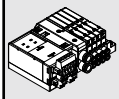
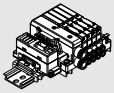
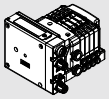
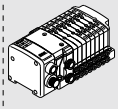
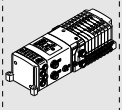
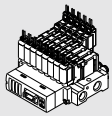
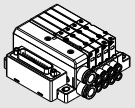
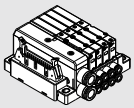
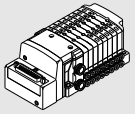
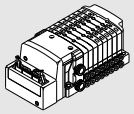
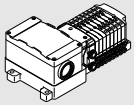
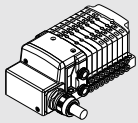
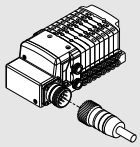
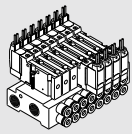
Series 10-S0700 5 Port Solenoid Valve

Variations

S kit
Serial Transmission (Fieldbus System)

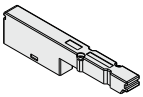
	EX180	EX260	EX500	EX510	EX250	EX600
	For Output Serial Transmission System	For Output Serial Transmission System	Gateway-type Serial Transmission System	Gateway-type Serial Transmission System	For Input/Output Serial Transmission System	For Input/Output Serial Transmission System
	Applicable Protocol · DeviceNet® · CC-Link	Applicable Protocol · DeviceNet® · PROFIBUS DP · CC-Link · EtherNet/IP™ · EtherCAT · PROFINET · Ethernet POWERLINK	Applicable Protocol · PROFIBUS DP · EtherNet/IP™	Applicable Protocol · DeviceNet® · PROFIBUS DP · CC-Link	Applicable Protocol · DeviceNet® · PROFIBUS DP · CANopen · AS-Interface · ControlNet™ · EtherNet/IP™	Applicable Protocol · DeviceNet® · PROFIBUS DP · CC-Link · EtherNet/IP™※ · EtherCAT · PROFINET ※ Compatible with wireless systems
Slim Compact Plug-in Manifold Bar Base	 Page 423-2	—	—	 Page 425	—	—
Plug-in Manifold Stacking Base	—	 Page 423-6	 Page 447	—	 Page 449	 Page 451
Plug Lead Manifold Bar Base	—	—	—	 Page 495	—	—

F kit D-sub Connector	P kit Flat Ribbon Cable	T kit Terminal Block Box	L kit Lead Wire	M kit Circular Connector	C kit Connector
MIL Standard	MIL Standard · 26 pins, 20 pins				
 Page 429	 Page 433	—	—	—	—
 Page 457	 Page 461	 Page 469	 Page 473	 Page 477	—
—	—	—	—	—	 Page 491

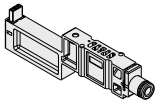
Options

Slim Compact Plug-in Manifold Bar Base / Options

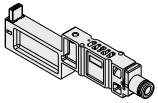
Blanking plate
SS0700-10A-3 Page 440



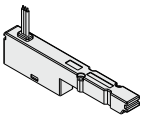
Individual SUP spacer
S0700-P-3-C□ Page 440



Individual EXH spacer
S0700-R-3-C□ Page 440

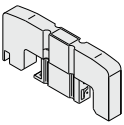


Blanking plate with output
SS0700-3C-□ Page 440

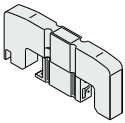


Plug-in Manifold Stacking Base / Options

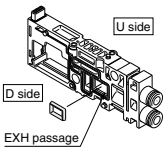
Blanking plate
SS0700-10A-1 Page 481



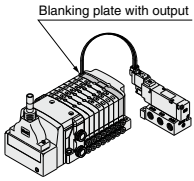
Individual SUP/EXH spacer
SS0700-PR-1 Page 481



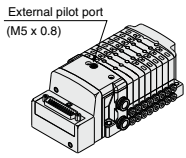
EXH block plate
SS0700-B-R Page 482



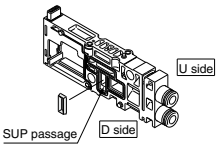
Blanking plate with output
SS0700-1C-□ Page 483



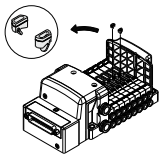
External pilot [-R] Page 481



SUP block plate
SS0700-B-P Page 482

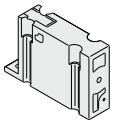


Back pressure check valve [-B]
SS0700-7A-1 Page 482



Plug Lead Manifold Bar Base / Options

Blanking plate
SS0700-10A-5 Page 497



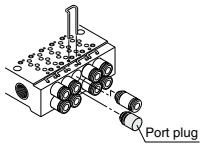
Individual SUP spacer
SS0700-P-5-M5 Page 497

∗ Compatible with 8.5 mm pitch only

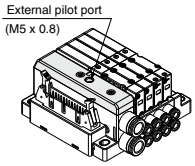
Individual EXH spacer
SS0700-R-5-M5 Page 497

∗ Compatible with 8.5 mm pitch only

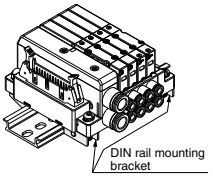
Port plug
VVQ0000-CP Page 497



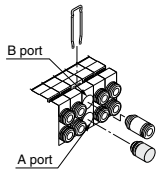
External pilot [-R]
Page 441



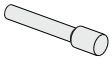
DIN rail mounting bracket
SS0700-57A-3 Page 441



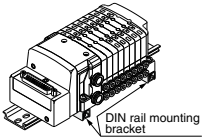
Port plug
VVQ0000-CP Page 483



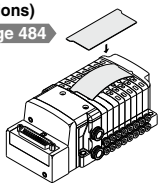
Blanking plug
(For One-touch fitting)
KJP-02
KQ2P-23/04/06 Page 483



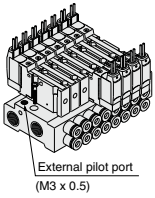
DIN rail mounting bracket
SS0700-57A-□ Page 483



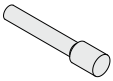
Name plate [-N]
SS0700-N-Station (1 to Max. stations)
Page 484



External pilot [-R]
Page 497



Blanking plug
(For One-touch fitting)
KJP-02
KQ2P-23/04/06 Page 498



Series 10-S0700
Valve Specifications

Valve Specifications

Model

Series		Actuation type	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 [dm³/(s·bar)]	b	Cv	C [dm³/(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}_{C}$1	0.34	0.34	0.09	0.33	0.33	0.08	18 or less	41
Plug-in manifold Stacking base	2-position	Single	S0710	0.39	0.39	0.11	0.37	0.39	0.10	18 or less	30
		Double	S0720	0.39	0.39	0.11	0.37	0.39	0.10	10 or less	38
	4-position	Dual 3-port valve	S07$^{A}_{C}$0	0.34	0.34	0.09	0.33	0.33	0.08	18 or less	38
Plug lead manifold Bar base	2-position	Single	S0715	0.39	0.39	0.11	0.37	0.39	0.10	12 or less	28
		Double	S0725	0.39	0.39	0.11	0.37	0.39	0.10	10 or less	36
	4-position	Dual 3-port valve	S07$^{A}_{C}$5	0.34	0.34	0.09	0.33	0.33	0.08	12 or less	36

Note 1) Values for cylinder port fitting size C6
Note 2) Based on JIS B 8375-1993 (Supply pressure: 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		0.7 MPa
	Min. operating pressure		0.2 MPa
	Ambient and fluid temperature		–10 to 50°C Note 1)
	Max. operating cycle		5 Hz
	Pilot valve exhaust method		Common exhaust Note 2)
	Pilot valve manual override		Push type
	Lubrication		Not required
	Impact/Vibration resistance Note 3)		30/100 m/s²
	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) Since the pilot EXH of valves with the external pilot specification also has a common exhaust specification, the 3(R) port should be released to the atmosphere.
Note 3) Impact resistance: No malfunction occurred when it was tested with a drop tester in the axial direction and at right angles to the main valve and armature in both energized and de-energized states once for each condition.
Vibration resistance: No malfunction occurred in a one-sweep test between 8.3 and 2000 Hz. Test was performed in both energized and de-energized states in the axial direction and at right angles to the main valve and armature.

Manifold Specifications

Manifold Specifications

Model

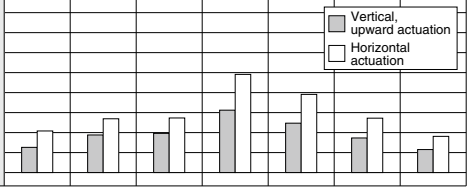
Base model		Piping specifications: Port size 1(P), 3(R)	Piping specifications: Port size 4(A), 2(B)	Connection type	Applicable stations (Note 1)	5-station weight (g) (Note 3)	Addition per station (g) (Note 3)
Slim compact Plug-in manifold Bar base	10-SS0751-□□□□	C6 (ø6) C8 (ø8) N7 (ø1/4") N9 (ø5/16") 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	320	19 (Note 7)
				F kit: D-sub connector	Max. 24 stations	185	17
				P kit: Flat ribbon cable	Max. 24 stations	181	17
Plug-in manifold Stacking base	10-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	360	20
				S kit: Serial transmission (EX250)	Max. 24 stations (Note 2)	560 (Note 4)	20
				F kit: D-sub connector	Max. 24 stations	330	20
				P kit: Flat ribbon cable	Max. 24 stations	325	20
				T kit: Terminal block box	Max. 20 stations	660	20
				L kit: Lead wire	Max. 24 stations	455 (Note 5)	20
				M kit: Circular connector	Max. 24 stations	390	20
Plug lead manifold Bar base	10-SS0755-□C□C (Manifold pitch: 8.5 mm*)	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	20
Single unit	10-S07□5-5□-M5	M5 thread	M5 thread	Connector kit	—	14 (Note 6)	

Note 1) Maximum stations for mixed single and double wiring (special wiring specifications)
Note 2) Differs depending on the serial unit type. For details, refer to page 449.
Note 3) Weight excluding valve. Refer to page 421 for valve weight.
Note 4) Weight with one input block
Note 5) Weight with lead wire length 0.6 m
Note 6) Weight of sub-plate only. Refer to page 421 for valve weight.
Note 7) Including DIN rail weight
* The manifold pitch 7.5 mm type is available as special order.

Cylinder Speed Chart

Base Mounted

Use as a guide for selection.
Please confirm the actual conditions with SMC Model Selection Software.

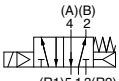
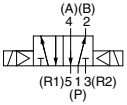
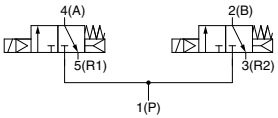
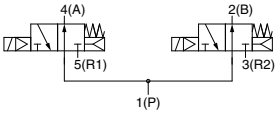
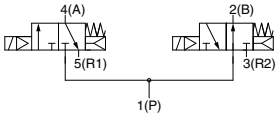
Series	Average speed mm/s	Bore size						
		Series CJ2 Pressure 0.5 MPa Load factor 50% Stroke 60 mm			Series CM2 Pressure 0.5 MPa Load factor 50% Stroke 300 mm			
		ø6	ø10	ø16	ø20	ø25	ø32	ø40
10-S0715-5G-M5	800 700 600 500 400 300 200 100 0							

∗ 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: ((Load mass x 9.8)/Theoretical force) x 100%

Conditions

Base mounted		Series CJ2	Series CM2
10-S0715-5G-M5	Tubing diameter x Length	ø6 x 1 m	
	Speed controller	AS2001F-06	AS2301F-06
	Silencer	AN120-M5	

Symbol

Model	Actuation type	Symbol
10-S0710 **10-S0711** **10-S0715**	2-position single	
10-S0720 **10-S0721** **10-S0725**	2-position double	
10-S07A0 **10-S07A1** **10-S07A5**	4-position dual 3-port (N.C. + N.C.) [Exhaust center]	
10-S07B0 **10-S07B1** **10-S07B5**	4-position dual 3-port (N.O. + N.O.) [Pressure center]	
10-S07C0 **10-S07C1** **10-S07C5**	4-position dual 3-port (N.C. + N.O.)	

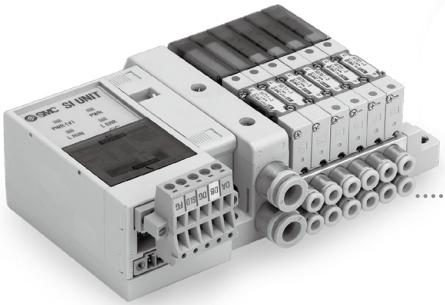
Slim Compact Bar Base

Serial Transmission

S kit

CE

Slim Compact Bar Base



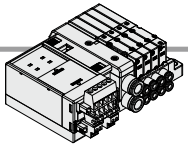
For Output
Serial Transmission System

EX180

Page 423-2

S *10-S0700 Series* Slim Compact Bar Base Kit (Serial Transmission) EX180 (For Output) Serial Transmission System

How to Order Manifold



10-SS0751 – 08 C4 C8 SDV2 □ □ – □

Stations

Symbol	Stations
02	2 stations
⋮	⋮
32*1	32 stations

*1: 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	
C6	With ø6 One-touch fitting	Metric
C8	With ø8 One-touch fitting	
N7	With ø1/4" One-touch fitting	Inch
N9	With ø5/16" One-touch fitting	

*: If an inch size cylinder port is selected, select inch size piping connections for the P and R ports as well.

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*1	Special wiring specifications (Except double wiring)
R*2	External pilot

*1: Indicate the wiring specifications for mixed single and double wirings.
*2: For details, refer to page 481.
*: When two or more options are specified, indicate them alphabetically.
Example) -KR
*: **For manifold optional parts, refer to pages 481 to 484.**
*: **For manifold exploded view, refer to page 487.**

Refer to the **Web Catalog** and the Operation Manual for the details of the EX180 Integrated-type (For Output) Serial Transmission System. Please download the Operation Manual via our website, http://www.smcworld.com

SI Unit Part No.

Symbol	Component module/ Communication connector	Common specification	SI unit part no.	Output stations
V2	CC-Link (32 points)	NPN output (Positive common)	EX180-SMJ3	Max. 32*1
V2N	T-branch type	PNP output (Negative common)	EX180-SMJ5	
V2A	CC-Link (32 points)	NPN output (Positive common)	EX180-SMJ3A	
V2AN	Straight type	PNP output (Negative common)	EX180-SMJ5A	
Q2	DeviceNet® (32 points)	NPN output (Positive common)	EX180-SDN3	Max. 32*1
Q2N	T-branch type	PNP output (Negative common)	EX180-SDN5	
Q2A	DeviceNet® (32 points)	NPN output (Positive common)	EX180-SDN3A	
Q2AN	Straight type	PNP output (Negative common)	EX180-SDN5A	
Q3	DeviceNet® (16 points)	NPN output (Positive common)	EX180-SDN4	Max. 16*1
Q3N	T-branch type	PNP output (Negative common)	EX180-SDN6	
Q3A	DeviceNet® (16 points)	NPN output (Positive common)	EX180-SDN4A	
Q3AN	Straight type	PNP output (Negative common)	EX180-SDN6A	

*1: Single wiring

Kit type

Symbol	Without SI unit
SD0	
SDV2	CC-Link (32 points)
SDQ2	DeviceNet® (32 points)
SDQ3	DeviceNet® (16 points)

*: Please contact SMC for SI unit specifications.

*: 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.
*: For the 10-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

10-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.)

*: For symbol, refer to page 652.

Function

Symbol	Specifications
Nil	Standard
R	External pilot*1

*1: Not compatible with dual 3-port valves. The 3(R) port is open to the atmosphere. (Cannot be used for applying pressure or vacuum)

Base mounted plug-in

Voltage: 24 VDC

How to Order Manifold Assembly

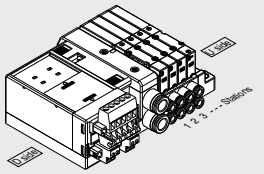
Example Serial transmission kit

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

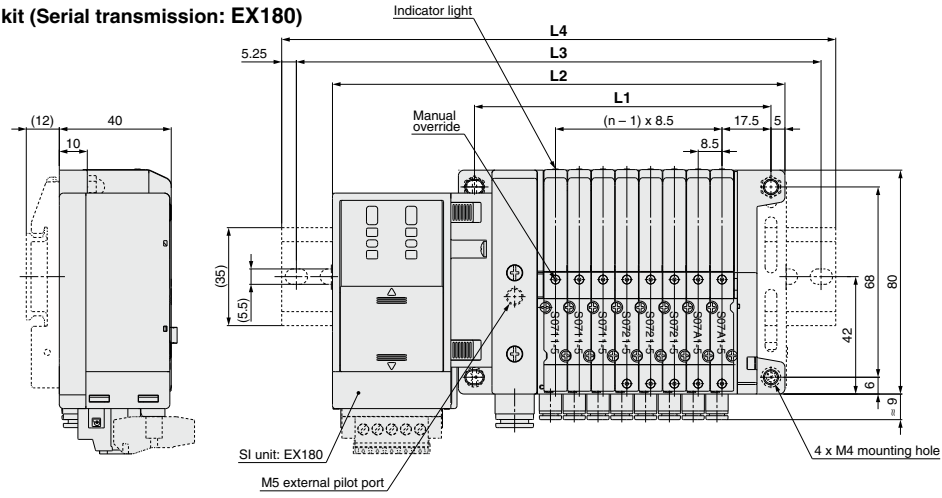
10-SS0751-08C4C8SDQ2 ··· 1 set – Manifold base part no.
* **10-S0711-5** ····· 3 sets – Valve part no. (Stations 1 to 3)
* **10-S0721-5** ····· 2 sets – Valve part no. (Stations 4 to 5)
* **10-S07A1-5** ····· 2 sets – Valve part no. (Stations 6 to 7)
* **10-SS0700-10A-3** · 1 set – Blanking plate part no. (Station 8)

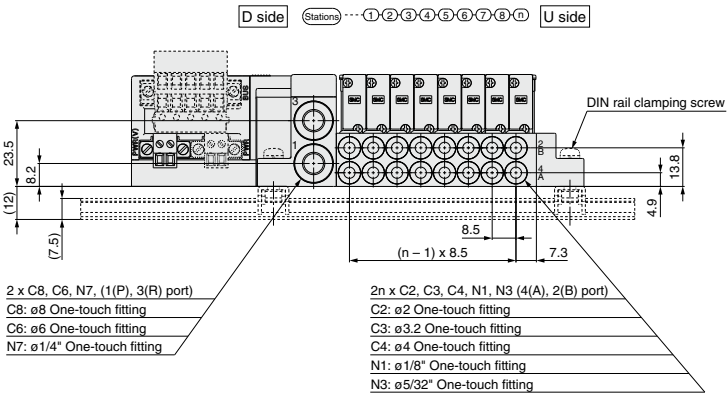
Prefix the asterisk to the part numbers of the solenoid valve etc.

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



10-SS0751
S kit (Serial transmission: EX180)





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

Dimensions

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

L \ 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

L \ 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

Plug-in Type Stacking Base

Serial Transmission

S kit

CE

Plug-in Type Stacking Base

For Output
Serial Transmission System

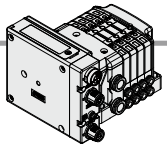
EX260

Page 423-6

Plug-in Type

S 10-S0700 Series Stacking Base Kit (Serial Transmission) EX260 (For Output) Serial Transmission System

How to Order Manifold



10-SS0750 – 08 C4 C8 SNAN – B

❶ ❷ ❸ ❹ ❺

❶ Stations

In the case of the 32-output SI unit

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

In the case of the 16-output SI unit

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

*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.
*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.)
*: This also includes the number of blanking plate assembly.

❷ 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*1	
N1	With ø1/8" One-touch fitting	Inch
N3	With ø5/32" One-touch fitting	
NM	Mixed sizes and with port plug*1	

*1: Specify Mixed sizes and with port plug on the manifold specification sheet.

❸ P, R port size

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

*: If an inch size cylinder port is selected, select inch size piping connections for the P and R ports as well.

❹ SI unit specifications

(Output polarity, protocol, number of outputs, communication connector)

Symbol (output polarity) Positive common (NPN)	Symbol (output polarity) Negative common (NPN)	Protocol	Number of outputs	Communication connector
SD0*1		Without SI unit		
SQA	**SQAN**	DeviceNet®	32	M12
SQB	**SQAN**		16	
SNA	**SNAN**	PROFIBUS DP	32	M12
SNB	**SNBN**		16	
SNC	**SNCN**		32	*4
SND	**SNDN**		16	D-sub
SVA	**SVAN**	CC-Link	32	M12
SVB	**SVBN**		16	
SDA	**SDAN**	EtherCAT	32	M12
SDB	**SDBN**		16	
SFA	**SFAN**	PROFINET	32	M12
SFB	**SFBN**		16	
SEA	**SEAN**	EtherNet/IP™	32	M12
SEB	**SEBN**		16	
—*3	**SGAN**	Ethernet POWERLINK	32	M12
—*3	**SGBN**		16	

*1: Without SI Unit, the output polarity is decied by the SI unit used.
*2: DIN rail cannot be mounted without SI unit.
*3: Positive common (NPN) type is not applicble.
*4: IP40 for the D-sub applicable communication connector specification.
*5: 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.
*6: For SI unit part number, refer to page 444.

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

❺ Option

Symbol	Specifications
Nil	None
B*1	With back pressure check valve (All stations)
D	With DIN rail (Rail length: Standard)
D0	Without DIN rail (with bracket)
D□*2	With DIN rail Designated length (□: Station)
K*3	Special wiring specifications (Except double wiring)
N	With name plate
R*4	External pilot

*1: 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.
*2: The available number of stations is larger than the number of manifold stations.
*3: Indicate the wiring specifications for mixed single and double wirings.
*4: For details, refer to page 481.
*: When two or more options are specified, indicate them alphabetically. Example) -BKN
*: **For manifold optional parts, refer to pages 481 to 484.**
*: **For manifold exploded view, refer to page 487.**
*: **When the SD0 (Without SI unit) is specified, -D, -D□ cannot be selected.**

Refer to the **Web Catalog** and the Operation Manual for the details of the EX260 Integrated-type (For Output) Serial Transmission System. Please download the Operation Manual via our website,
http://www.smcworld.com

How to Order Valves

10-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.)

