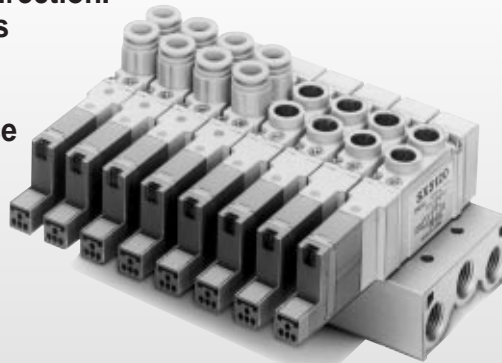


# 5 Port Solenoid Valve Rubber Seal Series SX

All pilot valves are located on the same side of the manifold. Pilot valves (single & double solenoid) on one side permit not only a reduction in the size of the valve but also a single wiring direction. In addition, this reduces the necessary mounting space and provides a clean neat appearance.



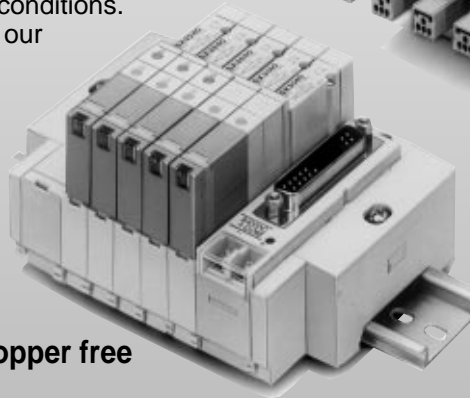
**Low power consumption: 0.6W  
(Current draw: 25mA at 24V DC)**

It is possible to operate directly by using a PLC instead of a relay. Cost reduction can be achieved due to a compact switching device, resulting in low power consumption.

**Compact design/Large flow capacity Cv factor for this series is 1.7 to 3 times larger than conventional valve with the same body width.**

**Response time 10ms** (Representative value)  
(SX3000 single solenoid, 0.5MPa)

**Long life exceeding 50 million cycles**  
(The valve may differ from a life under actual operating conditions. It is derived from our life test data.)



**Improved drainage resistance**

**Compatible to copper free**

**Bright color tone and "state of the art" design**

**No exhaust mist, no exhaust noise of pilot valve**

(Common exhaust for main and pilot valve)

**The fittings of the cylinder ports can be changed simply for the modification of the port size or for replacement.**

<Body ported>

	Port size available		
	<b>SX3000</b>	C4	C6
<b>SX5000</b>	C4, C6	C8	Rc1/8
<b>SX7000</b>	C8	C10	Rc1/4

**Concentrated indicator lights**

**Same manifold base as series SY**

SY

SYJ

**SX**

VK

VZ

VF

VFR

VP7

VP4

VQ

VQ4

VQZ

VQD

VZS

VFS

VS

VS7

# Cylinder Actuating Speed

This table shows the standard values.  
Check with the practical operating conditions referring to SMC's sizing program.

## Body Ported

Series	Cylinder actuating speed (mm/s)	Cylinder tube bore (mm)											
		Series CJ2 Pressure 0.5MPa Loading rate 50% Cylinder stroke 60mm			Series CM2 Pressure 0.5MPa Loading rate 50% Cylinder stroke 300mm				Series CA1 Pressure 0.5MPa Loading rate 50% Cylinder stroke 500mm				
		ø6	ø10	ø16	ø20	ø25	ø32	ø40	ø40	ø50	ø63	ø80	ø100
<b>SX3120</b> <b>-C6</b> Cv=0.23	150												
	300												
	450												
	600												
	750												
<b>SX5120</b> <b>-01</b> Cv=0.59	150												
	300												
	450												
	600												
	750												
<b>SX7120</b> <b>-02</b> Cv=0.87	150												
	300												
	450												
	600												
	750												



Cylinder speed of CJ2 and CM2 can be restricted with the flow controller installed in cylinders.  
\* At cylinder pushed out.

## Base Mounted (With Sub-plate)

Series	Cylinder actuating speed (mm/s)	Cylinder tube bore (mm)											
		Series CJ2 Pressure 0.5MPa Loading rate 50% Cylinder stroke 60mm			Series CM2 Pressure 0.5MPa Loading rate 50% Cylinder stroke 300mm				Series CA1 Pressure 0.5MPa Loading rate 50% Cylinder stroke 500mm				
		ø6	ø10	ø16	ø20	ø25	ø32	ø40	ø40	ø50	ø63	ø80	ø100
<b>SX3140</b> <b>-01</b> Cv=0.3	150												
	300												
	450												
	600												
	750												
<b>SX5140</b> <b>-02</b> Cv=0.7	150												
	300												
	450												
	600												
	750												
<b>SX7140</b> <b>-02</b> <b>-03</b> Cv=1.2	150												
	300												
	450												
	600												
	750												



Cylinder speed of CJ2 and CM2 can be restricted with the flow controller installed in cylinders.  
\* Cylinder is extended.

