

# 5 Port Solenoid Valve Plug Lead Type

## S0700 Series

### Body Ported

#### Flow rate characteristics\*

\* For single/double solenoid

**C [dm<sup>3</sup>/(s·bar)]: 0.6**

- Valve width: **7.4 mm**
- Possible to drive cylinders: Up to **Ø32** (300 mm/s)\*  
\* For details, refer to page 741.
- Power consumption: **0.35 W**
- Weight: **39 g**\*  
\* Single solenoid, built-in silencer type



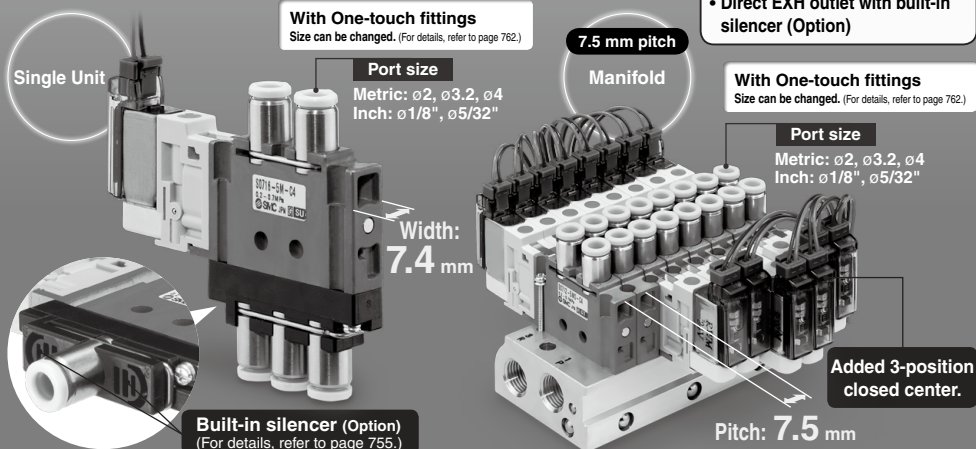
SJ

SY

SY

S0700

S0700



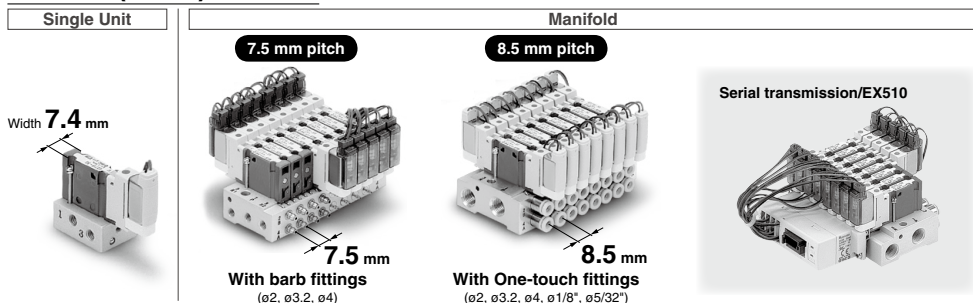
### Base Mounted

#### Flow rate characteristics

**C [dm<sup>3</sup>/(s·bar)]: 0.39**

- Possible to drive cylinders: Up to **Ø25** (300 mm/s)\*  
\* For details, refer to page 741.
- Power consumption: **0.35 W**

Added 3-position closed center.

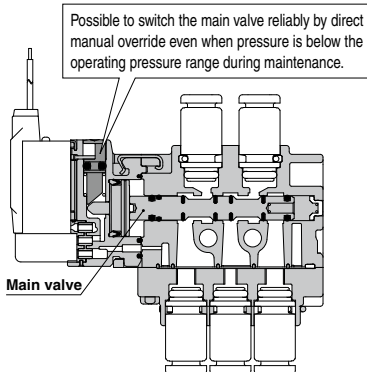


## 4-Position Dual 3-Port Valve

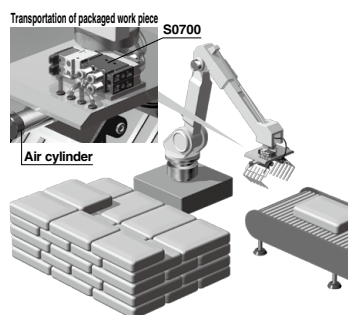
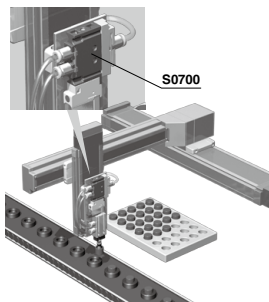
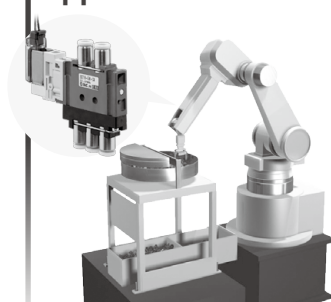
- Two 3-port valves in one body.
- Independently operating 3-port valve at each side of A and B.
- Number of stations occupied for 3-port valve halved.
- Available as 4-position 5-port valve.

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

## Adopted Direct Manual.



## Applications



## Plug-in Type Series Variations

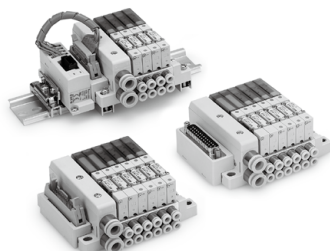
For details, refer to page 645.

### Slim Compact Plug-in Manifold Bar Base

Footprint: Reduced by **45%**\*

Height: Reduced by **20 mm**\*

\* Compared with plug-in manifold stacking base



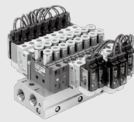
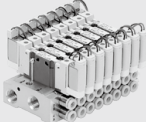

### Plug-in Manifold Stacking Base

**Many Combinations Available to Fit Your Needs**

- Serial transmission  
EX180/EX260/EX250  
EX600/EX500/EX510
- D-sub connector
- Flat ribbon cable
- Terminal block box
- Lead wire
- Circular connector



## Variations/Options

Base model				Body Ported			Base Mounted			Single Unit	
				Manifold pitch: 7.5 mm			Manifold pitch: 8.5 mm			Body Ported	
				Page 745			Page 750			Page 742	
											
				SS0752-□□C			SS0755-□C□C			S07□6-5□-□-□	
Piping specifications				1(P), 3(R)	M5						
					Rc1/8	●	●				
					ø2					●	
					ø4					●	
					ø1/8"					●	
					ø5/32"					●	
				4(A), 2(B)	M3			●			
					M5		●				●
					ø2	●	●	● Note 1)	●	●	
					ø3.2		●	● Note 1)			
					ø4	●	●	● Note 1)	●		
					ø1/8"	●	●		●		
					ø5/32"	●	●		●		
				Type of wiring			C Kit: Connector S Kit: Serial transmission (EX510)			Connector kit	
				Direct EXH outlet with built-in silencer			—			● Page 755	
				Blanking plate assembly			● Page 755			—	
				External pilot			● Note 2) Page 755			● Note 2) Page 755	
				Individual SUP spacer			—			—	
				Individual EXH spacer			—			—	
				Port plug			—			—	
				Blanking plug			● Page 756			● Page 756	
				Silencer (For manifold EXH port)			● Page 756			—	
				Double check block (Separated)			● Page 757			● Page 757	

Note 1) For barb fittings

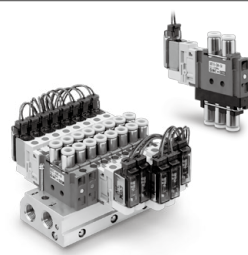
Note 2) Not compatible with dual 3-port valves.

