

5 Port Solenoid Valve

CE **New**

Flow-rate characteristics

C [dm³/(s·bar)]: **0.39**

b: **0.39**

Cv: **0.11**

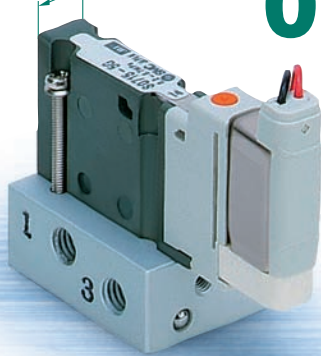
Width: **7 mm**

Power consumption

0.35 w

Cylinder
driving size

Up to **Ø25**



New Serial transmission system is added.

EX180 (For Output)

CC-Link

DeviceNet™

EX260 (For Output)

DeviceNet™

PROFIBUS DP

CC-Link

EtherCAT

PROFINET

New Compatible communication
protocol is added.

EX600 (For Input/Output)

EtherNet/IP™

EtherCAT



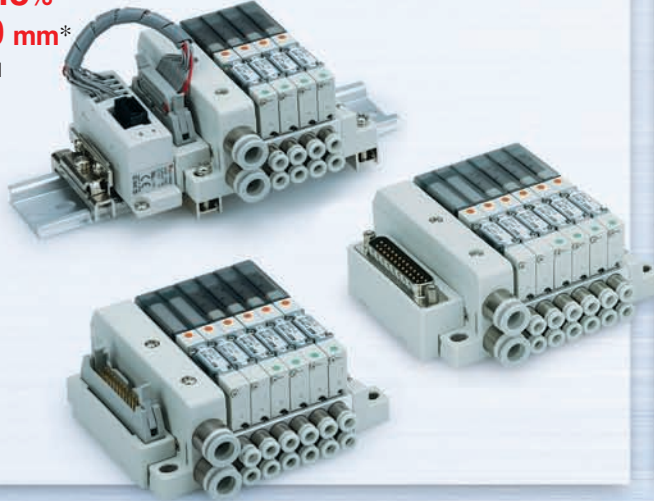
Series **S0700**


CAT.NAS11-88C

5 Port Solenoid Valve

Slim Compact Plug-in Manifold Bar Base

- Footprint: Reduced by **45%***
 - Height: Reduced by **20 mm***
- * Compared with plug-in manifold stacking base



Plug-in Manifold Stacking Base

Many Combinations Available to Fit Your Needs

- Serial transmission
- D-sub connector
- Flat ribbon cable
- PC wiring system compatible flat ribbon cable
- Terminal block box
- Lead wire
- Circular connector
- Connector

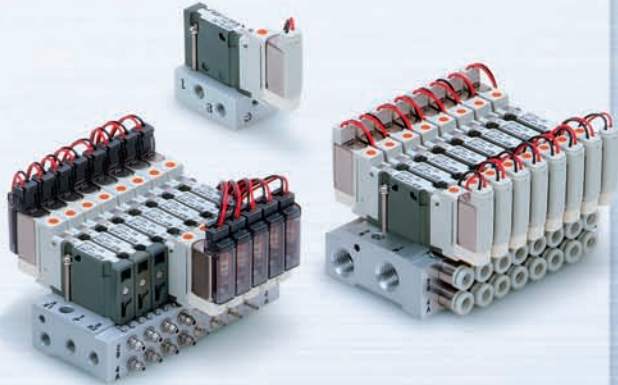
Many Combinations of Serial Transmission Systems Available

S kit

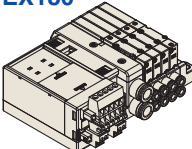
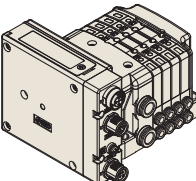
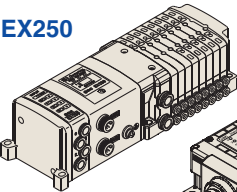
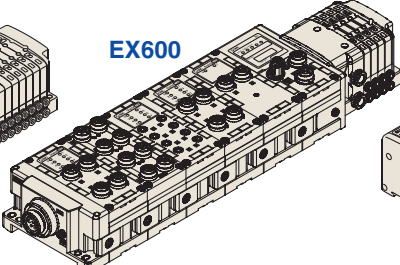
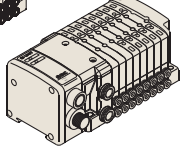
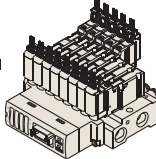
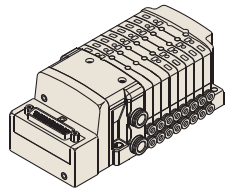
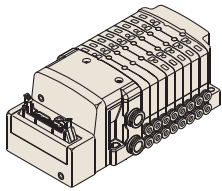
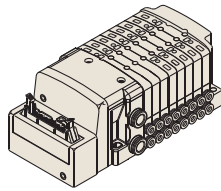
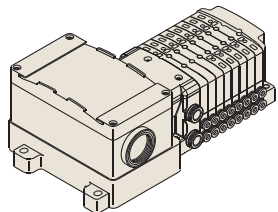
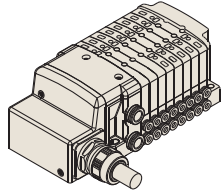
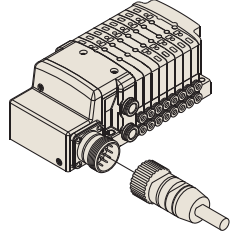
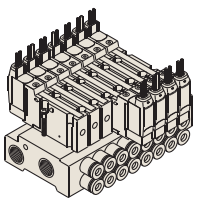
Series	Applicable protocol	Configuration
<p>New EX180</p> <p>For Output Serial Transmission System</p>	<ul style="list-style-type: none"> • CC-Link • DeviceNet™ 	
<p>New EX260</p> <p>For Output Serial Transmission System</p>	<ul style="list-style-type: none"> • DeviceNet™ • PROFIBUS DP • CC-Link • EtherCAT • PROFINET 	
<p>EX250</p> <p>For Input/Output Serial Transmission System</p>	<ul style="list-style-type: none"> • DeviceNet™ • PROFIBUS DP • CANopen • CC-Link • AS-Interface • EtherNet/IP™ 	
<p>EX600</p> <p>For Input/Output Serial Transmission System</p>	<ul style="list-style-type: none"> • DeviceNet™ • PROFIBUS DP • CC-Link New • EtherNet/IP™ New • EtherCAT 	
<p>EX500</p> <p>Gateway-type Serial Transmission System</p>	<ul style="list-style-type: none"> • DeviceNet™ • PROFIBUS DP • CC-Link • EtherNet/IP™ 	
<p>EX510</p> <p>Gateway-type Serial Transmission System</p>	<ul style="list-style-type: none"> • DeviceNet™ • PROFIBUS DP • CC-Link 	

Plug Lead Manifold Bar Base, Single Unit

2 types of manifold pitch are selectable.



Many Combinations Available to Fit Your Needs

S kit Serial Transmission					
EX180 	EX260 	EX250 	EX600 	EX500 	EX510 
F kit D-sub Connector 	P kit Flat Ribbon Cable 	J kit PC Wiring System Compatible Flat Ribbon Cable 	T kit Terminal Block Box 		
L kit Lead Wire 	M kit Circular Connector 	C kit Connector 			

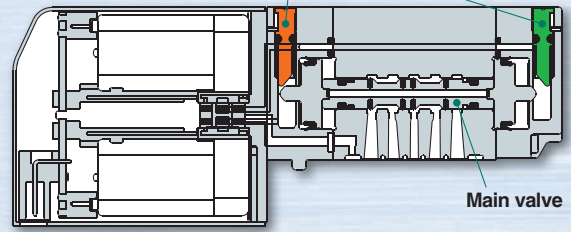
4-Position Dual 3-Port Valve

- Two 3-port valves in one body.
- Independently operating 3-port valve at each side of A and B.
- Number of stations occupied for 3-port valve – halved.
- Available as 4-position 5-port valve.

A side	B side	Symbol
N.C.	N.C.	
N.O.	N.O.	
N.C.	N.O.	

Direct Manual Is Adopted.

Possible to switch the main valve reliably by direct manual override even when pressure is below the operating pressure range during maintenance.

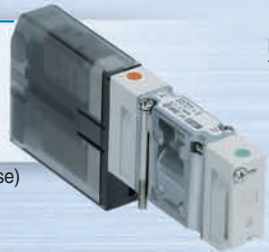


Slim Compact Plug-in Manifold Bar Base

Height

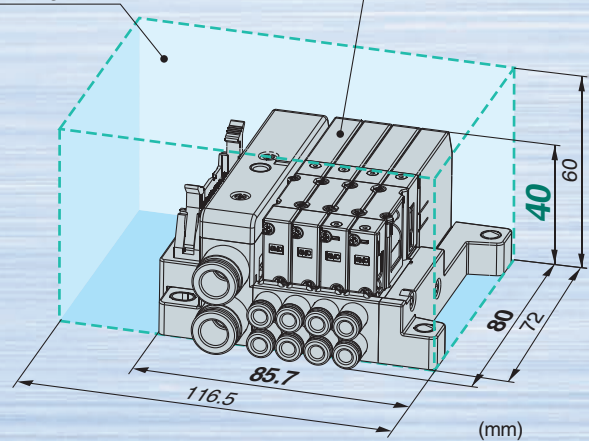
Reduced by 20 mm

(Compared with plug-in manifold stacking base)



Plug-in manifold stacking base

Slim compact plug-in manifold



Footprint

Reduced by 45%

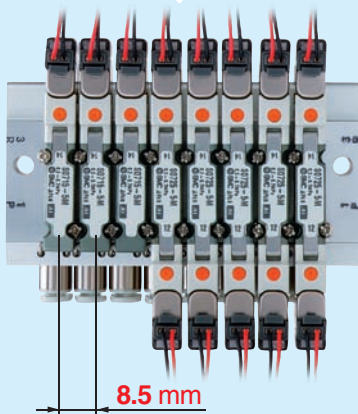
(4-station manifold)

2 Types of Manifold Pitch Are Selectable.

(Plug Lead Manifold Bar Base)

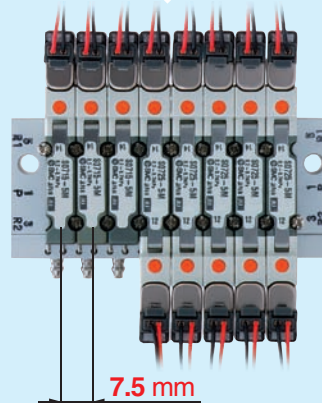
8.5 mm pitch

With one-touch fittings (ø2, ø3.2, ø1/8", ø5/32")



7.5 mm pitch

With barb fittings (ø2, ø3.2, ø4)

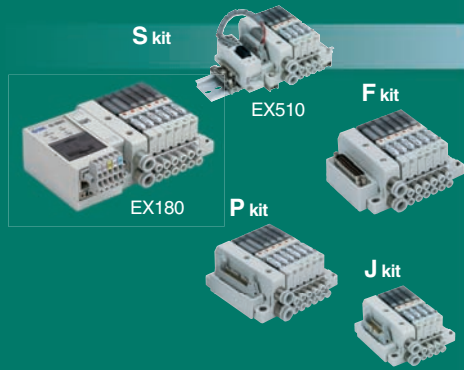


The mounting screw is tightened with the valve.

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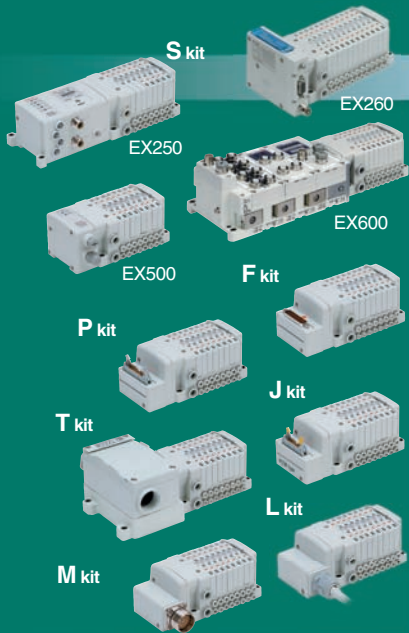
5 Port Solenoid Valve Series S0700

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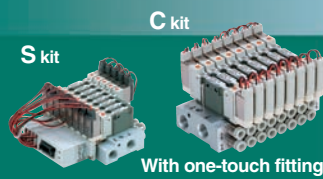
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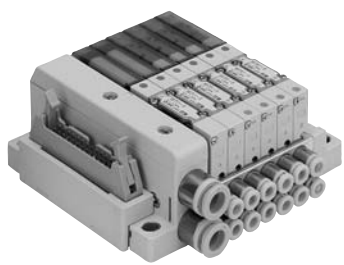
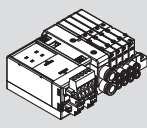
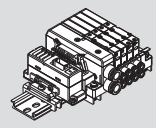

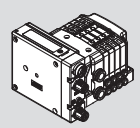
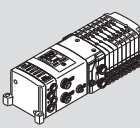
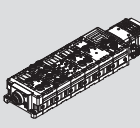
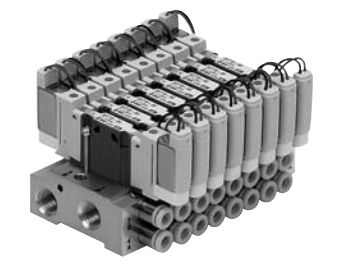
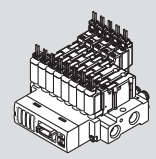
Slim Compact Plug-in Manifold Bar Base

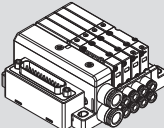
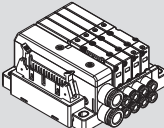
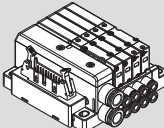
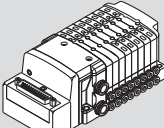
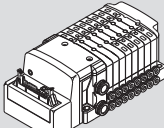
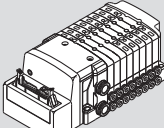
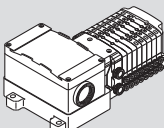
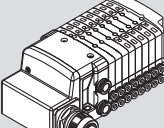
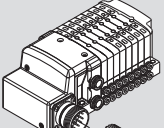
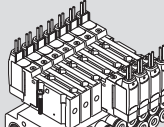
Plug-in Manifold Stacking Base

Plug Lead Manifold Bar Base

Plug Lead Single Unit

Series S0700 Variations

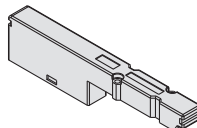
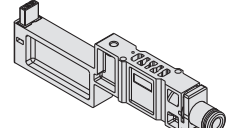
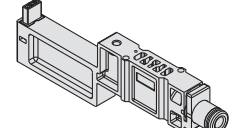
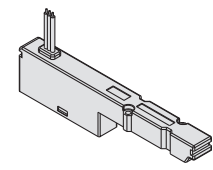
		S kit Serial Transmission (Fieldbus System)							
		EX180 For Output Serial Transmission System	EX260 For Output Serial Transmission System	EX250 For Input/Output Serial Transmission System	EX600 For Input/Output Serial Transmission System	EX500 Gateway-type Serial Transmission System	EX510 Gateway-type Serial Transmission System		
Applicable Network · DeviceNet™ · CC-Link		Applicable Network · DeviceNet™ · PROFIBUS DP · CC-Link · EtherCAT · PROFINET		Applicable Network · DeviceNet™ · PROFIBUS DP · CANopen · CC-Link · AS-Interface · EtherNet/IP™		Applicable Network · DeviceNet™ · PROFIBUS DP · CC-Link · EtherNet/IP™		Applicable Network · DeviceNet™ · PROFIBUS DP · CC-Link	
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	MIL Standard	MIL Standard · 26 pins, 20 pins	MIL Standard · 20 pins				
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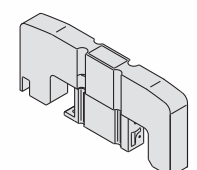
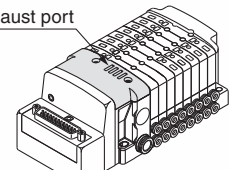
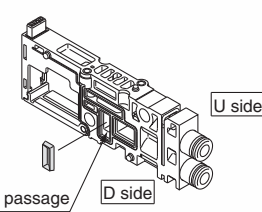
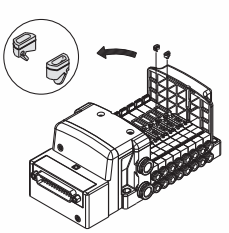
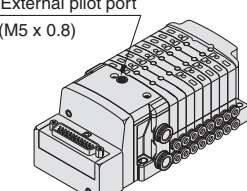
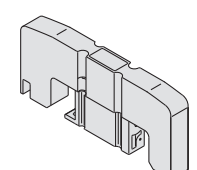
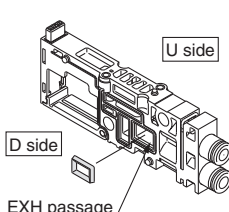
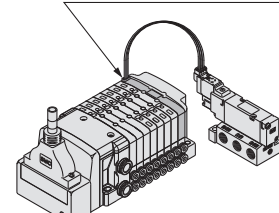
Series S0700

Options

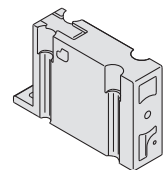
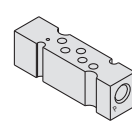
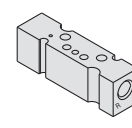
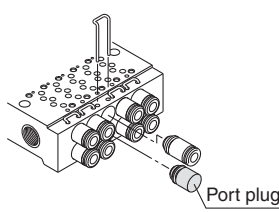
Slim Compact Plug-in Manifold Bar Base / Options

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Plug-in Manifold Stacking Base / Options

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<p>External pilot [-R] Page 69</p> <p>External pilot port (M5 x 0.8)</p> 	<p>Individual SUP/EXH spacer SS0700-PR-1 Page 69</p> 	<p>EXH block plate SS0700-B-R Page 70</p>  <p>EXH passage</p> <p>D side</p> <p>U side</p>	<p>Blanking plate with output SS0700-1C- Page 71</p> <p>Blanking plate with output</p> 

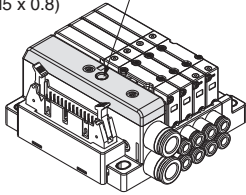
Plug Lead Manifold Bar Base / Options

<p>Blanking plate SS0700-10A-5 Page 85</p> 	<p>Individual SUP spacer SS0700-P-5-M5 Page 85</p>  <p>* Compatible with 8.5 mm pitch only</p>	<p>Individual EXH spacer SS0700-R-5-M5 Page 85</p>  <p>* Compatible with 8.5 mm pitch only</p>	<p>Port plug VVQ000-CP Page 85</p>  <p>Port plug</p>
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External pilot [-R]

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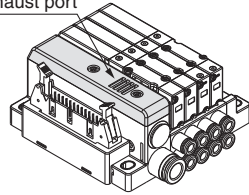
External pilot port
(M5 x 0.8)



**Direct EXH outlet
with built-in silencer [-S]**

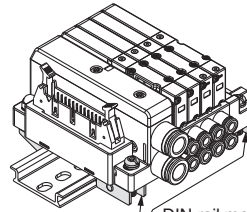
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Exhaust port



**DIN rail mounting bracket
SS0700-57A-3**

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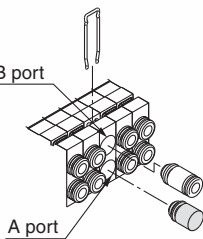


DIN rail mounting
bracket

**Port plug
VVQ0000-CP**

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B port

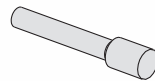


A port

**Blanking plug
(For one-touch fitting)**

KJP-02
KQ2P-23/04/06

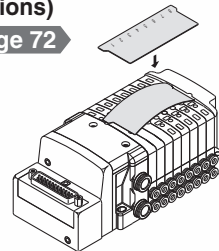
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Name plate [-N]

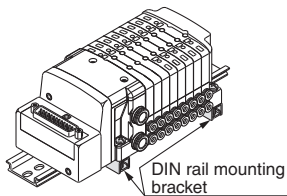
SS0700-N-Station (1 to Max.
stations)

Page 72



**DIN rail mounting bracket
SS0700-57A-□**

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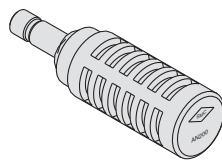


DIN rail mounting
bracket

Silencer (For EXH port)

AN200-KM8

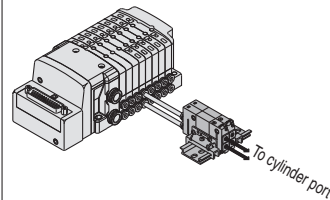
Page 72



**Double check block
(Separated)**

VQ1000-FPG-□□

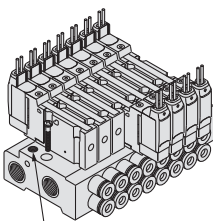
Page 73



To cylinder port

External pilot [-R]

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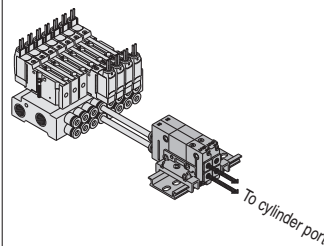


External pilot port
(M3 x 0.5)

**Double check block
(Separated)**

VQ1000-FPG-□□

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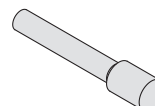


To cylinder port

**Blanking plug
(For one-touch fitting)**

KJP-02
KQ2P-23/04/06

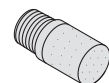
Page 87



**Silencer
(For manifold EXH port)**

AN110-01

Page 87



Series S0700

Valve Specifications

Valve Specifications

Model

Series	Type of actuation	Model	Flow-rate characteristics						Note 2) Response time (msec)	Weight (g)	
			1→4/2 (P→A/B)			4/2→5/3 (A/B→R1/R2)					
			C [dm ³ /(s·bar)]	b	Cv	C [dm ³ /(s·bar)]	b	Cv			
Slim compact Plug-in manifold Bar base	2-position	Single	S0711	0.39	0.39	0.11	0.37	0.39	0.10	18 or less	36
		Double	S0721	0.39	0.39	0.11	0.37	0.39	0.10	10 or less	41
	4-position	Dual 3-port valve	S07 ^A _B 1 _C	0.34	0.34	0.09	0.33	0.33	0.08	18 or less	41
Plug-in manifold Stacking base	2-position	Single	S0710	0.39	0.39	0.11	0.37	0.39	0.10	18 or less	30
		Double	S0720	0.39	0.39	0.11	0.37	0.39	0.10	10 or less	38
	4-position	Dual 3-port valve	S07 ^A _B 0 _C	0.34	0.34	0.09	0.33	0.33	0.08	18 or less	38
Plug lead manifold Bar base	2-position	Single	S0715	0.39	0.39	0.11	0.37	0.39	0.10	12 or less	28
		Double	S0725	0.39	0.39	0.11	0.37	0.39	0.10	10 or less	36
	4-position	Dual 3-port valve	S07 ^A _B 5 _C	0.34	0.34	0.09	0.33	0.33	0.08	12 or less	36

Note 1) Values for cylinder port fitting port size C6

Note 2) Based on JIS B 8375-1993 (Supply pressure: 73 psi (0.5 MPa), with indicator light and surge voltage suppressor, clean air. This will change depending on pressure and air quality.) The value when ON for the double type.

Specifications

Valve specifications	Valve construction		Rubber seal		
	Fluid		Air/Inert gas		
	Max. operating pressure		102 psi (0.7 MPa)		
	Min. operating pressure		29 psi (0.2 MPa)		
	Ambient and fluid temperature		14 to 122°F (-10 to 50°C) ^{Note 1)}		
	Max. operating cycle		5 Hz		
	Pilot valve exhaust method		Slim compact Plug-in manifold Bar base	Plug-in manifold Stacking base	Plug lead manifold Bar base
			Common exhaust ^{Note 2)}		Individual exhaust
	Pilot valve manual override		Push type		
	Lubrication		Not required		
Impact/Vibration resistance ^{Note 3)}		30/100 m/s ²			
Enclosure		IP40			
Electrical specifications	Coil rated voltage		24 VDC		
	Allowable voltage fluctuation		±10% of rated voltage		
	Coil insulation type		Class B or equivalent		
	Power consumption (Current)	24 VDC	DC 0.35 W (15 mA)		

Note 1) Use dry air to prevent condensation when operating at low temperatures.

Note 2) Valves with the external pilot specifications have a pilot EXH with individual exhaust specifications.

Note 3) Impact resistance: No malfunction occurred when it is tested with a drop tester in the axial direction and at the right angles to the main valve and armature in both energized and de-energized states every once for each condition.

Vibration resistance: No malfunction occurred in a one-sweep test between 8.3 and 2000 Hz. Test was performed at both energized and de-energized states in the axial direction and at the right angles to the main valve and armature.

Manifold Specifications

Manifold Specifications

Model

Base model		Piping specifications		Type of connection	Note 1) Applicable stations	Note 3) 5-station weight (g)	Note 3) Addition per station (g)
		Port size					
		1(P), 3(R)	4(A), 2(B)				
Slim compact Plug-in manifold Bar base	SS0751-□□□□	C6 (ø6) C8 (ø8) N7 (ø1/4") N9 (ø5/16") Option (Direct EXH outlet with built-in silencer)	C2 (ø2) C3 (ø3.2) C4 (ø4) N1 (ø1/8") N3 (ø5/32")	S kit: Serial transmission (EX510)	Max. 16 stations	270 Note 2)	19 Note 6)
				S kit: Serial transmission (EX180)	Max. 32 stations	230 Note 2)	17
				F kit: D-sub connector	Max. 24 stations	185	17
				P kit: Flat ribbon cable	Max. 24 stations	181	17
				J kit: PC wiring compatible flat ribbon cable	Max. 16 stations	181	17
Plug-in manifold Stacking base	SS0750-□□□□	C6 (ø6) C8 (ø8) N7 (ø1/4") N9 (ø5/16") Option (Direct EXH outlet with built-in silencer)	C2 (ø2) C3 (ø3.2) C4 (ø4) N1 (ø1/8") N3 (ø5/32")	S kit: Serial transmission (EX500)	Max. 16 stations	260 Note 2)	20
				S kit: Serial transmission (EX250/260/600)	Max. 24 stations	260 Note 2)	20
				F kit: D-sub connector	Max. 24 stations	330	20
				P kit: Flat ribbon cable	Max. 24 stations	325	20
				J kit: PC wiring compatible flat ribbon cable	Max. 16 stations	325	20
				T kit: Terminal block box	Max. 20 stations	660	20
				L kit: Lead wire	Max. 24 stations	455 Note 4)	20
				M kit: Circular connector	Max. 24 stations	390	20
Plug lead manifold Bar base	SS0755-□□□□C (Manifold pitch: 8.5)	Rc1/8	M5 thread C2 (ø2) C3 (ø3.2) C4 (ø4) N1 (ø1/8") N3 (ø5/32")	C kit: Connector	Max. 20 stations	115	20
				S kit: Serial transmission (EX510)	Max. 16 stations	115 Note 2)	20
Plug lead manifold Bar base	SS0755-□□□□C (Manifold pitch: 7.5)	M5 thread	M3 (M3 thread) V2 (ø2 barb fitting) V3 (ø3.2 barb fitting) V4 (ø5 barb fitting)	C kit: Connector	Max. 20 stations	75	10
Single unit	S07□5-5□-M5	M5 thread	M5 thread	Connector kit	—	14 Note 5)	

Note 1) Maximum stations in the case of mixed single and double wiring (special wiring specifications)

Note 2) Differs depending on the serial unit type. For details, refer to page 35.

Note 3) Weight excluding valve. Refer to page 5 for valve weight.

Note 4) Weight with lead wire length 0.6 m

Note 5) Weight of sub-plate only. Refer to page 5 for valve weight.

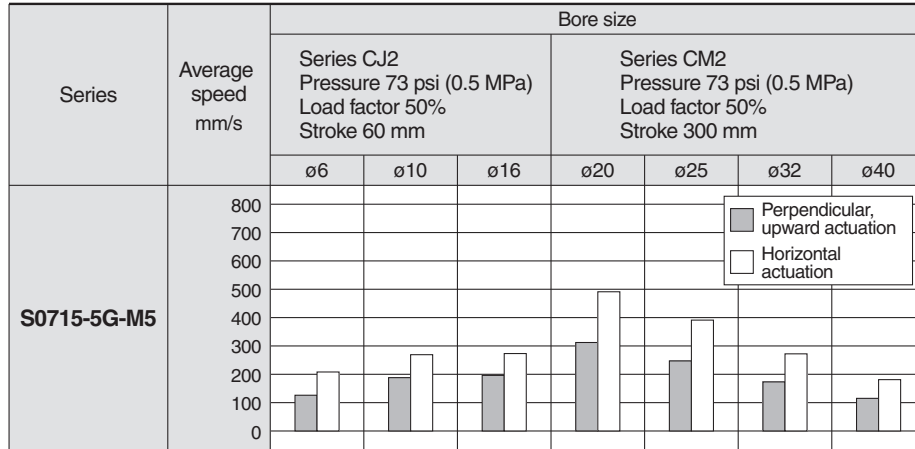
Note 6) Including DIN rail weight

Series S0700

Cylinder Speed Chart

Use as a guide for selection.
Please confirm the actual conditions with
SMC Sizing Program.

Base Mounted



- * It is when the cylinder is extending that is meter-out controlled by speed controller which is directly connected with cylinder, and its needle valve with being fully open.
- * The average velocity of the cylinder is what the stroke is divided by the total stroke time.
- * Load factor: $((\text{Load mass} \times 9.8) / \text{Theoretical force}) \times 100\%$

Conditions

Base mounted		Series CJ2	Series CM2
S0715-5G-M5	Tube bore x Length	ø6 x 1 m	
	Speed controller	AS2002F-06	AS2002F-06
	Silencer	AN120-M5	

Symbol

Model	Type of actuation	JIS symbol
S0710 S0711 S0715	2-position single	
S0720 S0721 S0725	2-position double	
S07A0 S07A1 S07A5	4-position dual 3-port (N.C. + N.C.) [Exhaust center]	
S07B0 S07B1 S07B5	4-position dual 3-port (N.O. + N.O.) [Pressure center]	
S07C0 S07C1 S07C5	4-position dual 3-port (N.C. + N.O.)	

Slim Compact Plug-in Manifold Bar Base Serial Transmission

S kit

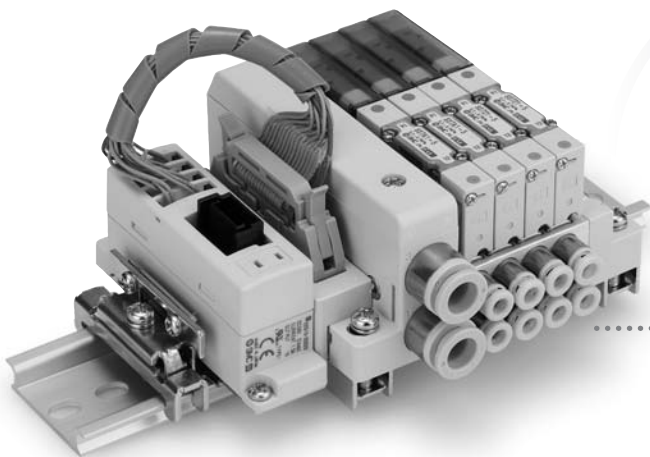


Slim Compact
Plug-in Manifold
Bar Base



For Output
Serial Transmission
System
EX180

Page 9



Gateway-type
Serial Transmission
System
EX510

Page 11

Slim Compact Plug-in Manifold
Bar Base

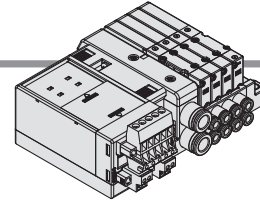
Plug-in Manifold
Stacking Base

Plug Lead Manifold
Bar Base

Plug Lead
Single Unit



How to Order Manifold



SS0751 - 08 C4 C8 [] [] [] - []

Stations

Symbol	Stations
02	2 station
⋮	⋮
32 (Note)	32 stations

Note) The maximum number of stations will be different depending on the wiring specifications.

Cylinder port size

Symbol	Port size	
C2	With ø2 one-touch fitting	Metric
C3	With ø3.2 one-touch fitting	
C4	With ø4 one-touch fitting	
N1	With ø1/8" one-touch fitting	Inch
N3	With ø5/32" one-touch fitting	

P, R port size

Symbol	Port size	
Nil	With ø8 one-touch fitting (Note)	Metric
C6	With ø6 one-touch fitting	
C8	With ø8 one-touch fitting	
N7	With ø1/4" one-touch fitting	Inch
N9	With ø5/16" one-touch fitting	

Note) The cylinder port is ø5/16" when measured in inches.

SI unit output polarity

Symbol	Specifications
Nil	Positive common
N	Negative common

Communication connector

Symbol	Specifications
Nil	T-branch type
A	Straight type

Option

Symbol	Specifications
Nil	None
D	With DIN rail (Rail length: Standard)
D0	Without DIN rail (With bracket)
D□	With DIN rail Designated length (□: Station)
K (Note 2)	Special wiring specifications (Except double wiring)
R (Note 3)	External pilot
S	Built-in silencer

Note 1) When two or more options are specified, indicate them alphabetically.
Example) -KRS

Note 2) Indicate the wiring specifications for mixed single and double wirings.

Note 3) For details, refer to page 27.

* For manifold optional parts, refer to pages 26 and 27.

* For manifold exploded view, refer to page 29.

Refer to Reduced Wiring Fieldbus System (Serial Transmission) in Electric Products (CAT.E150) for details on the EX180 Integrated-type (For Output) Serial Transmission System.

Kit type

Kit type	Symbol	Specifications (SI unit model)	Standard station	Max. number of stations for special wiring specifications	Max. number of solenoids
S kit	SD0	Without SI unit	1 to 16 stations	32 stations	32
	SDQ2	DeviceNet™ for 32 points (EX180-SDN3: Positive common (NPN), EX180-SDN5: Negative common (PNP))			
	SDQ3	DeviceNet™ for 16 points (EX180-SDN4: Positive common (NPN), EX180-SDN6: Negative common (PNP))			
	SDV2	CC-Link for 32 points (EX180-SMJ3: Positive common (NPN), EX180-SMJ5: Negative common (PNP))			

Note 1) The maximum number of stations is determined by the total number of solenoids.
For mixed single and double wirings, enter "K" to the order code options.

Note 2) For the S0700 series, SI unit models EX180-SDN1, EX180-SDN2, or EX180-SMJ1 cannot be selected as S kit (SDQ□, SDV2).

Type of actuation	Single	Double, Dual 3-port
Number of solenoids	1	2

How to Order Valves

S07 1 1 [] - **5**

Type of actuation

Symbol	Specifications
1	2-position single
2	2-position double
A	4-position dual 3-port (N.C. + N.C.) [Exhaust center]
B	4-position dual 3-port (N.O. + N.O.) [Pressure center]
C	4-position dual 3-port (N.C. + N.O.)

Note) For symbol, refer to page 7.

Voltage: 24 VDC

Function

Symbol	Specifications
Nil	Standard
R	External pilot (Note)

Note) Not compatible with dual 3-port valves.

Base mounted plug-in

How to Order Manifold Assembly

Specify the part numbers for valves and options together beneath the manifold base part number.

<Example>

Serial transmission kit

SS0751-08C4C8SDQ2 ... 1 set - Manifold base part no.

* S0711-5 3 sets - Valve part no. (Stations 1 to 3)

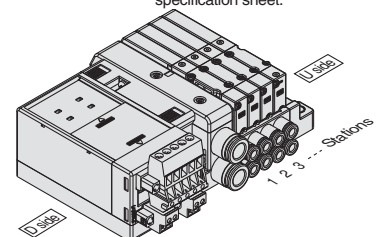
* S0721-5 2 sets - Valve part no. (Stations 4 to 5)

* S07A1-5 2 sets - Valve part no. (Stations 6 to 7)

* SS0700-10A-3 1 sets - Blanking plate part no. (Station 8)

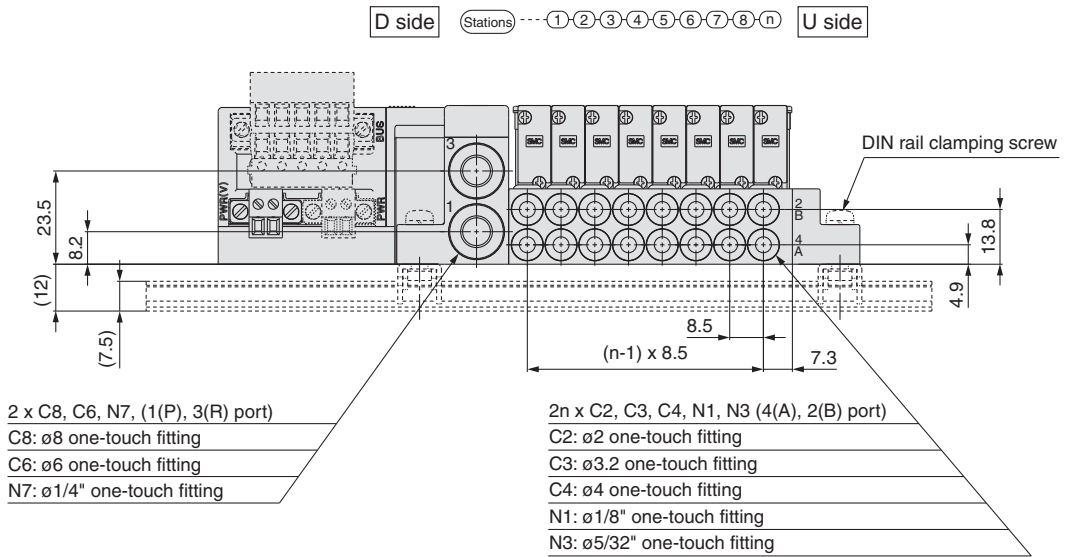
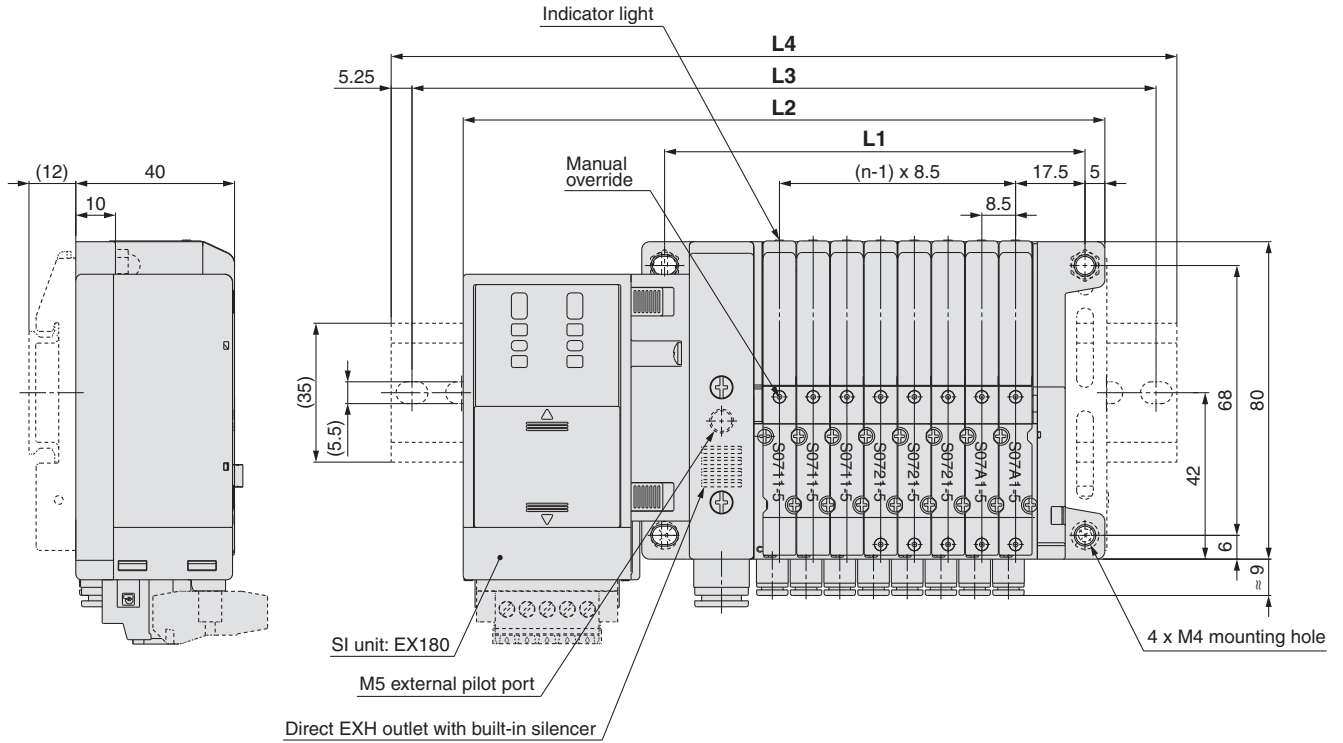
Prefix the asterisk to the part nos. of the solenoid valve, etc.

Write sequentially from the 1st station on the D side. When part nos. written collectively are complicated, specify on the manifold specification sheet.



Slim Compact Plug-in Manifold Bar Base **Series S0700**

EX180 (For Output) Serial Transmission System



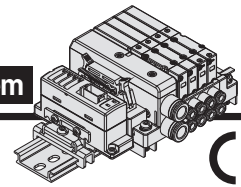
* Dotted line indicates DIN rail mounting bracket (-D).

Dimensions

Formula L1 = 8.5n + 38, L2 = 8.5n + 93.7 n: Station (Maximum 32 stations)

n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
L1	55	63.5	72	80.5	89	97.5	106	114.5	123	131.5	140	148.5	157	165.5	174	182.5	191
L2	110.7	119.2	127.7	136.2	144.7	153.2	161.7	170.2	178.7	187.2	195.7	204.2	212.7	221.2	229.7	238.2	246.7
L3	137.5	150	150	162.5	175	175	187.5	200	200	212.5	225	225	237.5	250	250	262.5	275
L4	148	160.5	160.5	173	185.5	185.5	198	210.5	210.5	223	235.5	235.5	248	260.5	260.5	273	285.5

n	19	20	21	22	23	24	25	26	27	28	29	30	31	32
L1	199.5	208	216.5	225	233.5	242	250.5	259	267.5	276	284.5	293	301.5	310
L2	255.2	263.7	272.2	280.7	289.2	297.7	306.2	314.7	323.2	331.7	340.2	348.7	357.2	365.7
L3	275	287.5	300	312.5	312.5	325	337.5	337.5	350	362.5	362.5	375	387.5	387.5
L4	285.5	298	310.5	323	323	335.5	348	348	360.5	373	373	385.5	398	398



How to Order Manifold

SS0751 - 08 C4 C8 SB -

Stations

Symbol	Stations
01	1 station
⋮	⋮
16 (Note)	16 stations

Note) The maximum number of stations will be different depending on the wiring specifications.

Cylinder port size

Symbol	Port size	
C2	With ø2 one-touch fitting	Metric
C3	With ø3.2 one-touch fitting	
C4	With ø4 one-touch fitting	
N1	With ø1/8" one-touch fitting	Inch
N3	With ø5/32" one-touch fitting	

Standard station	Max. number of stations for special wiring specifications	Max. number of solenoids
1 to 8 stations	16 stations	16

Type of actuation	Single	Double, Dual 3-port
Number of solenoids	1	2

P, R port size

Symbol	Port size	
Nil	With ø8 one-touch fitting (Note)	Metric
C6	With ø6 one-touch fitting	
C8	With ø8 one-touch fitting	
N7	With ø1/4" one-touch fitting	Inch
N9	With ø5/16" one-touch fitting	

Note) The cylinder port is ø5/16" when measured in inches.

Option

Symbol	Specifications
Nil	None
K (Note 2)	Special wiring specifications (Except double wiring)
R (Note 3)	External pilot
S	Built-in silencer

Note 1) When two or more options are specified, indicate them alphabetically. Example) -KRS

Note 2) Indicate the wiring specifications for mixed single and double wirings.

Note 3) For details, refer to page 27.

* For manifold optional parts, refer to pages 26 and 27.

* For manifold exploded view, refer to page 29.

SI unit output polarity

Symbol	Specifications
Nil	Positive common
N	Negative common

S kit

EX510 serial wiring

Note) For SI unit part number, refer to page 30.

Refer to Reduced Wiring Fieldbus System (Serial Transmission) in Electric Products (CAT.E150) for details on the EX510 Gateway-type Serial Transmission System.

How to Order Valves

S07 1 1 - 5

Type of actuation

Symbol	Specifications
1	2-position single
2	2-position double
A	4-position dual 3-port (N.C. + N.C.) [Exhaust center]
B	4-position dual 3-port (N.O. + N.O.) [Pressure center]
C	4-position dual 3-port (N.C. + N.O.)

Note) For symbol, refer to page 7.

• Voltage: 24 VDC

Function

Symbol	Specifications
Nil	Standard
R	External pilot (Note)

Note) Not compatible with dual 3-port valves.

Base mounted plug-in

How to Order Manifold Assembly

Specify the part numbers for valves and options together beneath the manifold base part number.

<Example>

Serial transmission kit

SS0751-08C4C8SB --1 set – Manifold base part no.

* S0711-5 3 sets – Valve part no. (Stations 1 to 3)

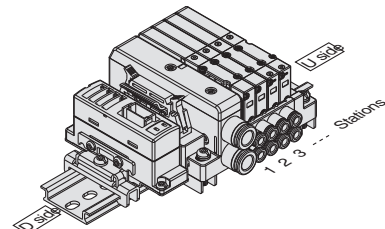
* S0721-5 2 sets – Valve part no. (Stations 4 to 5)

* S07A1-5 2 sets – Valve part no. (Stations 6 to 7)

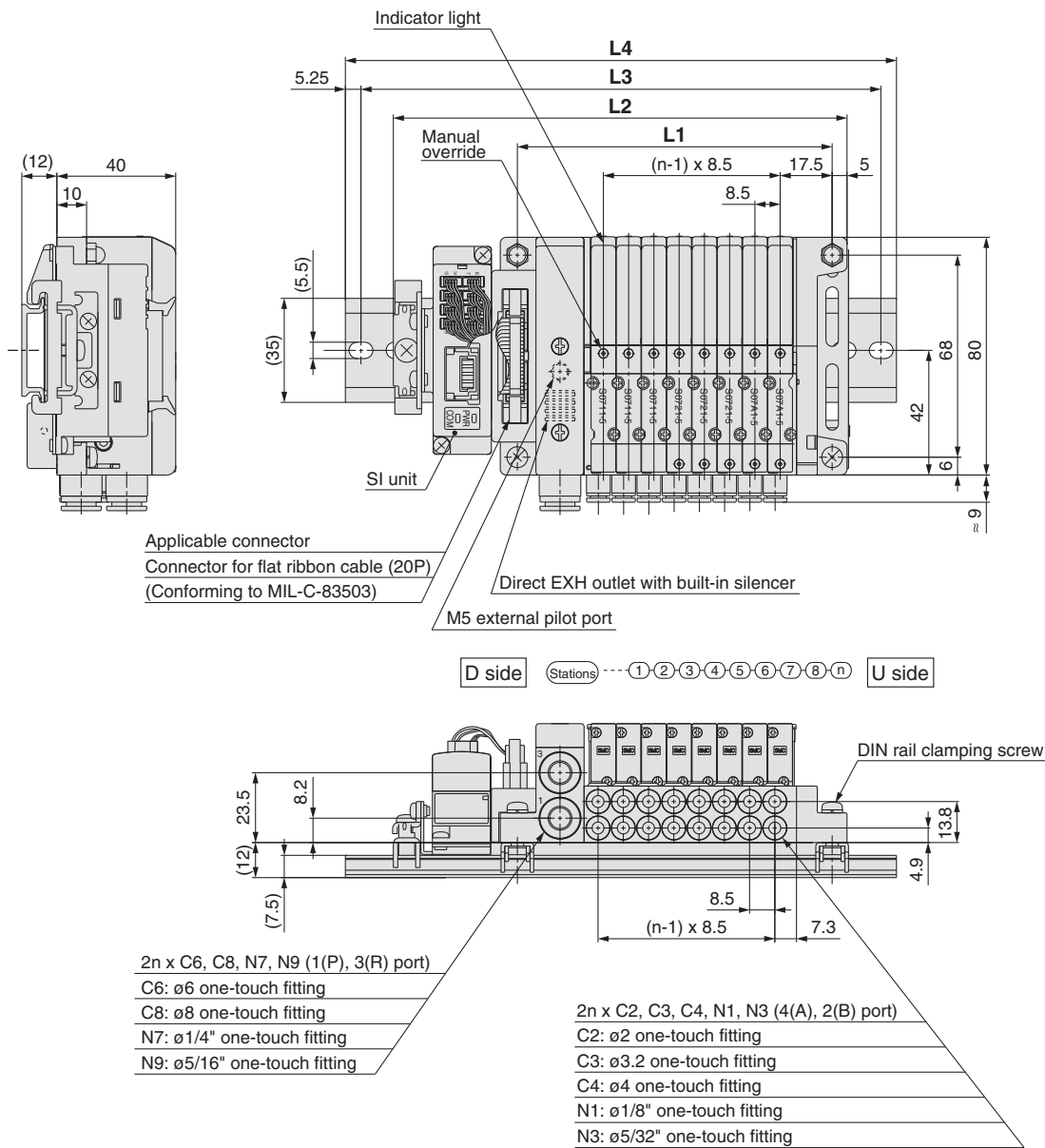
* SS0700-10A-3 1 sets – Blanking plate part no. (Station 8)

Prefix the asterisk to the part nos. of the solenoid valve, etc.