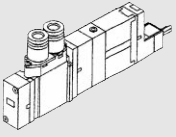
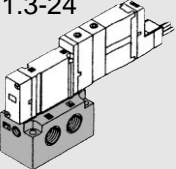
## Conditions

Body ported		Series CJ2	Series CM2	Series CA1
<b>SX3120</b> <b>-C6</b> (Cv=0.23)	Tube bore X length	ø6 X 1m		
	Speed controller	AS2051F-06 (Cv=0.25)		
	Silencer	AN120-M5 (Cv=0.27)		
<b>SX5120</b> <b>-01</b> (Cv=0.59)	Tube bore X length	ø6 X 1m	ø8 X 1m	
	Speed controller	AS3001F-06 (Cv=0.36)	AS3001F-08 (Cv=0.56)	
	Silencer	AN101-01 (Cv=1.11)		
<b>SX7120</b> <b>-02</b> (Cv=0.87)	Tube bore X length	ø6 X 1m	ø10 X 1m	
	Speed controller	AS3001F-06	AS4001F-10 (Cv=0.89)	
	Silencer	AN110-01 (Cv=1.94)		

## Conditions

Base mounted		Series CJ2	Series CM2	Series CA1
<b>SX3140</b> <b>-01</b> (Cv=0.3)	Tube bore X length	ø6 X 1m		
	Speed controller	AS3001F-06 (Cv=0.36)		
	Silencer	AN110-01 (Cv=1.94)		
<b>SX5140</b> <b>-02</b> (Cv=0.7)	Tube bore X length	ø6 X 1m	ø8 X 1m	
	Speed controller	AS3001F-06	AS3001F-08 (Cv=0.56)	
	Silencer	AN110-01 (Cv=1.94)		
<b>SX7140</b> <b>-02</b> <b>-03</b> (Cv=1.2)	Tube bore X length	ø6 X 1m	ø10 X 1m	ø12 X 1m
	Speed controller	AS3001F-06	AS4001F-10 (Cv=0.89)	AS4001F-12 (Cv=1.17)
	Silencer	AN200-02 (Cv=1.94)		

# Valve Variations

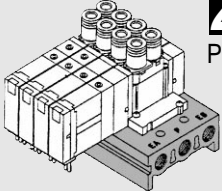
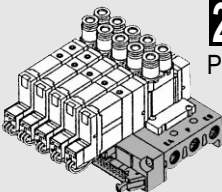
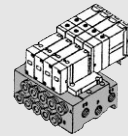
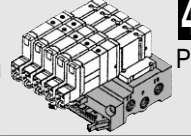
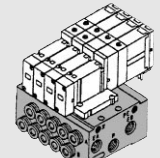
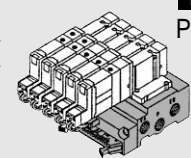
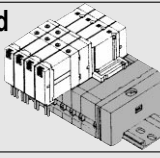
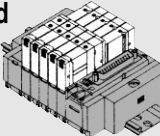
	Series	Effective area (mm <sup>2</sup> ) (Cv factor)	Configuration					Voltage	Electrical entry			Indicator light and surge suppressor	Manual override		Bracket		
			2 position		3 position				DC	Grommet	L plug connector		M plug connector	Non-locking push		Push-turn-locking slotted	
			Single	Double	Closed center	Exhaust center	Pressure center										
Body Ported	P.1.3-10 	SX3□20	4.14 (0.23)	●	●	●	●	●	●	●	●	●	●	●	●	●	
		SX5□20	10.62 (0.59)	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		SX7□20	15.66 (0.87)	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Base Mounted	P.1.3-24 	SX3□40	5.4 (0.3)	●	●	●	●	●	●	●	●	●	●	●	●	—	
		SX5□40	12.6 (0.7)	●	●	●	●	●	●	●	●	●	●	●	●	●	—
		SX7□40	21.6 (1.2)	●	●	●	●	●	●	●	●	●	●	●	●	●	—

