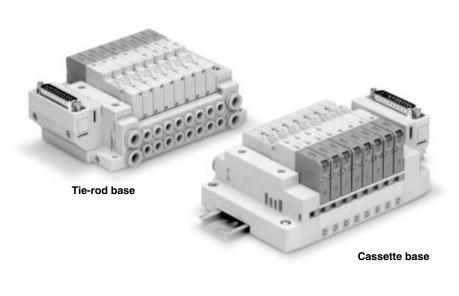
# **D-sub Connector**

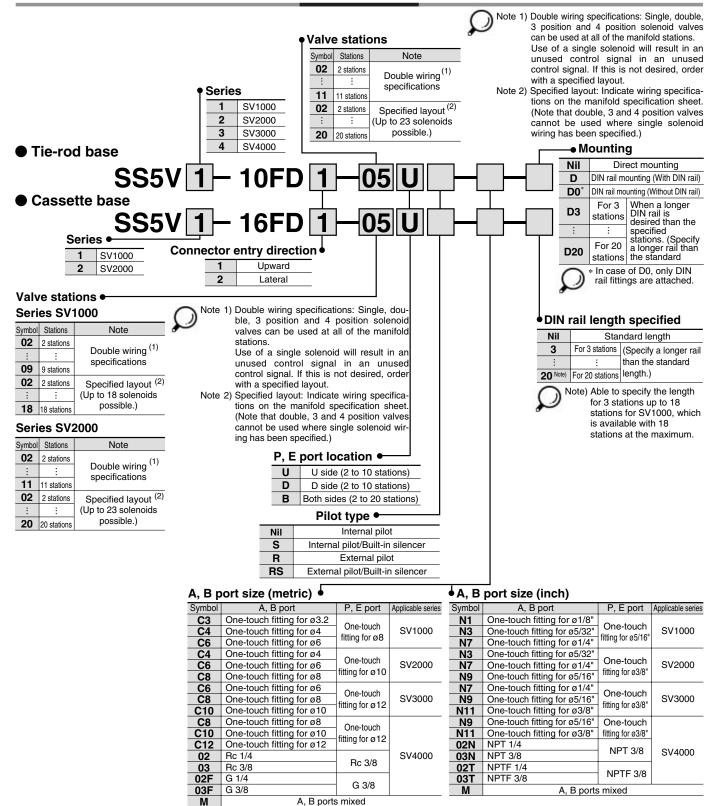


Appliachle corice	Cassette base manifold SV1000/SV2000
Applicable series	Tie-rod base manifold SV1000/SV2000/SV3000/SV4000
	Number of connectors: 25 pins     MIL-C-24308 Conforming to JIS-X-5101

SV	
SZ	
SY	
SYJ	
SX	

# D-sub Connector Series SV

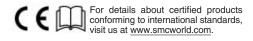
How to Order



\* 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



#### Manifold Specifications

	-					
Ap	plicable series	SV1000	SV2000			
Manifold type	)	Stacking type case	sette base manifold			
1 (P: SUP)/3	, 5 (E: EXH) type	Common SUP, EXH				
Valve station	s (maximum)	18 stations	20 stations			
Max. number	r of solenoids	18 points	26 points			
	1(P), 3/5(E) port	C8, N9	C10, N11			
Port size	4(A) 0(D) port	C3, C4, C6	C4, C6, C8			
	4(A), 2(B) port	N1, N3, N7	N3, N7, N9			

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

#### **Flow Characteristics**

	Port size		Flow characteristics									
Model	1, 5, 3	4, 2		$1 \rightarrow 4/2 \ (P \rightarrow A/B)$	4	$4/2 \rightarrow 3/5 (A/B \rightarrow 1)$	E)					
	(P, EA, EB)	(A, B)	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**

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

#### **Flow Characteristics**

Port	Port size		Flow characteristics									
1, 5, 3	4, 2		$1 \rightarrow 4/2(P \rightarrow A/B)$		$4/2 \rightarrow 3/5(A/B \rightarrow E)$							
(P, EA, EB)	(A, B)	C [dm <sup>3</sup> /(s·bar)]	b	Cv	C [dm <sup>3</sup> /(s·bar)]	b	Cv					
C8	C6	0.98	0.26	0.24	1.1	0.35	0.28					
C10	C8	2.1	0.20	0.46	2.4	0.18	0.48					
C12	C10	4.2	0.22	0.91	4.3	0.21	0.93					
C12	C12	6.2 0.19 1.3 7.0 0.18										
	1, 5, 3 (P, EA, EB) C8 C10 C12	1, 5, 3         4, 2           (P, EA, EB)         (A, B)           C8         C6           C10         C8           C12         C10	1, 5, 3         4, 2         C [dm³/(s·bar)]           (P, EA, EB)         (A, B)         C [dm³/(s·bar)]           C8         C6         0.98           C10         C8         2.1           C12         C10         4.2	$ \begin{array}{c ccccc} 1, 5, 3 & 4, 2 & & 1 \rightarrow 4/2(P \rightarrow A/B) \\ \hline (P, EA, EB) & (A, B) & C \left[ dm^{3}/(s \cdot bar) \right] & b \\ \hline C8 & C6 & 0.98 & 0.26 \\ \hline C10 & C8 & 2.1 & 0.20 \\ \hline C12 & C10 & 4.2 & 0.22 \\ \end{array} $	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $					

C

lote) 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)

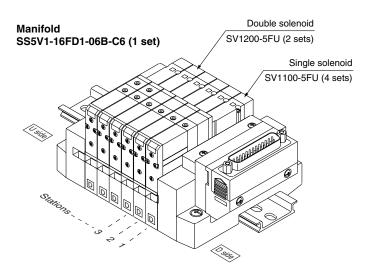
•				
Series	Enclosure (Based on IEC529)			
Series EX500 Decentralized serial wiring	IP67 *			
Series EX250 Serial wiring with input/output onit	IP67			
Series EX120 Dedicated output serial wiring	Dusttight (IP40)			
For circular connector	IP67			
D-sub connector	Dusttight (IP40)			
Flat ribbon cable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