*: For symbol, refer to page 423.

Base mounted plug-in

Function

Symbol	Specifications
Nil	Standard
R	External pilot*1

*1: Not compatible with dual 3-port valves. The 3(R) port is open to the atmosphere. (Cannot be used for applying pressure or vacuum)

Voltage: 24 VDC

How to Order Manifold Assembly

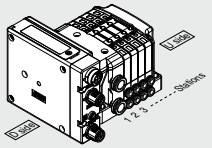
Example Serial transmission kit

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

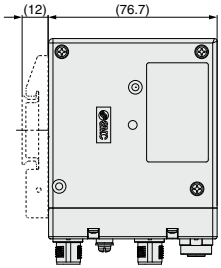
10-SS0750-04C4C8SNAN··· 1 set – Manifold base part no.
* 10-S0720-5 ····· 4 sets – Valve part no. (Stations 1 to 4)

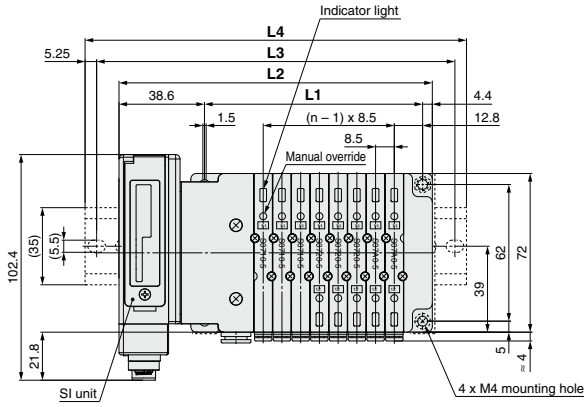
Prefix the asterisk to the part numbers of the solenoid valve etc.

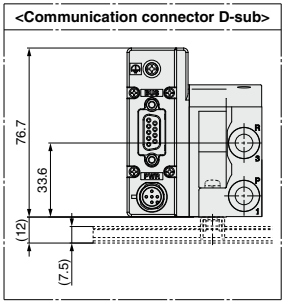
Write sequentially from the 1st station on the D side. When part numbers written collectively are complicated, specify on the manifold specification sheet.



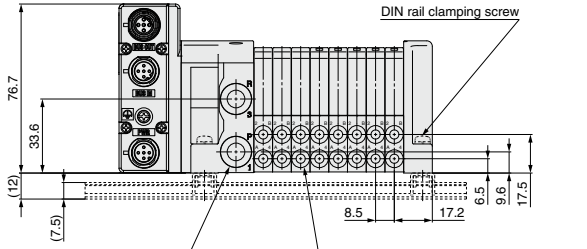
10-SS0750
S kit (Serial transmission: EX260)







D side (Stations) ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ U side



2 x C6, C8, N7, N9 (1(P), 3(R) port)
C6: ø6 One-touch fitting
C8: ø8 One-touch fitting
N7: ø1/4" One-touch fitting
N9: ø5/16" One-touch fitting

2n x C2, C3, C4, N1, N3 (4(A), 2(B) port)
C2: ø2 One-touch fitting
C3: ø3.2 One-touch fitting
C4: ø4 One-touch fitting
N1: ø1/8" One-touch fitting
N3: ø5/32" One-touch fitting

Dimensions

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

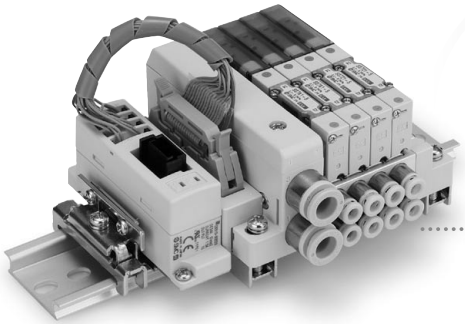
L \ n	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L1	39.5	48	56.5	65	73.5	82	90.5	99	107.5	116	124.5	133	141.5	150	158.5	167
L2	82.5	91	99.5	108	116.5	125	133.5	142	150.5	159	167.5	176	184.5	193	201.5	210
L3	112.5	112.5	125	137.5	137.5	150	162.5	162.5	175	187.5	187.5	200	212.5	212.5	225	237.5
L4	123	123	135.5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

Serial Transmission

S kit

Slim Compact Plug-in Manifold Bar Base

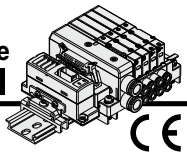


Gateway-type
Serial Transmission
System

EX510

Page 425

S Series 10-S0700 Slim Compact Plug-in Manifold Bar Base kit (Serial Transmission) EX510 Gateway-type Serial Transmission System



How to Order Manifold

10 – SS0751 – 08 C4 C8 SB □ – □

Clean series

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

Actuation type	Single	Double, Dual 3-port
Number of solenoids	1	2

P, R port size

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

Note) If an inch size cylinder port is selected, select inch size piping connections for the P and R ports as well.

S kit
EX510 serial wiring

SI unit output polarity

SI unit output polarity	
Nil	+COM.
N	–COM.

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 441.
* **For manifold optional parts, refer to pages 440 and 441.**
* **For manifold exploded view, refer to page 443.**

Refer to the **WEB catalog** for details on the EX510 Gateway-type Serial Transmission System.

How to Order Valve

10 – S07 1 1 □ – 5

Clean series

Actuation type

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 423.

Base mounted plug-in

Function

Symbol	Specifications
Nil	Standard
R	External pilot Note)

Note) Not compatible with dual 3-port valves. The 3(R) port is released to the atmosphere. (Pressurization and vacuum are not allowed.)

Voltage: 24 VDC

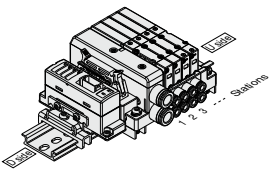
How to Order Manifold Assembly

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

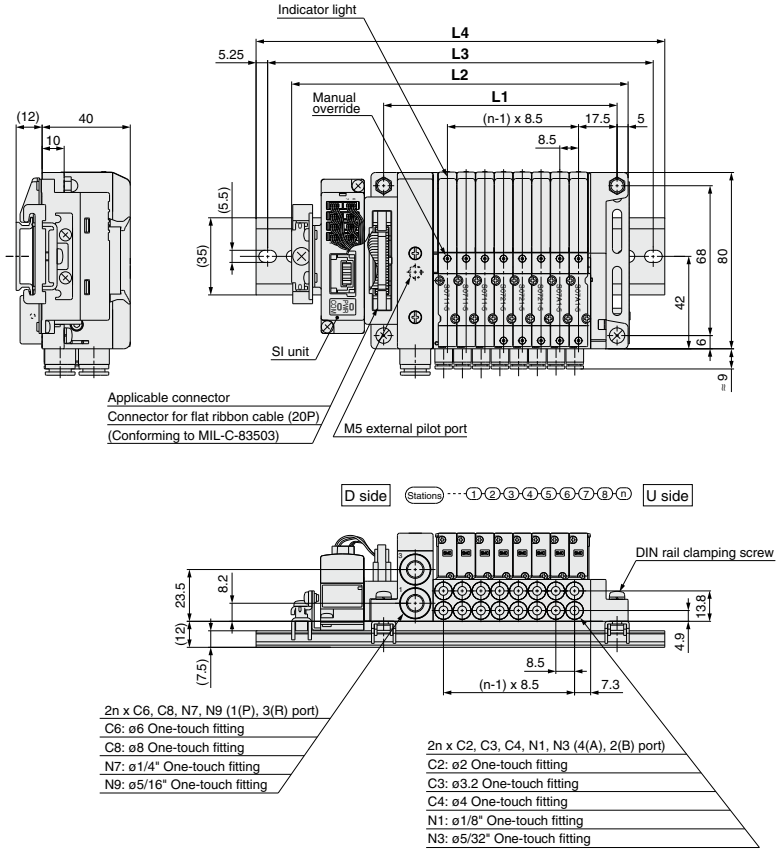
<Example>
Serial transmission kit
10-SS0751-08C4C8SB ··· 1 set – Manifold base part no.
* **10-S0711-5 ····· 3 sets – Valve part no. (Stations 1 to 3)**
* **10-S0721-5 ····· 2 sets – Valve part no. (Stations 4 to 5)**
* **10-S07A1-5 ····· 2 sets – Valve part no. (Stations 6 to 7)**
* **SS0700-10A-3 ····· 1 set – Blanking plate part no. (Station 8)**

Prefix the asterisk to the part no. of the solenoid valve, etc.

Write sequentially from the 1st station on the D side. When part no. written collectively are complicated, specify on the manifold specification sheet.



10-SS0751
S kit (Serial transmission: EX510)



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

D-sub Connector

F kit

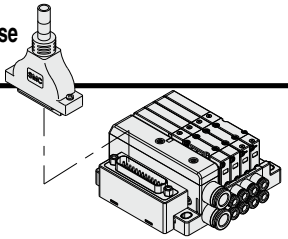
Slim Compact Plug-in Manifold Bar Base

MIL Standard

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

Page 429

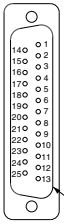
F Series 10-S0700 Slim Compact Plug-in Manifold Bar Base kit (D-sub Connector)



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

Electrical Wiring Specifications

D-sub connector



Connector terminal no.

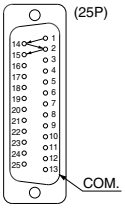
As the standard electrical wiring specifications, double wiring (connected to SOL.A and SOL.B) is adopted for the internal wiring of each station for 12 stations or less, regardless of valve and option types.
Mixed single and double wiring is available as an option. For details, refer to "Special Wiring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



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.

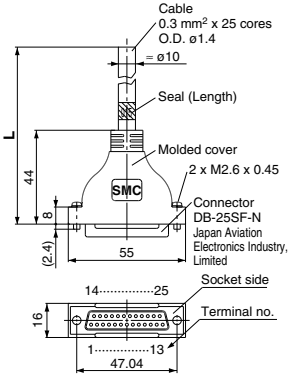
1. How to Order valve
Indicate an option symbol, -K, for the manifold part number and be sure to specify the mounting position and number of stations of the single and double wiring on the manifold specification sheet.

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 mm² 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 minute, AC	1000
Insulation resistance MΩ/km, 20°C	5 or more

Example of connector manufacturers

- Fujitsu Limited
- Japan Aviation Electronics Industry, Limited
- J.S.T. Mfg. Co., Ltd.
- HIROSE ELECTRIC CO., LTD.

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

How to Order Manifold

10 – SS0751 – 08 C4 C8 FD1 – □

Clean series

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	
C6	With ø6 One-touch fitting	Metric
C8	With ø8 One-touch fitting	
N7	With ø1/4" One-touch fitting	Inch
N9	With ø5/16" One-touch fitting	

Note) If an inch size cylinder port is selected, select inch size piping connections for the P and R ports as well.

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.

Actuation type	Single	Double, Dual 3-port
Number of solenoids	1	2

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

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 441.
∗ **For manifold optional parts, refer to pages 440 to 441.**
∗ **For manifold exploded view, refer to page 443.**

How to Order Valve

10 – S07 1 1 □ – 5

Clean series

Actuation type

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 423.

Base mounted plug-in

Function

Symbol	Specifications
Nil	Standard
R	External pilot Note)

Note) Not compatible with dual 3-port valves. The 3(R) port is released to the atmosphere. (Pressurization and vacuum are not allowed.)

Voltage

Symbol	Specifications
5	24 VDC
6	12 VDC

How to Order Manifold Assembly

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

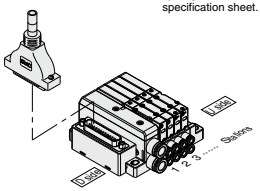
<Example>

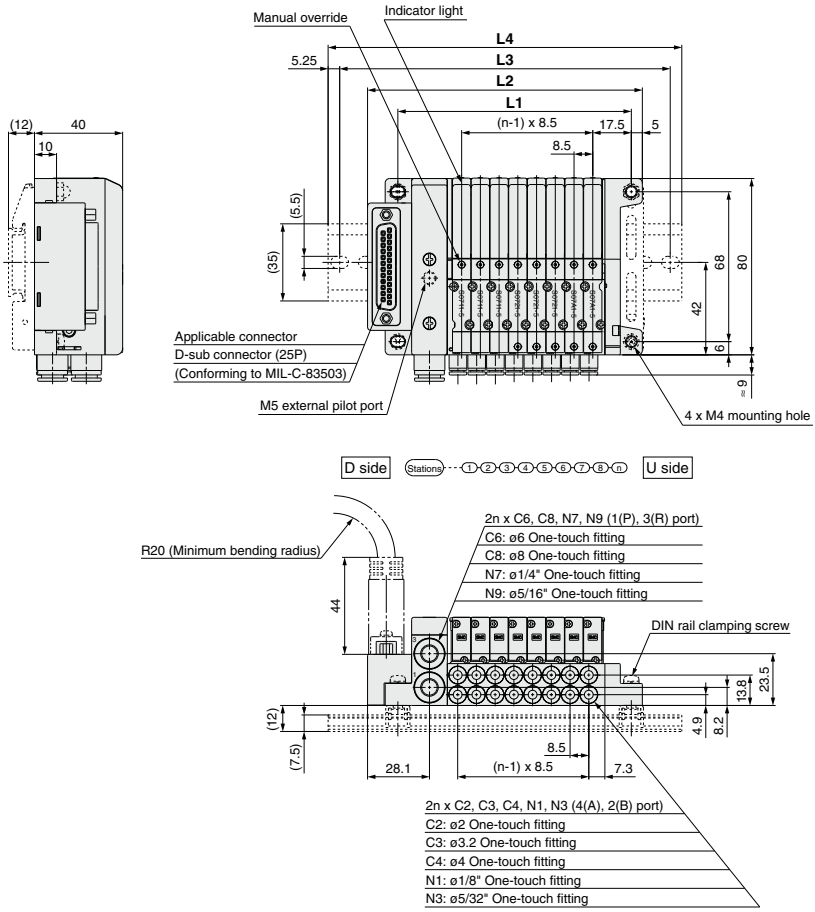
D-sub connector kit

10-SS0751-08C4C8FD1 ··· 1 set – Manifold base part no.
∗ **10-S0711-5 ····· 3 sets – Valve part no. (Stations 1 to 3)**
∗ **10-S0721-5 ····· 2 sets – Valve part no. (Stations 4 to 5)**
∗ **10-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 no. of the solenoid valve, etc.

Write sequentially from the 1st station on the D side. When part no. written collectively are complicated, specify on the manifold specification sheet.





Dimensions

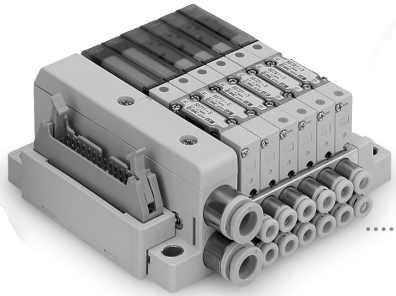
Formula L1 = 8.5n + 38, L2 = 8.5n + 56.7 n: Station (Maximum 24 stations)

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

Flat Ribbon Cable

P kit

Slim Compact Plug-in Manifold Bar Base

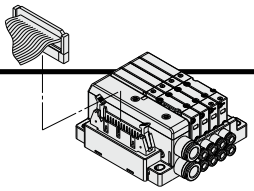


MIL Standard

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

Page 433

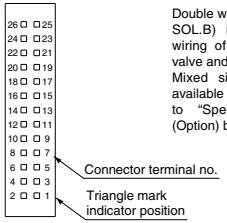
P Series 10-S0700 Slim Compact Plug-in Manifold Bar Base kit (Flat Ribbon Cable)



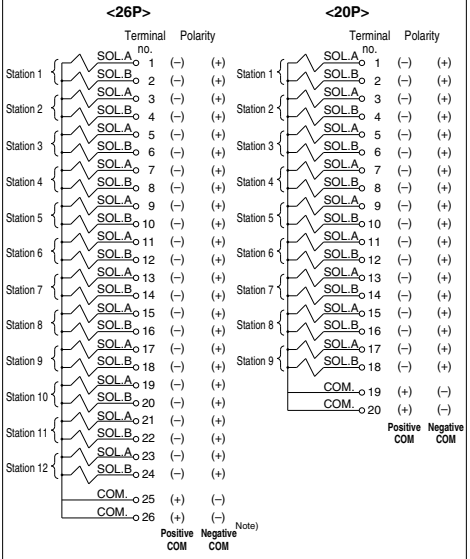
- **Flat ribbon cable connector reduces installation labor for electrical connection.**
- **Using the connector for flat ribbon cable (26P, 20P) conforming to MIL standard permits the use of commercial connectors and gives a wide interchangeability.**

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.

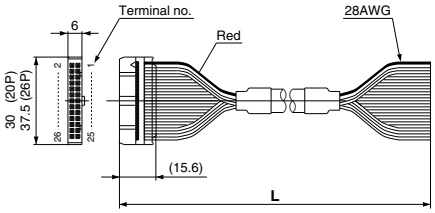


Note) Mounting valve has no polarity. It can also be used as a negative common.

Cable Assembly

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

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



Flat Ribbon Cable Connector Assembly (Option)

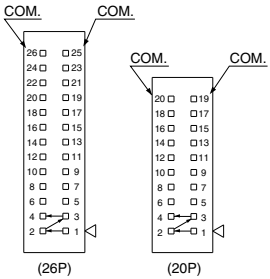
Cable length (**L**)	Assembly part no.	
	26P	20P
1.5 m	AXT100-FC26-1	AXT100-FC20-1
3 m	AXT100-FC26-2	AXT100-FC20-2
5 m	AXT100-FC26-3	AXT100-FC20-3

∗ 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.

Example of connector manufacturers

- HIROSE ELECTRIC CO., LTD.
- 3M Japan Limited
- Fujitsu Limited
- Japan Aviation Electronics Industry, Limited
- 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 valve

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

10 – SS0751 – 08 C4 C8 PD1 – ☐

Clean series

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 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	
C6	With ø6 One-touch fitting	Metric
C8	With ø8 One-touch fitting	
N7	With ø1/4" One-touch fitting	Inch
N9	With ø5/16" One-touch fitting	

Note) If an inch size cylinder port is selected, select inch size piping connections for the P and R ports as well.

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

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 441.
∗ **For manifold optional parts, refer to pages 440 to 441.**
∗ **For manifold exploded view, refer to page 443.**

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.

Actuation type	Single	Double, Dual 3-port
Number of solenoids	1	2

How to Order Valve

10 – S07 1 1 ☐ – 5

Clean series

Actuation type

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 423.

Base mounted plug-in

Function

Symbol	Specifications
Nil	Standard
R	External pilot Note)

Note) Not compatible with dual 3-port valves. The 3(R) port is released to the atmosphere. (Pressurization and vacuum are not allowed.)

Voltage

Symbol	Specifications
5	24 VDC
6	12 VDC

How to Order Manifold Assembly

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

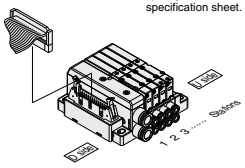
<Example>

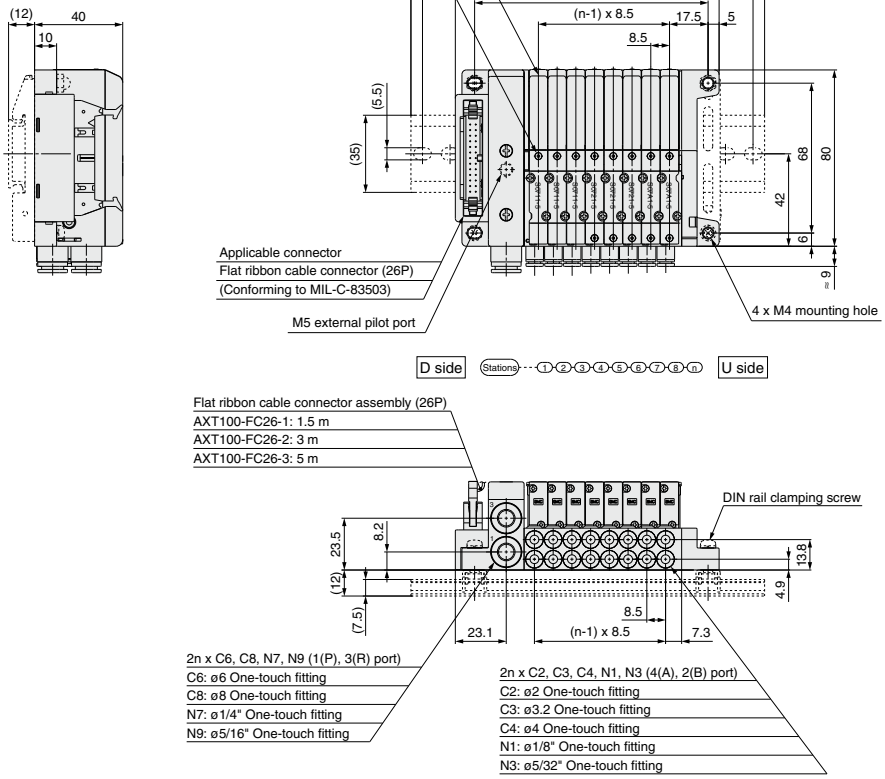
Flat ribbon cable kit

10-SS0751-08C4C8PD1 ··· 1 set – Manifold base part no.
∗ **10-S0711-5** ····· **2 sets – Valve part no. (Stations 1 to 3)**
∗ **10-S0721-5** ····· **4 sets – Valve part no. (Stations 4 to 5)**
∗ **10-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 no. of the solenoid valve, etc.

Write sequentially from the 1st station on the D side. When part no. written collectively are complicated, specify on the manifold specification sheet.





