LED	Description	POWER	ON for power supply input (ON when normal, flickers when voltage drops)	SEND	Transmission indication: Blinks when normal, OFF or ON when abnormal	 <table border="1" style="width: 100%; margin-top: 10px;"> <thead> <tr> <th>LED</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>POWER</td> <td>ON when power supply is ON</td> </tr> <tr> <td>COM</td> <td>ON when communication is normal Blinks when communication is initialized OFF for abnormal communication</td> </tr> <tr> <td>ERROR</td> <td>ON for abnormal communication</td> </tr> </tbody> </table>	LED	Description	POWER	ON when power supply is ON	COM	ON when communication is normal Blinks when communication is initialized OFF for abnormal communication	ERROR	ON for abnormal communication	 <table border="1" style="width: 100%; margin-top: 10px;"> <thead> <tr> <th>LED</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>POWER</td> <td>ON for power supply input</td> </tr> <tr> <td>SEND</td> <td>Transmission indication: Blinks when normal, Blinks slowly when abnormal</td> </tr> </tbody> </table>	LED	Description	POWER	ON for power supply input	SEND	Transmission indication: Blinks when normal, Blinks slowly when abnormal
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Note	<ul style="list-style-type: none"> <li>• Uni-wire System Send unit : SD-120</li> <li>• No. of output points, 16 points</li> </ul>	<ul style="list-style-type: none"> <li>• Remote I/O (RIO) System</li> <li>• No. of output points, 16 points</li> </ul>	<ul style="list-style-type: none"> <li>• S-LINK System S-LINK controller: SL-CU1A</li> <li>• No. of output points, 16 points (Type J1) No. of output points, 8 points (Type J2)</li> </ul>																				
Cable wiring			<div style="display: flex; justify-content: space-around;"> <div style="width: 45%;"> <p>a) Type T branching multi-drop wiring (S-LINK System)</p>  </div> <div style="width: 45%;"> <p>b) Crossover wiring (Sensor Link System)</p>  </div> </div> <p>The above is the example of using dedicated S-LINK flat ribbon cable SL-RCMI00.</p>																				

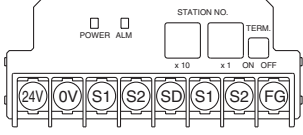
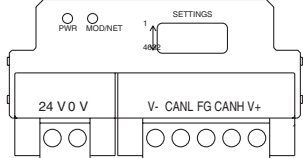
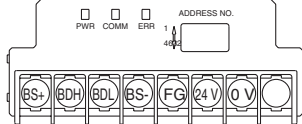
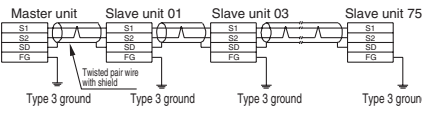
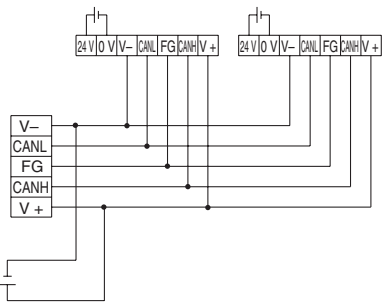
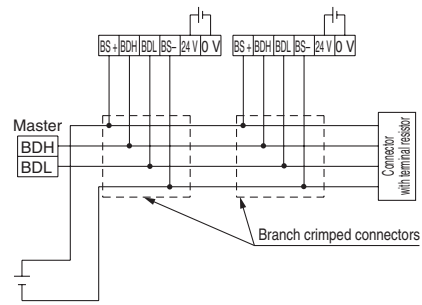
**SV**

**SZ**

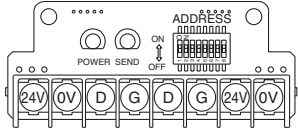
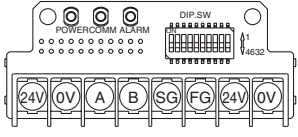
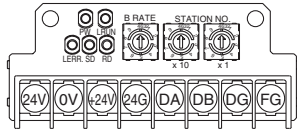
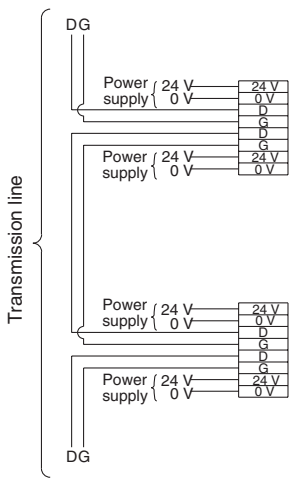
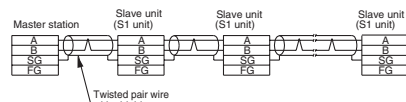
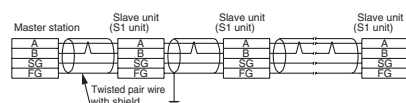
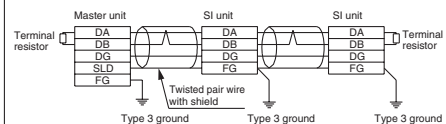
**SY**