Write sequentially from the 1st station on the D side. When part nos. written collectively are complicated, specify on the manifold specification sheet.



Slim Compact Plug-in Manifold Bar Base **Series S0700**



Dimensions

Formula L1 = 8.5n + 38, L2 = 8.5n + 84.7 n: Station (Maximum 16 stations)

L \ n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L1	55	63.5	72	80.5	89	97.5	106	114.5	123	131.5	140	148.5	157	165.5	174
L2	101.7	110.2	118.7	127.2	135.7	144.2	152.7	161.2	169.7	178.2	186.7	195.2	203.7	212.2	220.7
L3	125	137.5	150	150	162.5	175	175	187.5	200	200	212.5	225	225	237.5	250
L4	135.5	148	160.5	160.5	173	185.5	185.5	198	210.5	210.5	223	235.5	235.5	248	260.5

Slim Compact Plug-in Manifold Bar Base

Plug-in Manifold Stacking Base

Plug Lead Manifold Bar Base

Plug Lead Single Unit

Slim Compact Plug-in Manifold Bar Base D-sub Connector

F kit



Slim Compact
Plug-in Manifold
Bar Base



MIL Standard

- 25 pins
- Cable length:
1.5 m, 3 m, 5 m

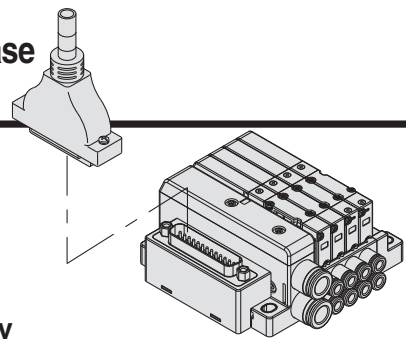
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Slim Compact Plug-in Manifold
Bar Base

Plug-in Manifold
Stacking Base

Plug Lead Manifold
Bar Base

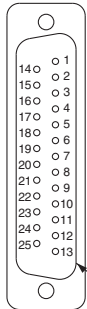
Plug Lead
Single Unit



- The D-sub connector reduces installation labor for electrical connections.
- Using the D-sub connector (25P), conforming to MIL standard permits the use of connectors put on the market and gives a wide interchangeability.

Electrical Wiring Specifications

D-sub connector



As the standard electrical wiring specifications, double wiring (connected to SOL. A and SOL. B) is adopted for the internal wiring of each station for 12 stations or less, regardless of valve and option types. Mixed single and double wiring is available as an option. For details, refer to "Special Wiring Specifications" (Option) below.

D-sub connector assembly wire color (AXT100-DS25-015 030 050)

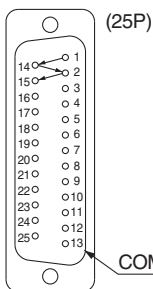
Terminal no.	Polarity	Lead wire color	Dot marking
Station 1	SOL.A 1 (-)	(+) Black	None
	SOL.B 14 (-)	(+) Yellow	Black
Station 2	SOL.A 2 (-)	(+) Brown	None
	SOL.B 15 (-)	(+) Pink	Black
Station 3	SOL.A 3 (-)	(+) Red	None
	SOL.B 16 (-)	(+) Blue	White
Station 4	SOL.A 4 (-)	(+) Orange	None
	SOL.B 17 (-)	(+)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

Positive COM Negative COM (Note)



Note) Mounting valve has no polarity. It can also be used as a negative common.

Special Wiring Specifications (Option) [-K]



(25P)

Mixed single and double wiring are available as an option. The maximum number of manifold stations is determined by the number of solenoids. Count one point for a single solenoid type and two points for a double solenoid type. The total number of solenoids (points) must not exceed 24.

1. How to Order valves

Indicate an option symbol, -K, for the manifold part number and be sure to specify the mounting position and number of stations of the single and double wiring on the manifold specification sheet.

2. Wiring specifications

Connector terminal numbers are connected from solenoid station 1 on the A side in the order indicated by the arrows without skipping any terminal numbers.

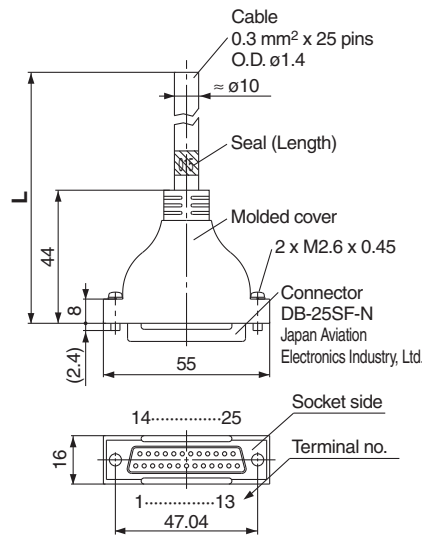
Cable Assembly

015
AXT100-DS25-030
050

(The D-sub connector cable assemblies can be ordered with manifolds.)
Refer to "How to Order Manifold."

D-sub connector cable assembly Wire Color by 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



D-sub Connector Cable Assembly (Option)

Cable length (L)	Assembly part no.	Note
1.5 m	AXT100-DS25-015	Cable
3 m	AXT100-DS25-030	0.3 mm ² x 25 cores
5 m	AXT100-DS25-050	

* For other commercial connectors, use a 25-pin type with female connector conforming to MIL-C-24308.

* Cannot be used for movable wiring.

Electrical Characteristics

Item	Property
Conductor resistance Ω/km, 20°C	65 or less
Voltage limit V, 1 min, AC	1000
Insulation resistance MΩ/km, 20°C	5 or more

Connector manufacturers' example

- Fujitsu Limited
- Japan Aviation Electronics Industry, Ltd.
- J.S.T. Mfg. Co., Ltd.
- Hirose Electric Co., Ltd.



Note) The minimum bending inner radius of D-sub connector cable is 20 mm.



How to Order Manifold

SS0751 - 08 C4 C8 FD1 -

Stations

Symbol	Stations
01	1 station
⋮	⋮
24 ^{Note)}	24 stations

Note) The maximum number of stations will be different depending on the wiring specifications.

Cylinder port size

Symbol	Port size	
C2	With ø2 one-touch fitting	Metric
C3	With ø3.2 one-touch fitting	
C4	With ø4 one-touch fitting	
N1	With ø1/8" one-touch fitting	Inch
N3	With ø5/32" one-touch fitting	

P, R port size

Symbol	Port size	
Nil	With ø8 one-touch fitting ^{Note)}	Metric
C6	With ø6 one-touch fitting	
C8	With ø8 one-touch fitting	
N7	With ø1/4" one-touch fitting	Inch
N9	With ø5/16" one-touch fitting	

Note) The cylinder port is ø5/16" when measured in inches.

Option

Symbol	Specifications
Nil	None
D	With DIN rail (Rail length: Standard)
D0	Without DIN rail (With bracket)
D□ ^{Note 2)}	With DIN rail Designated length (□: Station)
K ^{Note 3)}	Special wiring specifications (Except double wiring)
R ^{Note 4)}	External pilot
S	Built-in silencer

Note 1) When two or more options are specified, indicate them alphabetically. Example) -DKN
 Note 2) The available number of stations is larger than the number of manifold stations.
 Note 3) Indicate the wiring specifications for mixed single and double wirings.
 Note 4) For details, refer to page 27.
 * For manifold optional parts, refer to pages 26 to 27.
 * For manifold exploded view, refer to page 29.

Kit type/Cable length

Kit type	Symbol	Specifications	Standard station	Max. number of stations for special wiring specifications	Max. number of solenoids
F kit	FD0	D-sub connector (25P), without cable	1 to 12 stations	24 stations	24
	FD1	D-sub connector (25P), with 1.5 m cable			
	FD2	D-sub connector (25P), with 3.0 m cable			
	FD3	D-sub connector (25P), with 5.0 m cable			

Note) The maximum number of stations is determined by the total number of solenoids. For mixed single and double wirings, enter "-K" to the order code options.

Type of actuation	Single	Double, Dual 3-port
Number of solenoids	1	2

How to Order Valves

S07 1 1 - 5

Type of actuation

Symbol	Specifications
1	2-position single
2	2-position double
A	4-position dual 3-port (N.C. + N.C.) [Exhaust center]
B	4-position dual 3-port (N.O. + N.O.) [Pressure center]
C	4-position dual 3-port (N.C. + N.O.)

Note) For symbol, refer to page 7.

Voltage

Symbol	Specifications
5	24 VDC
6	12 VDC

Function

Symbol	Specifications
Nil	Standard
R	External pilot ^{Note)}

Note) Not compatible with dual 3-port valves.

Base mounted plug-in

How to Order Manifold Assembly

Specify the part numbers for valves and options together beneath the manifold base part number.

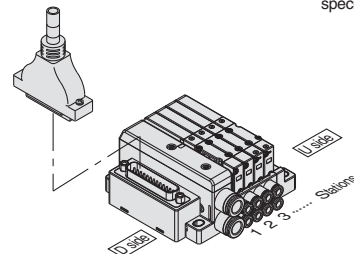
<Example>

D-sub connector kit

SS0751-08C4C8FD1...1 set - Manifold base part no.
 * S0711-5..... 3 sets - Valve part no. (Stations 1 to 3)
 * S0721-5..... 2 sets - Valve part no. (Stations 4 to 5)
 * S07A1-5..... 2 sets - Valve part no. (Stations 6 to 7)
 * SS0700-10A-3 1 set - Blanking plate part no. (Station 8)

Prefix the asterisk to the part nos. of the solenoid valve, etc.

Write sequentially from the 1st station on the D side. When part nos. written collectively are complicated, specify on the manifold specification sheet.

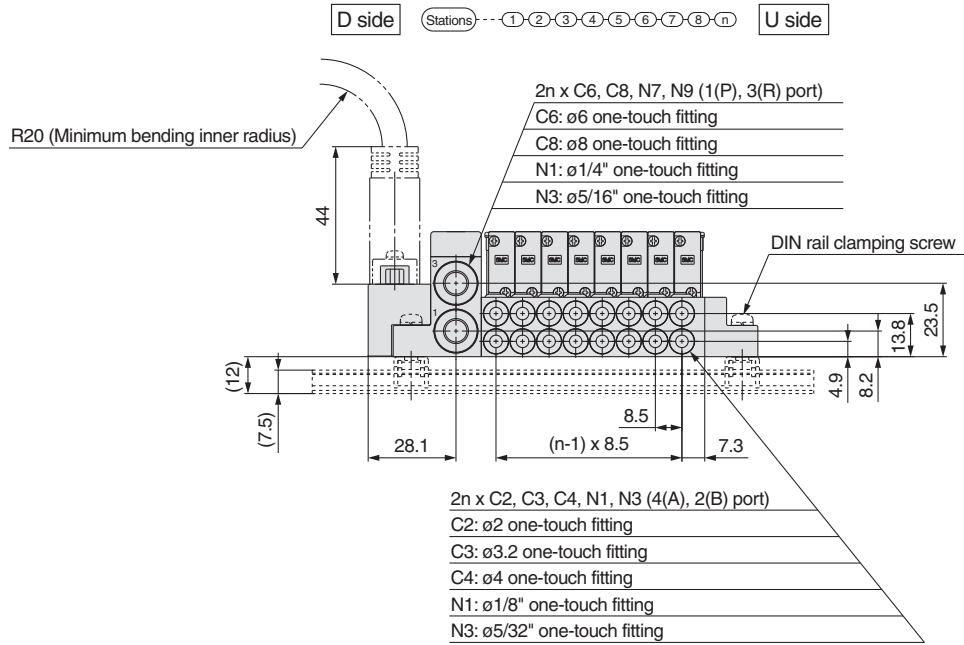
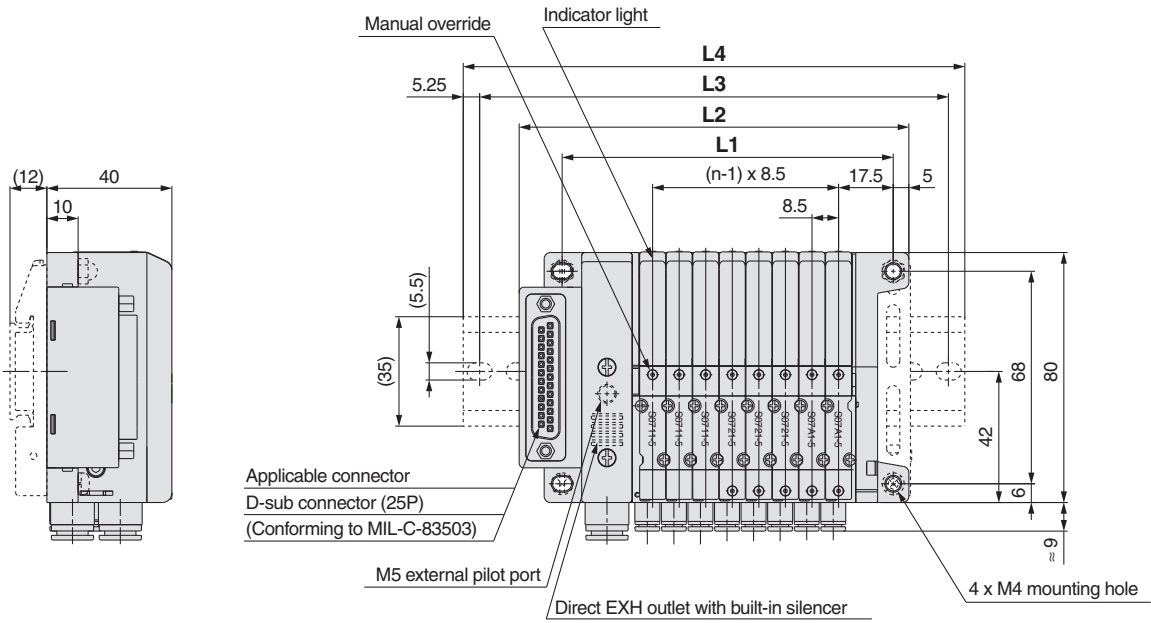


Slim Compact Plug-in Manifold Bar Base

Plug-in Manifold Stacking Base

Plug Lead Manifold Bar Base

Plug Lead Single Unit



Dimensions

Formula L1 = 8.5n + 38, L2 = 8.5n + 56.7 n: Station (Maximum 24 stations)

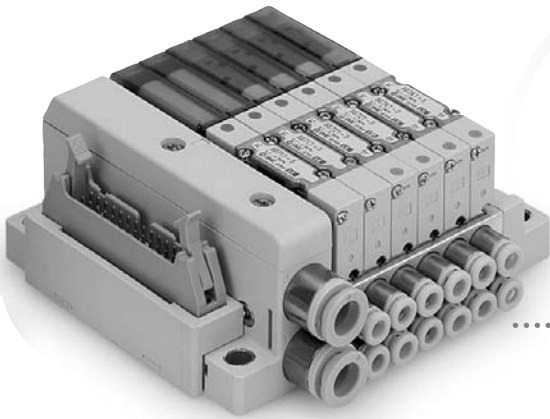
L \ n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
L1	55	63.5	72	80.5	89	97.5	106	114.5	123	131.5	140	148.5	157	165.5	174	182.5	191	199.5	208	216.5	225	233.5	242
L2	73.7	82.2	90.7	99.2	107.7	116.2	124.7	133.2	141.7	150.2	158.7	167.2	175.7	184.2	192.7	201.2	209.7	218.2	226.7	235.2	243.7	252.2	260.7
L3	100	112.5	112.5	125	137.5	137.5	150	162.5	162.5	175	187.5	187.5	200	212.5	212.5	225	237.5	237.5	250	262.5	275	275	287.5
L4	110.5	123	123	135.5	148	148	160.5	173	173	185.5	198	198	210.5	223	223	235.5	248	248	260.5	273	285.5	285.5	298

Slim Compact Plug-in Manifold Bar Base Flat Ribbon Cable

P kit



Slim Compact
Plug-in Manifold
Bar Base



MIL Standard

- 26 pins, 20 pins
- Cable length:
1.5 m, 3 m, 5 m

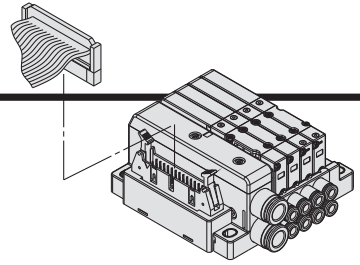
Page 19

Slim Compact Plug-in Manifold
Bar Base

Plug-in Manifold
Stacking Base

Plug Lead Manifold
Bar Base

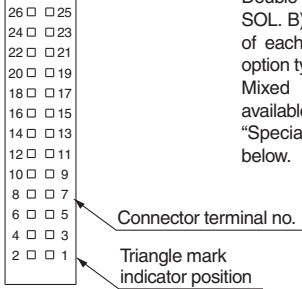
Plug Lead
Single Unit



- Flat ribbon cable connector reduces installation labor for electrical connection.
- Using the connector for flat ribbon cable (26P, 20P) conforming to MIL standard permits the use of connectors put on the market and gives a wide interchangeability.

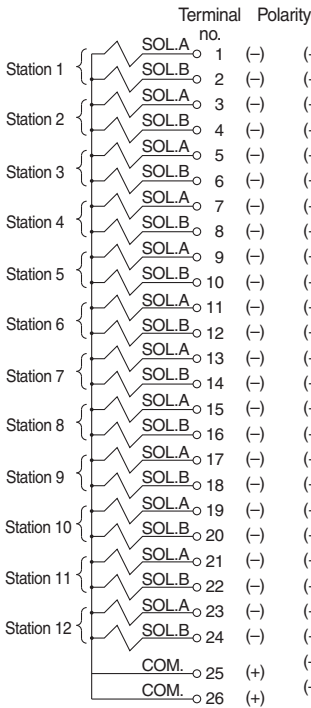
Electrical Wiring Specifications

Flat ribbon cable connector

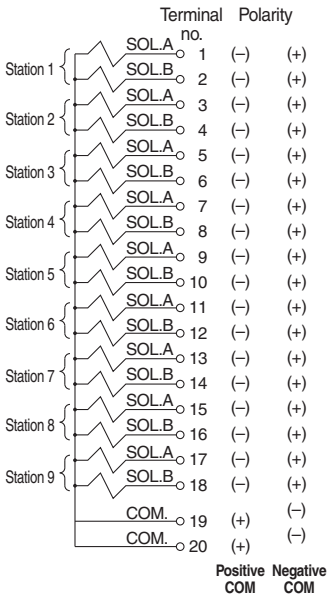


Double wiring (connected to SOL. A and SOL. B) is adopted for the internal wiring of each station, regardless of valve and option types. Mixed single and double wiring is available as an option. For details, refer to "Special Wiring Specifications" (Option) below.

<26P>



<20P>

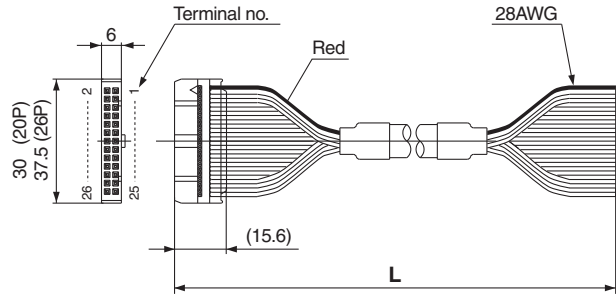


Note) Mounting valve has no polarity. It can also be used as a negative common.

Cable Assembly

AXT100-FC $\begin{matrix} 20 & 1 \\ 26 & 2 \\ & 3 \end{matrix}$

(Type 26P flat ribbon cable connector assemblies can be ordered with manifolds. Refer to "How to Order Manifold.")



Flat Ribbon Cable Connector Assembly (Option)

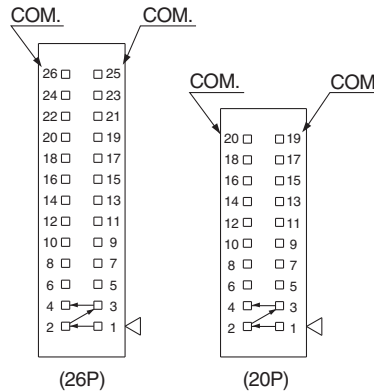
Cable length (L)	Assembly part no.	
	26P	20P
1.5 m	AXT100-FC26-1	AXT100-FC20-1
3 m	AXT100-FC26-2	AXT100-FC20-2
5 m	AXT100-FC26-3	AXT100-FC20-3

- * For other commercial connectors, use a 20- or 26-pin type with strain relief conforming to MIL-C-83503.
- * Cannot be used for movable wiring.

Connector manufacturers' example

- Hirose Electric Co., Ltd.
- Sumitomo 3M Limited
- Fujitsu Limited
- Japan Aviation Electronics Industry, Ltd.
- J.S.T. Mfg. Co., Ltd.
- Oki Electric Cable Co., Ltd.

Special Wiring Specifications (Option) [-K]



Mixed single and double wiring are available as an option. The maximum number of manifold stations is determined by the number of solenoids. Count one point for a single solenoid type and two points for a double solenoid type. The total number of solenoids (points) must not exceed 24 for 26P, 18 for 20P.

1. How to Order valves

Indicate an option symbol, -K, for the manifold part number and be sure to specify the mounting position and number of stations of the single and double wiring on the manifold specification sheet.

2. Wiring specifications

Connector terminal numbers are connected from solenoid station 1 on the A side in the order indicated by the arrows without skipping any terminal numbers.



How to Order Manifold

SS0751 - 08 C4 C8 PD1 -

Stations

Symbol	Stations
01	1 station
⋮	⋮
24	24 stations

Note) The maximum number of stations will be different depending on the wiring specifications.

Cylinder port size

Symbol	Port size	
C2	With $\phi 2$ one-touch fitting	Metric
C3	With $\phi 3.2$ one-touch fitting	
C4	With $\phi 4$ one-touch fitting	
N1	With $\phi 1/8$ " one-touch fitting	Inch
N3	With $\phi 5/32$ " one-touch fitting	

P, R port size

Symbol	Port size	
Nil	With $\phi 8$ one-touch fitting	Metric
C6	With $\phi 6$ one-touch fitting	
C8	With $\phi 8$ one-touch fitting	
N7	With $\phi 1/4$ " one-touch fitting	Inch
N9	With $\phi 5/16$ " one-touch fitting	

Note) The cylinder port is $\phi 5/16$ " when measured in inches.

Option

Symbol	Specifications
Nil	None
D	With DIN rail (Rail length: Standard)
D0	Without DIN rail (With bracket)
D□ ^{Note 2)}	With DIN rail Designated length (□: Station)
K ^{Note 3)}	Special wiring specifications (Except double wiring)
R ^{Note 4)}	External pilot
S	Built-in silencer

Note 1) When two or more options are specified, indicate them alphabetically. Example) -DKR

Note 2) The available number of stations is larger than the number of manifold stations.

Note 3) Indicate the wiring specifications for mixed single and double wirings.

Note 4) For details, refer to page 27.

* For manifold optional parts, refer to pages 26 to 27.

* For manifold exploded view, refer to page 29.

Kit type/Cable length

Kit type	Symbol	Specifications	Standard station	Max. number of stations for special wiring specifications	Max. number of solenoids
P kit	PD0	Flat ribbon cable (26P), without cable	1 to 12 stations	24 stations	24
	PD1	Flat ribbon cable (26P), with 1.5 m cable			
	PD2	Flat ribbon cable (26P), with 3.0 m cable			
	PD3	Flat ribbon cable (26P), with 5.0 m cable			
	PDC	Flat ribbon cable (20P), without cable	1 to 9 stations	18 stations	18

Note) The maximum number of stations is determined by the total number of solenoids.
For mixed single and double wirings, enter "K" to the order code options.

Type of actuation	Single	Double, Dual 3-port
Number of solenoids	1	2

How to Order Valves

S07 1 1 - 5

Type of actuation

Symbol	Specifications
1	2-position single
2	2-position double
A	4-position dual 3-port (N.C. + N.C.) [Exhaust center]
B	4-position dual 3-port (N.O. + N.O.) [Pressure center]
C	4-position dual 3-port (N.C. + N.O.)

Note) For symbol, refer to page 7.

Voltage

Symbol	Specifications
5	24 VDC
6	12 VDC

Function

Symbol	Specifications
Nil	Standard
R	External pilot ^{Note)}

Note) Not compatible with dual 3-port valves.

Base mounted plug-in

How to Order Manifold Assembly

Specify the part numbers for valves and options together beneath the manifold base part number.

<Example>

Flat ribbon cable kit

SS0751-08C4C8PD1.....1 set - Manifold base part no.

* S0711-5.....2 sets - Valve part no. (Stations 1 to 3)

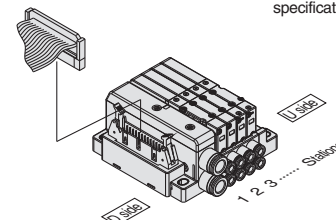
* S0721-5.....4 sets - Valve part no. (Stations 4 to 5)

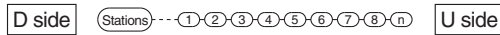
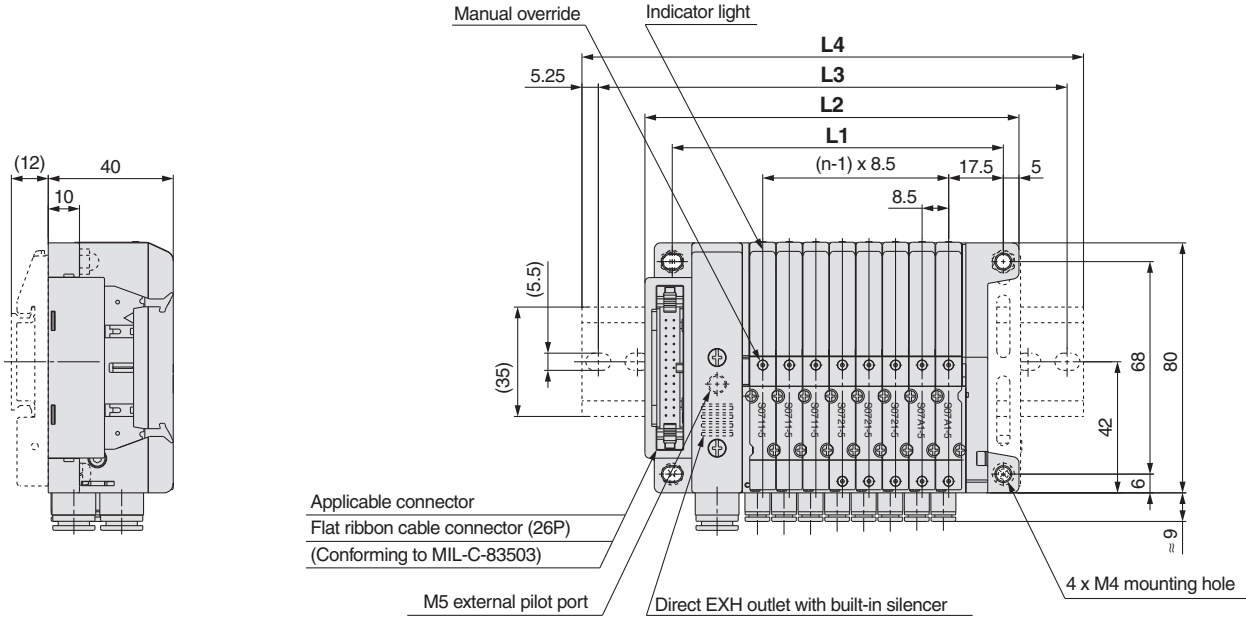
* S07A1-5.....1 set - Valve part no. (Stations 6 to 7)

* SS0700-10A-3.....1 set - Blanking plate part no. (Station 8)

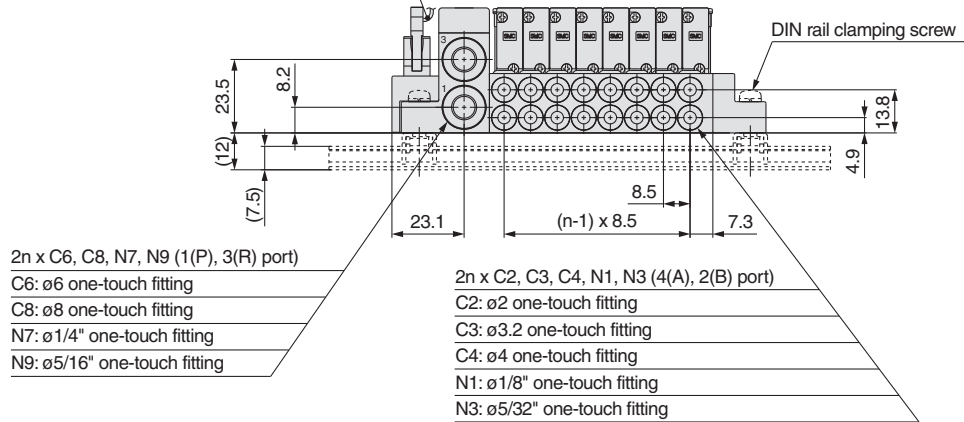
Prefix the asterisk to the part nos. of the solenoid valve, etc.

Write sequentially from the 1st station on the D side. When part nos. written collectively are complicated, specify on the manifold specification sheet.





Flat ribbon cable connector assembly (26P)
 AXT100-FC26-1: 1.5 m
 AXT100-FC26-2: 3 m
 AXT100-FC26-3: 5 m



Dimensions

Formula L1 = 8.5n + 38, L2 = 8.5n + 51.7 n: Station (Maximum 24 stations)

L \ n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
L1	55	63.5	72	80.5	89	97.5	106	114.5	123	131.5	140	148.5	157	165.5	174	182.5	191	199.5	208	216.5	225	233.5	242
L2	68.7	77.2	85.7	94.2	102.7	111.2	119.7	128.2	136.7	145.2	153.7	162.2	170.7	179.2	187.7	196.2	204.7	213.2	221.7	230.2	238.7	247.2	255.7
L3	100	100	112.5	125	137.5	137.5	150	150	162.5	175	175	187.5	200	200	212.5	225	225	237.5	250	250	262.5	275	275
L4	110.5	110.5	123	135.5	148	148	160.5	160.5	173	185.5	185.5	198	210.5	210.5	223	235.5	235.5	248	260.5	260.5	273	285.5	285.5

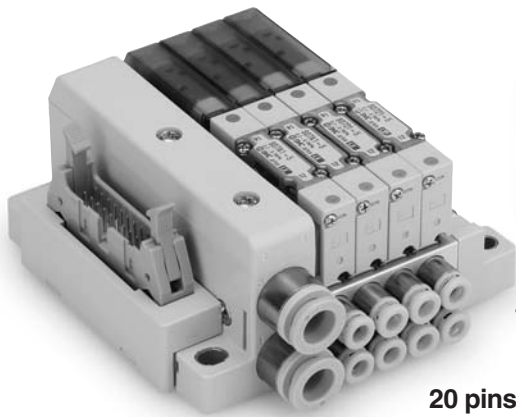
Slim Compact Plug-in Manifold Bar Base

PC Wiring System Compatible Flat Ribbon Cable

J kit



Slim Compact
Plug-in Manifold
Bar Base



20 pins

MIL Standard

■ 20 pins

PC wiring system
compatible

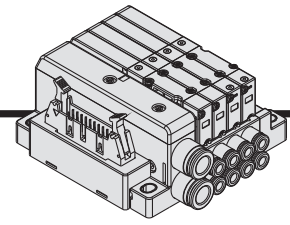
▶ Page 23

Slim Compact Plug-in Manifold
Bar Base

Plug-in Manifold
Stacking Base

Plug Lead Manifold
Bar Base

Plug Lead
Single Unit

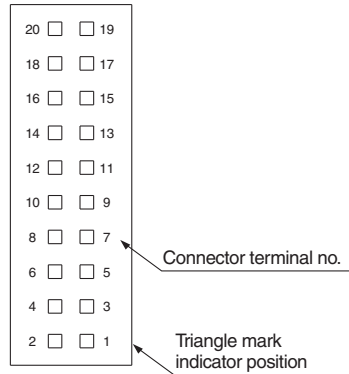


- Compatible with PC wiring system.
- Using connector for flat ribbon cable (20P) conforming to MIL standard permits the use of connectors put on the market and gives a wide interchangeability.
- Top or side receptacle position can be selected in accordance with the available mounting space.

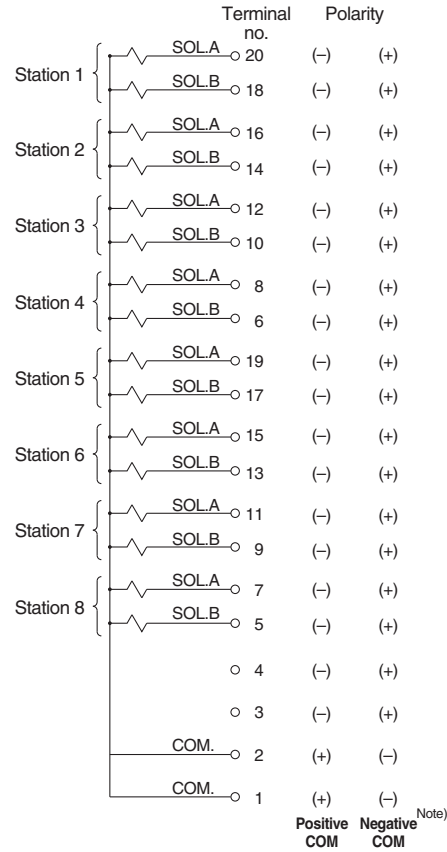
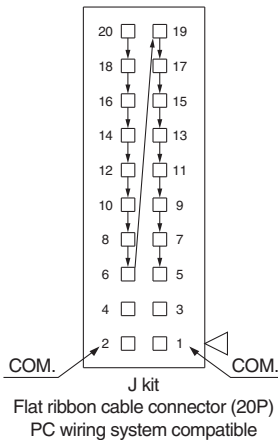
Electrical Wiring Specifications

Double wiring (connected to SOL. A and SOL. B) is adopted for the internal wiring of each station, regardless of valve and option types. Mixed single and double wiring is available as an option. For details, refer to "Special Wiring Specifications" (Option) below.

Flat ribbon cable connector



Special Wiring Specifications (Option) [-K]



Note) Mounting valve have no polarity. It can also be used as a negative common. For details about the PC wiring system, refer to catalog CAT.ES02-20 separately.

Mixed single and double wiring are available as an option. The maximum number of manifold stations is determined by the number of solenoids. Count one point for a single solenoid type and two points for a double solenoid type. The total number of solenoids (points) must not exceed 16.

1. How to Order valves

Indicate an option symbol, -K, for the manifold part number and be sure to specify the mounting position and number of stations of the single and double wiring on the manifold specification sheet.

2. Wiring specifications

Connector terminal numbers are connected from solenoid station 1 on the A side in the order indicated by the arrows without skipping any terminal numbers.



How to Order Manifold

SS0751 - 08 C4 C8 JD0 -

Stations

Symbol	Stations
01	1 station
⋮	⋮
16	16 stations

Note) The maximum number of stations will be different depending on the wiring specifications.

Cylinder port size

Symbol	Port size	
C2	With ø2 one-touch fitting	Metric
C3	With ø3.2 one-touch fitting	
C4	With ø4 one-touch fitting	
N1	With ø1/8" one-touch fitting	Inch
N3	With ø5/32" one-touch fitting	

P, R port size

Symbol	Port size	
Nil	With ø8 one-touch fitting <small>Note)</small>	Metric
C6	With ø6 one-touch fitting	
C8	With ø8 one-touch fitting	
N7	With ø1/4" one-touch fitting	Inch
N9	With ø5/16" one-touch fitting	

Note) The cylinder port is ø5/16" when measured in inches.

Option

Symbol	Specifications
Nil	None
D	With DIN rail (Rail length: Standard)
DO	Without DIN rail (With bracket)
D□ <small>Note 2)</small>	With DIN rail Designated length (□: Station)
K <small>Note 3)</small>	Special wiring specifications (Except double wiring)
R <small>Note 4)</small>	External pilot
S	Built-in silencer

Note 1) When two or more options are specified, indicate them alphabetically. Example) -DKR

Note 2) The available number of stations is larger than the number of manifold stations.

Note 3) Indicate the wiring specifications for mixed single and double wirings.

Note 4) For details, refer to page 27.

* For manifold optional parts, refer to pages 26 to 27.

* For manifold exploded view, refer to page 29.

Kit type

Kit type	Symbol	Specifications	Standard station	Max. number of stations for special wiring specifications	Max. number of solenoids
J kit	JD0	Flat ribbon cable (20P) PC wiring system compatible <small>Note 1)</small>	1 to 8 stations	16 stations	16

Note 1) Separately order the 20P type cable assembly for the J kit.

Note 2) The maximum number of stations is determined by the total number of solenoids.
For mixed single and double wirings, enter "-K" to the order code options.

Type of actuation	Single	Double, Dual 3-port
Number of solenoids	1	2

How to Order Valves

S07 1 1 - 5

Type of actuation

Symbol	Specifications
1	2-position single
2	2-position double
A	4-position dual 3-port (N.C. + N.C.) [Exhaust center]
B	4-position dual 3-port (N.O. + N.O.) [Pressure center]
C	4-position dual 3-port (N.C. + N.O.)

Note) For symbol, refer to page 7.

Voltage

Symbol	Specifications
5	24 VDC
6	12 VDC

Function

Symbol	Specifications
Nil	Standard
R	External pilot <small>Note)</small>

Note) Not compatible with dual 3-port valves.

Base mounted plug-in

How to Order Manifold Assembly

Specify the part numbers for valves and options together beneath the manifold base part number.

<Example>

Flat ribbon cable kit

SS0751-08C4C8JD0...1 set - Manifold base part no.

* S0711-5..... 3 sets - Valve part no. (Stations 1 to 3)

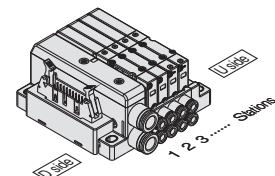
* S0721-5..... 2 sets - Valve part no. (Stations 4 to 5)

* S07A1-5..... 2 sets - Valve part no. (Stations 6 to 7)

* SS0700-10A-3..... 1 set - Blanking plate part no. (Station 8)

Prefix the asterisk to the part nos. of the solenoid valve, etc.

Write sequentially from the 1st station on the D side. When part nos. written collectively are complicated, specify on the manifold specification sheet.

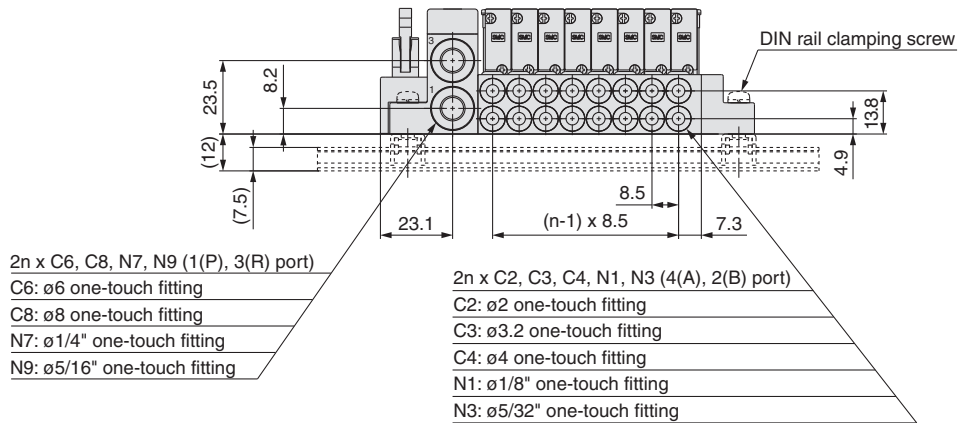
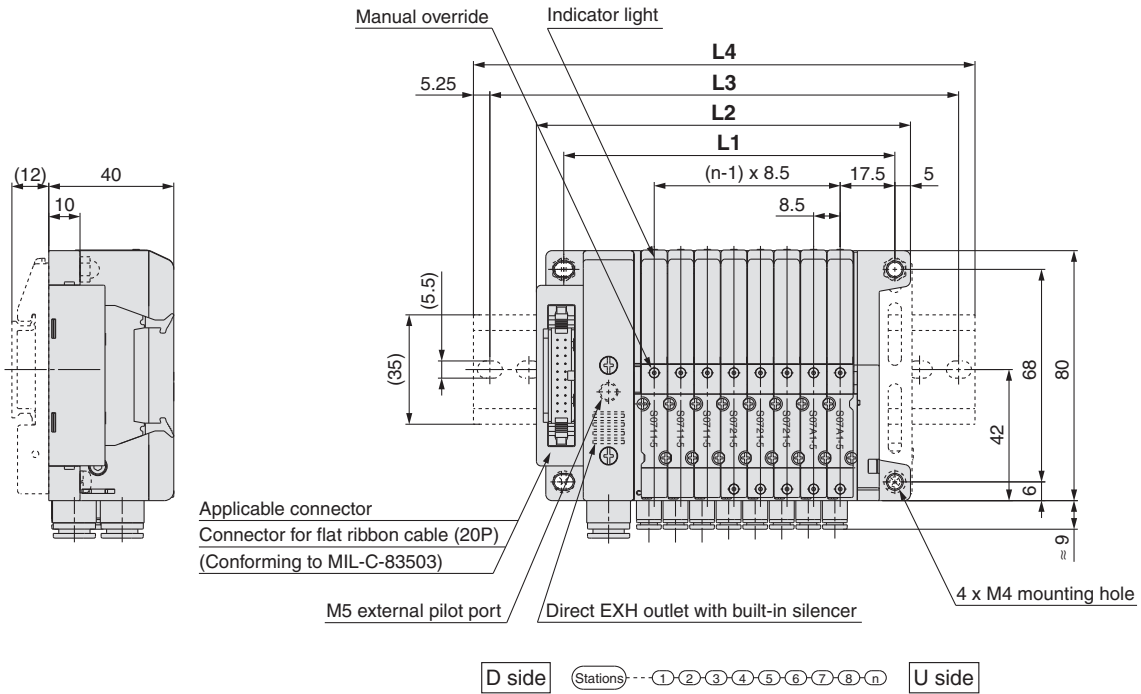


Slim Compact Plug-in Manifold Bar Base

Plug-in Manifold Stacking Base

Plug Lead Manifold Bar Base

Plug Lead Single Unit



Dimensions

Formula L1 = 8.5n + 38, L2 = 8.5n + 51.7 n: Station (Maximum 16 stations)

L \ n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L1	55	63.5	72	80.5	89	97.5	106	114.5	123	131.5	140	148.5	157	165.5	174
L2	68.7	77.2	85.7	94.2	102.7	111.2	119.7	128.2	136.7	145.2	153.7	162.2	170.7	179.2	187.7
L3	100	100	112.5	125	137.5	137.5	150	150	162.5	175	175	187.5	200	200	212.5
L4	110.5	110.5	123	135.5	148	148	160.5	160.5	173	185.5	185.5	198	210.5	210.5	223

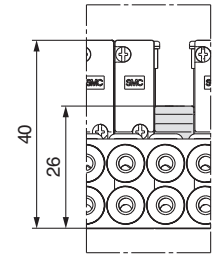
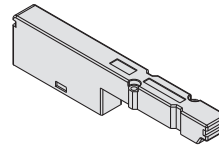
Manifold Optional Parts

Blanking plate assembly

SS0700-10A-3

It is used by attaching on the manifold block for being prepared for removing a valve for maintenance reasons or planning to mount a spare valve, etc.

Weight: 0.3 oz (8 g)



Individual SUP spacer

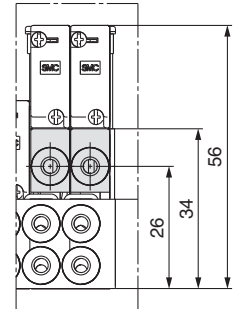
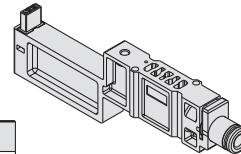
SS0700-P-3-C

Mounted on the manifold block to make an independent supply port when each solenoid valve uses different operating pressure.

Weight: 0.53 oz (15 g)

Port size

Symbol	Applicable tube
C2	Applicable tube $\phi 2$
C3	Applicable tube $\phi 3$
C4	Applicable tube $\phi 4$
N1	Applicable tube $\phi 1/8''$
N3	Applicable tube $\phi 5/32''$



Individual EXH spacer

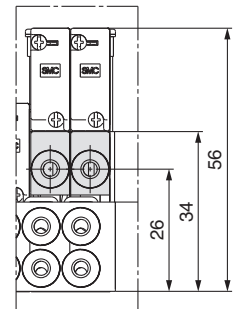
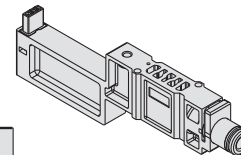
SS0700-R-3-C

Mounted on the manifold block to make an independent exhaust port when the exhaust from one valve affects valves on other stations in the air circuit.

Weight: 0.53 oz (15 g)

Port size

Symbol	Applicable tube
C2	Applicable tube $\phi 2$
C3	Applicable tube $\phi 3$
C4	Applicable tube $\phi 4$
N1	Applicable tube $\phi 1/8''$
N3	Applicable tube $\phi 5/32''$



Blanking plate with output

SS0700-1C3-

Lead wire length (mm)

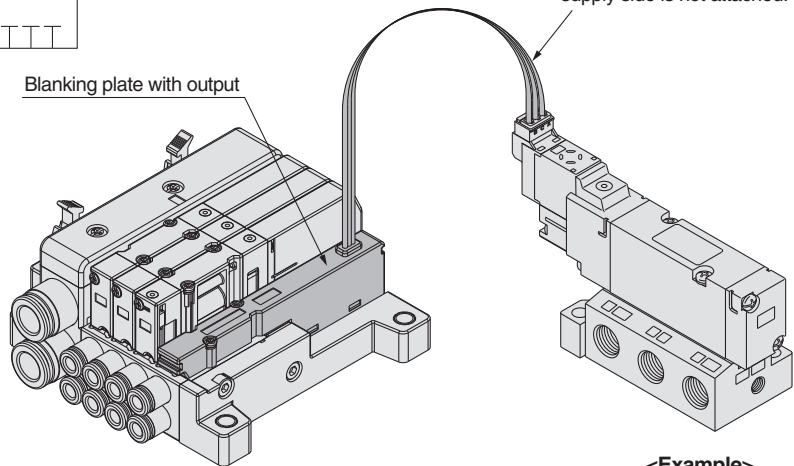
Nil	600
10	1000
15	1500
20	2000
25	2500
30	3000

JIS symbol



Blanking plate with output

Connector on the power supply side is not attached.



<Example>

Blanking plate with a connector for individually outputting electricity to drive a single valve or equipment that are not on the manifold base.

Note 1) Electric current should be 0.5 A or less.

(Including the mounted valves) When the current is output from two positions at the same time, the current should be 0.25 A or less.

Note 2) Please consult with SMC for the max.

allowable current for serial transmission kit.