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

Series 10-S0700 Slim Compact Plug-in Manifold Bar Base

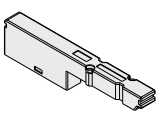
Manifold Optional Parts

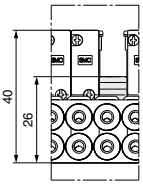
Blanking plate assembly

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: 8 g





Individual SUP spacer

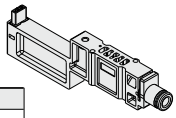
SS0700-P-3-C☐

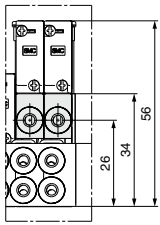
Mounted on the manifold block to make an independent supply port when each solenoid valve uses different operating pressure.

Weight: 15 g

Port size

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





Individual EXH spacer

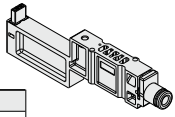
SS0700-R-3-C☐

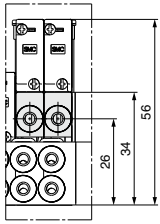
Mounted on the manifold block to make an independent exhaust port when the exhaust from one valve affects valves on other stations in the air circuit.

Weight: 15 g

Port size

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





Blanking plate with output

SS0700-3C-☐

Lead wire length (mm)

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

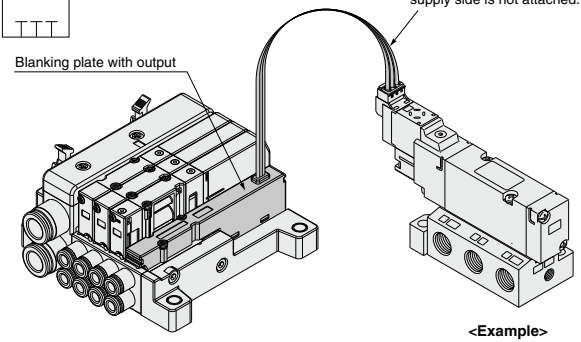
Blanking plate with a connector for individually outputting electricity to drive a single valve or equipment that are not on the manifold base.

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: 23 g

Symbol



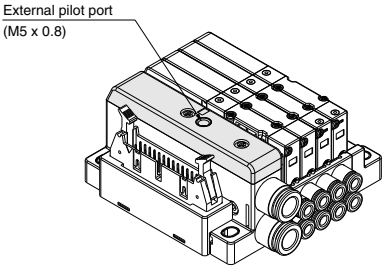
<Example>

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 Valve (Example)
10-S0710 R -5
External pilot

● How to Order Manifold (Example)
∗ Indicate R for an option.
10-SS0750-08C4FD1-R
External pilot



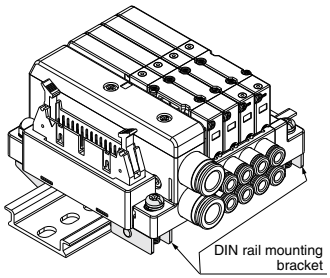
Note 1) Not compatible with dual 3-port valves.
Note 2) When the internal pilot type and external pilot type of valves are mixed up on the manifold, order the manifold suitable for the specifications of the external pilot valve.
Note 3) Since the pilot EXH of valves with the external pilot specification also has a common exhaust specification, the 3(R) port should be released to the atmosphere.

DIN rail mounting bracket

SS0700-57A-3

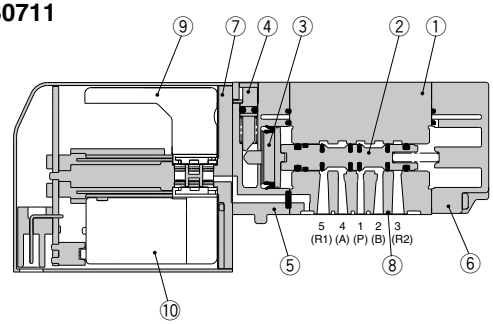
It is used for mounting a manifold on a DIN rail. The DIN rail mounting bracket is fixed to the manifold end plate. (The specification is the same as that for the option "-D".)
1 set of DIN rail mounting bracket is included for 1 manifold (2 or 3 DIN rail mounting brackets (S, T kit)).

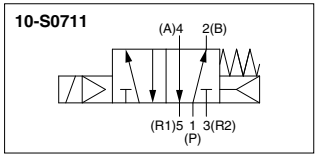
∗ When ordering this option incorporated with a manifold, suffix "-D" to the end of the manifold part number.



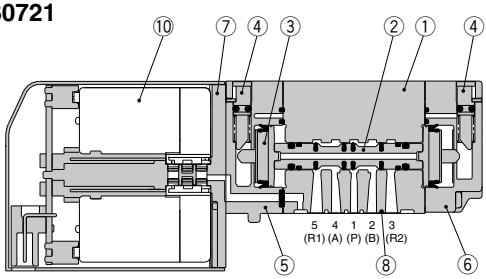
Construction

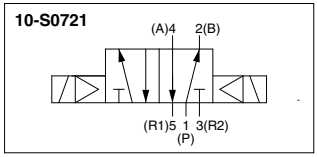
Single: 10-S0711



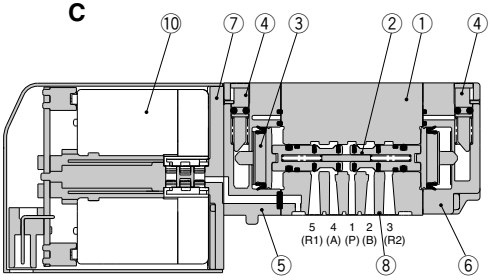


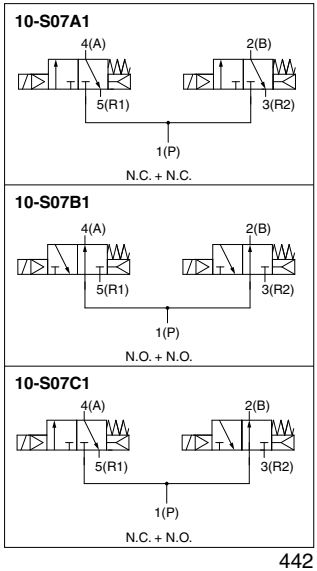
Double: 10-S0721





Dual 3-Port: 10-S07B1 (A / C)





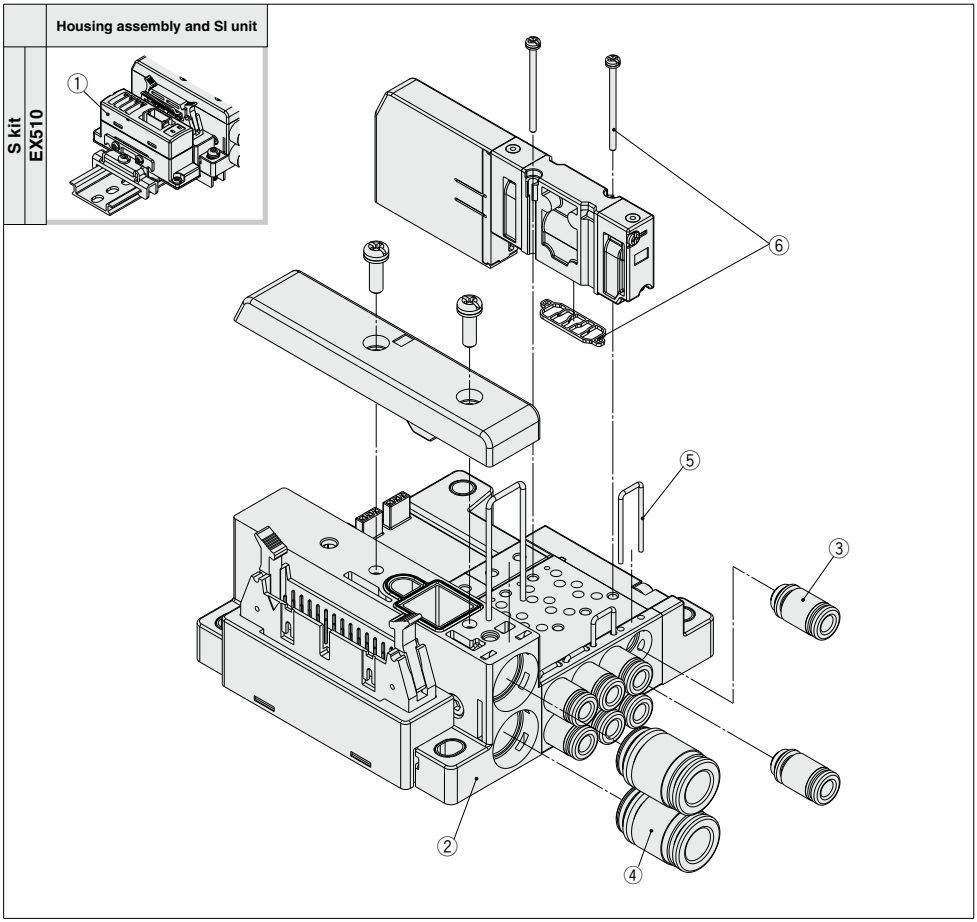
Component Parts

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** Note)	—

Note) Please consult with SMC for pilot valve replacement.

Manifold Exploded View

	Housing assembly and SI unit
S kit EX510	①



∗ 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**	**EX510-S002A**	NPN (Positive common)
		EX510-S102A	PNP (Negative common)
②	**Base unit**	**SS0751-□□□□**	Refer to How to Order for each kit.

③ Fitting assembly part number for cylinder port

VVQ0000−50A−□

Port size

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

Note 1) Purchase orders are available in units of 10 pieces.
Note 2) For One-touch fittings replacement, refer to the Specific Product Precautions 2.

④ Fitting assembly part number for P, R port

VVQ1000−51A−□

Port size

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

Note 1) Purchase orders are available in units of 10 pieces.
Note 2) For One-touch fittings replacement, refer to the Specific Product Precautions 2.

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

Note) 1 set includes 10 pieces.

No.	Description	Part no.
⑥	**Gasket, Screw**	**SS0700-GS-3**

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

Serial Transmission

S kit

Plug-in Manifold Stacking Base

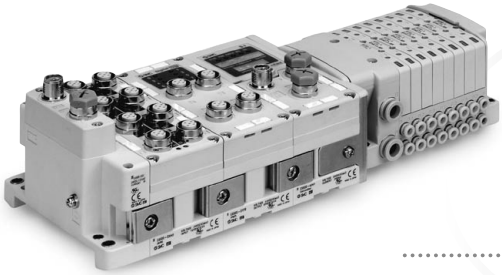
CE

Gateway-type
Serial Transmission System
EX500

Page 447

Integrated-type (For I/O)
Serial Transmission System
EX250

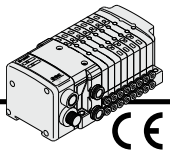
Page 449



Integrated-type (For I/O)
Serial Transmission System (Fieldbus System)
EX600

Page 451

S Series 10-S0700 Plug-in Manifold Stacking Base kit (Serial Transmission) EX500 Gateway-type Serial Transmission System



How to Order Manifold

10 – SS0750 – 08 C4 C8 SDA2 N – B

Clean series

❶ ❷ ❸ ❹ ❺ ❻

❶ Valve stations

	Stations	Note
01	1 station	Double wiring
⋮	⋮	
08	8 stations	
01	1 station	Specified layout*1 (Available up to 16 solenoids)
⋮	⋮	
16	16 stations	

*1: Specified layout: Indicate the wiring specifications on the manifold specification sheet. (Note that 2-position double, 3-position and 4-position valves cannot be used where single wiring has been specified.) In addition, select the option K.

❷ A, B port size

Metric size

C2	ø2 One-touch fitting
C3	ø3.2 One-touch fitting
C4	ø4 One-touch fitting
CM*1	Mixed sizes and port plug

Inch size

N1	ø1/8" One-touch fitting
N3	ø5/32" One-touch fitting
NM*1	Mixed sizes and port plug

*1: Indicate the sizes on the manifold specification sheet.

❸ P, R port size

Metric size

C6	ø6 One-touch fitting
C8	ø8 One-touch fitting

Inch size

N7	ø1/4" One-touch fitting
N9	ø5/16" One-touch fitting

*: If an inch size cylinder port is selected, select inch size piping connections for the P and R ports as well.

❹ SI unit (Number of outputs, Max. number of valve stations)

SD0	Without SI unit
SDA2	16 outputs, 1 to 8 stations (16 stations)*1

*1: ( ): Maximum number of stations for mixed single and double wiring.
*: For SI unit part number, refer to page 444.

❺ SI unit (Output polarity)

Nil	Positive common
N	Negative common

*: Ensure a match with the common specification of the valve to be used.
*: Select Nil for without SI unit.

❻ Option

Nil	None
B*1	With back pressure check valve (All stations)
D	With DIN bracket, DIN rail with standard length
D0	With DIN bracket, without DIN rail
D□*2	With DIN bracket, DIN rail for □ stations
K*3	Special wiring specification (Except double wiring)
N	With name plate
R*4	External pilot

*1: When a back pressure check valve is used only for specified station, specify the back pressure check valve part number, and specify the station number to which the valve is mounted, on the manifold specification sheet.
*2: □: Specify a longer rail than the length of valve stations.
Example) -D08
In this case, the valves will be mounted on the DIN rail for 8 stations, regardless of the number of manifold stations.
*3: When single wiring and double wiring are mixed, specify wiring type of each station on the manifold specification sheet.
*4: For external pilot option -R, indicate the external pilot specification R for the applicable valves as well.
*: When multiple symbols are specified, indicate them alphabetically. Example) -BKN
*: **For manifold optional parts, refer to pages 481 to 484.**
*: **For manifold exploded view, refer to page 487.**

How to Order Valves

10 – S07 1 0 □ – 5

Clean series

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.)

*: For symbol, refer to page 423.

Function

Symbol	Specifications
Nil	Standard
R	External pilot*1

*1: Not compatible with dual 3-port valves.
The 3(R) port is open to the atmosphere.
(Cannot be used for applying pressure or vacuum)

Base mounted plug-in

Voltage: 24 VDC

How to Order Manifold Assembly

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

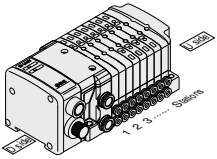
<Example>

Serial transmission kit

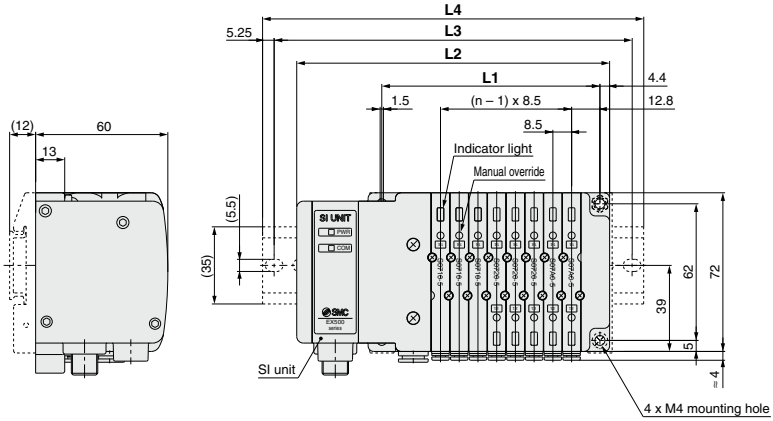
10-SS0750-08C4C8SDA2 ··· 1 set – Manifold base part no.
*** 10-S0710-5 ····· 3 sets – Valve part no. (Stations 1 to 3)**
*** 10-S0720-5 ····· 2 sets – Valve part no. (Stations 4 to 5)**
*** 10-S07A0-5 ····· 2 sets – Valve part no. (Stations 6 to 7)**
*** SS0700-10A-1 ····· 1 set – Blanking plate part no. (Station 8)**

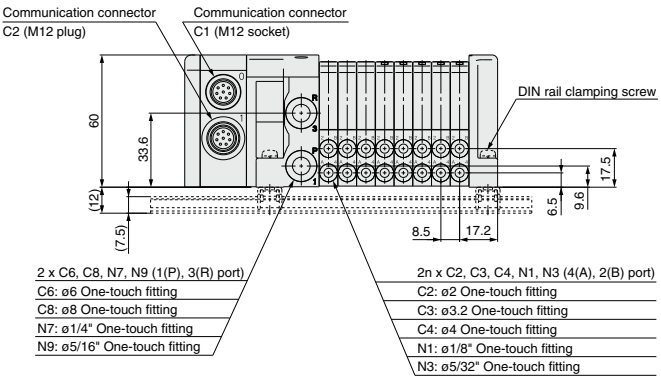
Prefix the asterisk to the part no. of the solenoid valve, etc.

Write sequentially from the 1st station on the D side. When part no. written collectively are complicated, specify on the manifold specification sheet.



10-SS0750
S kit (Serial transmission: EX500)





Dimensions

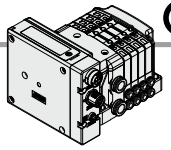
Formula L1 = 8.5n + 31, L2 = 8.5n + 74 n: Station (Maximum 16 stations)

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

S Series 10-S0700 Plug-in Manifold Stacking Base kit (Serial Transmission)

EX500 Gateway-type Serial Transmission System 2

How to Order Manifold



10 – SS0750 – 08 C4 C8 SDA3 N – B

Clean series

❶ ❷ ❸ ❹ ❺ ❻

❶ Valve stations

	Stations	Note
01	1 station	Double wiring
⋮	⋮	
16	16 stations	
01	1 station	Specified layout*1 (Available up to 32 solenoids)
⋮	⋮	
24	24 stations	

*1: Specified layout: Indicate the wiring specifications on the manifold specification sheet. (Note that 2-position double, 3-position and 4-position valves cannot be used where single wiring has been specified.) In addition, select the option K.

❷ A, B port size

Metric size

C2	ø2 One-touch fitting
C3	ø3.2 One-touch fitting
C4	ø4 One-touch fitting
CM*1	Mixed sizes and port plug

Inch size

N1	ø1/8" One-touch fitting
N3	ø5/32" One-touch fitting
NM*1	Mixed sizes and port plug

*1: Indicate the sizes on the manifold specification sheet.

❸ P, R port size

Metric size

C6	ø6 One-touch fitting
C8	ø8 One-touch fitting

Inch size

N7	ø1/4" One-touch fitting
N9	ø5/16" One-touch fitting

*: If an inch size cylinder port is selected, select inch size piping connections for the P and R ports as well.

❹ SI unit (Number of outputs, Max. number of valve stations)

SD0	Without SI unit
SDA3	32 outputs*1, 2, 1 to 16 stations (24 stations*3)

*1: When using the SI unit with 32 outputs, use the GW unit compatible with the EX500 Gateway Decentralized System 2 (128 points).
*2: 16 outputs can be set by switching the built-in setting switch.
*3: ( ): Maximum number of stations for mixed single and double wiring.
*: For SI unit part number, refer to page 444.

❺ SI unit (Output polarity)

Nil	(Without SI unit)
N	Negative common

❻ Option

Nil	None
B*1	With back pressure check valve (All stations)
D	With DIN bracket, DIN rail with standard length
D0	With DIN bracket, without DIN rail
D□*2	With DIN bracket, DIN rail for □ stations
K*3	Special wiring specification (Except double wiring)
N	With name plate
R*4	External pilot

*1: When a back pressure check valve is used only for specified station, specify the back pressure check valve part number, and specify the station number to which the valve is mounted, on the manifold specification sheet.
*2: □: Specify a longer rail than the length of valve stations.
Example) -D08
In this case, the valves will be mounted on the DIN rail for 8 stations, regardless of the number of manifold stations.
*3: When single wiring and double wiring are mixed, specify wiring type of each station on the manifold specification sheet.
*4: For external pilot option -R, indicate the external pilot specification R for the applicable valves as well.
*: When multiple symbols are specified, indicate them alphabetically. Example) -BKN
*: **For manifold optional parts, refer to pages 481 to 484.**
*: **For manifold exploded view, refer to page 487.**

How to Order Valves

10 – S07 1 0 □ – 5

Clean series

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.)

*: For symbol, refer to page 423.

Function

Symbol	Specifications
Nil	Standard
R	External pilot*1

*1: Not compatible with dual 3-port valves.
The 3(R) port is open to the atmosphere.
(Cannot be used for applying pressure or vacuum)

Base mounted plug-in

Voltage: 24 VDC

How to Order Manifold Assembly

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

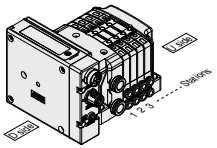
<Example>

Serial transmission kit

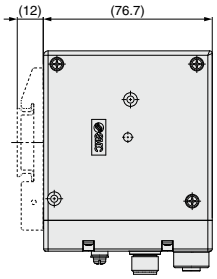
10-SS0750-04C4C8SDA3 ··· 1 set – Manifold base part no.
*** 10-S0720-5 ····· 2 sets – 2-position double part no.**
*** 10-S07A0-5 ····· 2 sets – 4-position dual 3-port part no.**

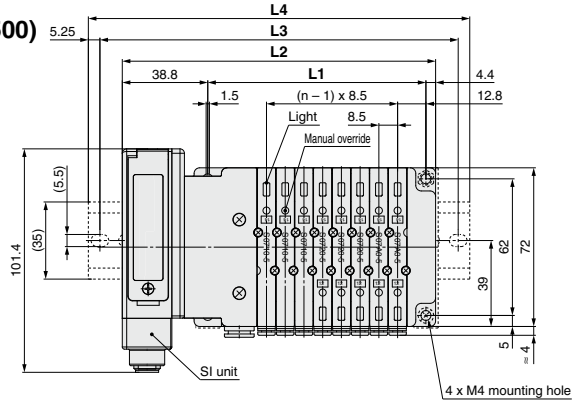
Prefix the asterisk to the part numbers of the solenoid valve etc.

