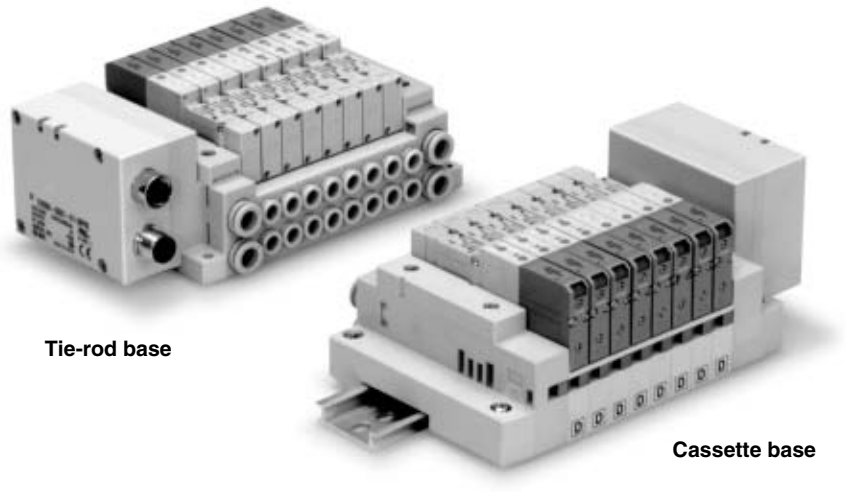
Decentralized Serial Wiring

Series EX500

IP67 compliant



Tie-rod base

Cassette base

Applicable series	Cassette base manifold SV1000/SV2000
	Tie-rod base manifold SV1000/SV2000/SV3000/SV4000
	• Number of output points: 16 points • EX500 gateway unit communication specifications Remote I/O, DeviceNet, PROFIBUS-DP

Series EX500
Decentralized Serial Wiring
Series SV

How to Order

Mounting

Nil	Direct mounting	
D	DIN rail mounting (With DIN rail)	
D0*	DIN rail mounting (Without DIN rail)	
D3	For 3 stations	When a longer DIN rail is desired than the specified stations. (Specify a longer rail than the standard length.)
⋮	⋮	
D16	For 16 stations	

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

Series

1	SV1000
2	SV2000
3	SV3000
4	SV4000

● **Tie-rod base**

SS5V 1 — W 10S A1W D — 05 U

● **Cassette base**

SS5V 1 — W 16S A1W D — 05 U

Series

1	SV1000
2	SV2000

Enclosure
IP67 specifications

SI unit

A1W	For Remote I/O
A2W	For DeviceNet/ For ProfiBus-DP
0	Without SI unit

DIN rail length specified

Nil	Standard length	
3	For 3 stations	(Specify a longer rail than the standard length.)
⋮	⋮	
16	For 16 stations	

Valve stations

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

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

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

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, 3 position and 4 position valves cannot be used where single solenoid wiring has been specified.)

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	
03	Rc3/8		
02F	G 1/4	G 3/8	
03F	G 3/8		
M	A, B ports mixed		

A, B port size (inch)

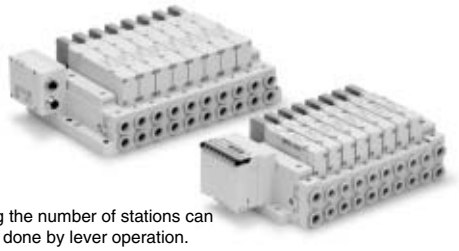
Symbol	A, B port	P, E port	Applicable series
N1	One-touch fitting for ø1/8"	One-touch fitting for ø5/16"	SV1000
N3	One-touch fitting for ø5/32"		
N7	One-touch fitting for ø1/4"		
N3	One-touch fitting for ø5/32"	One-touch fitting for ø3/8"	SV2000
N7	One-touch fitting for ø1/4"		
N9	One-touch fitting for 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	NPT 3/8	
03N	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 specifications (R, RS) are ø4 (metric), ø5/32" (inch) for SV1000/2000 and ø6 (metric) and ø1/4" (inch) for SV3000/4000.

Valve Manifold Common Specifications

Series SV

Cassette base manifold



• Changing the number of stations can be easily done by lever operation.

Manifold Specifications

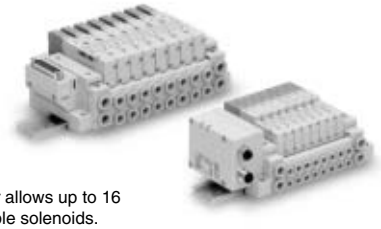
Applicable series		SV1000	SV2000
Manifold type		Stacking type cassette base manifold	
1 (P: SUP)/3, 5 (E: EXH) type		Common SUP, EXH	
Valve stations (maximum)		18 stations	20 stations
Max. number of solenoids		18 points	26 points
Port size	1(P), 3/5(E) port	C8, N9	C10, N11
	4(A), 2(B) port	C3, C4, C6 N1, N3, N7	C4, C6, C8 N3, N7, N9

Flow Characteristics

Model	Port size		Flow characteristics					
	1, 5, 3	4, 2	1 → 4/2 (P → A/B)			4/2 → 3/5 (A/B → E)		
	(P, EA, EB)	(A, B)	C [dm³/(s·bar)]	b	Cv	C [dm³/(s·bar)]	b	Cv
SS5V1-16	C8	C6	0.89	0.22	0.22	0.98	0.21	0.23
SS5V2-16	C10	C8	2.3	0.28	0.50	2.7	0.18	0.56

Note) The value is for manifold base with 5 stations and individually operated 2 position type.

Tie-rod base manifold



• 34 pins connector allows up to 16 stations with double solenoids.

Manifold Specifications

Applicable series		SV1000	SV2000	SV3000	SV4000
Manifold type		Tie-rod base manifold			
1 (P: SUP)/3, 5 (E: EXH) type		Common SUP, EXH			
Valve stations (maximum)		20 stations			
Max. number of solenoids		32 points			
Port size	1(P), 3/5(E) port	C8, N9	C10, N11	C12, N11	C12, N11, 03
	4(A), 2(B) port	C3, C4, C6 N1, N3, N7	C4, C6, C8 N3, N7, N9	C6, C8, C10 N7, N9, N11	C8, C10, C12 N9, N11, 02, 03

Flow Characteristics

Model	Port size		Flow characteristics					
	1, 5, 3	4, 2	1 → 4/2(P → A/B)			4/2 → 3/5(A/B → E)		
	(P, EA, EB)	(A, B)	C [dm³/(s·bar)]	b	Cv	C [dm³/(s·bar)]	b	Cv
SS5V1-10	C8	C6	0.98	0.26	0.24	1.1	0.35	0.28
SS5V2-10	C10	C8	2.1	0.20	0.46	2.4	0.18	0.48
SS5V3-10	C12	C10	4.2	0.22	0.91	4.3	0.21	0.93
SS5V4-10	C12	C12	6.2	0.19	1.3	7.0	0.18	1.6

Note) The value is for manifold base with 5 stations and individually operated 2 position type.

Enclosure of Manifold Variations (Common for cassette base and tie-rod base)

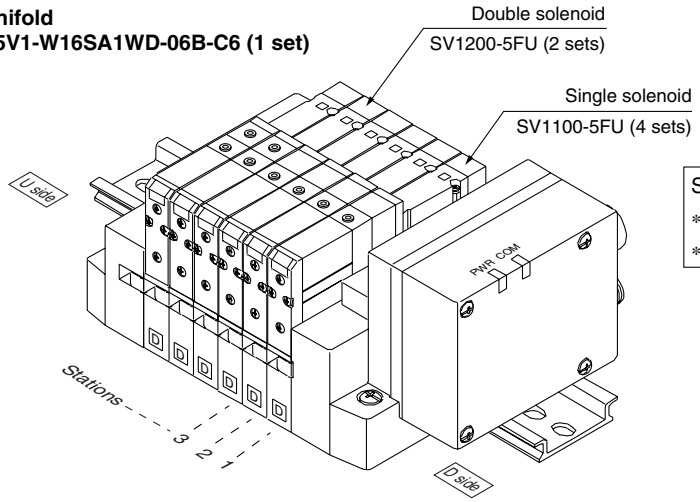
Series	Enclosure (Based on IEC529)
Series EX500 Decentralized serial wiring	IP67 *
Series EX250 Serial wiring with input/output onit	IP67
Series EX120 Dedicated output serial wiring	Dusttight (IP40)
For circular connector	IP67
D-sub connector	Dusttight (IP40)
Flat ribbon cable	Dusttight (IP40)

* Enclosure of a gateway unit and input manifold is IP65.

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.)

How to Order Solenoid Valves

SV 1 1 0 0 — 5 F Note)

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

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.