**SYJ**

**SX**

	Type K Fuji Electric Co., Ltd. T-LINK Mini System	Type Q DeviceNet	Type R1, R2 OMRON Corporation CompoBus/S																							
Name of terminal block, LED	 <table border="1" style="width: 100%; margin-top: 10px;"> <thead> <tr> <th>LED</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>POWER</td> <td>ON for power supply input</td> </tr> <tr> <td>ALM</td> <td>ON for abnormal transmission or processor side power supply cut</td> </tr> </tbody> </table>	LED	Description	POWER	ON for power supply input	ALM	ON for abnormal transmission or processor side power supply cut	 <table border="1" style="width: 100%; margin-top: 10px;"> <thead> <tr> <th>LED</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>PWR</td> <td>Green light ON for DeviceNet circuit power input OFF When this unit is off line or circuit power is OFF</td> </tr> <tr> <td rowspan="4">MOD/NET</td> <td>Green blinks When waiting for connection (On line)</td> </tr> <tr> <td>Green ON When connection is established (On line)</td> </tr> <tr> <td>Red blinks When connection time out occurs (recoverable communication abnormality)</td> </tr> <tr> <td>Red ON For MAC ID duplication error, or BUSOFF error (major communication abnormality)</td> </tr> </tbody> </table>	LED	Description	PWR	Green light ON for DeviceNet circuit power input OFF When this unit is off line or circuit power is OFF	MOD/NET	Green blinks When waiting for connection (On line)	Green ON When connection is established (On line)	Red blinks When connection time out occurs (recoverable communication abnormality)	Red ON For MAC ID duplication error, or BUSOFF error (major communication abnormality)	 <table border="1" style="width: 100%; margin-top: 10px;"> <thead> <tr> <th>LED</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>PWR</td> <td>ON when communication power is supplied, OFF when power is OFF</td> </tr> <tr> <td>COMM</td> <td>ON for normal communication, OFF for abnormal communication or waiting</td> </tr> <tr> <td>ERR</td> <td>ON for abnormal communication, OFF for normal communication or waiting</td> </tr> </tbody> </table>	LED	Description	PWR	ON when communication power is supplied, OFF when power is OFF	COMM	ON for normal communication, OFF for abnormal communication or waiting	ERR	ON for abnormal communication, OFF for normal communication or waiting
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Note	<ul style="list-style-type: none"> <li>• T-LINK Mini System Master unit : FTM100B Converter : FRC100A-G02 Repeater : FRC200A-C10</li> <li>• No. of output points, 16 points</li> </ul>	<ul style="list-style-type: none"> <li>• DeviceNet</li> <li>• OMRON Corporation: CompoBus/D System Master unit : Type C200HW-DRM21-V1 Master unit : Type CS1W-DRM21</li> <li>• No. of output points, 16 points</li> </ul>	<ul style="list-style-type: none"> <li>• CompoBus/S System Master unit : Type C200HW-SRM21-V1 Master unit : Type CQM1-SRM21-V1 No. of output points, 16 points (Type SR1) • No. of output points, 8 points (Type SR2)</li> </ul>																							
Cable wiring	 <p>Connect the shielding wire to the SD terminal. If the shielding wire is not connected to the SD terminal, normal transmission will be impossible even for short distances. Furthermore, do not ground the shielding wire (SD).</p>																									

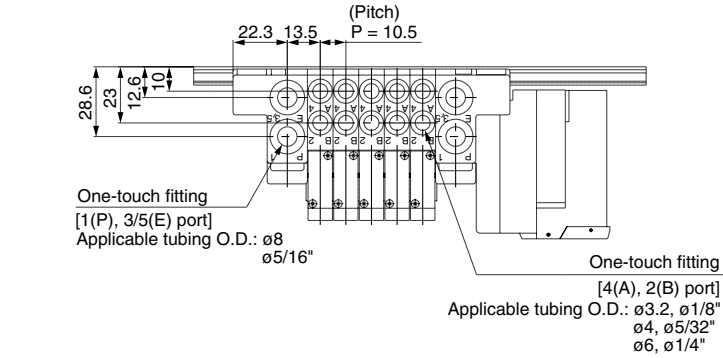
# Series SV

	Type H NKE Corporation Uni-wire H System	Type U JEMANET (JPCN-1)	Type V Mitsubishi Electric Corporation CC-LINK System																										
Name of terminal block, LED	 <table border="1"> <thead> <tr> <th>LED</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>POWER</td> <td>ON for power supply input (ON when normal, flickers when voltage drops)</td> </tr> <tr> <td>SEND</td> <td>Transmission indication: Blinks when normal, OFF or ON when abnormal</td> </tr> </tbody> </table>	LED	Description	POWER	ON for power supply input (ON when normal, flickers when voltage drops)	SEND	Transmission indication: Blinks when normal, OFF or ON when abnormal	 <table border="1"> <thead> <tr> <th>LED</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>POWER</td> <td>ON for SI unit power supply input</td> </tr> <tr> <td>COMM</td> <td>On for normal communication</td> </tr> <tr> <td>ALARM</td> <td>ON for abnormal communication</td> </tr> </tbody> </table>	LED	Description	POWER	ON for SI unit power supply input	COMM	On for normal communication	ALARM	ON for abnormal communication	 <table border="1"> <thead> <tr> <th>LED</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>PW</td> <td>ON when communication power is supplied, OFF when power is OFF</td> </tr> <tr> <td>L RUN</td> <td>ON when normal data is being received</td> </tr> <tr> <td>SD</td> <td>ON when data is transmitted</td> </tr> <tr> <td>RD</td> <td>ON when data is received</td> </tr> <tr> <td>L ERR.</td> <td>ON for transmission error/wrong setting, Blinks when station or transmission speed setting changes during operation</td> </tr> </tbody> </table>	LED	Description	PW	ON when communication power is supplied, OFF when power is OFF	L RUN	ON when normal data is being received	SD	ON when data is transmitted	RD	ON when data is received	L ERR.	ON for transmission error/wrong setting, Blinks when station or transmission speed setting changes during operation
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Note	<ul style="list-style-type: none"> <li>• Uni-wire H System Send unit: SD-H2</li> <li>• No. of output points, 16 points</li> </ul>	<ul style="list-style-type: none"> <li>• JEMANET (JPCN-1) (Reference) AJ71J92-S3 (Mitsubishi Electric Corporation) A1SJ71J92-S3 (Mitsubishi Electric Corporation) Type C200HW-JRM21 (OMRON Corporation) NJ-JPCN-1 (Fuji Electric Co., Ltd.) NP1L-JP1 (Fuji Electric Co., Ltd.) No. of output points, 16 points</li> </ul>	<ul style="list-style-type: none"> <li>• CC-Link System Master unit : AJ61BT11 Master unit : A1SJ61BT11 Master unit : AJ61QBT11 Master unit : A1SJ61QBT11</li> <li>• No. of output points, 16 points</li> </ul>																										
Cable wiring		<p>a) 2-wire type</p>  <p>b) 3-wire type</p> 																											