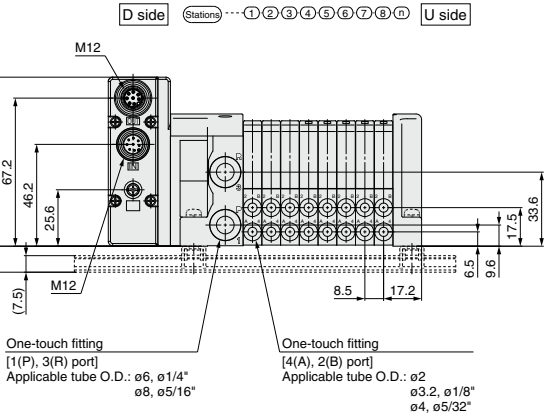
Write sequentially from the 1st station on the D side. When part numbers written collectively are complicated, specify on the manifold specification sheet.



10-SS0750
S kit (Serial transmission: EX500)







Dimensions

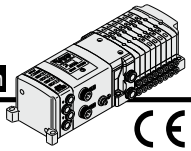
Formula L1 = 8.5n + 31, L2 = 8.5n + 74 n: Station (Maximum 24 stations)

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

S Series 10-S0700 Plug-in Manifold Stacking Base kit (Serial Transmission)

EX250 Integrated-type (For Input/Output) Serial Transmission System



How to Order Manifold

10 – SS0750 – 08 C4 C8 SDQ N □ □ □ – B

Clean series

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	
C6	With ø6 One-touch fitting	Metric
C8	With ø8 One-touch fitting	
N7	With ø1/4" One-touch fitting	Inch
N9	With ø5/16" One-touch fitting	

Note) If an inch size cylinder port is selected, select inch size piping connections for the P and R ports as well.

④ Kit type

Kit type		Symbol Note 2)	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 12 stations	24 stations	24
		SDQ	DeviceNet®			
		SDZEN	EtherNet/IP™			
		SDTA	AS-Interface, 8 in/8 out, 2 isolated common type	1 to 4 stations	8 stations	8
		SDTB	AS-Interface, 4 in/4 out, 2 isolated common type	1 to 2 stations	4 stations	4
		SDTC	AS-Interface, 8 in/8 out, 1 common type	1 to 4 stations	8 stations	8
		SDTD	AS-Interface, 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 444.

Actuation type	Single	Double, Dual 3-port
Number of solenoids	1	2

⑤ SI unit COM.

SI unit COM.		EX250		
		DeviceNet®	AS-Interface	EtherNet/IP™
Nil	+COM.	—	—	—
N	–COM.	○	○	○

Note) The symbol is nil for no SI unit (SD0).

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) The symbol is nil for no SI unit (SD0).

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) The symbol is nil for no SI unit (SD0).

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

Symbol	Specifications
Nil	PNP sensor input (+COM.) or without input block
N	NPN sensor input (–COM.)

Note) The symbol is nil for no SI unit (SD0).

⑨ 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

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 481.

∗ **For manifold optional parts, refer to pages 481 to 484.**

∗ **For manifold exploded view, refer to page 487.**

Refer to the **WEB catalog** 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

10-SS0750-08C4C8SDQN13N ··· 1 set – Manifold base part no.

∗ **10-S0710-5 ····· 3 sets – Valve part no. (Stations 1 to 3)**

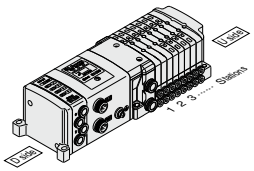
∗ **10-S0720-5 ····· 2 sets – Valve part no. (Stations 4 to 5)**

∗ **10-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 no. of the solenoid valve, etc.

Write sequentially from the 1st station on the D side. When part no. written collectively are complicated, specify on the manifold specification sheet.



How to Order Valve

10 – S07 1 0 □ – 5

Clean series

Actuation type

Function

Voltage: 24 VDC

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.)

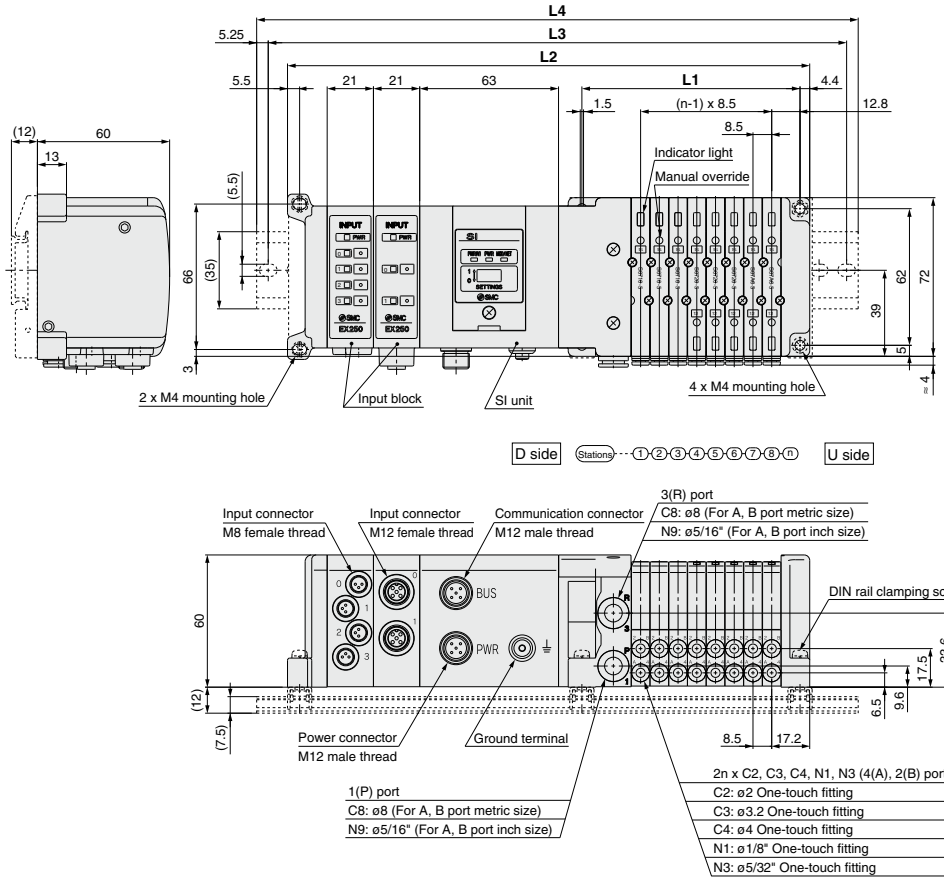
Note) For symbol, refer to page 423.

Symbol	Specifications
Nil	Standard
R	External pilot Note)

Note) Not compatible with dual 3-port valves. The 3(R) port is released to the atmosphere. (Pressurization and vacuum are not allowed.)

SMC

10-SS0750
S kit (Serial transmission: EX250)



Dimensions Formula L1 = 8.5n + 31, L2 = 8.5n + 169 (For 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

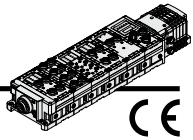
L \ n	17	18	19	20	21	22	23	24
L1	175.5	184	192.5	201	209.5	218	226.5	235
L2	313.5	322	330.5	339	347.5	356	364.5	373
L3	337.5	350	350	362.5	375	387.5	387.5	400
L4	348	360.5	360.5	373	385.5	398	398	410.5

The 1-port EtherNet/IP compatible SI unit is to be discontinued as of March 2022.
Please consider ordering the 2-port EtherNet/IP compatible SI unit as a substitute.

Kit type	
Discontinued model no.	Substitute model no.
SD6ZE	▶ SD6EA

S Series 10-S0700 Plug-in Manifold Stacking Base kit (Serial Transmission)

EX600 Integrated-type (For Input/Output) Serial Transmission System (Fieldbus System)



How to Order Manifold

10 – SS0750 – 08 C4 SD6Q 2 N 1 – B

Clean series

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 for 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®			
	SD6V	CC-Link			
	SD6N	PROFIBUS DP			
	SD6F	PROFINET			
	SD6ZE	EtherNet/IP™ (1 port)			
	SD6EA	EtherNet/IP™ (2 ports)			
	SD6D	EtherCAT			
	SD6WE	EtherNet/IP™ compatible wireless base Note 4)			
	SD6WF	PROFINET compatible wireless base Note 4)			
	SD6WS	Wireless remote Note 4)			

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 512 for mounting method.
• I/O unit cannot be chosen without SI unit.
Note 2) For SI unit part number, refer to page 444.
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.
Note 4) The wireless system is suitable for use only in a country where it is in accordance with the Radio Act and regulations of that country.

Actuation type	Single	Double, Dual 3-port
Number of solenoid valves	1	2

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

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 on 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) The symbol is nil for no SI unit.
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 COM.

Nil	+COM.
N	–COM.

Note) The symbol is nil for no SI unit.

End plate type

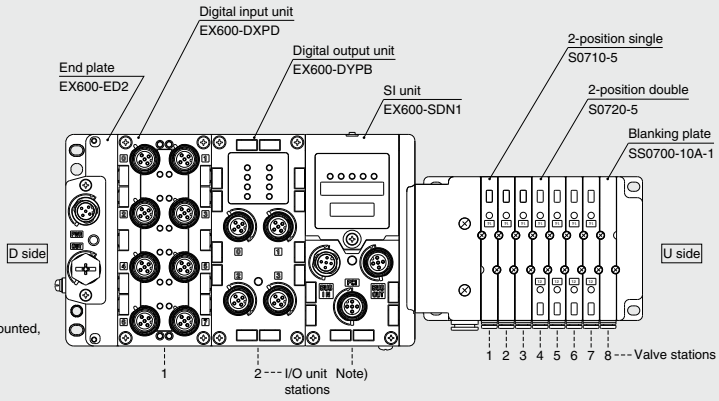
Nil	No end plate
2	M12 power supply connector, B-coded
3	7/8 inch power supply connector
4	M12 power supply connector IN/OUT, A-coded, Pin arrangement 1
5	M12 power supply connector IN/OUT, A-coded, Pin arrangement 2

Note) The symbol is nil for no SI unit.
∗ The pin layout for "4" and "5" pin connector is different.

Refer to the 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



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

Serial transmission kit

10-SS0750-08C4SD6Q2N2	**1 set**	**Manifold base part number**	
∗ **10-S0710-5**	**3 sets**	**Valve part number (Stations 1 to 3)**	Enter in order starting from the first station on the D side. If arrangement becomes complicated, specify on the manifold specification sheet.
∗ **10-S0720-5**	**4 sets**	**Valve part number (Stations 4 to 7)**	
∗ **SS0700-10A-1**	**1 set**	**Blanking plate number (Station 8)**	
∗ **EX600-DXPD**	**1 set**	**I/O unit part number (Station 1)**	Enter in order starting from the first station on the D side.
∗ **EX600-DYPB**	**1 set**	**I/O unit part number (Station 2)**	

→The asterisk denotes the symbol for assembly.
Prefix it to the part no. of the solenoid valve, etc.

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

How to Order Valve

10 – S07 1 0 □ – 5

Clean series

Actuation type

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

Base mounted plug-in

Function

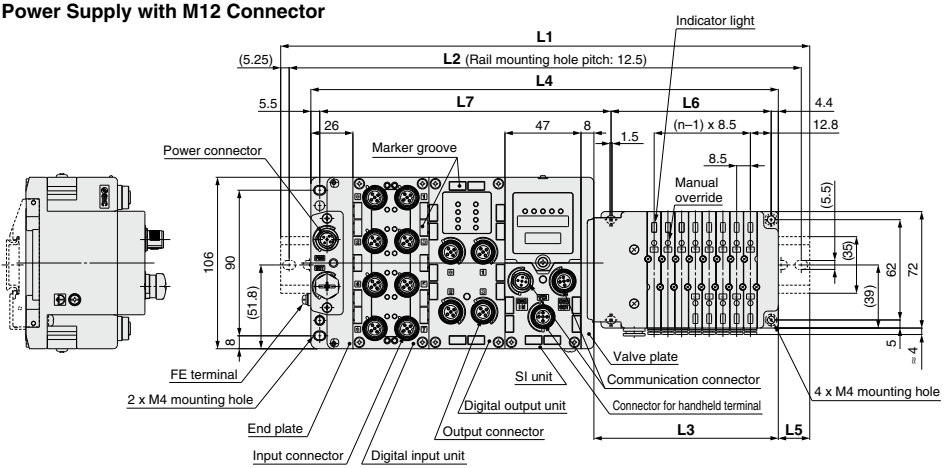
Symbol	Specifications
Nil	Standard
R	External pilot Note)

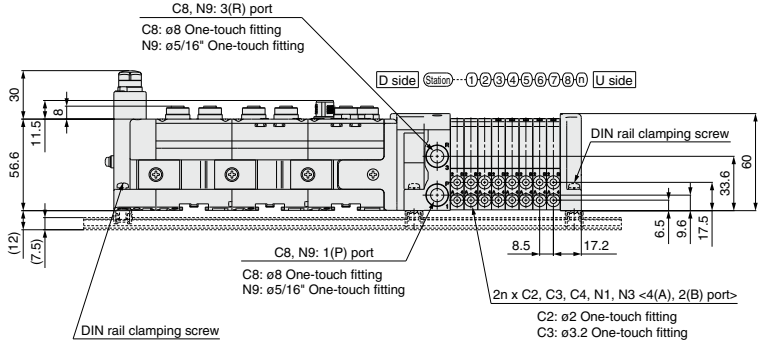
Note) Not compatible with dual 3-port valves. The 3(R) port is released to the atmosphere. (Pressurization and vacuum are not allowed.)

Coil voltage

5	24 VDC

Power Supply with M12 Connector



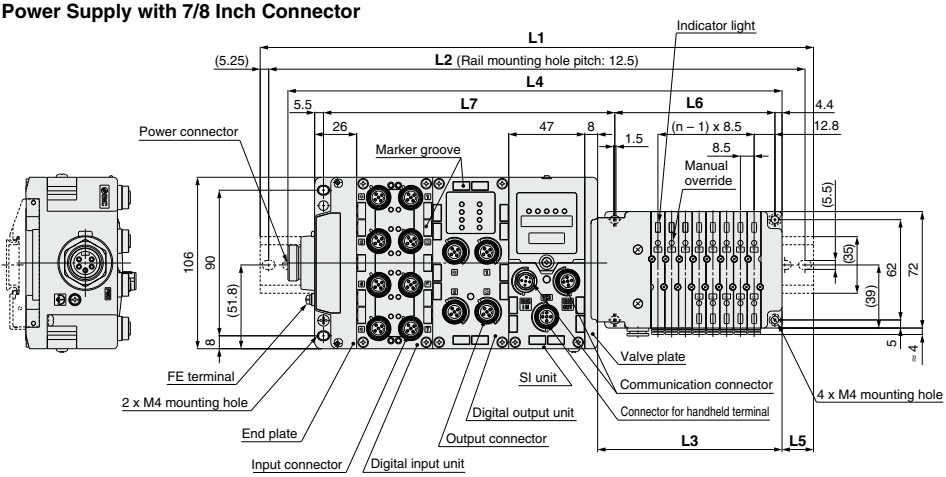


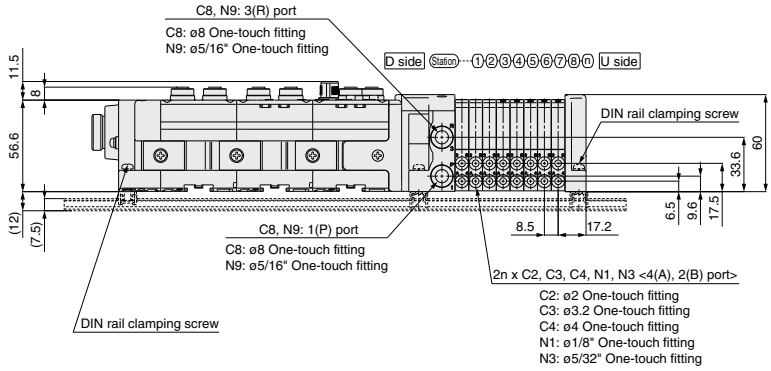
L2 = L1 – 10.5
L3 = 8.5 x n1 + 46
L4 = L3 + 81 + 47 x n2
L5 = (L1 – L4)/2
L6 = 8.5 x n1 + 31
L7 = 47 x n2 + 86.1

L1: DIN Rail Overall Length

I/O unit stations (n2) \ 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	435.5	448	460.5	460.5	473	485.5	485.5	498	510.5
4	360.5	373	373	385.5	398	398	410.5	423	423	435.5	448	448	460.5	473	473	485.5	498	498	510.5	523	535.5	535.5	548	560.5
5	410.5	410.5	423	435.5	435.5	448	460.5	460.5	473	485.5	485.5	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	535.5	548	560.5	560.5	573	585.5	585.5	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	660.5	673	673	685.5	698
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	710.5	723	723	735.5	748
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	760.5	760.5	773	785.5	785.5

Power Supply with 7/8 Inch Connector





L2 = L1 – 10.5
L3 = 8.5 x n1 + 46
L4 = L3 + 97.5 + 47 x n2
L5 = (L1 – L4)/2
L6 = 8.5 x n1 + 31
L7 = 47 x n2 + 86.1

L1: DIN Rail Overall Length

I/O unit stations (n2) \ 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	560.5	560.5	573
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	623
6	473	473	485.5	498	498	510.5	523	535.5	535.5	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
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-in Manifold Stacking Base

D-sub Connector

F kit

CE

Plug-in Manifold Stacking Base

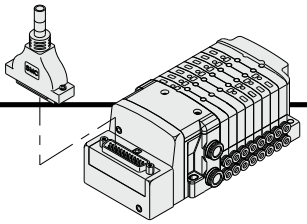
MIL Standard

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

Connector mounting direction: Top or side selectable

Page 457

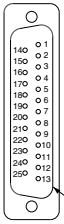
F Series 10-S0700 Plug-in Manifold Stacking Base kit (D-sub Connector)



- **The D-sub connector reduces installation labor for electrical connections.**
- **Using the D-sub connector (25P) conforming to MIL standard permits the use of commercial connectors 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



Connector terminal no.

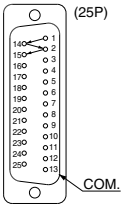
As the standard electrical wiring specifications, double wiring (connected to SOL.A and SOL.B) is adopted for the internal wiring of each station for 12 stations or less, regardless of valve and option types.
Mixed single and double wiring is available as an option. For details, refer to "Special Wiring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

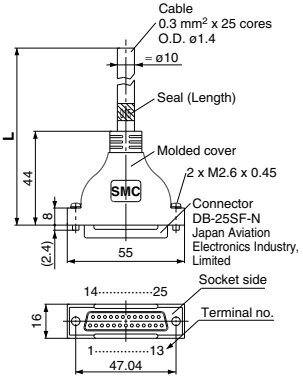
1. How to Order valve
Indicate an option symbol, -K, for the manifold part number and be sure to specify the mounting position and number of stations of the single and double wiring on the manifold specification sheet.

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 mm² 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 minute, AC	1000
Insulation resistance MΩ/km, 20°C	5 or more

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

Example of connector manufacturers

- Fujitsu Limited
- Japan Aviation Electronics Industry, Limited
- J.S.T. Mfg. Co., Ltd.
- HIROSE ELECTRIC CO., LTD.

How to Order Manifold

10 – SS0750 – 08 C4 C8 FD1 – B

Clean series

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 for CM and NM.

P, R port size

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

Note) If an inch size cylinder port is selected, select inch size piping connections for the P and R ports as well.

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

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 481.
∗ **For manifold optional parts, refer to pages 481 to 484.**
∗ **For manifold exploded view, refer to page 487.**

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.

Actuation type	Single	Double, Dual 3-port
Number of solenoids	1	2

How to Order Valve

10 – S07 1 0 □ – 5

Clean series

Actuation type

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 423.

Base mounted plug-in

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. The 3(R) port is released to the atmosphere. (Pressurization and vacuum are not allowed.)

How to Order Manifold Assembly

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

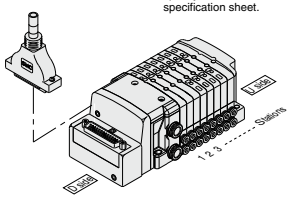
<Example>

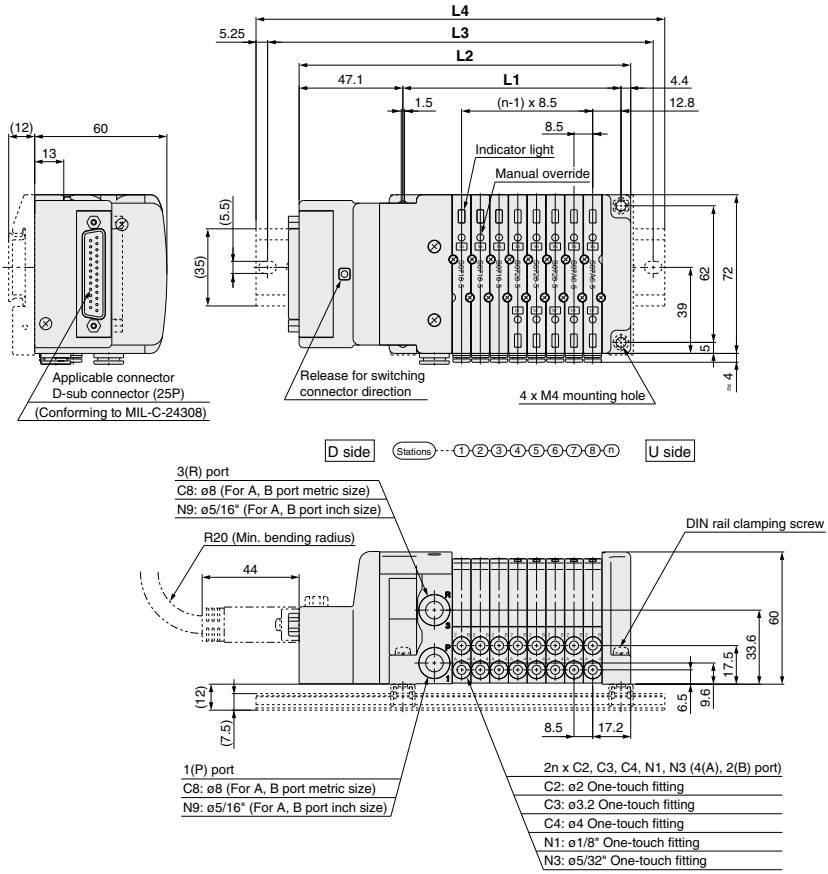
D-sub connector kit

10-SS0750-08C4C8FD1 ··· 1 set – Manifold base part no.
∗ **10-S0710-5 ····· 3 sets – Valve part no. (Stations 1 to 3)**
∗ **10-S0720-5 ····· 2 sets – Valve part no. (Stations 4 to 5)**
∗ **10-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 no. of the solenoid valve, etc.