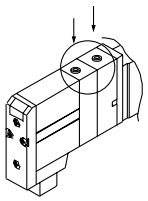
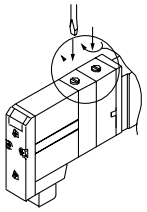
Rated voltage

5	24 VDC

Light/Surge voltage suppressor

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

Manual override

Nil: Non-locking push type	**D**: Push-turn locking slotted type
	

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 [ ]

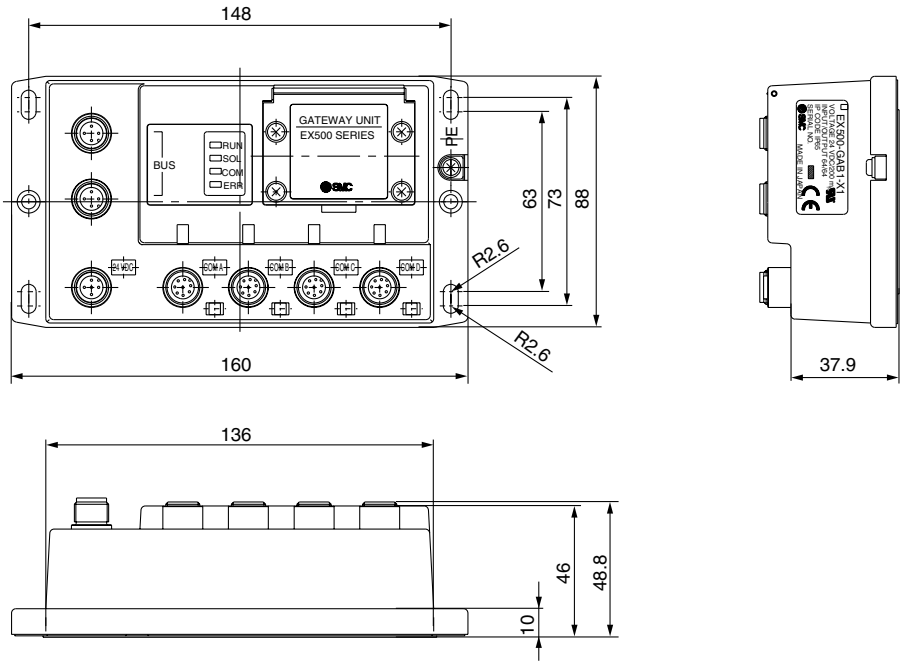
Communication protocol

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

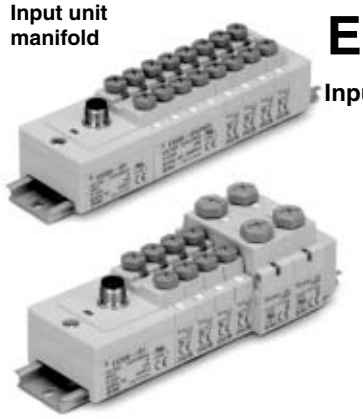
Applicable GW unit

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

Dimensions



Input unit manifold



How to Order Input Manifold

EEX500 — IB1 — E 8 [ ]

Input unit specifications

Connector type

E	M8 connector
T	M12 connector
M	M8, M12 mixed

Stations

1	1 station
⋮	⋮
8	8 stations

Applicable GW unit

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

How to Order Input Block

EX500 — IE 1 [ ]

Block type

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

Applicable GW unit

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

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

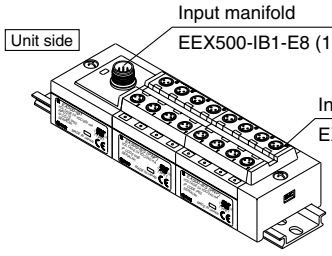
Sensor applicable	Current source type (PNP output) or Current sink type (NPN output)
Sensor connector	M8 connector (3 pins) or, M12 connector (4 pins)
Number of inputs	2 inputs/8 inputs (M8 only)
Rated voltage	24 VDC
Indication	Green LED
Insulation	None
Sensor supply current	Maximum 30 mA/Sensor
Enclosure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

How to Order Input Unit Manifold [Ordering example]

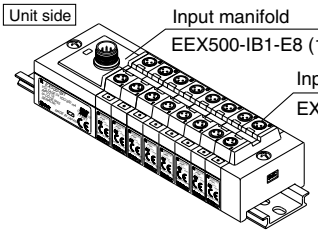
When ordering an input unit manifold, enter the Input manifold part no. + Input block part no. together.
The Input unit, End block and DIN rail are included in the input manifold. Refer to the indications below.

Block part no. entry
Unit side
↓
End block side

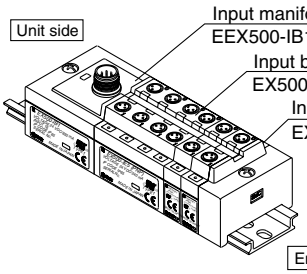
Example 1) M8 input block only



EEX500-IB1-E8 ····· 1 set
∗EX500-IE5 ····· 2 sets

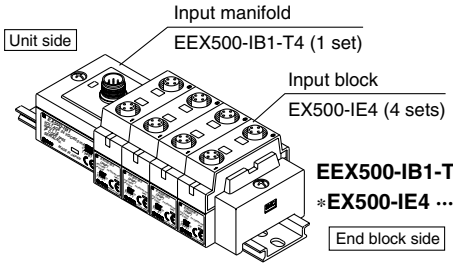


EEX500-IB1-E8 ····· 1 set
∗EX500-IE1 ····· 8 sets



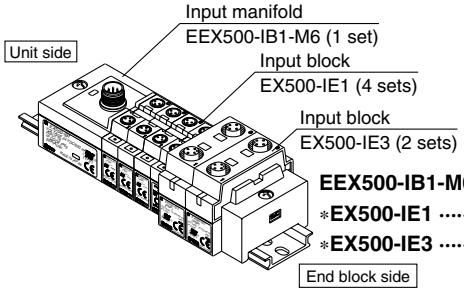
EEX500-IB1-E6 ····· 1 set
∗EX500-IE5 ····· 1 set
∗EX500-IE1 ····· 2 sets

Example 2) M12 input block only



EEX500-IB1-T4 ····· 1 set
∗EX500-IE4 ····· 4 sets

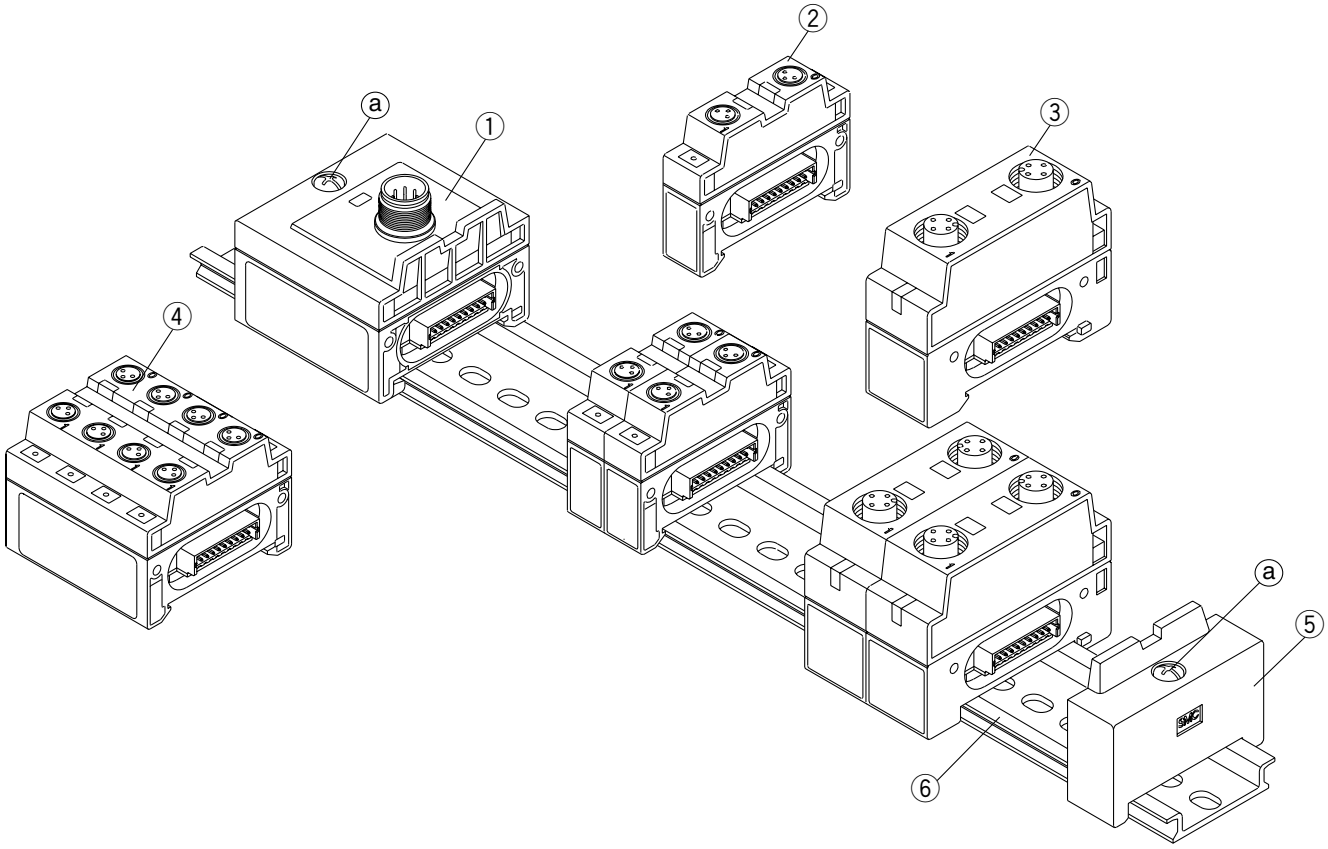
Example 3) M8 and M12 mixed



EEX500-IB1-M6 ····· 1 set
∗EX500-IE1 ····· 4 sets
∗EX500-IE3 ····· 2 sets

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 ⓐ (2 places) that hold the end block.

↓

(2) Separate the blocks at the locations where stations are to be added.