Series	P, EA, EB port size				A, B port size								Operating conditions				
	M5	Rc (PT) 1/8	Rc (PT) 1/4	Rc (PT) 3/8	M5	Rc (PT) 1/8	Rc (PT) 1/4	Rc (PT) 3/8	One-touch fitting				Ozone/Oil proof (Other than designated turbin oil)	Vacuum	Low pressure	Reverse pressure	Throttle
									C4	C6	C8	C10					
Body Ported	SX3□20	●	—	—	—	●	—	—	—	●	●	—	—	—	—	—	—
	SX5□20	—	●	—	—	—	●	—	—	●	●	●	—	▲	—	—	●
	SX7□20	—	● (EA, EB)	● (P)	—	—	—	●	—	—	—	●	●	—	—	—	—
Base Mounted	SX3□40	—	●	—	—	—	●	—	—	—	—	—	—	—	—	—	—
	SX5□40	—	—	●	—	—	—	●	—	—	—	—	—	▲	●	●	●
	SX7□40	—	—	●	●	—	—	●	●	—	—	—	—	—	External pilot	External pilot	External pilot

- SY
- SYJ
- SX**
- VK
- VZ
- VF
- VFR
- VP7
- VP4

- VQ
- VQ4
- VQZ
- VQD
- VZS
- VFS
- VS
- VS7

# Manifold Variations

Manifold Style	Valve Series	Wiring									
		Connection							Common spec.		
		Individual wiring	Flat cable (26 pin)	<Plug-in> D-sub connector (25 pin)	<Plug-in> Flat cable (26, 20, 10 pin)	<Plug-in> Terminal block (9, 18 pole)	Serial interface unit	Common connector	Positive common	Negative common	
<b>Body Ported</b> <b>Bar Style Individual wiring</b> ■ Direct piping to the main unit of a valve. Combinations of different fittings are possible. 	20 Type P.1.3-38	SX3□20									
		SX5□20	●					●			
		SX7□20									
	<b>Bar Style Flat cable</b> ■ A 26-pole MIL connector permits one-hand wiring of external cables in a bundle. 	20 P N Type P.1.3-44	SX3□20								
			SX5□20		●					●	●
			SX7□20								
<b>Base Mounted</b>	<b>Compact Bar Individual wiring</b> ■ The base piping makes it easier to change valves. 	41 Type P.1.3-50	SX3□40	●					●		
			SX5□40								
	<b>Compact Bar Flat cable</b> ■ A 26-pole MIL connector permits one-hand wiring of external cables in a bundle. 	41 P N Type P.1.3-60	SX3□40		●					●	●
			SX5□40								
	<b>External Pilot Capable Bar Individual wiring</b> ■ The base piping makes it easier to change valves. ■ Vacuum-low pressure combination system is possible. 	42 Type P.1.3-50	SX3□40								
			SX5□40	●					●		
			SX7□40								
	<b>External Pilot Capable Bar Flat cable</b> ■ A 26-pole MIL connector permits one-hand wiring of external cables in a bundle. ■ Vacuum-low pressure combination systems are possible. 	42 P N Type P.1.3-60	SX3□40								
			SX5□40		●					●	●
			SX7□40								
	<b>Stacking Style/DIN Rail Mounted Individual wiring</b> ■ Stations can be increased on the DIN rail. Integral mounting of other electric parts is possible. 	45 Type P.1.3-70	SX3□40	●					●		
			SX5□40								
<b>Stacking Style/DIN Rail Mounted Plug-in</b> ■ Stations can be increased on the DIN rail. ■ A wide variety of centralized wiring methods is available. 	45 Type P.1.3-78	SX3□40			●	●	●	●		●	
		SX5□40							●	●	

●Standard ●Option ▲Made to order

# Manifold Variations

Manifold options								A, B port size				Operating conditions											
Blank plate	Individual supply spacer	Individual exhaust spacer	Supply block disk	Exhaust block disk	Label for block disk	Silencer for One-touch fitting	Built-in silencer	M5	Rc (PT) 1/8	Rc (PT) 1/4	One-touch fittings				Ozone/Oil proof (Other than turbin oil)	Vacuum	Low pressure	Different pressure	Reverse pressure	Exhaust flow controls	Package wiring	Mixed fitting sizes	SX3000/5000 Mixed mounting
											C4	C6	C8	C10									
	●	●						●			●	●											
●	●	●							●		●	●	●	▲			●		●				
										●			●										
●	●	●						●			●	●		▲			●		●	●			
											●	●											
●	●	●									●	●		▲	●	●	●	●	●				
●	●	●	●	●	●	●	▲				●	●		▲			●		●		●	▲	
●			●	●	●	●	▲				●	●		▲			●		●	●		▲	

- SX
- SXJ
- SXK
- SXN
- SXQ
- SXR
- SXS
- SXT
- SXU
- SXV
- SXW
- SXZ
- SY
- SYJ
- SX
- VK
- VZ
- VF
- VFR
- VP7
- VP4
- VQ
- VQ4
- VQZ
- VQD
- VZS
- VFS
- VS
- VS7

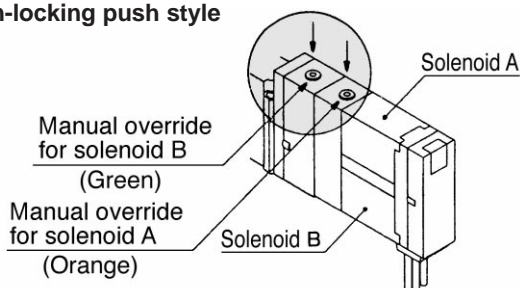


# ⚠ Precautions

Be sure to read before handling. Refer to p.0-33 to 0-36 for Safety Instructions and common precautions.