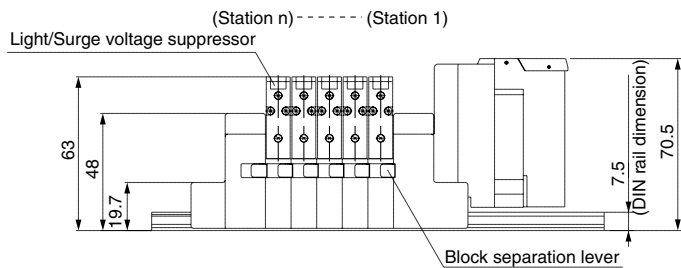
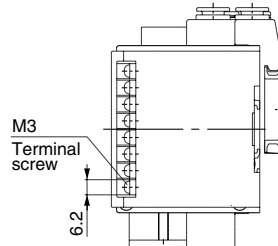
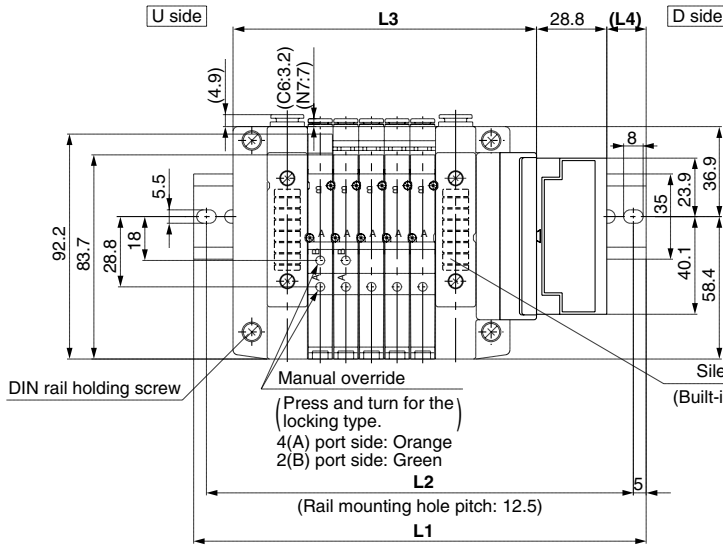
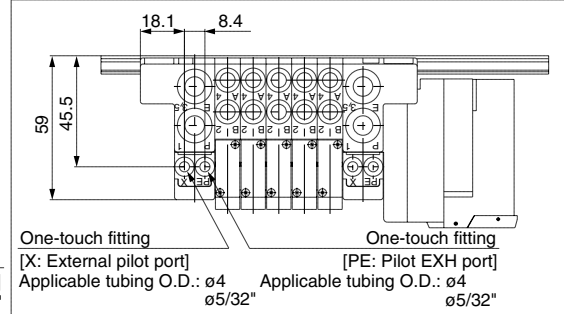
**Dimensions: Series SV1000 for EX120 Dedicated Output Serial Wiring**

- **Cassette base manifold: SS5V1-16S3□D- Stations**  $\begin{matrix} U \\ D \\ B \end{matrix}$ (S, R, RS)-  $\begin{matrix} C3, N1 \\ C4, N3 \\ C6, N7 \end{matrix}$

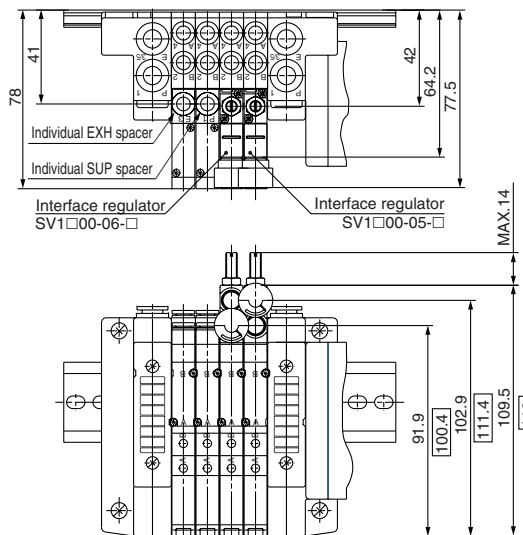
- When P, E port outlets are indicated on the U side or D side, the P, E ports on the opposite side are plugged.
- External pilot port positions and silencer discharge port positions are the same as P, E port outlet positions.



**With External Pilot Specifications**



**With option**



Dimensions are the ones for SV1300-□□-□.