↓

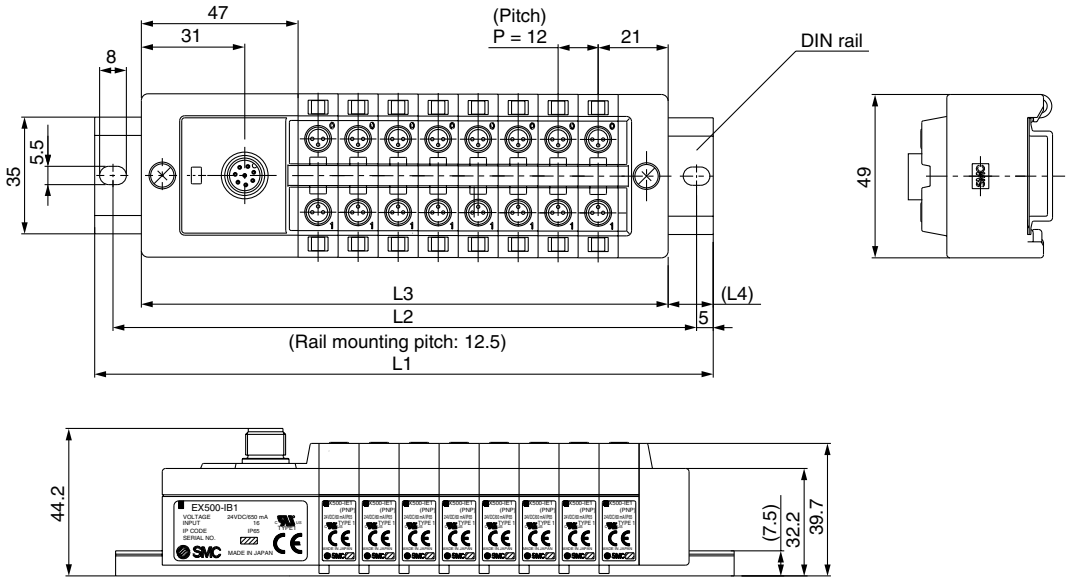
(3) Attach the additional blocks to the DIN rail, and connect the blocks so that they fit together securely.

↓

(4) While holding the blocks together so that there are no gaps between them, secure them to the DIN rail by tightening the screws ⓐ.
Note: Be sure to tighten the round head combination screw with the prescribed tightening torque. (0.6 N·m)

Input Unit Manifold Dimensions

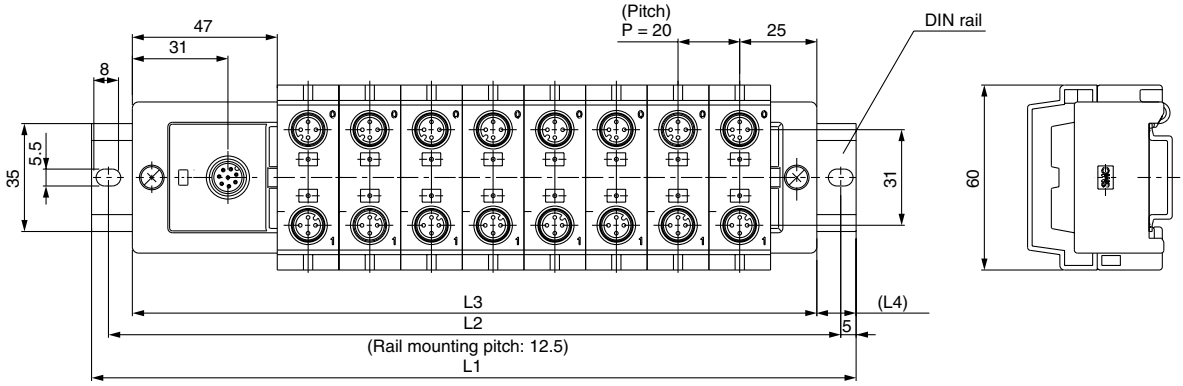
Input block (M8) only

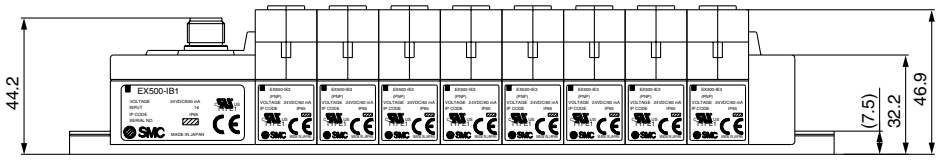


(mm)

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

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

How to Order SI Unit

EX500 – S001 [ ]

Applicable GW unit

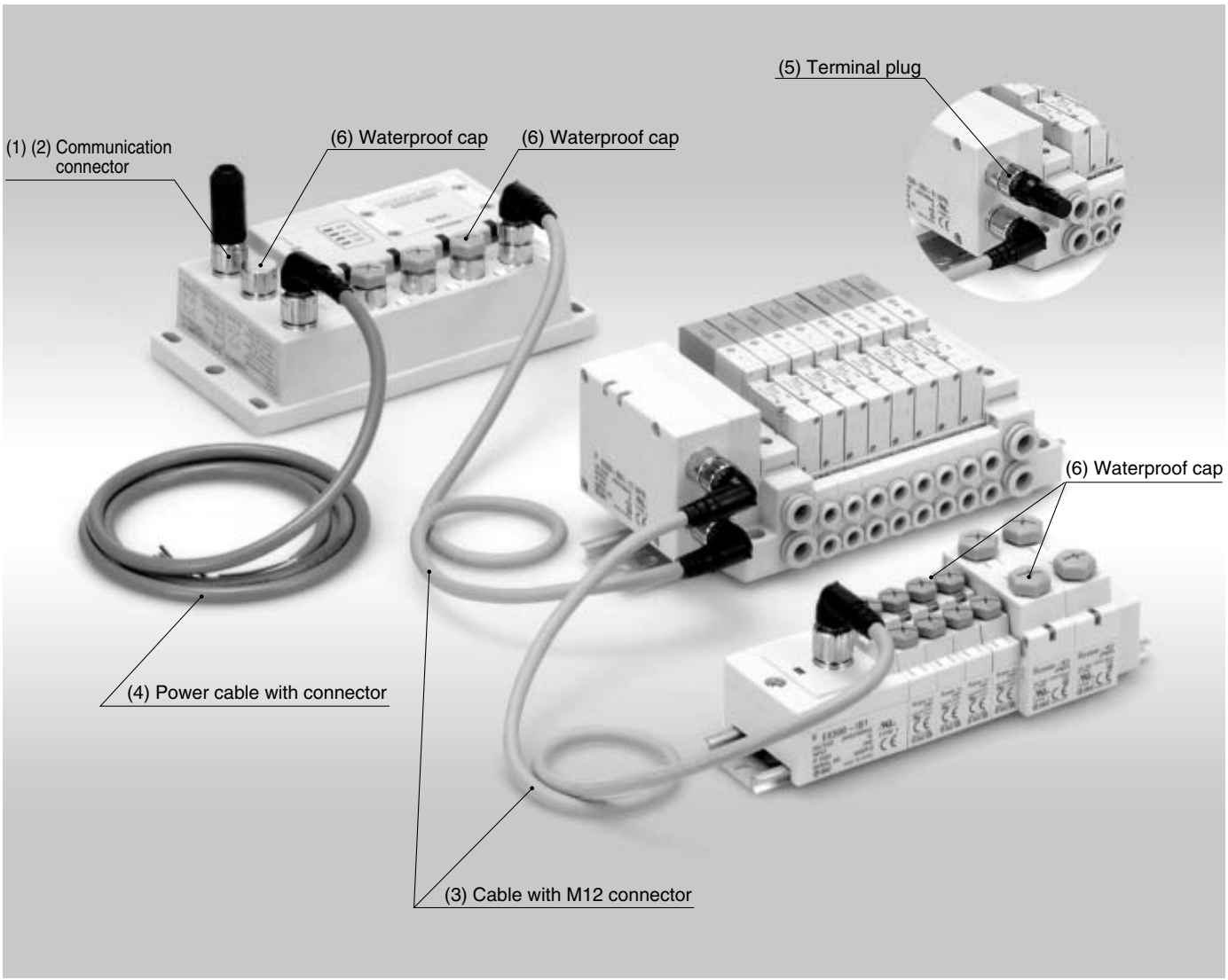
Nil	DeviceNet PROFIBUS-DP
-X1	Remote I/O (RIO)

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 Note)	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.