Weight: 0.8 oz (23 g)

Series S0700 Slim Compact Plug-in Manifold Bar Base Manifold Optional Parts

External pilot [-R]

This can be used when the air pressure is 14.5 to 29.0 psi (0.1 to 0.2 MPa) lower than the minimum operating pressure of the solenoid valves or used for vacuum specifications.

Add R to the part numbers of manifolds and valves to indicate the external pilot specifications.

An M5 port will be installed on the top side of the manifold's SUP/EXH block.

- How to Order Valves (Example)

- S0710 R -5

- External pilot

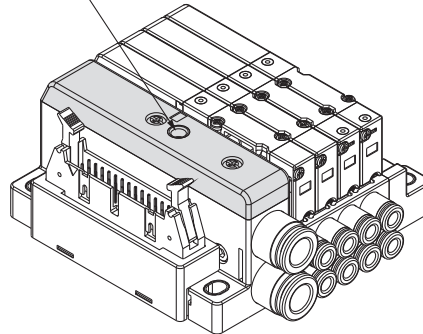
- How to Order Manifold (Example)

- * Indicate R for an option.

- SS0750-08C4FD1-R

- External pilot

External pilot port
(M5 x 0.8)




Note 1) Not compatible with dual 3-port valves.

Note 2) When the internal pilot type and external pilot type of valves are mixed up on the manifold, order the manifold suitable for the specifications of the external pilot valve.

Note 3) Valves with the external pilot have a pilot EXH with individual exhaust specifications and EXH can be pressurized. However, the pressure supplied from EXH should be 0.4 MPa or lower.

Direct EXH outlet with built-in silencer [-S]

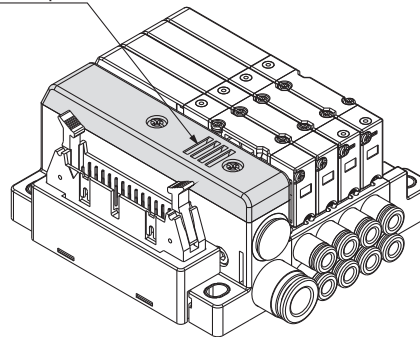
This is a type with an exhaust port atop the manifold end plate. The built-in silencer exhibits an excellent noise suppression effect. (Noise reduction: 30 dB)

 Note) A large quantity of drainage generated in the air source results in exhaust of air together with drainage.

- * When ordering this option incorporated with a manifold, suffix "S" to the end of the manifold part number.

- * For precautions on handling and how to replace elements, refer to "Specific Product Precautions."

Exhaust port




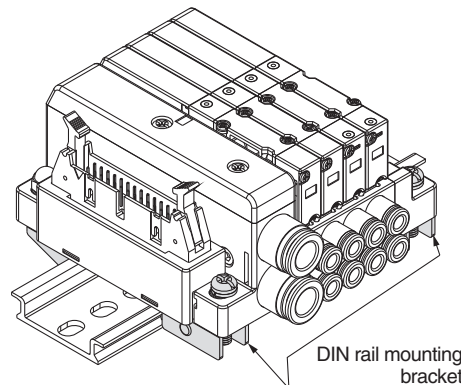
DIN rail mounting bracket

SS0700 - 57A - 3

It is used for mounting a manifold on a DIN rail. The DIN rail mounted bracket is fixed to the manifold end plate. (The specification is the same as that for the option "D".)

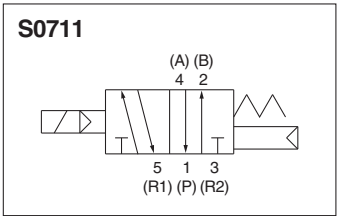
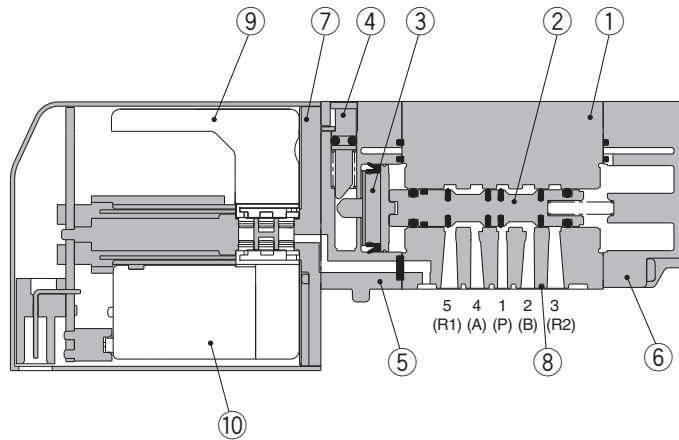
1 set of DIN rail mounting bracket is included for 1 manifold (2 or 3 DIN rail mounting brackets (S, T kit)).

 * When ordering this option incorporated with a manifold, suffix "D" to the end of the manifold part number.

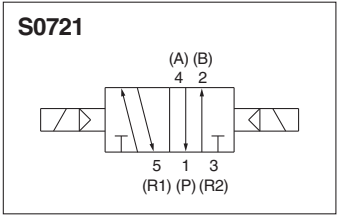
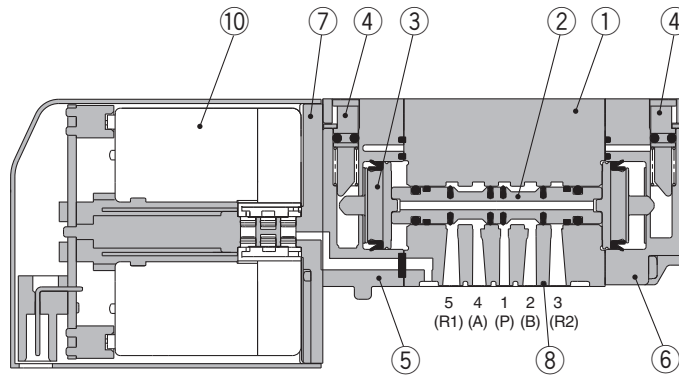


Construction

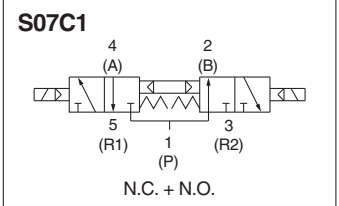
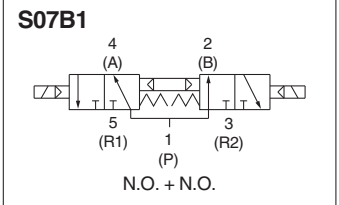
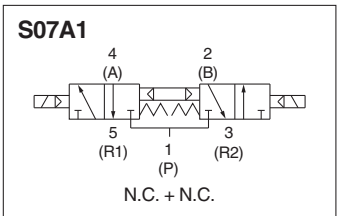
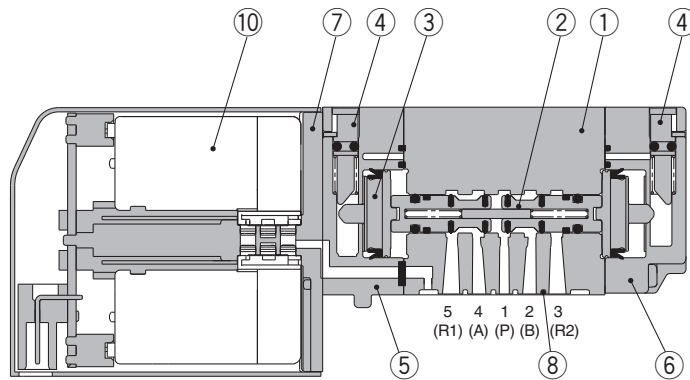
Single: S0711



Double: S0721



Dual 3-Port: S07B1



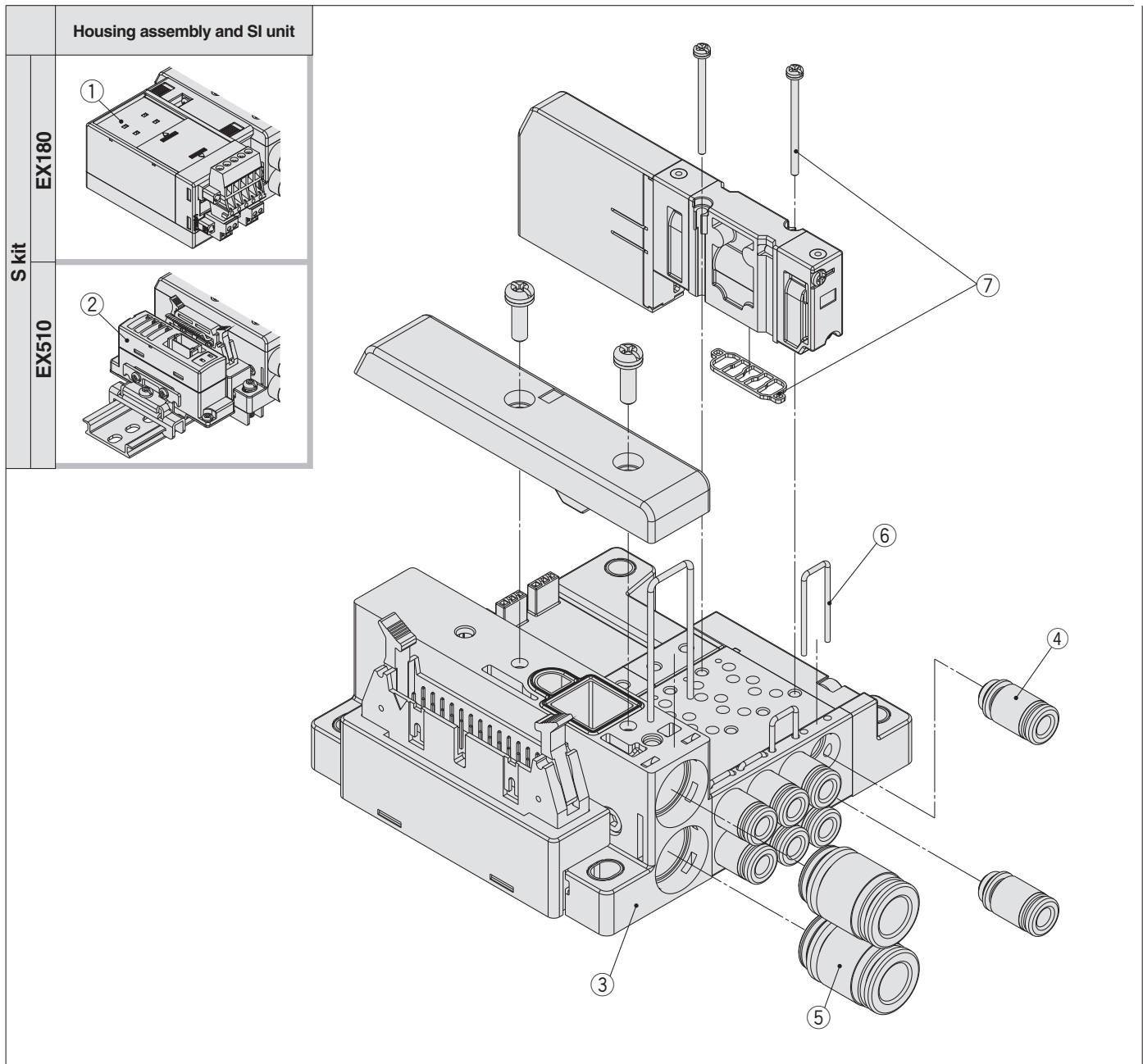
Component Parts

No.	Description	Material
1	Body	Zinc die-casted
2	Spool	Aluminum
3	Piston	Resin
4	Manual override	Resin
5	Adapter plate	Resin
6	End plate	Resin
7	Pilot spacer	Resin
8	Interface gasket	HNBR
9	Plate	Resin
10	Pilot valve assembly <small>Note</small>	—

Note) Please consult with SMC for pilot valve replacement.

Series S0700 Slim Compact Plug-in Manifold Bar Base

Manifold Exploded View




* It is not possible to increase or decrease the number of stations or change the wiring kit on the slim compact plug-in manifold bar base.
To change them, please change the entire base unit.

Manifold Assembly Part No.

No.	Description	Part no.	Note
①	SI unit	EX180-SDN3	DeviceNet™ 32 outputs NPN (positive common) T-branch type communication connector
		EX180-SDN3A	DeviceNet™ 32 outputs NPN (positive common) Straight type communication connector
		EX180-SDN4	DeviceNet™ 16 outputs NPN (positive common) T-branch type communication connector
		EX180-SDN4A	DeviceNet™ 16 outputs NPN (positive common) Straight type communication connector
		EX180-SMJ3	CC-Link 32 outputs NPN (positive common) T-branch type communication connector
		EX180-SMJ3A	CC-Link 32 outputs NPN (positive common) Straight type communication connector
		EX180-SDN5	DeviceNet™ 32 outputs PNP (negative common) T-branch type communication connector
		EX180-SDN5A	DeviceNet™ 32 outputs PNP (negative common) Straight type communication connector
		EX180-SDN6	DeviceNet™ 16 outputs PNP (negative common) T-branch type communication connector
		EX180-SDN6A	DeviceNet™ 16 outputs PNP (negative common) Straight type communication connector
		EX180-SMJ5	CC-Link 32 outputs PNP (negative common) T-branch type communication connector
		EX180-SMJ5A	CC-Link 32 outputs PNP (negative common) Straight type communication connector
②	SI unit	EX510-S002A	NPN (Positive common)
		EX510-S102A	PNP (Negative common)
③	Base unit	SS0751-□□□□	Refer to "How to Order" for each kit.

④ Fitting assembly part number for cylinder port

VVQ0000 – 50A – 

• Port size


Symbol	Applicable tube
C2	Applicable tube ø2
C3	Applicable tube ø3
C4	Applicable tube ø4
N1	Applicable tube ø1/8"
N3	Applicable tube ø5/32"



Note 1) Purchasing order is available in units of 10 pieces.

Note 2) For one-touch fittings replacement, refer to "Specific Product Precautions 3."

⑤ Fitting assembly part number for P, R port

VVQ1000 – 51A – 

• Port size

Symbol	Applicable tube
C6	Applicable tube ø6
C8	Applicable tube ø8
N7	Applicable tube ø1/4"
N9	Applicable tube ø5/16"



Note 1) Purchasing order is available in units of 10 pieces.

Note 2) For one-touch fittings replacement, refer to "Specific Product Precautions 3."

No.	Description	Part no.
⑥	Clip	SS0700-80A-5

Note) 1 set includes 10 pieces.

No.	Description	Part no.
⑦	Gasket, Screw	S0700-GS-3

Note) Above part number consists of 10 units. Each unit has one gasket and two screws.

Slim Compact Plug-in Manifold Bar Base

Plug-in Manifold Stacking Base

Plug Lead Manifold Bar Base

Plug Lead Single Unit

Plug-in Manifold Stacking Base

Serial Transmission

S kit

Plug-in Manifold Stacking Base



For Output Serial Transmission System

EX260

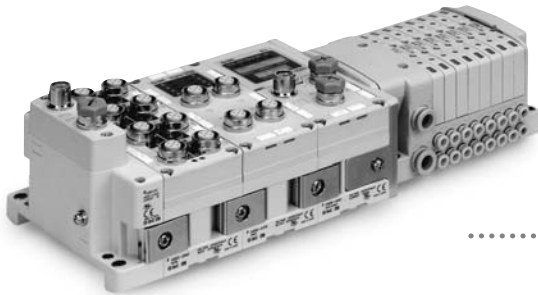
Page 33



For Input/Output Serial Transmission System

EX250

Page 35



For Input/Output Serial Transmission System

EX600

Page 37



Gateway-type Serial Transmission System

EX500

Page 41



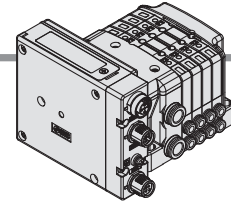
Slim Compact Plug-in Manifold Bar Base

Plug-in Manifold Stacking Base

Plug Lead Manifold Bar Base

Plug Lead Single Unit

How to Order Manifold



SS0750 - 08 C4 C8 SNA N - B

1 2 3 4 5 6

1 Stations

In the case of the 32-output SI unit

Symbol	Stations	Note
01	1 station	Double wiring ^{Note 1)}
⋮	⋮	
16	16 stations	Specified layout ^{Note 2)} (Available up to 32 solenoids)
01	1 station	
⋮	⋮	
24	24 stations	

In the case of the 16-output SI unit

Symbol	Stations	Note
01	1 station	Double wiring ^{Note 1)}
⋮	⋮	
08	8 stations	Specified layout ^{Note 2)} (Available up to 16 solenoids)
01	1 station	
⋮	⋮	
16	16 stations	

Note 1) Double wiring : single, double, 3-position and 4-position solenoid valves can be used on all manifold stations.

Up to 24 stations due to the structure of the manifold. Please note the maximum number of stations is 24 for single wiring, too.

Note 2) Specified layout: Indicate the wiring specifications with the manifold specification sheet. (Note that double, 3-position and 4-position valves cannot be used where single solenoid wiring has been specified.)

Note 3) This also includes the number of blanking plate assembly.

2 Cylinder port size

Symbol	Port size	
C2	With ø2 one-touch fitting	Metric
C3	With ø3.2 one-touch fitting	
C4	With ø4 one-touch fitting	
CM	Mixed sizes and with port plug ^{Note)}	
N1	With ø1/8" one-touch fitting	Inch
N3	With ø5/32" one-touch fitting	
NM	Mixed sizes and with port plug ^{Note)}	

Note) Specify "Mixed sizes and with port plug" on the manifold specification sheet.

3 P, R port size

Symbol	Port size	
Nil	With ø8 one-touch fitting ^{Note)}	Metric
C6	With ø6 one-touch fitting	
C8	With ø8 one-touch fitting	Inch
N7	With ø1/4" one-touch fitting	
N9	With ø5/16" one-touch fitting	

Note) The cylinder port is ø5/16" when measured in inches.

4 Kit type

Symbol	Protocol	Number of outputs	Communication connector
SD0	Without SI unit		
SQA	DeviceNet™	32	M12
SQB		16	
SNA	PROFIBUS DP	32	M12
SNB		16	
SNC		32	D-sub
SND		16	
SVA	CC-Link	32	M12
SVB		16	
SDA	EtherCAT	32	M12
SDB		16	
SFA	PROFINET	32	M12
SFB		16	

Note 1) The maximum number of stations is determined by the total number of solenoids. For mixed single and double wirings, enter "K" to the order code options.

Note 2) For SI unit part number, refer to page 76.

Type of actuation	Single	Double, Dual 3 port
Number of solenoids	1	2

5 SI unit output polarity

Nil	Positive common
N	Negative common

6 Option

Symbol	Specifications
Nil	None
B ^{Note 2)}	With back pressure check valve (All stations)
D	With DIN rail (Rail length: Standard)
D0	Without DIN rail (with bracket)
D□ ^{Note 3)}	With DIN rail Designated length (□: Station)
K ^{Note 4)}	Special wiring specifications (Except double wiring)
N	With name plate
R ^{Note 5)}	External pilot
S	Built-in silencer

Note 1) When two or more options are specified, indicate them alphabetically. Example) -BKN

Note 2) When installing a back pressure check valve on the required station, enter the part number and specify the station position on the manifold specification sheet.

Note 3) The available number of stations is larger than the number of manifold stations.

Note 4) Indicate the wiring specifications for mixed single and double wirings.

Note 5) For details, refer to page 69.

* For manifold optional parts, refer to pages 69 to 73.

* For manifold exploded view, refer to page 75.

* When the "SD0" (Without SI unit) is specified, "D", "D□" cannot be selected.

Refer to Fieldbus System (CAT.E02-25) for details on the EX260 Integrated-type (For Output) Serial Transmission System.

How to Order Valves

S07 1 0 □ - 5

Type of actuation

Voltage: 24 VDC

Function

Symbol	Specifications
Nil	Standard
R	External pilot ^{Note)}

Note) Not compatible with dual 3-port valves.

Base mounted plug-in

Symbol	Specifications
1	2-position single
2	2-position double
A	4-position dual 3-port (N.C. + N.C.) [Exhaust center]
B	4-position dual 3-port (N.O. + N.O.) [Pressure center]
C	4-position dual 3-port (N.C. + N.O.)

Note) For symbol, refer to page 7.

How to Order Manifold Assembly

Specify the part numbers for valves and options together beneath the manifold base part number.

<Example>

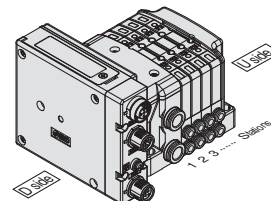
Serial transmission kit

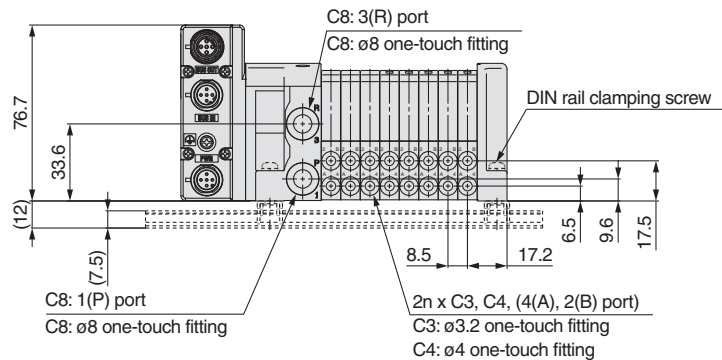
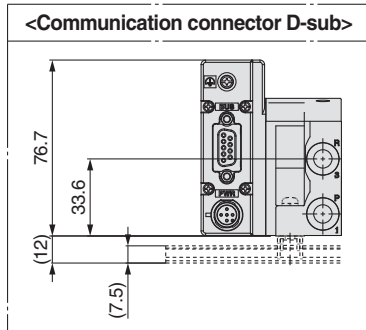
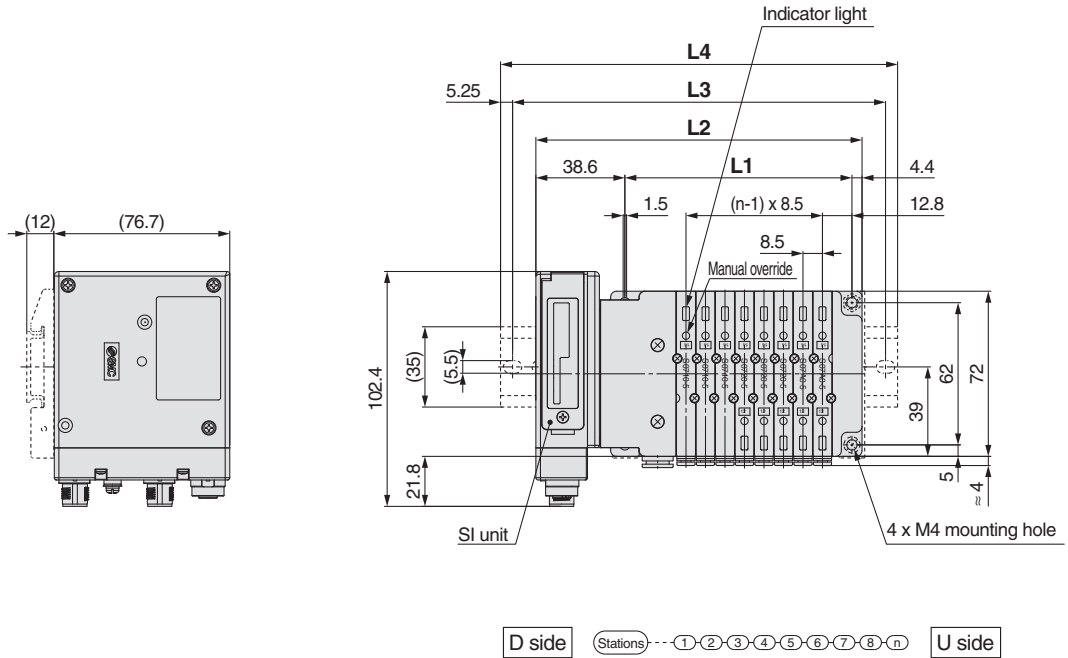
SS0750-04C4SNAN.....1 set – Manifold base part no.

* **S0720-5.....** 4 sets – Valve part no. (Stations 1 to 4)

Prefix the asterisk to the part nos. of the solenoid valve, etc.

Write sequentially from the 1st station on the D side. When part nos. written collectively are complicated, specify on the manifold specification sheet.





Dimensions

Formula L1 = 8.5n + 31, L2 = 8.5n + 74 n: Station (Maximum 24 stations)

L \ n	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L1	39.5	48	56.5	65	73.5	82	90.5	99	107.5	116	124.5	133	141.5	150	158.5	167
L2	82.5	91	99.5	108	116.5	125	133.5	142	150.5	159	167.5	176	184.5	193	201.5	210
L3	112.5	112.5	125	137.5	137.5	150	162.5	162.5	175	187.5	187.5	200	212.5	212.5	225	237.5
L4	123	123	135.5	148	148	160.5	173	173	185.5	198	198	210.5	223	223	235.5	248

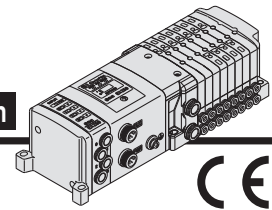
L \ n	17	18	19	20	21	22	23	24
L1	175.5	184	192.5	201	209.5	218	226.5	235
L2	218.5	227	235.5	244	252.5	261	269.5	278
L3	250	250	262.5	275	275	287.5	300	300
L4	260.5	260.5	273	285.5	285.5	298	310.5	310.5

Slim Compact Plug-in Manifold Bar Base

Plug-in Manifold Stacking Base

Plug Lead Manifold Bar Base

Plug Lead Single Unit



How to Order Manifold

SS0750 - 08 C4 C8 SDQ N - B

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

① Stations

Symbol	Stations
01	1 station
⋮	⋮
24 (Note)	24 stations

Note) The maximum number of stations will be different depending on the wiring specifications.

② Cylinder port size

Symbol	Port size	
C2	With ø2 one-touch fitting	Metric
C3	With ø3.2 one-touch fitting	
C4	With ø4 one-touch fitting	
CM	Mixed sizes and with port plug (Note)	
N1	With ø1/8" one-touch fitting	Inch
N3	With ø5/32" one-touch fitting	
NM	Mixed sizes and with port plug (Note)	

Note) Specify "Mixed sizes and with port plug" on the manifold specification sheet.

③ P, R port size

Symbol	Port size	
Nil	With ø8 one-touch fitting (Note)	Metric
C6	With ø6 one-touch fitting	
C8	With ø8 one-touch fitting	Inch
N7	With ø1/4" one-touch fitting	
N9	With ø5/16" one-touch fitting	

Note) The cylinder port is ø5/16" when measured in inches.

④ Kit type

Kit type	Note 2) Symbol	Specifications	Standard station	Max. number of stations for special wiring specifications	Max. number of solenoids	
S kit	For I/O serial transmission	SD0	Without SI unit	1 to 16 stations	24 (Note 3) stations	32
		SDQ	DeviceNet™			
		SDN	PROFIBUS DP			
		SDV	CC-Link			
		SDY	CANopen			
		SDZEN	EtherNet/IP™			
		SDTA	AS-Interface 31 slave, 8 in/8 out, 2 isolated common type	1 to 4 stations	8 stations	8
		SDTB	AS-Interface 31 slave, 4 in/4 out, 2 isolated common type	1 to 2 stations	4 stations	4
		SDTC	AS-Interface 31 slave, 8 in/8 out, 1 common type	1 to 4 stations	8 stations	8
		SDTD	AS-Interface 31 slave, 4 in/4 out, 1 common type	1 to 2 stations	4 stations	4

Note 1) The maximum number of stations is determined by the total number of solenoids.

For mixed single and double wirings, enter "-K" to the order code options.

Note 2) For SI unit part number, refer to page 76.

Note 3) Up to 24 stations due to the structure of the manifold. Please note the maximum number of stations is 24 for single wiring, too.

Type of actuation	Single	Double, Dual 3-port
Number of solenoids	1	2

How to Order Valves

S07 1 0 - 5

• Type of actuation

Symbol	Specifications
1	2-position single
2	2-position double
A	4-position dual 3-port (N.C. + N.C.) [Exhaust center]
B	4-position dual 3-port (N.O. + N.O.) [Pressure center]
C	4-position dual 3-port (N.C. + N.O.)

Note) For symbol, refer to page 7.

• Voltage: 24 VDC

• Function

Symbol	Specifications
Nil	Standard
R	External pilot (Note)

Note) Not compatible with dual 3-port valves.

• Base mounted plug-in

⑤ SI unit output polarity

SI unit common		EX250					
		DeviceNet™	PROFIBUS DP	CC-Link	AS-Interface	CANopen	EtherNet/IP™
Nil	Positive common	—	—	○	—	—	—
N	Negative common	○	○	—	○	○	○

Note) Without SI unit (SD0), the symbol is nil.

⑥ Input block (for I/O unit only)

Symbol	Specifications
Nil	SI unit/Input block: None (SD0)
0	Input block: None
1	Input block: 1 pc.
⋮	⋮
8	Input block: 8 pcs.

Note) Without SI unit (SD0), the symbol is nil.

⑦ Input block type (for I/O unit only)

Symbol	Specifications
Nil	Input block: None
1	M12 2 inputs
2	M12 4 inputs
3	M8 4 inputs (3 pins)

Note) Without SI unit (SD0), the symbol is nil.

⑧ Input block COM. (for I/O unit only)

Symbol	Specifications
Nil	PNP sensor input (Positive common) or without input block
N	NPN sensor input (Negative common)

Note) Without SI unit (SD0), the symbol is nil.

⑨ Option

Symbol	Specifications
Nil	None
B (Note 2)	With back pressure check valve (All stations)
D	With DIN rail (Rail length: Standard)
DO	Without DIN rail (With bracket)
D□ (Note 3)	With DIN rail Designated length (□: Station)
K (Note 4)	Special wiring specifications (Except double wiring)
N	With name plate
R (Note 5)	External pilot
S	Built-in silencer

Note 1) When two or more options are specified, indicate them alphabetically. Example) -BKN

Note 2) When installing a back pressure check valve on the required station, enter the part number and specify the station position on the manifold specification sheet.

Note 3) The available number of stations is larger than the number of manifold stations.

Note 4) Indicate the wiring specifications for mixed single and double wirings.

Note 5) For details, refer to page 69.

* For manifold optional parts, refer to pages 69 to 73.

* For manifold exploded view, refer to page 75.

Refer to Reduced Wiring Fieldbus System (Serial Transmission) in Electric Products (CAT.E150) for details on the EX250 Integrated-type (For Input/Output) Serial Transmission System.

How to Order Manifold Assembly

Specify the part numbers for valves and options together beneath the manifold base part number.

<Example>

Serial transmission kit

SS0750-08C4SDQN13N 1 set - Manifold base part no.

* S0710-5..... 3 sets - Valve part no. (Stations 1 to 3)

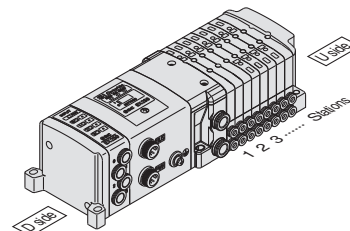
* S0720-5..... 2 sets - Valve part no. (Stations 4 to 5)

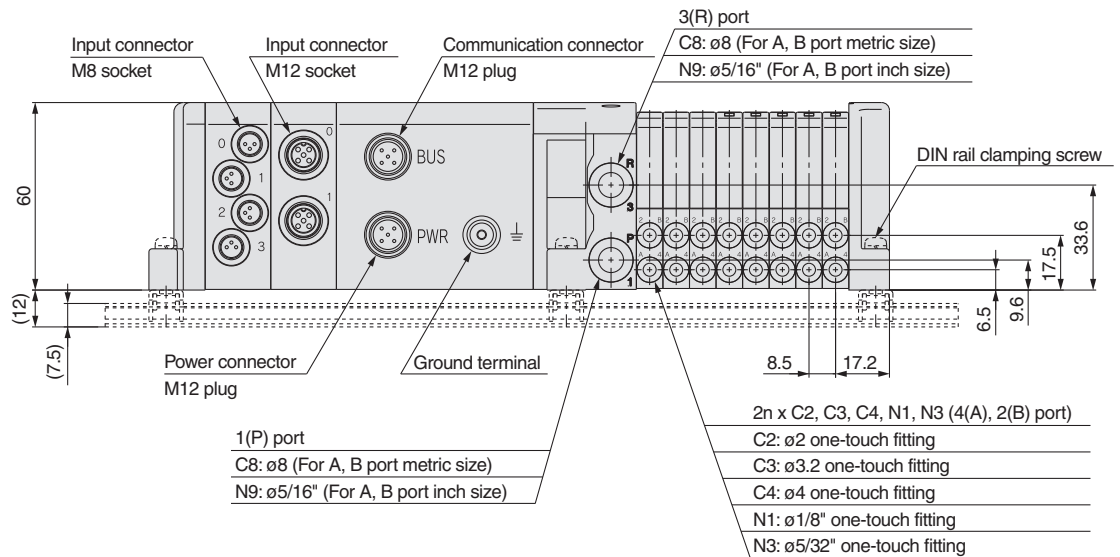
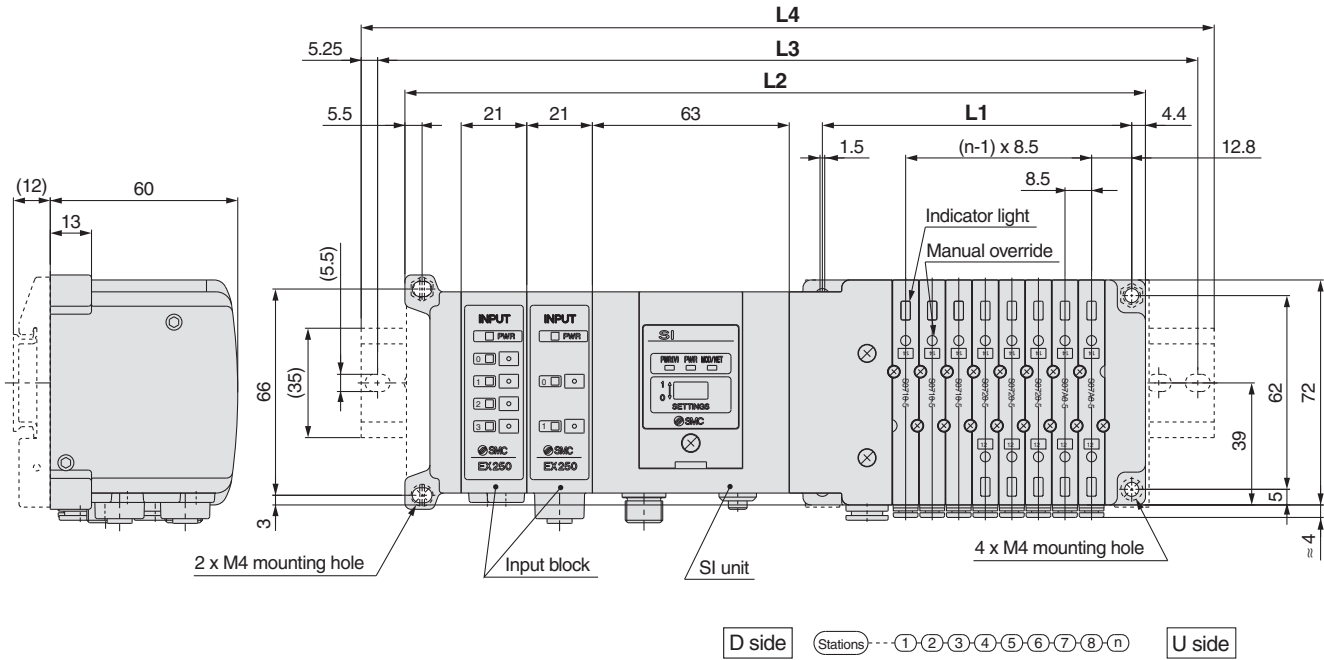
* S07A0-5..... 2 sets - Valve part no. (Stations 6 to 7)

* SS0700-10A-1..... 1 set - Blanking plate part no. (Station 8)

Prefix the asterisk to the part nos. of the solenoid valve, etc.

Write sequentially from the 1st station on the D side. When part nos. written collectively are complicated, specify on the manifold specification sheet.



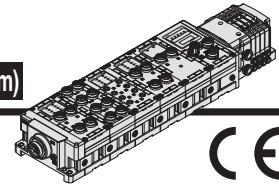


Dimensions

Formula L1 = 8.5n + 31, L2 = 8.5n + 169 (In the case of 2 input blocks, 21 mm is added per 1 pc.) n: Station (Maximum 24 stations)

L \ n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L1	48	56.5	65	73.5	82	90.5	99	107.5	116	124.5	133	141.5	150	158.5	167
L2	186	194.5	203	211.5	220	228.5	237	245.5	254	262.5	271	279.5	288	296.5	305
L3	212.5	225	225	237.5	250	250	262.5	275	275	287.5	300	300	312.5	325	325
L4	223	235.5	235.5	248	260.5	260.5	273	285.5	285.5	298	310.5	310.5	323	335.5	335.5

L \ n	17	18	19	20	21	22	23	24
L1	175.5	184	192.5	201	209.5	218	226.5	235
L2	313.5	322	330.5	339	347.5	356	364.5	373
L3	337.5	350	350	362.5	375	387.5	387.5	400
L4	348	360.5	360.5	373	385.5	398	398	410.5



How to Order Manifold

SS0750 - 08 C4 SD6Q 2 N 1 - B

Stations

Symbol	Stations
01	1 station
⋮	⋮
24 ^{Note)}	24 stations

Note) Max. number of stations depends on the wiring specifications.

Cylinder port size

Symbol	Port size	
C2	With ø2 one-touch fitting	Metric
C3	With ø3.2 one-touch fitting	
C4	With ø4 one-touch fitting	
CM	Mixed sizes and with port plug ^{Note)}	
N1	With ø1/8" one-touch fitting	Inch
N3	With ø5/32" one-touch fitting	
NM	Mixed sizes and with port plug ^{Note)}	

Note) Indicate the sizes on the manifold specification sheet in the case of CM and NM.

Kit type

Kit type	Symbol	Specifications	Standard station	Max. number of stations for special wiring specifications	Max. number of solenoids
S kit	SD60	Without SI unit	1 to 16 stations	24 stations ^{Note 3)}	32
	SD6Q	DeviceNet™			
	SD6N	PROFIBUS DP			
	SD6V	CC-Link			
	SD6ZE	EtherNet/IP™			
	SD6D	EtherCAT			

Note 1) Max. station number depends on the number of solenoid valve.

Add the option symbol "K" when the combination of single wiring and double wiring is specified.

- When "Without SI unit" is specified, valve plate to connect the manifold and SI unit is not mounted. Refer to page 94 for mounting method.
- I/O unit cannot be chosen without SI unit.

Note 2) For SI unit part number, refer to page 76.

Note 3) Up to 24 stations due to the structure of the manifold. Please note the maximum number of stations is 24 for single wiring, too.

Type of actuation	Single	Double, Dual 3-port
Number of solenoid valves	1	2

End plate type

Nil	No end plate
2	Power supply with M12 connector (Max. supplied current 2 A)
3	Power supply with 7/8 inch connector (Max. supplied current 8 A)

Note) Without SI Unit, the symbol is nil.

Option

Symbol	Specifications
Nil	None
B ^{Note 2)}	With back pressure check valve (All sta.)
D	With DIN rail (Rail length: Standard)
D0	With DIN rail bracket (Without rail)
D□ ^{Note 3)}	With DIN rail length specified (□: Sta.)
K ^{Note 4)}	Special wiring specifications (Except double wiring)
N	With name plate
R	External pilot
S	Built-in silencer

Note 1) When two or more symbols are specified, indicate them alphabetically. Example) -BKN

Note 2) When back pressure check valve is used only for specified station, specify back pressure check valve part number, and specify station number to which the valve is mounted on the manifold specification sheet.

Note 3) Specified station number shall be longer than manifold station number.

Note 4) When single wiring and double wiring are mixed, specify wiring type of each station with the manifold specification sheet.

Note 5) When "Without SI unit (SD60)" is specified, "With DIN rail (D)" cannot be selected.

I/O unit station number

Nil	None
1	1 station
⋮	⋮
9	9 stations

Note 1) Without SI unit, the symbol is nil.

Note 2) SI unit is not included in I/O unit station number.

Note 3) When I/O unit is selected, it is shipped separately, and assembled by customer. Refer to the attached operation manual for mounting method.

SI unit output polarity

Nil	Positive common
N	Negative common

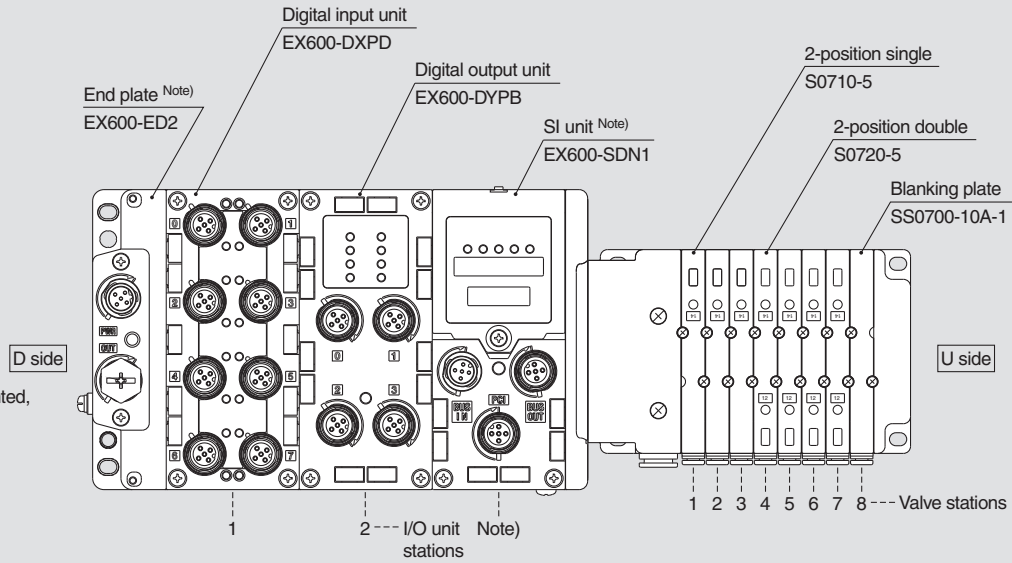
Note) Without SI unit the symbol is nil.

Refer to Fieldbus System (For Input/Output) catalog CAT.E02-24 for details on the EX600 Integrated-type (For I/O) Serial Transmission System.

How to Order Manifold Assembly (Example)

Example

Serial transmission kit



For the I/O unit part number mounted, refer to CAT.E02-24 catalog.

- Digital input unit
- Digital output unit
- Digital I/O unit
- Analog input unit
- Analog output unit
- Analog I/O unit

Serial transmission kit

- * SS0750-08C4SD6Q2N2....1 set Manifold base part number
- * S0710-53 sets Valve part number (Stations 1 to 3)
- * S0720-54 sets Valve part number (Stations 4 to 7)
- * SS0700-10A-11 set Blanking plate number (Station 8)
- * EX600-DXPD1 set I/O unit part number (Station 1)
- * EX600-DYPB1 set I/O unit part number (Station 2)

↳ The asterisk denotes the symbol for assembly.
 Prefix it to the part nos. of the solenoid valve, etc.

Enter in order starting from the first station on the D side.
 If arrangement becomes complicated, specify on a manifold specification sheet.

Enter in order starting from the first station on the D side.

Note) Do not enter the SI unit part number and the end plate part number together.

How to Order Valves

S07 1 0 [] - 5

• Type of actuation •

• Coil voltage

5 | 24 VDC

• Function

Symbol	Specifications
Nil	Standard
R	External pilot ^{Note)}

Note) Not compatible with dual 3-port valves.

• Base mounted plug-in

1	2-position single		A	4-position dual 3-port valve (N.C. + N.C.) [Exhaust center]	
	2	2-position double			B
			C	4-position dual 3-port valve (N.C. + N.O.)	