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



## How to Order Valve Manifold Assembly

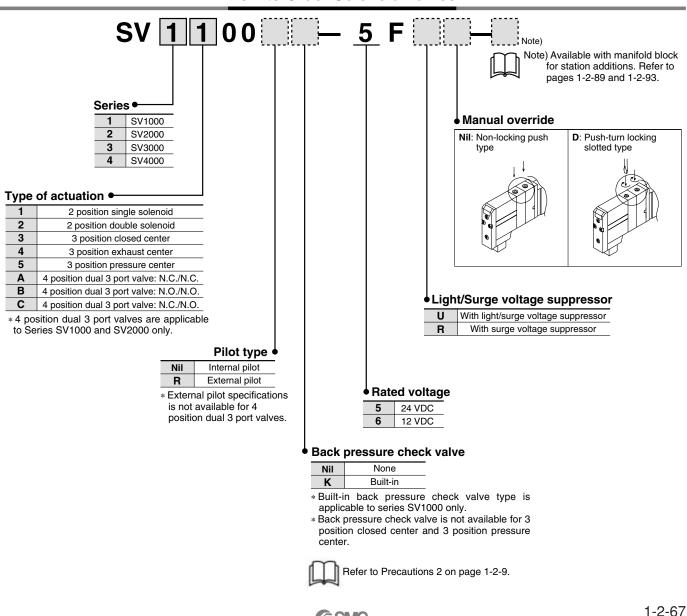
#### Ordering example (SV1000)



SS5V1-16FD1-06B-C61 set (manifold part no.)
*SV1100-5FU······4 sets (Single solenoid part no.)
*SV1200-5FU······2 sets (Double solenoid part no.)

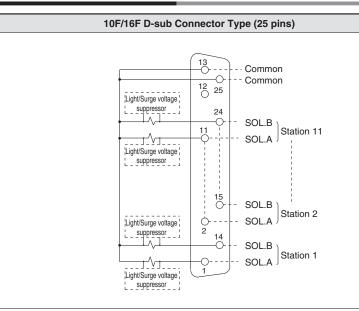
SV
SZ
SY
SYJ
SX

### How to Order Solenoid Valves



**多SMC** 

## **Manifold Electrical Wiring**



• This circuit has double wiring specifications for up to 11 stations. Since the usable number of solenoids differs depending on the manifold type, refer to the table below. In the case of single solenoids, connect to SOL.A. Furthermore, when wiring is specified on the manifold specification sheet, connections are made without skipping any connectors, and signals A for single and A, B for double are in order  $1 \rightarrow 14 \rightarrow 2 \rightarrow 15$ , etc.

Stations are counted from D side (connector side) as the 1st.
Since solenoid valves do not have polarity, either the +COM or -COM can be used.

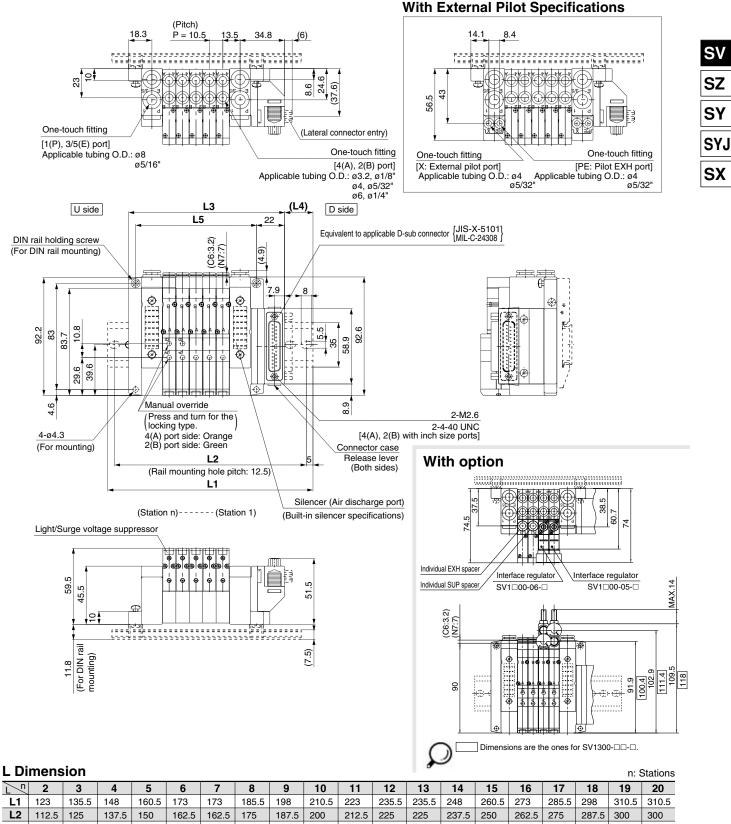
#### **Usable No. of Solenoids**

Model	Max. no. of solenoids					
Tie-rod base type 10	SV1000 to SV4000	23				
Cassette base type 16	SV1000	18				
SV2000		23				

## Dimensions: Series SV1000 for D-sub Connector

# Tie-rod base manifold: SS5V4-10FD<sup>1</sup><sub>2</sub> - Stations <sup>U</sup><sub>B</sub> (S, R, RS) - <sup>C3, N1</sup><sub>C4, N3</sub> (-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.



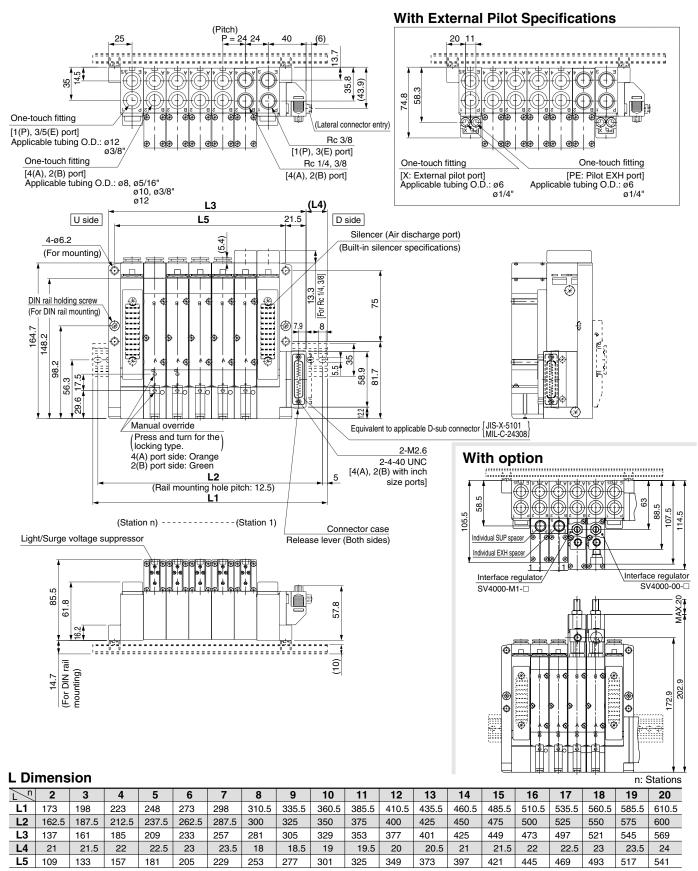
L n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L1	123	135.5	148	160.5	173	173	185.5	198	210.5	223	235.5	235.5	248	260.5	273	285.5	298	310.5	310.5
L2	112.5	125	137.5	150	162.5	162.5	175	187.5	200	212.5	225	225	237.5	250	262.5	275	287.5	300	300
L3	90.5	101	111.5	122	132.5	143	153.5	164	174.5	185	195.5	206	216.5	227	237.5	248	258.5	269	279.5
L4	19.5	20.5	21.5	22.5	23.5	18	19	20	21	22	23	18	19	20	21	22	23	24	18.5
L5	63	73.5	84	94.5	105	115.5	126	136.5	147	157.5	168	178.9	189	199.5	210	220.5	231	241.5	252