**L Dimension**

n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L1	148	160.5	173	185.5	198	198	210.5	223	235.5	248	260.5	260.5	273	285.5	298
L2	137.5	150	162.5	175	187.5	187.5	200	212.5	225	237.5	250	250	262.5	275	287.5
L3	92.9	103.4	113.9	124.4	134.9	145.4	155.9	166.4	176.9	187.4	197.9	208.4	218.9	229.4	239.9
L4	13	14	15	16	17	12	13	14	15	16	17	11.5	12.5	13.5	14.5

Note) The width of type E (Matsushita Electric Works, Ltd.) and type G (Rockwell Automation, Inc.) SI units are  $\boxed{24.3 \text{ mm}}$  greater. For details, please contact SMC.

- SV
- SZ
- SY
- SYJ
- SX



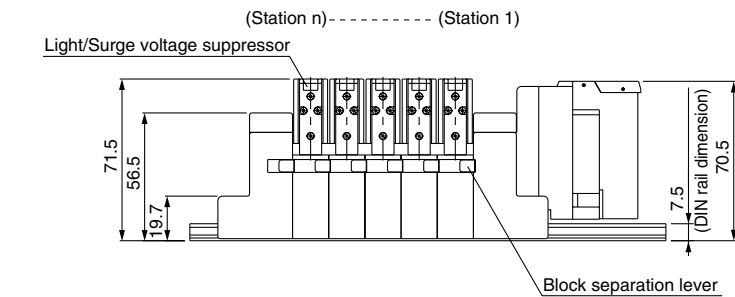
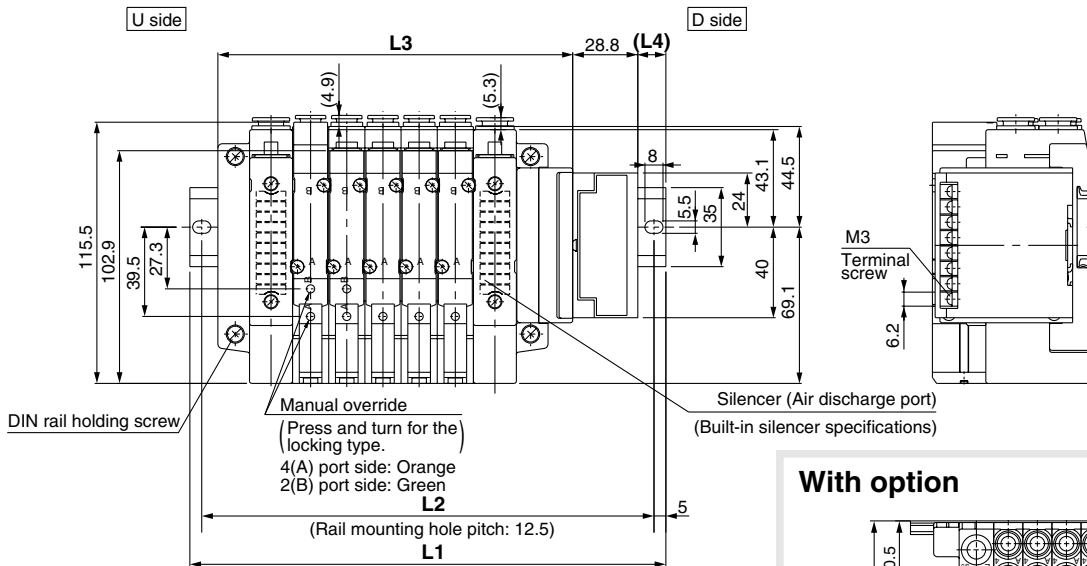
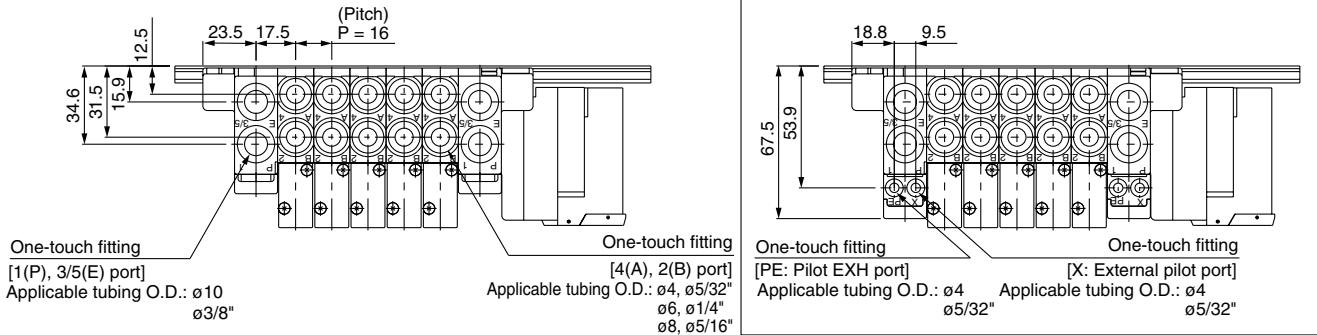
# Series SV