Slim Compact Plug-in Manifold Bar Base

Plug-in Manifold Stacking Base

Plug Lead Manifold Bar Base

Plug Lead Single Unit

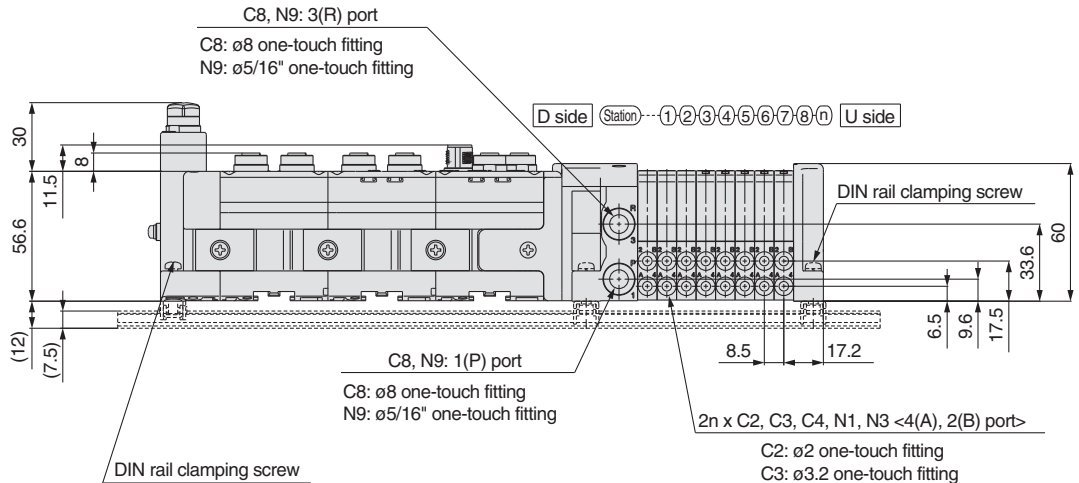
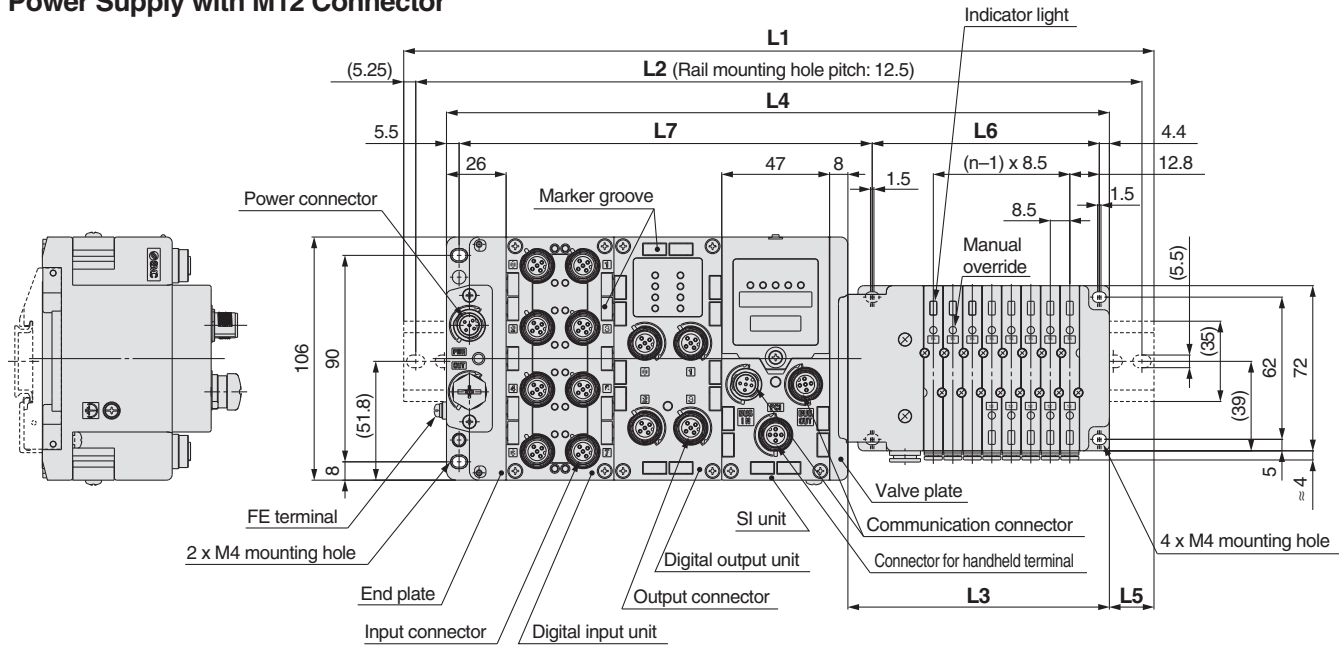


Series S0700 Plug-in Manifold Stacking Base

kit (Serial Transmission)

EX600 (For Input/Output) Serial Transmission System (Fieldbus System)

Power Supply with M12 Connector

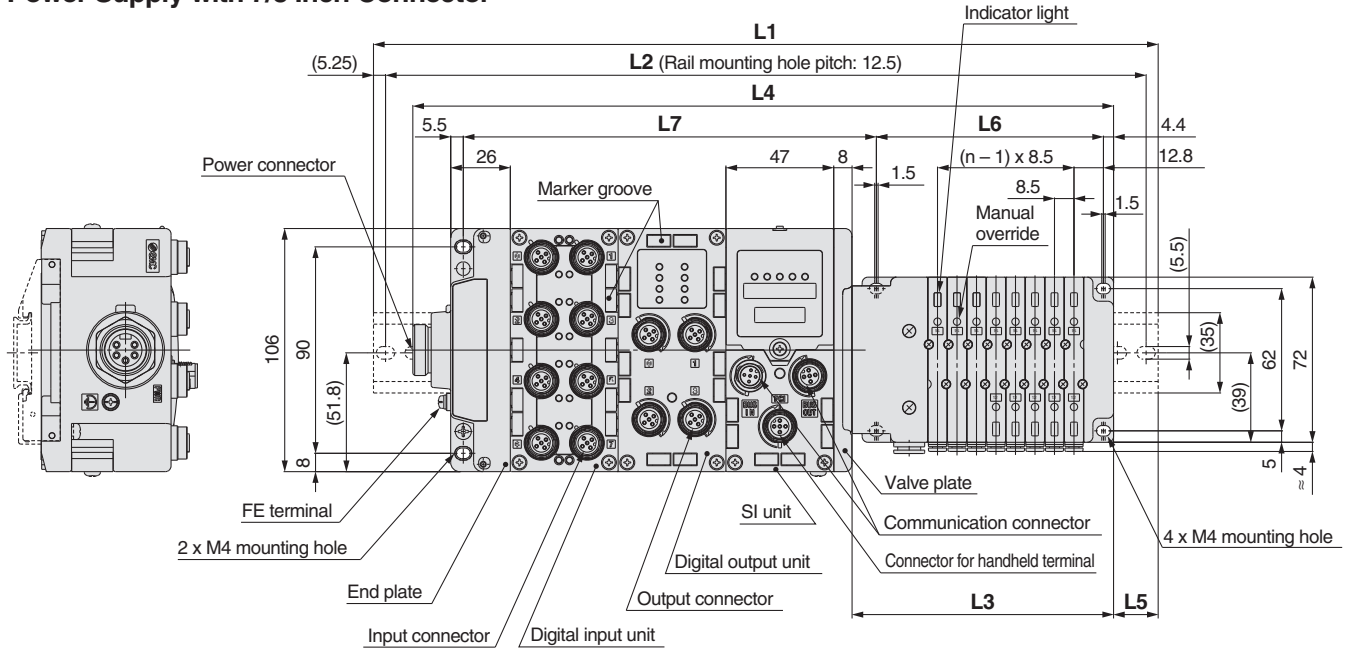


$L2 = L1 - 10.5$
 $L3 = 8.5 \times n1 + 46$
 $L4 = L3 + 81 + 47 \times n2$
 $L5 = (L1 - L4) / 2$
 $L6 = 8.5 \times n1 + 31$
 $L7 = 47 \times n2 + 86.1$

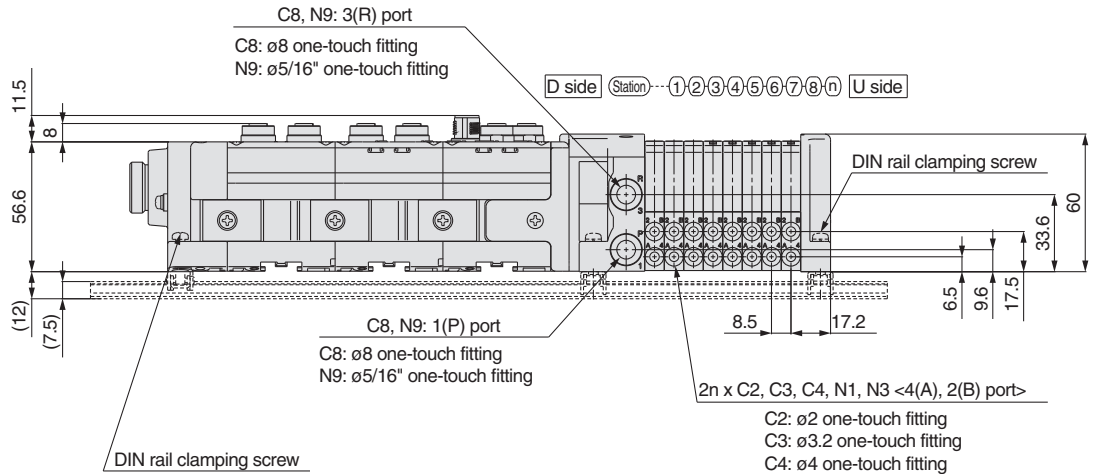
L1: DIN Rail Overall Length

I/O unit stations (n2) \ Valve stations (n1)	Valve stations (n1)																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
0	173	185.5	185.5	198	210.5	210.5	223	235.5	235.5	248	260.5	260.5	273	285.5	285.5	298	310.5	310.5	323	335.5	335.5	348	360.5	373
1	223	223	235.5	248	248	260.5	273	273	285.5	298	298	310.5	323	323	335.5	348	360.5	360.5	373	385.5	385.5	398	410.5	410.5
2	260.5	273	285.5	285.5	298	310.5	310.5	323	335.5	348	348	360.5	373	373	385.5	398	398	410.5	423	423	435.5	448	448	460.5
3	310.5	323	335.5	335.5	348	360.5	360.5	373	385.5	385.5	398	410.5	410.5	423	435.5	448	448	460.5	473	473	485.5	498	498	510.5
4	360.5	373	373	385.5	398	398	410.5	423	423	435.5	448	448	460.5	473	485.5	485.5	498	510.5	523	523	535.5	548	548	560.5
5	410.5	410.5	423	435.5	435.5	448	460.5	460.5	473	485.5	498	498	510.5	523	523	535.5	548	548	560.5	573	573	585.5	598	598
6	448	460.5	473	473	485.5	498	510.5	510.5	523	535.5	548	548	560.5	573	573	585.5	598	598	610.5	610.5	623	635.5	635.5	648
7	498	510.5	523	523	535.5	548	548	560.5	573	573	585.5	598	598	610.5	623	623	635.5	648	648	648	660.5	673	673	685.5
8	548	560.5	560.5	573	585.5	585.5	598	610.5	610.5	623	635.5	635.5	648	660.5	660.5	673	685.5	698	698	698	710.5	723	723	735.5
9	598	598	610.5	623	623	635.5	648	648	660.5	673	685.5	685.5	698	710.5	710.5	723	735.5	735.5	748	748	760.5	760.5	773	785.5

Power Supply with 7/8 Inch Connector



Slim Compact Plug-in Manifold Bar Base



Plug-in Manifold Stacking Base

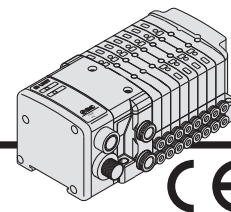
$L2 = L1 - 10.5$
 $L3 = 8.5 \times n1 + 46$
 $L4 = L3 + 97.5 + 47 \times n2$
 $L5 = (L1 - L4) / 2$
 $L6 = 8.5 \times n1 + 31$
 $L7 = 47 \times n2 + 86.1$

L1: DIN Rail Overall Length

I/O unit stations (n2) \ Valve stations (n1)	Valve stations (n1)																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
0	185.5	198	210.5	210.5	223	235.5	235.5	248	260.5	260.5	273	285.5	285.5	298	310.5	310.5	323	335.5	335.5	348	360.5	360.5	373	385.5
1	235.5	248	248	260.5	273	273	285.5	298	298	310.5	323	323	335.5	348	348	360.5	373	385.5	385.5	398	410.5	410.5	423	435.5
2	285.5	285.5	298	310.5	310.5	323	335.5	335.5	348	360.5	373	373	385.5	398	398	410.5	423	423	435.5	448	448	460.5	473	473
3	323	335.5	348	360.5	360.5	373	385.5	385.5	398	410.5	410.5	423	435.5	435.5	448	460.5	460.5	473	485.5	485.5	498	510.5	510.5	523
4	373	385.5	398	398	410.5	423	423	435.5	448	448	460.5	473	473	485.5	498	498	510.5	523	523	535.5	548	548	560.5	560.5
5	423	435.5	435.5	448	460.5	460.5	473	485.5	485.5	498	510.5	510.5	523	535.5	548	548	560.5	573	573	585.5	598	598	610.5	610.5
6	473	473	485.5	498	498	510.5	523	535.5	535.5	548	560.5	560.5	573	585.5	598	598	610.5	623	623	635.5	648	648	660.5	660.5
7	523	523	535.5	548	548	560.5	573	573	585.5	598	598	610.5	623	623	635.5	648	648	660.5	673	673	685.5	698	698	710.5
8	560.5	573	585.5	585.5	598	610.5	610.5	623	635.5	635.5	648	660.5	660.5	673	685.5	685.5	698	710.5	723	723	735.5	748	748	760.5
9	610.5	623	623	635.5	648	648	660.5	673	673	685.5	698	710.5	710.5	723	735.5	735.5	748	760.5	760.5	773	785.5	785.5	798	810.5

Plug Lead Manifold Bar Base

Plug Lead Manifold Single Unit



How to Order Manifold

SS0750 - **08** **C4** **C8** **SDA2** **□** - **B**

① ② ③ ④ ⑤ ⑥

① Stations

Symbol	Stations
01	1 station
⋮	⋮
16 <small>Note</small>	16 stations

Note) The maximum number of stations will be different depending on the wiring specifications.

② Cylinder port size

Symbol	Port size	
C2	With ø2 one-touch fitting	Metric
C3	With ø3.2 one-touch fitting	
C4	With ø4 one-touch fitting	
CM	Mixed sizes and with port plug <small>Note</small>	
N1	With ø1/8" one-touch fitting	Inch
N3	With ø5/32" one-touch fitting	
NM	Mixed sizes and with port plug <small>Note</small>	

Note) Specify "Mixed sizes and with port plug" on the manifold specification sheet.

③ P, R port size

Symbol	Port size	
Nil	With ø8 one-touch fitting <small>Note</small>	Metric
C6	With ø6 one-touch fitting	
C8	With ø8 one-touch fitting	
N7	With ø1/4" one-touch fitting	Inch
N9	With ø5/16" one-touch fitting	

Note) The cylinder port is ø5/16" when measured in inches.

④ Kit type

Kit type		Symbol	Specifications	Standard station	Max. number of stations for special wiring specifications	Max. number of solenoids
S kit	Gateway-type serial transmission	SD0	Without SI unit	1 to 8 stations	16 stations	16
		SDA2	DeviceNet™, PROFIBUS DP, CC-Link, EtherNet/IP™			

Note 1) The maximum number of stations is determined by the total number of solenoids.

For mixed single and double wirings, enter "-K" to the order code options.

Note 2) For SI unit part number, refer to page 76.

Type of actuation	Single	Double, Dual 3 port
Number of solenoids	1	2

⑤ SI unit output polarity

SI unit output polarity		EX500			
		DeviceNet™	PROFIBUS DP	CC-Link	EtherNet/IP™
Nil	Positive common	○	○	○	○
N	Negative common	○	○	○	○

Note) Without SI unit (SD0), the symbol is nil.

How to Order Valves

S07 **1** 0 **□** - **5**

Type of actuation

Symbol	Specifications
1	2-position single
2	2-position double
A	4-position dual 3-port (N.C. + N.C.) [Exhaust center]
B	4-position dual 3-port (N.O. + N.O.) [Pressure center]
C	4-position dual 3-port (N.C. + N.O.)

Voltage: 24 VDC

Function

Symbol	Specifications
Nil	Standard
R	External pilot <small>Note</small>

Note) Not compatible with dual 3-port valves.

Base mounted plug-in

Note) For symbol, refer to page 7.

⑥ Option

Symbol	Specifications
Nil	None
B <small>Note 2</small>	With back pressure check valve (All stations)
D	With DIN rail (Rail length: Standard)
D0	Without DIN rail (with bracket)
D□ <small>Note 3</small>	With DIN rail Designated length (□: Station)
K <small>Note 4</small>	Special wiring specifications (Except double wiring)
N	With name plate
R <small>Note 5</small>	External pilot
S	Built-in silencer

Note 1) When two or more options are specified, indicate them alphabetically. Example) -BKN

Note 2) When installing a back pressure check valve on the required station, enter the part number and specify the station position on the manifold specification sheet.

Note 3) The available number of stations is larger than the number of manifold stations.

Note 4) Indicate the wiring specifications for mixed single and double wirings.

Note 5) For details, refer to page 69.

* For manifold optional parts, refer to pages 69 to 73.

* For manifold exploded view, refer to page 75.

Refer to Reduced Wiring Fieldbus System (Serial Transmission) in Electric Products (CAT.E150) for details on the EX500 Gateway-type Serial Transmission System.

How to Order Manifold Assembly

Specify the part numbers for valves and options together beneath the manifold base part number.

<Example>

Serial transmission kit

SS0750-08C4SDA2...1 set - Manifold base part no.

* S0710-5.....3 sets - Valve part no. (Stations 1 to 3)

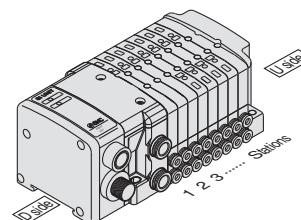
* S0720-5.....2 sets - Valve part no. (Stations 4 to 5)

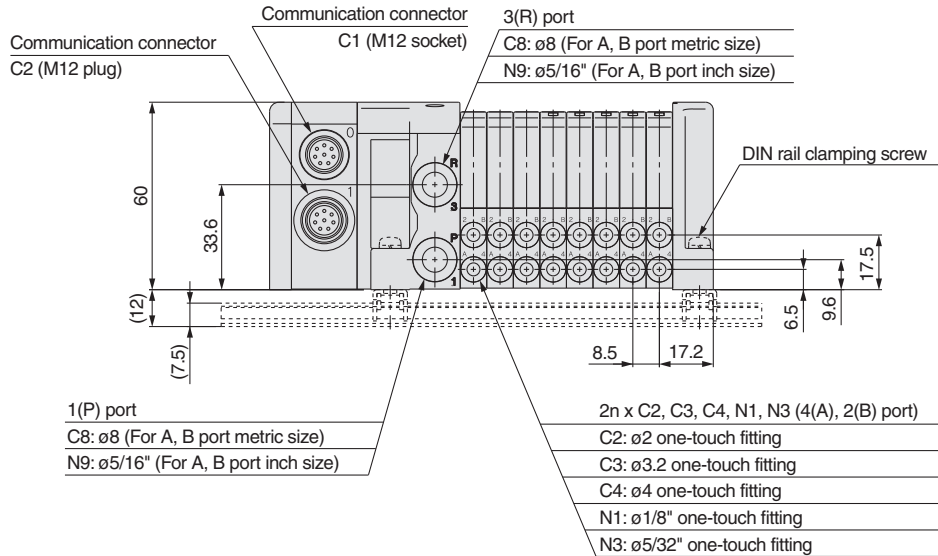
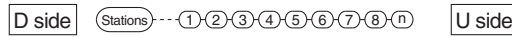
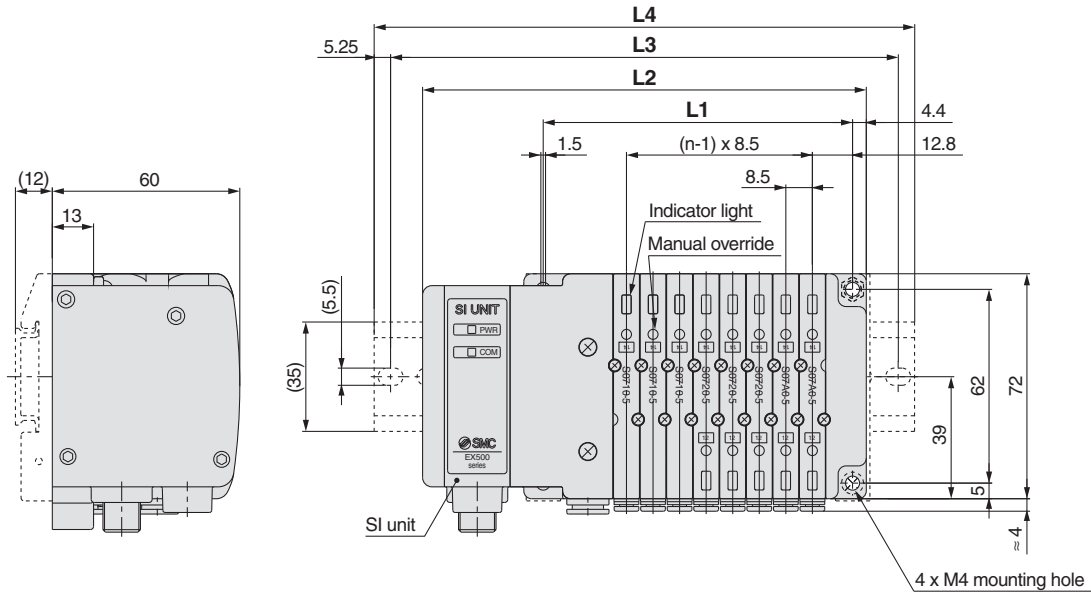
* S07A0-5.....2 sets - Valve part no. (Stations 6 to 7)

* SS0700-10A-1.....1 set - Blanking plate part no. (Station 8)

Prefix the asterisk to the part nos. of the solenoid valve, etc.

Write sequentially from the 1st station on the D side. When part nos. written collectively are complicated, specify on the manifold specification sheet.





Dimensions

Formula L1 = 8.5n + 31, L2 = 8.5n + 74 n: Station (Maximum 16 stations)

L \ n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L1	48	56.5	65	73.5	82	90.5	99	107.5	116	124.5	133	141.5	150	158.5	167
L2	91	99.5	108	116.5	125	133.5	142	150.5	159	167.5	176	184.5	193	201.5	210
L3	112.5	125	137.5	137.5	150	162.5	162.5	175	187.5	187.5	200	212.5	212.5	225	237.5
L4	123	135.5	148	148	160.5	173	173	185.5	198	198	210.5	223	223	235.5	248

Slim Compact Plug-in Manifold Bar Base

Plug-in Manifold Stacking Base

Plug Lead Manifold Bar Base

Plug Lead Single Unit

Plug-in Manifold Stacking Base

D-sub Connector

F kit



Plug-in Manifold
Stacking Base



MIL Standard

- 25 pins
- Cable length:
1.5 m, 3 m, 5 m

Connector mounting
direction: top or side
selectable

.....> Page 45

Slim Compact Plug-in Manifold
Bar Base

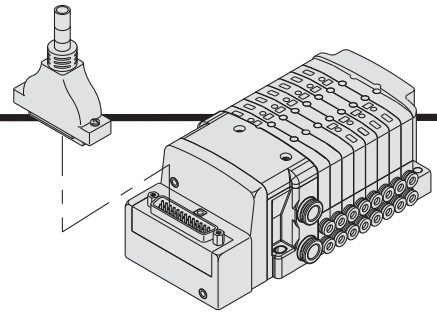
Plug-in Manifold
Stacking Base

Plug Lead Manifold
Bar Base

Plug Lead
Single Unit

F

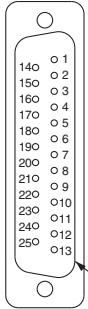
Series S0700 Plug-in Manifold Stacking Base kit (D-sub Connector)



- The D-sub connector reduces installation labor for electrical connections.
- Using the D-sub connector (25P), conforming to MIL standard permits the use of connectors put on the market and gives a wide interchangeability.
- Top or side receptacle position can be selected in accordance with the available mounting space.

Electrical Wiring Specifications

D-sub connector



As the standard electrical wiring specifications, double wiring (connected to SOL. A and SOL. B) is adopted for the internal wiring of each station for 12 stations or less, regardless of valve and option types.

Mixed single and double wiring is available as an option. For details, refer to "Special Wiring Specifications" (Option) below.

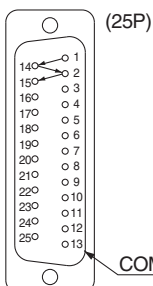
D-sub connector assembly wire color (AXT100-DS25-015, 030, 050)

Terminal no.	Polarity	Lead wire color	Dot marking	
Station 1				
SOLA	(-)	(+)	Black	None
SOLB	(-)	(+)	Yellow	Black
Station 2				
SOLA	(-)	(+)	Brown	None
SOLB	(-)	(+)	Pink	Black
Station 3				
SOLA	(-)	(+)	Red	None
SOLB	(-)	(+)	Blue	White
Station 4				
SOLA	(-)	(+)	Orange	None
SOLB	(-)	(+)	Purple	None
Station 5				
SOLA	(-)	(+)	Yellow	None
SOLB	(-)	(+)	Gray	None
Station 6				
SOLA	(-)	(+)	Pink	None
SOLB	(-)	(+)	Orange	Black
Station 7				
SOLA	(-)	(+)	Blue	None
SOLB	(-)	(+)	Red	White
Station 8				
SOLA	(-)	(+)	Purple	White
SOLB	(-)	(+)	Brown	White
Station 9				
SOLA	(-)	(+)	Gray	Black
SOLB	(-)	(+)	Pink	Red
Station 10				
SOLA	(-)	(+)	White	Black
SOLB	(-)	(+)	Gray	Red
Station 11				
SOLA	(-)	(+)	White	Red
SOLB	(-)	(+)	Black	White
Station 12				
SOLA	(-)	(+)	Yellow	Red
SOLB	(-)	(+)	White	None
COM.	(+)	(-)	Orange	Red



Note) Mounting valve has no polarity. It can also be used as a negative common.

Special Wiring Specifications (Option) [-K]



Mixed single and double wiring are available as an option. The maximum number of manifold stations is determined by the number of solenoids. Count one point for a single solenoid type and two points for a double solenoid type. The total number of solenoids (points) must not exceed 24.

1. How to Order valves

Indicate an option symbol, -K, for the manifold part number and be sure to specify the mounting position and number of stations of the single and double wiring on the manifold specification sheet.

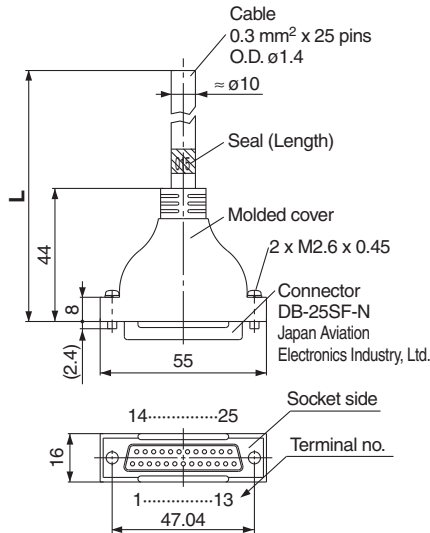
2. Wiring specifications

Connector terminal numbers are connected from solenoid station 1 on the A side in the order indicated by the arrows without skipping any terminal numbers.

Cable Assembly

AXT100-DS25-015
030
050

(The D-sub connector cable assemblies can be ordered with manifolds.)
(Refer to "How to Order Manifold.")



D-sub connector cable assembly

Wire Color by 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

D-sub Connector Cable Assembly (Option)

Cable length (L)	Assembly part no.	Note
1.5 m	AXT100-DS25-015	Cable 0.3 mm ² x 25 cores
3 m	AXT100-DS25-030	
5 m	AXT100-DS25-050	

- * For other commercial connectors, use a 25-pin type with female connector conforming to MIL-C-24308.
- * Cannot be used for movable wiring.

Electrical Characteristics

Item	Property
Conductor resistance Ω/km, 20°C	65 or less
Voltage limit V, 1 min, AC	1000
Insulation resistance MΩ/km, 20°C	5 or more



Note) The minimum bending inner radius of D-sub connector cable is 20 mm.

Connector manufacturers' example

- Fujitsu Limited
- Japan Aviation Electronics Industry, Ltd.
- J.S.T. Mfg. Co., Ltd.
- Hirose Electric Co., Ltd.



How to Order Manifold

SS0750 - 08 C4 C8 FD1 - B

• **Stations**

Symbol	Stations
02	2 stations
⋮	⋮
24 ^{Note)}	24 stations

Note) The maximum number of stations will be different depending on the wiring specifications.

• **Cylinder port size**

Symbol	Port size	
C2	With ø2 one-touch fitting	Metric
C3	With ø3.2 one-touch fitting	
C4	With ø4 one-touch fitting	
CM	Mixed sizes and with port plug ^{Note)}	
N1	With ø1/8" one-touch fitting	Inch
N3	With ø5/32" one-touch fitting	
NM	Mixed sizes and with port plug ^{Note)}	

Note) Indicate the sizes on the manifold specification sheet in the case of CM and NM.

• **P, R port size**

Symbol	Port size	
Nil	With ø8 one-touch fitting ^{Note)}	Metric
C6	With ø6 one-touch fitting	
C8	With ø8 one-touch fitting	
N7	With ø1/4" one-touch fitting	Inch
N9	With ø5/16" one-touch fitting	

Note) The cylinder port is ø5/16" when measured in inches.

• **Option**

Symbol	Specifications
Nil	None
B ^{Note 2)}	With back pressure check valve (All sta.)
D	With DIN rail (Rail length: Standard)
D0	Without DIN rail (With bracket)
D ^{Note 3)}	With DIN rail Designated length (□: Station)
K ^{Note 4)}	Special wiring specifications (Except double wiring)
N	With name plate
R ^{Note 5)}	External pilot
S	Built-in silencer

- Note 1) When two or more options are specified, indicate them alphabetically. Example) -BKN
 - Note 2) When installing a back pressure check valve on the required station, enter the part number and specify the station position on the manifold specification sheet.
 - Note 3) The available number of stations is larger than the number of manifold stations.
 - Note 4) Indicate the wiring specifications for mixed single and double wirings.
 - Note 5) For details, refer to page 69.
- * For manifold optional parts, refer to pages 69 to 73.
* For manifold exploded view, refer to page 75.

• **Kit type/Cable length**

Kit type	Symbol	Specifications	Standard station	Max. number of stations for special wiring specifications	Max. number of solenoids
F kit	FD0	D-sub connector (25P), without cable	1 to 12 stations	24 stations	24
	FD1	D-sub connector (25P), with 1.5 m cable			
	FD2	D-sub connector (25P), with 3.0 m cable			
	FD3	D-sub connector (25P), with 5.0 m cable			

Note) The maximum number of stations is determined by the total number of solenoids. For mixed single and double wirings, enter "K" to the order code options.

Type of actuation	Single	Double, Dual 3-port
Number of solenoids	1	2

How to Order Manifold Assembly

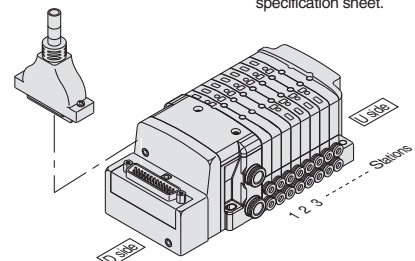
Specify the part numbers for valves and options together beneath the manifold base part number.

<Example>

- D-sub connector kit
SS0750-08C4FD1... 1 set – Manifold base part no.
 * S0710-5..... 3 sets – Valve part no. (Stations 1 to 3)
 * S0720-5..... 2 sets – Valve part no. (Stations 4 to 5)
 * S07A0-5..... 2 sets – Valve part no. (Stations 6 to 7)
 * SS0700-10A-1..... 1 set – Blanking plate part no. (Station 8)

Prefix the asterisk to the part nos. of the solenoid valve, etc.

Write sequentially from the 1st station on the D side. When part nos. written collectively are complicated, specify on the manifold specification sheet.



How to Order Valves

S07 1 0 □ - 5

• **Type of actuation**

Symbol	Specifications
1	2-position single
2	2-position double
A	4-position dual 3-port (N.C. + N.C.) [Exhaust center]
B	4-position dual 3-port (N.O. + N.O.) [Pressure center]
C	4-position dual 3-port (N.C. + N.O.)

Note) For symbol, refer to page 7.

• **Voltage**

Symbol	Specifications
5	24 VDC
6	12 VDC

• **Function**

Symbol	Specifications
Nil	Standard
R	External pilot ^{Note)}

Note) Not compatible with dual 3-port valves.

• **Base mounted plug-in**



Slim Compact Plug-in Manifold Bar Base

Plug-in Manifold Stacking Base

Plug Lead Manifold Bar Base

Plug Lead Single Unit

Plug-in Manifold Stacking Base

Flat Ribbon Cable

P kit



Plug-in Manifold
Stacking Base



MIL Standard

- 26 pins, 20 pins
- Cable length
1.5 m, 3 m, 5 m

Connector mounting
direction: top or side
selectable

.....> Page 49

Slim Compact Plug-in Manifold
Bar Base

Plug-in Manifold
Stacking Base

Plug Lead Manifold
Bar Base

Plug Lead
Single Unit



How to Order Manifold

SS0750 - 08 C4 C8 PD1 - B

Stations

Symbol	Stations
02	2 stations
⋮	⋮
24	24 stations

Note) The maximum number of stations will be different depending on the wiring specifications.

Cylinder port size

Symbol	Port size	
C2	With ø2 one-touch fitting	Metric
C3	With ø3.2 one-touch fitting	
C4	With ø4 one-touch fitting	
CM	Mixed sizes and with port plug ^{Note)}	Inch
N1	With ø1/8" one-touch fitting	
N3	With ø5/32" one-touch fitting	
NM	Mixed sizes and with port plug ^{Note)}	

Note) Indicate the sizes on the manifold specification sheet in the case of CM and NM.

P, R port size

Symbol	Port size	
Nil	With ø8 one-touch fitting ^{Note)}	Metric
C6	With ø6 one-touch fitting	
C8	With ø8 one-touch fitting	
N7	With ø1/4" one-touch fitting	Inch
N9	With ø5/16" one-touch fitting	

Note) The cylinder port is ø5/16" when measured in inches.

Option

Symbol	Specifications
Nil	None
B ^{Note 2)}	With back pressure check valve (All sta.)
D	With DIN rail (Rail length: Standard)
D0	Without DIN rail (With bracket)
D <input type="checkbox"/> ^{Note 3)}	With DIN rail Designated length (□: Station)
K ^{Note 4)}	Special wiring specifications (Except double wiring)
N	With name plate
R ^{Note 5)}	External pilot
S	Built-in silencer

Note 1) When two or more options are specified, indicate them alphabetically. Example) -BKN

Note 2) When installing a back pressure check valve on the required station, enter the part number and specify the station position on the manifold specification sheet.

Note 3) The available number of stations is larger than the number of manifold stations.

Note 4) Indicate the wiring specifications for mixed single and double wirings.

Note 5) For details, refer to page 69.

* For manifold optional parts, refer to pages 69 to 73.
* For manifold exploded view, refer to page 75.

Kit type/Cable length

Kit type	Symbol	Specifications	Standard station	Max. number of stations for special wiring specifications	Max. number of solenoids
P kit	PD0	Flat ribbon cable (26P), without cable	1 to 12 stations	24 stations	24
	PD1	Flat ribbon cable (26P), with 1.5 m cable			
	PD2	Flat ribbon cable (26P), with 3.0 m cable			
	PD3	Flat ribbon cable (26P), with 5.0 m cable			
	PDC	Flat ribbon cable (20P), without cable	1 to 9 stations	18 stations	18

Note) The maximum number of stations is determined by the total number of solenoids. For mixed single and double wirings, enter "K" to the order code options.

Type of actuation	Single	Double, Dual 3-port
Number of solenoids	1	2

How to Order Manifold Assembly

Specify the part numbers for valves and options together beneath the manifold base part number.

<Example>

Flat ribbon cable kit

SS0750-08C4PD1.....1 set – Manifold base part no.

* S0710-5.....2 sets – Valve part no. (Stations 1 to 3)

* S0720-5.....4 sets – Valve part no. (Stations 4 to 5)

* S07A0-5.....1 set – Valve part no. (Stations 6 to 7)

* SS0700-10A-1.....1 set – Blanking plate part no. (Station 8)

Prefix the asterisk to the part nos. of the solenoid valve, etc.

Write sequentially from the 1st station on the D side. When part nos. written collectively are complicated, specify on the manifold specification sheet.

How to Order Valves

S07 1 0 - 5

Type of actuation

Symbol	Specifications
1	2-position single
2	2-position double
A	4-position dual 3-port (N.C. + N.C.) [Exhaust center]
B	4-position dual 3-port (N.O. + N.O.) [Pressure center]
C	4-position dual 3-port (N.C. + N.O.)

Note) For symbol, refer to page 7.

Voltage

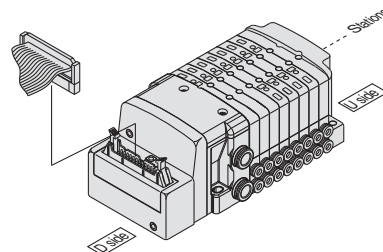
Symbol	Specifications
5	24 VDC
6	12 VDC

Function

Symbol	Specifications
Nil	Standard
R	External pilot ^{Note)}

Note) Not compatible with dual 3-port valves.

Base mounted plug-in



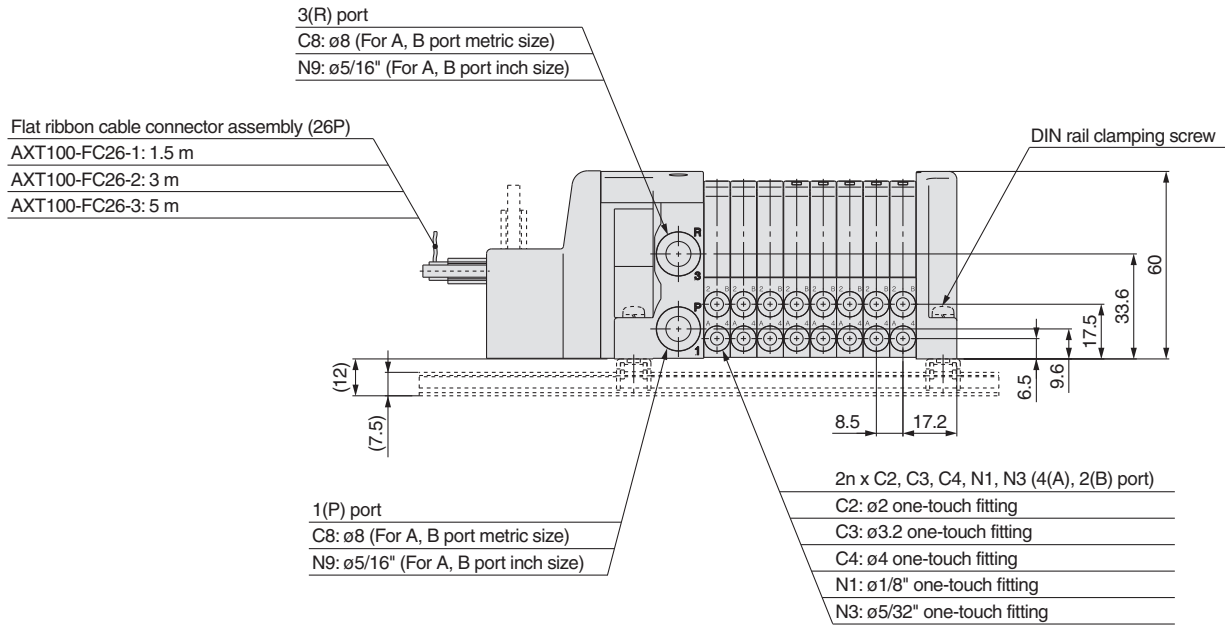
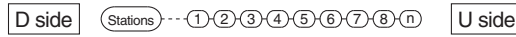
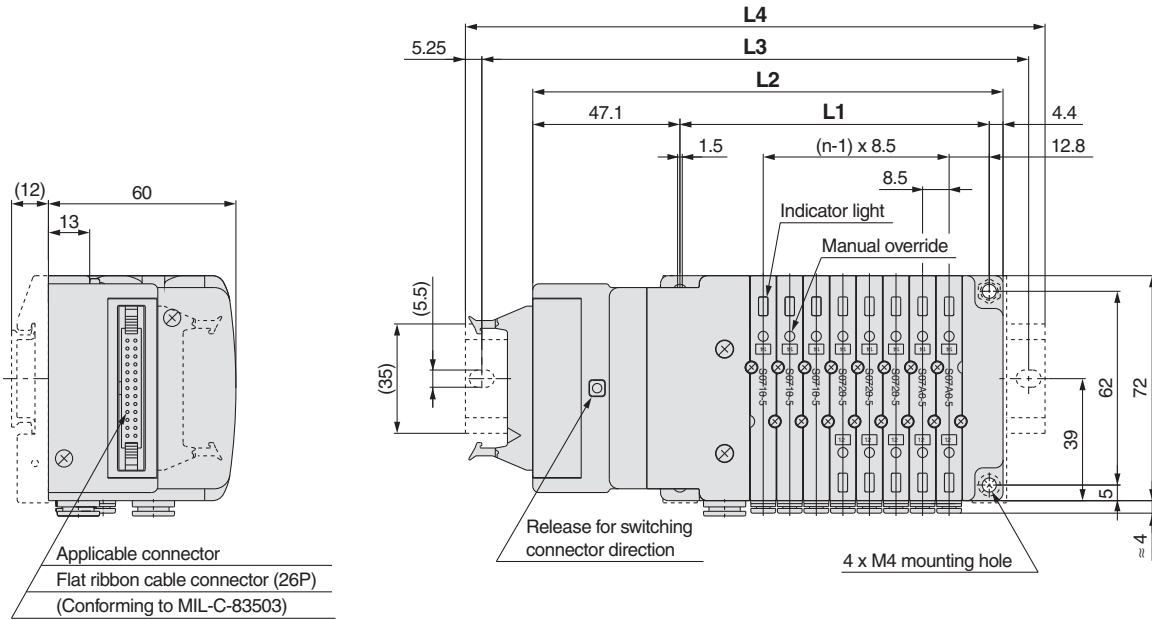
Slim Compact Plug-in Manifold Bar Base

Plug-in Manifold Stacking Base

Plug Lead Manifold Bar Base

Plug Lead Single Unit





Dimensions

Formula L1 = 8.5n + 31, L2 = 8.5n + 82.5 n: Station (Maximum 24 stations)

L \ n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
L1	48	56.5	65	73.5	82	90.5	99	107.5	116	124.5	133	141.5	150	158.5	167	175.5	184	192.5	201	209.5	218	226.5	235
L2	99.5	108	116.5	125	133.5	142	150.5	159	167.5	176	184.5	193	201.5	210	218.5	227	235.5	244	252.5	261	269.5	278	286.5
L3	125	137.5	137.5	150	162.5	162.5	175	187.5	187.5	200	212.5	212.5	225	237.5	250	250	262.5	275	275	287.5	300	300	312.5
L4	135.5	148	148	160.5	173	173	185.5	198	198	210.5	223	223	235.5	248	260.5	260.5	273	285.5	285.5	298	310.5	310.5	323

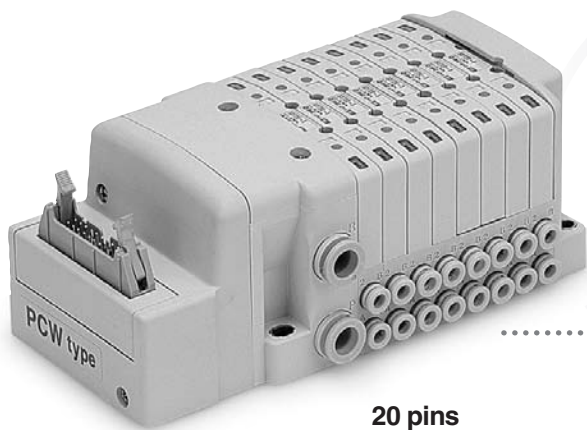
Plug-in Manifold Stacking Base

PC Wiring System Compatible Flat Ribbon Cable

J kit



Plug-in Manifold Stacking Base



20 pins

MIL Standard

■ 20 pins

PC wiring system compatible

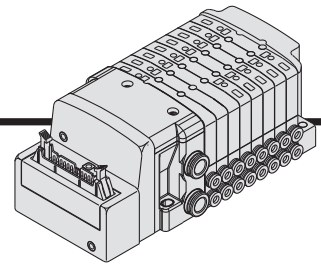
Page 53

Slim Compact Plug-in Manifold Bar Base

Plug-in Manifold Stacking Base

Plug Lead Manifold Bar Base

Plug Lead Single Unit

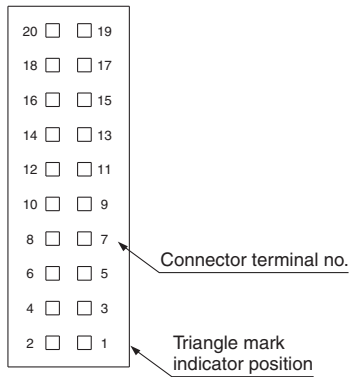


- Compatible with PC wiring system.
- Using connector for flat ribbon cable (20P) conforming to MIL standard permits the use of connectors put on the market and gives a wide interchangeability.
- Top or side receptacle position can be selected in accordance with the available mounting space.

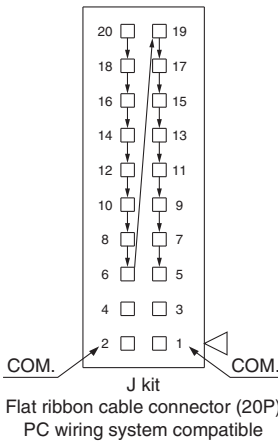
Electrical Wiring Specifications

Double wiring (connected to SOL. A and SOL. B) is adopted for the internal wiring of each station, regardless of valve and option types. Mixed single and double wiring is available as an option. For details, refer to "Special Wiring Specifications" (Option) below.

Flat ribbon cable connector



Special Wiring Specifications (Option) [-K]



	Terminal no.	Polarity	
Station 1	SOL.A 20	(-)	(+)
	SOL.B 18	(-)	(+)
Station 2	SOL.A 16	(-)	(+)
	SOL.B 14	(-)	(+)
Station 3	SOL.A 12	(-)	(+)
	SOL.B 10	(-)	(+)
Station 4	SOL.A 8	(-)	(+)
	SOL.B 6	(-)	(+)
Station 5	SOL.A 19	(-)	(+)
	SOL.B 17	(-)	(+)
Station 6	SOL.A 15	(-)	(+)
	SOL.B 13	(-)	(+)
Station 7	SOL.A 11	(-)	(+)
	SOL.B 9	(-)	(+)
Station 8	SOL.A 7	(-)	(+)
	SOL.B 5	(-)	(+)
	4	(-)	(+)
	3	(-)	(+)
	COM. 2	(+)	(-)
	COM. 1	(+)	(-)

Positive COM Negative COM ^{Note)}



Note) Mounting valve has no polarity. It can also be used as a negative common. For details about the PC wiring system, refer to catalog CAT.ES02-20 separately.

Mixed single and double wiring are available as an option. The maximum number of manifold stations is determined by the number of solenoids. Count one point for a single solenoid type and two points for a double solenoid type. The total number of solenoids (points) must not exceed 16.

1. How to Order valves

Indicate an option symbol, -K, for the manifold part number and be sure to specify the mounting position and number of stations of the single and double wiring on the manifold specification sheet.

2. Wiring specifications

Connector terminal numbers are connected from solenoid station 1 on the A side in the order indicated by the arrows without skipping any terminal numbers.



How to Order Manifold

SS0750 - 08 C4 C8 JD0 - B

Stations

Symbol	Stations
02	2 stations
⋮	⋮
16	16 stations

Note) The maximum number of stations will be different depending on the wiring specifications.

Cylinder port size

Symbol	Port size	
C2	With ø2 one-touch fitting	Metric
C3	With ø3.2 one-touch fitting	
C4	With ø4 one-touch fitting	
CM	Mixed sizes and with port plug Note)	
N1	With ø1/8" one-touch fitting	Inch
N3	With ø5/32" one-touch fitting	
NM	Mixed sizes and with port plug Note)	

Note) Indicate the sizes on the manifold specification sheet in the case of CM and NM.

P, R port size

Symbol	Port size	
Nil	With ø8 one-touch fitting Note)	Metric
C6	With ø6 one-touch fitting	
C8	With ø8 one-touch fitting	
N7	With ø1/4" one-touch fitting	Inch
N9	With ø5/16" one-touch fitting	

Note) The cylinder port is ø5/16" when measured in inches.

Option

Symbol	Specifications
Nil	None
B Note 2)	With back pressure check valve (All sta.)
D	With DIN rail (Rail length: Standard)
DO	Without DIN rail (With bracket)
D□ Note 3)	With DIN rail Designated length (□: Station)
K Note 4)	Special wiring specifications (Except double wiring)
N	With name plate
R Note 5)	External pilot
S	Built-in silencer

Note 1) When two or more options are specified, indicate them alphabetically. Example) -BKN

Note 2) When installing a back pressure check valve on the required station, enter the part number and specify the station position on the manifold specification sheet.

Note 3) The available number of stations is larger than the number of manifold stations.

Note 4) Indicate the wiring specifications for mixed single and double wirings.

Note 5) For details, refer to page 69.

* For manifold optional parts, refer to pages 69 to 73.

* For manifold exploded view, refer to page 75.

Kit type

Kit type	Symbol	Specifications	Standard station	Max. number of stations for special wiring specifications	Max. number of solenoids
J kit	JD0	Flat ribbon cable (20P) PC wiring system compatible Note 1)	1 to 8 stations	16 stations	16

Note 1) For 20P type table assembly of J kit, order it separately.

Note 2) The maximum number of stations is determined by the total number of solenoids.

For mixed single and double wirings, enter "-K" to the order code options.

Type of actuation	Single	Double, Dual 3-port
Number of solenoids	1	2

How to Order Valves

S07 1 0 - 5

Type of actuation

Symbol	Specifications
1	2-position single
2	2-position double
A	4-position dual 3-port (N.C. + N.C.) [Exhaust center]
B	4-position dual 3-port (N.O. + N.O.) [Pressure center]
C	4-position dual 3-port (N.C. + N.O.)

Note) For symbol, refer to page 7.

Voltage

Symbol	Specifications
5	24 VDC
6	12 VDC

Function

Symbol	Specifications
Nil	Standard
R	External pilot Note)

Note) Not compatible with dual 3-port valves.

Base mounted plug-in

How to Order Manifold Assembly

Specify the part numbers for valves and options together beneath the manifold base part number.

<Example>

Flat ribbon cable kit

SS0750-08C4JD0 ... 1 set - Manifold base part no.

* S0710-5..... 3 sets - Valve part no. (Stations 1 to 3)

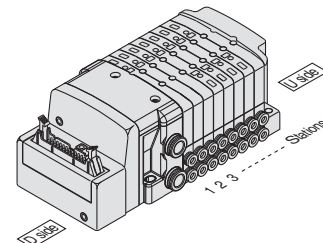
* S0720-5..... 2 sets - Valve part no. (Stations 4 to 5)

* S07A0-5..... 2 sets - Valve part no. (Stations 6 to 7)

* SS0700-10A-1..... 1 set - Blanking plate part no. (Station 8)

Prefix the asterisk to the part nos. of the solenoid valve, etc.

Write sequentially from the 1st station on the D side. When part nos. written collectively are complicated, specify on the manifold specification sheet.