Write sequentially from the 1st station on the D side. When part no. written collectively are complicated, specify on the manifold specification sheet.





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

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

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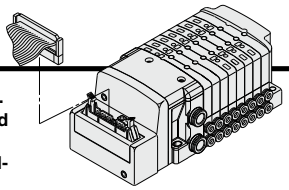
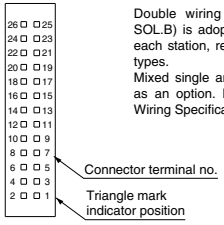
P Series 10-S0700 Plug-in Manifold Stacking Base kit (Flat Ribbon Cable)



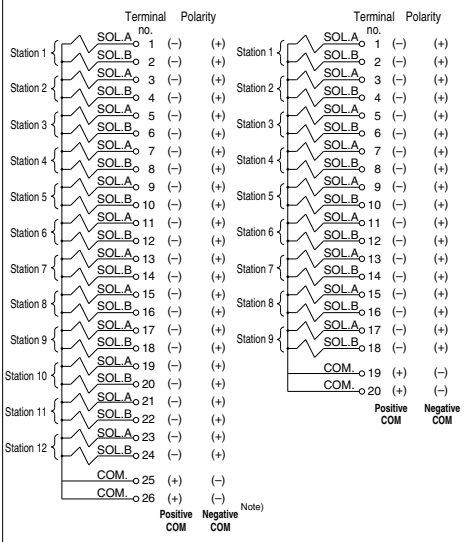
- **Flat ribbon cable connector reduces installation labor for electrical connection.**
- **Using the connector for flat ribbon cable (26P, 20P) conforming to MIL standard permits the use of commercial connectors and gives a wide interchangeability.**
- **Top or side receptacle position can be selected in accordance with the available mounting space.**

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.

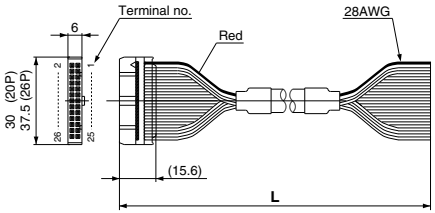


Note) Mounting valve has no polarity. It can also be used as a negative common.

Cable Assembly

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

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



Flat Ribbon Cable Connector Assembly (Option)

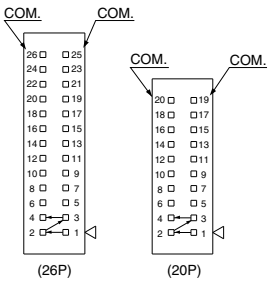
Cable length (**L**)	Assembly part no.	
	26P	20P
1.5 m	AXT100-FC26-1	AXT100-FC20-1
3 m	AXT100-FC26-2	AXT100-FC20-2
5 m	AXT100-FC26-3	AXT100-FC20-3

∗ 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.

Example of connector manufacturers

- HIROSE ELECTRIC CO., LTD.
- 3M Japan Limited
- Fujitsu Limited
- Japan Aviation Electronics Industry, Limited
- 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 valve

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

10 – SS0750 – 08 C4 C8 PD1 – B

Clean series

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) Indicate the sizes on the manifold specification sheet for CM and NM.

P, R port size

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

Note) If an inch size cylinder port is selected, select inch size piping connections for the P and R ports as well.

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

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 481.
* **For manifold optional parts, refer to pages 481 to 484.**
* **For manifold exploded view, refer to page 487.**

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.

Actuation type	Single	Double, Dual 3-port
Number of solenoids	1	2

How to Order Valve

10 – S07 1 0 □ – 5

Clean series

Actuation type

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 423.

Base mounted plug-in

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. The 3(R) port is released to the atmosphere. (Pressurization and vacuum are not allowed.)

How to Order Manifold Assembly

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

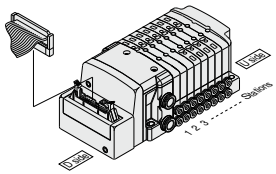
<Example>

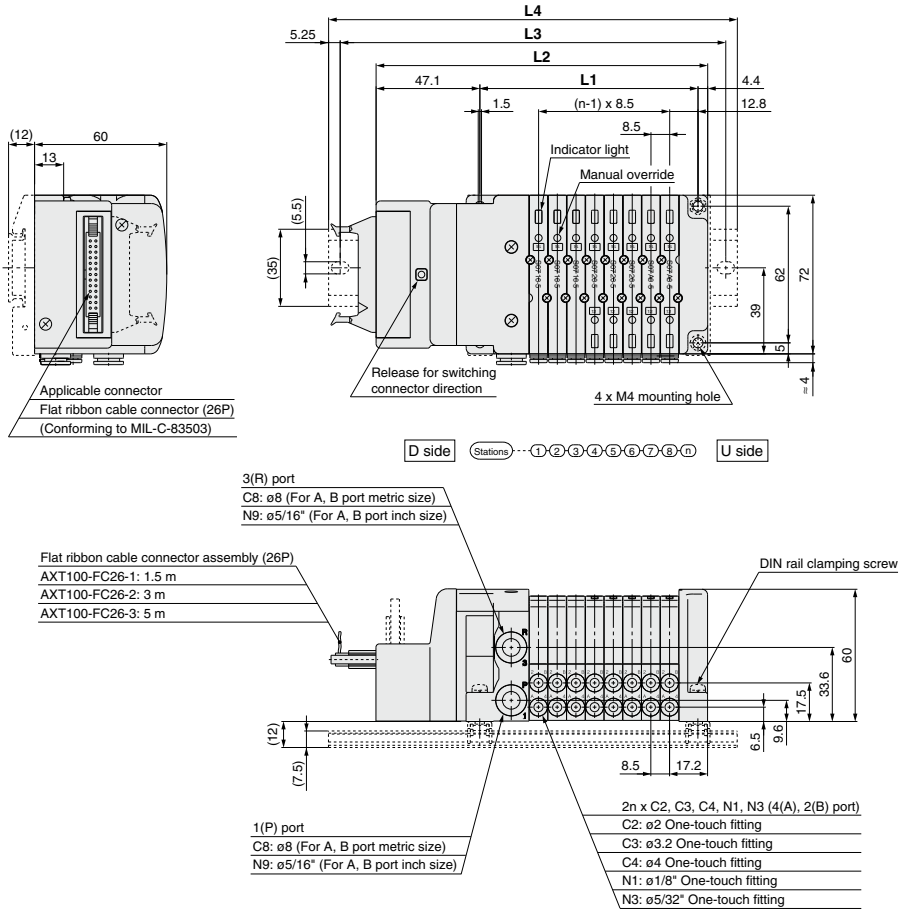
Flat ribbon cable kit

10-SS0750-08C4C8PD1 ··· 1 set – Manifold base part no.
*** 10-S0710-5 ····· 2 sets – Valve part no. (Stations 1 to 3)**
*** 10-S0720-5 ····· 4 sets – Valve part no. (Stations 4 to 5)**
*** 10-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 no. of the solenoid valve, etc.

Write sequentially from the 1st station on the D side. When part no. written collectively are complicated, specify on the manifold specification sheet.

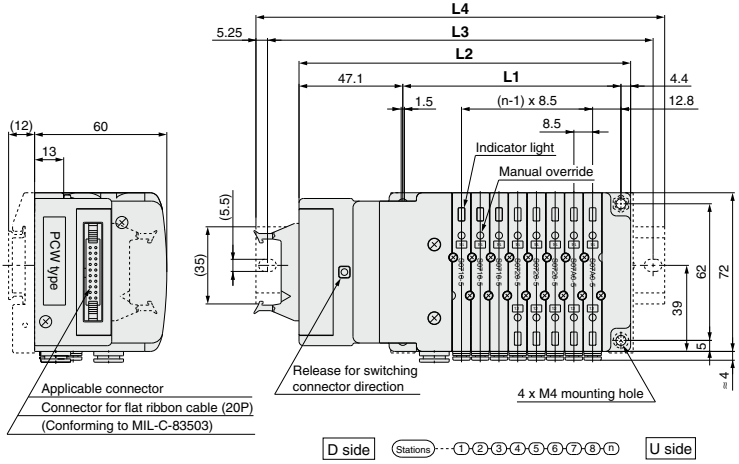


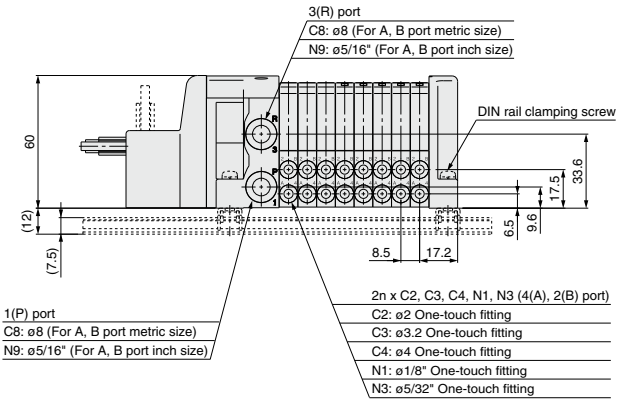


Dimensions

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





Dimensions

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

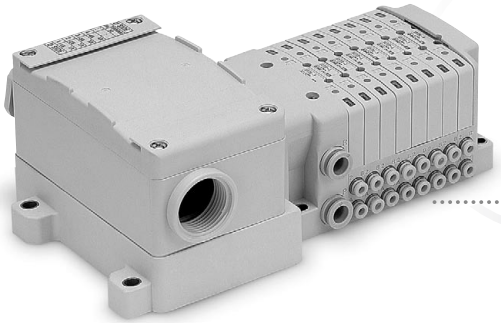
L \ n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L1	48	56.5	65	73.5	82	90.5	99	107.5	116	124.5	133	141.5	150	158.5	167
L2	99.5	108	116.5	125	133.5	142	150.5	159	167.5	176	184.5	193	201.5	210	218.5
L3	125	137.5	137.5	150	162.5	162.5	175	187.5	187.5	200	212.5	212.5	225	237.5	250
L4	135.5	148	148	160.5	173	173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

Plug-in Manifold Stacking Base

Terminal Block Box

T kit

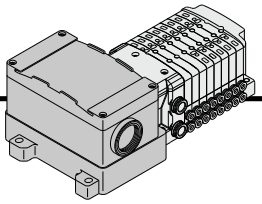
Plug-in Manifold Stacking Base



With Terminal Block Box

Page 469

T Series 10-S0700 Plug-in Manifold Stacking Base kit (Terminal Block Box)

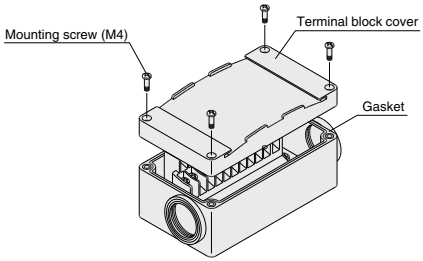


● **This kit has a small terminal box inside a junction box. The electrical entry port (G3/4) permits connection of conduit fittings.**

Terminal Block Connection

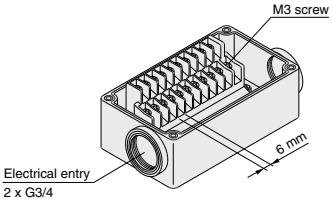
Step 1. How to remove terminal block cover

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.



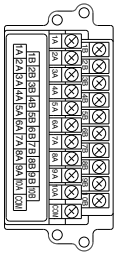
Step 3. How to replace terminal block cover

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

Proper tightening torque (N·m)
0.7 to 1.2

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

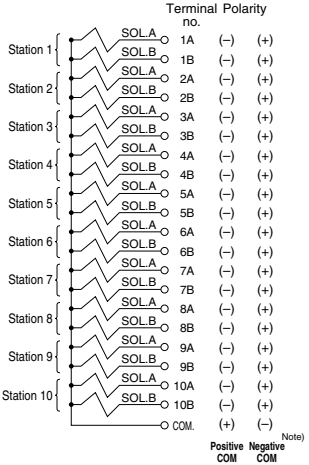
Electrical Wiring Specifications



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.

Standard wiring



Special Wiring Specifications (Option) [-K]

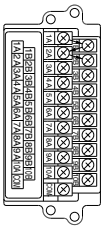
Mixed single and double wiring are available as an option. The maximum number of manifold stations is determined by the number of solenoids. Count one point for a single solenoid type and two points for a double solenoid type. The total number of solenoids (points) must not exceed 20.

1. How to Order valve

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

10 – SS0750 – 08 C4 C8 TD0 – B

Clean series ①②③④⑤

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	
C6	With ø6 One-touch fitting	Metric
C8	With ø8 One-touch fitting	
N7	With ø1/4" One-touch fitting	Inch
N9	With ø5/16" One-touch fitting	

Note) If an inch size cylinder port is selected, select inch size piping connections for the P and R ports as well.

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 box	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.

Actuation type	Single	Double, Dual 3-port
Number of solenoids	1	2

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

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 481.
* **For manifold optional parts, refer to pages 481 to 484.**
* **For manifold exploded view, refer to page 487.**

How to Order Valve

10 – S07 1 0 □ – 5

Clean series

Actuation type

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 423.

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. The 3(R) port is released to the atmosphere. (Pressurization and vacuum are not allowed.)

Base mounted plug-in

How to Order Manifold Assembly

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

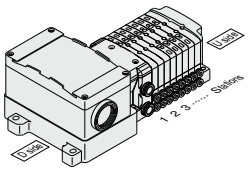
<Example>

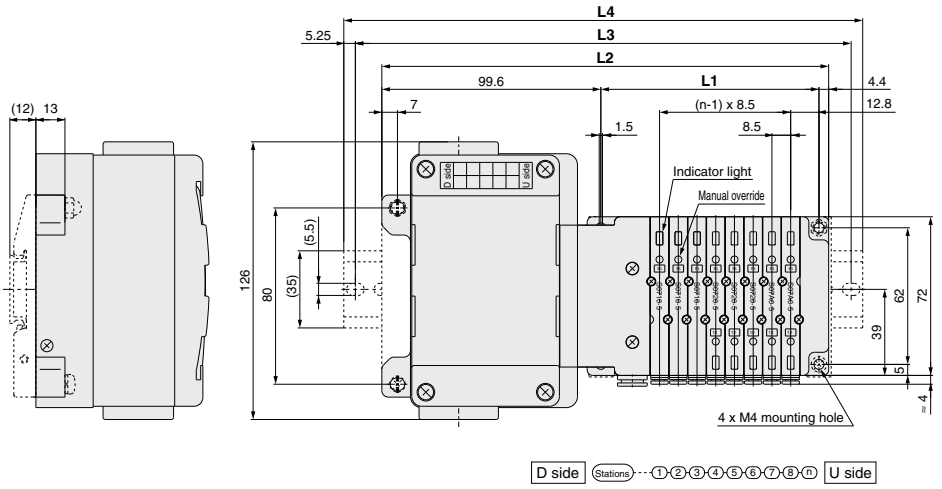
Terminal block box kit

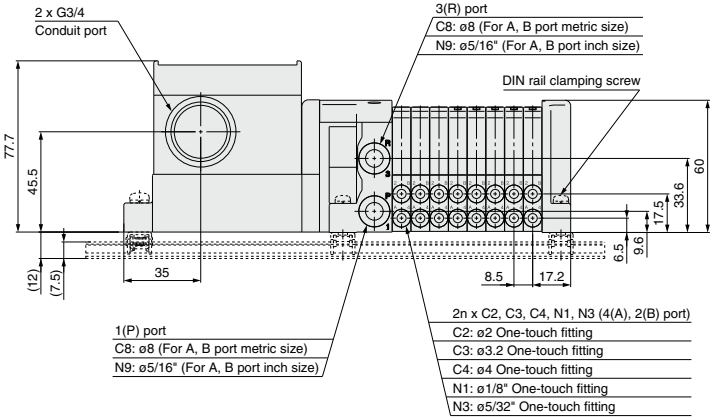
10-SS0750-08C4C8TD0···1 set – Manifold base part no.
*** 10-S0710-5·····3 sets – Valve part no. (Stations 1 to 3)**
*** 10-S0720-5·····2 sets – Valve part no. (Stations 4 to 5)**
*** 10-S07A0-5 ·····2 sets – Valve part no. (Stations 6 to 7)**
*** SS0700-10A-1·····1 set – Blanking plate part no. (Station 8)**

Prefix the asterisk to the part no. of the solenoid valve, etc.

Write sequentially from the 1st station on the D side. When part no. written collectively are complicated, specify on the manifold specification sheet.







Dimensions

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

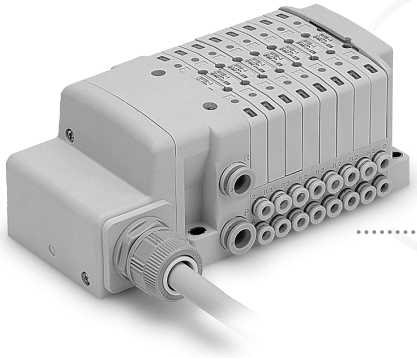
L \ n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L1	48	56.5	65	73.5	82	90.5	99	107.5	116	124.5	133	141.5	150	158.5	167	175.5	184	192.5	201
L2	152	160.5	169	177.5	186	194.5	203	211.5	220	228.5	237	245.5	254	262.5	271	279.5	288	296.5	305
L3	175	187.5	200	200	212.5	225	225	237.5	250	250	262.5	275	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

Lead Wire

L kit

CE

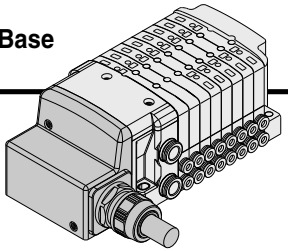
Plug-in Manifold Stacking Base



Lead Wire Direct Entry Type

Page 473

L Series 10-S0700 Plug-in Manifold Stacking Base kit (Lead Wire)

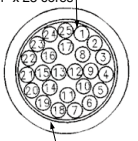


●Direct electrical entry type

Electrical Wiring Specifications

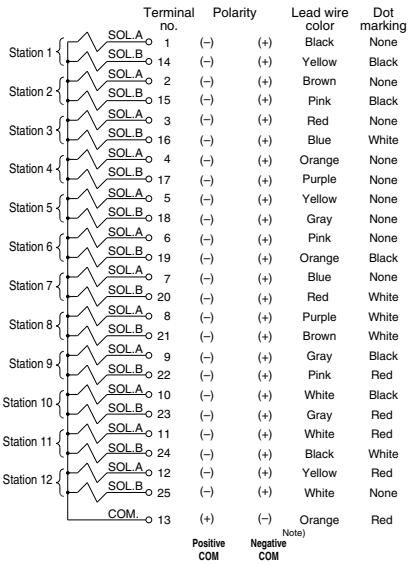
Lead wire specifications

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.



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

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, 20°C	65 or less
Voltage limit V, 1 minute, AC	1000
Insulation resistance MΩ/km, 20°C	5 or more

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

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 valve

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

10 – SS0750 – 08 C4 C8 LD0 – B

Clean series

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	
C6	With ø6 One-touch fitting	Metric
C8	With ø8 One-touch fitting	
N7	With ø1/4" One-touch fitting	Inch
N9	With ø5/16" One-touch fitting	

Note) If an inch size cylinder port is selected, select inch size piping connections for the P and R ports as well.

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

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 481.
∗ **For manifold optional parts, refer to pages 481 to 484.**
∗ **For manifold exploded view, refer to page 487.**

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.

Actuation type	Single	Double, Dual 3-port
Number of solenoids	1	2

How to Order Valve

10 – S07 1 0 □ – 5

Clean series

Actuation type

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 423.

Base mounted plug-in

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. The 3(R) port is released to the atmosphere. (Pressurization and vacuum are not allowed.)

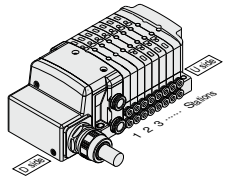
How to Order Manifold Assembly

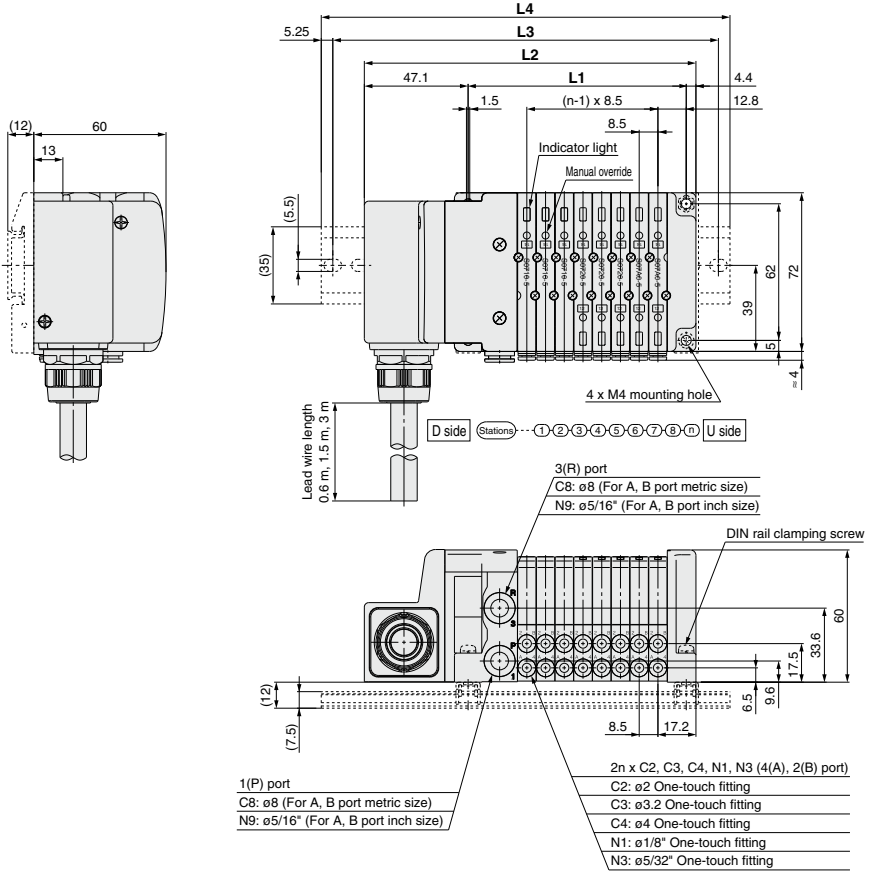
Specify the part numbers for valves and options together beneath the manifold base part number.