## Dimensions: Series SV4000 for D-sub Connector

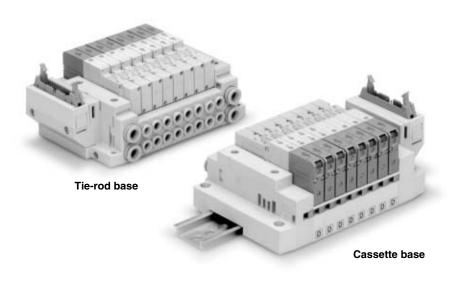
# • Tie-rod base manifold: SS5V4-10FD $_{2}^{1}$ - Stations $B_{B}^{U}(S, R, RS)$ - $\frac{02, C8, N9}{03, C10, N11}(-D)$

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.



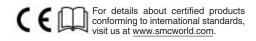


# Flat Ribbon Cable Connector



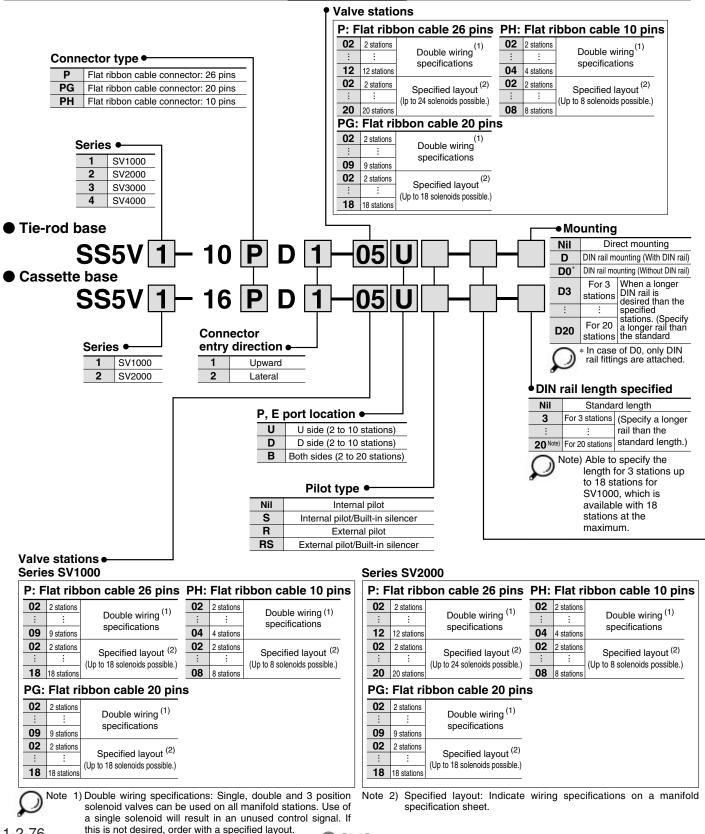
Applicable series	Cassette base manifold SV1000/SV2000
	Tie-rod base manifold SV1000/SV2000/SV3000/SV4000
	<ul> <li>Number of connectors: 26, 20, 10 pins</li> <li>With strain relief Conforming to MIL-C-83503</li> </ul>

SV
SZ
SY
SYJ
SX



# Flat Ribbon Cable Connector Series SV

## How to Order



**G**SMC

#### Double solenoid Manifold SV1200-5FU (2 sets) SS5V1-16PD1-06B-C6 (1 set) Single solenoid SV1100-5FU (4 sets) SS5V1-16PD1-06B-C6.....1 set (manifold part no.) \*SV1100-5FU.....4 sets (Single solenoid part no.) \*SV1200-5FU ......2 sets (Double solenoid part no.) Osido How to Order Solenoid Valves **SV** 1 00 5 Note) Note) Available with manifold block for station additions. Refer to Series • pages 1-2-89 and 1-2-93. 1 SV1000 Manual override 2 SV2000 Nil: Non-locking push D: Push-turn locking 3 SV3000 type slotted type SV4000 4 Type of actuation • 2 position single solenoid 2 2 position double solenoid 3 3 position closed center 4 3 position exhaust center 5 3 position pressure center Α 4 position dual 3 port valve: N.C./N.C. Light/Surge voltage suppressor В 4 position dual 3 port valve: N.O./N.O. Rated voltage With light/surge voltage suppressor U С 4 position dual 3 port valve: N.C./N.O. 24 VDC 5 With surge voltage suppressor \*4 position dual 3 port valves are R 6 12 VDC applicable to Series SV1000 and SV2000 only. Back pressure check valve Pilot type • Nil None Internal pilot Nil Κ Built-in R External pilot \* Built-in back pressure check valve type is applicable to series SV1000 only. \* External pilot specifications \* Back pressure check valve is not available for 3 position closed center and 3 is not available for 4 position position pressure center. dual 3 port valves. Refer to Precautions 2 on page 1-2-9.