**SJ**
**SY**
**SY**
**S0700**
**S0700**

# INDEX

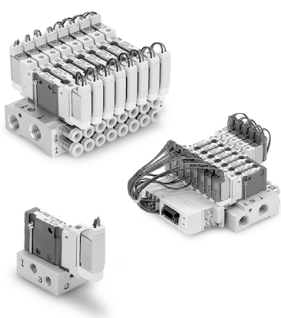
Valve Specifications .....	Page 739
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## Body Ported Bar Base



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## Base Mounted Bar Base



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# S0700 Series Valve Specifications

## Valve Specifications

### Model

Type			Type of actuation	Model	Flow rate characteristics						Note 2) 3)	Note 4)
					1→4/2 (P→A/B)			4/2→5/3 (A/B→R1/R2)			Response time [msec]	Weight [g]
					C [dm <sup>3</sup> /(s·bar)]	b	Cv	C [dm <sup>3</sup> /(s·bar)]	b	Cv		
Body Ported	Single Unit Page 742	2-position	Single	S0716	0.62	0.44	0.18	0.60	0.41	0.17	22 or less	39
			Double	S0726	0.62	0.44	0.18	0.60	0.41	0.17	10 or less	47
		3-pos.	3-position closed center	S0736	0.54	0.37	0.15	0.50	0.38	0.14	45 or less	47
		4-pos.	Dual 3-port valve	S07 <sup>A</sup> <sub>6C</sub>	0.58	0.39	0.16	0.67	0.37	0.18	25 or less	49
	Manifold Bar Base Page 745	2-position	Single	S0712	0.51	0.40	0.15	0.64	0.33	0.15	22 or less	34
			Double	S0722	0.51	0.40	0.15	0.64	0.33	0.15	10 or less	42
		3-pos.	3-position closed center	S0732	0.54	0.37	0.10	0.46	0.38	0.08	45 or less	42
		4-pos.	Dual 3-port valve	S07 <sup>A</sup> <sub>2C</sub>	0.57	0.39	0.15	0.55	0.37	0.15	25 or less	44
Base Mounted	Single Unit Page 747	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
	Manifold Bar Base Page 750	3-pos.	3-position closed center	S0735	0.29	0.29	0.07	0.26	0.21	0.06	28 or less	38
		4-pos.	Dual 3-port valve	S07 <sup>A</sup> <sub>5C</sub>	0.34	0.34	0.09	0.33	0.33	0.08	12 or less	36

Note 1) Values for cylinder port fitting port size C4. The flow rate of a body ported single valve is the SUP and EXH port C4 value.

Note 2) Based on JIS B 8419-2010 (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.

Note 3) If the product is used in the following conditions or environment, switching of the valve may be significantly delayed compared to the above values.

1. The first response time when the valve is not used for a long period of time
2. When using in an environment where the ambient and fluid temperature is low (10°C or less)

Note 4) The weight of a single unit of the valve includes a built-in EXH port silencer.

Note 5) The flow rate of the body ported product with an external pilot decreases by 10%.

Note 6) The flow rate of the body ported product with a built-in silencer decreases by 30%.

### Specifications

Valve specifications	Valve construction	Rubber seal
	Fluid	Air
	Maximum operating pressure	0.7 MPa
	Minimum operating pressure	0.2 MPa
	Ambient and fluid temperature	-10 to 50°C (Note 1)
	Maximum operating cycle	5 Hz
	Pilot valve exhaust method	Individual exhaust
	Pilot valve manual override	Push type
	Lubrication	Not required
	Impact/Vibration resistance (Note 2)	30/100 m/s <sup>2</sup>
	Enclosure	IP40
Electrical specifications	Noise reduction (Built-in silencer)	20 dB(A) (Note 3)
	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) Impact resistance: No malfunction occurred when it is tested with a drop tester in the axial direction and at the right angles to the main valve and armature in both energized and de-energized states every once for each condition.

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

Note 3) The value may vary depending on the pneumatic circuit or pressure.

## Manifold/Single Unit Specifications

Model		Piping specifications		Type of connection	Note 1) Applicable stations	Note 3) 5-station weight [g]	Note 3) Addition per station [g]
		Port size					
		1 (P), 3 (R)	4 (A), 2 (B)				
Body Ported	Manifold pitch: 7.5 mm Page 745  SS0752-□□C	Rc1/8	C2 (ø2) C4 (ø4) N1 (ø1/8") N3 (ø5/32")	C Kit: Connector	Max. 20 stations	76	10
	Manifold pitch: 8.5 mm Page 750  SS0755-□C□C	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
Base Mounted	Manifold pitch: 7.5 mm Page 750  SS0755-□V□C	M5 thread	M3 (M3 thread) V2 (ø2 Barb fitting) V3 (ø3.2 Barb fitting) V4 (ø5 Barb fitting)	C Kit: Connector	Max. 20 stations	75	10
	Manifold pitch: 8.5 mm Page 750  SS0755-□C□C	M5 thread	M3 (M3 thread) V2 (ø2 Barb fitting) V3 (ø3.2 Barb fitting) V4 (ø5 Barb fitting)	C Kit: Connector	Max. 20 stations	75	10
Single Unit	Body Ported Page 742  S07□6-5□-□-□	C2 (ø2) C4 (ø4) N1 (ø1/8") N3 (ø5/32")	C2 (ø2) C4 (ø4) N1 (ø1/8") N3 (ø5/32")	Connector kit	—	—	—
	Base Mounted Page 747  S07□5-5□-M5	M5 thread	M5 thread	Connector kit	—	14 Note 4)	

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

Note 2) Differs depending on the serial unit type. For details, refer to page 897.

Note 3) Weight excluding valve. For valve weight, refer to page 739.

Note 4) Weight of sub-plate only. For valve weight, refer to page 739.

## Manifold Flow Rate Characteristics

Model	Port size		Flow rate characteristics			
			1→4/2 (P→A/B)		4/2→5/3 (A/B→EA/EB)	
	1, 5, 3 (P, EA, EB)	4, 2 (A, B)	C [dm³/(s·bar)]	Cv	C [dm³/(s·bar)]	Cv
<b>SS0752-□□C</b>	1/8	C4	2.6	0.71	2.7	0.75
<b>SS0755-□□C□C</b>	1/8	C4	2.1	0.58	1.9	0.53
<b>SS0755-□□C</b>	M5 thread	V4	0.86	0.24	0.86	0.24

\* When 5-station single solenoids are operated simultaneously.

## Cylinder Speed Chart

Applicable cylinder speed	Type	Applicable cylinder							
		ø6	ø10	ø16	ø20	ø25	ø32	ø40	ø50
100 mm/s or less	Body Ported								●
	Base Mounted							●	
300 mm/s or less	Body Ported						●		
	Base Mounted					●			
500 mm/s or less	Body Ported			●					
	Base Mounted		●						

[Common conditions]

- Pressure: 0.5 MPa
- Piping length: 1 m
- Load ratio: 50%
- Stroke: 200 mm

\* Use as a guide for selection.

Please confirm the actual conditions with SMC Model Selection Software.

**SJ**
**SY**
**SY**
**S0700**
**S0700**

## Symbol

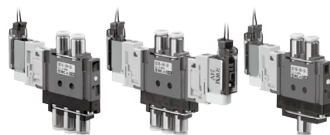
Model	Type of actuation	Symbol
<b>S0712</b> <b>S0716</b> <b>S0715</b>	2-position single	
<b>S0722</b> <b>S0726</b> <b>S0725</b>	2-position double	
<b>S0732</b> <b>S0736</b> <b>S0735</b>	3-position closed center	
<b>S07A2</b> <b>S07A6</b> <b>S07A5</b>	4-position dual 3-port N.C. + N.C. (Exhaust center)	
<b>S07B2</b> <b>S07B6</b> <b>S07B5</b>	4-position dual 3-port N.O. + N.O. (Pressure center)	
<b>S07C2</b> <b>S07C6</b> <b>S07C5</b>	4-position dual 3-port N.C. + N.O.	