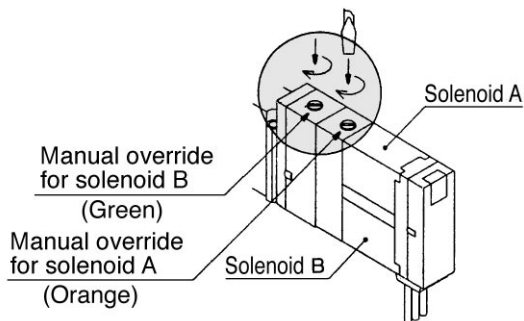
## ⚠ Warning Manual Operation

### ■ Non-locking push style



### ■ Push-turn-locking slotted style

While pressing, turn in the direction of the arrow. If you do not turn, the mechanism is the same as that of a non-locking push style.



### ⚠ Caution

- To lock manual override of push-locking turn slotted style, be sure to push it down and turn.
- When operating D type with a screw driver, turn it lightly.

## ⚠ Caution Throttle

Since series SX has a mechanism that the exhausted air from pilot valve is gathered with the exhaust of the main valve inside, make sure that the exhaust port is not restricted.

## ⚠ Caution

### Usage of SX3000, 5000, 7000 as a 3 Way Valve

#### In case of using a 5-port valve

Series SX3000, 5000, 7000 may be used as and N.C. or N.O. 3 way valve by plugging one of the A, B ports. Be sure not to plug the exhaust ports. Can be used when a double solenoid, 3 way valve is required.

		B port	A port
		N.C.	N.O.
Number of solenoids	Single		
	Double		

## ⚠ Caution How to Use Plug Connector

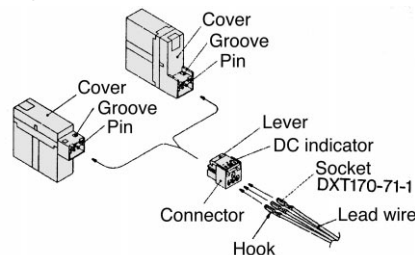
### ① Connection/Disconnection of connector

#### ● Connection

Push the connector straight on to the pins of the solenoid, making sure the lip of the lever is securely positioned in the groove of the solenoid cover.

#### ● Disconnection

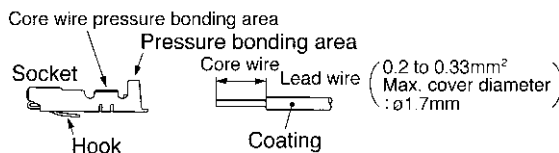
Press the lever against the connector and pull the connector away from the solenoid.



### ② Crimping connection of lead wire and socket

Peel 3.2 to 3.7mm of the tip of lead wire, enter the core wires neatly into a socket and press contact it by a special press tool. Be careful so that the cover of lead wire does not enter the core press contacting part.

(Crimping tool: DXT170-75-1)



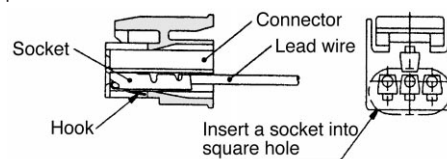
### ③ Connection/Disconnection of socket with lead wire

#### ● Connection

Insert a socket into the square hole (indicated as positive/negative) of connector, push fully the lead wire and lock by hanging the hook of socket to the seat of connector. (Pushing-in can open the hook and lock it automatically.) Confirm the lock by lightly pulling the lead wire.

#### ● Disconnection

For pulling-out the socket from the connector, pull out the lead wire with pushing the hook of socket by a stick with a fine point (ca. 1mm). If the socket is to be re-used, spread the hook to the outside.



### ■ Plug connector lead wire length

Standard length is 300mm, but the following lengths are also available.

#### How To Order L/M Connector Ass'y

#### In case of positive common

For single solenoid: **SX100-40-4S-**

For double solenoid: **SX100-40-4D-**

For 3 position

#### In case of negative common

For single solenoid: **SX100-41-4S-**

For double solenoid: **SX100-41-4D-**

For 3 position

#### How to Order

To order a valve with lead wire length other than 300mm, indicate part numbers of the valve without connector and the required connector ass'y separately.