### How to Order Valve Manifold Assembly

Ordering example (SV1000)

#### A, B port size (Inch) A, B port size (Metric) A, B port Applicable series A, B port Symbol P, E port P, E port Symbol C3 One-touch fitting for ø3.2 N1 One-touch fitting for ø1/8" One-touch One-touch One-touch fitting for ø4 One-touch fitting for ø5/32" C4 SV1000 N3 fitting for ø8 itting for ø5/16" One-touch fitting for ø1/4" C6 One-touch fitting for ø6 N7 C4 One-touch fitting for ø4 **N**3 One-touch fitting for ø5/32' One-touch One-touch C6 One-touch fitting for ø6 SV2000 N7 One-touch fitting for ø1/4" fitting for ø10 fittina for ø3/8" **C**8 One-touch fitting for ø8 N9 One-touch fitting for ø5/16" C6 One-touch fitting for ø6 N7 One-touch fitting for ø1/4" One-touch One-touch **C**8 One-touch fitting for ø8 SV3000 N9 One-touch fitting for ø5/16" fitting for ø12 fitting for ø3/8" C10 One-touch fitting for ø10 N11 One-touch fitting for ø3/8" **C**8 N9 One-touch fitting for ø8 One-touch fitting for ø5/16" One-touch One-touch C10 One-touch fitting for ø10 N11 One-touch fitting for ø3/8" fitting for ø3/8" fitting for ø12 C12 One-touch fitting for ø12 02N NPT 1/4 NPT 3/8 03N NPT 3/8 02 Rc 1/4 SV4000 Rc 3/8 03 02T NPTF 1/4 Rc 3/8 **NPTF 3/8** 02F G 1/4 03T **NPTF 3/8** G 3/8 G 3/8 03F М A, B ports mixed М A, B ports mixed

_					
	* In the case of	mixed	speci	ficati	ons
	(M), indicate	separa	tely	on	the
	manifold specifi	cation s	heet.		
	* Port sizes of X	PE po	rt for	exte	rnal
	pilot specificati	on (R,	RS)	are	ø4
	(metric), ø5	/32"	(incl	ר)	for

Applicable series

SV1000

SV2000

SV3000

SV4000

(metric), 05/32" (inch) for SV1000/2000 and 06(metric) and 01/4" (inch) for SV3000/4000.

SV

SZ

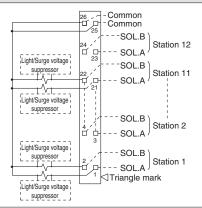
SY

SYJ

SX

# Manifold Electrical Wiring

#### 10P/16P Flat Ribbon Cable Type (26 pins)

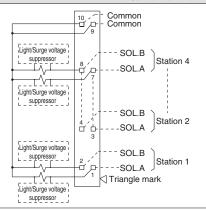


- This circuit has double wiring specifications for up to 12 stations. Since the usable number of solenoids differs depending on the manifold type, refer to the table below. In the case of single solenoids, connect to SOL. A. Furthermore, when wiring is specified on a manifold specification sheet, connections are made without skipping any connectors, and connections are made without skipping any connectors, and signals A for single and A, B for double are in order  $1 \rightarrow 2 \rightarrow 3 \rightarrow 4$ , etc. • Stations are counted from D side (connector side) as the 1st one.
- Since terminal numbers are not indicated on the flat cable, use the triangle mark as a reference for wiring.
- Since solenoid valves do not have polarity, either the +COM or -COM can be used.

#### Usable No. of Solenoids

Model	Max. no. of solenoids	
Tie-rod base type 10	SV1000 to SV4000	24
Cassette base type 16	SV1000	18
Casselle base type 10	SV2000	24

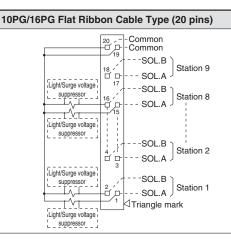
#### 10PH/16PH Flat Ribbon Cable Type (10 pins)



- This circuit has double wiring specifications for up to 4 stations. Since the usable number of solenoids differs depending on the manifold type, refer to the table below. In the case of single solenoids, connect to SOL. A. Furthermore, when wiring is specified on a manifold specification sheet, connections are made without skipping any connectors, connections are made without skipping any connectors, and signals A for single and A, B for double are in order  $1 \rightarrow 2 \rightarrow 3 \rightarrow 4$ , etc.
- Stations are counted from D side (connector side) as the 1st one.
- Since terminal numbers are not indicated on the flat cable, use the triangle mark as a reference for wiring
- Since solenoid valves do not have polarity, either the +COM or -COM can be used.

#### Usable No. of Solenoids

Model	Max. no. of solenoids	
	SV1000	
Tie-rod base type 10	to	
	SV4000	8
Cassette base type 16	SV1000	
Casselle base type 10	SV2000	



- This circuit has double wiring specifications for up to 9 stations. Since the usable number of solenoids differs depending on the manifold type, refer to the table below. In the case of single solenoids, connect to SOL. A. Furthermore, when wiring is specified on a manifold specification sheet, connections are made without skipping any connectors, and connections are made without skipping any connectors, and signals A for single and A, B for double are in order  $1 \rightarrow 2 \rightarrow 3 \rightarrow 4$ , etc. • Stations are counted from D side (connector side) as the 1st one.
- Since terminal numbers are not indicated on the flat cable, use the triangle mark as a reference for wiring.
- Since solenoid valves do not have polarity, either the +COM or -COM can be used.