Plug Lead Type

Body Ported

# Single Unit

## S0700 Series



### How to Order Valves

**S07 1 6 S - 5 G - C4**

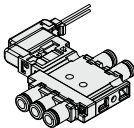
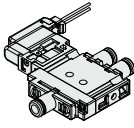
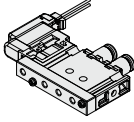
#### Type of actuation

Symbol	Specifications
<b>1</b>	2-position single
<b>2</b>	2-position double
<b>3</b>	3-position closed center
<b>A</b>	4-position dual 3-port (N.C. + N.C.) (Exhaust center)
<b>B</b>	4-position dual 3-port (N.O. + N.O.) (Pressure center)
<b>C</b>	4-position dual 3-port (N.C. + N.O.)

#### Body Ported

Note) It cannot be mounted on a manifold.

#### Function

Symbol	Type
<b>Nil</b>	EXH port: With One-touch fitting 
<b>S</b>	EXH outlet: With built-in silencer Note 1) 
<b>R</b>	External pilot Note 2) 

Note 1) Refer to page 755.

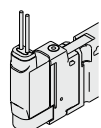
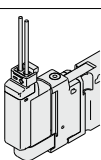
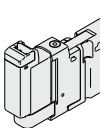
Note 2) Not compatible with dual 3-port valves.

#### P, E port/A, B port size

Symbol	Port size
<b>C2</b>	ø2 One-touch fitting
<b>C4</b>	ø4 One-touch fitting
<b>N1</b>	ø1/8" One-touch fitting
<b>N3</b>	ø5/32" One-touch fitting

Note) For external pilots, the P, E, and X ports are size M3. (Refer to page 744.)

#### Electrical entry

Symbol	Specifications	Configuration
<b>G</b>	Grommet	
<b>M</b>	M-type plug connector, with 300 mm lead wire (With light/surge voltage suppressor)	
<b>MO</b>	M-type plug connector, without lead wire (With light/surge voltage suppressor)	

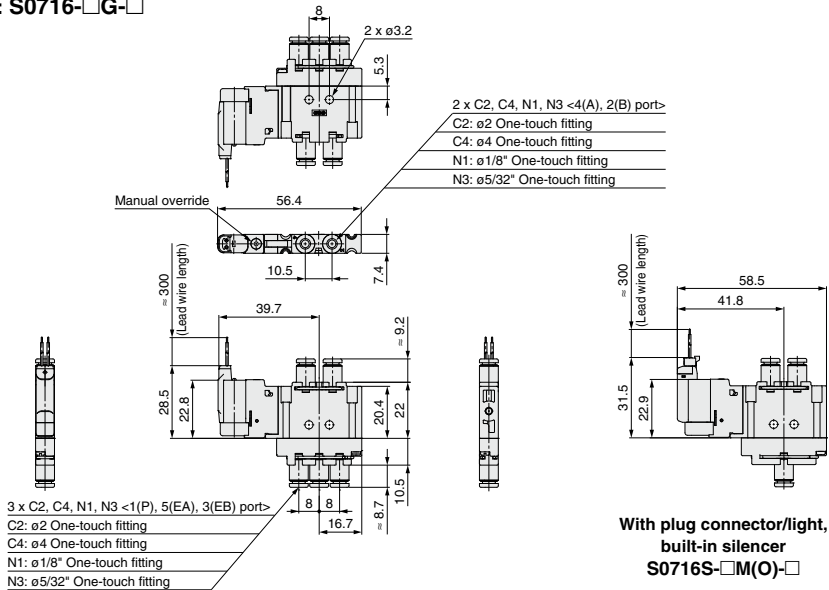
#### Voltage

Symbol	Type
<b>5</b>	24 VDC
<b>6</b>	12 VDC

## Dimensions

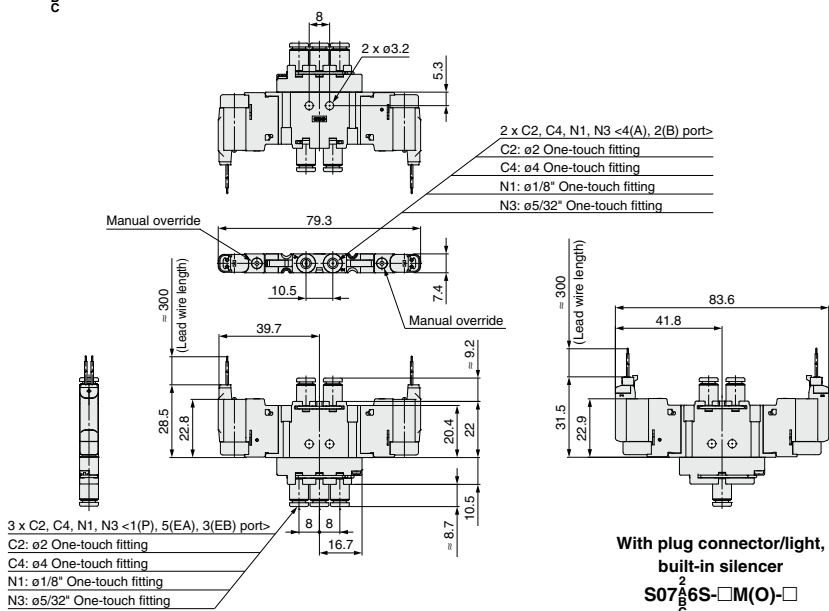
### 2-Position Single

Grommet: S0716-□G-□



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

Grommet: S0716-□G-□

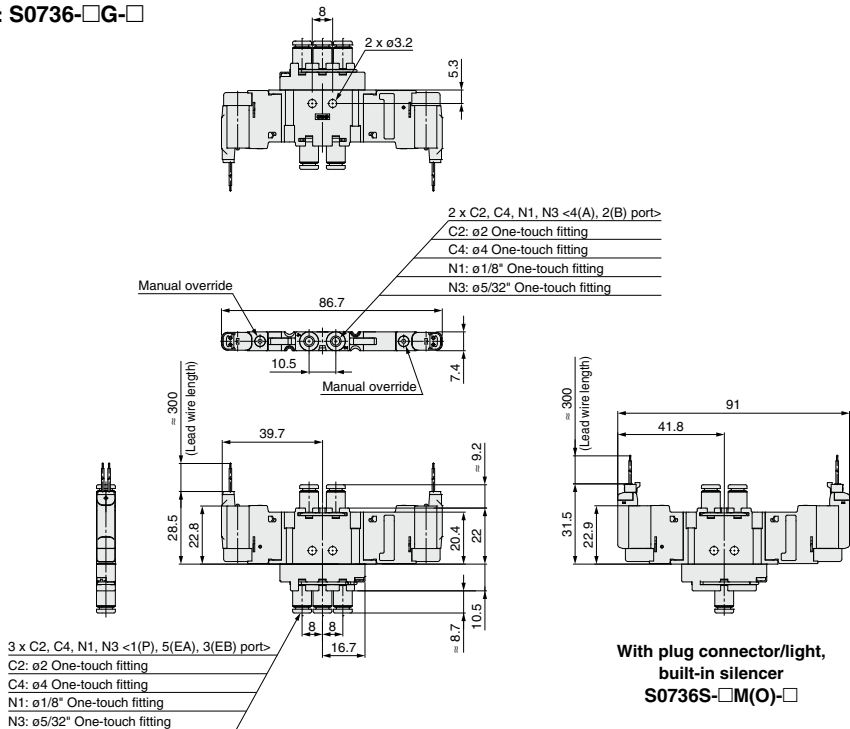


# S0700 Series

## Dimensions

### 3-Position Closed Center

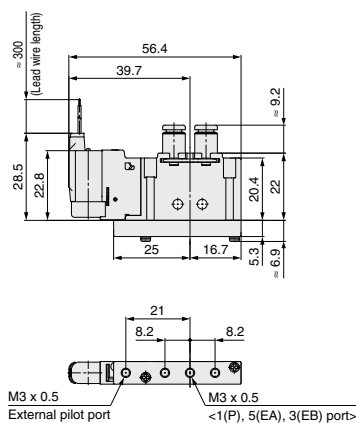
Grommet: S0736-□G-□



### External Pilot

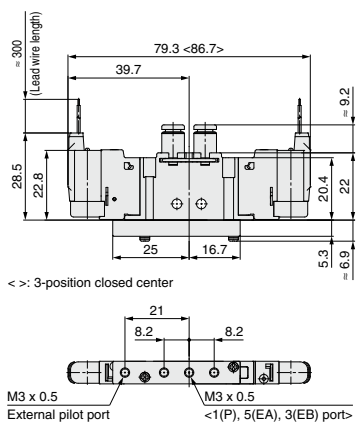
#### 2-Position Single

Grommet (G): S0716R-□G-□-□



#### 2-Position Double/3-Position Closed Center

Grommet (G): S0736R-□G-□-□



\* Other dimensions are the same as the internal pilot.