<Ex.> 2000mm lead wire length  
**SX3120-5LO-M5**  
**SX100-40-4S-20**

Lead wire length	
—	300mm
6	600mm
10	1000mm
15	1500mm
20	2000mm
25	2500mm
30	3000mm
50	5000mm

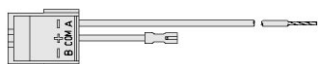
## ⚠ Caution

### Common Connector Ass'y For Manifold

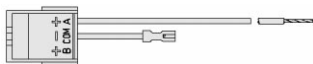
With the common connector ass'y, all of the common lead wires are tied together and this reduces wiring time.

#### How to Order Common Connector Ass'y

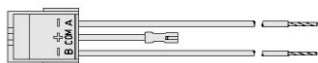
**Positive common specification  
For single solenoid  
SX100-42-4S**



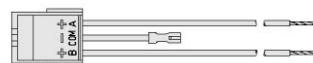
**Negative common specification  
For single solenoid  
SX100-43-4S**



**For double solenoid and 3 position  
SX100-42-4D**



**For double solenoid and 3 position  
SX100-43-4D**



**With lead wire for common for single solenoid  
SX100-40-4S**



**With lead wire for common for single solenoid  
SX100-41-4S**



**With lead wire for common for double solenoid and 3 position  
SX100-40-4D**



(Lead wire 300mm)

**With lead wire for common for double solenoid and 3 position  
SX100-41-4D**



(Lead wire 300mm)

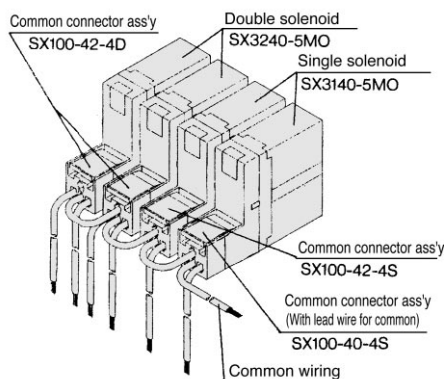
#### How to Order

When ordering a common connector lead wire ass'y, indicate the model no. for manifold, solenoid valve and common connector ass'y. For more complicated assemblies, refer to the manifold specification form.

Note 1) Applications like connectors not wired to a valve or when there is a blank station between valves is not possible.

Note 2) Designate "Without connector" of plug connector style for solenoid valve. Grommet style is not applicable.

Note 3) Connector ass'y with lead wire for common should be used in the place where the signals are transmitted to the common wiring. (Only the valves of first station and/or last station of manifold is compatible to connector with lead wire for common.)

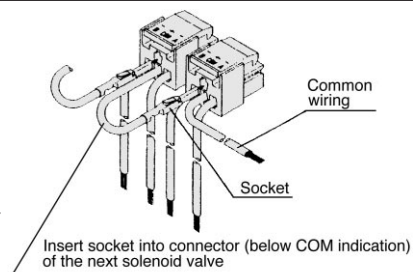


- SS5X3-41-04-C6.....1set
- \* SX3140-5MO .....2set
- \* SX3240-5MO .....2set
- \* SX100-40-4S .....1set (Single solenoid with lead wire for common)
- \* SX100-42-4S .....1set (Single solenoid)
- \* SX100-42-4D .....2set (Double solenoid, 3 position)

To order valves and options mounted onto the manifold at the factory, list the valves etc. with an asterisk in front of each part no.

#### Common connector assembly wiring

When only common connector ass'y is ordered, wiring should be done as shown in the illustration to the right. Refer to "How to use plug connector" on p.1.3-6 for further information on socket mounting.



#### Flat cable/Connector ass'y No. for 20P, 41P, & 42P

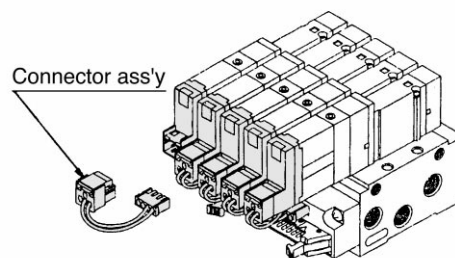
##### SX3000/5000/7000

##### ● Positive common specification

For single solenoid : SX3000-23-1A  
For double solenoid, 3 position style : SX3000-23-2A

##### ● Negative common specification

For single solenoid : SX3000-24-1A  
For double solenoid, 3 position style : SX3000-24-2A



## ⚠ Caution

### One-touch fittings

The pitch between ports (P, A, B, etc.) of the SX series has been determined subject using the series KJ One-touch fittings.

Therefore, use of other fitting models may not be possible due to limited space.