<Example>
Lead wire kit
10-SS0750-08C4C8LD0···1 set – Manifold base part no.
∗ **10-S0710-5** ·····**3 sets – Valve part no. (Stations 1 to 3)**
∗ **10-S0720-5** ·····**2 sets – Valve part no. (Stations 4 to 5)**
∗ **10-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 no. of the solenoid valve, etc.

Write sequentially from the 1st station on the D side. When part no. written collectively are complicated, specify on the manifold specification sheet.





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

Circular Connector

M kit

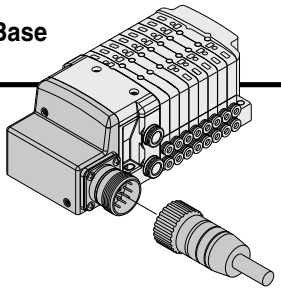
CE

Plug-in Manifold Stacking Base

Circular Connector 26 Pins

Page 477

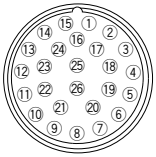
M Series 10-S0700 Plug-in Manifold Stacking Base kit (Circular Connector)



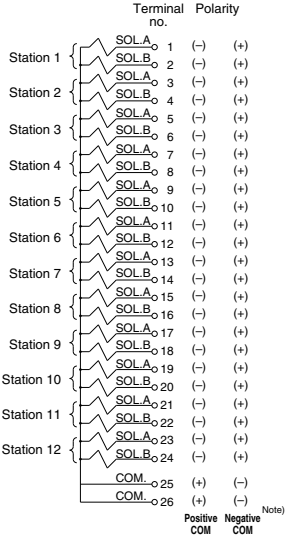
● **Simplification and labor savings for wiring work can be achieved by using a circular connector for the electrical connection.**

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.



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 valve

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.

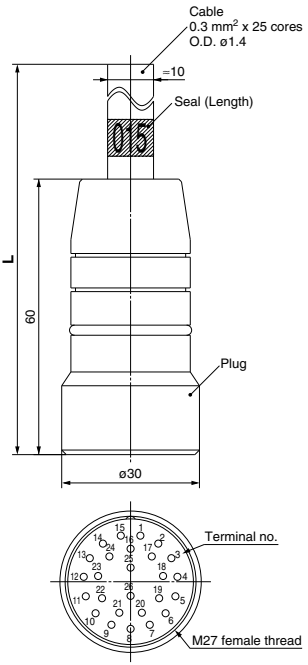
2. Wiring specifications

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-MC26- 015 / 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

10 – SS0750 – 08 C4 C8 MD1 – B

Clean series

① ② ③ ④ ⑤

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	
C6	With ø6 One-touch fitting	Metric
C8	With ø8 One-touch fitting	
N7	With ø1/4" One-touch fitting	Inch
N9	With ø5/16" One-touch fitting	

Note) If an inch size cylinder port is selected, select inch size piping connections for the P and R ports as well.

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.

Actuation type	Single	Double, Dual 3-port
Number of solenoids	1	2

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

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 481.
∗ **For manifold optional parts, refer to pages 481 to 484.**
∗ **For manifold exploded view, refer to page 487.**

How to Order Valve

10 – S07 1 0 □ – 5

Clean series

Actuation type

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 423.

Base mounted plug-in

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. The 3(R) port is released to the atmosphere. (Pressurization and vacuum are not allowed.)

How to Order Manifold Assembly

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

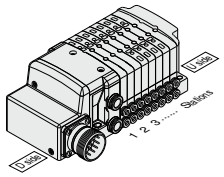
<Example>

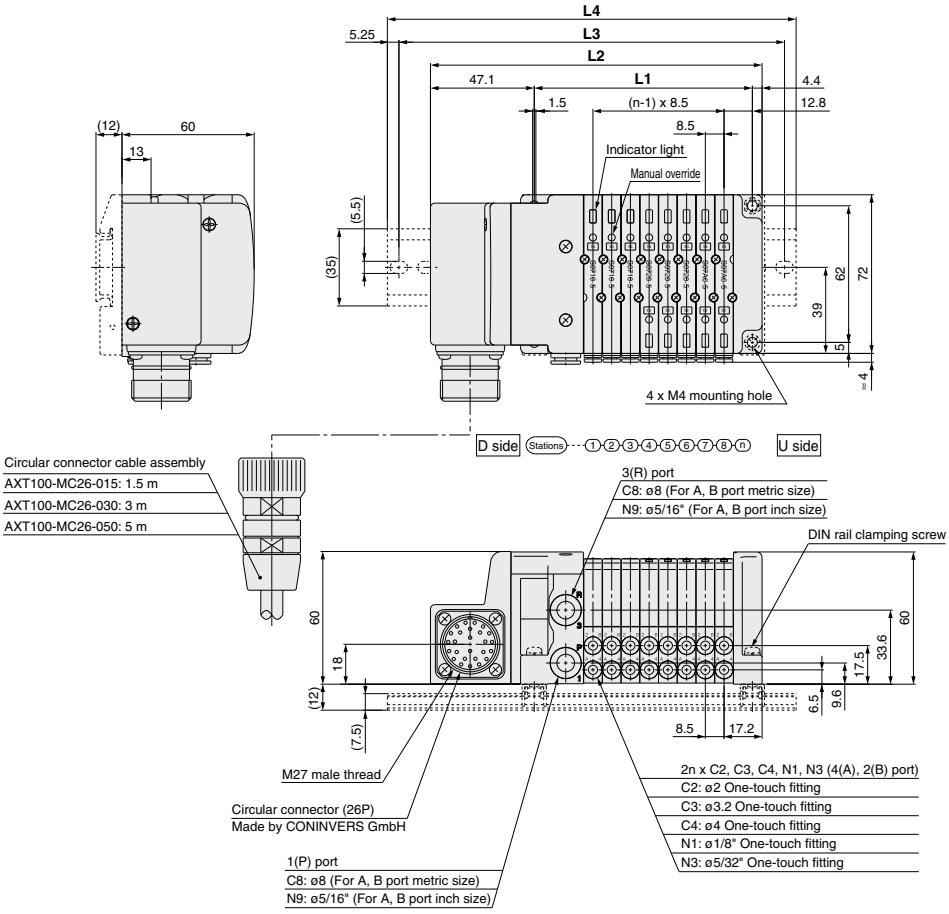
Circular connector kit

10-SS0750-08C4C8MD1 ··· 1 set – Manifold base part no.
∗ **10-S0710-5** ····· 3 sets – Valve part no. (Stations 1 to 3)
∗ **10-S0720-5** ····· 2 sets – Valve part no. (Stations 4 to 5)
∗ **10-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 no. of the solenoid valve, etc.

Write sequentially from the 1st station on the D side. When part no. written collectively are complicated, specify on the manifold specification sheet.





Dimensions

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

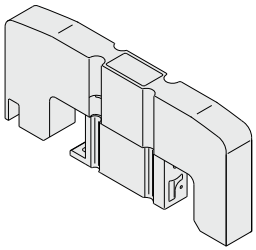
L \ n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
L1	48	56.5	65	73.5	82	90.5	99	107.5	116	124.5	133	141.5	150	158.5	167	175.5	184	192.5	201	209.5	218	226.5	235
L2	99.5	108	116.5	125	133.5	142	150.5	159	167.5	176	184.5	193	201.5	210	218.5	227	235.5	244	252.5	261	269.5	278	286.5
L3	125	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

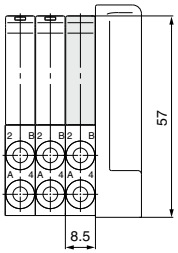
Blanking plate

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: 25 g



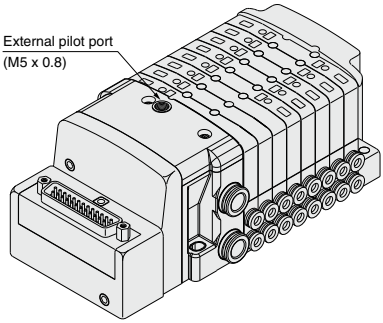


External pilot [-R]

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 Valve (Example)
10-S0710 R -5
External pilot

● How to Order Manifold (Example)
∗ Indicate R for an option.
10-SS0750-08C4FD1-R
External pilot

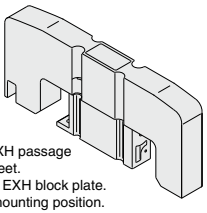


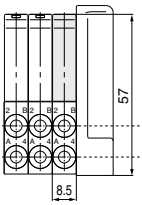
Note 1) Not compatible with dual 3-port valves.
Note 2) When the internal pilot type and external pilot type of valves are mixed up on the manifold, order the manifold suitable for the specifications of the external pilot valve.
Note 3) Since the pilot EXH of valves with the external pilot specification also has a common exhaust specification, the 3(R) port should be released to the atmosphere.

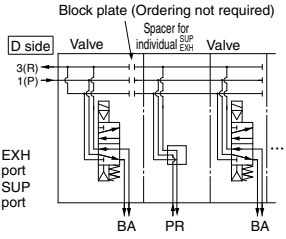
Individual SUP/EXH spacer

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.

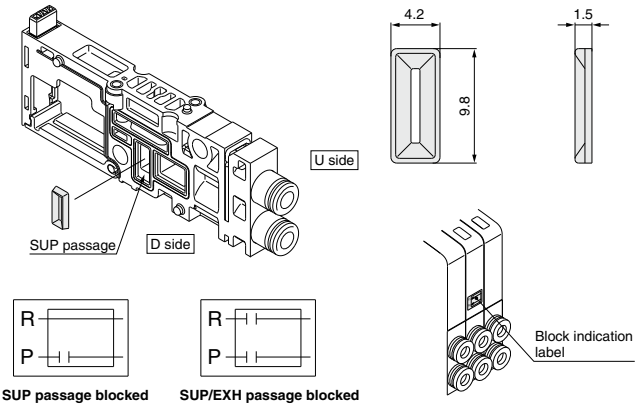
* Specify the number of stations on the manifold specification sheet.

<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.

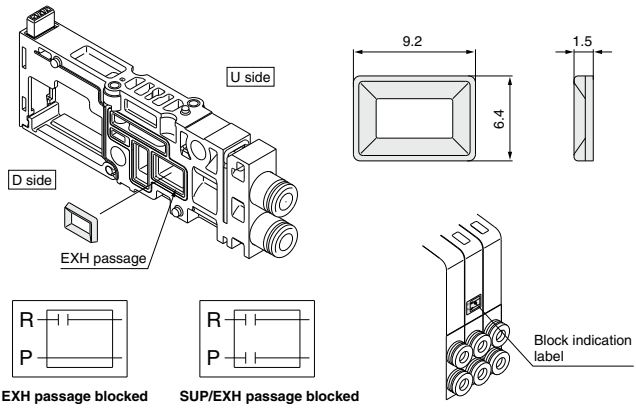
* Specify the number of stations on the manifold specification sheet.

<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



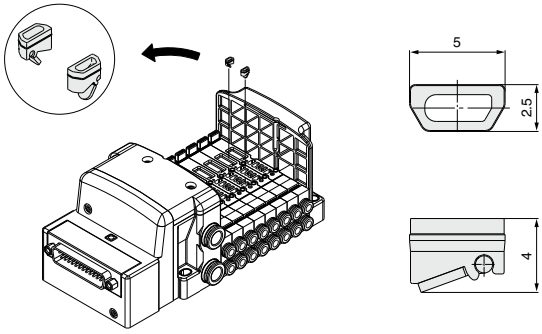
Back pressure check valve [-B]

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%.

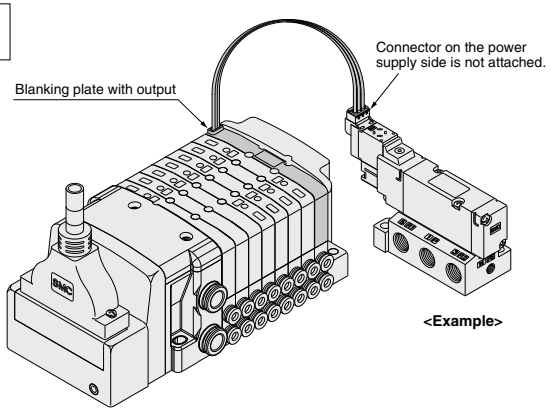
Blanking plate with output

SS0700-1C-□

Lead wire length (mm)

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

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.

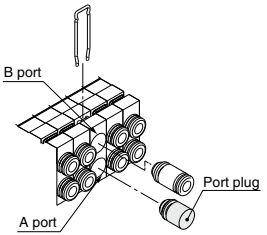
Weight: 34 g

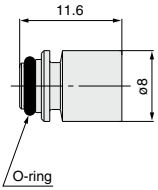
Port plug

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 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

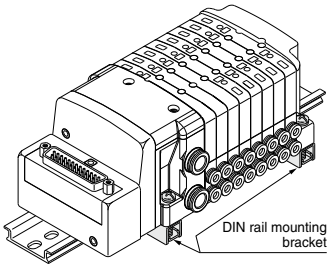
SS0700-57A-□

Symbol	Specifications
Nil	S (EX500), F, P, 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".)

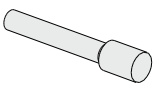
1 set of DIN rail mounting bracket is included for 1 manifold (2 or 3 DIN rail mounting brackets (S, T kit)).

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



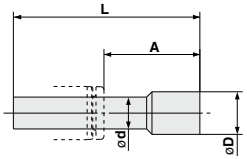
Blanking plug (For One-touch fittings)

KJP-02
KQ2P-23
KQ2P-04
KQ2P-06



It is inserted into an unused cylinder port and SUP/EXH ports.

Purchasing order is available in units of 10 pieces.



Dimensions (mm)

Applicable fitting size ø**d**	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

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) **10-SS0750-08C4FD0-D09K**

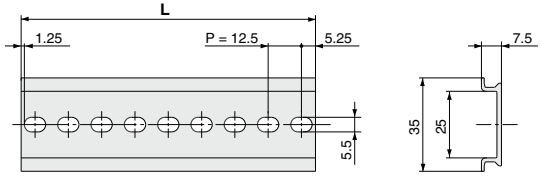
- 8-station manifold
- Optional symbol (alphabetically)
- DIN rail for 9 stations

● 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 x 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

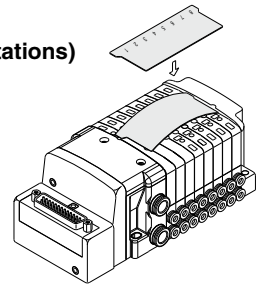
No.	31	32	33	34	35	36	37	38	39	40
L dimension	398	410.5	423	435.5	448	460.5	473	485.5	498	510.5

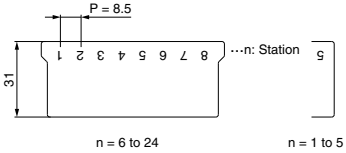
Name plate [-N]

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.

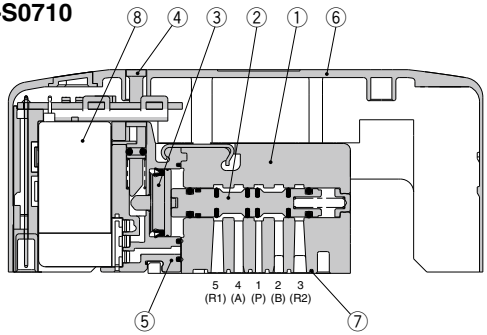
* When ordering this option incorporated with a manifold, suffix "-N" to the end of the manifold part number.

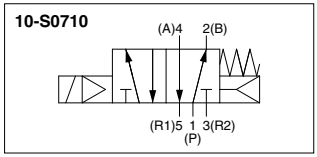




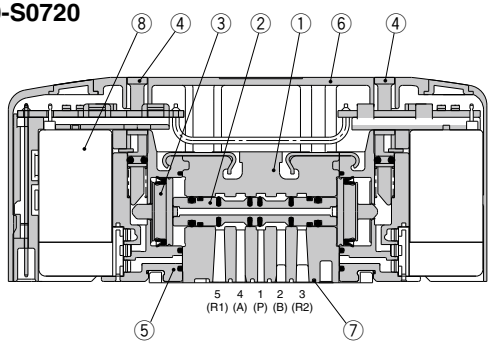
Construction

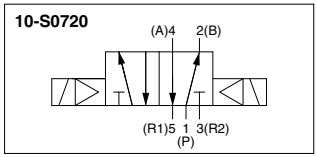
Single: 10-S0710



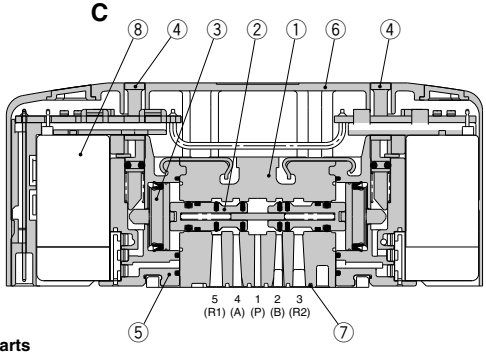


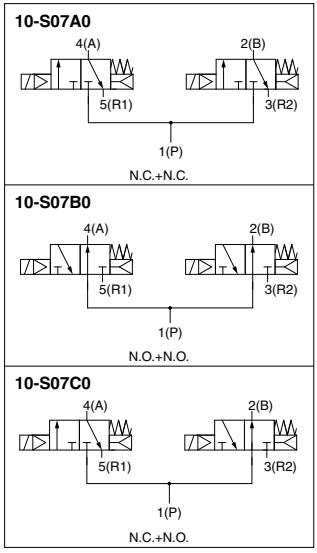
Double: 10-S0720





Dual 3-Port: 10-S07B0 (A / C)



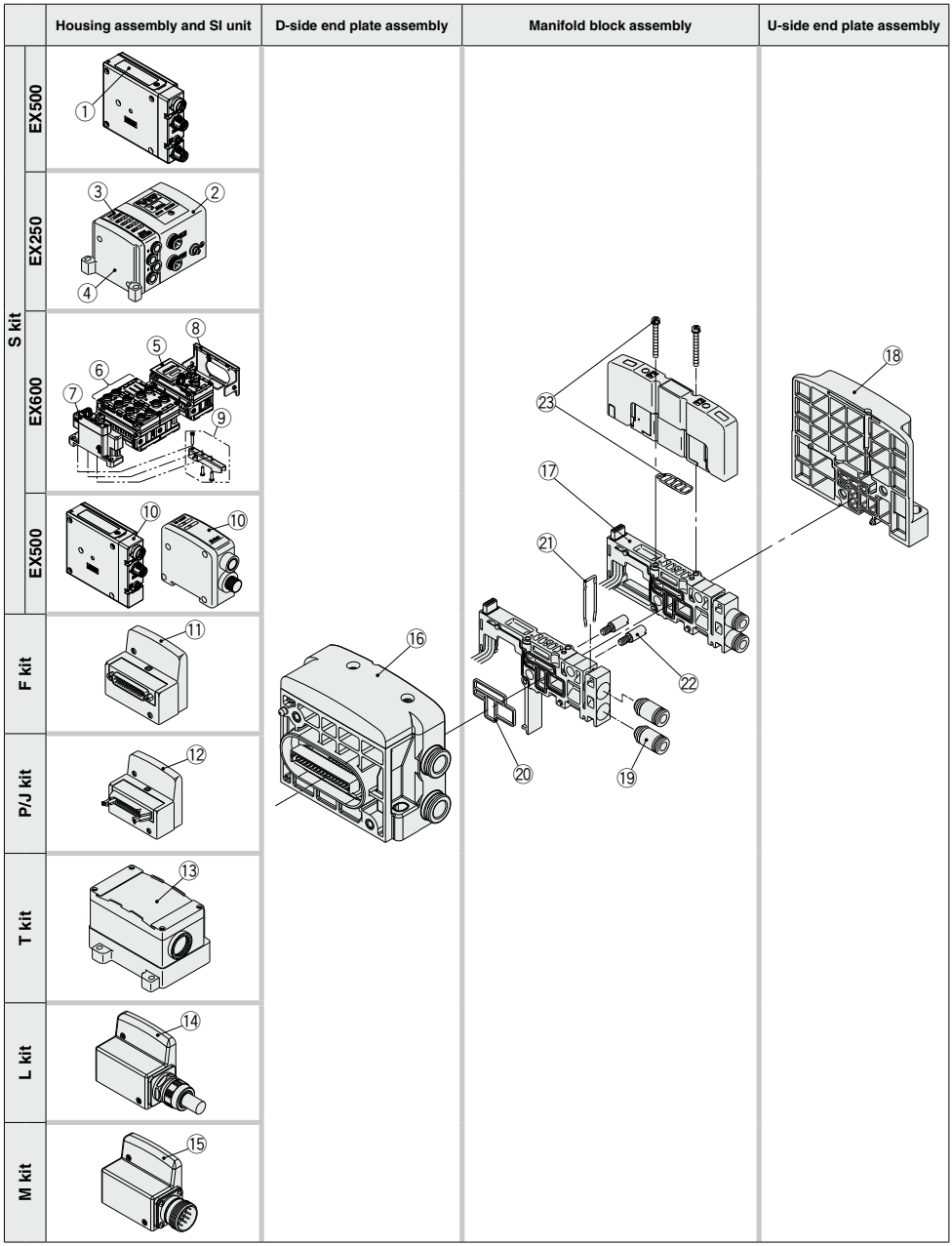


Component Parts

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** Note)	—

Note) Please consult with SMC for pilot valve replacement.