Plug Lead Type

# Body Ported Manifold Bar Base

## Individual Wiring: C Kit

### S0700 Series



#### How to Order Manifold

SS07 5 2 - 08 C - -

5 port

Body Ported

Stations

Symbol	Stations
02	2 stations
03	3 stations
⋮	⋮
20	20 stations

Note) Max. 20 stations

Thread type

1(P), 3/5(R) port

Nil	Rc
00N	NPT
00T	NPTF
00F	G

Option

Symbol	Type
Nil	None
R	External pilot

Individual wiring

#### How to Order Valves

S07 1 2 - 5 G - C4

Body Ported  
Manifold Bar Base

Note) The valve cannot be used as a stand-alone unit.

Voltage

Symbol	Type
5	24 VDC
6	12 VDC

Function

Symbol	Type
Nil	Standard
R	External pilot <sup>Note)</sup>

Note) Not compatible with dual 3-port valves.

Electrical entry

Symbol	Specifications
G	Grommet
M	M-type plug connector, with 300 mm lead wire (With light/surge voltage suppressor)
MO	M-type plug connector, without lead wire (With light/surge voltage suppressor)

Type of actuation

Symbol	Specifications
1	2-position single
2	2-position double
3	3-position closed center
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.)

Cylinder port size

Symbol	Port size
C2	ø2 One-touch fitting
C4	ø4 One-touch fitting
N1	ø1/8" One-touch fitting
N3	ø5/32" One-touch fitting

#### How to Order Manifold Assembly

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

<Example>

Connector kit

SS0752-08C..... 1 set-Manifold base part no.

\* S0712-5G-C4..... 2 sets-Valve part no. (Stations 1 to 2)

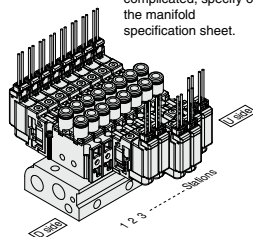
\* S0722-5G-C4..... 2 sets-Valve part no. (Stations 3 to 4)

\* S0732-5G-C4..... 2 sets-Valve part no. (Stations 5 to 6)

\* S0742-5G-C4..... 2 sets-Valve part no. (Stations 7 to 8)

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

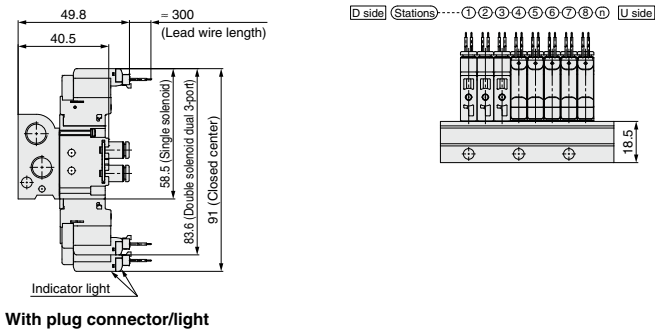
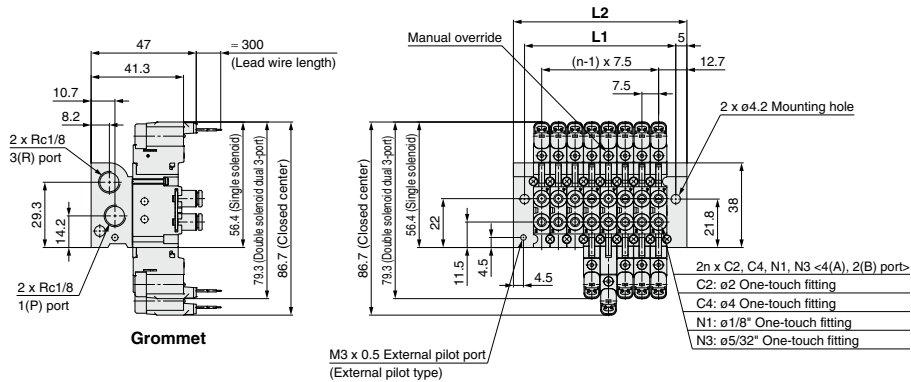
Write sequentially from the 1st station on the D side. When part numbers written collectively are complicated, specify on the manifold specification sheet.



S0700 Series

Dimensions

SS0752-□C



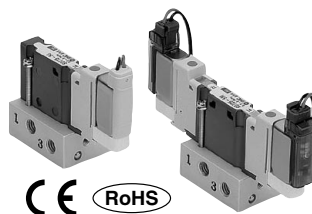
Dimensions		Formula L1 = 7.5n + 7.9, L2 = 7.5n + 17.9 n: Station (Maximum 20 stations)																			
L	n	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L1		15.4	22.9	30.4	37.9	45.4	52.9	60.4	67.9	75.4	82.9	90.4	97.9	105.4	112.9	120.4	127.9	135.4	142.9	150.4	157.9
L2		25.4	32.9	40.4	47.9	55.4	62.9	70.4	77.9	85.4	92.9	100.4	107.9	115.4	122.9	130.4	137.9	145.4	152.9	160.4	167.9

Plug Lead Type

Base Mounted

# Single Unit

## S0700 Series



### How to Order Valves

**S07 1 5 - 5 G - M5**

#### Type of actuation

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

Note) For symbol, refer to page 741.

#### Base Mounted

#### Function

Symbol	Type
<b>Nil</b>	Standard
<b>R</b>	External pilot Note)

Note) Not compatible with dual 3-port valves.