SY

SYJ

SX

VK

VZ

VF

VFR

VP7

VP4

VQ

VQ4

VQZ

VQD

VZS

VFS

VS

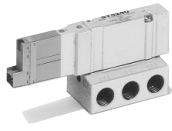
VS7

# ⚠ Precautions

Be sure to read before handling. Refer to p.0-33 to 0-36 for Safety Instructions and common precautions.

## ⚠ Caution

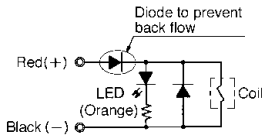
### Indicator Light and Surge Suppressor



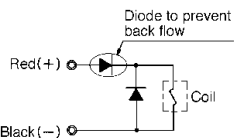
#### Positive common

Single solenoid

Indicator light and surge suppressor



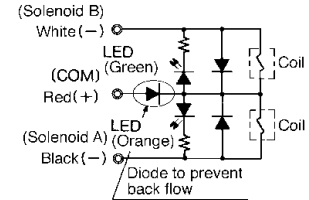
Surge voltage suppressor



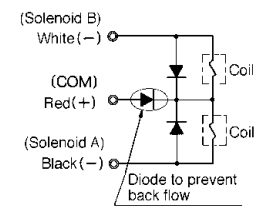
#### Positive common

Double solenoid, 3 position

Indicator light and surge suppressor



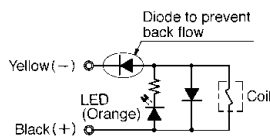
Surge voltage suppressor



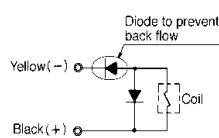
#### Negative common

Single solenoid

Indicator light and surge suppressor



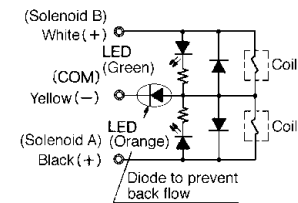
Surge voltage suppressor



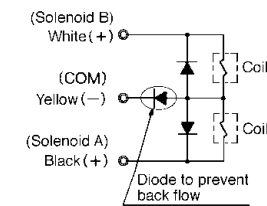
#### Negative common

Double solenoid, 3 position

Indicator light and surge suppressor



Surge voltage suppressor



- Please correctly connect the lead wires to ⊕ (positive) and ⊖ (negative) indications on the connector.
- For DC voltages other than 12, 24 incorrect wiring will cause damage to the surge voltage suppressor circuit. (Wrong polarity will cause trouble.)
- Solenoids, whose lead wires have been pre-wired, are positive side red and negative side black.

**Positive common specification** A(-) : Black

COM(+): Red

B(-) : White (W/o lead wire in case of single solenoid)

**Negative common specification** A(+) : Black

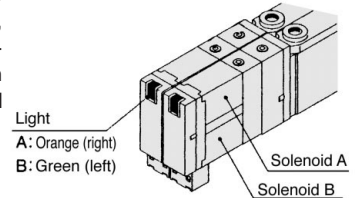
COM(-): Yellow

B(+) : White (W/o lead wire in case of single solenoid)

## ⚠ Caution

### Indicator Light

When indicator lights with surge voltage suppressors are used, the orange indicator light represents solenoid A and the green indicator light represents solenoid B when energized.



## ⚠ Caution

### Fixed DIN Rail Manifold

Fixed "45", "45□" DIN rail manifold to the setting side with screws, fix points as follows:

2 to 5 stations : 2 points

6 to 10 stations : 3 points

11 to 15 stations : 4 points

16 to 20 stations : 5 points

# SX3000/5000/7000

## Body Ported Valve

### How to Order

SX **5** **1** 20 — **5** **N** **L** — — — **01** — —

**Series**

3	SX3000
5	SX5000
7	SX7000

**Configuration**

1	2 position single 
2	2 position double 
3	3 position closed center 
4	3 position exhaust center 
5	3 position pressure center 

**Rated voltage**

5	24V DC
6	12V DC
V	6V DC
S	5V DC
R	3V DC

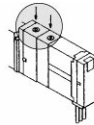
**Common**

—	Positive common
N	Negative common

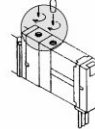
Note) Put nothing for single grommet and single without indicator light and surge voltage suppresser.