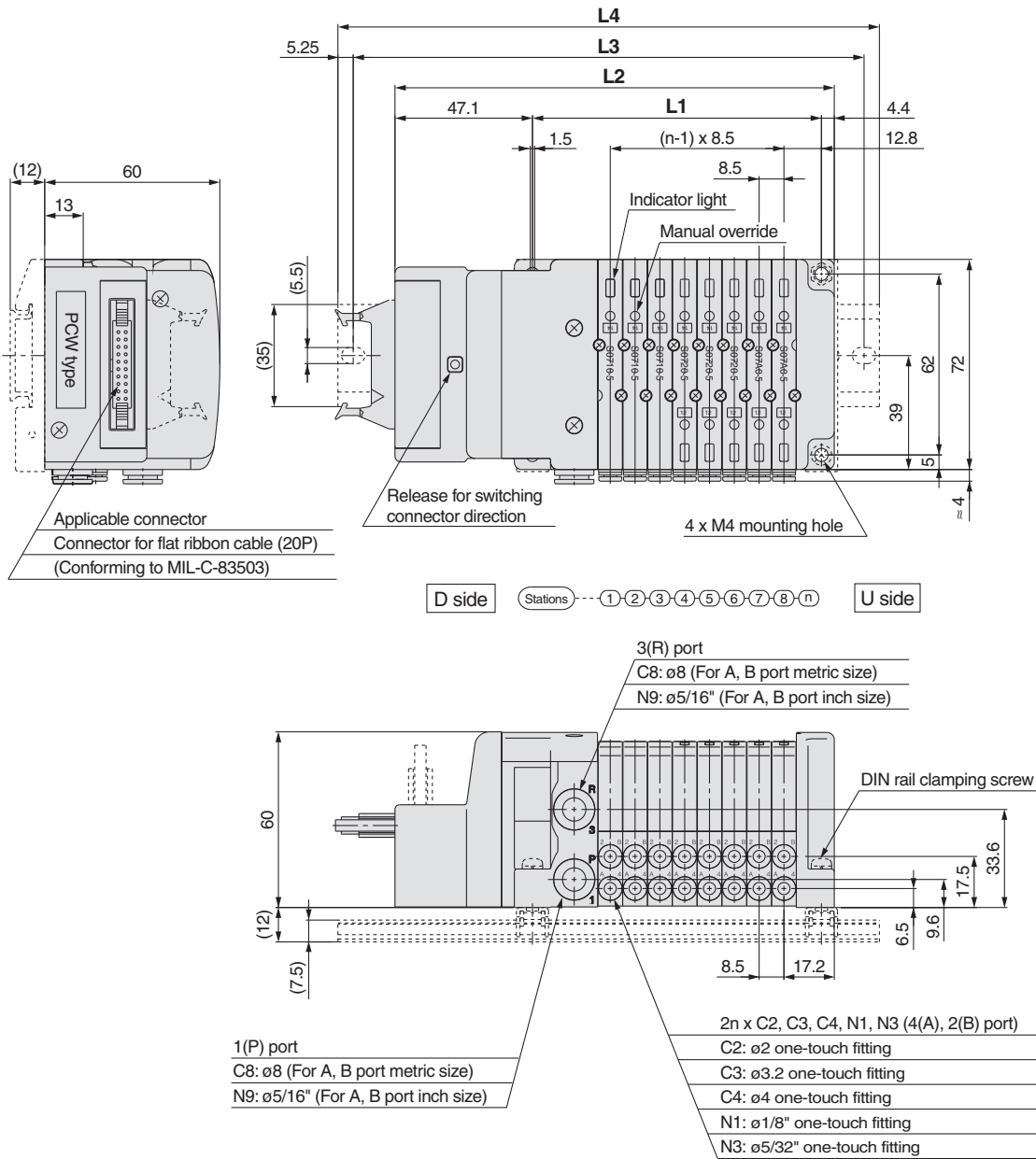


Slim Compact Plug-in Manifold Bar Base

Plug-in Manifold Stacking Base

Plug Lead Manifold Bar Base

Plug Lead Single Unit



Dimensions

Formula L1 = 8.5n + 31, L2 = 8.5n + 82.5 n: Station (Maximum 16 stations)

L \ n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L1	48	56.5	65	73.5	82	90.5	99	107.5	116	124.5	133	141.5	150	158.5	167
L2	99.5	108	116.5	125	133.5	142	150.5	159	167.5	176	184.5	193	201.5	210	218.5
L3	125	137.5	137.5	150	162.5	162.5	175	187.5	187.5	200	212.5	212.5	225	237.5	250
L4	135.5	148	148	160.5	173	173	185.5	198	198	210.5	223	223	235.5	248	260.5

Plug-in Manifold Stacking Base

Terminal Block Box

T kit



Plug-in Manifold Stacking Base



With Terminal Block Box

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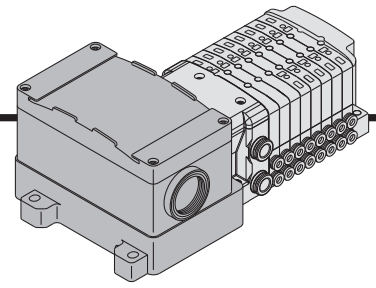
Slim Compact Plug-in Manifold Bar Base

Plug-in Manifold Stacking Base

Plug Lead Manifold Bar Base

Plug Lead Single Unit

T Series S0700 Plug-in Manifold Stacking Base kit (Terminal Block Box)

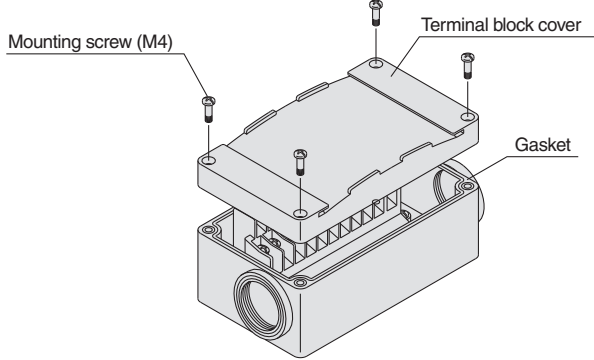


- This kit has a small terminal box inside a junction box. The electrical entry port (G3/4) permits connection of conduit fittings.

Terminal Block Connection

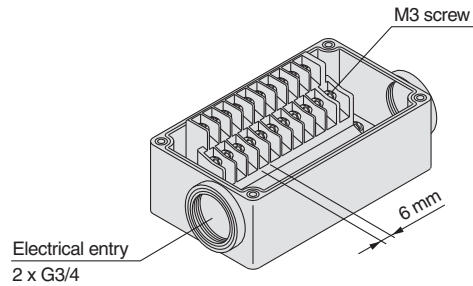
Step 1. How to remove terminal block cover

Loosen the 4 mounting screws (M4) and open the terminal block cover.



Step 2. The diagram below shows the terminal block wiring schematic. All stations are provided with double solenoid wiring.

Connect each wire to the power supply side, according to the markings provided inside the terminal block.



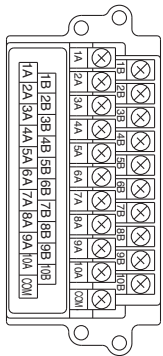
Step 3. How to replace terminal block cover

Securely tighten the screws with the torque shown in the table below, after confirming that the gasket is installed correctly.

Proper tightening torque lbf-ft (N-m)
0.52 to 0.89 (0.7 to 1.2)

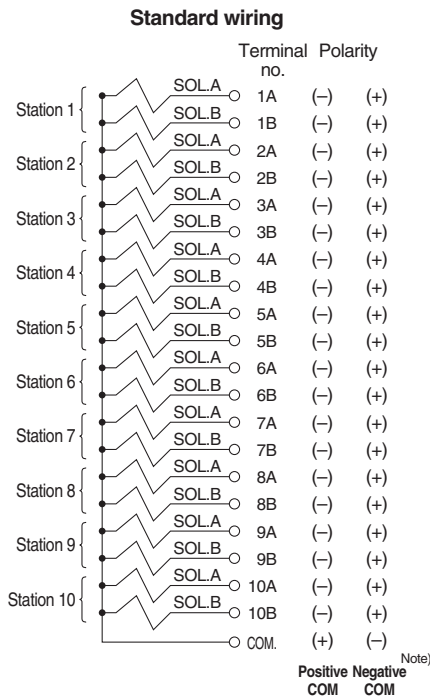
• Applicable crimped terminal: 1.25-3S, 1.25Y-3, 1.25Y-3N, 1.25Y-3.5

Electrical Wiring Specifications



Double wiring (connected to SOL. A and SOL. B) is adopted for the internal wiring of each station, regardless of valve and option types. Mixed single and double wiring is available as an option.

Note) Mounting valve has no polarity. It can also be used as a negative common.



Special Wiring Specifications (Option) [-K]

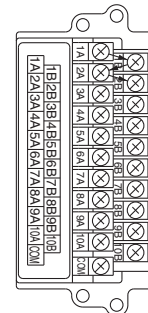
Mixed single and double wiring are available as an option. The maximum number of manifold stations is determined by the number of solenoids. Count one point for a single solenoid type and two points for a double solenoid type. The total number of solenoids (points) must not exceed 20.

1. How to Order valves

Indicate an option symbol, -K, for the manifold part number and be sure to specify the mounting position and number of stations of the single and double wiring on the manifold specification sheet.

2. Wiring specifications

Connector terminal numbers are connected from solenoid station 1 on the A side in the order indicated by the arrows without skipping any terminal numbers.





How to Order Manifold

SS0750 - 08 C4 C8 TD0 - B

①
②
③
④
⑤

① Stations

Symbol	Stations
01	1 station
⋮	⋮
20 ^{Note)}	20 stations

Note) The maximum number of stations will be different depending on the wiring specifications.

② Cylinder port size

Symbol	Port size	
C2	With ø2 one-touch fitting	Metric
C3	With ø3.2 one-touch fitting	
C4	With ø4 one-touch fitting	
CM	Mixed sizes and with port plug ^{Note)}	
N1	With ø1/8" one-touch fitting	Inch
N3	With ø5/32" one-touch fitting	
NM	Mixed sizes and with port plug ^{Note)}	

Note) Specify "Mixed sizes and with port plug" on the manifold specification sheet.

③ P, R port size

Symbol	Port size	
Nil	With ø8 one-touch fitting ^{Note)}	Metric
C6	With ø6 one-touch fitting	
C8	With ø8 one-touch fitting	
N7	With ø1/4" one-touch fitting	Inch
N9	With ø5/16" one-touch fitting	

Note) The cylinder port is ø5/16" when measured in inches.

④ Kit type

Kit type	Symbol	Specifications	Standard station	Max. number of stations for special wiring specifications	Max. number of solenoids
T kit	TD0	Terminal block	1 to 10 stations	20 stations	20

Note) The maximum number of stations is determined by the total number of solenoids. For mixed single and double wirings, enter "K" to the order code options.

Type of actuation	Single	Double, Dual 3-port
Number of solenoids	1	2

How to Order Valves

S07 1 0 - 5

Type of actuation

Symbol	Specifications
1	2-position single
2	2-position double
A	4-position dual 3-port (N.C. + N.C.) [Exhaust center]
B	4-position dual 3-port (N.O. + N.O.) [Pressure center]
C	4-position dual 3-port (N.C. + N.O.)

Note) For symbol, refer to page 7.

Voltage

Symbol	Specifications
5	24 VDC
6	12 VDC

Function

Symbol	Specifications
Nil	Standard
R	External pilot ^{Note)}

Note) Not compatible with dual 3-port valves.

Base mounted plug-in

⑤ Option

Symbol	Specifications
Nil	None
B ^{Note 2)}	With back pressure check valve (All stations)
D	With DIN rail (Rail length: Standard)
D0	Without DIN rail (With bracket)
D□ ^{Note 3)}	With DIN rail Designated length (□: Station)
K ^{Note 4)}	Special wiring specifications (Except double wiring)
N	With name plate
R ^{Note 5)}	External pilot
S	Built-in silencer

Note 1) When two or more options are specified, indicate them alphabetically. Example) -BKN

Note 2) When installing a back pressure check valve on the required station, enter the part number and specify the station position on the manifold specification sheet.

Note 3) The available number of stations is larger than the number of manifold stations.

Note 4) Indicate the wiring specifications for mixed single and double wirings.

Note 5) For details, refer to page 69.

* For manifold optional parts, refer to pages 69 to 73.

* For manifold exploded view, refer to page 75.

How to Order Manifold Assembly

Specify the part numbers for valves and options together beneath the manifold base part number.

<Example>

Terminal block box kit

SS0750-08C4TD0 ...1 set – Manifold base part no.

* S0710-5..... 3 sets – Valve part no. (Stations 1 to 3)

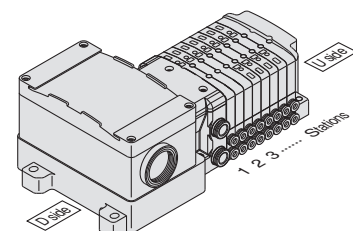
* S0720-5..... 2 sets – Valve part no. (Stations 4 to 5)

* S07A0-5..... 2 sets – Valve part no. (Stations 6 to 7)

* SS0700-10A-1..... 1 set – Blanking plate part no. (Station 8)

Prefix the asterisk to the part nos. of the solenoid valve, etc.

Write sequentially from the 1st station on the D side. When part nos. written collectively are complicated, specify on the manifold specification sheet.



Slim Compact Plug-in Manifold Bar Base

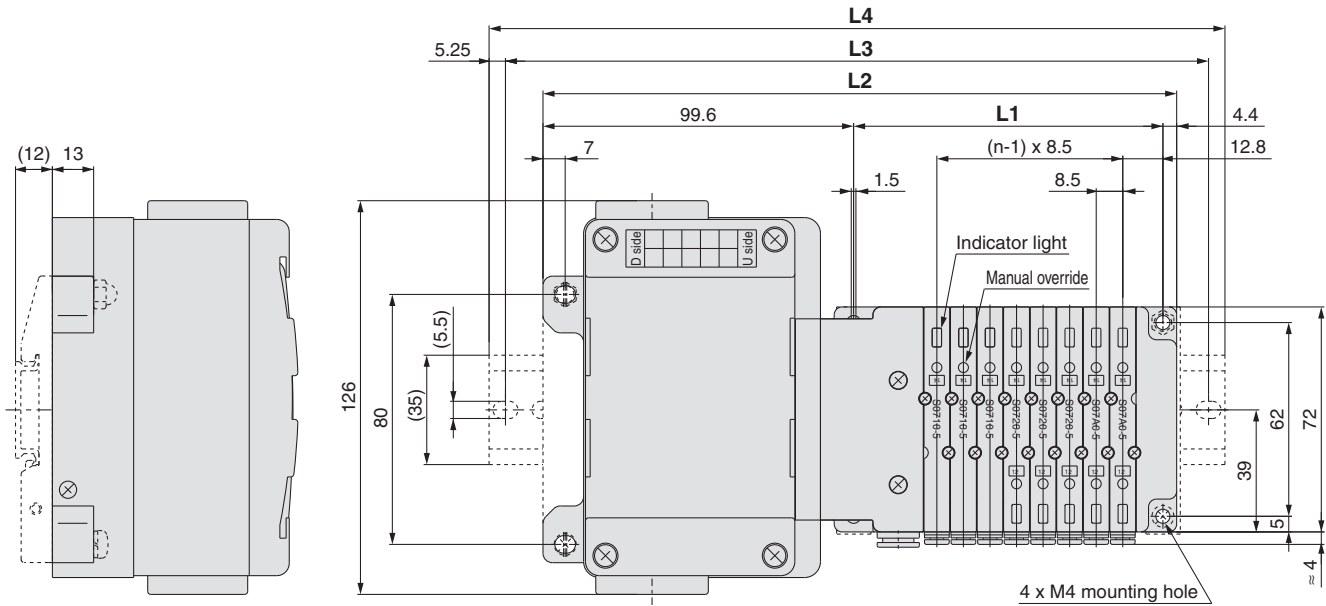
Plug-in Manifold Stacking Base

Plug Lead Manifold Bar Base

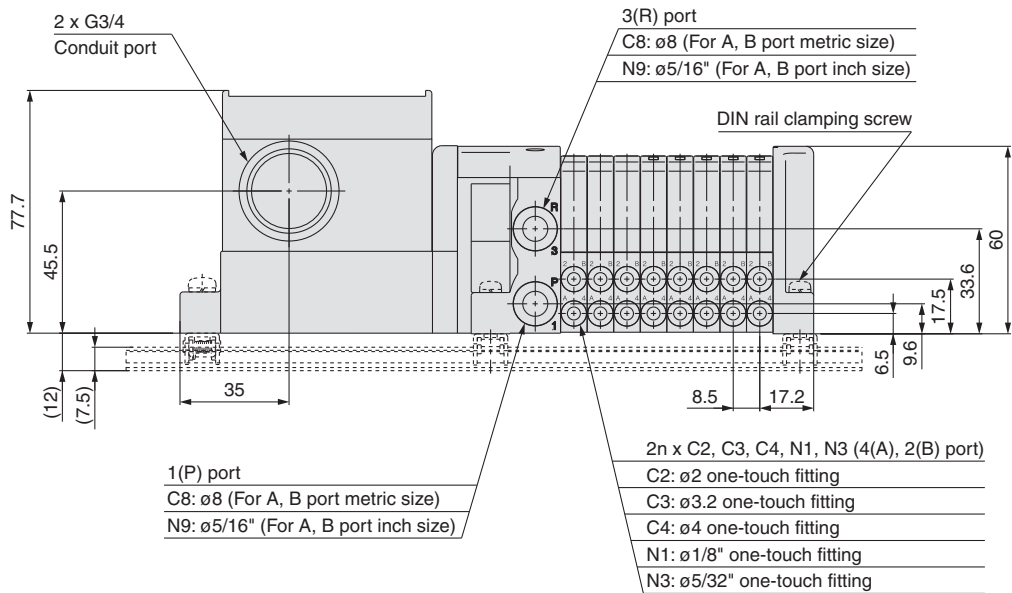
Plug Lead Manifold Single Unit

T

Series S0700 kit (Terminal Block Box)



D side Stations ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ n U side



Dimensions

Formula $L1 = 8.5n + 31$, $L2 = 8.5n + 135$ n: Station (Maximum 20 stations)

L \ n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L1	48	56.5	65	73.5	82	90.5	99	107.5	116	124.5	133	141.5	150	158.5	167	175.5	184	192.5	201
L2	152	160.5	169	177.5	186	194.5	203	211.5	220	228.5	237	245.5	254	262.5	271	279.5	288	296.5	305
L3	175	187.5	200	200	212.5	225	225	237.5	250	250	262.5	275	275	287.5	300	300	312.5	325	325
L4	185.5	198	210.5	210.5	223	235.5	235.5	248	260.5	260.5	273	285.5	285.5	298	310.5	310.5	323	335.5	335.5

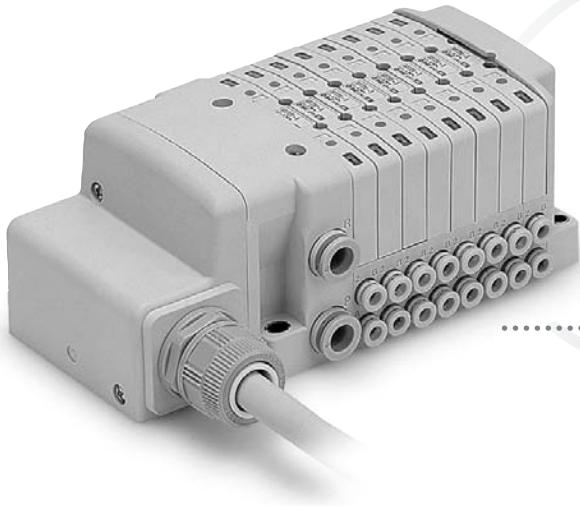
Plug-in Manifold Stacking Base

Lead Wire

L kit



**Plug-in Manifold
Stacking Base**



**Lead Wire
Direct Entry
Type**

.....▶ **Page 61**

Slim Compact Plug-in Manifold
Bar Base

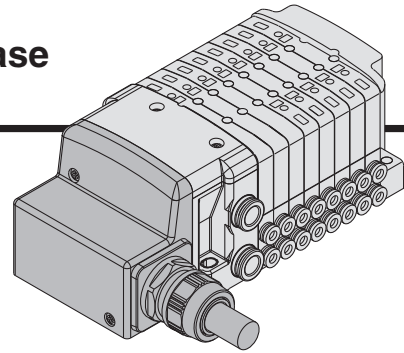
Plug-in Manifold
Stacking Base

Plug Lead Manifold
Bar Base

Plug Lead
Single Unit



Series S0700 Plug-in Manifold Stacking Base kit (Lead Wire)



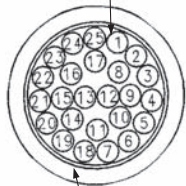
● Direct electrical entry type

Electrical Wiring Specifications

Lead wire specifications

Lead wire

0.3 mm² x 25 cores



Sheath
Color: White

As the standard electrical wiring specifications, double wiring (connected to SOL. A and SOL. B) is adopted for the internal wiring of each station for 12 stations or less, regardless of valve and option types. Mixed single and double wiring is available as an option. For details, refer to "Special Wiring Specifications" (Option) below.

Lead wire length

SS0750 – 08 C4 LD **0**

● Lead wire length

0	0.6 m
1	1.5 m
2	3.0 m

Electrical Characteristics

Item	Property
Conductor resistance Ω/km, 68°F (20°C)	65 or less
Voltage limit V, 1 min, AC	1000
Insulation resistance MΩ/km, 68°F (20°C)	5 or more

Note) Cannot be used for movable wiring. The minimum bending inner radius of cable is 20 mm.

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

Positive COM Negative COM ^{Note)}

Note) Mounting valve has no polarity. It can also be used as a negative common.

Special Wiring Specifications (Option) [-K]

Mixed single and double wiring are available as an option. The maximum number of manifold stations is determined by the number of solenoids. Count one point for a single solenoid type and two points for a double solenoid type. The total number of solenoids (points) must not exceed 24.

1. How to Order valves

Indicate an option symbol, -K, for the manifold part number and be sure to specify the mounting position and number of stations of the single and double wiring on the manifold specification sheet.

2. Wiring specifications

Connector terminal numbers are connected from solenoid station 1 on the A side in the order indicated by the arrows without skipping any terminal numbers.



How to Order Manifold

SS0750 - 08 C4 C8 LD0 - B

• **Stations**

Symbol	Stations
02	2 stations
⋮	⋮
24	24 stations

Note) The maximum number of stations will be different depending on the wiring specifications.

• **Cylinder port size**

Symbol	Port size	
C2	With ø2 one-touch fitting	Metric
C3	With ø3.2 one-touch fitting	
C4	With ø4 one-touch fitting	
CM	Mixed sizes and with port plug ^{Note)}	
N1	With ø1/8" one-touch fitting	Inch
N3	With ø5/32" one-touch fitting	
NM	Mixed sizes and with port plug ^{Note)}	

Note) Specify "Mixed sizes and with port plug" on the manifold specification sheet.

• **P, R port size**

Symbol	Port size	
Nil	With ø8 one-touch fitting ^{Note)}	Metric
C6	With ø6 one-touch fitting	
C8	With ø8 one-touch fitting	
N7	With ø1/4" one-touch fitting	Inch
N9	With ø5/16" one-touch fitting	

Note) The cylinder port is ø5/16" when measured in inches.

• **Kit type/Cable length**

Kit type	Symbol	Specifications	Standard station	Max. number of stations for special wiring specifications	Max. number of solenoids
L kit	LD0	Lead wire, with 0.6 m cable	1 to 12 stations	24 stations	24
	LD1	Lead wire, with 1.5 m cable			
	LD2	Lead wire, with 3.0 m cable			

Note) The maximum number of stations is determined by the total number of solenoids. For mixed single and double wirings, enter "K" to the order code options.

Type of actuation	Single	Double, Dual 3-port
Number of solenoids	1	2

• **Option**

Symbol	Specifications
Nil	None
B ^{Note 2)}	With back pressure check valve (All stations)
D	With DIN rail (Rail length: Standard)
D0	Without DIN rail (With bracket)
D ^{Note 3)} □	With DIN rail Designated length (□: Station)
K ^{Note 4)}	Special wiring specifications (Except double wiring)
N	With name plate
R ^{Note 5)}	External pilot
S	Built-in silencer

- Note 1) When two or more options are specified, indicate them alphabetically. Example) -BKN
- Note 2) When installing a back pressure check valve on the required station, enter the part number and specify the station position on the manifold specification sheet.
- Note 3) The available number of stations is larger than the number of manifold stations.
- Note 4) Indicate the wiring specifications for mixed single and double wirings.
- Note 5) For details, refer to page 69.
- * For manifold optional parts, refer to pages 69 to 73.
- * For manifold exploded view, refer to page 75.

Slim Compact Plug-in Manifold Bar Base

Plug-in Manifold Stacking Base

How to Order Manifold Assembly

Specify the part numbers for valves and options together beneath the manifold base part number.

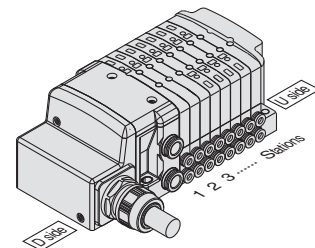
<Example>

Lead wire kit

- SS0750-08C4LD0 ... 1 set – Manifold base part no.
- * S0710-5..... 3 sets – Valve part no. (Stations 1 to 3)
- * S0720-5..... 2 sets – Valve part no. (Stations 4 to 5)
- * S07A0-5..... 2 sets – Valve part no. (Stations 6 to 7)
- * SS0700-10A-1..... 1 set – Blanking plate part no. (Station 8)

Prefix the asterisk to the part nos. of the solenoid valve, etc.

Write sequentially from the 1st station on the D side. When part nos. written collectively are complicated, specify on the manifold specification sheet.



Plug Lead Manifold Bar Base

Plug Lead Manifold Single Unit

How to Order Valves

S07 1 0 □ - 5

• **Type of actuation**

Symbol	Specifications
1	2-position single
2	2-position double
A	4-position dual 3-port (N.C. + N.C.) [Exhaust center]
B	4-position dual 3-port (N.O. + N.O.) [Pressure center]
C	4-position dual 3-port (N.C. + N.O.)

Note) For symbol, refer to page 7.

• **Voltage**

Symbol	Specifications
5	24 VDC
6	12 VDC

• **Function**

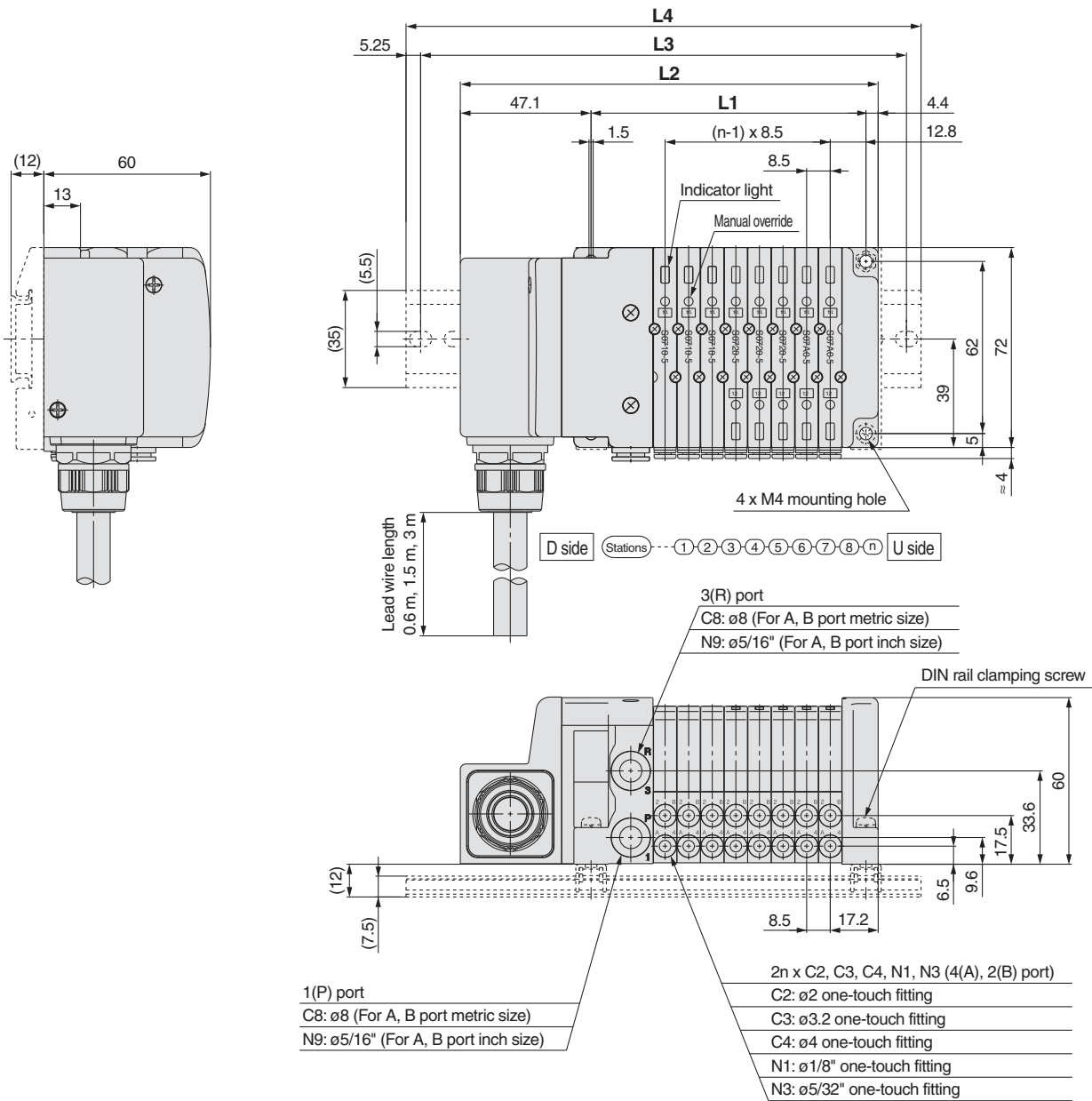
Symbol	Specifications
Nil	Standard
R	External pilot ^{Note)}

Note) Not compatible with dual 3-port valves.

• **Base mounted plug-in**



Series S0700 kit (Lead Wire)



Dimensions

Formula L1 = 8.5n + 31, L2 = 8.5n + 82.5 n: Station (Maximum 24 stations)

L \ n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
L1	48	56.5	65	73.5	82	90.5	99	107.5	116	124.5	133	141.5	150	158.5	167	175.5	184	192.5	201	209.5	218	226.5	235
L2	99.5	108	116.5	125	133.5	142	150.5	159	167.5	176	184.5	193	201.5	210	218.5	227	235.5	244	252.5	261	269.5	278	286.5
L3	125	137.5	137.5	150	162.5	162.5	175	187.5	187.5	200	212.5	212.5	225	237.5	250	250	262.5	275	275	287.5	300	300	312.5
L4	135.5	148	148	160.5	173	173	185.5	198	198	210.5	223	223	235.5	248	260.5	260.5	273	285.5	285.5	298	310.5	310.5	323

Plug-in Manifold Stacking Base

Circular Connector

M kit



Plug-in Manifold Stacking Base



Circular Connector 26 Pins

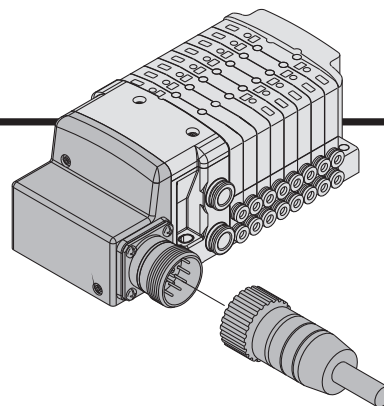
.....> Page 65

Slim Compact Plug-in Manifold Bar Base

Plug-in Manifold Stacking Base

Plug Lead Manifold Bar Base

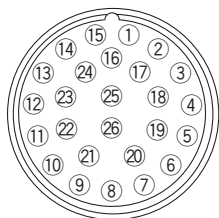
Plug Lead Single Unit



- Simplification and labor savings for wiring work can be achieved by using a circular connector for the electrical connection.

Electrical Wiring Specifications

Circular connector



Double wiring (connected to SOL. A and SOL. B) is adopted for the internal wiring of each station, regardless of valve and option types.

Mixed single and double wiring is available as an option. For details, refer to "Special Wiring Specifications" (Option) below.

	Terminal no.	Polarity
Station 1	SOLA 1	(-) (+)
	SOLB 2	(-) (+)
Station 2	SOLA 3	(-) (+)
	SOLB 4	(-) (+)
Station 3	SOLA 5	(-) (+)
	SOLB 6	(-) (+)
Station 4	SOLA 7	(-) (+)
	SOLB 8	(-) (+)
Station 5	SOLA 9	(-) (+)
	SOLB 10	(-) (+)
Station 6	SOLA 11	(-) (+)
	SOLB 12	(-) (+)
Station 7	SOLA 13	(-) (+)
	SOLB 14	(-) (+)
Station 8	SOLA 15	(-) (+)
	SOLB 16	(-) (+)
Station 9	SOLA 17	(-) (+)
	SOLB 18	(-) (+)
Station 10	SOLA 19	(-) (+)
	SOLB 20	(-) (+)
Station 11	SOLA 21	(-) (+)
	SOLB 22	(-) (+)
Station 12	SOLA 23	(-) (+)
	SOLB 24	(-) (+)
	COM. 25	(+) (-)
	COM. 26	(+) (-)

Note) Positive COM Negative COM

Note) Mounting valve has no polarity. It can also be used as a negative common.

Special Wiring Specifications (Option) [-K]

Mixed single and double wiring are available as an option. The maximum number of manifold stations is determined by the number of solenoids. Count one point for a single solenoid type and two points for a double solenoid type. The total number of solenoids (points) must not exceed 24.

1. How to Order valves

Indicate an option symbol, -K, for the manifold part number and be sure to specify the mounting position and number of stations of the single and double wiring on the manifold specification sheet.

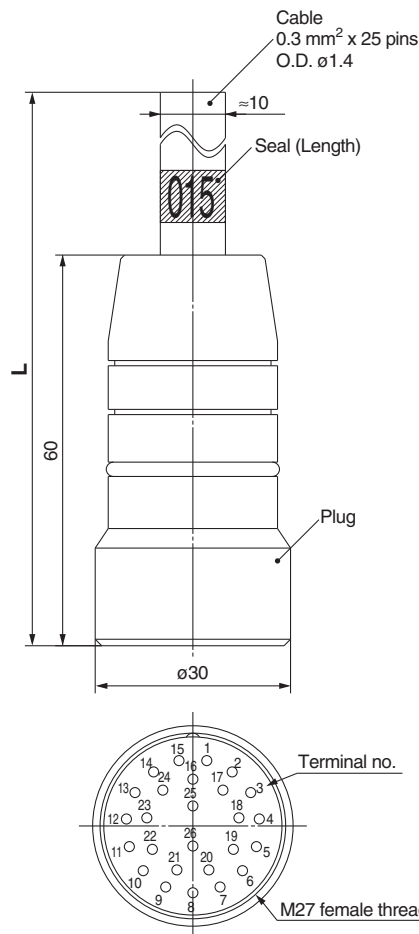
2. Wiring specifications

Connector terminal numbers are connected from solenoid station 1 on the A side in the order indicated by the arrows without skipping any terminal numbers.

Cable Assembly

015
AXT100-MC26-030
050

(Circular connector assembly (26P type) can be included in a specific manifold model number. Refer to "How to Order Manifold.")



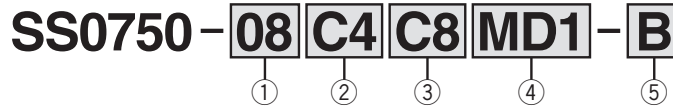
Circular Connector Cable Assembly (Option)

Cable length (L)	Assembly part no.
	26P
1.5 m	AXT100-MC26-015
3 m	AXT100-MC26-030
5 m	AXT100-MC26-050

* Cannot be used for movable wiring.



How to Order Manifold



① Stations

Symbol	Stations
02	2 stations
⋮	⋮
24 ^{Note)}	24 stations

Note) The maximum number of stations will be different depending on the wiring specifications.

② Cylinder port size

Symbol	Port size	
C2	With ø2 one-touch fitting	Metric
C3	With ø3.2 one-touch fitting	
C4	With ø4 one-touch fitting	
CM	Mixed sizes and with port plug ^{Note)}	
N1	With ø1/8" one-touch fitting	Inch
N3	With ø5/32" one-touch fitting	
NM	Mixed sizes and with port plug ^{Note)}	

Note) Specify "Mixed sizes and with port plug" on the manifold specification sheet.

③ P, R port size

Symbol	Port size	
Nil	With ø8 one-touch fitting ^{Note)}	Metric
C6	With ø6 one-touch fitting	
C8	With ø8 one-touch fitting	
N7	With ø1/4" one-touch fitting	Inch
N9	With ø5/16" one-touch fitting	

Note) The cylinder port is ø5/16" when measured in inches.

④ Kit type/Cable length

Kit type	Symbol	Specifications	Standard station	Max. number of stations for special wiring specifications	Max. number of solenoids
M kit	MD0	Circular connector (26P), without cable	1 to 12 stations	24 stations	24
	MD1	Circular connector (26P), with 1.5 m cable			
	MD2	Circular connector (26P), with 3.0 m cable			
	MD3	Circular connector (26P), with 5.0 m cable			

Note) The maximum number of stations is determined by the total number of solenoids.
For mixed single and double wirings, enter "K" to the order code options.

Type of actuation	Single	Double, Dual 3-port
Number of solenoids	1	2

How to Order Valves



Type of actuation

Symbol	Specifications
1	2-position single
2	2-position double
A	4-position dual 3-port (N.C. + N.C.) [Exhaust center]
B	4-position dual 3-port (N.O. + N.O.) [Pressure center]
C	4-position dual 3-port (N.C. + N.O.)

Note) For symbol, refer to page 7.

Voltage

Symbol	Specifications
5	24 VDC
6	12 VDC

Function

Symbol	Specifications
Nil	Standard
R	External pilot ^{Note)}

Note) Not compatible with dual 3-port valves.

Base mounted plug-in

How to Order Manifold Assembly

Specify the part numbers for valves and options together beneath the manifold base part number.

<Example>

Circular connector kit

SS0750-08C4MD1...1 set – Manifold base part no.

* **S0710-5**..... 3 sets – Valve part no. (Stations 1 to 3)

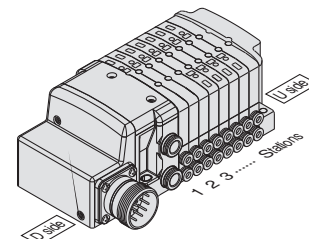
* **S0720-5**..... 2 sets – Valve part no. (Stations 4 to 5)

* **S07A0-5**..... 2 sets – Valve part no. (Stations 6 to 7)

* **SS0700-10A-1**..... 1 set – Blanking plate part no. (Station 8)

Prefix the asterisk to the part nos. of the solenoid valve, etc.

Write sequentially from the 1st station on the D side.
When part nos. written collectively are complicated, specify on the manifold specification sheet.



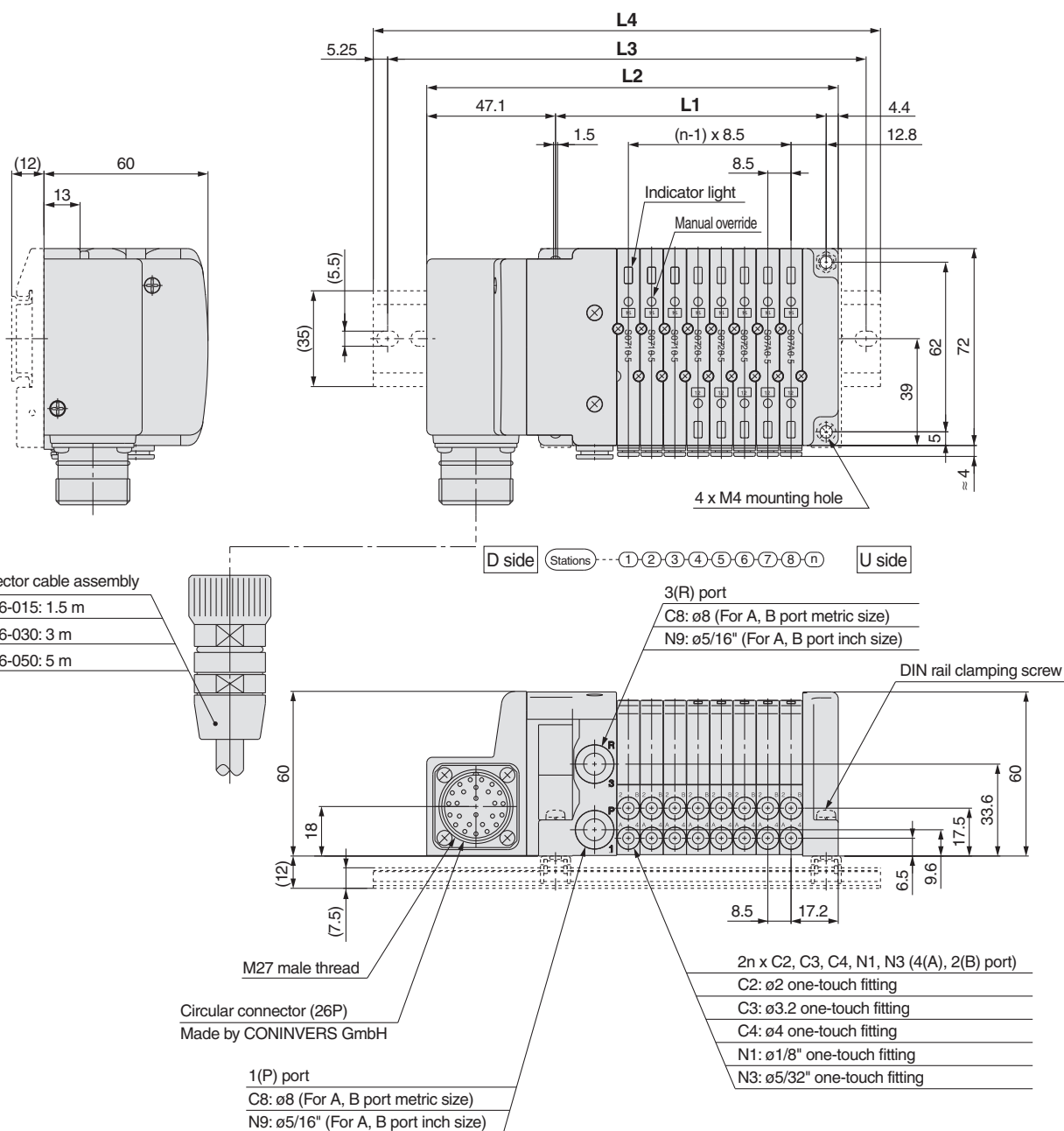
Slim Compact Plug-in Manifold Bar Base

Plug-in Manifold Stacking Base

Plug Lead Manifold Bar Base

Plug Lead Manifold Single Unit

M Series S0700 kit (Circular Connector)



Dimensions

Formula L1 = 8.5n + 31, L2 = 8.5n + 82.5 n: Station (Maximum 24 stations)

L \ n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
L1	48	56.5	65	73.5	82	90.5	99	107.5	116	124.5	133	141.5	150	158.5	167	175.5	184	192.5	201	209.5	218	226.5	235
L2	99.5	108	116.5	125	133.5	142	150.5	159	167.5	176	184.5	193	201.5	210	218.5	227	235.5	244	252.5	261	269.5	278	286.5
L3	125	137.5	137.5	150	162.5	162.5	175	187.5	187.5	200	212.5	212.5	225	237.5	250	250	262.5	275	275	287.5	300	300	312.5
L4	135.5	148	148	160.5	173	173	185.5	198	198	210.5	223	223	235.5	248	260.5	260.5	273	285.5	285.5	298	310.5	310.5	323

Series S0700 Plug-in Manifold Stacking Base

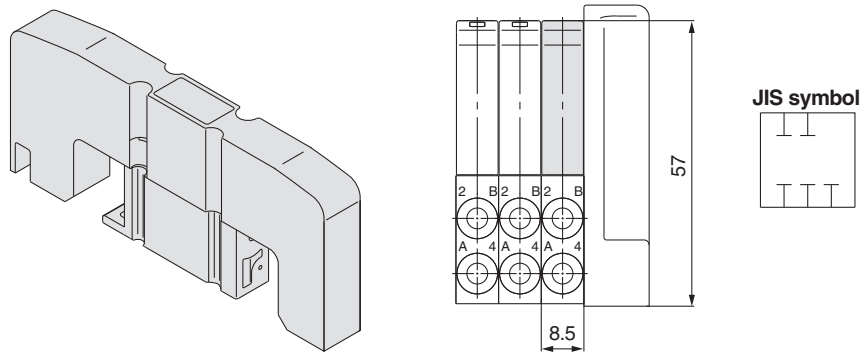
Manifold Optional Parts

Blanking plate

SS0700-10A-1

It is used by attaching on the manifold block for being prepared for removing a valve for maintenance reasons or planning to mount a spare valve, etc.

Weight: 0.88 oz (25 g)



External pilot [-R]

This can be used when the air pressure is 0.1 to 0.2 MPa lower than the minimum operating pressure of the solenoid valves or used for vacuum specifications.

Add R to the part numbers of manifolds and valves to indicate the external pilot specifications. An M5 port will be installed on the top side of the manifold's SUP/EXH block.

● How to Order Valves (Example)

S0710 R -5

External pilot

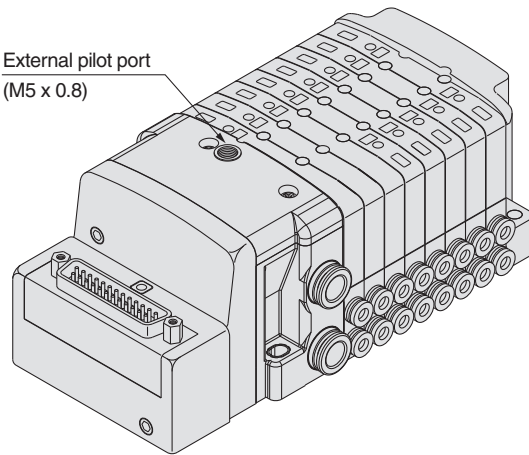
● How to Order Manifold (Example)

* Indicate R for an option.

SS0750-08C4FD1-R

External pilot

External pilot port
(M5 x 0.8)



Note 1) Not compatible with dual 3-port valves.

Note 2) When the internal pilot type and external pilot type of valves are mixed up on the manifold, order the manifold suitable for the specifications of the external pilot valve.

Note 3) Valves with the external pilot have a pilot EXH with individual exhaust specifications and EXH can be pressurized. However, the pressure supplied from EXH should be 58 psi (0.4 MPa) or lower.

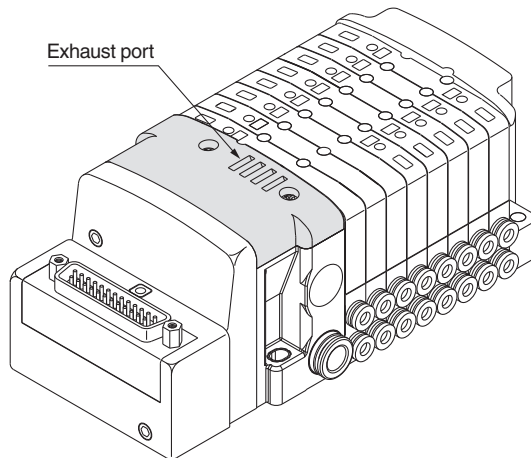
Direct EXH outlet with built-in silencer [-S]

This is a type with an exhaust port atop the manifold end plate. The built-in silencer exhibits an excellent noise suppression effect. (Noise reduction: 30 dB)

Note) A large quantity of drainage generated in the air source results in exhaust of air together with drainage.

- * When ordering this option incorporated with a manifold, suffix "S" to the end of the manifold part number.
- * For precautions on handling and how to replace elements, refer to "Specific Product Precautions."

Exhaust port



Individual SUP/EXH spacer

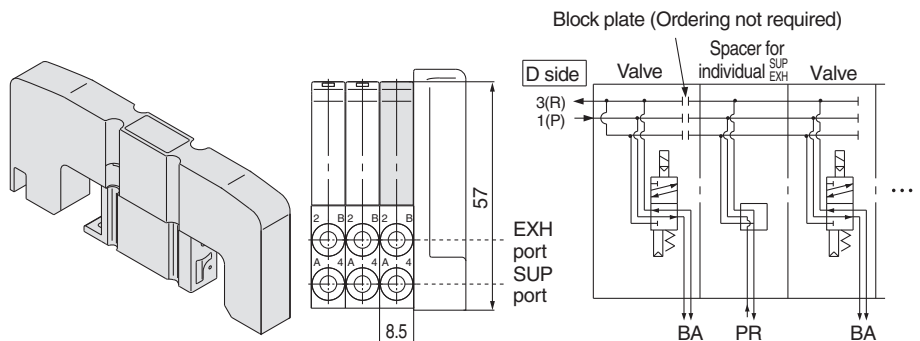
SS0700-PR-1

If this spacer is installed instead of a valve, it is possible to add SUP and EXH ports. In this condition, the A port should be an SUP port and the B port an EXH port.