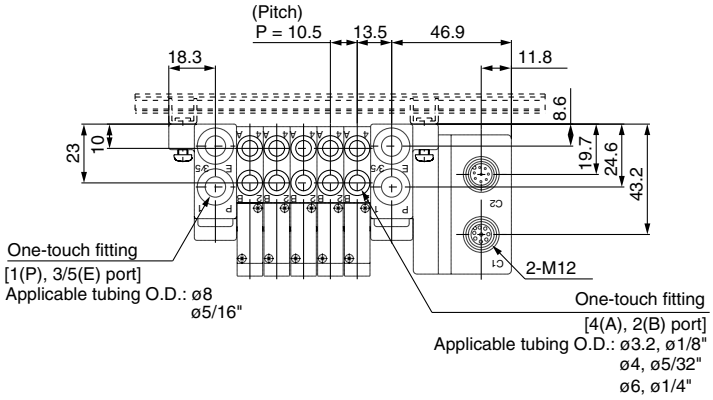
Option



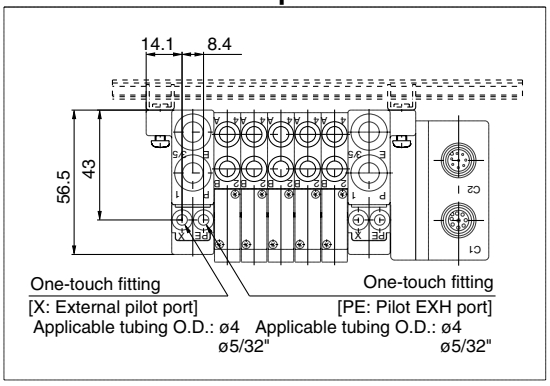
Dimensions: Series SV1000 for EX500 Decentralized Serial Wiring

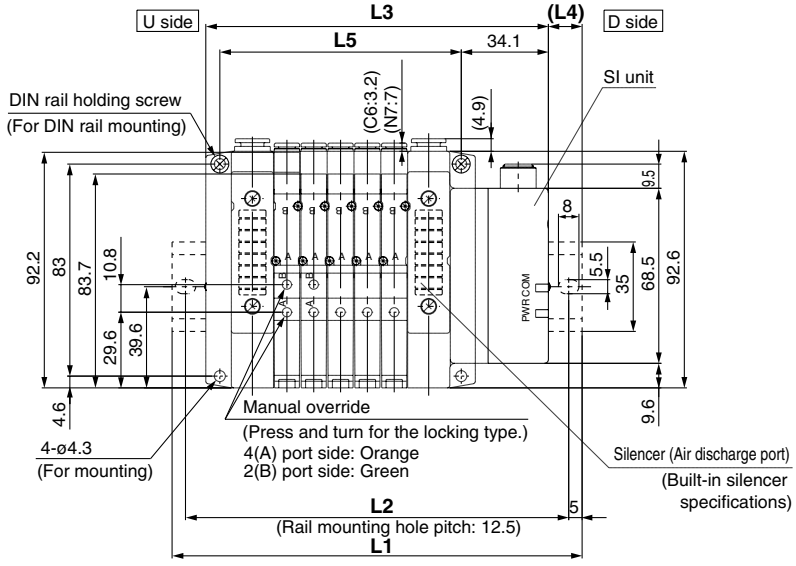
● Tie-rod base manifold: SS5V1-W10SA□WD-[Stations]$^{U}_{D}$(S, R, RS)-$^{C3, N1}_{C4, N3}$(-D)

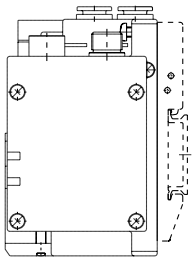
- When P, E port outlets are indicated on the U side or D side, the P, E ports on the opposite side are plugged.
- External pilot port positions and silencer discharge port positions are the same as P, E port outlet positions.



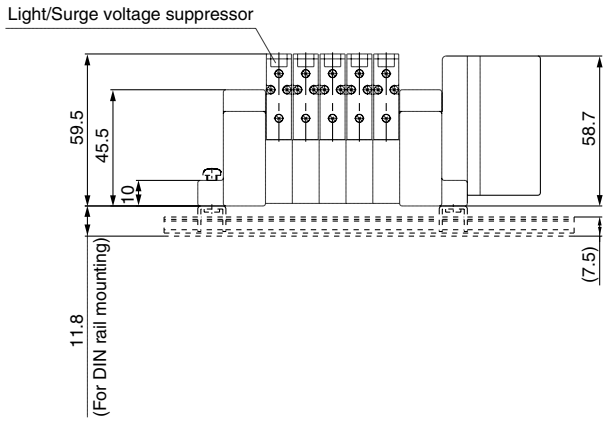
With External Pilot Specifications



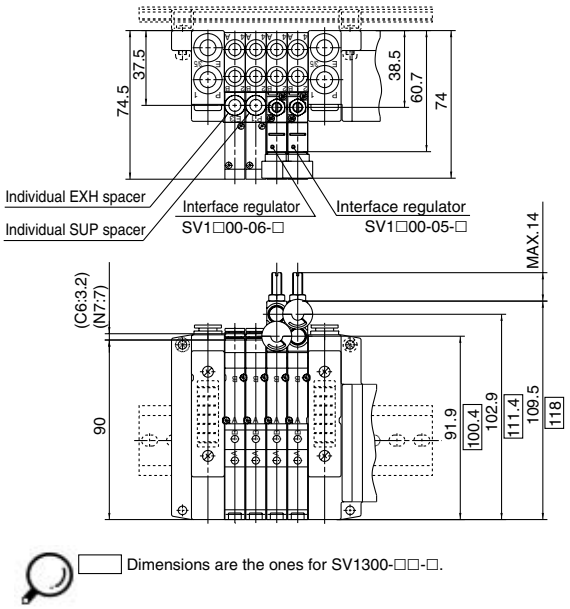




(Station n) - - - - - - - (Station 1)



With option



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

L Dimension

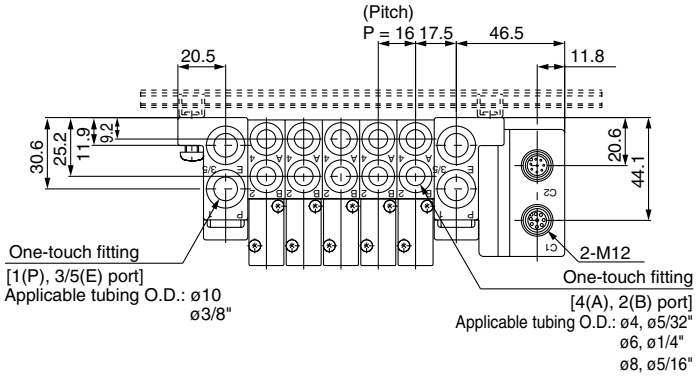
n: Stations

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

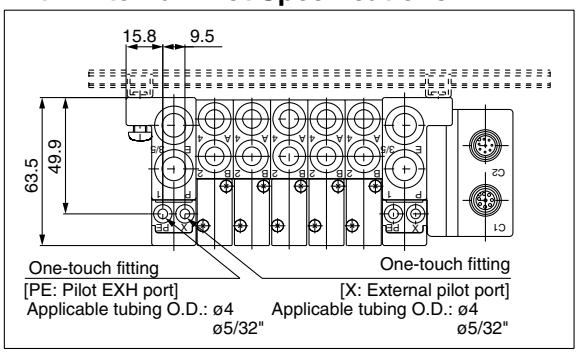
Dimensions: Series SV2000 for EX500 Decentralized Serial Wiring

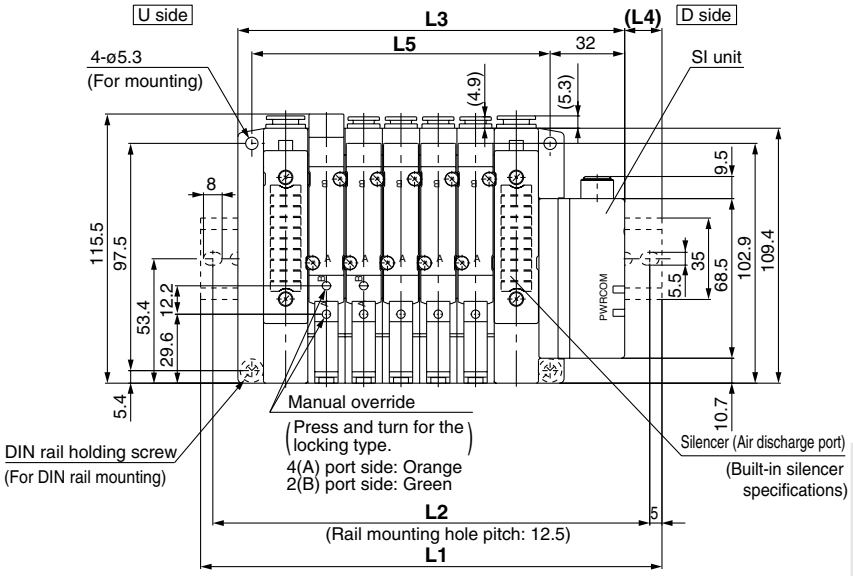
● Tie-rod base manifold: SS5V2-W10SA□WD- Stations U/D/B (S, R, RS)- C4, N3 / C6, N7 / C8, N9 (-D)

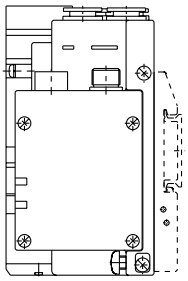
- When P, E port outlets are indicated on the U side or D side, the P, E ports on the opposite side are plugged.
- External pilot port positions and silencer discharge port positions are the same as P, E port outlet positions.