**Manual override**

—: Non-locking push style



D: Push-turn-locking slotted style

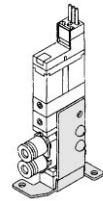


**Indicator light and surge voltage suppressor**

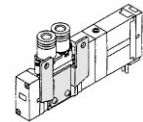
—	Without indicator light and surge voltage suppressor
S	With surge voltage suppressor
Z	With indicator light and surge voltage suppressor

**Bracket**

—: Without bracket  
F1: With foot bracket



F2: With side bracket



**A/B port size**

	Port size	Series
M5	M5 X 0.8	SX3000
C4	One-touch fittings for ø4	
C6	One-touch fittings for ø6	
C4	One-touch fittings for ø4	SX5000
C6	One-touch fittings for ø6	
C8	One-touch fittings for ø8	
O1	Rc(PT) 1/8	SX7000
O2	Rc(PT) 1/4	
C8	One-touch fittings for ø8	
C10	One-touch fittings for ø10	

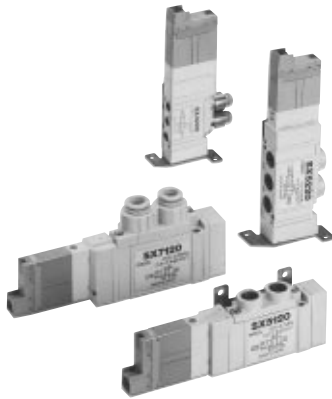
**Electrical entry**

Grommet	L plug connector	M plug connector	
<b>G:</b> 300mm lead wire 	<b>L:</b> 300mm lead wire 	<b>M:</b> 300mm lead wire 	<b>MN:</b> Without lead wire 
<b>H:</b> 600mm lead wire 	<b>LN:</b> Without lead wire 	<b>LO:</b> Without connector 	<b>MO:</b> Without connector 


\* The LN or MN option includes 2 sockets for single solenoid valves and 3 sockets for double solenoid valves.

# SX3000/5000/7000 Body Ported Valve

## Specifications



Series		SX3000	SX5000	SX7000
Fluid		Air		
Internal pilot	2 position single	0.15 to 0.7		
operating pressure range (MPa)	2 position double	0.1 to 0.7		
	3 position	0.2 to 0.7		
Ambient and fluid temperature °C		Max. 50		
Max. operating frequency (Hz)	2 position single, double	10	5	5
	3 position	3	3	3
Manual override		Non-locking push style, Push-turn-locking slotted style		
Pilot exhaust		Common exhaust for main and pilot valve		
Lubrication		Not required		
Mounting position		Free		
Impact/Vibration resistance (m/s <sup>2</sup> )		150/30		
Protection structure		Dust proof		

 Note) Shock resistance: No malfunction resulted from the impact test using a drop impact tester. The test was performed on the axis and right angle direction of the main valve and armature, for both energized and de-energized states.

Vibration resistance: No malfunction occurred in a one-sweep test between 8.3 and 2000Hz. Tests were performed at both energized and de-energized states to the axis and right angle direction of the main valve and armature. (Value in the initial stage.)




P.1.3-112 to 1.3-126

## Solenoid Specifications

Electrical entry		Grommet (G)/(H), L plug connector (L), M plug connector (M)
Coil rated voltage (V)	DC	24, 12, 6, 5, 3
Allowable voltage		±10% rated voltage
Power consumption (W)	DC	0.6 (With light: 0.65)
Surge voltage suppressor		Diode
Indicator light		LED

## Response Time

 Note) According to JISB8375-1981 kinetic ability test (Coil temperature: 20°C, at rated voltage).

### SX3000

Configuration	Response time (ms) (0.5MPa)	
	Without indicator light and surge voltage suppressor	W/ indicator light and surge suppressor S, Z type
2 position single	12 or less	15 or less
2 position double	10 or less	13 or less
3 position	15 or less	20 or less

### SX5000

Configuration	Response time (ms) (0.5MPa)	
	Without indicator light and surge voltage suppressor	W/ indicator light and surge suppressor S, Z type
2 position single	19 or less	26 or less
2 position double	18 or less	22 or less
3 position	32 or less	38 or less

### SX7000

Configuration	Response time (ms) (0.5MPa)	
	Without indicator light and surge voltage suppressor	W/ indicator light and surge suppressor S, Z type
2 position single	31 or less	38 or less
2 position double	27 or less	30 or less
3 position	50 or less	56 or less