## Dimensions: Series SV2000 for EX120 Dedicated Output Serial Wiring

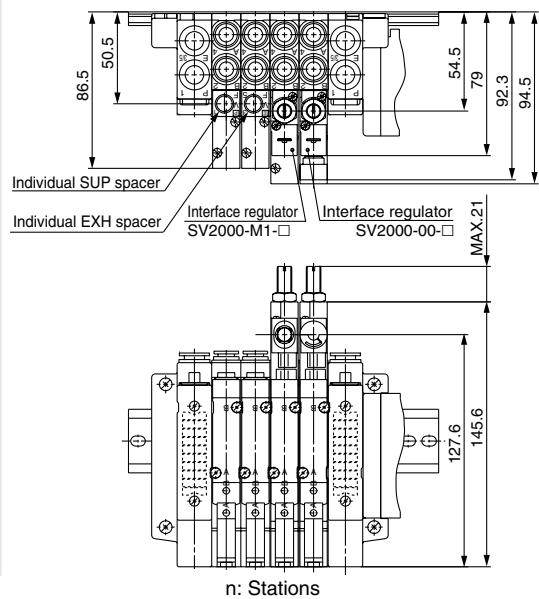
● **Cassette base manifold: SS5V2-16S3□D- Stations**  $\begin{matrix} U \\ D \end{matrix}$  (S, R, RS)  $\begin{matrix} C4, N3 \\ C6, N7 \\ C8, N9 \end{matrix}$

- When P, E port outlets are indicated on the U side or D side, the P, E ports on the opposite side are plugged.
- External pilot port positions and silencer discharge port positions are the same as P, E port outlet positions.

### With External Pilot Specifications



### With option



### L Dimension

n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L1	173	185.5	198	210.5	235.5	248	260.5	273	298	310.5	323	348	360.5	373	385.5
L2	162.5	175	187.5	200	225	237.5	250	262.5	287.5	300	312.5	337.5	350	362.5	375
L3	108.9	124.9	140.9	156.9	172.9	188.9	204.9	220.9	236.9	252.9	268.9	284.9	300.9	316.9	332.9
L4	17.5	16	14	12.5	17	15	13.5	11.5	16	14.5	12.5	17	15.5	13.5	12

● Note) The width of type E (Matsushita Electric Works, Ltd.) and type G (Rockwell Automation, Inc.) SI units are  $\boxed{24.3 \text{ mm}}$  greater. For details, please contact SMC.

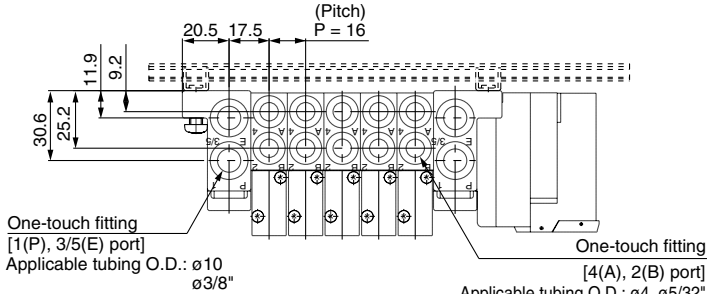


# Series SV

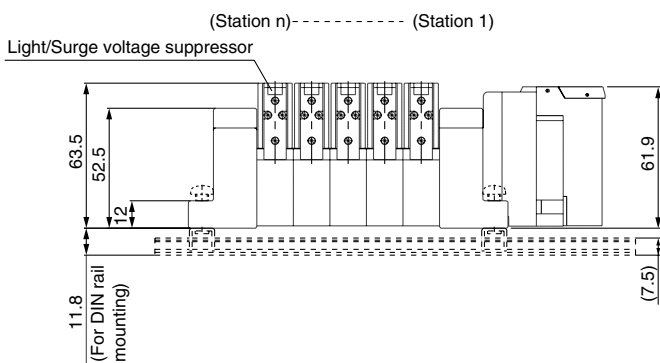
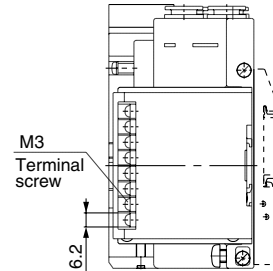
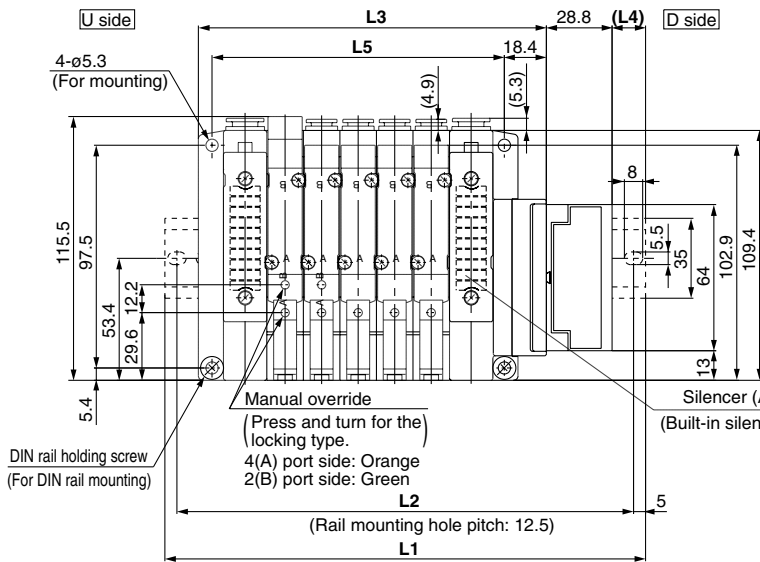
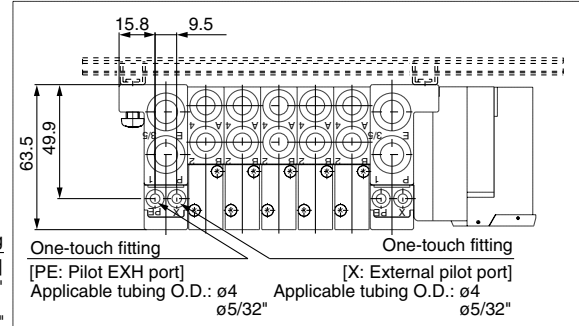
## Dimensions: Series SV2000 for EX120 Dedicated Output Serial Wiring