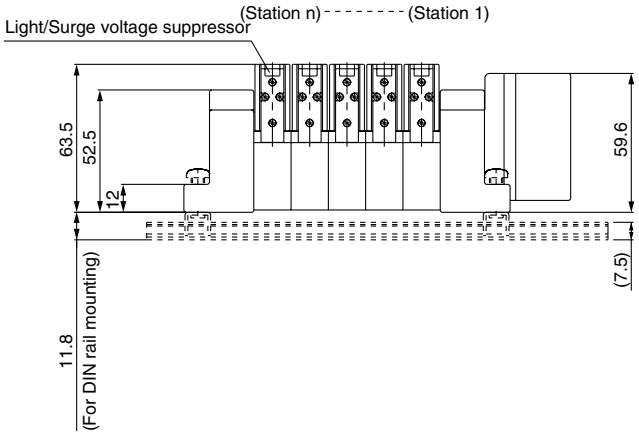


With External Pilot Specifications

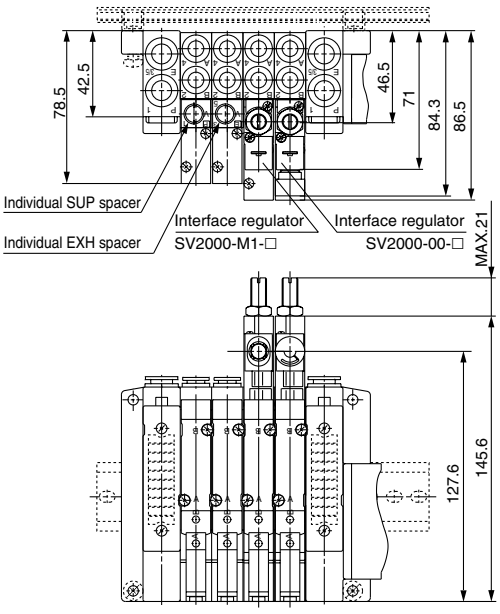








With option



L Dimension

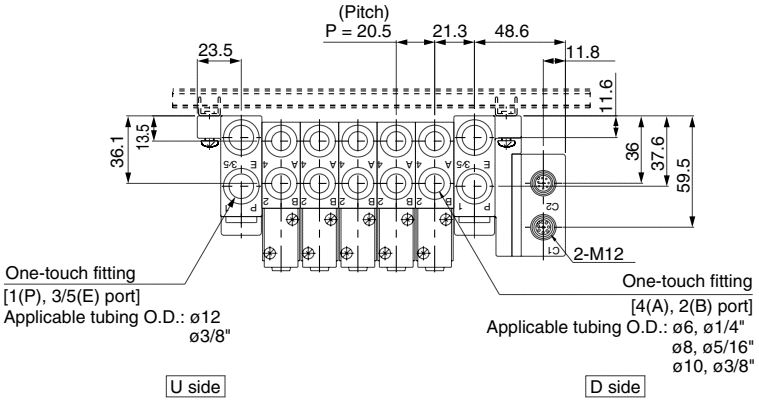
n: Stations

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

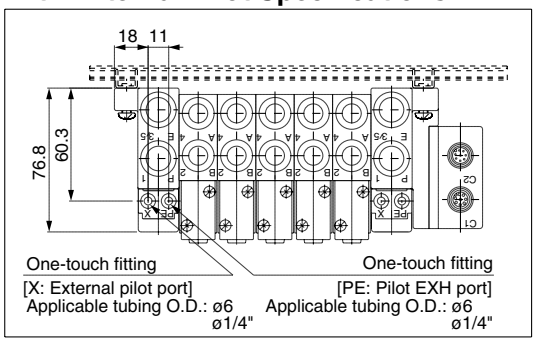
Dimensions: Series SV3000 for EX500 Decentralized Serial Wiring

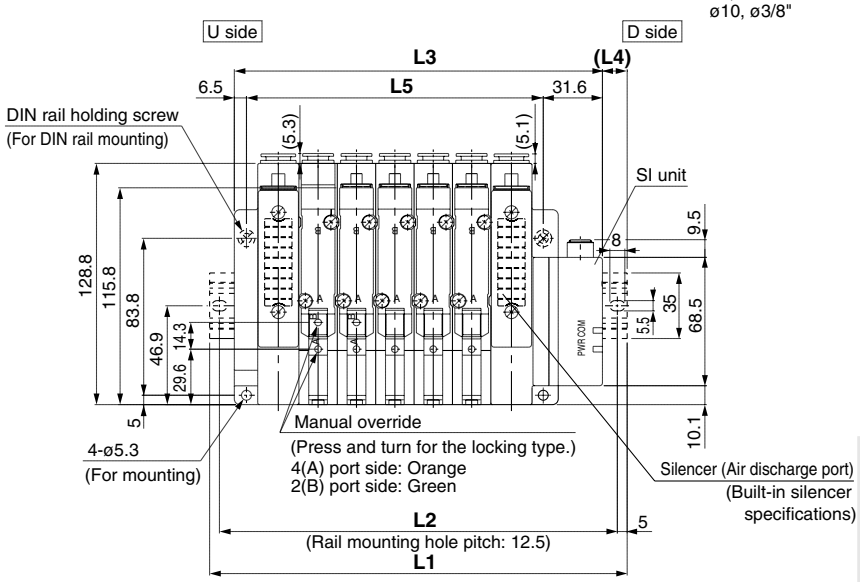
● Tie-rod base manifold: SS5V3-W10SA□WD-Stations U/D/B (S, R, RS)-C6, N7 / C8, N9 / C10, N11 (-D)

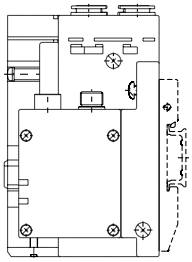
- When P, E port outlets are indicated on the U side or D side, the P, E ports on the opposite side are plugged.
- External pilot port positions and silencer discharge port positions are the same as P, E port outlet positions.



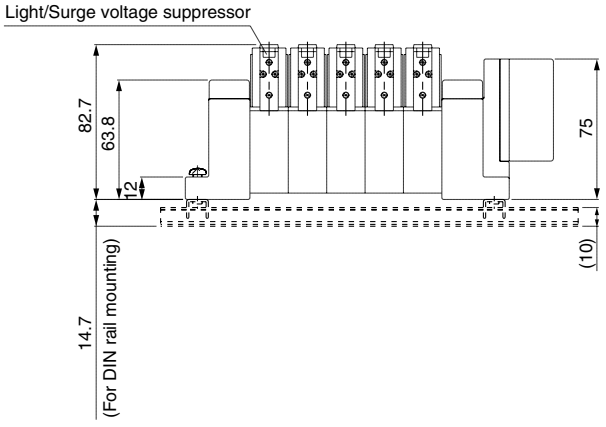
With External Pilot Specifications



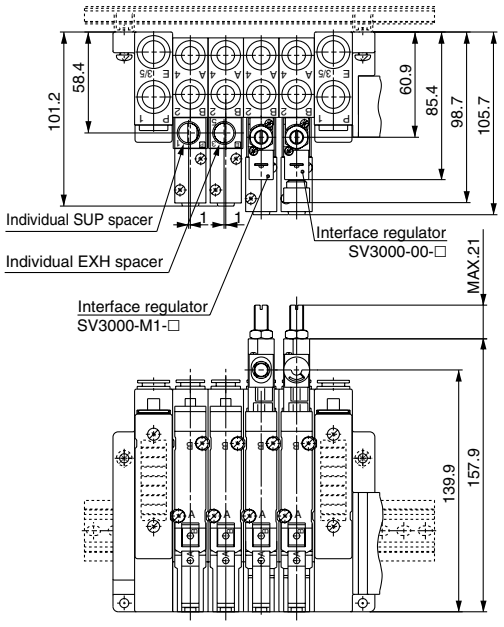




(Station n) - - - - - - - - - - - - (Station 1)



With option



L Dimension

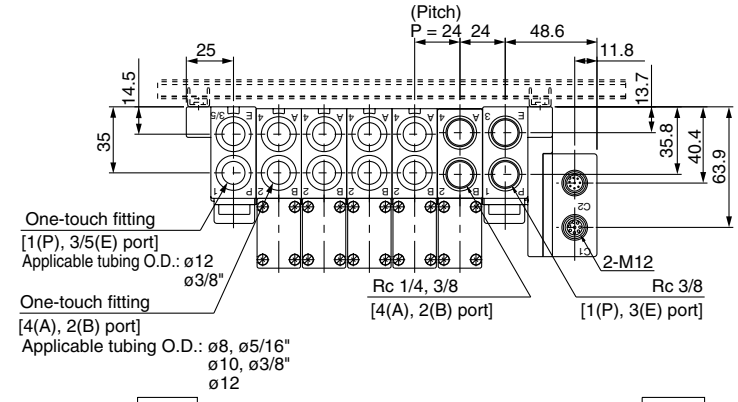
n: Stations

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

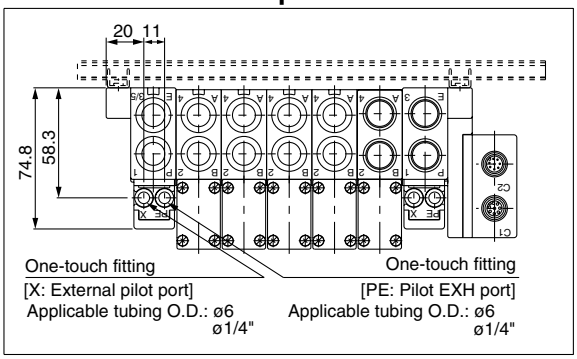
Dimensions: Series SV4000 for EX500 Decentralized Serial Wiring

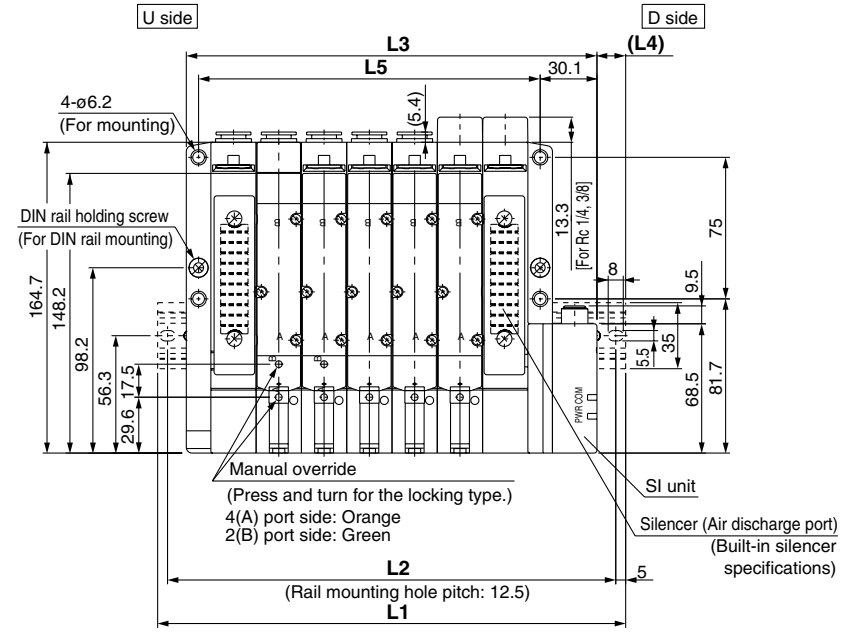
● Tie-rod base manifold: SS5V4-W10SA□WD-Stations U/D/B (S, R, RS)-02, 03, C8, C10, C12, N9, N11 (-D)

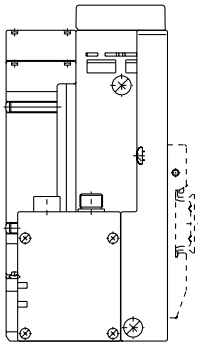
- When P, E port outlets are indicated on the U side or D side, the P, E ports on the opposite side are plugged.
- External pilot port positions and silencer discharge port positions are the same as P, E port outlet positions.