#### With/Without sub-plate

Symbol	Type
<b>Nil</b>	Without sub-plate
<b>M5</b>	With sub-plate

#### Electrical entry

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

#### Voltage

Symbol	Type
<b>5</b>	24 VDC
<b>6</b>	12 VDC

SJ

SY

SY

S0700

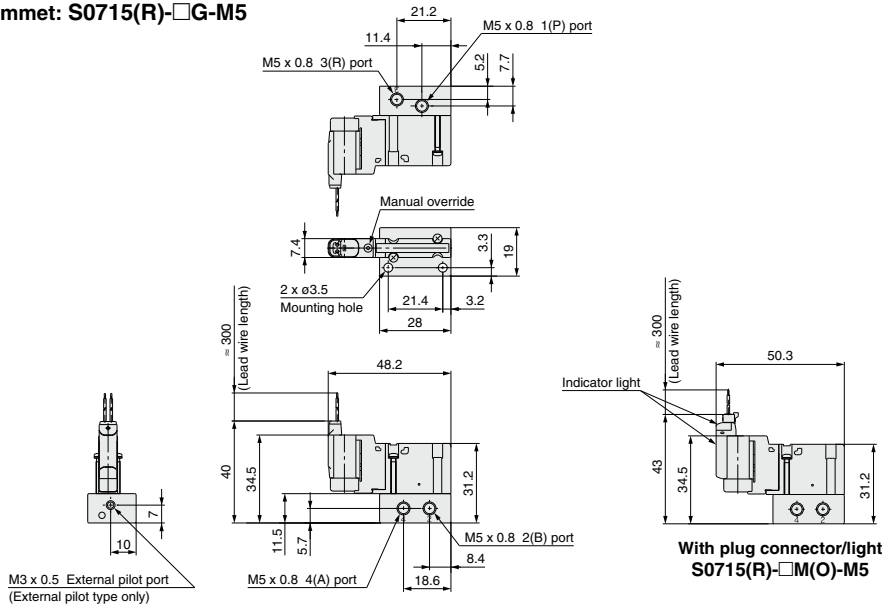
S0700

# S0700 Series

## Dimensions

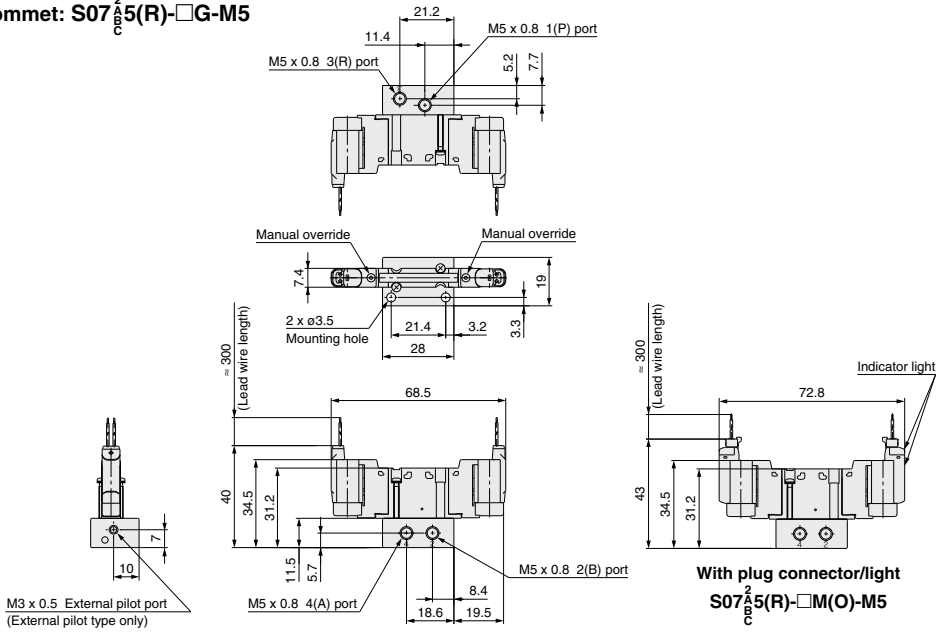
### 2-Position Single

Grommet: S0715(R)-□G-M5



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

Grommet: S07<sup>2</sup><sub>A</sub>5(R)-□G-M5

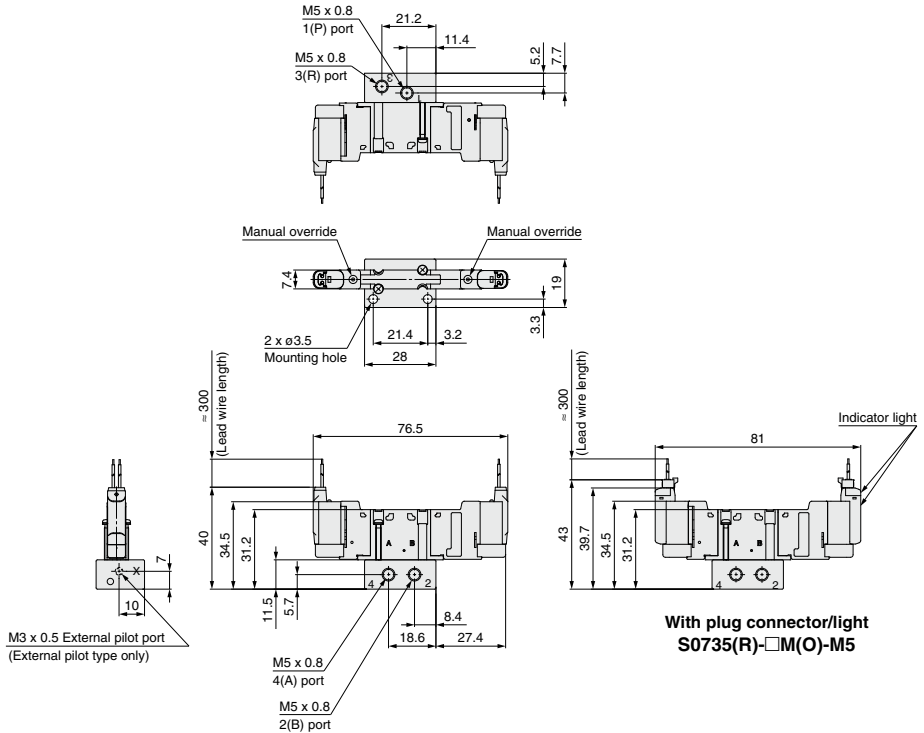


## Dimensions

### 3-Position Closed Center

Grommet: S0735(R)-□G-M5

SJ
SY
SY
S0700
S0700



## Plug Lead Type

# Base Mounted Manifold Bar Base Individual Wiring: C Kit

## S0700 Series



## How to Order Manifold

**SS0755-08C4 C-**

Base Mounted

Stations

Symbol	Stations
02	2 stations
...	...
20	20 stations

Option

Symbol	Type
Nil	None
R (Note)	External pilot

Note) For details, refer to page 755.

\* For manifold optional parts, refer to pages 755 to 757.

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)	
M3	M3 thread	Metric 7.5
V2	ø2 Barb fitting	
V3	ø3.2 Barb fitting	
V4	ø4 Barb fitting	
VM	Mixed sizes and with port plug (Note)	

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

Connector individual wiring

P, R port thread type

Symbol	Manifold pitch	
	8.5	7.5
Nil	Rc	M5
F	G	
N	NPT	
T	NPTF	

## How to Order Valves

**S0715-5G**

Type of actuation

Symbol	Specifications
1	2-position single
2	2-position double
3	3-position closed center
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 741.

Electrical entry

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

Voltage

Symbol	Type
5	24 VDC
6	12 VDC

Base Mounted Manifold

Function

Symbol	Type
Nil	Standard
R	External pilot (Note)

Note) Not compatible with dual 3-port valves.

## How to Order Manifold Assembly

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

<Example>

Connector kit

SS0755-07C4C... 1 set-Manifold base part no.

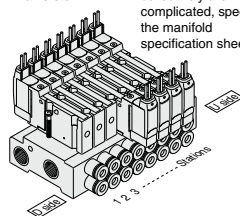
\* S0715-5G ..... 3 sets-Valve part no. (Stations 1 to 3)

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

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

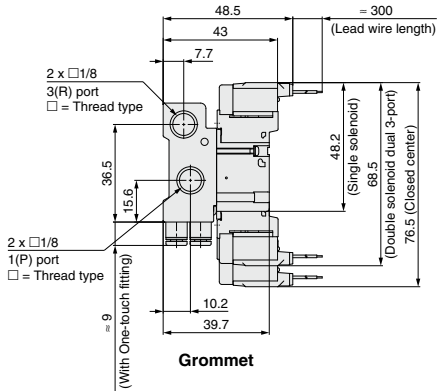
Prefix the asterisk to the part numbers of the solenoid valve etc.