● Tie-rod base manifold: SS5V2-10S3□D- Stations  $\frac{U}{D}$  (S, R, RS)-  $\frac{C4, N3}{C6, N7}$  (-D)  
 $\frac{C8, N9}{C8, N9}$

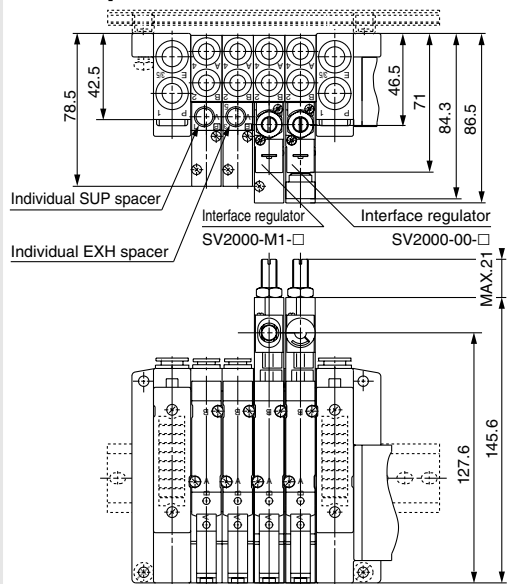
- When P, E port outlets are indicated on the U side or D side, the P, E ports on the opposite side are plugged.
- External pilot port positions and silencer discharge port positions are the same as P, E port outlet positions.



### With External Pilot Specifications



### With option



### L Dimension

L	n: Stations															
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
L1	160.5	173	198	210.5	223	248	260.5	273	285.5	310.5	323	335.5	360.5	373	385.5	
L2	150	162.5	187.5	200	212.5	237.5	250	262.5	275	300	312.5	325	350	362.5	375	
L3	104.4	120.4	136.4	152.4	168.4	184.4	200.4	216.4	232.4	248.4	264.4	280.4	296.4	312.4	328.4	
L4	13.5	12	16.5	14.5	13	17.5	15.5	14	12	16.5	15	13	17.5	16	14	
L5	80	96	112	128	144	160	176	192	208	224	240	256	272	288	304	

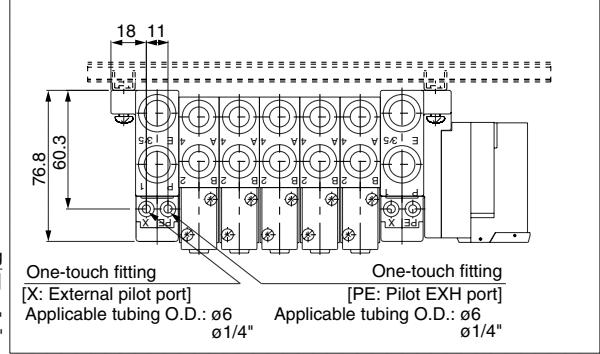
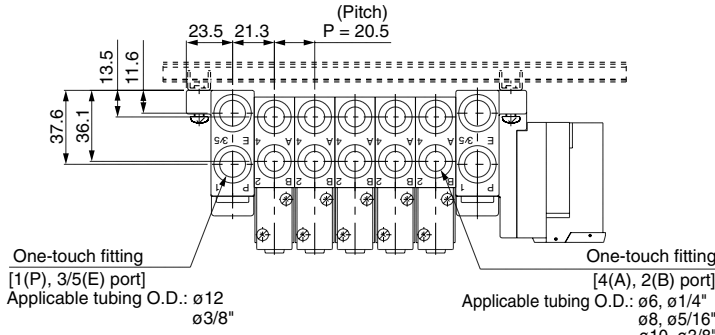
Note) The width of type E (Matsushita Electric Works, Ltd.) and type G (Rockwell Automation, Inc.) SI units are  $\geq 24.3$  mm greater. For details, please contact SMC.