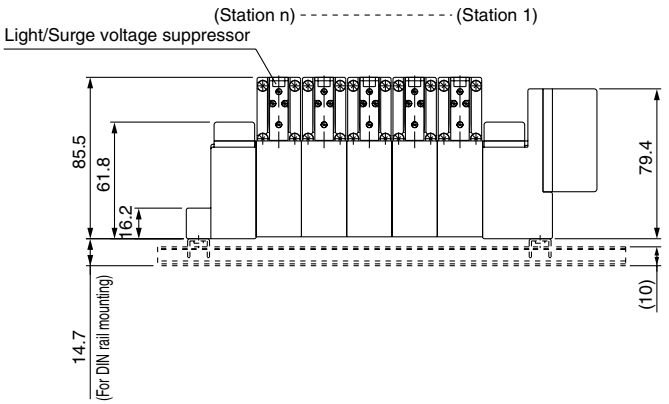


With External Pilot Specifications

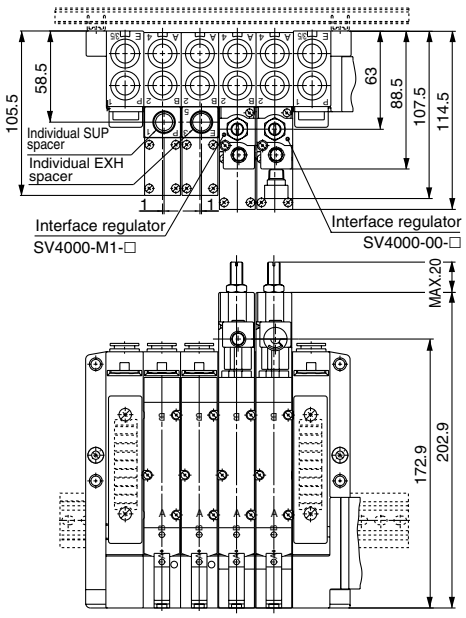








With option



L Dimension

n: Stations

L \ n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L1	173	198	223	248	273	298	323	348	373	385.5	410.5	435.5	460.5	485.5	510.5
L2	162.5	187.5	212.5	237.5	262.5	287.5	312.5	337.5	362.5	375	400	425	450	475	500
L3	145.6	169.6	193.6	217.6	241.6	265.6	289.6	313.6	337.6	361.6	385.6	409.6	433.6	457.6	481.6
L4	13.5	14	14.5	15	15.5	16	16.5	17	17.5	12	12.5	13	13.5	14	14.5
L5	109	133	157	181	205	229	253	277	301	325	349	373	397	421	445

Manifold Option (Common for Type 16 and 10)

■ Relay output module

By adding a relay output module to a series SV manifold, devices up to 110 VAC, 3 A (large type solenoid valves, etc.) can be controlled together with Series SV valves.

How to Order

SV □ 000—60 —5 A—1A

Series

1	SV1000
2	SV2000
3	SV3000
4	SV4000

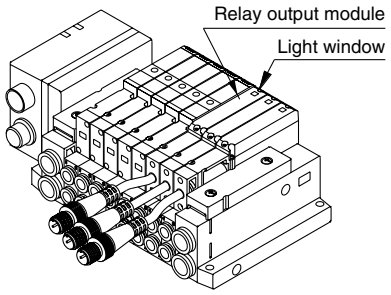
No. of output point

A	1 output
B	2 outputs

Rated voltage

5	24 VDC
6	12 VDC

∗ Note that serial wiring manifolds (EX500, EX250 and EX120) are available with 24 VDC only.



Relay Output Module Specifications

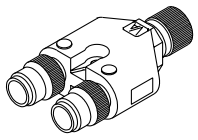
Item	Specifications			
No. of output points	1 output [connector with lead wire (M12)]		2 outputs [connector with lead wire (M12)]	
Output type	4 pins connector (M12) plug 1. — 2. Output A 3. — 4. Output A Contact type (“a” contact) Relay output module side pin arrangement		4 pins connector (M12) plug 1. Output B 2. Output A 3. Output B 4. Output A Contact type (“a” contact) Relay output module side pin arrangement	
Load voltage	110 VAC	30 VDC	110 VAC	30 VDC
Load current	3 A	3 A	0.3 A	1 A
Indicator light	Orange		A side: Orange B side: Green	
Enclosure	Based on IP67 (IEC529)			
Current consumption	20 mA or less			
Polarity	Non-polar			
weight (g)	48			

■ Y type connector

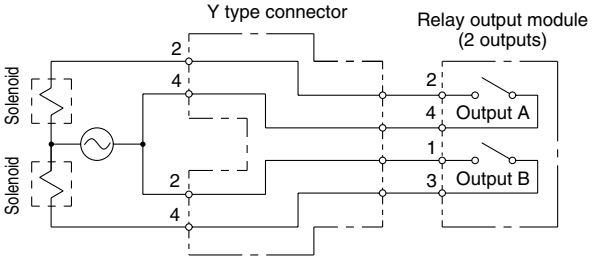
Used to branch a two output relay output module to two separate systems.

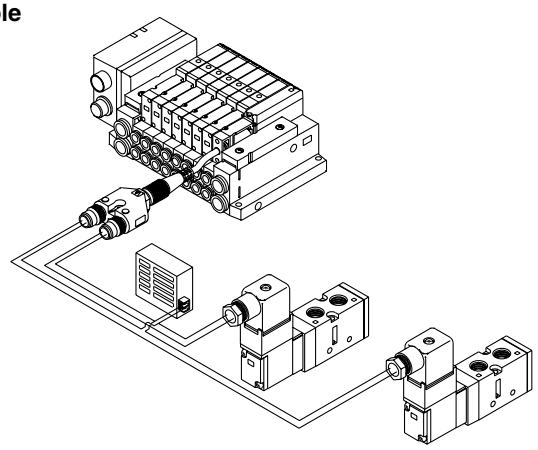
How to Order

EX500—ACY00 —S



Relay output module and Y type connector wiring example

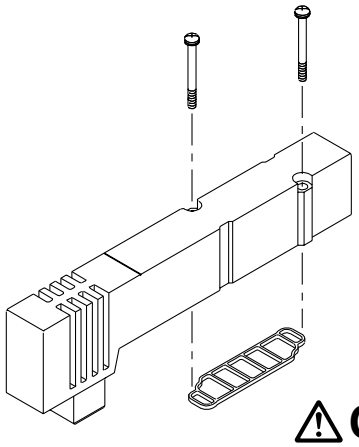




Manifold Option

■ Blanking plate assembly

Used in situations where valves will be added in the future.



Series	Blanking plate assembly part no.
SV1000	SV1000-67-1A
SV2000	SV2000-67-1A
SV3000	SV3000-67-1A
SV4000	SV4000-67-1A

⚠ Caution

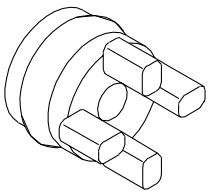
Mounting screw tightening torques

M2: 0.15 N·m
M3: 0.6 N·m
M4: 1.4 N·m

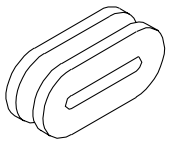
■ SUP/EXH block disk

[SUP block disk]
By placing a SUP block disk in a manifold valve's pressure supply passage, two different high and low pressures can be supplied to one manifold.

[EXH block disk]
By installing an EXH block disk in a manifold valve's exhaust passage, the valve's exhaust can be separated so that it will not affect other valves. It can also be used on a manifold with mixed positive pressure and vacuum.
(Two pieces are required to block EXH on both sides. However, Series SV1000 and 2000 type 10 manifolds require only one piece.)



Cassette base type 16



Tie-rod base type 10

Series	Manifold Model	SUP block disk	EXH block disk
SV1000	10	SV1000-59-1A	SV1000-59-2A
	16	SX3000-77-1A	SX3000-77-1A
SV2000	10	SV2000-59-1A	SV2000-59-2A
	16	SV2000-59-3A	SV2000-59-3A
SV3000	10	SV3000-59-1A	SV3000-59-1A
SV4000	10	SY9000-57-1A	SY9000-57-1A

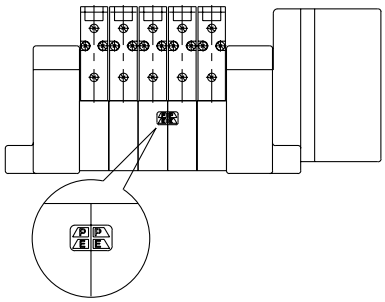
■ Label for block disk

These labels are attached to manifolds in which SUP and EXH block disks have been installed, in order to identify the installed locations. (Three sheets each included.)