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

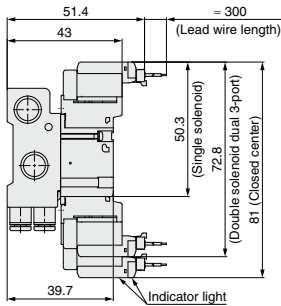


## Dimensions

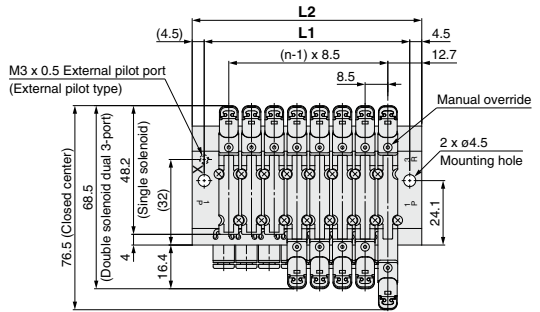
SS0755-□ M5  
□ C □  
□ N □



Grommet



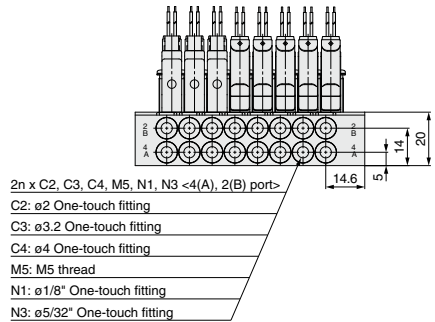
With plug connector/light



D side

Stations 1 2 3 4 5 6 7 8 n

U side



## Dimensions

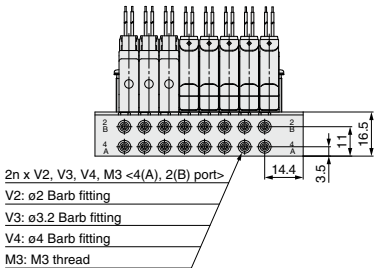
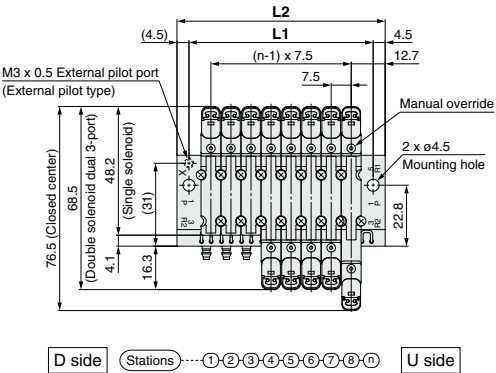
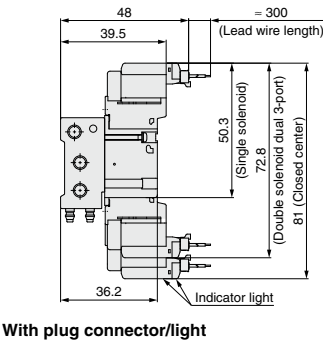
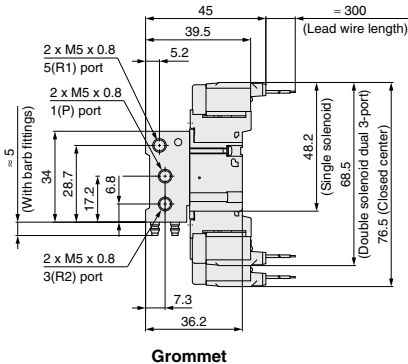
n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L1	25.9	34.4	42.9	51.4	59.9	68.4	76.9	85.4	93.9	102.4	110.9	119.4	127.9	136.4	144.9	153.4	161.9	170.4	178.9
L2	34.9	43.4	51.9	60.4	68.9	77.4	85.9	94.4	102.9	111.4	119.9	128.4	136.9	145.4	153.9	162.4	170.9	179.4	187.9

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

S0700 Series

Dimensions

SS0755-□ M3  
V□



Dimensions

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

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

Plug Lead Type

Base Mounted Manifold Bar Base

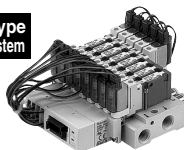
Serial Transmission: S Kit

EX510 Gateway Type  
Serial Transmission System

S0700 Series



RoHS



## How to Order Manifold

SS0755-SA 08 C4 -

S Kit

EX510 serial wiring

(Note) For SI Unit part number, refer to page 897.

SI Unit output polarity

Nil	Positive common
N	Negative common

Stations

Symbol	Stations
02	2 stations
⋮	⋮
16	16 stations

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

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

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

For details of the EX510 Gateway Type Serial Transmission System, refer to pages 878 to 906, and the Operation Manual. Please download the Operation Manual via our website, <http://www.smcworld.com>

Option

Symbol	Type
Nil	None
K (Note 2)	Special wiring specifications (Except double wiring)
R (Note 3)	External pilot

Note 1) When multiple options are specified, indicate them alphabetically. Example) -K R

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

Note 3) For details, refer to page 755.

\* For manifold optional parts, refer to pages 755 to 757.

P, R port thread type

Symbol	Manifold pitch
Nil	8.5
N	Rc
G	G
N	NPT
T	NPTF

Cylinder port size

Symbol	Port size
M5	M5 thread
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
N3	With ø5/32" One-touch fitting
NM	Mixed sizes and with port plug (Note)

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

## How to Order Valves

S07 1 5 - 5 MO

Type of actuation

Symbol	Specifications
1	2-position single
2	2-position double
3	3-position closed center
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 741.

Electrical entry

M-type plug connector, without lead wire  
(With light/surge voltage suppressor)

Voltage: 24 VDC

Function

Symbol	Type
Nil	Standard
R	External pilot (Note)

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

Base Mounted  
Manifold

## How to Order Manifold Assembly

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

<Example>

Serial transmission kit

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

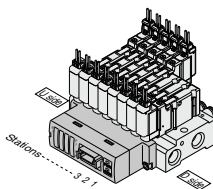
+ S0715-5MO.....3 sets-Valve part no. (Stations 1 to 3)

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

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

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

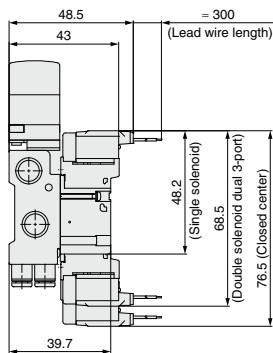
Write sequentially from the 1st station on the D side. When part numbers written collectively are complicated, specify on the manifold specification sheet. The connector assembly lead wire length used for EX510 manifold varies depending on the number of stations. Therefore, solenoid valves (including a blanking plate) and connector assembly are assembled when shipped as a standard specification. Specify the mounting solenoid valve when ordering.



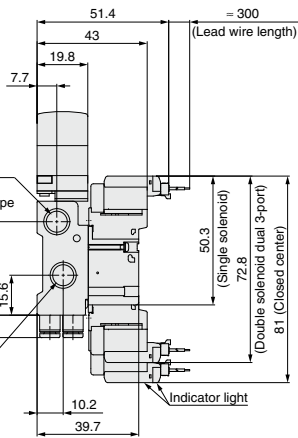
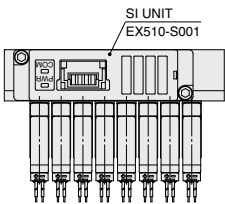
S0700 Series

Dimensions

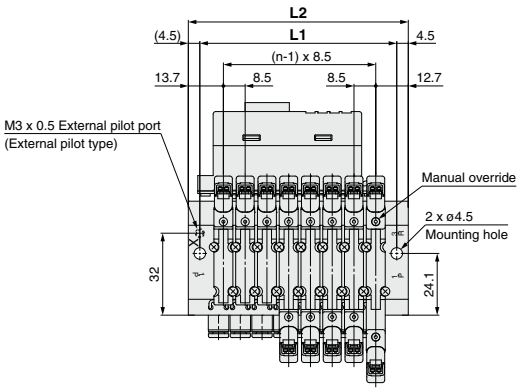
SS0755-SA □ M5  
□ C □  
□ N □



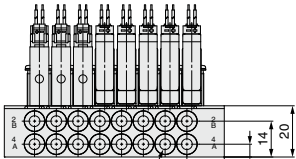
Grommet



With plug connector/light



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



- 2n x C2, C3, C4, M5, N1, N3 <4(A), 2(B) port>
- C2: ø2 One-touch fitting
- C3: ø3.2 One-touch fitting
- C4: ø4 One-touch fitting
- M5: M5 thread
- N1: ø1/8" One-touch fitting
- N3: ø5/32" One-touch fitting

Dimensions

		n: Station (Maximum 16 stations)															
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	

Note) The L dimension of 2 to 7 stations is the same. Valves are numbered from the D side according up to the number of stations.