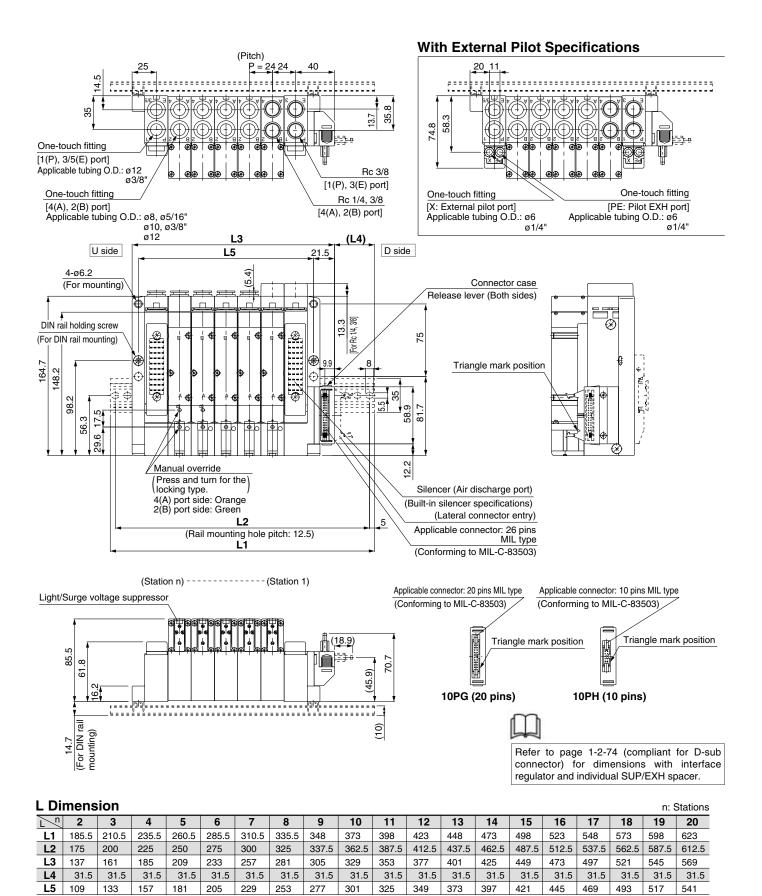
#### Usable No. of Solenoids

Model		Max. no. of solenoids
	SV1000	
Tie-rod base type 10	to	
	SV4000	18
Cassette base type 16	SV1000	
Casselle base type 10	SV2000	

# Dimensions: Series SV4000 for Flat Ribbon Cable

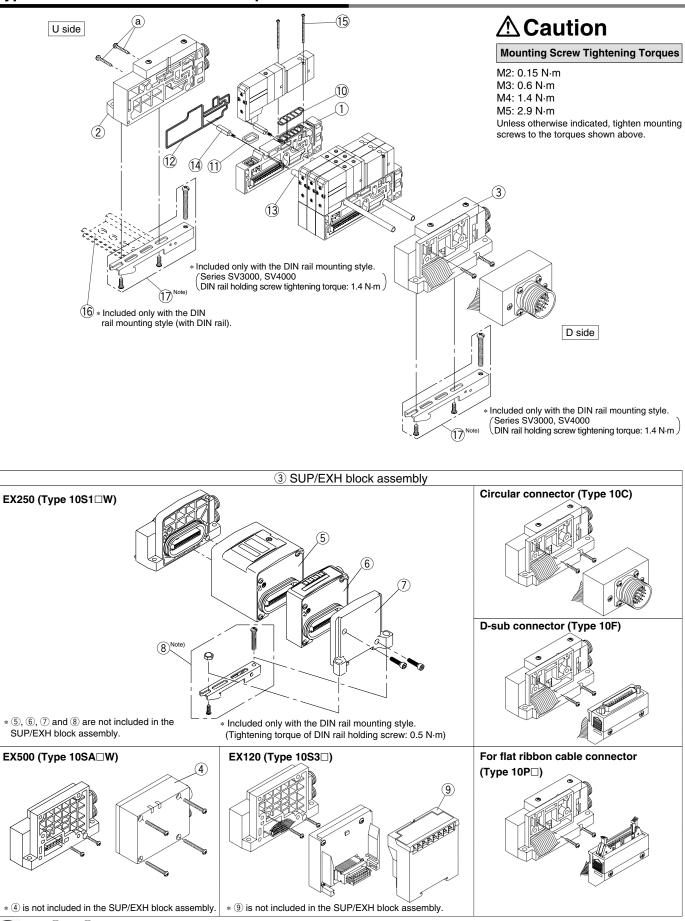
# • Tie-rod manifold: SS5V4-10 $P_{PH}^{P_{G}} D_{2}^{1}$ - Stations $U_{B}^{U}$ (S, R, RS) - $\frac{02}{03}$ , $\frac{C8}{C10}$ , N91 (-D)

•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.



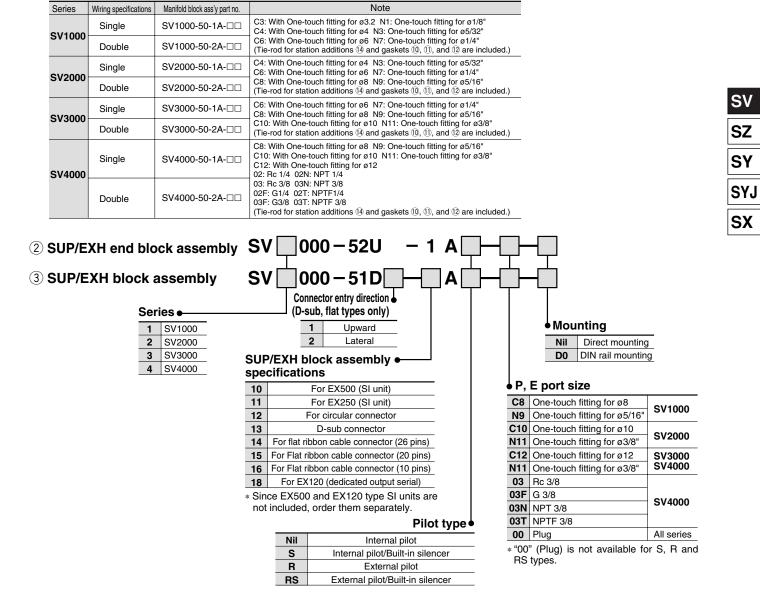


# Type 10: Tie-rod Base Manifold Exploded View



Note) (8) and (7) are for SV2000. Mounting orientation onto DIN rail gets reversed.





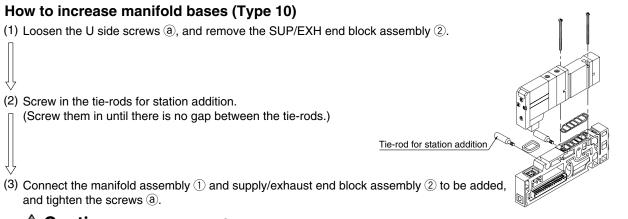
1 Manifold Block Assembly Part No.