SV1000 – 74 – 1A

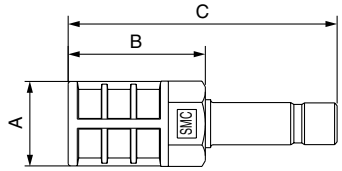
Label for SUP block disk	Label for EXH block disk	Label for SUP/EXH block disk
P P E	P E E	P P E E

∗ When a block disk is concurrently ordered by specifying on the manifold specification sheet, etc., a label will be stuck on the position where block disk is mounted.



■ Silencer with One-touch fitting

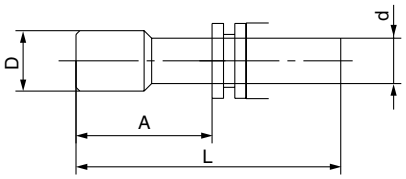
This silencer can be quickly mounted on the manifold's E (exhaust) port.



Series	Model	Effective area	A	B	C
SV1000 (For ø8)	AN203-KM8	14 mm²	ø16	26	51
SV2000 (For ø10)	AN200-KM10	26 m²	ø22	53.8	80.8
	AN300-KM10	30 mm²	ø25	70	97
SV3000 **SV4000** (For ø12)	AN300-KM12	41 mm²	ø25	70	98

■ Plug (White)

These are inserted in unused cylinder ports and P, E ports.



Applicable fitting size d	Model	A	L	D
ø4	KQP-04	16	32	ø6
ø6	KQP-06	18	35	ø8
ø8	KQP-08	20.5	39	ø10
ø10	KQ2P-10	22	43	ø12
ø12	KQ2P-12	24	44.5	ø14
ø1/8"	KQ2P-01	16	31.5	ø5
ø5/32"	KQ2P-03	16	32	ø6
ø1/4"	KQ2P-07	18	35	ø8.5
ø5/16"	KQ2P-09	20.5	39	ø10
ø3/8"	KQ2P-11	22	43	ø11.5

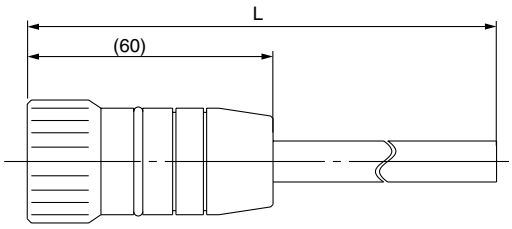
Manifold Option

■ Circular connector/Cable assembly (26 pins)

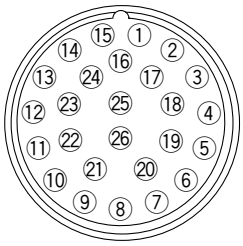
AXT100 – MC26 – □

Lead Wire Length

Part no.	L dimension
AXT100-MC26-015	1.5 m
AXT100-MC26-030	3 m
AXT100-MC26-050	5 m



Plug terminal no.
(arrangement as seen from lead wire side)



Circular Connector Cable Assembly Terminal No.

Terminal no.	Lead wire color	Dot marking
①	Black	None
②	Brown	None
③	Red	None
④	Orange	None
⑤	Yellow	None
⑥	Pink	None
⑦	Blue	None
⑧	Purple	White
⑨	Gray	Black
⑩	White	Black
⑪	White	Red
⑫	Yellow	Red
⑬	Orange	Red
⑭	Yellow	Black
⑮	Pink	Black
⑯	Blue	White
⑰	Purple	None
⑱	Gray	None
⑲	Orange	Black
⑳	Red	White
㉑	Brown	White
㉒	Pink	Red
㉓	Gray	Red
㉔	Black	White
㉕	White	None

Note) Terminal no.㉖ is connected to ㉕ inside the connector.

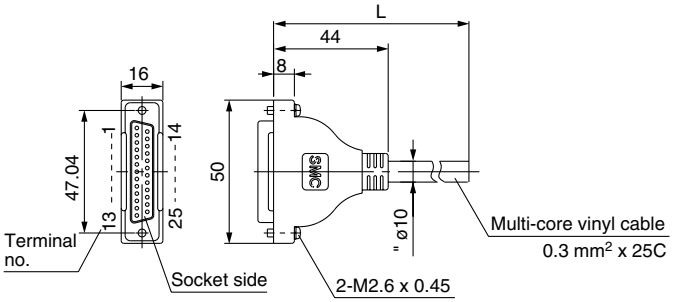
■ D-sub connector/Cable assembly (25 pins)

AXT100 – DS25 – □

Lead Wire Length

Part no.	L dimension
AXT100-DS25-015	1.5 m
AXT100-DS25-030	3 m
AXT100-DS25-050	5 m

When a commercially available connector is required, use a 25 pin female connector conforming to MIL-C24308.



D-sub Connector Cable Assembly Terminal No.

Terminal no.	Lead wire color	Dot marking
①	Black	None
②	Brown	None
③	Red	None
④	Orange	None
⑤	Yellow	None
⑥	Pink	None
⑦	Blue	None
⑧	Purple	White
⑨	Gray	Black
⑩	White	Black
⑪	White	Red
⑫	Yellow	Red
⑬	Orange	Red
⑭	Yellow	Black
⑮	Pink	Black
⑯	Blue	White
⑰	Purple	None
⑱	Gray	None
⑲	Orange	Black
⑳	Red	White
㉑	Brown	White
㉒	Pink	Red
㉓	Gray	Red
㉔	Black	White
㉕	White	None

Circular Connector, D-sub Connector Cable Assembly Electric Characteristics

Item	Characteristics
Conductor resistance W/km, 20°C	65 or less
Withstand voltage VAC, 1 min.	1000
Insulation resistance, M/km, 20°C	5 or less

Note) The minimum inside bending radius for each cable is 20 mm.

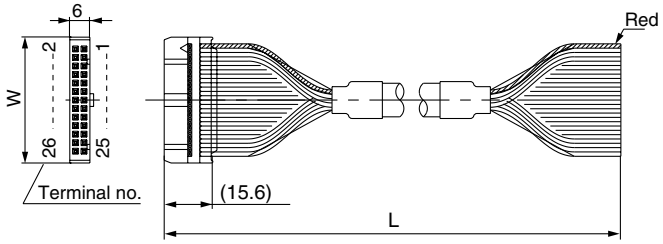
Manifold Option

■ Flat ribbon cable/Cable assembly

AXT100 – FC□ – □

Cable length L	10 pins	20 pins	26 pins
1.5 m	AXT100-FC10-1	AXT100-FC20-1	AXT100-FC26-1
3 m	AXT100-FC10-2	AXT100-FC20-2	AXT100-FC26-2
5 m	AXT100-FC10-3	AXT100-FC20-3	AXT100-FC26-3
Connector width (W)	17.2	30	37.5

∗ For other commercial connectors, use a type with strain relief conforming to MIL-C-83503.

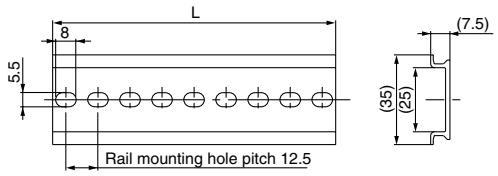


Connector manufacturers' example
- **Hirose Electric Co., Ltd.**
- **Sumitomo 3M Limited**
- **Fujitsu Limited**
- **Japan Aviation Electronics Industry, Ltd.**
- **J.S.T. Mfg. Co., Ltd.**

■ SV1000/2000 and Series EX500 input unit DIN rail dimensions and weights

VZ1000 – 11 – 1 – □

∗ As for □, enter the number from the DIN rail dimensions table.

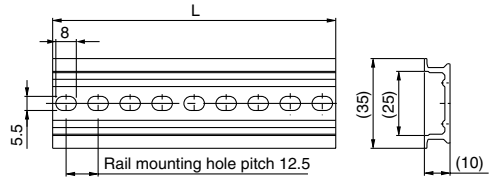


No.	0	1	2	3	4	5	6	7	8	9
L dimension	98	110.5	123	135.5	148	160.5	173	185.5	198	210.5
Weight (g)	17.6	19.9	22.1	24.4	26.6	28.9	31.1	33.4	35.6	37.9
No.	10	11	12	13	14	15	16	17	18	19
L dimension	223	235.5	248	260.5	273	285.5	298	310.5	323	335.5
Weight (g)	40.1	42.4	44.6	46.9	49.1	51.4	53.6	55.9	58.1	60.4
No.	20	21	22	23	24	25	26	27	28	29
L dimension	348	360.5	373	385.5	398	410.5	423	435.5	448	460.5
Weight (g)	62.5	64.9	67.1	69.4	71.6	73.9	76.1	78.4	80.6	82.9
No.	30	31	32	33	34	35	36	37	38	39
L dimension	473	485.5	498	510.5	523	535.5	548	560.5	573	585.5
Weight (g)	85.1	87.4	89.6	91.9	94.1	96.4	98.6	100.9	103.1	105.4
No.	40	41	42	43	44	45	46	47	48	49
L dimension	598	610.5	623	635.5	648	660.5	673	685.5	698	710.5
Weight (g)	107.6	109.9	112.1	114.4	116.6	118.9	121.1	123.4	125.6	127.9
No.	50	51	52	53	547	55	56	57	58	59
L dimension	723	735.5	748	760.5	731	785.5	798	810.5	823	835.5
Weight (g)	130.1	132.4	134.6	136.9	39.1	141.4	143.6	145.9	148.1	150.4
No.	60	61	62	63	64	65	66	67	68	69
L dimension	848	860.5	873	885.5	898	910.5	923	935.5	948	960.5
Weight (g)	152.6	154.9	157.1	159.4	161.6	163.9	166.1	168.4	170.6	172.9
No.	70	71								
L dimension	973	985.5								
Weight (g)	175.1	177.4								

■ SV3000 and 4000 DIN rail dimensions and weights

VZ1000 – 11 – 4 – □

∗ As for □, enter the number from the DIN rail dimensions table.