* Specify the spacer mounting position and SUP/EXH passage shut off positions on the manifold specification sheet.

* The spacer comes with a SUP block plate and an EXH block plate.

* Electrical wiring is also connected to the spacer mounting position.



SUP block plate

SS0700-B-P

When different pressures, high and low, are supplied to one manifold, a SUP block plate is inserted between the stations under different pressures.

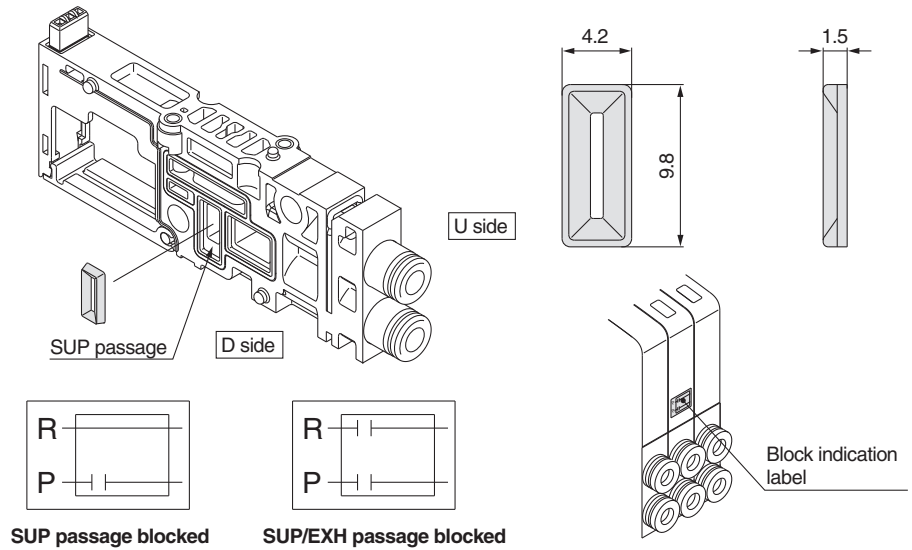
* Specify the number of stations on the manifold specification sheet.

<Block indication label>

When using block plates for SUP passage, indication label for confirmation of the blocking position from outside is attached. (One label of each)

* When ordering a block plate for SUP incorporated with the manifold, a block indication label is attached to the manifold.

Weight: 0.3 g



EXH block plate

SS0700-B-R

When valve exhaust affects the other stations on the circuit, insert EXH block plate in between stations to separate valve exhaust.

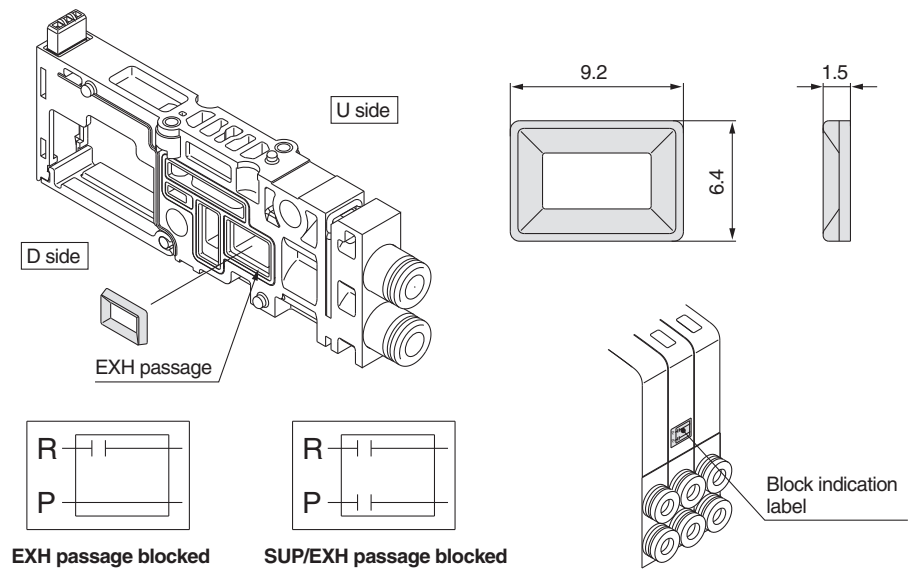
* Specify the number of stations on the manifold specification sheet.

<Block indication label>

When using block plates for EXH passage, indication label for confirmation of the blocking position from outside is attached. (One label of each)

* When ordering a block plate for EXH incorporated with the manifold, a block indication label is attached to the manifold.

Weight: 0.3 g



Back pressure check valve [-B]

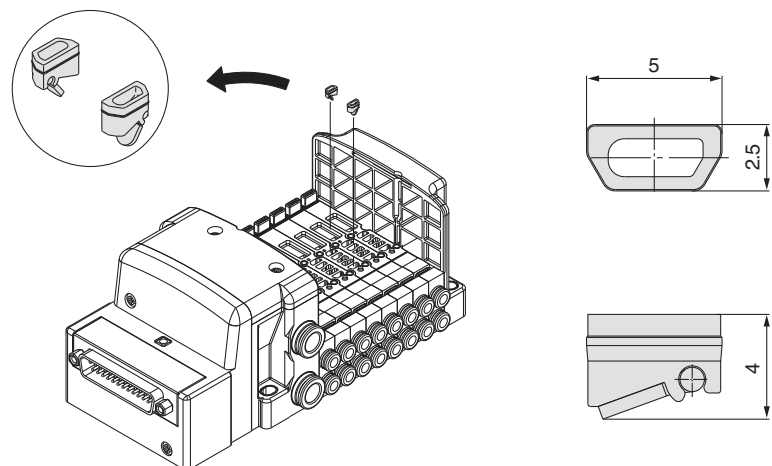
SS0700-7A-1

It prevents cylinder malfunction caused by other valve exhaust. Insert it into R (EXH) port on the manifold side of a valve which is affected. It is effective when a single action cylinder is used or an exhaust center type solenoid valve is used.

* When a check valve for back pressure prevention is desired, and is to be installed only in certain manifold stations, clearly write the part number and specify the number of stations on the manifold specification sheet.

* When ordering this option incorporated with a manifold, suffix "-B" to the end of the manifold part number.

Weight: 0.1 g



⚠ Precautions

1. The back pressure check valve assembly is assembly parts with a check valve structure. However, as slight air leakage is allowed for the back pressure, take care the exhaust air will not be restricted at the exhaust port.
2. When a back pressure check valve is mounted, the effective area of the valve will decrease by about 20%.

Series S0700 Plug-in Manifold Stacking Base

Manifold Optional Parts

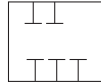
Blanking plate with output

SS0700-1C-□

Lead wire length (mm)

Nil	600
10	1000
15	1500
20	2000
25	2500
30	3000

JIS symbol



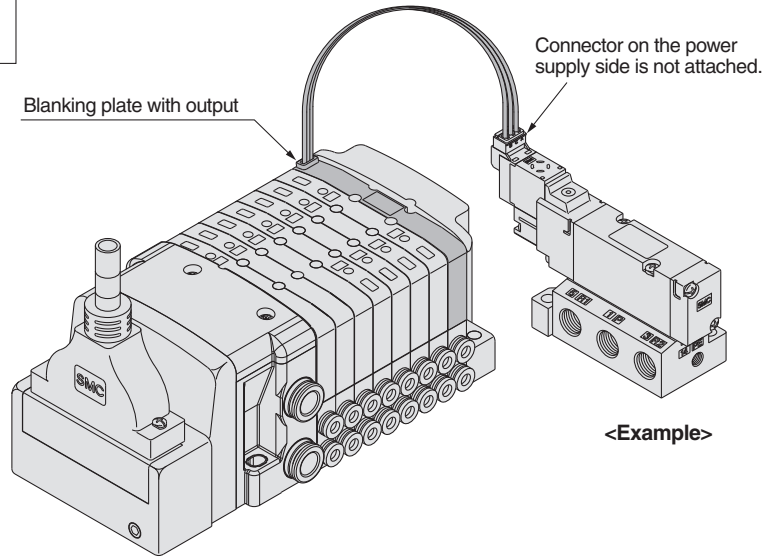
Blanking plate with a connector for individually outputting electricity to drive a single valve or equipment that are not on the manifold base.

Note 1) Electric current should be 0.5 A or less.

(Including the mounted valves) When the current is output from two positions at the same time, the current should be 0.25 A or less.

Note 2) Please consult with SMC for the max. allowable current for serial transmission kit.

Weight: 34 g

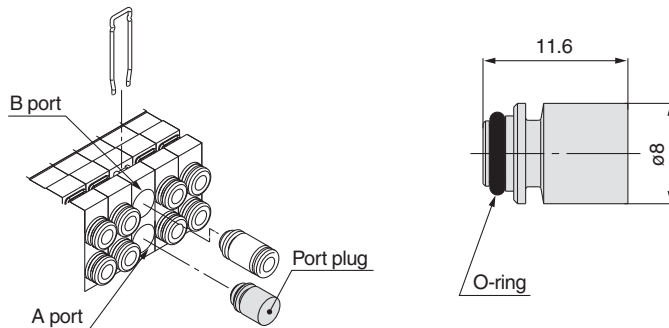


Port plug

VVQ000-CP

The plug is used to block the cylinder port when using a 5-port valve as a 3-port valve.

* When ordering a plug incorporated with a manifold, indicate "CM" for the port size in the manifold part number, as well as, the mounting position and number of stations and cylinder port mounting positions, A and B on the manifold specification sheet.



DIN rail mounting bracket

For S(EX260/600/500, EX250), F, P, J, T, L, M kit

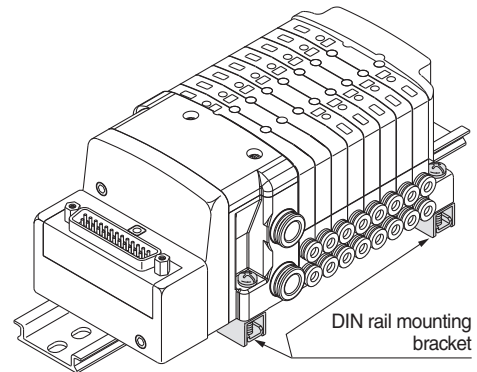
SS0700 - 57A - □

Symbol	Specifications
Nil	S(EX260/600/500), F, P, J, L, M kit
S	S(EX250) kit
T	T kit

It is used for mounting a manifold on a DIN rail. The DIN rail mounted bracket is fixed to the manifold end plate. (The specification is the same as that for the option "D".)

1 set of DIN rail mounting bracket is included for 1 manifold (2 or 3 DIN rail mounting brackets (S, T kit)).

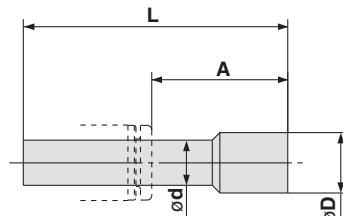
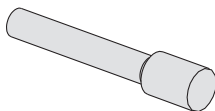
* When ordering this option incorporated with a manifold, suffix "D" to the end of the manifold part number.



Blanking plug (For one-touch fittings)

KJP-02

23
KQ2P-04
06



Dimensions

Applicable fitting size ød	Model	A	L	D	Weight: g
2	KJP-02	8.2	17	3	0.1
3.2	KQ2P-23	16	31.5	3.2	1
4	KQ2P-04	16	32	6	1
6	KQ2P-06	18	35	8	1

It is inserted into an unused cylinder port and SUP/EXH ports.
Purchasing order is available in units of 10 pieces.

Applicable to DIN rail mounting

Each manifold can be mounted on a DIN rail.

Order it by indicating a manifold mounting symbol for DIN rail mounting [-D].

Standard DIN rail which is approx. 30 mm longer than the manifold with the specified number of stations is attached.

The following options are also available.

● DIN rail length longer than the standard (for stations to be added later, etc.)

In the manifold part number, specify -D for the manifold mounting symbol and add the number of required stations after the symbol.

Example) **SS0750-08C4FD0-D09K**



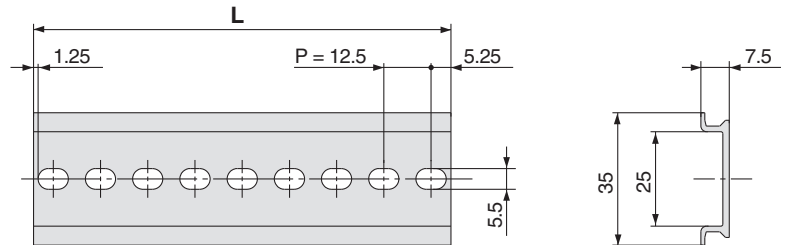
● How to Order DIN rail only

DIN rail part number

AXT100- DR- n □



Note) For n, enter a number from the No. line in the table below.
For L dimension, refer to the dimensions of each kit.



L Dimension

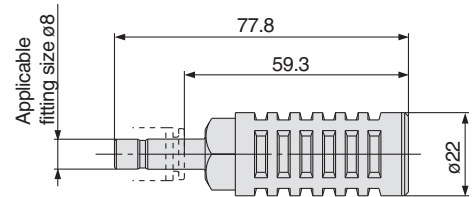
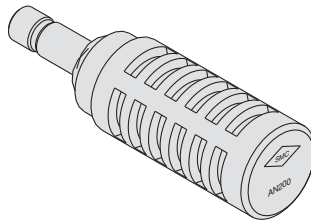
$$L = 12.5 \times n + 10.5$$

No.	1	2	3	4	5	6	7	8	9	10
L dimension	23	35.5	48	60.5	73	85.5	98	110.5	123	135.5
No.	11	12	13	14	15	16	17	18	19	20
L dimension	148	160.5	173	185.5	198	210.5	223	235.5	248	260.5
No.	21	22	23	24	25	26	27	28	29	30
L dimension	273	285.5	298	310.5	323	335.5	348	360.5	373	385.5
No.	31	32	33	34	35	36	37	38	39	40
L dimension	398	410.5	423	435.5	448	460.5	473	485.5	498	510.5

Silencer (For EXH port)

This silencer is to be inserted into the EXH port (one-touch fitting) of the common exhaust type.

AN200-KM8



Specifications

Model	Effective area (mm ²) (Cv factor)	Noise reduction (dB)
AN200-KM8	20 (1.1)	30

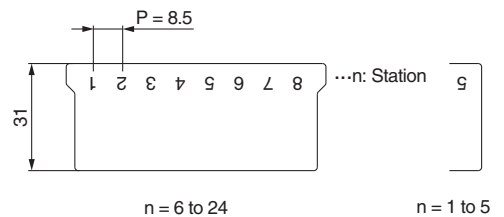
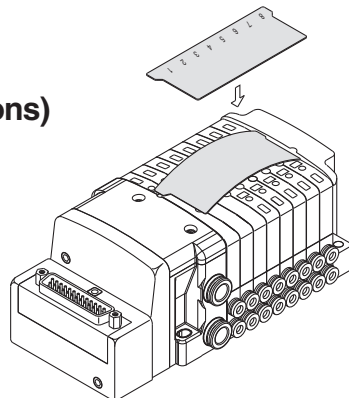
Name plate [-N]

SS0700-N-Station (1 to max. stations)

It is a transparent resin plate for placing a label that indicates solenoid valve function, etc.

Insert it into the groove on the side of the end plate and bend it as shown in the figure.

* When ordering this option incorporated with a manifold, suffix "-N" to the end of the manifold part number.



Series S0700 Plug-in Manifold Stacking Base

Manifold Optional Parts

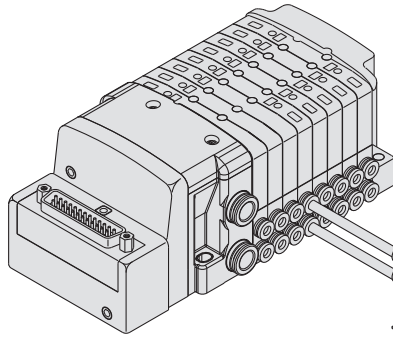
Double check block (Separated)

VQ1000-FPG-□□

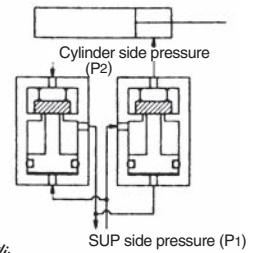
It is used on the outlet side piping to keep the cylinder in the intermediate position for long periods of time. Combining the double check block with a built-in pilot type double check valve and a 2-position single/double solenoid valve will permit this block to be used for preventing the dropping at the cylinder stroke end when the SUP residual pressure is released.

Specifications

Max. operating pressure	116 psi (0.8 MPa)
Min. operating pressure	22 psi (0.15 MPa)
Ambient and fluid temperature	23 to 122°F (-5 to 50°C)
Flow-rate characteristics: C	0.60 dm ³ /(s·bar)
Max. operating frequency	180 c.p.m



<Check Valve Working Principle>

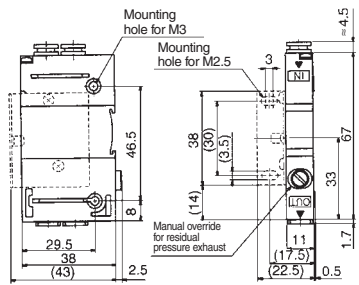
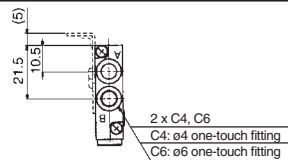


Note) Based on JIS B 8375-1981
(Supply pressure: 73 psi (0.5 MPa))

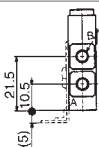
VVQ1000-FPG-02 1 set
* VQ1000-FPG-C6M5-D 2 pcs.

Dimensions

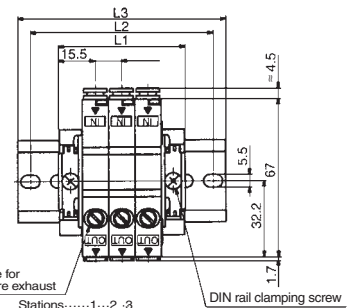
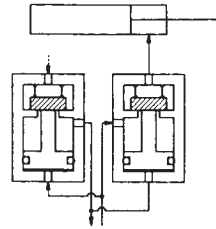
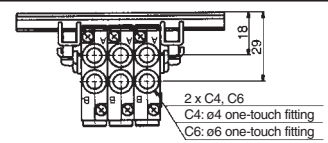
Single unit



2 x C3, C4, C6, M5
C3: ø3.2 one-touch fitting
C4: ø4 one-touch fitting
C6: ø6 one-touch fitting
M5: M5 thread



Manifold



D side

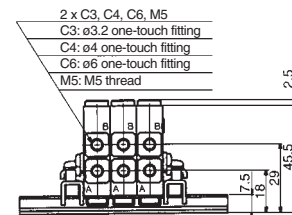
U side

Dimensions

Formula L1 = 11n + 20 n: Station (Max. 24 stations)

L/n	1	2	3	4	5	6	7	8	9	10	11	12
L1	31	42	53	64	75	86	97	108	119	130	141	152
L2	50	62.5	75	87.5	100	112.5	125	137.5	150	162.5	175	
L3	60.5	73	85.5	98	110.5	123	135.5	148	160.5	173	185.5	

L/n	13	14	15	16	17	18	19	20	21	22	23	24
L1	163	174	185	196	207	218	229	240	251	262	273	284
L2	187.5	187.5	200	212.5	225	237.5	250	250	262.5	275	287.5	300
L3	198	198	210.5	223	235.5	248	260.5	260.5	273	285.5	298	310.5



How to Order

Single unit, double check block

VQ1000-FPG-**C4** **M5** - **F**

IN side port size

C4	ø4 one-touch fitting
C6	ø6 one-touch fitting

OUT side port size

M5	M5 thread
C3	ø3.2 one-touch fitting
C4	ø4 one-touch fitting
C6	ø6 one-touch fitting

Option

Nil	None
F	With bracket
D	DIN rail mounting (For manifold)
N	With name plate

Note) When two or more symbols are specified, indicate them alphabetically. Example) -DN

Manifold (DIN rail mounting)

VVQ1000-FPG-**06**

Stations

01	1 station
⋮	⋮
16	16 stations

When ordering a double check block, order the DIN rail mounting [-D]

<Example>

VVQ1000-FPG-06--6-station manifold

* VQ1000-FPG-C4M5-D: 3 sets } Double check
* VQ1000-FPG-C6M5-D: 3 sets } block

Bracket Assembly

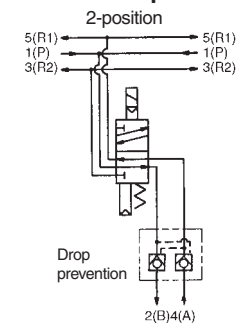
Part no.	Tightening torque
VQ1000-FPG-FB	0.16 to 0.18 lbf·ft (0.22 to 0.25 N·m)

Caution

- Air leakage from the pipe between the valve and cylinder or from the fittings will prevent the cylinder from stopping for long periods of time. Check the leakage using neutral household detergent, such as dish washing soap. Also, check the cylinder's tube gasket, piston seal and rod seal for air leakage.
- Since one-touch fittings allow slight air leakage, screw piping (with M5 thread) is recommended when stopping the cylinder in the middle for long periods of time.

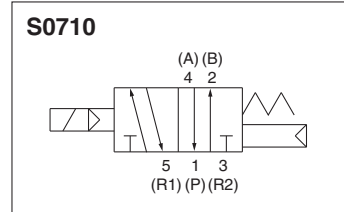
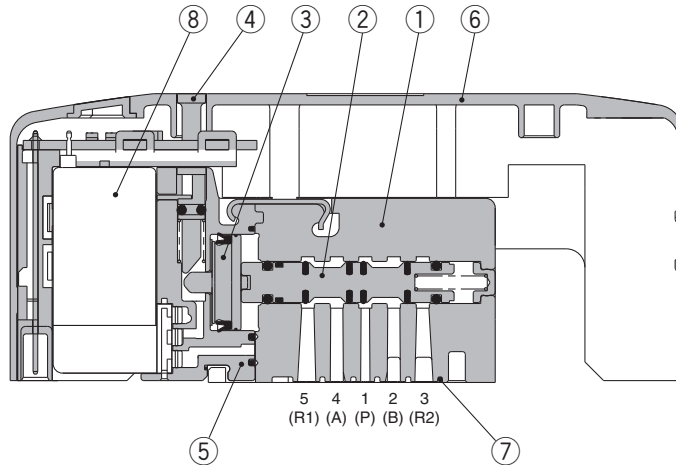
- M5 fitting assembly is attached, not incorporated into the double check block. After screwing in the M5 fittings, mount the assembly on the double check block. (Tightening torque: 0.6 to 0.8 lbf·ft (0.8 to 1.2 N·m))
- If the exhaust of the double check block is restricted too much, the cylinder may not operate properly and may not stop intermediately.
- Set the cylinder load so that the cylinder pressure will be within two times that of the supply pressure.
- Air leakage from the pipe between the valve and cylinder or from the fittings will prevent the cylinder from stopping for long periods of time. Check the leakage using neutral household detergent, such as dish washing soap. Also, check the cylinder's tube gasket, piston seal and rod seal for air leakage.

<Example>

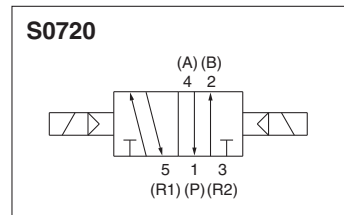
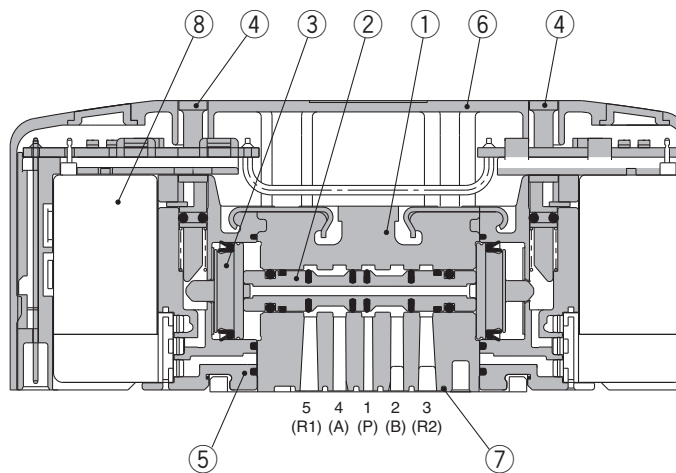


Construction

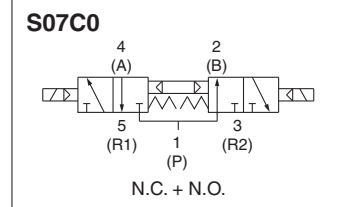
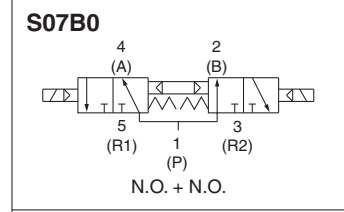
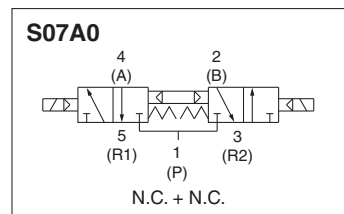
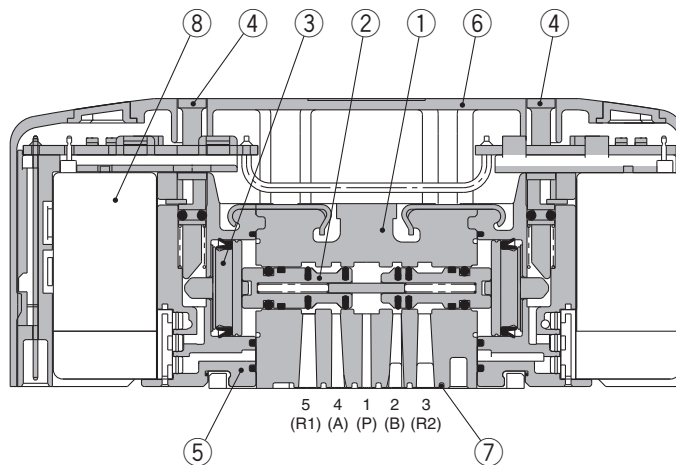
Single: S0710



Double: S0720



Dual 3-Port: S07B0



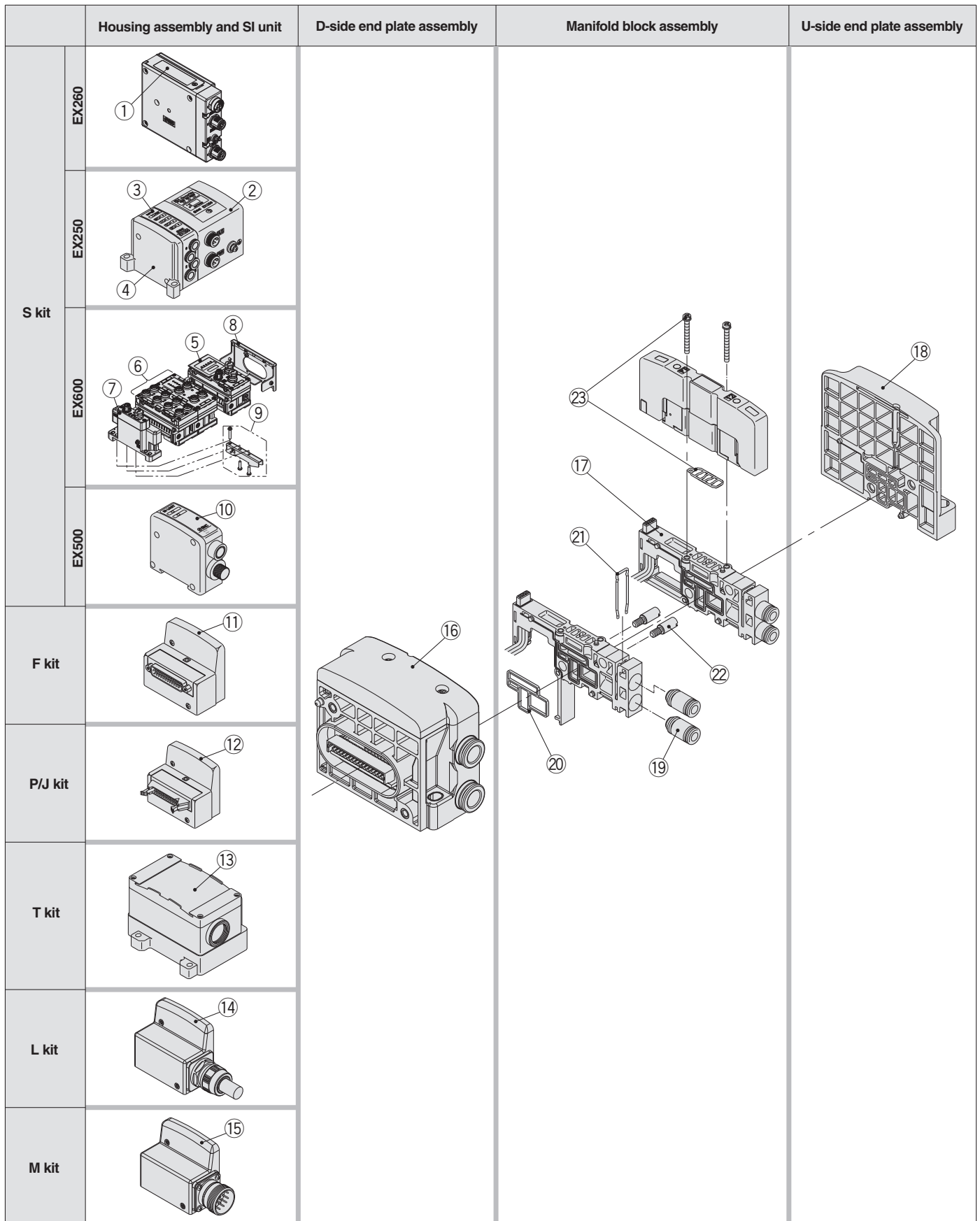
Component Parts

No.	Description	Material
1	Body	Zinc die-casted
2	Spool	Aluminum
3	Piston	Resin
4	Manual override	Resin
5	Adapter plate	Resin
6	Cover	Resin
7	Interface gasket	HNBR
8	Pilot valve assembly <small>(Note)</small>	—

(Note) Please consult with SMC for pilot valve replacement.

Series S0700 Plug-in Manifold

Manifold Exploded View



Manifold Assembly Part No.

<Housing Assembly and SI Unit, Input Block>

No.	Description	Part no.	Note	
①	EX260 SI unit	EX260-SDN1	DeviceNet™ M12 connector, 32 outputs, Negative common (PNP)	
		EX260-SDN2	DeviceNet™ M12 connector, 32 outputs, Positive common (NPN)	
		EX260-SDN3	DeviceNet™ M12 connector, 16 outputs, Negative common (PNP)	
		EX260-SDN4	DeviceNet™ M12 connector, 16 outputs, Positive common (NPN)	
		EX260-SPR1	PROFIBUS DP M12 connector, 32 outputs, Negative common (PNP)	
		EX260-SPR2	PROFIBUS DP M12 connector, 32 outputs, Positive common (NPN)	
		EX260-SPR3	PROFIBUS DP M12 connector, 16 outputs, Negative common (PNP)	
		EX260-SPR4	PROFIBUS DP M12 connector, 16 outputs, Positive common (NPN)	
		EX260-SPR5	PROFIBUS DP D-sub connector, 32 outputs, Negative common (PNP)	
		EX260-SPR6	PROFIBUS DP D-sub connector, 32 outputs, Positive common (NPN)	
		EX260-SPR7	PROFIBUS DP D-sub connector, 16 outputs, Negative common (PNP)	
		EX260-SPR8	PROFIBUS DP D-sub connector, 16 outputs, Positive common (NPN)	
		EX260-SMJ1	CC-Link M12 connector, 32 outputs, Negative common (PNP)	
		EX260-SMJ2	CC-Link M12 connector, 32 outputs, Positive common (NPN)	
		EX260-SMJ3	CC-Link M12 connector, 16 outputs, Negative common (PNP)	
		EX260-SMJ4	CC-Link M12 connector, 16 outputs, Positive common (NPN)	
		EX260-SEC1	EtherCAT M12 connector, 32 outputs, Negative common (PNP)	
		EX260-SEC2	EtherCAT M12 connector, 32 outputs, Positive common (NPN)	
		EX260-SEC3	EtherCAT M12 connector, 16 outputs, Negative common (PNP)	
		EX260-SEC4	EtherCAT M12 connector, 16 outputs, Positive common (NPN)	
		EX260-SPN1	PROFINET M12 connector, 32 outputs, Negative common (PNP)	
		EX260-SPN2	PROFINET M12 connector, 32 outputs, Positive common (NPN)	
		EX260-SPN3	PROFINET M12 connector, 16 outputs, Negative common (PNP)	
		EX260-SPN4	PROFINET M12 connector, 16 outputs, Positive common (NPN)	
②	EX250 SI unit	EX250-SDN1	DeviceNet™ Negative common (PNP)	
		EX250-SPR1	PROFIBUS DP Negative common (PNP)	
		EX250-SMJ2	CC-Link Positive common (NPN)	
		EX250-SAS3	AS-Interface 31 slave, 8 in/8 out, 2 isolated common type, Negative common (PNP)	
		EX250-SAS5	AS-Interface 31 slave, 4 in/4 out, 2 isolated common type, Negative common (PNP)	
		EX250-SAS7	AS-Interface 31 slave, 8 in/8 out, 1 common type, Negative common (PNP)	
		EX250-SAS9	AS-Interface 31 slave, 4 in/4 out, 1 common type, Negative common (PNP)	
		EX250-SCA1A	CANopen Negative common (PNP)	
		EX250-SEN1	EtherNet/IP™ Negative common (PNP)	
		③	EX250 input block	EX250-IE1
EX250-IE2	M12 4 inputs			
EX250-IE3	M8 4 inputs			
④	EX250 end plate assembly	EX250-EA1	Direct mounting	
		EX250-EA2	DIN rail mounting	
⑤	EX600 SI unit	EX600-SDN1A	DeviceNet™ Negative common (PNP)	
		EX600-SDN2A	DeviceNet™ Positive common (NPN)	
		EX600-SMJ1	CC-Link Negative common (PNP)	
		EX600-SMJ2	CC-Link Positive common (NPN)	
		EX600-SPR1A	PROFIBUS DP Negative common (PNP)	
		EX600-SPR2A	PROFIBUS DP Positive common (NPN)	
		EX600-SEN1	EtherNet/IP™ Negative common (PNP)	
		EX600-SEN2	EtherNet/IP™ Positive common (NPN)	
		EX600-SEC1	EtherCAT Negative common (PNP)	
		EX600-SEC2	EtherCAT Positive common (NPN)	
⑥	EX600 digital input unit	EX600-DXNB	NPN input, M12 connector, 5 pins (4 pcs.), 8 inputs	
		EX600-DXPB	PNP input, M12 connector, 5 pins (4 pcs.), 8 inputs	
		EX600-DXNC	NPN input, M8 connector, 3 pins (8 pcs.), 8 inputs	
		EX600-DXNC1	NPN input, M8 connector, 3 pins (8 pcs.), 8 inputs, with open circuit detection	
		EX600-DXPC	PNP input, M8 connector, 3 pins (8 pcs.), 8 inputs	
		EX600-DXPC1	PNP input, M8 connector, 3 pins (8 pcs.), 8 inputs, with open circuit detection	
		EX600-DXND	NPN input, M12 connector, 5 pins (8 pcs.), 16 inputs	
		EX600-DXPD	PNP input, M12 connector, 5 pins (8 pcs.), 16 inputs	
		EX600-DXNE	NPN input, D-sub connector, 25 pins, 16 inputs	
		EX600-DXPE	PNP input, D-sub connector, 25 pins, 16 inputs	
	EX600 digital output unit	EX600-DXNF	NPN input, Spring type terminal block, 32 pins, 16 inputs	
		EX600-DXPF	PNP input, Spring type terminal block, 32 pins, 16 inputs	
		EX600-DYNB	NPN output, M12 connector, 5 pins (4 pcs.), 8 outputs	
		EX600-DYPB	PNP output, M12 connector, 5 pins (4 pcs.), 8 outputs	
		EX600-DYNE	NPN output, D-sub connector, 25 pins, 16 outputs	
		EX600-DYPE	PNP output, D-sub connector, 25 pins, 16 outputs	
		EX600-DYNF	NPN output, Spring type terminal block, 32 pins, 16 outputs	
		EX600-DYPF	PNP output, Spring type terminal block, 32 pins, 16 outputs	
		EX600 digital I/O unit	EX600-DMNE	NPN input/output, D-sub connector, 25 pins, 8 inputs/outputs
			EX600-DMPE	PNP input/output, D-sub connector, 25 pins, 8 inputs/outputs
EX600-DMNF	NPN input/output, Spring type terminal block, 32 pins, 8 inputs/outputs			
EX600-DMPF	PNP input/output, Spring type terminal block, 32 pins, 8 inputs/outputs			
EX600 analog input unit	EX600-AXA	M12 connector, 5 pins (2 pcs.), 2-channel input		
	EX600-AYA	M12 connector, 5 pins (2 pcs.), 2-channel output		
	EX600-AMB	M12 connector, 5 pins (4 pcs.), 2-channel input/output		
⑦	EX600 end plate	EX600-ED2	M12 connector, 5 pins, Max. supplied current 2 A	
		EX600-ED3	M12 connector, 5 pins, Max. supplied current 2 A, with DIN rail mounting bracket	
		EX600-ED3-2	7/8 inch connector, 5 pins, Max. supplied current 8 A	
		EX600-ED3-2	7/8 inch connector, 5 pins, Max. supplied current 8 A, with DIN rail mounting bracket	
⑧	EX600 valve plate	EX600-ZMV1	Enclosed parts: Round head screw (M4 x 6) 2 pcs, Round head screw (M3 x 8) 4 pcs.	
⑨	EX600 bracket for end plate	EX600-ZMA2	This bracket is used for the end plate of DIN rail mounting.	
⑩	EX500 SI unit	EX500-Q001	EX500 Positive common (NPN)	
		EX500-Q101	EX500 Negative common (PNP)	
⑪	D-sub connector housing assembly	VVQC1000-F25-1	F kit, 25 pins	
		VVQC1000-P26-1	P kit, 26 pins	
		VVQC1000-P20-1	P kit, 20 pins	
⑫	Flat ribbon cable housing assembly	VVQC1000-J20-1	J kit, 20 pins	
		VVQC1000-T0-1	T kit	
⑬	Terminal block box housing assembly	VVQC1000-L25-0-1	L kit, Lead wire length 0.6 m	
		VVQC1000-L25-1-1	L kit, Lead wire length 1.5 m	
		VVQC1000-L25-2-1	L kit, Lead wire length 3.0 m	
⑭	Lead wire housing assembly	VVQC1000-M26-1	M kit, 26 pins	
⑮	Circular connector housing assembly	VVQC1000-M26-1	M kit, 26 pins	

Slim Compact Plug-in Manifold Bar Base

Plug-in Manifold Stacking Base

Plug Lead Manifold Bar Base

Plug Lead Single Unit

Series S0700

Manifold Assembly Part No.

⑩ D-side end plate assembly part no.

SS0700 - 3A - 1 - **C8** -

Port size

Symbol	Port size
C8	With ø8 one-touch fitting
N9	With ø5/16" one-touch fitting

Option

Symbol	Specifications
Nil	Common EXH
R	External pilot
S	Direct EXH outlet with built-in silencer

Note) When both options are specified, indicate as "-RS".

⑪ Manifold block assembly Tie-rod (2 pcs.) and lead wire assembly for extensions are attached.

SS0700 - 1A - **PD** **05** - **C3** -

Wiring specifications

Symbol	Specifications
PD	Double wiring
PS	Single wiring
P0	None

Option

Symbol	Specifications
Nil	None
B	With back pressure check valve

Port size

Symbol	Port size
C2	With ø2 one-touch fitting
C3	With ø3.2 one-touch fitting
C4	With ø4 one-touch fitting
N1	With ø1/8" one-touch fitting
N3	With ø5/32" one-touch fitting
C0	Without one-touch fitting

Stations

Symbol	Stations
02	2 stations
⋮	⋮
24	24 stations

⑫ U-side end plate assembly part no.

SS0700 - 2A - 2

⑬ Fitting assembly part no.

VVQ0000 - 50A -

Port size

Symbol	Applicable tube
C2	Applicable tube ø2
C3	Applicable tube ø3
C4	Applicable tube ø4
N1	Applicable tube ø1/8"
N3	Applicable tube ø5/32"

Note 1) Purchasing order is available in units of 10 pieces.
Note 2) For one-touch fittings replacement, refer to "Specific Product Precautions."

<Replacement Parts for Manifold Block> Replacement Parts

No.	Description	Part no.	Qty.
⑳	Gasket	SS0700-80A-2	10 Note 1)
㉑	Clip	SS0700-80A-4	10 Note 1)
㉒	Tie-rod assembly	SS0700-TR-□	2 Note 2)

Note 1) 1 set includes 10 pieces.
Note 2) 1 set includes 2 pieces. Please order when eliminating manifold stations. When adding stations, tie-rods are attached to the manifold block assembly. Therefore, it is not necessary to order.
□: Stations 02 to 24

<Replacement Parts for Valve> Replacement Parts

No.	Description	Part no.	Qty.
㉓	Gasket, Screw	S0700-GS-5	10

Note) Above part number consists of 10 units. Each unit has one gasket and two screws.

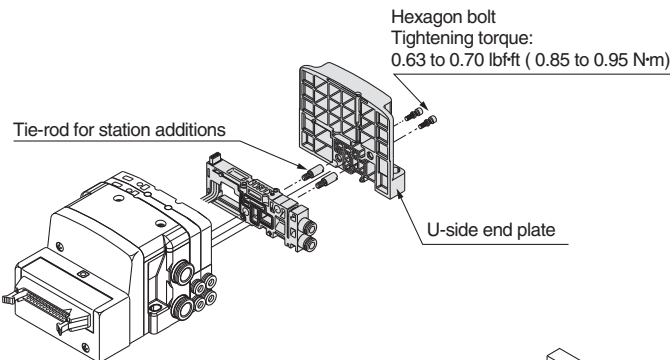
How to Add Manifold Stations (Plug-in Type / Lead Wire Connection Type)

What to order

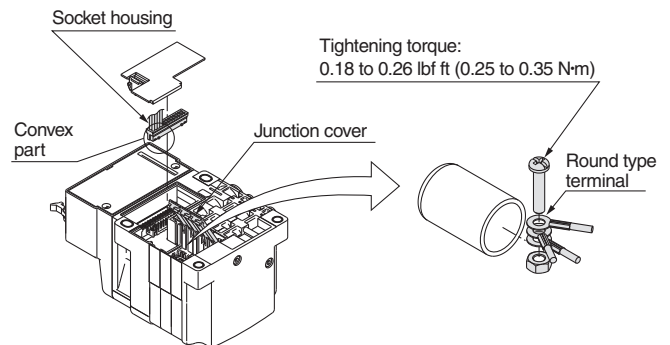
- Manifold block assembly (Refer to the above ⑪.)

Steps for adding stations

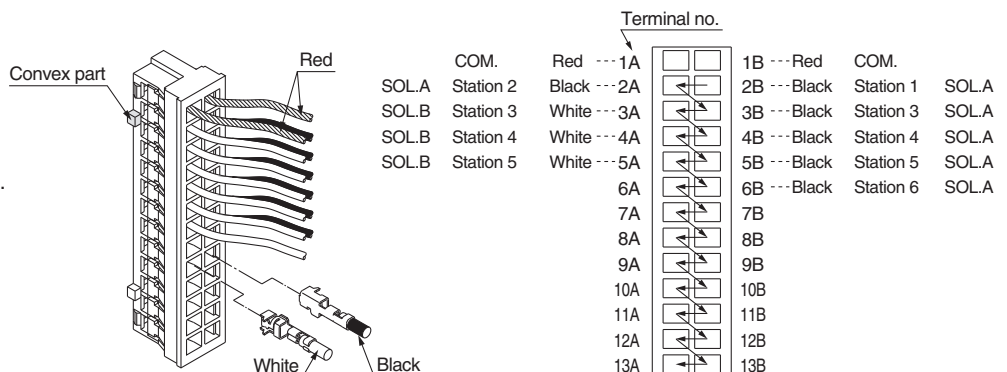
- Loosen hexagon bolts from the end plate at the U-side and remove the end plate.
- Connect the tie rod for increasing the station number, open the junction cover, mount the manifold block assembly and U-side end plate and tighten them by hexagon bolts.
(Tightening torque: 0.63 to 0.70 lbf-ft (0.85 to 0.95 N-m))



- Connect the round type terminal of red lead wire to the common terminal inside the junction cover.



- Take out the socket housing and connect the black and white lead wires. The connection layout is common to all kits.



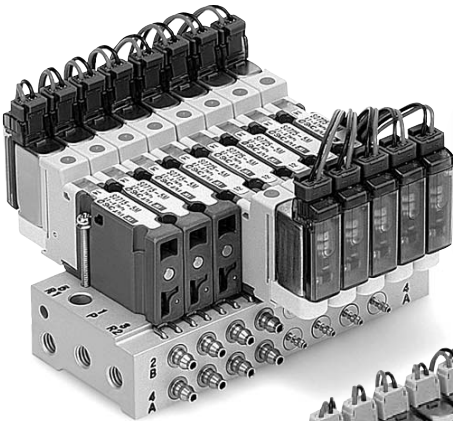
Plug Lead Manifold Bar Base

Connector

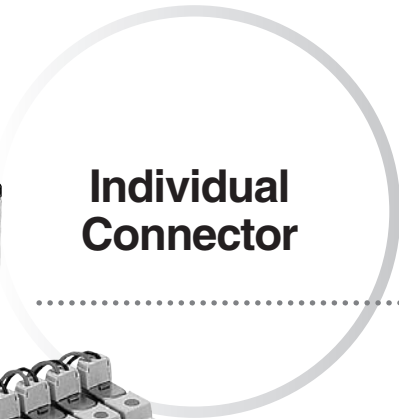
C kit



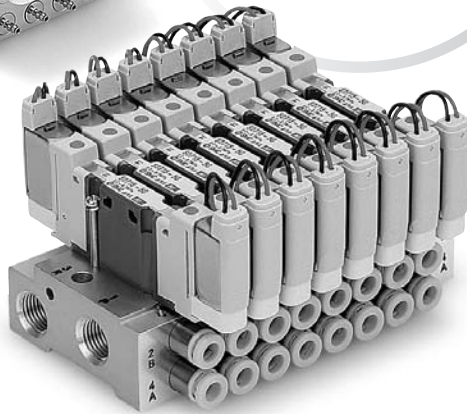
Plug-in Manifold
Bar Base



With barb fittings



Individual
Connector



With one-touch fittings

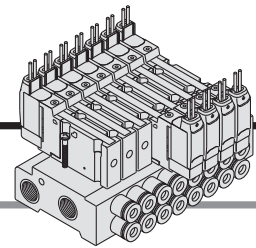
Page 79

Slim Compact Plug-in Manifold
Bar Base

Plug-in Manifold
Stacking Base

Plug Lead Manifold
Bar Base

Plug Lead
Single Unit



How to Order Manifold

SS0755 - 08 C4 [] C - []

Plug lead

Stations

Symbol	Stations
02	2 stations
⋮	⋮
20	20 stations

Option

Symbol	Specifications
Nil	None
R (Note)	External pilot

Note) For details, refer to page 85.

* For manifold optional parts, refer to pages 85 to 87.