Description		Par	t no.		Note
Description	SV1000	SV2000	SV3000	SV4000	Note
Series EX500 SI unit		Refer to pa	age 1-2-26.		
Series EX250 SI unit		EX250	-SDN1		For DeviceNet
		EX25	60-IE1		M12, 2 inputs
Series EX250 input block		EX25	60-IE2		M12, 4 inputs
		EX25	60-IE3		M8, 4 inputs (3 pins)
Series EX250 end plate assembly		EX25	0-EA1		With mounting screws (M3 x 10, 2 pcs.)
EX250 clamp assembly		SV1000-78A			
Series EX120 SI unit		Refer to pa	age 1-2-44.		
Gasket	SX3000-57-4	SX5000-57-6	SX7000-57-5	SY9000-11-2	
Connector gasket	SX3000-146-2	SX3000-146-2	SX3000-146-2	SX3000-146-2	
Manifold block gasket	SX3000-181-1	SX5000-138-1	SV3000-65-1	SV4000-65-1	
Tie-rod	SV1000-55-1-□□	VZ1000-11-1-□	SV3000-55-1-□□	VZ1000-11-4-□	□□: Manifold stations
Tie-rod for station addition	SV1000-55-2-1	SV2000-55-2A	SV3000-55-2A	SV4000-55-2A	
Round head combination screw	SX3000-22-2	SV2000-21-1	SV3000-21-1	SV2000-21-2	
(Valve mounting screw)	(M2 x 24)	(M3 x 30)	(M4 x 35)	(M3 x 40)	
DIN rail	SV4000-55-1-□□	SV4000-55-1-□□	VZ1000-11-4-□	VZ1000-11-4-□	Refer to DIN rail dimension tables on page 1-2-97.
Clamp assembly	SV1000-69A	SV1000-69A	SV3000-69A	SV3000-69A	
	Series EX250 SI unit Series EX250 input block Series EX250 end plate assembly EX250 clamp assembly Series EX120 SI unit Gasket Connector gasket Manifold block gasket Tie-rod Tie-rod for station addition Round head combination screw (Valve mounting screw) DIN rail Clamp assembly	Sv1000       Series EX500 SI unit       Series EX250 SI unit       Series EX250 input block       Series EX250 end plate assembly       EX250 clamp assembly       Series EX120 SI unit       Gasket       SX3000-57-4       Connector gasket       SX3000-146-2       Manifold block gasket       SV1000-55-1-□□       Tie-rod       SV1000-55-2-1       Round head combination screw       (Valve mounting screw)       (M2 x 24)       DIN rail       SV1000-69A	Description         SV1000         SV2000           Series EX500 SI unit         Refer to pa           Series EX250 SI unit         EX250           Series EX250 input block         EX250           Series EX250 end plate assembly         EX250           Series EX250 clamp assembly         SV1000           Series EX120 SI unit         Refer to pa           Gasket         SX3000-57-4           SX3000-146-2         SX3000-146-2           Manifold block gasket         SX3000-181-1           SV1000-55-1-□         VZ1000-111-1-□           Tie-rod         SV1000-55-2-1           Round head combination screw         SX3000-22-2           (Valve mounting screw)         (M2 x 24)           DIN rail         SV4000-55-1-□           SV1000-69A         SV1000-69A	SV1000         SV2000         SV3000           Series EX500 SI unit         Refer to page 1-2-26.           Series EX250 SI unit         EX250-SDN1           Series EX250 input block         EX250-IE1           Series EX250 end plate assembly         EX250-IE3           Series EX250 clamp assembly         EX250-IE3           Series EX120 SI unit         Refer to page 1-2-44.           Gasket         SX3000-57-4         SX5000-57-6           Gasket         SX3000-146-2         SX3000-146-2           Manifold block gasket         SX3000-181-1         SV5000-57-5           Tie-rod         SV1000-55-1-III         SV3000-55-1           Tie-rod for station addition         SV1000-55-2-1         SV2000-55-2A           Round head combination screw         SX3000-22-2         SV2000-21-1           (M2 x 24)         (M3 x 30)         (M4 x 35)           DIN rail         SV4000-55-1-III         SV1000-69A         SV3000-69A	Description         SV1000         SV2000         SV3000         SV4000           Series EX500 SI unit         Refer to page 1-2-26.         EX250-SDN1         EX250-SDN1           Series EX250 SI unit         EX250-IE1         EX250-IE2         EX250-IE3           Series EX250 end plate assembly         EX250-EA1         EX250-IE3           Series EX250 clamp assembly         SV1000-78A         Series EX120 SI unit         SV1000-78A           Series EX120 SI unit         Refer to page 1-2-44.         Gasket         SX3000-57-4         SX5000-57-6         SX7000-57-5         SY9000-11-2           Connector gasket         SX3000-146-2         SX3000-146-2         SX3000-146-2         SX3000-146-2           Manifold block gasket         SV1000-55-1-III         VZ1000-11-1-III         SV3000-65-1         SV4000-65-1           Tie-rod         SV1000-55-2-1         SV2000-21-1         SV3000-25-2A         SV4000-65-2A           Round head combination screw         SX3000-22-2         SV2000-21-1         SV3000-21-1         SV2000-21-2           (Valve mounting screw)         (M2 x 24)         (M3 x 30)         (M4 x 35)         (M3 x 40)

te) Two pieces of (13 and (14) (tie-rod) are required for Series SV1000, and three pieces are required for Series SV2000, 3000 and 4000. Two pieces of (15) (valve mounting screw) are required for Series SV1000, 2000 and 3000, and three pieces are required for Series SV4000.

**SMC** 

# Type 10: Tie-rod Base Manifold



## **Caution** Tightening torques ⓐ

 rightening torque.	J
SV1000, SV2000	0.6 N∙m
SV3000	1.4 N⋅m
SV4000	2.9 N⋅m

Note) When eliminating manifold stations, the appropriate tie-rods (3) for the desired change should be ordered separately. (When equipped with a DIN rail, be sure to tighten the DIN rail holding screws after tightening the tension bolts.)

# **A**Caution

#### **Fitting Assembly Replacement**

By replacing manifold fitting assemblies, it is possible to change the size of the A, B ports and P, E ports. To replace them, remove the clip with a flat head screwdriver, etc., and pull out the fitting assembly.

Mount the new fitting assembly by inserting it and then replacing the clip to its fully inserted position.