**Dimensions: Series SV3000 for EX120 Dedicated Output Serial Wiring**

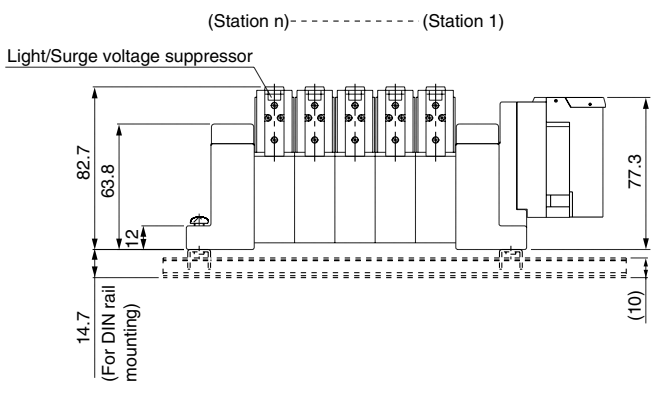
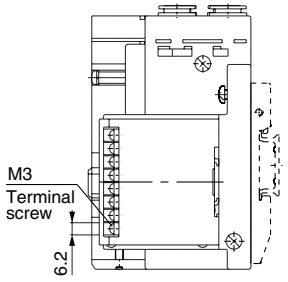
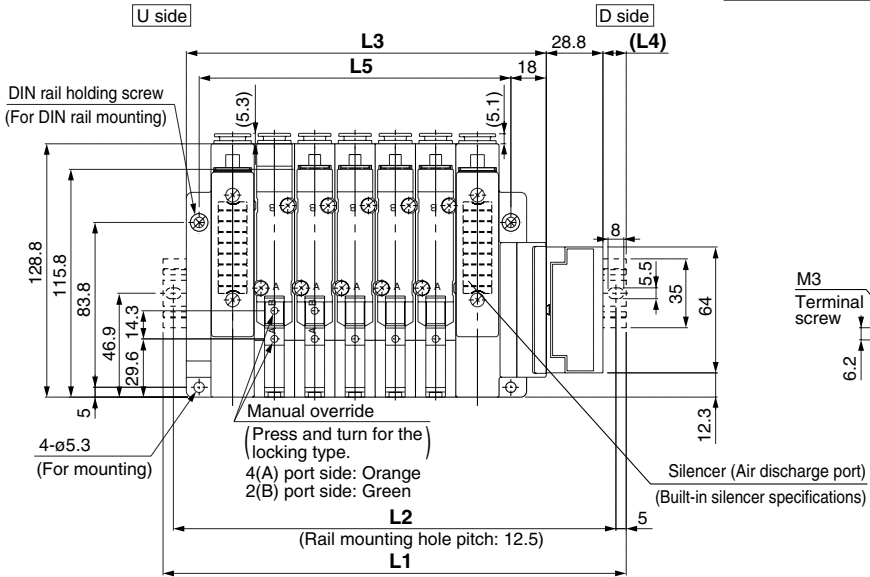
● Tie-rod base manifold: SS5V3-10S3□D-**Stations**  $\begin{matrix} U \\ D \end{matrix}$  (S, R, RS)  $\begin{matrix} C6, N7 \\ C8, N9 \\ C10, N11 \end{matrix}$  (-D)

- When P, E port outlets are indicated on the U side or D side, the P, E ports on the opposite side are plugged.
- External pilot port positions and silencer discharge port positions are the same as P, E port outlet positions.

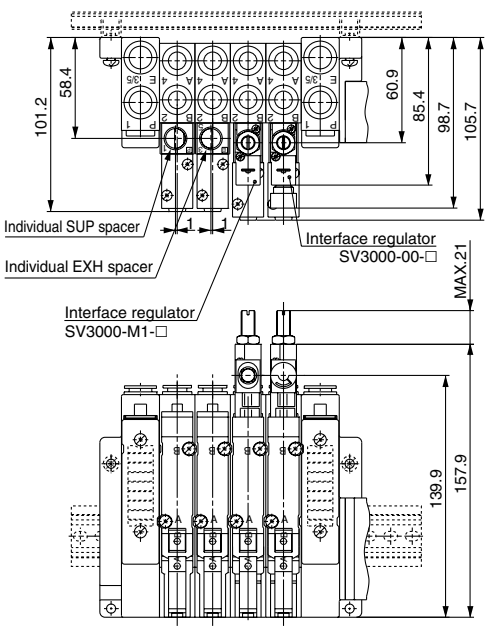
**With External Pilot Specifications**



- SV
- SZ
- SY
- SYJ
- SX



**With option**



**L Dimension**

$\begin{matrix} L \\ n \end{matrix}$	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L1	185.5	198	223	235.5	260.5	285.5	298	323	348	360.5	385.5	410.5	423	448	460.5
L2	175	187.5	212.5	225	250	275	287.5	312.5	337.5	350	375	400	412.5	437.5	450
L3	121.5	142	162.5	183	203.5	224	244.5	265	285.5	306	326.5	347	367.5	388	408.5
L4	17.5	13.5	16	12	14	16.5	12.5	14.5	17	13	15	17.5	13.5	15.5	11.5
L5	97	117.5	138	158.5	179	199.5	220	240.5	261	281.5	302	322.5	343	363.5	384

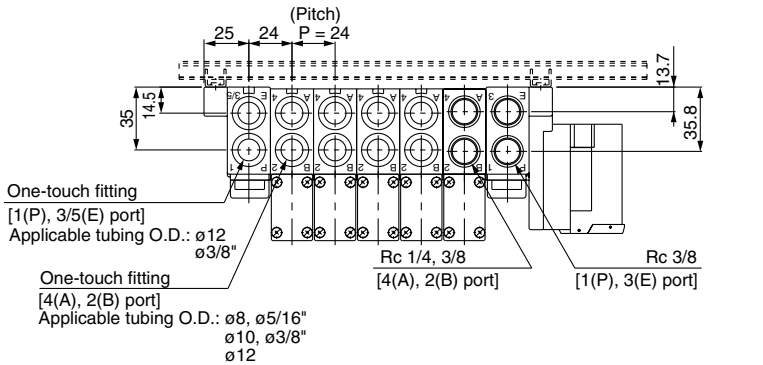
Note) The width of type E (Matsushita Electric Works, Ltd.) and type G (Rockwell Automation, Inc.) SI units are [24.3 mm] greater. For details, please contact SMC.