Manifold Exploded View



The 1-port EtherNet/IP compatible SI unit is to be discontinued as of March 2022.
Please consider ordering the 2-port EtherNet/IP compatible SI unit as a substitute.

Discontinued models		Substitute models
EX600-SEN1	▶	EX600-SEN3
EX600-SEN2	▶	EX600-SEN4

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, PNP (Negative common)
		EX260-SDN2	DeviceNet® M12 connector, 32 outputs, NPN (Positive common)
		EX260-SDN3	DeviceNet® M12 connector, 16 outputs, PNP (Negative common)
		EX260-SDN4	DeviceNet® M12 connector, 16 outputs, NPN (Positive common)
		EX260-SPR1	PROFIBUS DP M12 connector, 32 outputs, PNP (Negative common)
		EX260-SPR2	PROFIBUS DP M12 connector, 32 outputs, NPN (Positive common)
		EX260-SPR3	PROFIBUS DP M12 connector, 16 outputs, PNP (Negative common)
		EX260-SPR4	PROFIBUS DP M12 connector, 16 outputs, NPN (Positive common)
		EX260-SPR5	PROFIBUS DP D-sub connector, 32 outputs, PNP (Negative common)
		EX260-SPR6	PROFIBUS DP D-sub connector, 32 outputs, NPN (Positive common)
		EX260-SPR7	PROFIBUS DP D-sub connector, 16 outputs, PNP (Negative common)
		EX260-SPR8	PROFIBUS DP D-sub connector, 16 outputs, NPN (Positive common)
		EX260-SMJ1	CC-Link M12 connector, 32 outputs, PNP (Negative common)
		EX260-SMJ2	CC-Link M12 connector, 32 outputs, NPN (Positive common)
		EX260-SMJ3	CC-Link M12 connector, 16 outputs, PNP (Negative common)
		EX260-SMJ4	CC-Link M12 connector, 16 outputs, NPN (Positive common)
		EX260-SEC1	EtherCAT M12 connector, 32 outputs, PNP (Negative common)
		EX260-SEC2	EtherCAT M12 connector, 32 outputs, NPN (Positive common)
		EX260-SEC3	EtherCAT M12 connector 16 outputs, PNP (Negative common)
		EX260-SEC4	EtherCAT M12 connector, 16 outputs, NPN (Positive common)
		EX260-SPN1	PROFINET M12 connector, 32 outputs, PNP (Negative common)
		EX260-SPN2	PROFINET M12 connector, 32 outputs, NPN (Positive common)
		EX260-SPN3	PROFINET M12 connector, 16 outputs, PNP (Negative common)
		EX260-SPN4	PROFINET M12 connector, 16 outputs, NPN (Positive common)
		EX260-SEN1	EtherNet/IP™ M12 connector, 32 outputs, PNP (Negative common)
		EX260-SEN2	EtherNet/IP™ M12 connector, 32 outputs, NPN (Positive common)
		EX260-SE3	EtherNet/IP™ M12 connector 16 outputs, PNP (Negative common)
		EX260-SE4	EtherNet/IP™ M12 connector, 16 outputs, NPN (Positive common)
②	**EX250 SI unit**	**EX250-SDN1**	DeviceNet® PNP (Negative common)
		EX250-SPR1	PROFIBUS DP PNP (Negative common)
		EX250-SAS3	AS-Interface 31 slave, 8 in/8 out, 2 isolated common type, PNP (Negative common)
		EX250-SAS5	AS-Interface 31 slave, 4 in/4 out, 2 isolated common type, PNP (Negative common)
		EX250-SAS7	AS-Interface 31 slave, 8 in/8 out, 1 common type, PNP (Negative common)
		EX250-SAS9	AS-Interface 31 slave, 4 in/4 out, 1 common type, PNP (Negative common)
		EX250-SCA1A	CANopen PNP (Negative common)
		EX250-SEN1	EtherNet/IP™ PNP (Negative common)
③	**EX250 input block**	**EX250-IE1**	M12 2 inputs
		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® PNP (Negative common)
		EX600-SDN2A	DeviceNet® NPN (Positive common)
		EX600-SMJ1	CC-Link PNP (Negative common)
		EX600-SMJ2	CC-Link NPN (Positive common)
		EX600-SPR1A	PROFIBUS DP PNP (Negative common)
		EX600-SPR2A	PROFIBUS DP NPN (Positive common)
		EX600-SEN1	EtherNet/IP™ (1 port) PNP (Negative common)
		EX600-SEN2	EtherNet/IP™ (1 port) NPN (Positive common)
		EX600-SEN3	EtherNet/IP™ (2 ports) PNP (Negative common)
		EX600-SEN4	EtherNet/IP™ (2 ports) NPN (Positive common)
		EX600-SPN1	PROFINET PNP (Negative common)
		EX600-SPN2	PROFINET NPN (Positive common)
		EX600-SEC1	EtherCAT PNP (Negative common)
		EX600-SEC2	EtherCAT NPN (Positive common)
		EX600-WEN1 Note)	Wireless base module EtherNet/IP™ PNP (Negative common)
		EX600-WEN2 Note)	Wireless base module EtherNet/IP™ NPN (Positive common)
		EX600-WPN1 Note)	Wireless base module PROFINET PNP (Negative common)
		EX600-WPN2 Note)	Wireless base module PROFINET NPN (Positive common)
		EX600-WSV1 Note)	Wireless remote module PNP (Negative common)
		EX600-WSV2 Note)	Wireless remote module NPN (Positive common)
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-DXNF	NPN input, Spring type terminal block, 32 pins, 16 inputs
		EX600-DXPF	PNP input, Spring type terminal block, 32 pins, 16 inputs

Note) The wireless system is suitable for use only in a country where it is in accordance with the Radio Act and regulations of that country.

Manifold Assembly Part No.

<Housing Assembly and SI Unit, Input Block>

No.	Description	Part no.	Note
⑥	EX600 digital output unit	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-DYPE	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 analog output unit	EX600-AYA	M12 connector, 5 pins (2 pcs.), 2-channel output
	EX600 analog I/O unit	EX600-AMB	M12 connector, 5 pins (4 pcs.), 2-channel input/output
⑦	EX600 end plate	EX600-ED2	M12 connector, 5 pins
		EX600-ED2-2	M12 connector, 5 pins, with DIN rail mounting bracket
		EX600-ED3	7/8 inch connector, 5 pins
		EX600-ED3-2	7/8 inch connector, 5 pins, with DIN rail mounting bracket
		EX600-ED4	M12 connector (4 pins/5 pins) IN/OUT
		EX600-ED4-2	M12 connector (4 pins/5 pins) IN/OUT, with DIN rail mounting bracket
		EX600-ED5	M12 connector (4 pins/5 pins) IN/OUT
		EX600-ED5-2	M12 connector (4 pins/5 pins) IN/OUT, 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-S103	EX500 Gateway Decentralized System 2 Negative common (PNP)
		EX500-Q001	EX500 Gateway Decentralized System Positive common (NPN)
		EX500-Q101	EX500 Gateway Decentralized System Negative common (PNP)
⑪	D-sub connector housing assembly	VVQC1000-F25-1	F kit, 25 pins
⑫	Flat ribbon cable housing assembly	VVQC1000-P26-1	P kit, 26 pins
		VVQC1000-P20-1	P kit, 20 pins
	Flat ribbon cable housing assembly Flat ribbon cable PC wiring system compatible	VVQC1000-J20-1	J kit, 20 pins
⑬	Terminal block box housing assembly	VVQC1000-T0-1	T kit
⑭	Lead wire 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
⑮	Circular connector housing assembly	VVQC1000-M26-1	M kit, 26 pins

⑯D-side end plate assembly part no.

SS0700 − 3 A − 1 − C8 − □

Number of outputs

Symbol	Specifications
A	24 outputs or less
B	25 outputs or more

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

∗: When both options are specified, indicate as -RS.

⑰Manifold 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

Stations

Symbol	Stations
02	2 stations
⋮	⋮
24	24 stations

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

⑱U-side end plate assembly part no.

SS0700 − 2A − 2

⑲Fitting assembly part no.

VVQ0000 − 50A − C4

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"

∗: Purchasing order is available in units of 10 pieces.
∗: 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∗1
㉑	Clip	SS0700-80A-4	10∗1
㉒	Tie-rod assembly	SS0700-TR-□	2∗2

∗1: 1 set includes 10 pieces.
∗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

∗: 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)

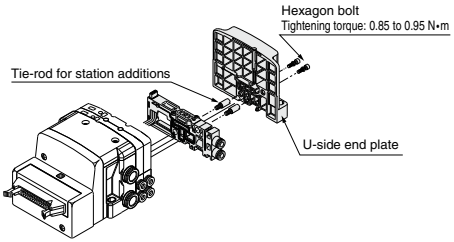
What to order

• Manifold block assembly (Refer to page 489-⑯.)

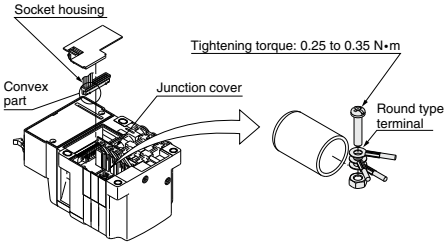
Steps for adding stations

① Loosen hexagon bolts from the end plate at the U-side and remove the end plate.

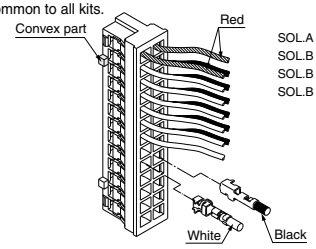
② Connect the tie-rod for increasing the station number, open the junction cover, mount the manifold block assembly and U-side end plate and tighten them by hexagon bolts.
(Tightening torque: 0.85 to 0.95 N•m)

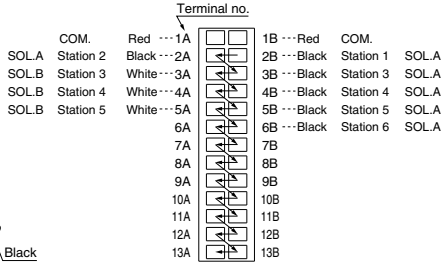


③ Connect the round type terminal of red lead wire to the common terminal inside the junction cover.



④ Take out the socket housing and connect the black and white lead wires.
The connection layout is common to all kits.

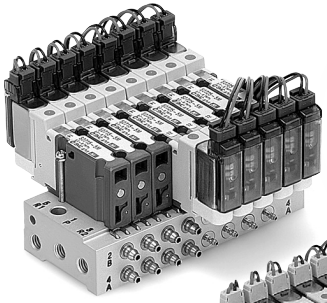




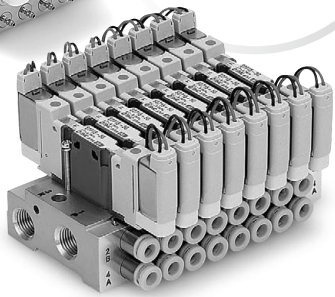
Connector

C kit

Plug-in Manifold Bar Base



With barb fittings

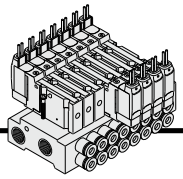


With One-touch fittings

Individual Connector

Page 491

C Series 10-S0700 Plug Lead Manifold Bar Base kit (Connector)



How to Order Manifold

10 – SS0755 – 08 C4 ☐ C – ☐

Clean series

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 497.
∗ **For manifold optional parts, refer to pages 497 to 498.**

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	
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.
∗ **The manifold pitch 7.5 mm type is available as special order.**

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 Valve

10 – S07 1 5 ☐ – 5 G

Clean series

Actuation type

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 423.

Base mounted plug lead

Function

Symbol	Specifications
Nil	Standard
R	External pilot Note)

Note) Not compatible with dual 3-port valves.
The 3(R) port is released to the atmosphere.
(Pressurization and vacuum are not allowed.)

Voltage

Symbol	Specifications
5	24 VDC
6	12 VDC

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)

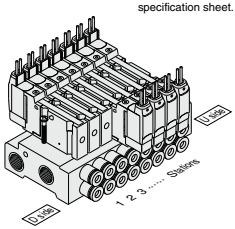
How to Order Manifold Assembly

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

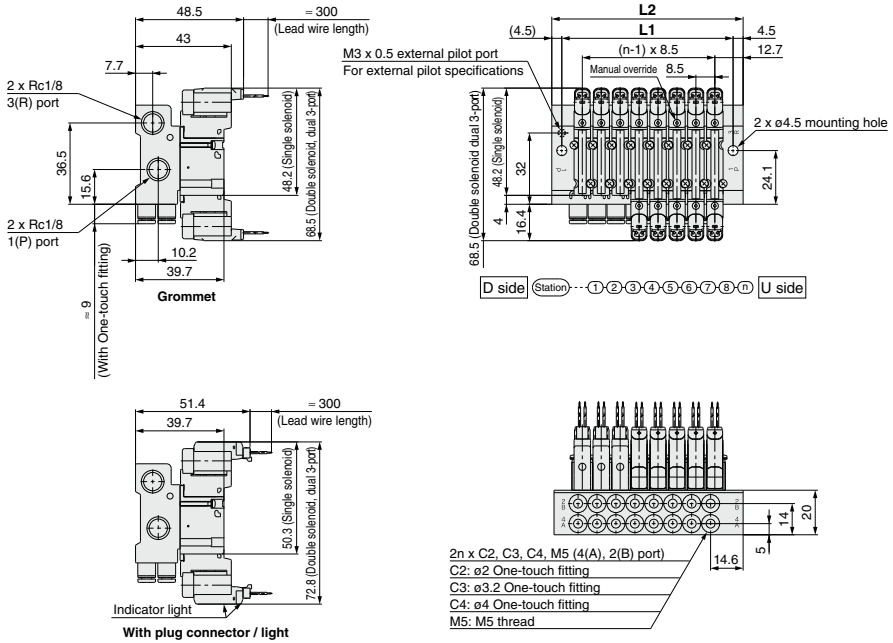
<Example>
Connector kit
10-SS0755-07C4C··· 1 set – Manifold base part no.
∗ **10-S0715-5G····· 3 sets – Valve part no. (Stations 1 to 3)**
∗ **10-S0725-5G····· 2 sets – Valve part no. (Stations 4 to 5)**
∗ **10-S07A5-5G····· 2 sets – Valve part no. (Stations 6 to 7)**

Prefix the asterisk to the part no. of the solenoid valve, etc.

Write sequentially from the 1st station on the D side. When part no. written collectively are complicated, specify on the manifold specification sheet.



10-SS0755-□ M5 C□ N□



Dimensions

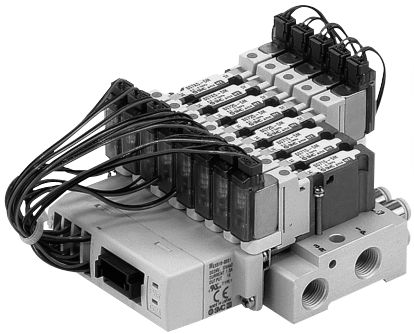
Formula L1 = 8.5n + 8.9, L2 = 8.5n + 17.9 n: Station (Maximum 20 stations)

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

Serial Transmission

S kit

Plug Lead Manifold Bar Base



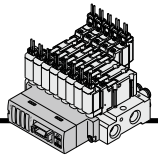
Gateway-type
Serial Transmission
System

EX510

Connect all wiring
using connectors.

Page 495

S Series 10-S0700 Plug Lead Manifold Bar Base kit (Serial Transmission) EX510 Gateway-type Serial Transmission System



How to Order Manifold

10 – SS0755 – SA □ 08 C4 □ – □

Clean series

S kit
EX510 serial wiring

SI unit COM.

Nil	+COM.
N	–COM.

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

Actuation type	Single	Double, Dual 3-port
Number of solenoids	1	2

Refer to the **WEB catalog** 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 497.
∗ **For manifold optional parts, refer to pages 497 to 498.**

P, R port thread type

Symbol	Manifold pitch
	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)	
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.

How to Order Valve

10 – S07 1 5 □ – 5 MO

Clean series

Actuation type

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 423

Base mounted plug lead

Function

Symbol	Specifications
Nil	Standard
R	External pilot Note)

Note) Not compatible with dual 3-port valves. The 3(R) port is released to the atmosphere. (Pressurization and vacuum are not allowed.)

Voltage: 24 VDC

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

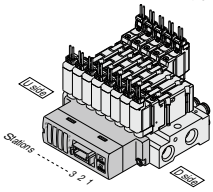
How to Order Manifold Assembly

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

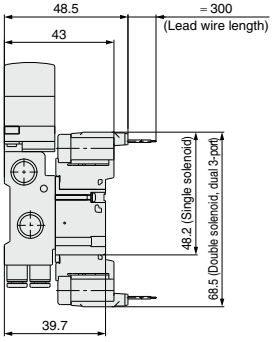
<Example>
Serial transmission kit
10-SS0755-SA08C4 ··· 1 set – Manifold base part no.
∗ **10-S0715-5MO ····· 3 sets – Valve part no. (Stations 1 to 3)**
∗ **10-S0725-5MO ····· 3 sets – Valve part no. (Stations 4 to 6)**
∗ **10-S07A5-5MO ····· 2 sets – Valve part no. (Stations 7 to 8)**

Prefix the asterisk to the part no. of the solenoid valve, etc.

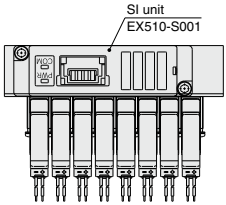
Write sequentially from the 1st station on the D side. When part no. written collectively are complicated, specify on the manifold specification sheet.
The connector assembly lead wire length used for EX510 manifold varies depending on the number of stations. Therefore, solenoid valves (including a blanking plate) and connector assembly are assembled when shipped as a standard specification. Please specify the mounting solenoid valve when ordering.

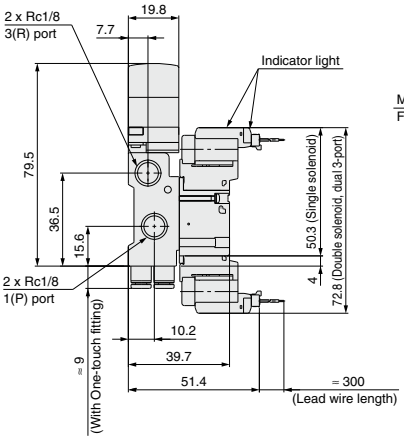


10-SS0755
S kit (Serial transmission: EX510)

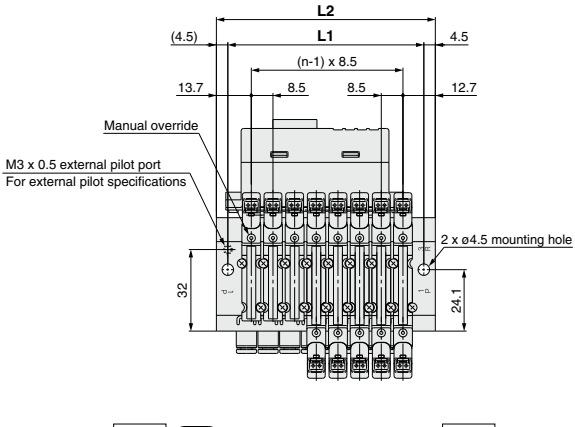


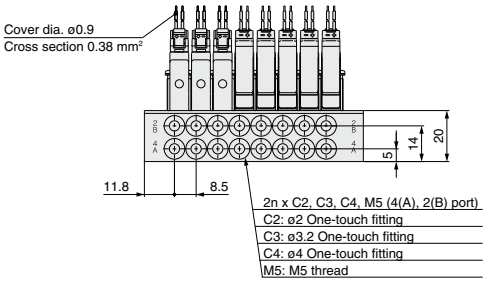
Grommet





With plug connector / light





Dimensions

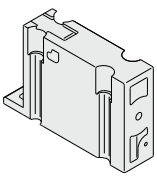
L \ n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L1	68.4	68.4	68.4	68.4	68.4	68.4	76.9	85.4	93.9	102.4	110.9	119.4	127.9	136.4	144.9
L2	77.4	77.4	77.4	77.4	77.4	77.4	85.9	94.4	102.9	111.4	119.9	128.4	136.9	145.4	153.9

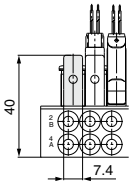
Blanking plate assembly

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: 21 g





Individual SUP spacer

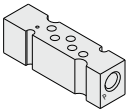
SS0700-P-5-M5

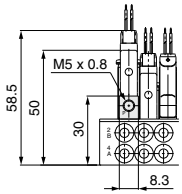
Port size

M5	M5 thread

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

Weight: 7 g
∗ Compatible with 8.5 mm pitch manifold only.





Individual EXH spacer

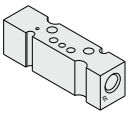
SS0700-R-5-M5

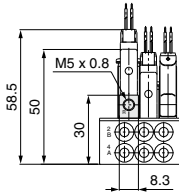
Port size

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: 7 g
∗ Compatible with 8.5 mm pitch manifold only.

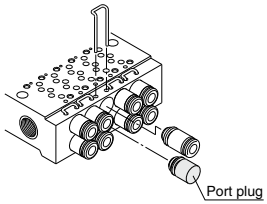


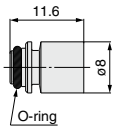


Port plug

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.