#### Fitting Assembly Part No.

	Port size	SV1000	SV2000	SV3000	SV4000
	One-touch fitting for ø3.2	VVQ1000-50A-C3	_	_	_
	One-touch fitting for ø4	VVQ1000-50A-C4	VVQ1000-51A-C4	_	_
	One-touch fitting for ø6	VVQ1000-50A-C6	VVQ1000-51A-C6	VVQ2000-51A-C6	_
	One-touch fitting for ø8	_	VVQ1000-51A-C8	VVQ2000-51A-C8	VVQ4000-50B-C8
	One-touch fitting for ø10	_	_	VVQ2000-51A-C10	VVQ4000-50B-C10
Port	One-touch fitting for ø12	_	_	_	VVQ4000-50B-C12
8	One-touch fitting for ø1/8"	VVQ1000-50A-N1	_	_	_
Ý.	One-touch fitting for ø5/32"	VVQ1000-50A-N3	VVQ1000-51A-N3	_	—
	One-touch fitting for ø1/4"	VVQ1000-50A-N7	VVQ1000-51A-N7	VVQ2000-51A-N7	_
	One-touch fitting for ø5/16"	_	VVQ1000-51A-N9	VVQ2000-51A-N9	VVQ4000-50B-N9
-	One-touch fitting for ø3/8"	_	_	VVQ2000-51A-N11	VVQ4000-50B-N11
	1/4 threaded type port block assembly	_	_	_	SY9000-58A-02□
	3/8 threaded type port block assembly	_	_	_	SY9000-58A-03□
	One-touch fitting for ø8	VVQ1000-51A-C8	_	_	_
τ	One-touch fitting for ø10	-	VVQ2000-51A-C10	—	_
Port	One-touch fitting for ø12	_	_	VVQ4000-50B-C12	VVQ4000-50B-C12
ш	One-touch fitting for ø5/16"	VVQ1000-51A-N9	_	_	_
₽ -	One-touch fitting for ø3/8"	_	VVQ2000-51A-N11	VVQ4000-50B-N11	VVQ4000-50B-N11
-	3/8 threaded type port block assembly	_	_	_	SY9000-58B-03□

SV

SZ

SY

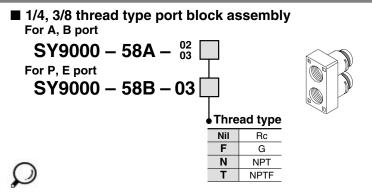
SYJ

SX

Fitting assembly

Clip

O-ring



Note 1) Be careful to avoid damage or contamination of O-rings, as this can cause air leakage.

Note 2) When removing a fitting assembly from a valve, after removing the clip, attach tubing or a plug (KQP-UD) to the One-touch fitting, and pull it out while holding the tubing (or plug). If it is pulled out while holding the release button of the fitting assembly (resin part), the release button may be damaged.

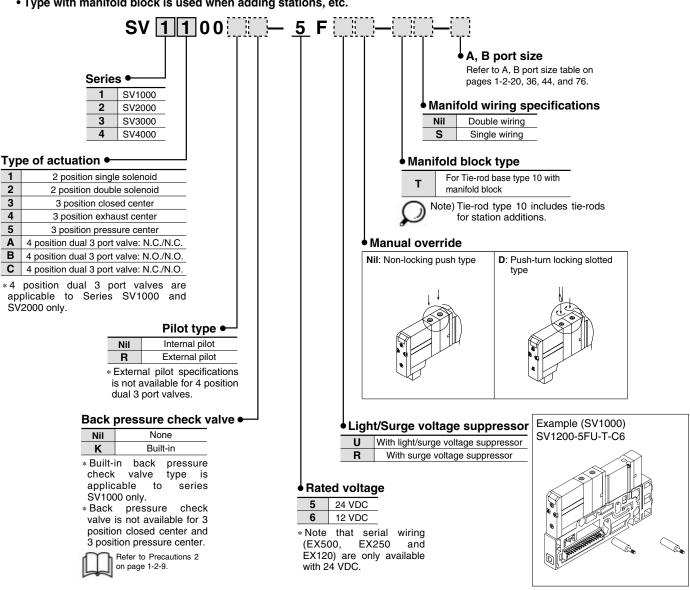
However, 02 and 03 port block assemblies should be pulled out as they are.

Note 3) Be sure to shut off the power and air supplies before disassembly. Furthermore, since air may remain inside the actuator, piping and manifold, confirm that the air is completely exhausted before performing any work.

#### ■ How to order tie-rod type 10 solenoid valves with manifold block

#### [Series SV1000 to SV4000]

• Type with manifold block is used when adding stations, etc.



SMC

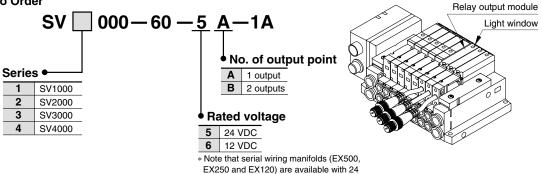
# Series SV Manifold Option (Common for Type 16 and 10)

#### 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.

VDC only.

#### How to Order



### **Relay Output Module Specifications**

Item	Specifications				
No. of output points	1 output [connector with lead wire (M12)]		2	outputs [connecto	r with lead wire (M12)]
	4 pins connector (M12) plug		4 pins conne	ctor (M12) plug	
Output type	1. — 2. Output A 3. — 4. Output A ("a" contact type ("a" contact)	2 3 3 4 Relay output module side pin arrangement	1. Output B 2. Output A 3. Output B 4. Output A	Contact type ("a" contact)	2 3 4 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	Orar	nge		A side: Orange E	3 side: Green
Enclosure	Based on IP67 (IEC529)				
Current consumption	20 mA or less				
Polarity	Non-polar				
weight (g)		48			

#### ■ Y type connector

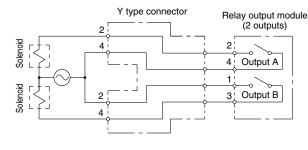
Used to branch a two output relay output module to two separate systems.

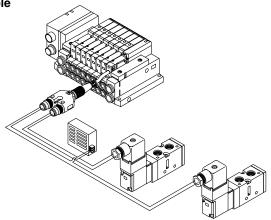
How to Order





#### Relay output module and Y type connector wiring example



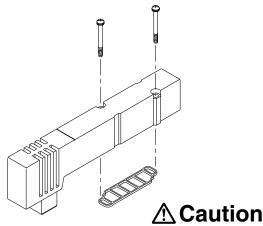


**SMC** 

## **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

M2: 0.15 N⋅m M3: 0.6 N⋅m M4: 1.4 N⋅m

Mounting screw tightening torques

#### SUP/EXH block disk

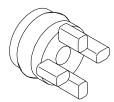
#### [SUP block disk]

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

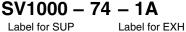
Series	Manifold Model	SUP block disk	EXH block disk
SV1000	10	SV1000-59-1A	SV1000-59-2A
SV1000	16	SX3000-77-1A	SX3000-77-1A
SV2000	10	SV2000-59-1A	SV2000-59-2A
572000	16	SV2000-59-3A	SV2000-59-3A
SV3000	10	SV3000-59-1A	SV3000-59-1A
SV4000	10	SY9000-57-1A	SY9000-57-1A

#### 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.)

block disk

ΕI



Label for SUP block disk



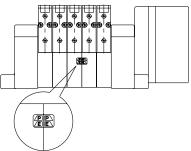
P

	P
E	E

Label for SUP/EXH

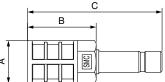
block disk

\* 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

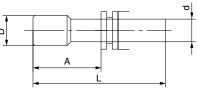
This silencer can be quickly mounted on the manifold's E (exhaust) port.