Cylinder port size

Symbol	Port size		Manifold pitch
M5	M5 thread	Metric	8.5
C2	With ø2 one-touch fitting		
C3	With ø3.2 one-touch fitting		
C4	With ø4 one-touch fitting		
CM	Mixed sizes and with port plug (Note)		
N1	With ø1/8" one-touch fitting	Inch	8.5
N3	With ø5/32" one-touch fitting		
NM	Mixed sizes and with port plug (Note)		
M3	M3 thread	Metric	7.5
V2	With ø2 barb fitting		
V3	With ø3.2 barb fitting		
V4	With ø4 barb fitting		
VM	Mixed sizes and with port plug (Note)		

Note) Specify "Mixed sizes and with port plug" on the manifold specification sheet.

Connector kit

P, R port thread type

Symbol	Manifold pitch	
	8.5	7.5
Nil	Rc (PT)	M5
F	G (PF)	/
N	NPT	
T	NPTF	

How to Order Valves

S07 1 5 [] - 5 G

Type of actuation

Symbol	Specifications
1	2-position single
2	2-position double
A	4-position dual 3-port (N.C. + N.C.) [exhaust center]
B	4-position dual 3-port (N.O. + N.O.) [pressure center]
C	4-position dual 3-port (N.C. + N.O.)

Note) For symbol, refer to page 7.

Electrical entry

Symbol	Specifications
G	Grommet
M	Plug connector, with lead wire (Light/surge voltage suppressor)
MO	Plug connector, without lead wire (Light/surge voltage suppressor)

Voltage

Symbol	Specifications
5	24 VDC
6	12 VDC

Base mounted plug lead

Function

Symbol	Specifications
Nil	Standard
R	External pilot (Note)

Note) Not compatible with dual 3-port valves.

How to Order Manifold Assembly

Specify the part numbers for valves and options together beneath the manifold base part number.

<Example>

Connector kit

SS0755-07C4..... 1 set – Manifold base part no.

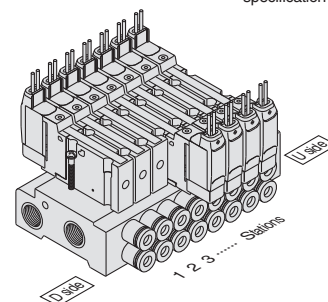
* S0715-5G..... 3 sets – Valve part no. (Stations 1 to 3)

* S0725-5G..... 2 sets – Valve part no. (Stations 4 to 5)

* S07A5-5G..... 2 sets – Valve part no. (Stations 6 to 7)

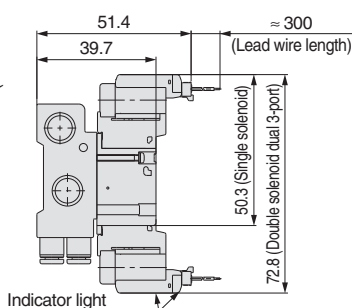
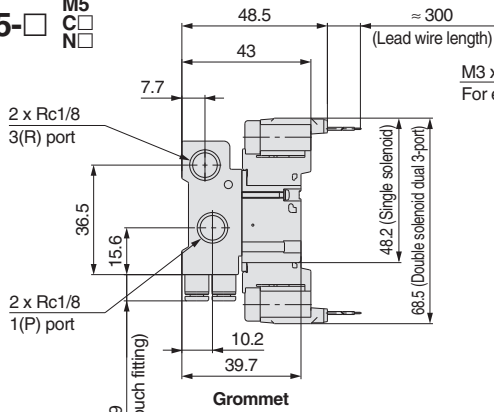
Prefix the asterisk to the part nos. of the solenoid valve, etc.

Write sequentially from the 1st station on the D side. When part nos. written collectively are complicated, specify on the manifold specification sheet.

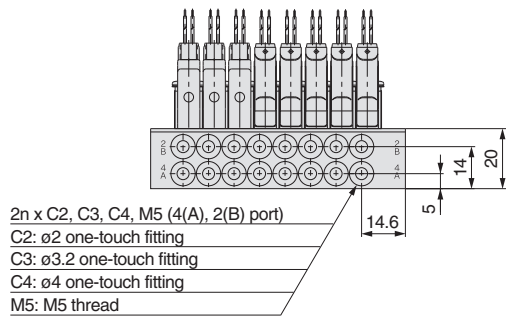
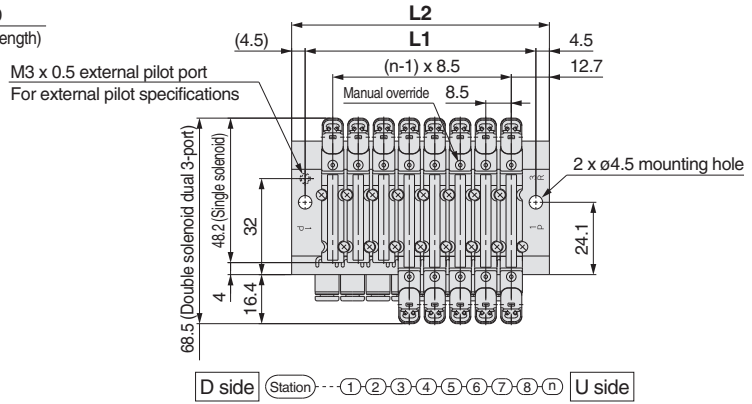


Plug Lead Manifold Bar Base *Series S0700*

SS0755-□ M5
C□
N□



With plug connector / light

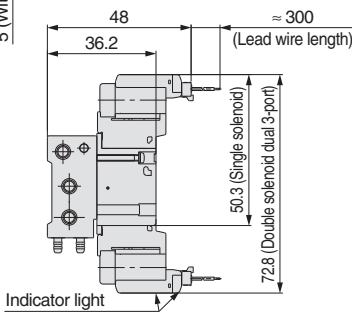
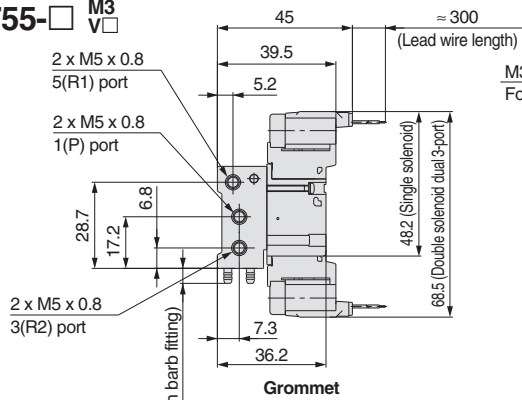


Dimensions

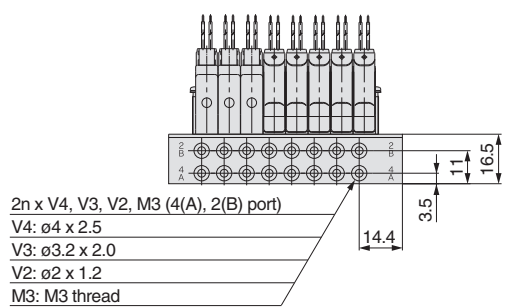
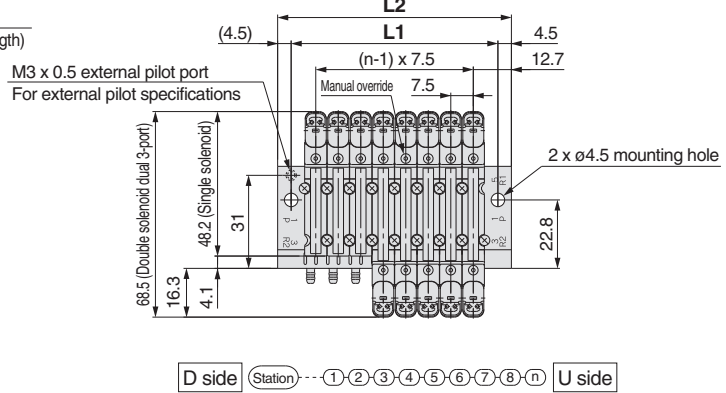
Formula $L1 = 8.5n + 8.9$, $L2 = 8.5n + 17.9$ n: Station (Maximum 20 stations)

L	n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L1		25.9	34.4	42.9	51.4	59.9	68.4	76.9	85.4	93.9	102.4	110.9	119.4	127.9	136.4	144.9	153.4	161.9	170.4	178.9
L2		34.9	43.4	51.9	60.4	68.9	77.4	85.9	94.4	102.9	111.4	119.9	128.4	136.9	145.4	153.9	162.4	170.9	179.4	187.9

SS0755-□ M3
V□



With plug connector / light



Dimensions

Formula $L1 = 7.5n + 8.9$, $L2 = 7.5n + 17.9$ n: Station (Maximum 20 stations)

L	n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L1		23.9	31.4	38.9	46.4	53.9	61.4	68.9	76.4	83.9	91.4	98.9	106.4	113.9	121.4	128.9	136.4	143.9	151.4	158.9
L2		32.9	40.4	47.9	55.4	62.9	70.4	77.9	85.4	92.9	100.4	107.9	115.4	122.9	130.4	137.9	145.4	152.9	160.4	167.9

Slim Compact Plug-in Manifold Bar Base

Plug-in Manifold Stacking Base

Plug Lead Manifold Bar Base

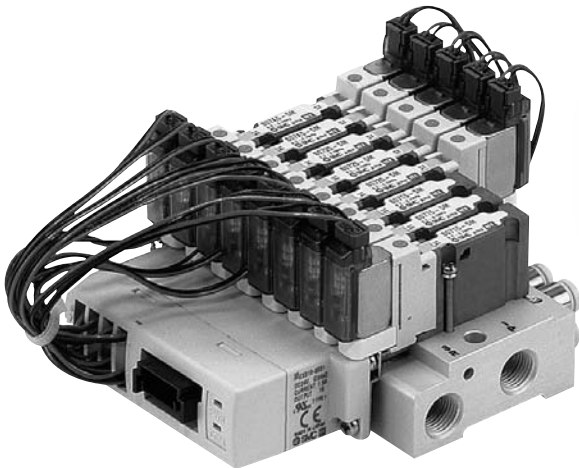
Plug Lead Single Unit

Plug Lead Manifold Bar Base Serial Transmission

S kit



Plug Lead Manifold
Bar Base



Gateway-type
Serial Transmission
System

EX510

Connect all wiring
using connectors.

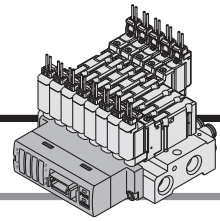
Page 83

Slim Compact Plug-in Manifold
Bar Base

Plug-in Manifold
Stacking Base

Plug Lead Manifold
Bar Base

Plug Lead
Single Unit



How to Order Manifold

SS0755-SA **08** **C4** -

S kit
EX510 serial wiring
 Note) For SI unit part number, refer to page 91.

SI unit output polarity

Nil	Positive common
N	Negative common

Stations

Symbol	Stations
02	2 stations
⋮	⋮
16	16 stations

Note) The maximum number of stations is determined by the total number of solenoids. For mixed single and double wirings, enter "K" to the order code options.

Standard station	Max. number of stations for special wiring specifications	Max. number of solenoids
1 to 8 stations	16 stations	16

Type of actuation	Single	Double, Dual 3-port
Number of solenoids	1	2

Refer to Reduced Wiring Fieldbus System (Serial Transmission) in Electric Products (CAT.E150) for details on the EX510 Gateway-type Serial Transmission System.

Option

Symbol	Specifications
Nil	None
K ^{Note 2)}	Special wiring specifications (Except double wiring)
R ^{Note 3)}	External pilot

Note 1) When two or more options are specified, indicate them alphabetically. Example) -KR

Note 2) Indicate the wiring specifications for mixed single and double wirings.

Note 3) For details, refer to page 85.

* For manifold optional parts, refer to pages 85 to 87.

P, R port thread type

Symbol	Manifold pitch
Nil	8.5
Nil	Rc (PT)
F	G (PF)
N	NPT
T	NPTF

Cylinder port size

Symbol	Port size	
M5	M5 thread	Metric
C2	With ø2 one-touch fitting	
C3	With ø3.2 one-touch fitting	
C4	With ø4 one-touch fitting	
CM	Mixed sizes and with port plug ^{Note)}	Inch
N1	With ø1/8" one-touch fitting	
N3	With ø5/32" one-touch fitting	
NM	Mixed sizes and with port plug ^{Note)}	

Note) Specify "Mixed sizes and with port plug" on the manifold specification sheet.

How to Order Valves

S07 **1** **5** - **5** **MO**

Type of actuation

Symbol	Specifications
1	2-position single
2	2-position double
A	4-position dual 3-port (N.C. + N.C.) [Exhaust center]
B	4-position dual 3-port (N.O. + N.O.) [Pressure center]
C	4-position dual 3-port (N.C. + N.O.)

Note) For symbol, refer to page 7.

Electrical entry
 M-type plug connector, without lead wire (Light/surge voltage suppressor)

Voltage: 24 VDC

Function

Symbol	Specifications
Nil	Standard
R	External pilot ^{Note)}

Note) Not compatible with dual 3-port valves.

Base mounted plug lead

How to Order Manifold Assembly

Specify the part numbers for valves and options together beneath the manifold base part number.

<Example>

Serial transmission kit

SS0755-SA08C4...1 set - Manifold base part no.

* **S0715-5MO****3**-sets - Valve part no. (Stations 1 to 3)

* **S0725-5MO****3**-sets - Valve part no. (Stations 4 to 6)

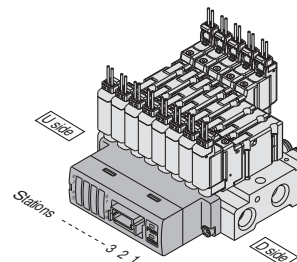
* **S07A5-5MO****2**-sets - Valve part no. (Stations 7 to 8)

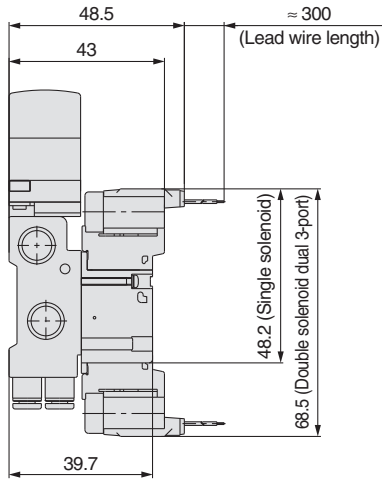
Write sequentially from the 1st station on the D side.

When part nos. written collectively are complicated, specify on the manifold specification sheet.

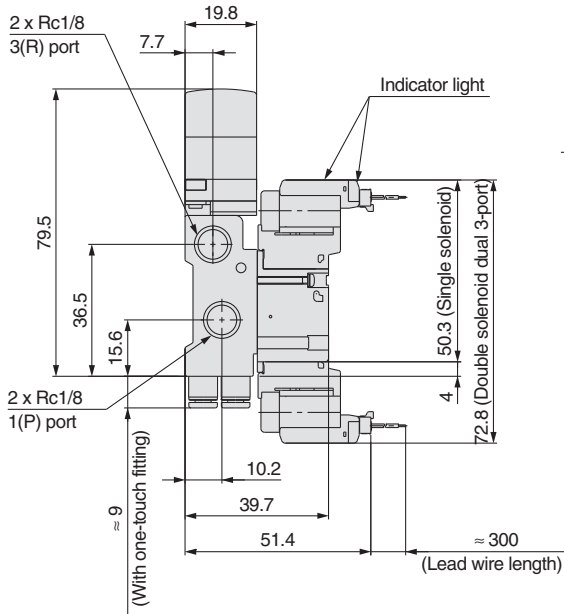
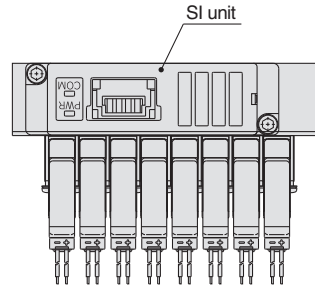
The connector assembly lead wire length used for EX510 manifold varies depending on the number of stations.

Therefore, solenoid valves (including a blanking plate) and connector assembly are assembled when shipped as a standard specification. Please specify the mounting solenoid valve when ordering.

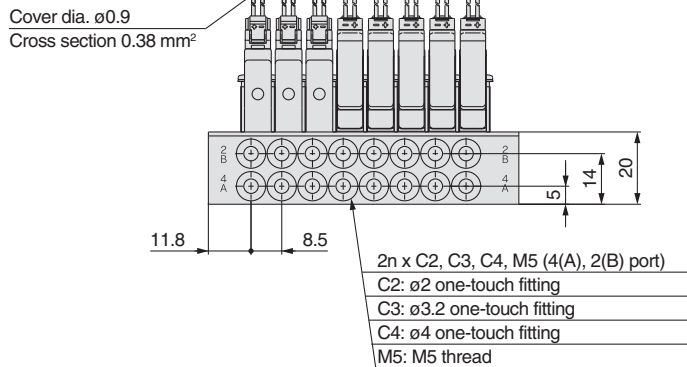
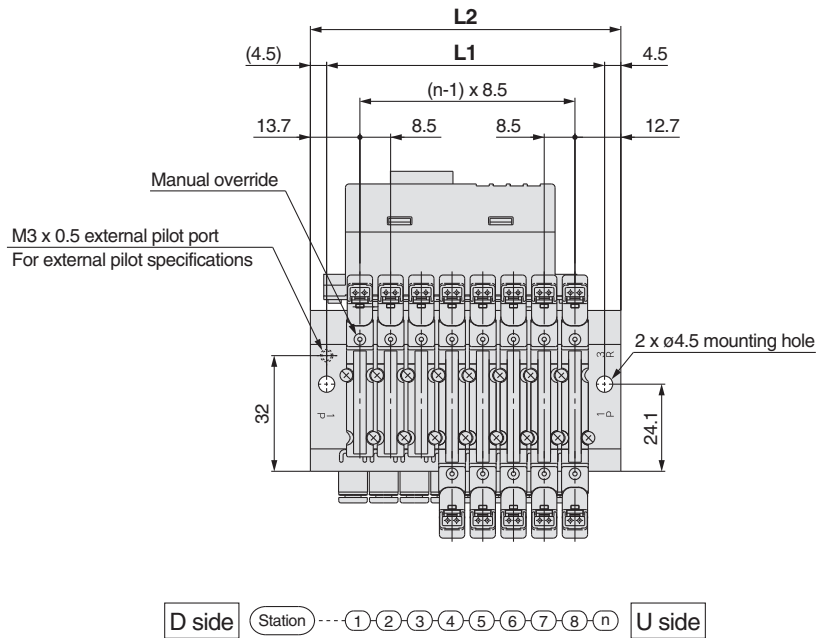




Grommet



With plug connector / light



Dimensions

L \ n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L1	68.4	68.4	68.4	68.4	68.4	68.4	76.9	85.4	93.9	102.4	110.9	119.4	127.9	136.4	144.9
L2	77.4	77.4	77.4	77.4	77.4	77.4	85.9	94.4	102.9	111.4	119.9	128.4	136.9	145.4	153.9

Slim Compact Plug-in Manifold Bar Base

Plug-in Manifold Stacking Base

Plug Lead Manifold Bar Base

Plug Lead Single Unit

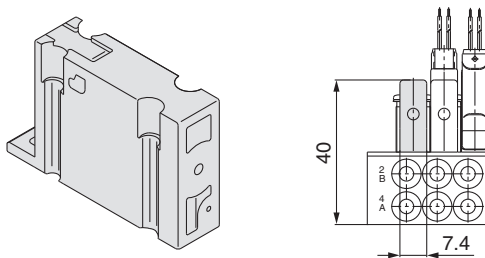
Series S0700 Plug Lead Manifold Bar Base Manifold Optional Parts

Blanking plate assembly

SS0700-10A-5

It is used by attaching on the manifold block for being prepared for removing a valve for maintenance reasons or planning to mount a spare valve, etc.

Weight: 0.75 oz (21 g)



Individual SUP spacer

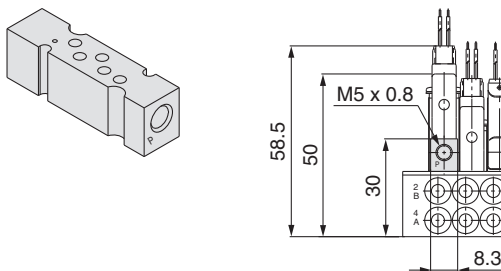
SS0700-P-5-M5

• Port size
M5 M5 thread

Mounted on the manifold block to make an independent supply port when each solenoid valve uses different operating pressure.

Weight: 0.25 oz (7 g)

* Compatible with 8.5 mm pitch manifold only.



Individual EXH spacer

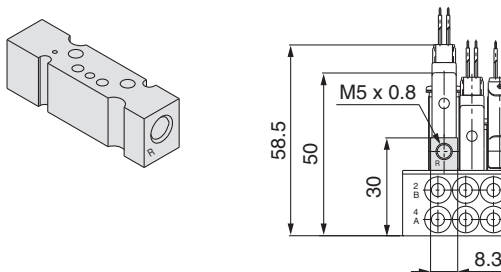
SS0700-R-5-M5

• Port size
M5 M5 thread

Mounted on the manifold block to make an independent exhaust port when the exhaust from one valve affects valves on other stations in the air circuit.

Weight: 0.25 oz (7 g)

* Compatible with 8.5 mm pitch manifold only.

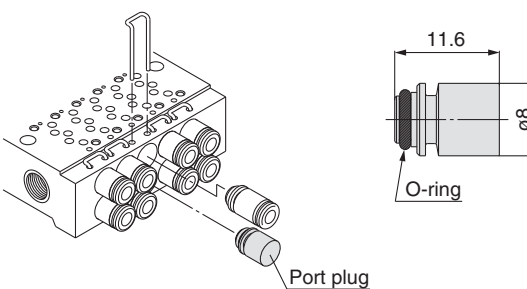


Port plug

VVQ0000-CP

The plug is used to block the cylinder port when using a 5-port valve as a 3-port valve.

* When ordering a plug incorporated with a manifold, indicate "CM" for the port size in the manifold no., as well as, the mounting position and number of stations and cylinder port mounting positions, A and B, on the manifold specification sheet.



External pilot [-R]

This can be used when the air pressure is 14.5 to 29 psi (0.1 to 0.2 MPa) lower than the minimum operating pressure of the solenoid valves or used for vacuum specifications.

Add R to the part numbers of manifolds and valves to indicate the external pilot specifications.

An M5 port will be installed on the top side of the manifold's SUP/EXH block.

● How to Order Valves (Example)

S0715 R -5G

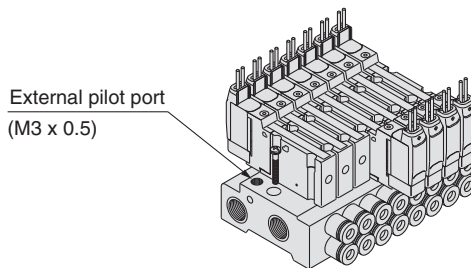
• External pilot

● How to Order Manifold (Example)

* Indicate -R for an option.

SS0755-08C4C-R

• External pilot



Note 1) The dual 3-port valve is not available.

Note 2) When the internal pilot type and external pilot type of valves are mixed up on the manifold, order the manifold suitable for the specifications of the external pilot valve.

Note 3) Valves with the external pilot have a pilot EXH with individual exhaust specifications and EXH can be pressurized. However, the pressure supplied from EXH should be 58 psi (0.4 MPa) or lower.

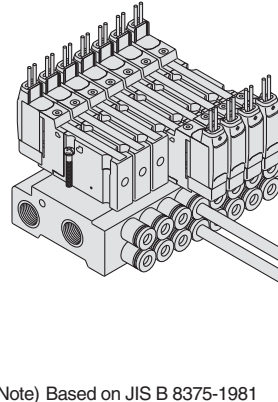
Double check block (Separated)

VQ1000-FPG-□□

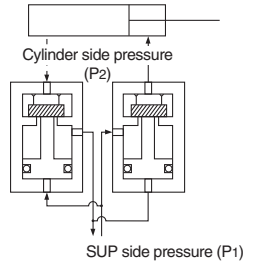
It is used on the outlet side piping to keep the cylinder in the intermediate position for long periods of time. Combining the double check block with a built-in pilot type double check valve and a 2-position single/double solenoid valve will permit this block to be used for preventing the dropping at the cylinder stroke end when the SUP residual pressure is released.

Specifications

Max. operating pressure	116 psi (0.8 MPa)
Min. operating pressure	22 psi (0.15 MPa)
Ambient and fluid temperature	23 to 122°F (-5 to 50°C)
Flow-rate characteristics: C	0.60 dm ³ / (s-bar)
Max. operating frequency	180 c.p.m

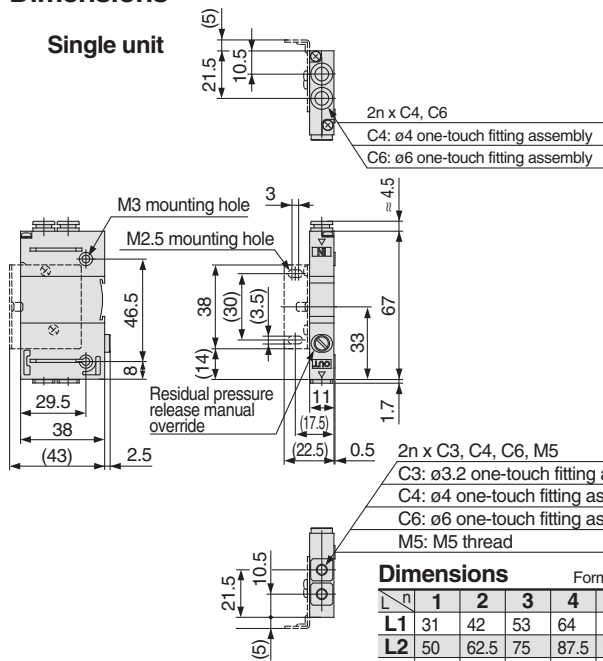


<Check Valve Working Principle>



Note) Based on JIS B 8375-1981 (Supply pressure: 73 psi (0.5 MPa))

Dimensions



Dimensions

Formula L1 = 11n + 20 n: Station (Maximum 24 stations)

Station	1	2	3	4	5	6	7	8	9	10	11	12
L1	31	42	53	64	75	86	97	108	119	130	141	152
L2	50	62.5	75	87.5	100	112.5	125	137.5	150	162.5	175	187.5
L3	60.5	73	85.5	98	110.5	123	135.5	148	160.5	173	185.5	198.5
Station	13	14	15	16	17	18	19	20	21	22	23	24
L1	163	174	185	196	207	218	229	240	251	262	273	284
L2	187.5	187.5	200	212.5	225	237.5	250	250	262.5	275	287.5	300
L3	198	198	210.5	223	235.5	248	260.5	260.5	273	285.5	298	310.5

How to Order

Single unit, double check block

VQ1000-FPG - C4 M5 - F

IN side port size

C4	ø4 one-touch fitting
C6	ø6 one-touch fitting

OUT side port size

M5	M5 thread
C3	ø3.2 one-touch fitting
C4	ø4 one-touch fitting
C6	ø6 one-touch fitting

Option

Nil	None
D	DIN rail mounting (For manifold)
F	With bracket
N	With name plate

Note) When two or more symbols are specified, indicate them alphabetically. Example) -DN

Manifold (DIN rail mounting)

VVQ1000-FPG - 06

When ordering a double check block, order the DIN rail mounting [-D].

Stations

01	1 station
:	:
16	16 stations

<Example>

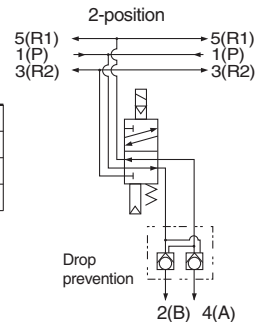
VVQ1000-FPG-06 ... 6-station manifold
* VQ1000-FPG-C4M5-D, 3 sets } Double check block
* VQ1000-FPG-C6M5-D, 3 sets }

Caution

- Air leakage from the pipe between the valve and cylinder or from the fittings will prevent the cylinder from stopping for long periods of time. Check the leakage using neutral household detergent, such as dish washing soap. Also, check the cylinder's tube gasket, piston seal and rod seal for air leakage.
- Since one-touch fittings allow slight air leakage, screw piping (with M5 thread) is recommended when stopping the cylinder in the middle for long periods of time.
- M5 fitting assembly is attached, not incorporated into the double check block. After screwing in the M5 fittings, mount the assembly on the double check block. (Tightening torque: 0.59 to 0.89 lbf-ft (0.8 to 1.2 N-m))
- If the exhaust of the double check block is restricted too much, the cylinder may not operate properly and may not stop intermediately.



<Example>



Bracket Assembly

Part no.	Tightening torque
VQ1000-FPG-100	0.16 to 0.18 lbf-ft (0.22 to 0.25 N-m)

Note) This torque is used to mount the bracket on the double check block.

Slim Compact Plug-in Manifold Bar Base

Plug-in Manifold Stacking Base

Plug Lead Manifold Bar Base

Plug Lead Single Unit

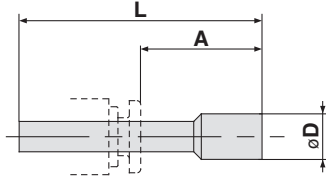
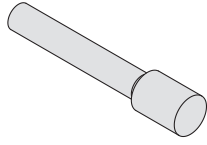
Series S0700 Plug Lead Manifold Bar Base Manifold Optional Parts

Blanking plug (For one-touch fittings)

KJP-02

23
KQ2P-04

06



Dimensions

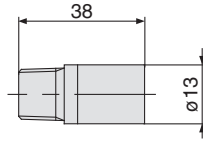
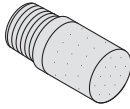
(mm)

Applicable fitting size ϕd	Model	A	L	D	Weight (g)
2	KJP-02	8.2	17	3	0.1
3.2	KQ2P-23	16	31.5	3.2	1
4	KQ2P-04	16	32	6	1
6	KQ2P-06	18	35	8	1

Silencer
(For manifold EXH port)

AN110-01

Silencer is installed in the EXH port.



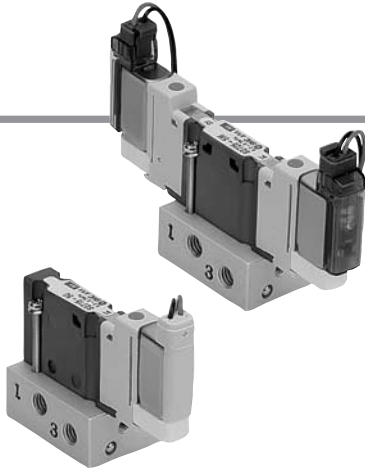
5 Port Solenoid Valve/Base Mounted Plug Lead

Series S0700

Single Unit



How to Order Valves



S07 1 5 □ - 5 G - M5

Type of actuation

Symbol	Specifications
1	2-position single
2	2-position double
A	4-position dual 3-port (N.C. + N.C.) [Exhaust center]
B	4-position dual 3-port (N.O. + N.O.) [Pressure center]
C	4-position dual 3-port (N.C. + N.O.)

Note) For symbol, refer to page 7.

Plug lead

Function

Symbol	Specifications
Nil	Standard
R	External pilot ^{Note)}

Note) Not compatible with dual 3-port valves.

With/Without sub-plate

Symbol	Specifications
Nil	Without sub-plate
M5	With sub-plate

Electrical entry

Symbol	Specifications	Configuration
G	Grommet	
M	M-type plug connector, with lead wire (With light/surge voltage suppressor)	
MO	M-type plug connector, without lead wire (With light/surge voltage suppressor)	

Voltage

Symbol	Specifications
5	24 VDC
6	12 VDC

Slim Compact Plug-in Manifold Bar Base

Plug-in Manifold Stacking Base

Plug Lead Manifold Bar Base

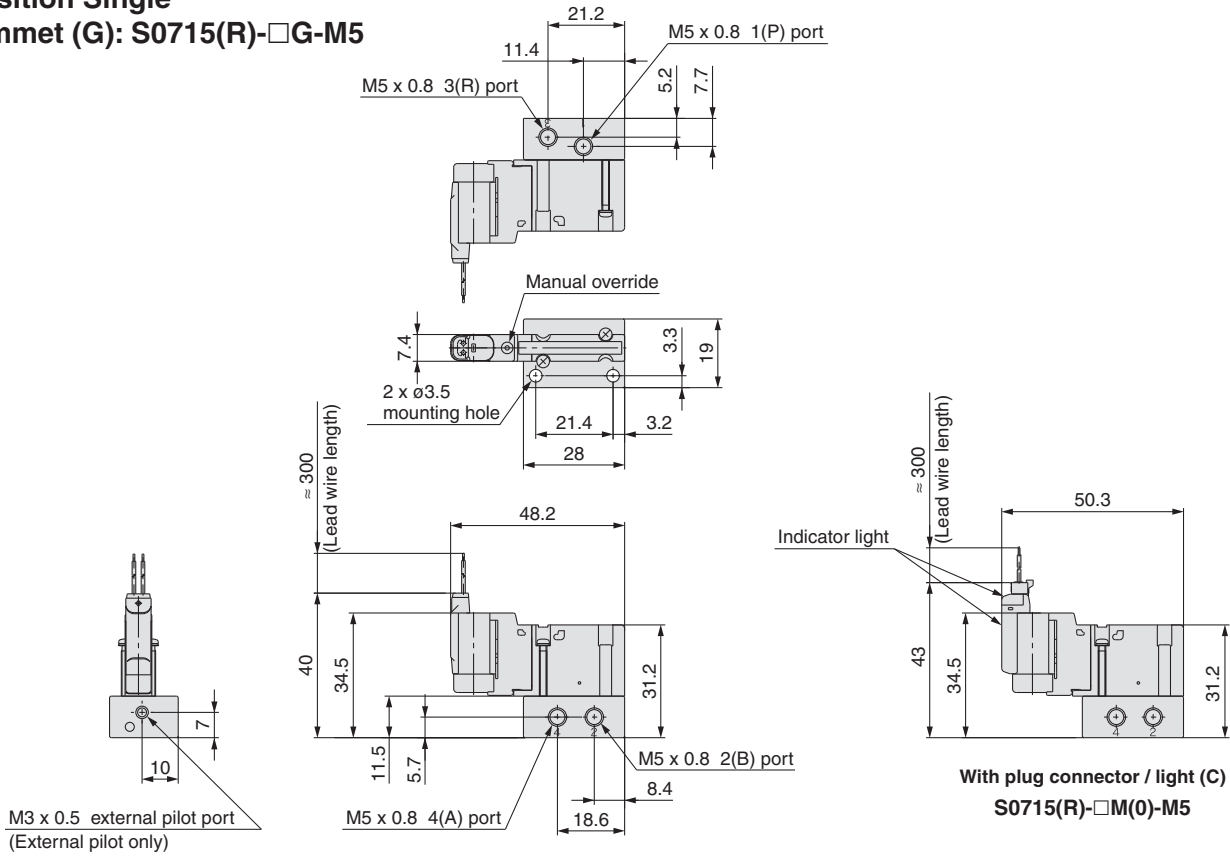
Plug Lead Single Unit

Series S0700

Dimensions

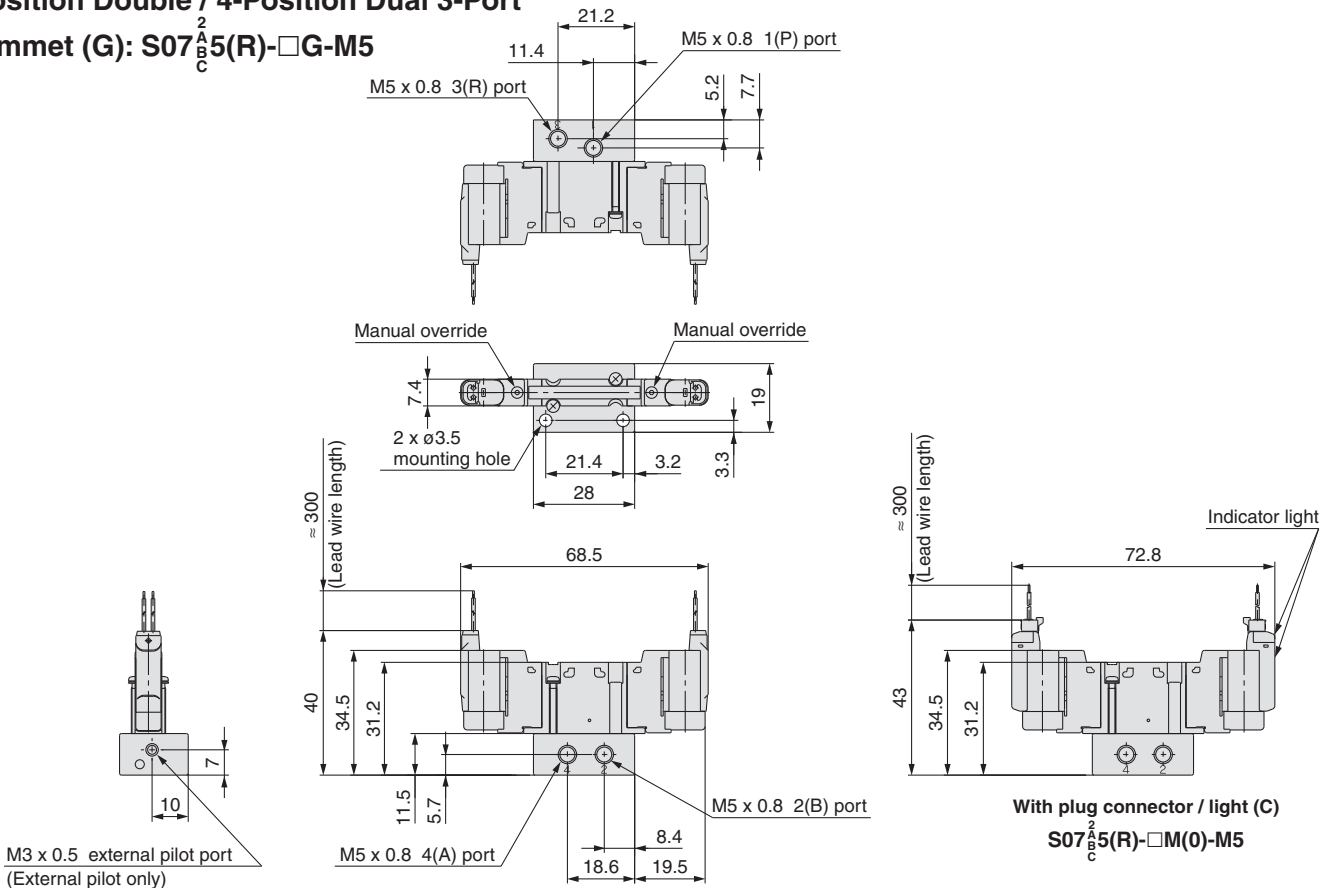
2-Position Single

Grommet (G): S0715(R)-□G-M5



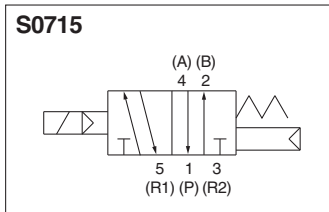
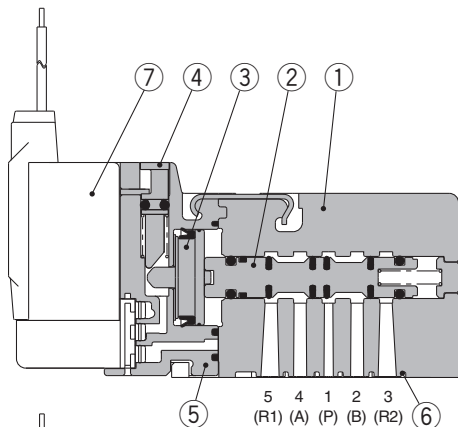
2-Position Double / 4-Position Dual 3-Port

Grommet (G): S07^A_B5(R)-□G-M5

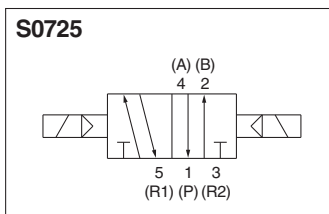
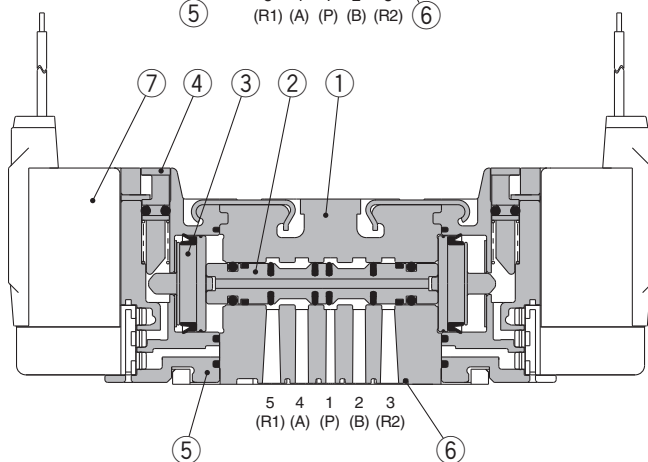


Construction: Main Parts/Replacement Parts

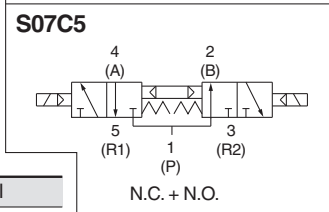
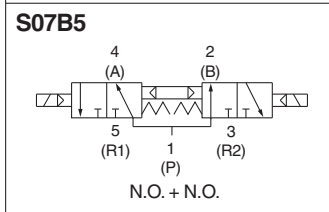
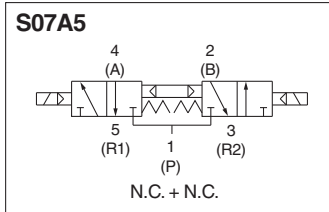
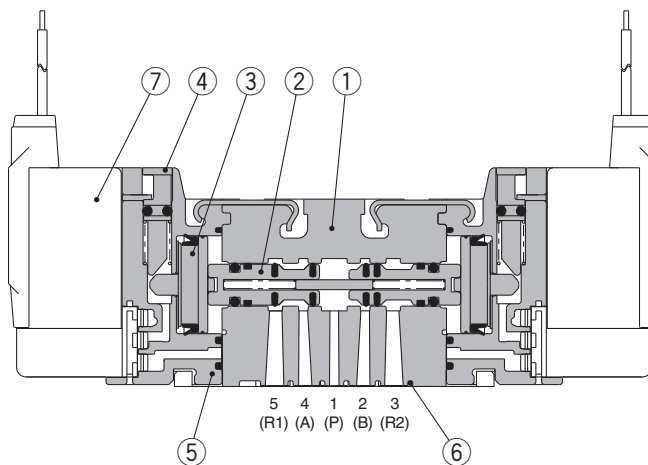
2-Position Single



2-Position Double



4-Position Dual 3-Port Valve



<Pilot Valve Assembly Part No.>

S070P - 5 B G -1

Voltage

Symbol	Specifications
5	24 VDC
6	12 VDC

Accessory

Symbol	Specifications
Nil	None
-1	Stopper plate is included.

Electrical entry

Symbol	Specifications
G	Grommet
C	Plug connector, with lead wire (With light/surge voltage suppressor)
CO	Plug connector, without lead wire (With light/surge voltage suppressor)

Component Parts

No.	Description	Material
1	Body	Zinc die-casted
2	Spool	Aluminum
3	Piston	Resin
4	Manual override	Resin
5	Adapter plate	Resin
6	Interface gasket	HNBR

Replacement Parts

No.	Description	Material
7	Pilot valve assembly	—

Note) For pilot valve assembly replacement, refer to "Specific Product Precautions 4."



Slim Compact Plug-in Manifold Bar Base

Plug-in Manifold Stacking Base

Plug Lead Manifold Bar Base


Plug Lead Single Unit

Note) For pilot valve assembly replacement, refer to "Specific Product Precautions 4."

Series S0700 Plug Lead Replacement Parts

<One-touch Fitting Assembly (For Cylinder Port)>

Manifold pitch	Port size	Part no.
8.5	ø2 one-touch fitting	VVQ0000-50A-C2
	ø3.2 one-touch fitting	VVQ0000-50A-C3
	ø4 one-touch fitting	VVQ0000-50A-C4
	ø1/8" one-touch fitting	VVQ0000-50A-N1
	ø5/32" one-touch fitting	VVQ0000-50A-N3
7.5	ø2 barb fitting	SS070-50A-20
	ø3.2 barb fitting	SS070-50A-32
	ø4 barb fitting	SS070-50A-40


 Note) Purchasing order is available in units of 10 pieces.

<Plug Connector Assembly>

S070-14A-□


• Lead wire length

Symbol	Length
Nil	150 mm
3	300 mm
6	600 mm
10	1000 mm

 Note) Standard wire length of valve with plug connector is 300 mm. When ordering a lead wire length of 600 mm or longer, list the part numbers for the valve without connector and the connector assembly.

<Gasket, Screw Assembly>

Part no.
S0700-GS-5

 Note) Above part number consists of 10 units. Each unit has one gasket and two screws.

<Sub-plate>

Part no.
S0700-S-M5

<SI Unit (Series EX510)>

EX510-S□01

• Output specifications

0	NPN output (Positive common)
1	PNP output (Negative common)

<Pilot Valve Assembly>

S070P-5BG-1

• Voltage


Symbol	Specifications
5	24 VDC
6	12 VDC

• Accessory

Symbol	Specifications
Nil	None
-1	Stopper plate is included.

• Electrical entry

Symbol	Specifications
G	Grommet
C	Plug connector, with lead wire (With light/surge voltage suppressor)
CO	Plug connector, without lead wire (With light/surge voltage suppressor)

 Note) For pilot valve assembly replacement, refer to "Specific Product Precautions 4."



Series S0700 Specific Product Precautions 1

Be sure to read before handling. Refer to back cover for Safety Instructions, "Handling Precautions for SMC Products" (M-E03-3) for 3/4/5 Port Solenoid Valve Precautions.

Manual Override

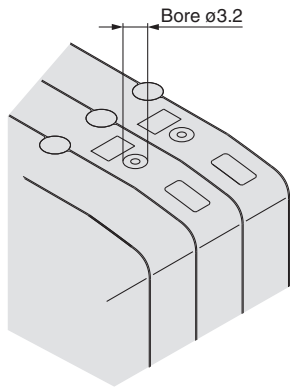
Warning

The manual override is used for switching the main valve.

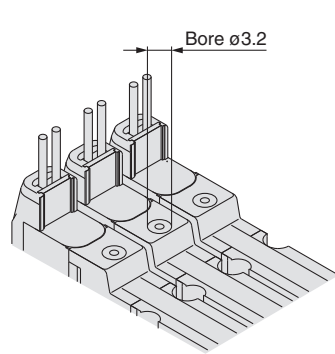
Push type (Tool required)

Push down on the manual override button with a small screwdriver until it stops.

Plug-in



Plug lead

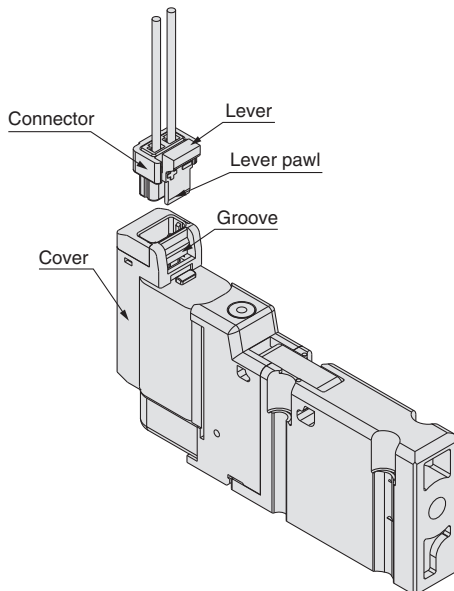


How to Attach/Detach Plug Connector

<Plug lead type only>

To attach a connector, hold the lever and connector unit between your fingers and insert straight onto the pins of the solenoid valve so that the lever's pawl is pushed into the groove and locks.

To detach a connector, remove the pawl from the groove by pushing the lever downward with your thumb, and pull the connector straight out.



Note) In order not to damage the connector and cover, do not pull the lead wire excessively (with a force of 2.25 lbf (10 N) or more).

