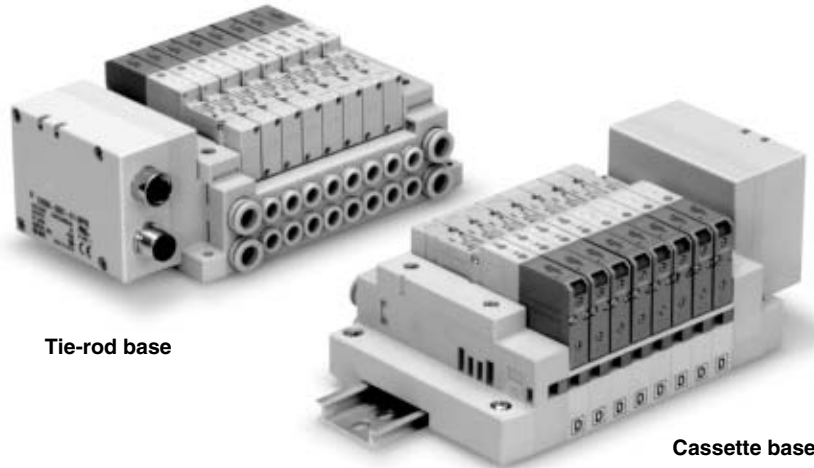


# Decentralized Serial Wiring

## 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

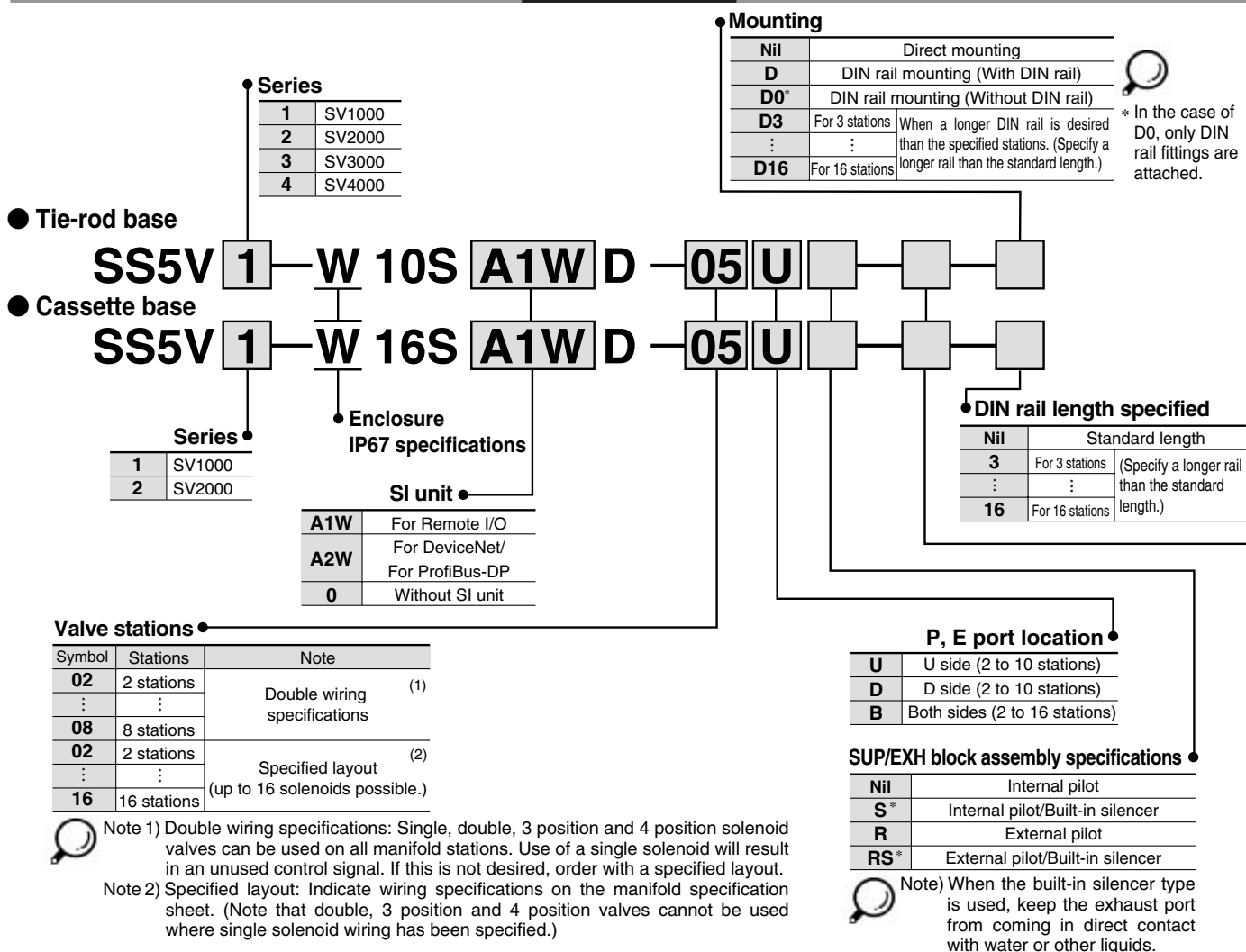
SX

# Series EX500

## Decentralized Serial Wiring

# Series SV

### How to Order



**Series**

1	SV1000
2	SV2000
3	SV3000
4	SV4000

**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

**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	Specified layout (2) (up to 16 solenoids possible.)
02	2 stations	
:	:	
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 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.)