Series	Model	Effective area	Α	В	С
SV1000 (For ø8)	AN203-KM8	14 mm <sup>2</sup>	ø16	26	51
SV2000 (For ø10)	AN200-KM10	26 m <sup>2</sup>	ø22	53.8	80.8
	AN300-KM10	30 mm <sup>2</sup>	ø25	70	97
SV3000 SV4000 (For ø12)	AN300-KM12	41 mm <sup>2</sup>	ø25	70	98

#### ■ Plug (White)

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



Applicable fitting size d	Model	Α	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

SV

SZ

SY

SYJ

SX

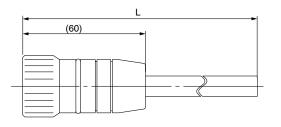


## **Manifold Option**

■ 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.

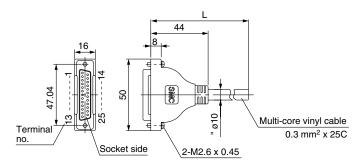
### ■ D-sub connector/Cable assembly (25 pins)

# AXT100 – DS25 – 🗌

L	ead 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
$\bigcirc$	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.



(7.5)

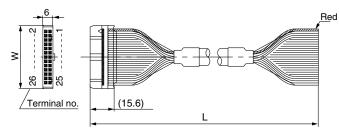
## **Manifold Option**

#### ■ 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

- $\cdot$  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 − 🗌

 $\ast$  As for  $\Box,$  enter the number from the DIN rail dimensions table.

		L .	
-•	8	-	
2			
ы. N		<u>+++++++++++++++++++++++++++++++++++++</u>	(35)
-			<u></u>
	-	Rail mounting hole pitch 12.5	

sv
SZ
SY
SYJ
SX

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

weight (g) 175.1 177.

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# ■ SV3000 and 4000 DIN rail dimensions and weights

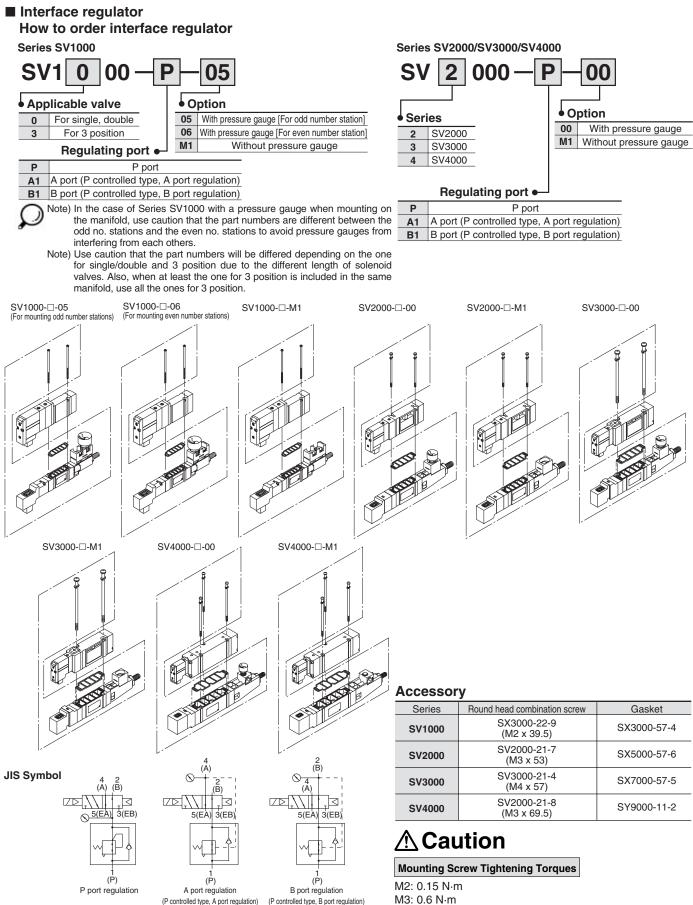
35)

## VZ1000 - 11 - 4 - 🗌

\* As for  $\Box$ , enter the number from the DIN rail dimensions table.

		ומ						Rail mounting hole pitch 12.5					(10)								
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												

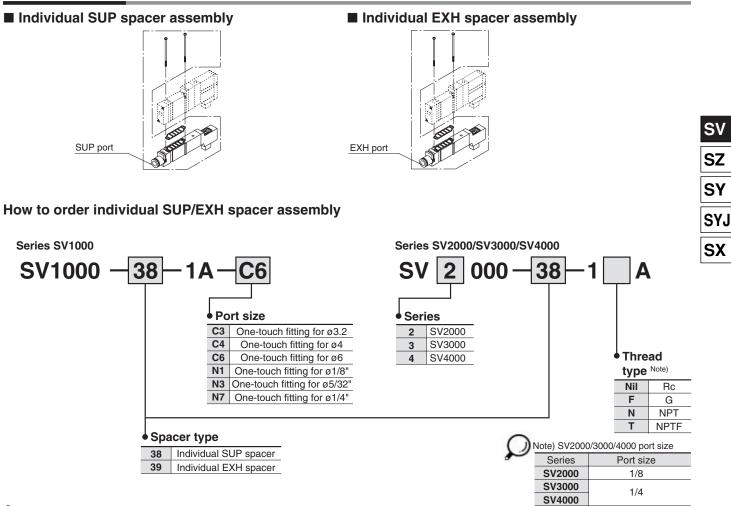
## **Manifold Option**



M3: 0.6 N⋅m M4: 1.4 N⋅m



## **Manifold Option**



#### Accessory

Series	Round head combination screw	Gasket				
SV1000	SX3000-22-9	SX3000-57-4				
311000	(M2 x 39.5)					
SV2000	SV2000-21-6	SY5000-11-15				
572000	(M3 x 46)	315000-11-15				
SV3000	SV3000-21-3	SY7000-11-11				
373000	(M4 x 53)					
SV4000	SV2000-21-5	SY9000-11-2				
374000	(M3 x 60)	319000-11-2				