How to Mount Valve

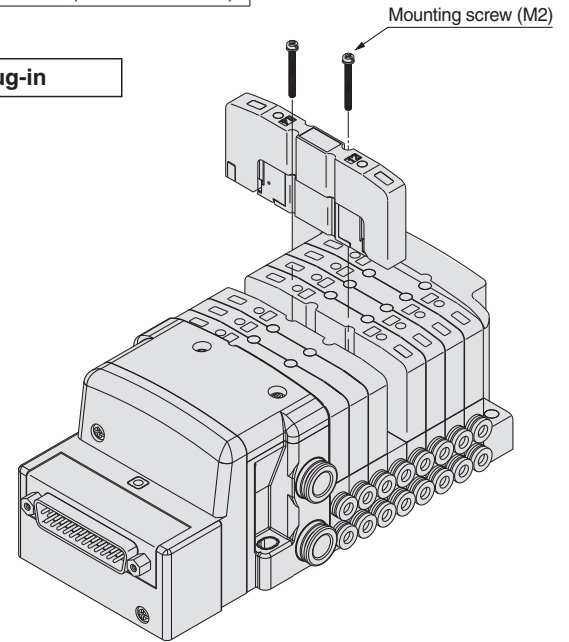
Caution

Tighten the bolts firmly to stop the gasket from coming away from the valve using the appropriate torque as shown on the following table.

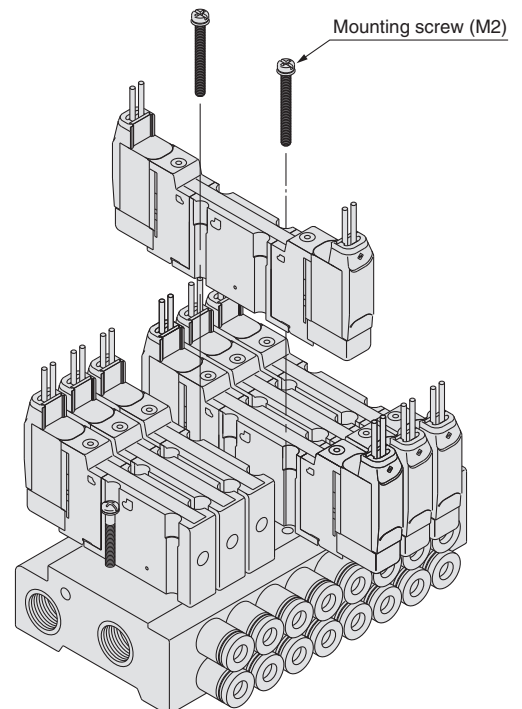
Proper tightening torque

0.13 to 0.17 lbf·ft (0.17 to 0.23N·m)

Plug-in



Plug lead





Series S0700 Specific Product Precautions 2

Be sure to read before handling. Refer to back cover for Safety Instructions, "Handling Precautions for SMC Products" (M-E03-3) for 3/4/5 Port Solenoid Valve Precautions.

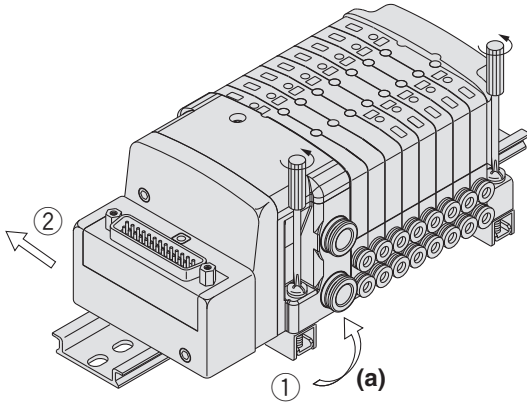
How to Mount/Remove DIN Rail

⚠ Caution

Plug-in

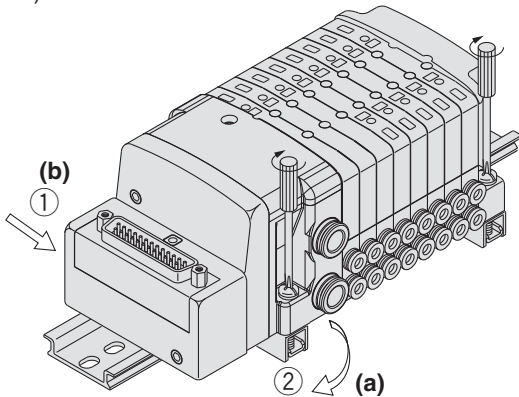
Removal

- 1) Loosen the clamping screw of the end plate on both sides.
- 2) Lift side (a) of the manifold base and slide the end plate in the direction of ② shown in the figure to remove.



Mounting

- 1) Hook side (b) of the manifold base on the DIN rail.
- 2) Press down side (a) and mount the end plate on the DIN rail. Tighten the clamping screw on side (a) of the end plate. The proper tightening torque for screws is 0.30 to 0.44 lbf-ft (0.4 to 0.6 N·m).

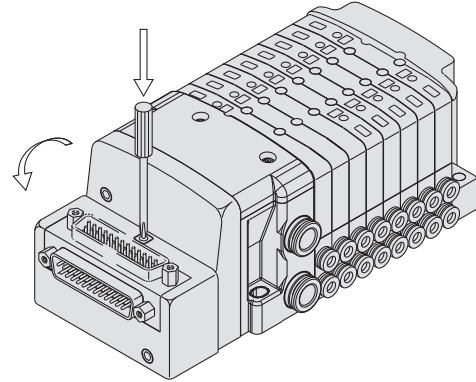


How to Change Connector Entry Direction

⚠ Caution

<Plug-in manifold stacking base>

The connector entry direction can be changed from the top to the side by simply pressing the manual release button. It is not necessary to use the manual release button when switching from the side to the top.



Built-in Silencer Element

⚠ Caution

<Plug-in type only>

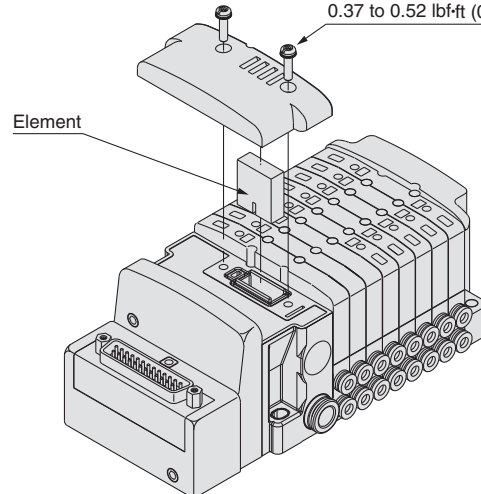
A silencer element is incorporated in the end plate on both sides of the base. A dirty and choked element may reduce cylinder speed or cause a malfunction. Clean or replace the dirty element.

Element Part No.

Type	Element part no.
Slim compact plug-in manifold bar base SS0751	SS0700-83A
Plug-in manifold stacking base SS0750	SS0700-82A

* Above part number is for a set of ten elements.

Tightening torque:
0.37 to 0.52 lbf-ft (0.5 to 0.7 N·m)



Remove the cover from the side of the end plate and remove the old element with a flat blade screwdriver, etc.



Series S0700 Specific Product Precautions 3

Be sure to read before handling. Refer to back cover for Safety Instructions, "Handling Precautions for SMC Products" (M-E03-3) for 3/4/5 Port Solenoid Valve Precautions.

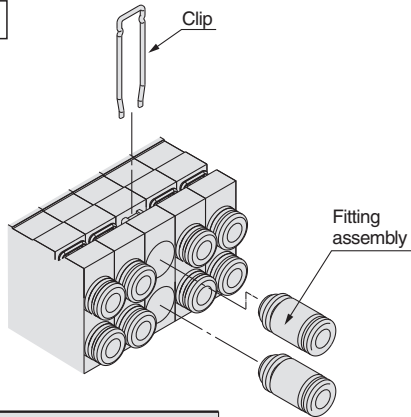
How to Replace Cylinder Port Fittings

Warning

The cylinder port fittings are a cassette for easy replacement. The fittings are blocked by a clip inserted from the top of the valve.

Remove the clip with a flat blade screwdriver to remove fittings. For replacement, insert the fitting assembly until it strikes against the inside wall and then re-insert the clip to the specified position.

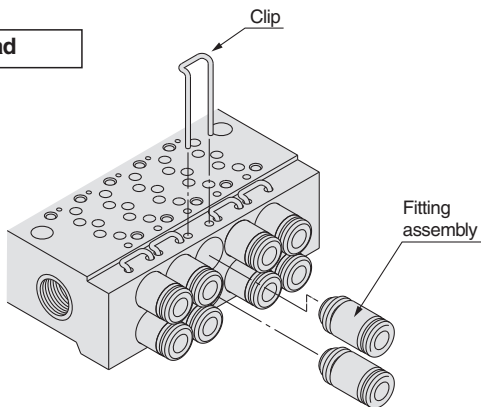
Plug-in



Applicable tube O.D.	One-touch fitting part no.
Applicable tube $\phi 2$	VVQ0000-50A-C2
Applicable tube $\phi 3.2$	VVQ0000-50A-C3
Applicable tube $\phi 4$	VVQ0000-50A-C4
Applicable tube $\phi 1/8''$	VVQ0000-50A-N1
Applicable tube $\phi 5/32''$	VVQ0000-50A-N3

* Part number is for one fitting assembly.
* Please order it in units of 10 pieces.

Plug lead



	Applicable tube O.D.	Fitting part no.
8.5 mm pitch (One-touch fitting)	Applicable tube $\phi 2$	VVQ0000-50A-C2
	Applicable tube $\phi 3.2$	VVQ0000-50A-C3
	Applicable tube $\phi 4$	VVQ0000-50A-C4
	Applicable tube $\phi 1/8''$	VVQ0000-50A-N1
	Applicable tube $\phi 5/32''$	VVQ0000-50A-N3
7.5 mm pitch (Barb fitting)	Barb fitting $\phi 2$	SS070-50A-20
	Barb fitting $\phi 3.2$	SS070-50A-32
	Barb fitting $\phi 4$	SS070-50A-40

* Part number is for one fitting assembly.
Please order it in units of 10 pieces.

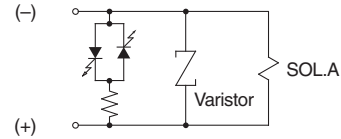
Internal Wiring Specifications

Caution

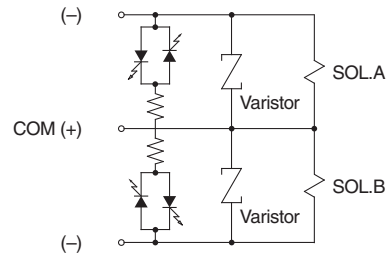
Light/surge voltage suppressor

No polarity by adopting non-polar light.

Plug-in Single/All plug lead types



Plug-in Double, Dual 3-port

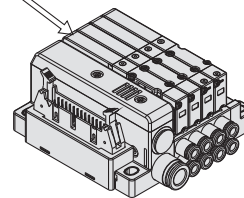


Note) Coil surge voltage generated when OFF is about -60 V. Please contact SMC separately for further suppression of the coil surge voltage.

Plug-in

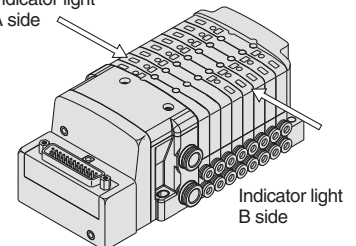
Slim type plug-in manifold

A: Orange
B: Green



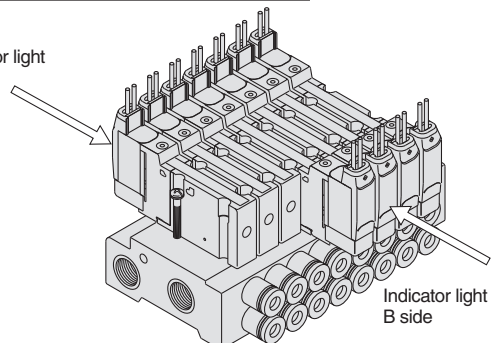
Plug-in manifold

Indicator light
A side



Plug lead manifold

Indicator light
A side





Series S0700 Specific Product Precautions 4

Be sure to read before handling. Refer to back cover for Safety Instructions, "Handling Precautions for SMC Products" (M-E03-3) for 3/4/5 Port Solenoid Valve Precautions.

Surge Voltage Intrusion

⚠ Caution

The surge voltage created when the power supply is cut off could apply to the de-energized load equipment through the output circuit. In cases where the energized load equipment has a larger capacity (power consumption) and is connected to the same power supply as the product, the surge voltage could malfunction and/or damage the internal circuit element of the product and the internal device of the output equipment. To avoid this situation, place a diode which can suppress the surge voltage between the COM lines of the load equipment and output equipment.

How to Replace Pilot Valve

⚠ Caution

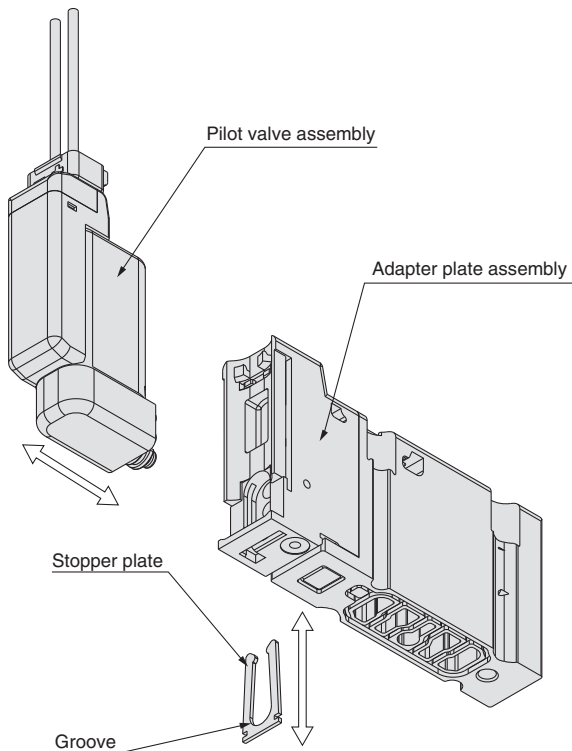
<Plug lead>

Removal

- 1) Remove the stopper plate from the adapter plate assembly by using a flat blade screwdriver on the concave of the stopper plate.
- 2) Take off the pilot valve in horizontal direction.

Mounting

- 1) Mount the pilot valve on the adapter plate assembly.
- 2) Insert the stopper plate into the adapter plate so that the stopper plate will not protrude from the end of the adapter plate.

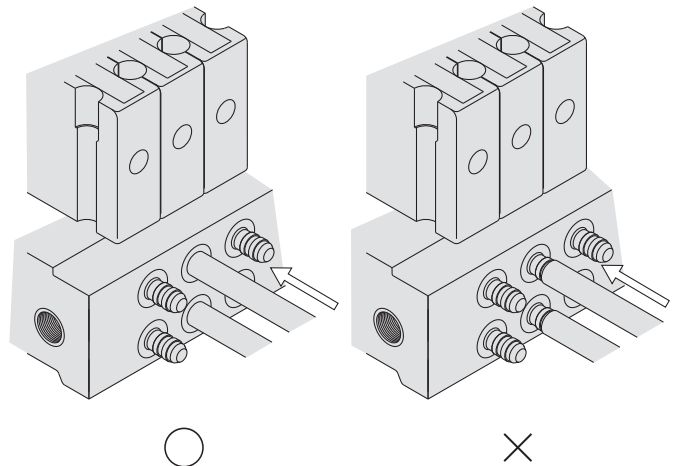


How to Connect Tubing

⚠ Caution

<Plug lead/Barb fittings>

- 1) Perpendicularly cut the tube to the necessary length by using an SMC tube cutter TK-1, 2 or 3.
- 2) Firmly insert the tube into the barb fitting. Insufficient insertion of the tube could cause the air leakage and/or disconnection of the tube.
- 3) When inserting the tube into the barb fitting, move the tube in parallel to the axis of the barb fitting to avoid any excessive side load to the fitting.



- 4) Pay attention not to apply any excessive side load to the barb fitting when removing it from the tube. When using a tube cutter or something similar, be careful not to damage or crack the fitting.
- 5) Do not apply any excessive load such as tensile, compressive or bending force to the tube once connected.



Series S0700

Specific Product Precautions 5

Be sure to read before handling. Refer to back cover for Safety Instructions, "Handling Precautions for SMC Products" (M-E03-3) for 3/4/5 Port Solenoid Valve Precautions.

Serial EX500/EX250/EX260 Precautions

Warning

1. **These products are intended for use in general factory automation equipment.**
Avoid using these products in machinery/equipment which affects human safety, and in cases where malfunction or failure can result in extensive damage.
2. **Do not use in an explosive atmosphere, environment with inflammable gases, or corrosive atmosphere. This can cause injury or fire, etc.**
3. **Work such as transporting, installing, piping, wiring, operation, control and maintenance should be performed by personnel with specialized knowledge. There is a danger of electrocution, injury or fire, etc.**
4. **Install an external emergency stop circuit that can promptly stop operation and shut off the power supply.**
5. **Do not remodel these products, as there is a danger of injury and damage.**

Caution

1. **Read the operation manual carefully, strictly observe the precautions and operate within the range of the specifications.**
2. **Do not drop these products or submit them to strong impacts. This can cause damage, failure or malfunction, etc.**
3. **In locations with poor electrical conditions, take steps to ensure a steady flow of the rated power supply. Use of a voltage outside of the specifications can cause malfunction, damage to the unit, electrocution or fire, etc.**
4. **Do not touch connector terminals or internal substrates when current is being supplied. There is a danger of malfunction, damage to the unit or electrocution if connector terminals or internal substrates are touched when current is being supplied.**
Be sure that the power supply is OFF when adding or removing manifold valves or input blocks, etc., or when connecting or disconnecting connectors.
5. **Operate at an ambient temperature that is within the specifications. Even when the ambient temperature range is within the specifications, do not use in locations where there are rapid temperature changes.**
6. **Keep wire scraps and other extraneous material from getting inside these products. This can cause fire, failure or malfunction, etc.**
7. **This product is not constructed to withstand water or oil penetration. Therefore it should be fitted with a protective cover when used in environments where it could be exposed to water or oil splash.**
8. **Observe the proper tightening torque.**
There is a possibility of damaging threads if tightening exceeds the tightening torque range.
9. **Adjustment/Operation**
DIP switches and rotary switches should be set with a small watch-makers' screwdriver.

Caution

10. **Provide adequate protection when operating in locations such as the following:**
 - Where noise is generated by static electricity, etc.
 - Where there is a strong electric field
 - Where there is a danger of exposure to radiation
 - When in close proximity to power supply lines
11. **When these products are installed in equipment, provide adequate protection against noise by using noise filters, etc.**
12. **Since these products are components that are used after installation in other equipment, the customer should confirm conformity to EMC directives for the finished product.**
13. **Do not remove the name plate.**
14. **Perform periodic inspections and confirm normal operation. It may otherwise be impossible to guarantee safety due to unexpected malfunction or erroneous operation.**
15. **For the EX260-SPN□, the side of the SI unit may become hot.**
It may cause burns.

Safety Instructions on Power Supply

Caution

1. **Operation is possible with a single power supply or a separate power supply. However, be sure to provide two wiring systems (one for solenoid valves, and one for input and control units).**
2. **When applicable to UL, use a Class 2 power supply unit conforming to UL1310 for direct current power supply.**



Series S0700 Specific Product Precautions 6

Be sure to read before handling. Refer to back cover for Safety Instructions, "Handling Precautions for SMC Products" (M-E03-3) for 3/4/5 Port Solenoid Valve Precautions.

Serial EX500/EX250/EX260 Precautions

Safety Instructions on Cable

⚠ Caution

1. Be careful of miswiring. This can cause malfunction, damage and fire in the unit.
2. Do not connect cables during energizing.
This could damage or cause malfunction to the SI unit.
3. To prevent noise and surge in signal lines, keep all wiring separate from power lines and high voltage lines. Otherwise, this can cause malfunction.
4. Check wiring insulation, as defective insulation can cause damage to the unit due to excessive voltage or current.
5. Do not bend or pull cables repeatedly, and do not place heavy objects on them or allow them to be pinched. This can cause broken lines.

Serial EX510 Precautions

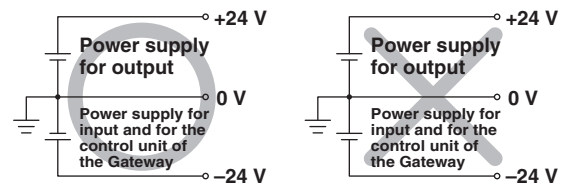
Design/Selection

⚠ Warning

1. Use within the allowable voltage range.
Using beyond the allowable voltage range is likely to cause the units and connecting devices to be damaged or to malfunction.
2. Do not use beyond the specification range.
Using beyond the specification range is likely to cause a fire, malfunction, or breakdown in the units and connecting devices. Check the specifications before handling.
3. Establish a backup system beforehand, which employs fail-safe concepts such as multiple equipment and devices to prevent breakage or malfunction of this product.
4. Provide an external emergency stop circuit that will immediately stop an operation and cut off the power supply.
5. When using for an interlock circuit:
 - Provide a double interlock which is operated by another system (such mechanical protection function).
 - Perform an inspection to check that it is working properly because it can cause possible injuries.

⚠ Caution

1. Keep the surrounding space free for maintenance.
When designing a system, take into consideration the amount of free space needed for performing maintenance.
2. When applicable to UL, use a Class 2 power supply unit conforming to UL1310 for direct current power supply.
3. This product is one of the components to be equipped into a final equipment. Confirm the adaptability to the EMC directive as the whole equipment by customers themselves.
4. The power supply for the Gateway unit should be 0 V as the standard for both power supply for outputs as well as inputs and for the control unit of the Gateway.





Series S0700

Specific Product Precautions 7

Be sure to read before handling. Refer to back cover for Safety Instructions, "Handling Precautions for SMC Products" (M-E03-3) for 3/4/5 Port Solenoid Valve Precautions.

Serial EX510 Precautions

Mounting

Caution

- 1. Do not drop, bump, or apply excessive impact.**
Otherwise, the unit can become damaged, malfunction, or fail to function.
- 2. Hold the body while handling this product.**
Otherwise, the unit can become damaged, malfunction, or fail to function.
- 3. Observe the tightening torque range.**
Tightening outside of the allowable torque range will likely damage the product.
- 4. Do not install a unit in a place where it can be used as a scaffold.**
Applying any excessive load such as stepping on the unit by mistake or placing a foot on it, will cause it to break.

Wiring

Warning

- 1. Avoid miswiring.**
If miswired, there is a probability of damaging units or connecting devices.
- 2. Do not wire while energizing the product.**
It is likely to damage the units or connecting devices.
- 3. Avoid wiring the power line and high pressure line in parallel.**
Noise or surge produced by signal line resulting from the power line or high pressure line could cause a malfunction. Wiring of the reduced wiring system and the power line or high pressure line should be separated from each other.
- 4. Check the wiring insulation.**
Inferior insulation (contact with other circuit, insulation between terminals, etc.) will likely cause damage to the units or connecting devices due to excessive voltage or the influx of current.

Caution

- 1. Take measures to avoid applying repeated bending force or pulling force to the cable.**
Also, pay attention not to place any heavy matter on the cable or clipping. It is likely to cause a broken wire.
- 2. Check the grounding to maintain the safety of the reduced wiring system and for anti-noise performance.**
Grounding should be close to units and keep the grounding distance short.

Operating Environment

Warning

- 1. Do not use this product in the presence of dust, particles, water, chemicals, and oil.**
Use with such materials is likely to cause a malfunction or breakage.
- 2. Do not use this product in the presence of a magnetic field.**
Use in such an environment is likely to cause a malfunction.
- 3. Do not use this product in an atmosphere containing an inflammable gas, explosive gas, or corrosive gas.**
Use in such an atmosphere is likely to cause a fire, explosion, or corrosion. This wire-reduced system is not explosion-proof.
- 4. Do not use this product in places where there are cyclic temperature changes.**
In case that the cyclic temperature is beyond normal temperature changes, the internal unit is likely to be adversely affected.
- 5. Do not use this product in places where there is radiated heat around it.**
Such a place is likely to cause a malfunction or breakage.
- 6. Do not use this product near sources that generate a surge which exceeds the benchmark test, even though this product is CE-marked certified.**
The internal circuit components are likely to deteriorate or become damaged when there are equipment (solenoid type lifter, high frequency guided furnace, motor, etc.) which generate a large surge around the reduced wiring system. Take measures to prevent an electrical surge and avoid having the wires touch each other.
- 7. Use the product type that has an integrated surge absorption element when directly driving a load which generates surge voltage by relay or solenoid valves.**
- 8. The reduced wiring system should be installed in places with no vibration or shock.**
Such a place is likely to cause a malfunction or breakage.



Series S0700 Specific Product Precautions 8

Be sure to read before handling. Refer to back cover for Safety Instructions, "Handling Precautions for SMC Products" (M-E03-3) for 3/4/5 Port Solenoid Valve Precautions.

Serial EX510 Precautions

Adjustment/Operation

Warning

1. Do not short-circuit a load.

If a load is short-circuited, excessive current can cause damage to the connected devices. The fuse of the input unit will melt. The output and SI unit will activate its overcurrent protection function. However, they cannot cover all modes, so damage is likely to occur.

2. Do not manipulate or perform settings with wet hands.

Performing such activity will likely cause an electrical shock.

Caution

1. DIP switches and rotary switches should be set with a small watchmakers' screwdriver.

Maintenance

Warning

1. Do not disassemble, modify (including circuit board replacement) or repair this product.

Such actions are likely to cause injuries or breakage.

2. Perform periodic inspection.

Confirm that wiring or screws are not loose. Otherwise, unpredicted malfunction in the system composition devices is likely to occur.

3. When an inspection is performed.

- Turn off the power supply.
- Stop the supplied fluid and discharge the fluid in the piping and confirm the release to the atmosphere before performing an inspection. It is likely to cause injuries.

Caution

1. Do not wipe this product with chemicals such as benzene or thinner.

Using such chemicals is likely to cause damage.



Series S0700 Specific Product Precautions 9

Be sure to read before handling. Refer to back cover for Safety Instructions, "Handling Precautions for SMC Products" (M-E03-3) for 3/4/5 Port Solenoid Valve Precautions.

Serial EX600 Precautions

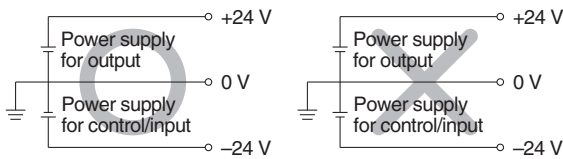
Design/Selection

⚠ Warning

- 1. Use this product within the specification range.**
Using beyond the specified specifications range can cause fire, malfunction, or damage to the system.
Check the specifications when operating.
- 2. When using for an interlock circuit:**
 - Provide a multiple interlock system which is operated by another system (such as mechanical protection function).
 - Perform an inspection to confirm that it is working properly.
This may cause possible injury due to malfunction.

⚠ Caution

- 1. When applicable to UL, use a Class 2 power supply unit conforming to UL1310 for direct current power supply.**
- 2. Use this product within the specified voltage range.**
Using beyond the specified voltage range is likely to cause the units and connecting devices to be damaged or to malfunction.
- 3. The power supply for the unit should be 0 V as the standard for both power supply for output as well as power supply for control/input.**



- 4. Do not install a unit in a place where it can be used as a foothold.**
Applying any excessive load such as stepping on the unit by mistake or placing a foot on it, will cause it to break.
- 5. Keep the surrounding space free for maintenance.**
When designing a system, take into consideration the amount of free space needed for performing maintenance.
- 6. Do not remove the name plate.**
Improper maintenance or incorrect use of instruction manual can cause failure and malfunction. Also, there is a risk of losing conformity with safety standards.
- 7. Beware of inrush current when the power supply is turned on.**
Some connected loads can apply an initial charge current which will trigger the over current protection function, causing the unit to malfunction.

Mounting

⚠ Caution

- 1. When handling and assembling units:**
 - Do not touch the sharp metal parts of the connector or plug.
 - Do not apply excessive force to the unit when disassembling.
The connecting portions of the unit are firmly joined with seals.
 - When joining units, take care not to get fingers caught between units.
Injury can result.

Mounting

⚠ Caution

- 2. Do not drop, bump, or apply excessive impact.**
Otherwise, the unit can become damaged, malfunction, or fail to function.
- 3. Observe the tightening torque range.**
Tightening outside of the allowable torque range will likely damage the product.
IP67 protection class cannot be guaranteed if the screws are not tightened to the specified torque.
- 4. When lifting a large size manifold solenoid valve unit, take care to avoid causing stress to the valve connection joint.**
The connection parts of the unit may be damaged.
Because the unit may be heavy, carrying and installation should be performed by more than one operator to avoid strain or injury.
- 5. When placing a manifold, mount it on a flat surface.**
Torsion in the whole manifold can lead to trouble such as air leakage or defective insulation.

Wiring

⚠ Caution

- 1. Check the grounding to maintain the safety of the reduced wiring system and for anti-noise performance.**
Provide a specific grounding as close to the unit as possible to minimize the distance to grounding.
- 2. Avoid repeatedly bending or stretching the cable and applying a heavy object or force to it.**
Wiring applying repeated bending and tensile stress to the cable can break the circuit.
- 3. Avoid miswiring.**
If miswired, there is a danger of malfunction or damage to the reduced wiring system.
- 4. Do not wire while energizing the product.**
There is a danger of malfunction or damage to the reduced wiring system or input/output equipment.
- 5. Avoid wiring the power line and high pressure line in parallel.**
Noise or surge produced by signal line resulting from the power line or high pressure line could cause malfunction.
Wiring of the reduced wiring system or input/output device and the power line or high pressure line should be separated from each other.
- 6. Check the wiring insulation.**
Defective insulation (contact with other circuits, improper insulation between terminals, etc.) may cause damage to the reduced wiring system or input/output device due to excessive voltage or current.



Series S0700 Specific Product Precautions 10

Be sure to read before handling. Refer to back cover for Safety Instructions, "Handling Precautions for SMC Products" (M-E03-3) for 3/4/5 Port Solenoid Valve Precautions.

Serial EX600 Precautions

Wiring

Caution

- 7. When a reduced wiring system is installed in machinery/equipment, provide adequate protection against noise by using noise filters, etc.**
Noise in signal lines may cause a malfunction.
- 8. When connecting wires of input/output device or hand-held terminal, prevent water, solvent or oil from entering inside from the connector section.**
This can cause damage, equipment failure or malfunction.
- 9. Avoid wiring patterns in which excessive stress is applied to the connector.**
This may cause malfunction or damage to the unit due to contact failure.

Operating Environment

Warning

- 1. Do not use in an atmosphere containing an inflammable gas or explosive gas.**
Use in such an atmosphere is likely to cause a fire or explosion. This system is not explosion-proof.

Caution

- 2. Provide adequate protection when operating in locations such as the following.**
Failure to do so may cause damage or malfunction. The effect of countermeasures should be checked in individual equipment and machine.
 - 1) Where noise is generated by static electricity, etc.
 - 2) Where there is a strong electric field
 - 3) Where there is a danger of exposure to radiation
 - 4) When in close proximity to power supply lines

Operating Environment

Caution

- 3. Do not use in an environment where oil and chemicals are used.**
Operating in environments with coolants, cleaning solvents, various oils or chemicals may cause adverse effects (damage, malfunction) to the unit even in a short period of time.
- 4. Do not use in an environment where the product could be exposed to corrosive gas or liquid.**
This may damage the unit and cause it to malfunction.
- 5. Do not use in locations with sources of surge generation.**
Installation of the unit in an area around the equipment (electromagnetic lifters, high frequency induction furnaces, welding machine, motors etc.), which generates the large surge voltage could cause to deteriorate an internal circuitry element of the unit or result in damage. Implement countermeasures against the surge from the generating source, and avoid touching the lines with each other.
- 6. Use the product type that has an integrated surge absorption element when directly driving a load which generates surge voltage by relay, solenoid valves or lamp.**
When a surge generating load is directly driven, the unit may be damaged.
- 7. The product is CE marked, but not immune to lightning strikes. Take measures against lightning strikes in your system.**
- 8. Keep dust, wire scraps and other extraneous material from getting inside the product.**
This may cause a malfunction or damage.
- 9. Mount the unit in such locations, where no vibration or shock is affected.**
This may cause a malfunction or damage.
- 10. Do not use in places where there are cyclic temperature changes.**
In case that the cyclic temperature is beyond normal temperature changes, the internal unit is likely to be adversely effected.
- 11. Do not use in direct sunlight.**
Do not use in direct sunlight. It may cause a malfunction or damage.
- 12. Use this product within the specified ambient temperature range.**
This may cause a malfunction.
- 13. Do not use in places where there is radiated heat around it.**
Such a place is likely to cause a malfunction.



Series S0700 Specific Product Precautions 11

Be sure to read before handling. Refer to back cover for Safety Instructions, "Handling Precautions for SMC Products" (M-E03-3) for 3/4/5 Port Solenoid Valve Precautions.

Serial EX600 Precautions

Adjustment/Operation

⚠ Warning

1. Do not perform operation or setting with wet hands.
There is a risk of electrical shock.

<Handheld Terminal>

2. Do not apply pressure to the LCD.

There is a possibility of the crack of LCD and injuring.

3. The forced input/output function is used to change the signal status forcibly. When operating this function, be sure to check the safety of the surroundings and installation.

Otherwise, injury or equipment damage could result.

4. Incorrect setting of parameters can cause malfunction.
Be sure to check the settings before use.

This may cause injury or equipment damage.

⚠ Caution

1. Use a watchmakers' screwdriver with thin blade for the setting of each switch of the SI unit.
When setting the switch, do not touch other unrelated parts.

This may cause parts damage or malfunction due to a short-circuit.

2. Provide adequate setting for the operating conditions.

Failure to do so could result in malfunction.

Refer to the instruction manual for setting of the switches.

3. For details on programming and address setting, refer to the manual from the PLC manufacturer.

The content of programming related to protocol is designed by the manufacturer of the PLC used.

<Handheld Terminal>

4. Do not press the setting buttons with a sharp pointed object.

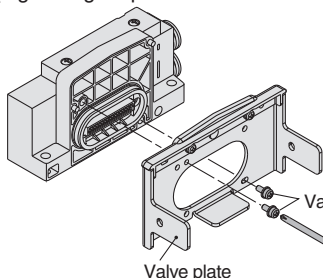
This may cause damage or malfunction.

5. Do not apply excessive load and impact to the setting buttons.

This may cause damage, equipment failure or malfunction.

When the order does not include the SI unit, the valve plate to connect the manifold and SI unit is not mounted. Use attached valve fixing screws and mount the valve plate.

(Tightening torque: 0.44 to 0.52 lbf-ft (0.6 to 0.7 N·m))



Screw tightened parts
Series SV: 2 places
Series S0700: 2 places
Series VQC1000: 2 places
Series VQC2000: 3 places
Series VQC4000: 4 places
Series SY: 2 places

Maintenance

⚠ Warning

1. Do not disassemble, modify (including circuit board replacement) or repair this product.

Such actions are likely to cause injuries or breakage.

2. When an inspection is performed,

- Turn off the power supply.
- Stop the air supply, exhaust the residual pressure in piping and verify that the air is released before performing maintenance work.

Unexpected malfunction of system components and injury can result.

⚠ Caution

1. When handling and replacing the unit:

- Do not touch the sharp metal parts of the connector or plug.
- Do not apply excessive force to the unit when disassembling.

The connecting portions of the unit are firmly joined with seals.

- When joining units, take care not to get fingers caught between units.

Injury can result.

2. Perform periodic inspection.

Unexpected malfunction in the system composition devices is likely to occur due to malfunction of machinery or equipment.

3. After maintenance, make sure to perform an appropriate functionality inspection.

In cases of abnormality such as faulty operation, stop operation. Unexpected malfunction in the system composition devices is likely to occur.

4. Do not use benzene and thinner for cleaning units.

Damage to the surface or erasure of the display can result. Wipe off any stains with a soft cloth.

If the stain is persistent, wipe off with a cloth soaked in a dilute solution of neutral detergent and wrung out tightly, and then finish with a dry cloth.

■ Trademark

DeviceNet™ is a trademark of ODVA.

EtherNet/IP™ is a trademark of ODVA.

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

Series S0700 Troubleshooting

Trouble	In the event of product failure, take remedial measures by checking the following items as detailed below.	Cause	Measures
<p>Operating failure</p> <p>The air supply direction has not been changed.</p>	<pre> graph TD Q1{Does the product operate by pressing a manual button?} -- NO --> C1_1 Q1 -- YES --> Q2{Does the indicator light illuminate when energizing?} Q2 -- NO --> C1_1 Q2 -- YES --> C2_1 C1_1 --> C3_1 </pre>	<p>1) Slide failure or sticking of the main valve Foreign matter from the air source has been caught in the main valve and has caused slide failure and sticking.</p>	<ul style="list-style-type: none"> • Replace the valve. • Purify the air source. (Refer to Best Pneumatics No. 1.)
		<p>2) Pressure drop The pressure of the air source decreases and fails to reach the minimum operating pressure of the valve, resulting in operating failure.</p>	<p>Adjust the pressure of the valve within the operating pressure range.</p>
		<p>1) Electric system error</p> <ul style="list-style-type: none"> • Sequencer failure • Incorrect wiring • Open fuse and lead wire disconnection • Voltage drop 	<p>Check each item and take applicable measure.</p>
		<p>1) Voltage drop The product may not operate due to a voltage drop even when its indicator light remains illuminated.</p>	<p>Check the voltage and take applicable measure if decreased.</p>
		<p>2) Current leakage The product does not shift from off to on due to the residual voltage.</p>	<p>Check the residual voltage, which shall be 2% or less of rated voltage.</p>
		<p>3) Pilot valve failure</p> <ul style="list-style-type: none"> • Foreign matter from the air source has entered the inside of the pilot valve and has caused operating failure. • Open coil circuit 	<ul style="list-style-type: none"> • Replace the pilot valve assembly. <Part no. of pilot valve assembly> S070P-⁵/₆BC CO • Purify the air source. (Refer to Best Pneumatics No. 1.)
<p>Response failure</p> <p>The product operates, but has a time delay.</p>		<p>1) Current leakage The response of the product was delayed due to the residual voltage.</p>	<p>Check the residual voltage, which should be 2% or less of the rated voltage.</p>
<p>2) Clogging of the filter element of the manifold</p>	<ul style="list-style-type: none"> • Clean or replace the element. 		
<p>3) Foreign matter from the air source has entered the main valve and has caused slide failure and sticking.</p>	<ul style="list-style-type: none"> • Replace the valve. • Purify the air source. (Refer to Best Pneumatics No. 1.) 		

Trouble	In the event of product failure, take remedial measures by checking the following items as detailed below.	Cause	Measures
Air leakage	<div style="border: 1px solid black; border-radius: 10px; padding: 5px; display: inline-block; margin-bottom: 10px;"> Check the part where the air is leaking. </div> <p>1. Leakage between the valve and base →</p>	1-1) The clamping screw or mounting bolt is loose.	Tighten the clamping screw. Proper tightening torque 0.17 to 0.23 N·m Replace the gasket if it was damaged.
		1-2) The gasket got caught.	Replace the gasket. <Part no. of gasket and spare parts> S0700-GS-5 (10 sets) Plug-in Manifold Stacking Base Plug Lead Manifold Bar Base, Plug Lead Single Unit S0700-GS-3 (10 sets) Slim Compact Plug-in Manifold Bar Base
	<p>2. Air leakage from the one-touch fitting →</p>	2-1) The tube did not bottom out. 2-2) The tube had a flaw. 2-3) The tube end was cut uneven.	} Check each item and take applicable measures.
		2-4) The packing of the one-touch fitting was damaged.	Replace the one-touch fitting assembly. <Part no. of one-touch fitting assembly> VVQ0000-50A-C2 VVQ0000-50A-C3 VVQ0000-50A-C4 VVQ0000-50A-N1 VVQ0000-50A-N3 SS070-50A-20 SS070-50A-32 SS070-50A-40
	<p>3. Leakage from R port →</p>	3-1) The mounting screw is loose.	Tighten the mounting bolt. Proper tightening torque • 0.17 to 0.23 N·m Replace the gasket if it was damaged.
		3-2) Foreign matter from the air source got caught in the main valve and increased the internal leakage.	• Replace the valve. Purify the air source. (Refer to Best Pneumatics No. 1.)

⚠ Safety Instructions

These safety instructions are intended to prevent hazardous situations and/or equipment damage. These instructions indicate the level of potential hazard with the labels of “**Caution**,” “**Warning**” or “**Danger**.” They are all important notes for safety and must be followed in addition to International Standards (ISO/IEC)*1), and other safety regulations.

⚠ Caution: **Caution** indicates a hazard with a low level of risk which, if not avoided, could result in minor or moderate injury.

⚠ Warning: **Warning** indicates a hazard with a medium level of risk which, if not avoided, could result in death or serious injury.

⚠ Danger: **Danger** indicates a hazard with a high level of risk which, if not avoided, will result in death or serious injury.

*1) ISO 4414: Pneumatic fluid power – General rules relating to systems.
 ISO 4413: Hydraulic fluid power – General rules relating to systems.
 IEC 60204-1: Safety of machinery – Electrical equipment of machines.
 (Part 1: General requirements)
 ISO 10218-1: Manipulating industrial robots - Safety.
 etc.

⚠ Warning

1. The compatibility of the product is the responsibility of the person who designs the equipment or decides its specifications.

Since the product specified here is used under various operating conditions, its compatibility with specific equipment must be decided by the person who designs the equipment or decides its specifications based on necessary analysis and test results. The expected performance and safety assurance of the equipment will be the responsibility of the person who has determined its compatibility with the product. This person should also continuously review all specifications of the product referring to its latest catalog information, with a view to giving due consideration to any possibility of equipment failure when configuring the equipment.

2. Only personnel with appropriate training should operate machinery and equipment.

The product specified here may become unsafe if handled incorrectly. The assembly, operation and maintenance of machines or equipment including our products must be performed by an operator who is appropriately trained and experienced.

3. Do not service or attempt to remove product and machinery/equipment until safety is confirmed.

1. The inspection and maintenance of machinery/equipment should only be performed after measures to prevent falling or runaway of the driven objects have been confirmed.
2. When the product is to be removed, confirm that the safety measures as mentioned above are implemented and the power from any appropriate source is cut, and read and understand the specific product precautions of all relevant products carefully.
3. Before machinery/equipment is restarted, take measures to prevent unexpected operation and malfunction.

4. Contact SMC beforehand and take special consideration of safety measures if the product is to be used in any of the following conditions.

1. Conditions and environments outside of the given specifications, or use outdoors or in a place exposed to direct sunlight.
2. Installation on equipment in conjunction with atomic energy, railways, air navigation, space, shipping, vehicles, military, medical treatment, combustion and recreation, or equipment in contact with food and beverages, emergency stop circuits, clutch and brake circuits in press applications, safety equipment or other applications unsuitable for the standard specifications described in the product catalog.
3. An application which could have negative effects on people, property, or animals requiring special safety analysis.
4. Use in an interlock circuit, which requires the provision of double interlock for possible failure by using a mechanical protective function, and periodical checks to confirm proper operation.

⚠ Caution

1. The product is provided for use in manufacturing industries.

The product herein described is basically provided for peaceful use in manufacturing industries.
 If considering using the product in other industries, consult SMC beforehand and exchange specifications or a contract if necessary.
 If anything is unclear, contact your nearest sales branch.

Limited warranty and Disclaimer/ Compliance Requirements

The product used is subject to the following “Limited warranty and Disclaimer” and “Compliance Requirements.”

Read and accept them before using the product.

Limited warranty and Disclaimer

1. The warranty period of the product is 1 year in service or 1.5 years after the product is delivered.*2)

Also, the product may have specified durability, running distance or replacement parts. Please consult your nearest sales branch.

2. For any failure or damage reported within the warranty period which is clearly our responsibility, a replacement product or necessary parts will be provided.

This limited warranty applies only to our product independently, and not to any other damage incurred due to the failure of the product.

3. Prior to using SMC products, please read and understand the warranty terms and disclaimers noted in the specified catalog for the particular products.

*2) **Vacuum pads are excluded from this 1 year warranty.**

A vacuum pad is a consumable part, so it is warranted for a year after it is delivered. Also, even within the warranty period, the wear of a product due to the use of the vacuum pad or failure due to the deterioration of rubber material are not covered by the limited warranty.

Compliance Requirements

1. The use of SMC products with production equipment for the manufacture of weapons of mass destruction (WMD) or any other weapon is strictly prohibited.

2. The exports of SMC products or technology from one country to another are governed by the relevant security laws and regulations of the countries involved in the transaction. Prior to the shipment of a SMC product to another country, assure that all local rules governing that export are known and followed.

Revision history

Edition B	* Addition of Slim Compact Plug-in Manifold Bar Base, 5 Port Solenoid Valve Series S0700. * Number of pages from 84 to 112.	NR
Edition C	* 5 Port Solenoid Valve Series S0700 EX180 (For Output) for Serial Transmission System is added. EX260 (For Output) for Serial Transmission System is added. EtherNet/IP™ and EtherCAT are added as supported network types for EX600 (For Input/Output) for Serial Transmission System.	QO












⚠ Safety Instructions

Be sure to read “Handling Precautions for SMC Products” (M-E03-3) before using.

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-  JAPAN SMC Corporation

Europe/Africa

-  GERMANY SMC Pneumatik GmbH
-  SWITZERLAND SMC Pneumatik AG
-  U.K. SMC Pneumatics (U.K.) Ltd.
-  FRANCE SMC Pneumatique SA
-  SPAIN / PORTUGAL SMC España S.A.
-  ITALY SMC Italia S.p.A.
-  GREECE SMC HELLAS E.P.E
-  IRELAND SMC Pneumatics (Ireland) Ltd.
-  NETHERLANDS (Associated company) SMC Pneumatics BV
-  BELGIUM (Associated company) SMC Pneumatics N.V./S.A.
-  DENMARK SMC Pneumatik A/S
-  AUSTRIA SMC Pneumatik GmbH (Austria)

Europe/Africa

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-  HUNGARY SMC Hungary Ipari Automatizálási Kft.
-  POLAND SMC Industrial Automation Polska Sp. z o.o.
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-  SLOVENIA SMC Industrijska Avtomatika d.o.o.
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-  CROATIA SMC Industrijska Automatika d.o.o.
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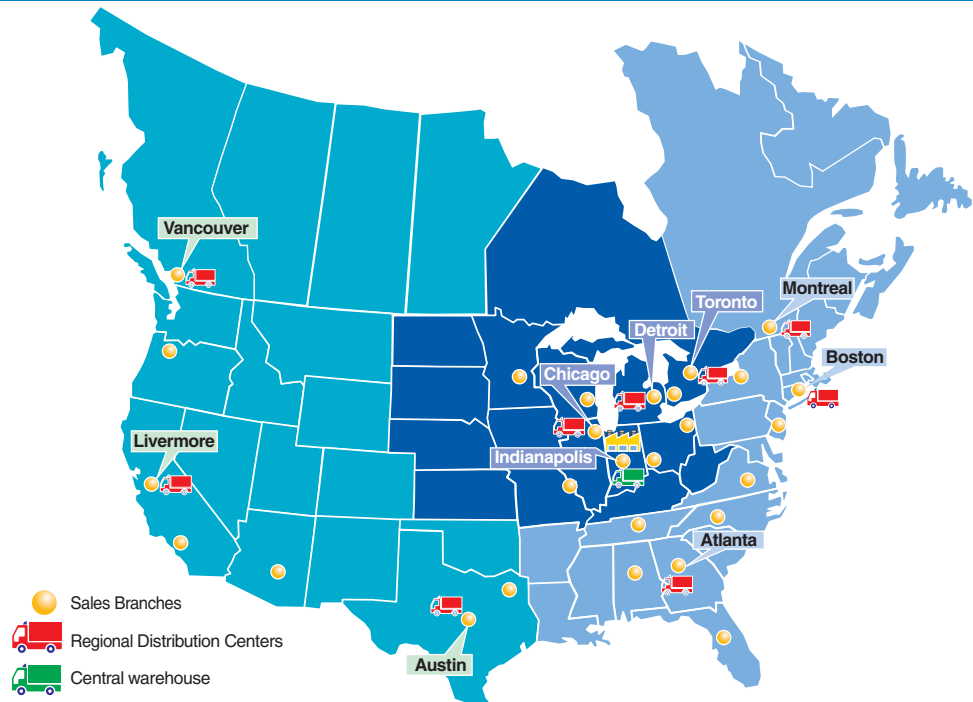
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