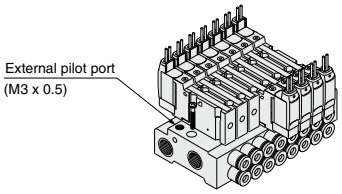


External pilot [-R]

This can be used when the air pressure is 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 Valve (Example)
10-S0715 R -5G
External pilot

● How to Order Manifold (Example)
∗ Indicate -R for an option.
10-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) Since the pilot EXH of valves with the external pilot specification also has a common exhaust specification, the 3(R) port should be released to the atmosphere.

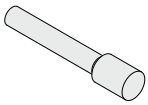
Blanking plug (For One-touch fittings)

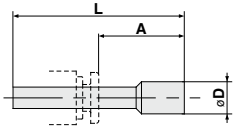
KJP-02

23

KQ2P-04

06





Dimensions (mm)

Applicable fitting size ø**d**	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

Series 10-S0700

5 Port Solenoid Valve: Base Mounted Plug Lead, Single Unit

How to Order Valve

10 – S07 [1] 5 [ ] – 5 [G] – [M5]

Clean series

Actuation type

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 423.

Plug lead

Function

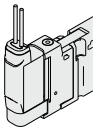
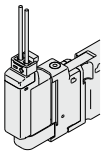
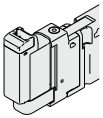
Symbol	Specifications
Nil	Standard
R	External pilot Note)

Note) Not compatible with dual 3-port valves.

Voltage

Symbol	Specifications
5	24 VDC
6	12 VDC

Electrical entry

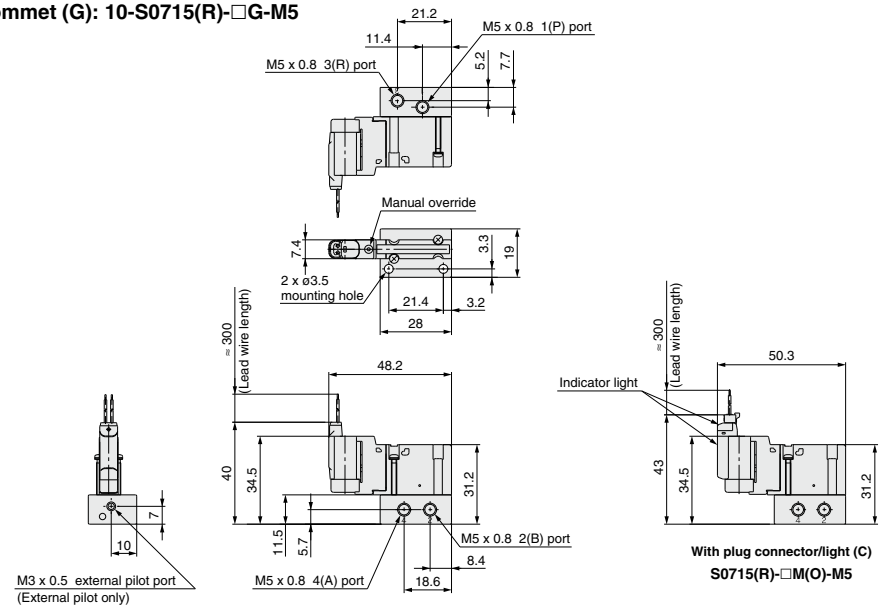
Symbol	Specifications	Configuration
G	Grommet	
M	M-type plug connector, with lead wire (With light/surge voltage suppressor)	
MO	M-type plug connector, without lead wire (With light/surge voltage suppressor)	

Sub-plate

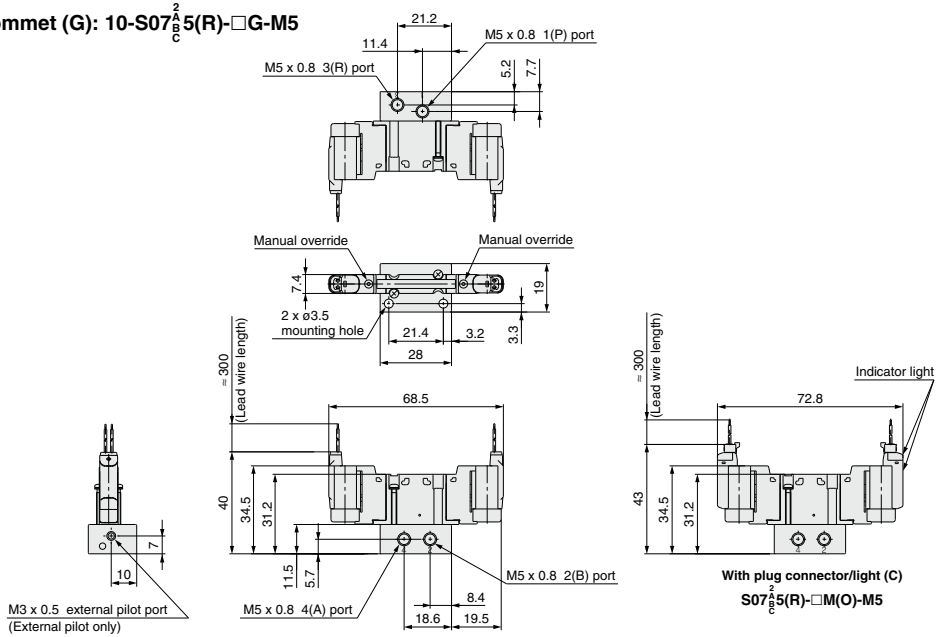
Symbol	Specifications
Nil	Without sub-plate
M5	With sub-plate

Dimensions

2-Position Single
Grommet (G): 10-S0715(R)-□G-M5



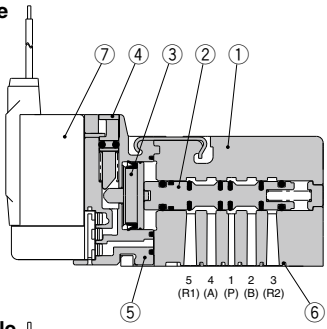
2-Position Double/4-Position Dual 3-Port
Grommet (G): 10-S07$^{2}_{C}$5(R)-□G-M5



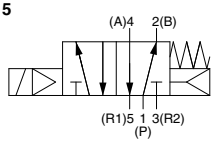
Series 10-S0700 Plug Lead Single Unit

Construction: Main Parts/Replacement Parts

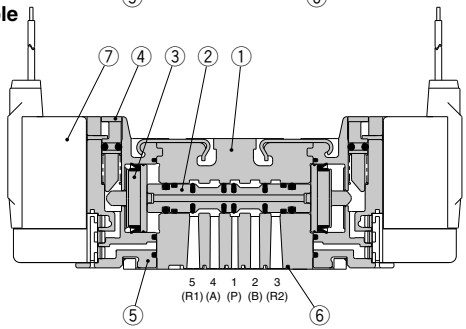
2-Position Single



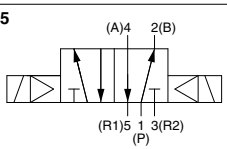
S0715



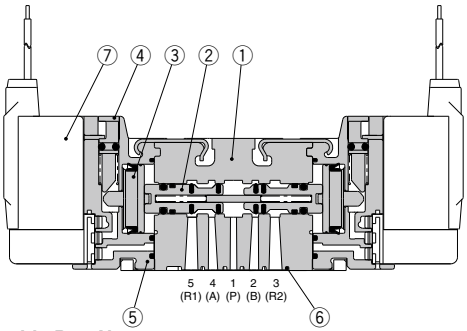
2-Position Double



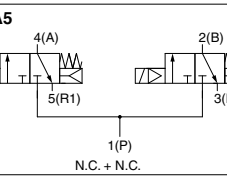
S0725



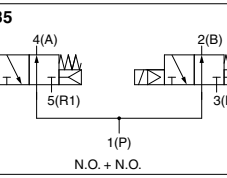
4-Position Dual 3-Port Valve



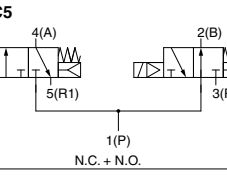
S07A5



S07B5



S07C5



<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)

Note) For pilot valve assembly replacement, refer to the Specific Product Precautions 3.

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 the Specific Product Precautions 3.

SMC

Series 10-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) Purchase orders are 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.

<Pilot Valve Assembly>

10-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)

Note) For pilot valve assembly replacement, refer to the Specific Product Precautions 3.

<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 0 01

Output specifications

0	NPN output (+COM.)
1	PNP output (–COM.)

Specific Product Precautions 1

Be sure to read this before handling.
Refer to page 1382 for Safety Instructions and pages 677 to 683 for 3/4/5 Port Solenoid Valve Precautions.

Manual Override

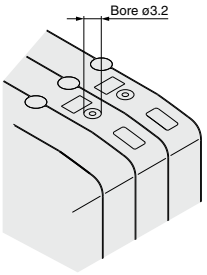
⚠ Warning

The manual override is used for switching the main valve.

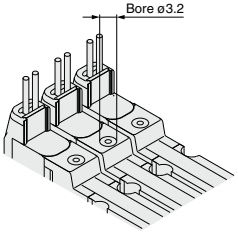
Push type (Tool required)

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

Plug-in



Plug lead

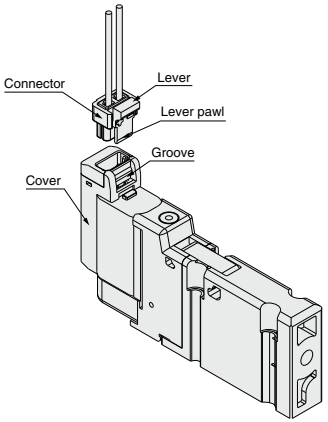


How to Attach/Detach Plug Connector

<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 10 N or more).

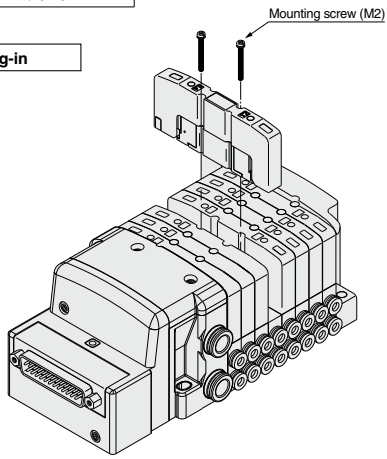
How to Mount Valve

⚠ Caution

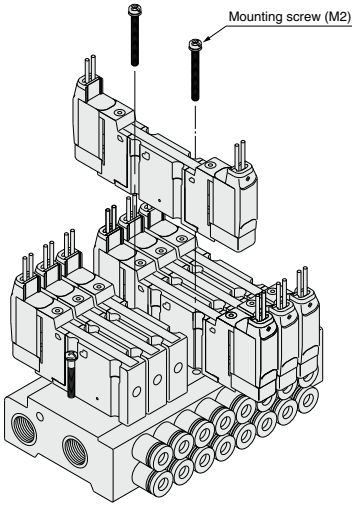
Tighten the bolts firmly to stop the gasket from coming away from the valve using the appropriate torque as shown on the following table.

Proper tightening torque N•m
0.17 to 0.23

Plug-in



Plug lead



Specific Product Precautions 2

Be sure to read this before handling.
Refer to page 1382 for Safety Instructions and pages 677 to 683 for 3/4/5 Port Solenoid Valve Precautions.

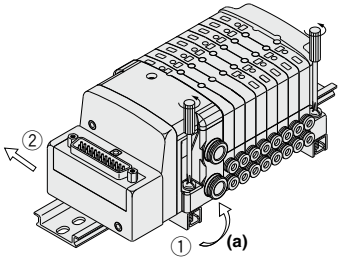
How to Mount/Remove DIN Rail

⚠ Caution

Plug-in

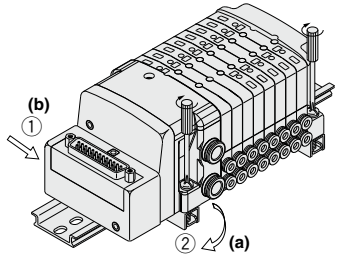
Removal

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 0.4 to 0.6 N•m.

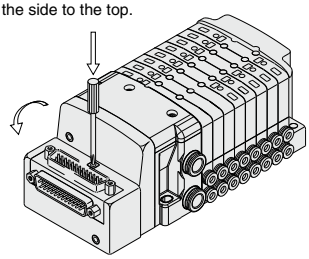


How to Change Connector Entry Direction

⚠ 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.

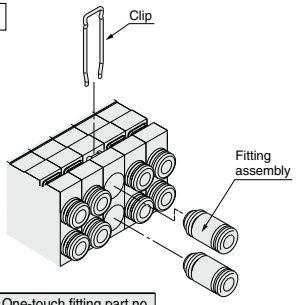


How to Replace Cylinder Port Fittings

⚠ 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.

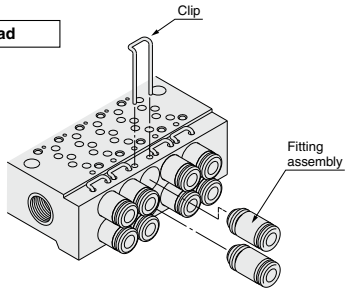
Plug-in



Applicable tubing O.D.	One-touch fitting part no.
Applicable tubing ø2	VVQ0000-50A-C2
Applicable tubing ø3.2	VVQ0000-50A-C3
Applicable tubing ø4	VVQ0000-50A-C4
Applicable tubing ø1/8"	VVQ0000-50A-N1
Applicable tubing ø5/32"	VVQ0000-50A-N3

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

Plug lead



	Applicable tubing O.D.	Fitting part no.
8.5 mm pitch (One-touch fitting)	Applicable tubing ø2	VVQ0000-50A-C2
	Applicable tubing ø3.2	VVQ0000-50A-C3
	Applicable tubing ø4	VVQ0000-50A-C4
	Applicable tubing ø1/8"	VVQ0000-50A-N1
	Applicable tubing ø5/32"	VVQ0000-50A-N3
7.5 mm pitch (Barb fitting)	Barb fitting ø2	SS070-50A-20
	Barb fitting ø3.2	SS070-50A-32
	Barb fitting ø4	SS070-50A-40

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

Series 10-S0700
Specific Product Precautions 3

Be sure to read this before handling.
Refer to page 1382 for Safety Instructions and pages 677 to 683 for 3/4/5 Port Solenoid Valve Precautions.

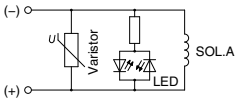
Internal Wiring Specifications

⚠ Caution

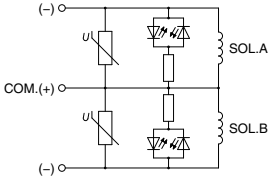
Light/surge voltage suppressor

No polarity by adopting non-polar light.

Plug-in Single/All plug lead types



Plug-in Double, Dual 3-port

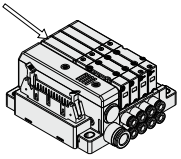


Note) Coil surge voltage generated when OFF is about –60 V. Please contact SMC separately for further suppression of the coil surge voltage.

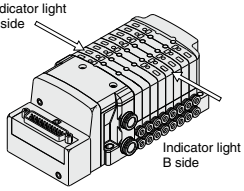
Plug-in

Slim type plug-in manifold

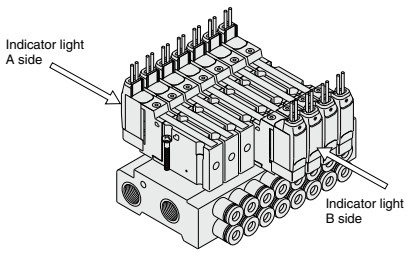
A: Red
B: Green



Plug-in manifold



Plug lead manifold



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

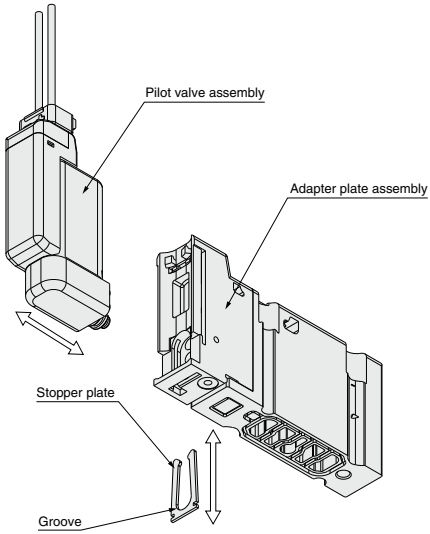
<Plug lead>

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.



Series 10-S0700
Specific Product Precautions 4

Be sure to read this before handling.
Refer to page 1382 for Safety Instructions and pages 677 to 683 for 3/4/5 Port Solenoid Valve Precautions.

EX500/EX250/EX260

⚠ 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 watchmakers' 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.

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. Use the following UL approved products for DC power supply combinations.

1) Controlled voltage current circuit conforming to UL508
Circuit uses the secondary coil of an isolated transformer as the power supply, satisfying the following conditions.
- Max. voltage (with no load): 30 Vrms (42.4 V peak) or less
- Max. current: (1) 8 A or less (including shorts), and
(2) When controlled by a circuit protector (fuse, etc.) with the following rating

No-load voltage (V peak)	Max. current rating
0 to 20 [V]	5.0
Over 20 [V] to 30 [V]	100 / Peak voltage value

2) A circuit (class 2 circuit) with maximum 30 Vrms (42.4 V peak) or less, and a power supply consisting of a class 2 power supply unit confirming to UL1310, or a class 2 transformer confirming to UL1585

Series 10-S0700
Specific Product Precautions 5

Be sure to read this before handling.
Refer to page 1382 for Safety Instructions and pages 677 to 683 for 3/4/5 Port Solenoid Valve Precautions.

EX500/EX250

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.**

EX510

Design/Selection

⚠ Warning

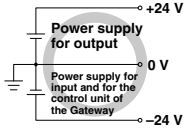
1. **Use within the allowable voltage range.**
   Using beyond the allowable voltage range is likely to cause the units and connecting devices to be damaged or to malfunction.
2. **Do not use beyond the specification range.**
   Using beyond the specification range is likely to cause a fire, malfunction, 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.

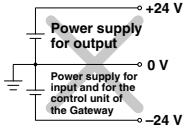
⚠ Caution

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. **Use the following UL approved products for DC power supply combinations.**
   1) Controlled voltage current circuit conforming to UL508
      Circuit uses the secondary coil of an isolated transformer as the power supply, satisfying the following conditions.
      - Max. voltage (with no load): 30 Vrms (42.4 V peak) or less
      - Max. current: (1) 8 A or less (including shorts), and
        (2) When controlled by a circuit protector (fuse, etc.) with the following rating

No-load voltage (V peak)	Max. current rating
0 to 20 [V]	5.0
Over 20 [V] to 30 [V]	$\frac{100}{\text{Peak voltage value}}$

   2) A circuit (class 2 circuit) with maximum 30 Vrms (42.4 V peak) or less, and a power supply consisting of a class 2 power supply unit confirming to UL1310, or a class 2 transformer confirming to UL1585
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 10-S0700
Specific Product Precautions 6

Be sure to read this before handling.
Refer to page 1382 for Safety Instructions and pages 677 to 683 for 3/4/5 Port Solenoid Valve Precautions.

EX510

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 10-S0700
Specific Product Precautions 7

Be sure to read this before handling.
Refer to page 1382 for Safety Instructions and pages 677 to 683 for 3/4/5 Port Solenoid Valve Precautions.

EX510

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 benzine or thinner.

Using such chemicals is likely to cause damage.

Specific Product Precautions 8

Be sure to read this before handling.
Refer to page 1382 for Safety Instructions and pages 677 to 683 for 3/4/5 Port Solenoid Valve Precautions.

EX600

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. Use the following UL approved products for DC power supply combinations.

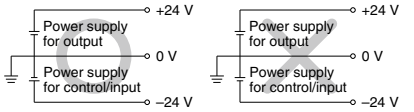
1) Controlled voltage current circuit conforming to UL508
Circuit uses the secondary coil of an isolated transformer as the power supply, satisfying the following conditions.
• Max. voltage (with no load): 30 Vrms (42.4 V peak) or less
• Max. current: (1) 8 A or less (including shorts), and
(2) When controlled by a circuit protector (fuse, etc.) with the following rating

No-load voltage (V peak)	Max. current rating
0 to 20 [V]	5.0
Over 20 [V] to 30 [V]	100 / Peak voltage value

2) A circuit (class 2 circuit) with maximum 30 Vrms (42.4 V peak) or less, and a power supply consisting of a class 2 power supply unit confirming to UL1310, or a class 2 transformer confirming to UL1585

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 operation 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.

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.

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Specific Product Precautions 9

Be sure to read this before handling.
Refer to page 1382 for Safety Instructions and pages 677 to 683 for 3/4/5 Port Solenoid Valve Precautions.

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Wiring

⚠Caution

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.

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 handheld terminal, prevent water, solvent or oil from entering inside from the connecter 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

1. Select the proper type of enclosure according to the environment of operation.

IP65/67 is achieved when the following conditions are met.

1) Provide appropriate wiring between all units using electrical wiring cables, communication connectors and cables with M12 connectors.
2) Suitable mounting of each unit and manifold valve.
3) Be sure to mount a seal cap on any unused connectors.

If using in an environment that is exposed to water splashes, please take measures such as using a cover.
Also, the Handheld Terminal conforms to IP20, so prevent foreign matter from entering inside, and water, solvent or oil from coming in direct contact with it.

Operating Environment

⚠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

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.

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Specific Product Precautions 10

Be sure to read this before handling.
Refer to page 1382 for Safety Instructions and pages 677 to 683 for 3/4/5 Port Solenoid Valve Precautions.

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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 operation manual for setting of the switches.

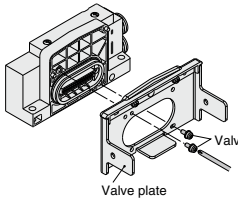
3. For details on programming and address setting, refer to the manual from the PLC manufacturer.
The content of programming related to protocol is designed by the manufacturer of the PLC used.

<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: 0.6 to 0.7 N·m)



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.