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

**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)**

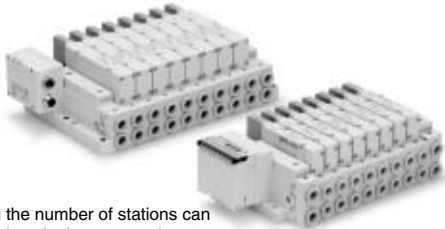
Symbol	A, B port	P, E port	Applicable series
N1	One-touch fitting for ø1/8"	One-touch fitting for ø5/16"	SV1000
N3	One-touch fitting for ø5/32"		
N7	One-touch fitting for ø1/4"		
N3	One-touch fitting for ø5/32"	One-touch fitting for ø3/8"	SV2000
N7	One-touch fitting for ø1/4"		
N9	One-touch fitting for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

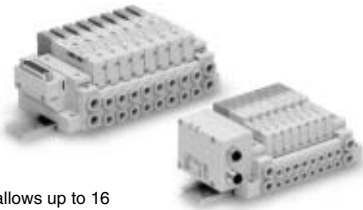
## Flow Characteristics

Model	Port size		Flow characteristics					
	1, 5, 3 (P, EA, EB)	4, 2 (A, B)	1 → 4/2 (P → A/B)			4/2 → 3/5 (A/B → E)		
			C [dm <sup>3</sup> /(s·bar)]	b	Cv	C [dm <sup>3</sup> /(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 (P, EA, EB)	4, 2 (A, B)	1 → 4/2(P → A/B)			4/2 → 3/5(A/B → E)		
			C [dm <sup>3</sup> /(s·bar)]	b	Cv	C [dm <sup>3</sup> /(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)

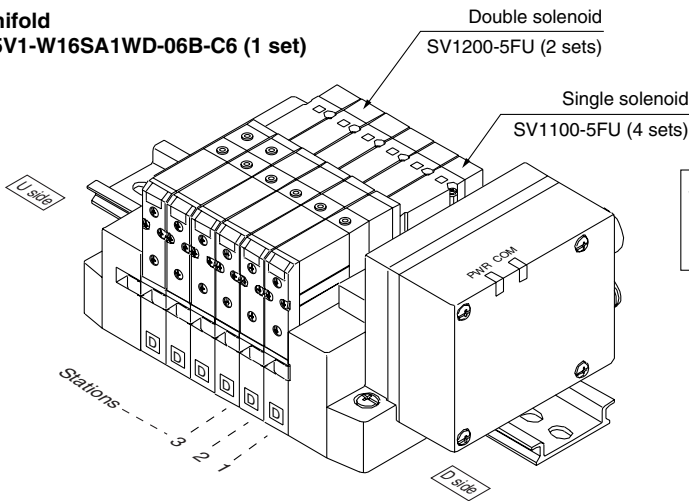
\* Enclosure of a gateway unit and input manifold is IP65.

## 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.)

**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

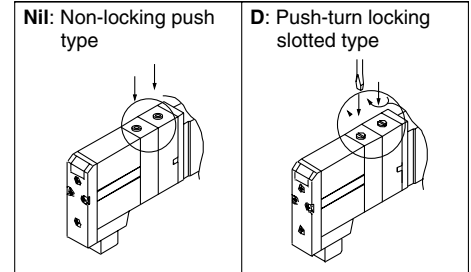
Refer to Precautions 2 on page 1-2-9.

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**

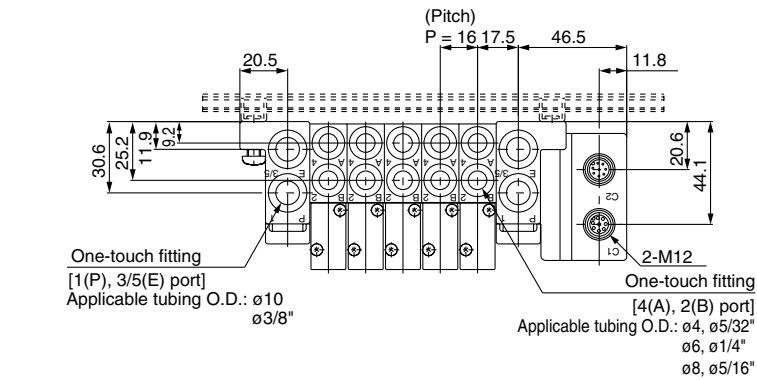
5	24 VDC
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# Series SV