# Series SV

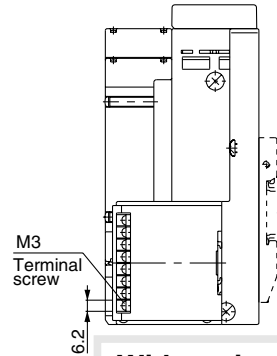
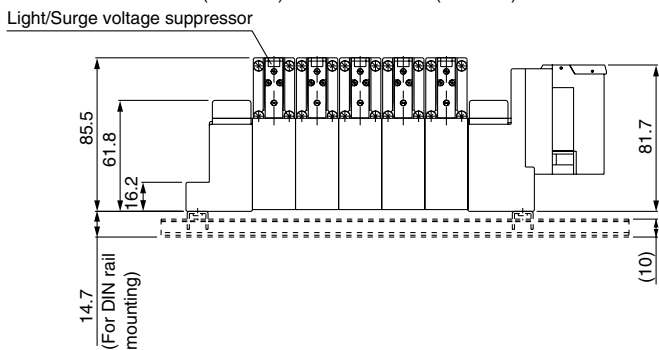
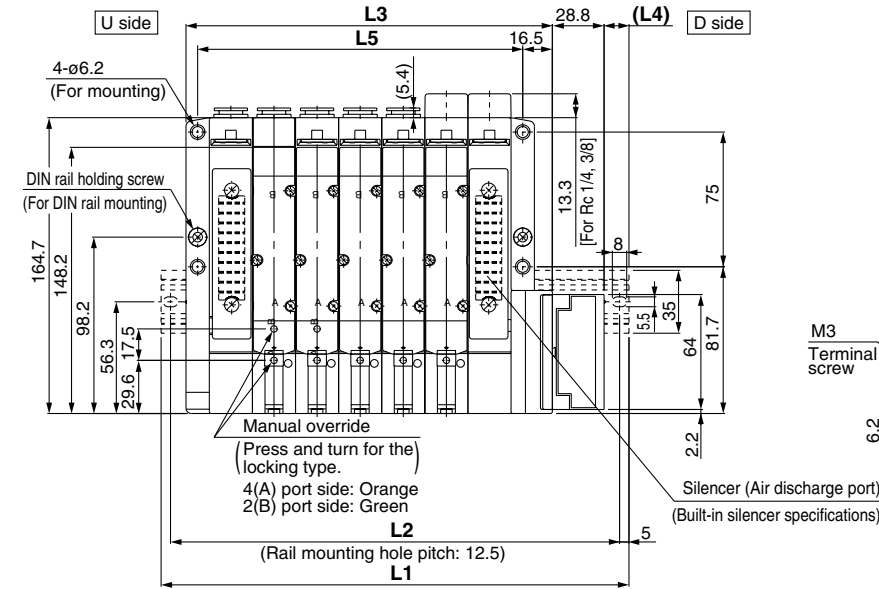
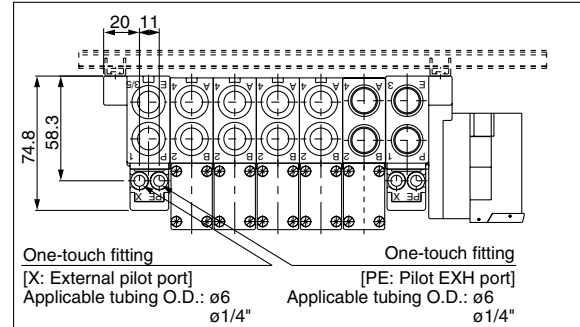
## Dimensions: Series SV4000 for EX120 Dedicated Output Serial Wiring

### ● Tie-rod base manifold: SS5V4-10S3□D- Stations $\frac{U}{D}$ (S, R, RS) - $\frac{02, C8, N9}{03, C10, N11}$ (-D)

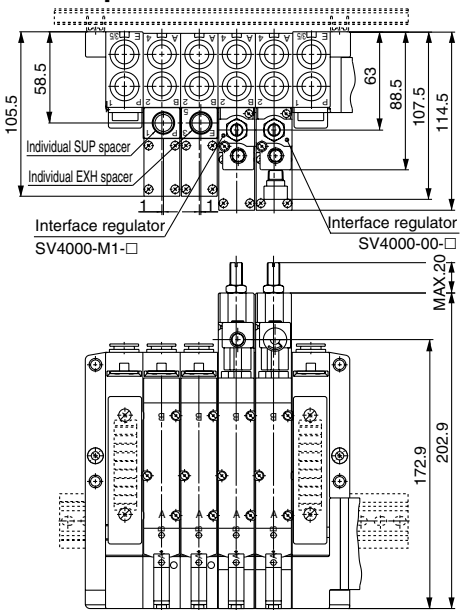
- When P, E port outlets are indicated on the U side or D side, the P, E ports on the opposite side are plugged.
- External pilot port positions and silencer discharge port positions are the same as P, E port outlet positions.



### With External Pilot Specifications



### With option



### L Dimension

L	n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L1		185.5	210.5	235.5	260.5	285.5	310.5	335.5	360.5	385.5	410.5	435.5	448	473	498	523
L2		175	200	225	250	275	300	325	350	375	400	425	437.5	462.5	487.5	512.5
L3		132	156	180	204	228	252	276	300	324	348	372	396	420	444	468
L4		12.5	13	13.5	14	14.5	15	15.5	16	16.5	17	17.5	11.5	12	12.5	13
L5		109	133	157	181	205	229	253	277	301	325	349	373	397	421	445

Note) The width of type E (Matsushita Electric Works, Ltd.) and type G (Rockwell Automation, Inc.) SI units are  $\pm 24.3$  mm greater. For details, please contact SMC.