No.	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L dimension	98	110.5	123	135.5	148	160.5	173	185.5	198	210.5	223	233.5	248	260.5	273	285.5	298	310.5	323	335.5	348
Weight (g)	24.8	28	31.1	34.3	37.4	40.6	43.8	46.9	50.1	53.3	56.4	59.6	62.7	65.9	69.1	72.2	75.4	78.6	81.7	84.9	88
No.	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
L dimension	360.5	373	385.5	398	410.5	423	435.5	448	460.5	473	485.5	498	510.5	523	535.5	548	560.5	573	585.5	598	610.5
Weight (g)	91.2	94.4	97.5	100.7	103.9	107	110.2	113.3	116.5	119.7	122.8	126	129.2	132.3	135.5	138.6	141.8	145	148.1	151.3	154.5
No.	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62
L dimension	623	635.5	648	660.5	673	685.5	698	710.5	723	735.5	748	760.5	773	785.5	798	810.5	823	835.5	848	860.5	873
Weight (g)	157.6	160.8	163.9	167.1	170.3	173.4	176.6	179.8	182.9	186.1	189.2	192.4	195.6	198.7	201.9	205.1	208.2	211.4	214.5	217.7	220.9
No.	63	64	65	66	67	68	69	70	71												
L dimension	885.5	898	910.5	923	935.5	948	960.5	973	985.5												
Weight (g)	224	227.2	230.4	233.5	236.7	239.8	243	246.2	249.3												

Manifold Option

■ Interface regulator

How to order interface regulator

Series SV1000

SV1 0 00 — P — 05

Applicable valve

0	For single, double
3	For 3 position

Option

05	With pressure gauge [For odd number station]
06	With pressure gauge [For even number station]
M1	Without pressure gauge

Regulating port

P	P port
A1	A port (P controlled type, A port regulation)
B1	B port (P controlled type, B port regulation)

Note) In the case of Series SV1000 with a pressure gauge when mounting on the manifold, use caution that the part numbers are different between the odd no. stations and the even no. stations to avoid pressure gauges from interfering from each others.

Note) Use caution that the part numbers will be differed depending on the one for single/double and 3 position due to the different length of solenoid valves. Also, when at least the one for 3 position is included in the same manifold, use all the ones for 3 position.

Series SV2000/SV3000/SV4000

SV 2 000 — P — 00

Series

2	SV2000
3	SV3000
4	SV4000

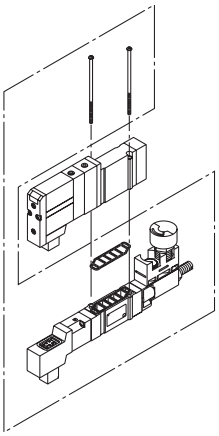
Option

00	With pressure gauge
M1	Without pressure gauge

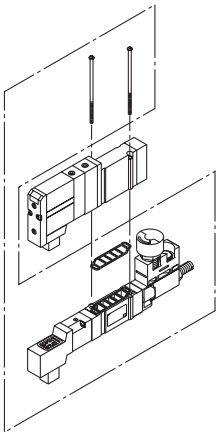
Regulating port

P	P port
A1	A port (P controlled type, A port regulation)
B1	B port (P controlled type, B port regulation)

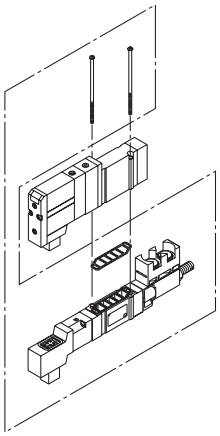
SV1000-□-05
(For mounting odd number stations)



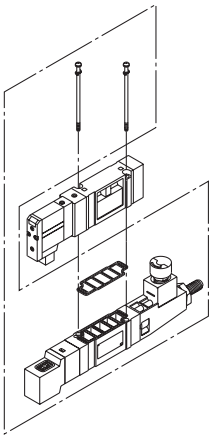
SV1000-□-06
(For mounting even number stations)



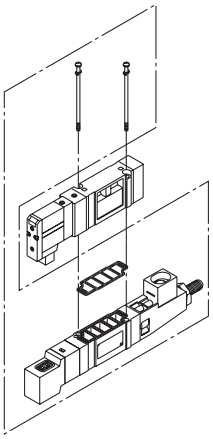
SV1000-□-M1



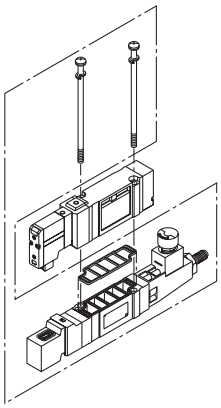
SV2000-□-00



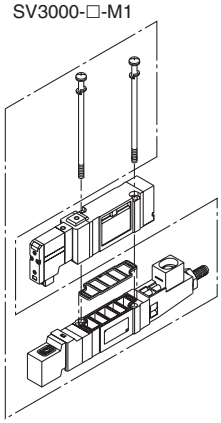
SV2000-□-M1



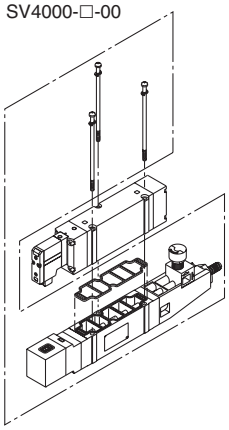
SV3000-□-00



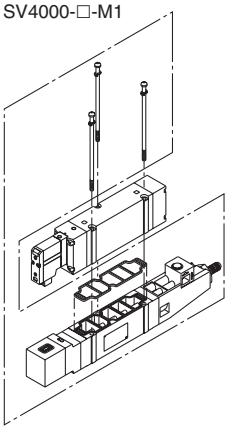
SV3000-□-M1



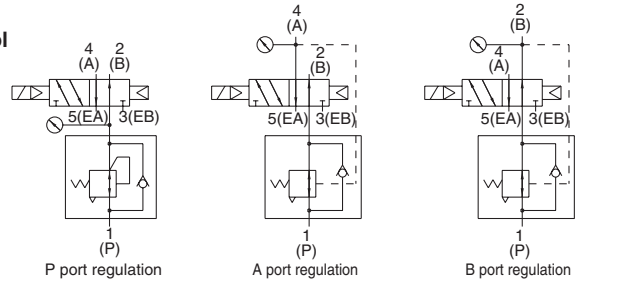
SV4000-□-00



SV4000-□-M1



JIS Symbol



Accessory

Series	Round head combination screw	Gasket
SV1000	SX3000-22-9 (M2 x 39.5)	SX3000-57-4
SV2000	SV2000-21-7 (M3 x 53)	SX5000-57-6
SV3000	SV3000-21-4 (M4 x 57)	SX7000-57-5
SV4000	SV2000-21-8 (M3 x 69.5)	SY9000-11-2

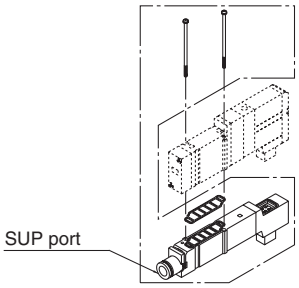
⚠ Caution

Mounting Screw Tightening Torques

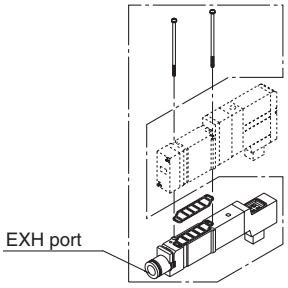
M2: 0.15 N·m
M3: 0.6 N·m
M4: 1.4 N·m

Manifold Option

■ Individual SUP spacer assembly



■ Individual EXH spacer assembly



How to order individual SUP/EXH spacer assembly

Series SV1000

SV1000 — 38 — 1A — C6

Port size

C3	One-touch fitting for ø3.2
C4	One-touch fitting for ø4
C6	One-touch fitting for ø6
N1	One-touch fitting for ø1/8"
N3	One-touch fitting for ø5/32"
N7	One-touch fitting for ø1/4"

Spacer type

38	Individual SUP spacer
39	Individual EXH spacer

Series SV2000/SV3000/SV4000

SV 2 000 — 38 — 1 □ A

Series

2	SV2000
3	SV3000
4	SV4000

Thread type Note)

Nil	Rc
F	G
N	NPT
T	NPTF

Note) SV2000/3000/4000 port size

Series	Port size
SV2000	1/8
SV3000	1/4
SV4000	

Accessory

Series	Round head combination screw	Gasket
SV1000	SX3000-22-9 (M2 x 39.5)	SX3000-57-4
SV2000	SV2000-21-6 (M3 x 46)	SY5000-11-15
SV3000	SV3000-21-3 (M4 x 53)	SY7000-11-11
SV4000	SV2000-21-5 (M3 x 60)	SY9000-11-2