# S0700 Series Options

**Body  
Ported**

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

Since a silencer is built into the exhaust port of the valve, it has a high silencing effect. (Noise reduction: 20 dB(A))

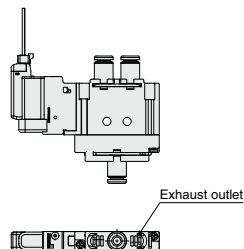
- How to Order Valves (Example)

S0716 S -5G-C4

↓ Built-in silencer

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

- For maintenance, refer to page 762.



SJ

SY

SY

S0700

S0700

**Body  
Ported**

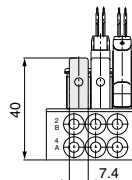
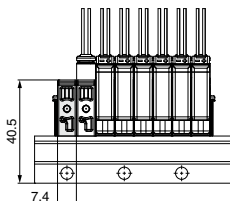
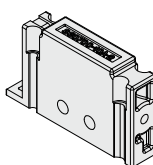
**Base  
Mounted**

## Blanking plate assembly

### SS0700-10A-2/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.

Applicable manifold	Part no.	Weight
Body ported	SS0752 SS0700-10A-2	28 g
Base mounted	SS0755 SS0700-10A-5	21 g



Body Ported (SS0752)

Base Mounted (SS0755)

**Body  
Ported**

**Base  
Mounted**

## External pilot [-R]

This can be used when the air pressure is lower than the minimum operating pressure (0.2 MPa) of the solenoid valves or used for vacuum specification. Add "-R" to the part numbers of manifolds and valves to indicate the external pilot specification.

An M3 port will be installed on the top side of the manifold's SUP/EXH block.

- How to Order Valves (Example)

S0712 R -5G-C4

↓ External pilot

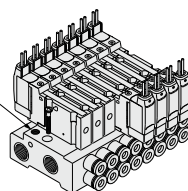
- How to Order Manifold (Example)

\* Indicate "-R" for an option.

SS0752-08C-R

↓ External pilot

External pilot port  
(M3 x 0.5)



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 specification of the external pilot valve.

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

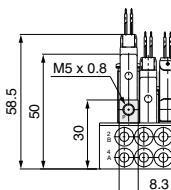
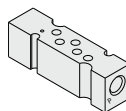
**Base  
Mounted**

## 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.

\* Cannot be mounted on the body ported manifold (SS0752).

# S0700 Series

Base  
Mounted

## Individual EXH spacer

**SS0700-R-5-M5**

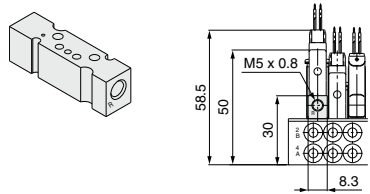
Port size

**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.
- \* Cannot be mounted on the body ported manifold (SS0752).



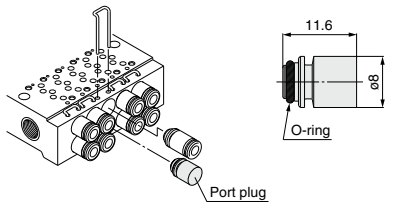
Base  
Mounted

## 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 station number, mounting positions of cylinder port A/B, on the manifold specification sheet.



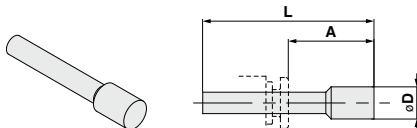
Body  
Ported

Base  
Mounted

## Blanking plug (For One-touch fittings)

**KJP-02**

**KQ2P-23  
04**



### Dimensions

Applicable fitting size ød	Model	A	L	D	Weight [g]
2	<b>KJP-02</b>	8.2	17	3	0.1
3.2	<b>KQ2P-23</b>	16	31.5	5	1
4	<b>KQ2P-04</b>	16	32	6	1

Body  
Ported

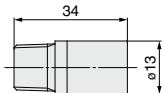
Base  
Mounted

## Silencer (For manifold EXH port)

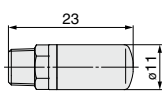
Silencer is installed in the EXH port.



**AN110-01**  
(BC sintered body)



**AN10-01**  
(Resin)



**Body Ported** **Base Mounted**

## Double check block (Separated)

### VQ1000-FPG-□□

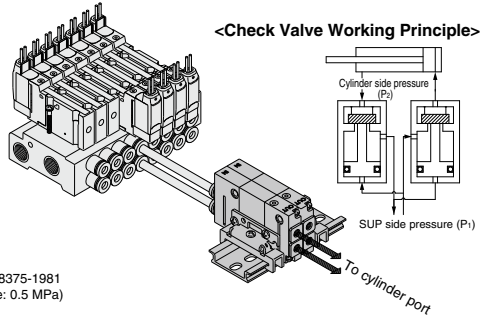
It is used on the outlet side piping to keep the cylinder in the intermediate position for long periods of time. Combining the double check block with a built-in pilot type double check valve and a 2-position single/double solenoid valve will permit this block to be used for preventing the dropping at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

### Specifications

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

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

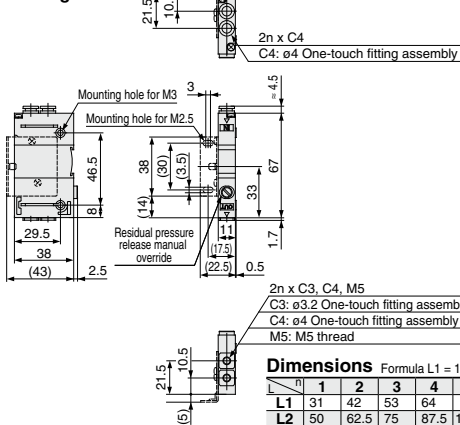
### <Check Valve Working Principle>



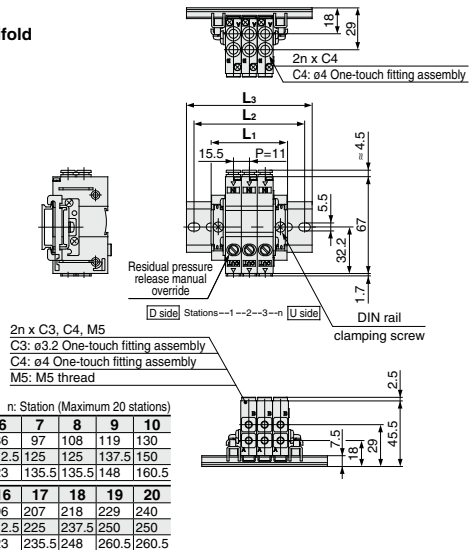
SJ  
SY  
SY  
S0700  
S0700

### Dimensions

#### Single Unit



#### Manifold



2n x C3, C4, M5  
C3: ø3.2 One-touch fitting assembly  
C4: ø4 One-touch fitting assembly  
M5: M5 thread

2n x C3, C4, M5  
C3: ø3.2 One-touch fitting assembly  
C4: ø4 One-touch fitting assembly  
M5: M5 thread

Formula	L1 = 11n + 20 n: Station (Maximum 20 stations)																			
n	1	2	3	4	5	6	7	8	9	10										
L1	31	42	53	64	75	86	97	108	119	130										
L2	50	62.5	75	87.5	100	112.5	125	137.5	150											
L3	60.5	73	85.5	98	110.5	123	135.5	148	160.5											