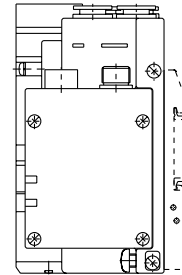
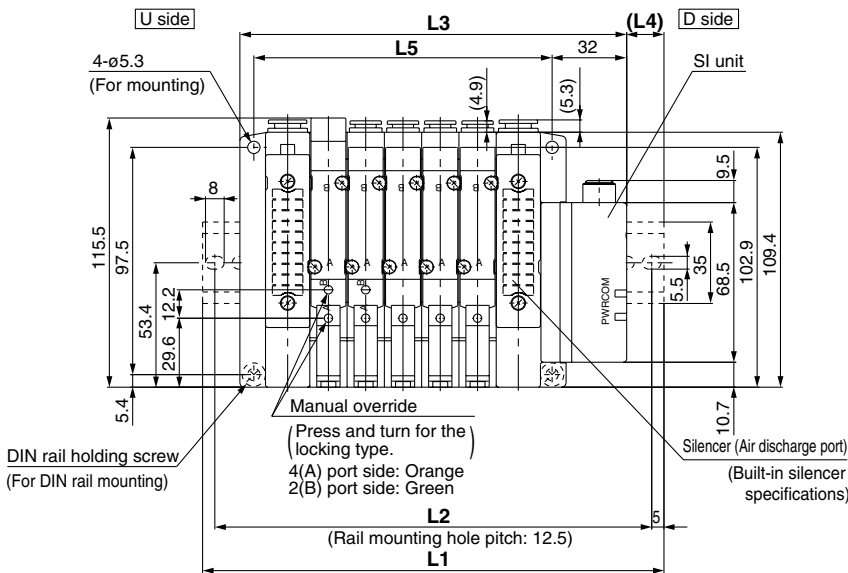
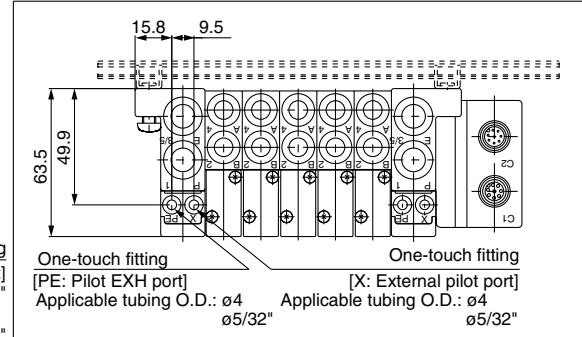
## Dimensions: Series SV2000 for EX500 Decentralized Serial Wiring

● 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)

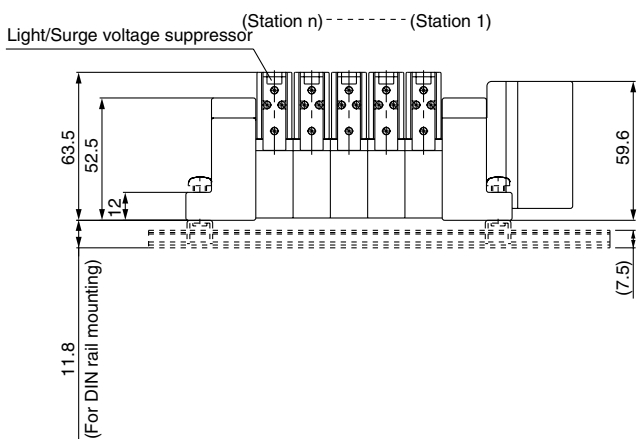
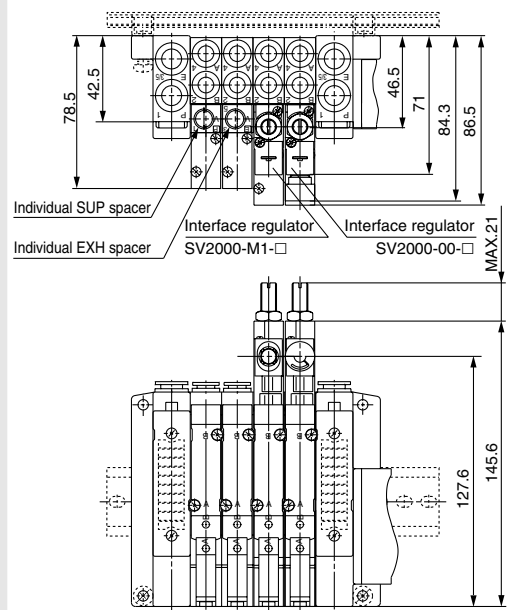
- When P, E port outlets are indicated on the U side or D side, the P, E ports on the opposite side are plugged.
- External pilot port positions and silencer discharge port positions are the same as P, E port outlet positions.



### 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