### How to Order

#### Single unit, double check block

VQ1000-FPG-C4 M5-F

#### IN side port size

C4 ø4 One-touch fitting

#### OUT side port size

M5	M5 thread
C3	ø3.2 One-touch fitting
C4	ø4 One-touch fitting

#### Option

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

(Note) When multiple symbols are specified, indicate them alphabetically.  
Example) -DN

#### Manifold (DIN rail mounting)

VVQ1000-FPG-06

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

#### Stations

01	1 station
16	16 stations

#### <Example>

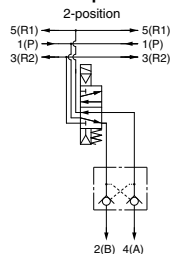
VVQ1000-FPG-06...6-station manifold

\* VQ1000-FPG-C4M5-D: 6 sets Double check block

### Caution

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

### <Example>



### Bracket Assembly

Part no.	Tightening torque
VQ1000-FPG-FB	0.22 to 0.25 N·m

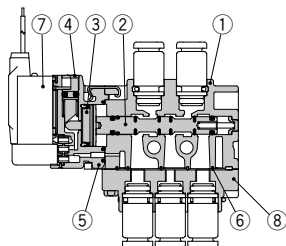
(Note) This torque is used to mount the bracket on the double check block.

# S0700 Series Construction

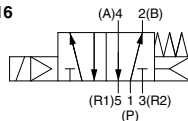
Body  
Ported

## Construction

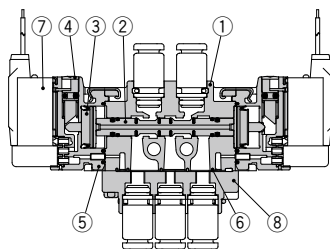
### 2-Position Single



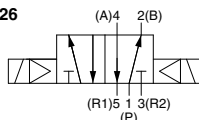
**S0716**



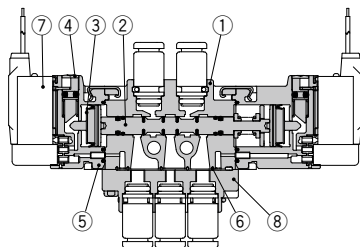
### 2-Position Double



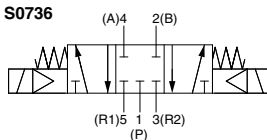
**S0726**



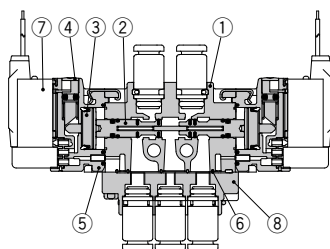
### 3-Position Closed Center



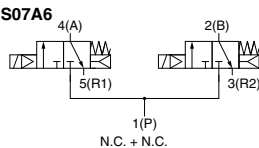
**S0736**



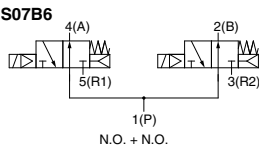
### 4-Position Dual 3-Port Valve



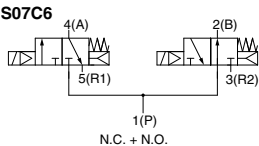
**S07A6**



**S07B6**



**S07C6**



### Component Parts

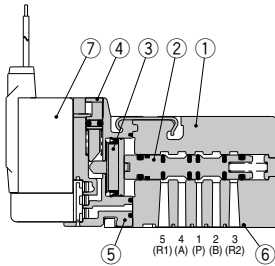
No.	Description	Material
1	Body	Zinc die-casted
2	Spool	Aluminum
3	Piston	Resin
4	Manual override	Resin
5	Adapter plate	Resin
6	Interface gasket	HNBR
7	Pilot valve assembly	Refer to page 760.
8	PR plate	Resin (Note)

Note) The external pilot is made of aluminum.

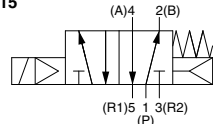
Base  
Mounted

## Construction

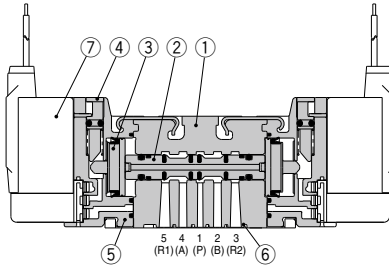
### 2-Position Single



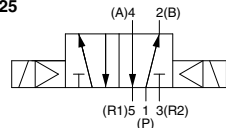
**S0715**



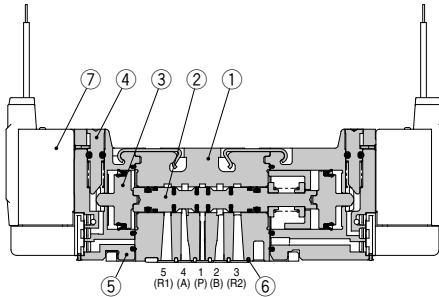
### 2-Position Double



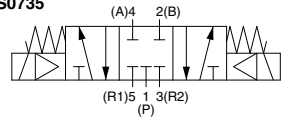
**S0725**



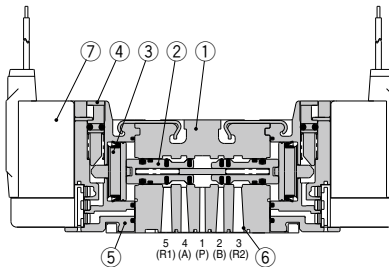
### 3-Position Closed Center



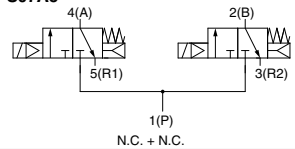
**S0735**



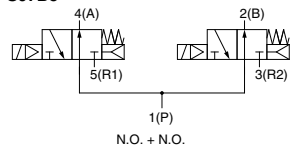
### 4-Position Dual 3-Port Valve



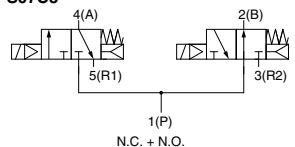
**S07A5**



**S07B5**



**S07C5**



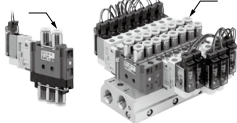
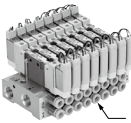
### Component Parts

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
7	Pilot valve assembly	Refer to page 760.

# S0700 Series Replacement Parts

Body Ported Base Mounted

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

Applicable manifold		Port size		Part no.
	<b>Body Ported</b> S07□6 SS0752	ø2 One-touch fitting		KJH02-C1
		ø4 One-touch fitting		KJH04-C1
		ø1/8" One-touch fitting		KJH01-C1
		ø5/32" One-touch fitting		KJH03-C1
	<b>Base Mounted</b> SS0755	8.5 mm pitch	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 mm pitch	ø2 Barb fitting	SS070-50A-20
			ø3.2 Barb fitting	SS070-50A-32
			ø4 Barb fitting	SS070-50A-40

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

## <Plug Connector Assembly>

S070 - 14A - □

Body Ported Base Mounted

### 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>

S070P - 5 B G -1

Body Ported Base Mounted

### Voltage

Symbol	Type
5	24 VDC
6	12 VDC

### Accessory

Symbol	Specifications
Nil	None
-1	Stopper plate is included.

### Electrical entry

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

Note) For pilot valve assembly replacement, refer to "Specific Product Precautions" on page 764.

## <Gasket, Screw Assembly>

Body Ported Base Mounted

Body ported	For internal pilot	S0700-GS-2
	For external pilot	S0700-GS-2R
Base mounted		S0700-GS-5

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

## <Sub-plate>

Part no.	Type
S0700-S-M5	For internal pilot
S0700-S-M5-R	For external pilot

Base Mounted

## <SI Unit (EX510 series)>

EX510 - S 0 01

Base Mounted

### Output specifications

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

## <Silencer Element>

Body Ported