SY

SYJ

SX

VK

VZ

VF

VFR

VP7

VP4

VQ

VQ4

VQZ

VQD

VZS

VFS

VS

VS7



# SX3000/5000/7000

## Series SX3000

Valve	Configuration	Port size		Effective area (mm <sup>2</sup> ) (Cv)		Weight (g)				
		P, EA, EB	A, B	P→A/B	A/B→EA/EB	Grommet	L, M plug connector			
SX3□20-□-M5	2 position	Single	M5 X 0.8	C4 (One-touch fitting for ø4)	3.6 (0.2)	3.78 (0.21)	62	63		
		Double					70	72		
	3 position	Closed center					3.6 (0.2)	3.42 (0.19)	73	74
		Exhaust center					3.6 (0.2)	3.78 (0.21) [2.7 (0.15)]		
		Pressure center					3.96 (0.22) [2.88 (0.16)]	3.6 (0.2)		
SX3□20-□-C4	2 position	Single	M5 X 0.8	C4 (One-touch fitting for ø4)	3.42 (0.19)	3.6 (0.2)	72	73		
		Double					80	81		
	3 position	Closed center					3.42 (0.19)	3.42 (0.19)	82	84
		Exhaust center					3.42 (0.19)	3.78 (0.21) [2.7 (0.15)]		
		Pressure center					3.6 (0.2) [2.16 (0.12)]	3.6 (0.2)		
SX3□20-□-C6	2 position	Single	M5 X 0.8	C6 (One-touch fitting for ø6)	3.6 (0.2)	4.14 (0.23)	68	69		
		Double					76	77		
	3 position	Closed center					3.6 (0.2)	3.96 (0.22)	78	80
		Exhaust center					3.78 (0.21)	4.5 (0.25) [3.06 (0.17)]		
		Pressure center					3.96 (0.22) [2.88 (0.16)]	3.96 (0.22)		



Note) [ ]: Normal position

## Series SX5000

Valve	Configuration	Port size		Effective area (mm <sup>2</sup> ) (Cv)		Weight (g)				
		P, EA, EB	A, B	P→A/B	A/B→EA/EB	Grommet	L, M plug connector			
SX5□20-□-01	2 position	Single	Rc (PT) 1/8	C4 (One-touch fitting for ø4)	9.18 (0.51)	10.6 (0.59)	75	76		
		Double					83	84		
	3 position	Closed center					7.38 (0.41)	7.92 (0.44)	88	90
		Exhaust center					7.56 (0.42)	12.06 (0.67) [8.28 (0.46)]		
		Pressure center					10.62 (0.59) [4.32 (0.24)]	8.46 (0.47)		
SX5□20-□-C4	2 position	Single	Rc (PT) 1/8	C4 (One-touch fitting for ø4)	5.5 (0.31)	3.9 (0.22)	83	84		
		Double					91	92		
	3 position	Closed center					5.3 (0.29)	3.9 (0.22)	96	97
		Exhaust center					5.3 (0.29)	3.9 (0.22)		
		Pressure center					5.7 (0.32)	3.9 (0.22)		
SX5□20-□-C6	2 position	Single	Rc (PT) 1/8	C6 (One-touch fitting for ø6)	9 (0.5)	9 (0.5)	78	79		
		Double					86	87		
	3 position	Closed center					7.2 (0.4)	7.38 (0.41)	91	92
		Exhaust center					7.38 (0.41)	9.72 (0.54) [7.2 (0.4)]		
		Pressure center					10.62 (0.59) [4.32 (0.24)]	7.2 (0.4)		
SX5□20-□-C8	2 position	Single	Rc (PT) 1/8	C8 (One-touch fitting for ø8)	9.18 (0.51)	9.9 (0.55)	79	80		
		Double					87	88		
	3 position	Closed center					7.38 (0.41)	7.92 (0.44)	92	93
		Exhaust center					7.38 (0.41)	11.88 (0.66) [7.74 (0.43)]		
		Pressure center					10.62 (0.59) [4.32 (0.24)]	7.92 (0.44)		



Note) [ ]: Normal position

## Series SX7000

Valve	Configuration	Port size		Effective area (mm <sup>2</sup> ) (Cv)		Weight (g)				
		P, EA, EB	A, B	P→A/B	A/B→EA/EB	Grommet	L, M plug connector			
SX7□20-□-02	2 position	Single	Rc (PT) 1/4	C8 (One-touch fitting for ø8)	16.2 (0.9)	15.66 (0.87)	108	109		
		Double					116	117		
	3 position	Closed center					12.06 (0.67)	11.34 (0.63)	125	126
		Exhaust center					11.88 (0.66)	16.74 (0.93) [11.7 (0.65)]		
		Pressure center					17.1 (0.95) [11.16 (0.62)]	11.34 (0.63)		
SX7□20-□-C8	2 position	Single	P port :Rc (PT) 1/4 EA, EB port :Rc (PT) 1/8	C8 (One-touch fitting for ø8)	13.86 (0.77)	13.68 (0.76)	114	116		
		Double					122	124		
	3 position	Closed center					11.52 (0.64)	10.44 (0.58)	131	132
		Exhaust center					11.16 (0.62)	14.4 (0.8) [10.8 (0.6)]		
		Pressure center					14.58 (0.81) [10.62 (0.59)]	10.44 (0.58)		
SX7□20-□-C10	2 position	Single	Rc (PT) 1/4	C10 (One-touch fitting for ø10)	15.84 (0.88)	14.94 (0.83)	110	111		
		Double					118	119		
	3 position	Closed center					12.24 (0.68)	11.16 (0.62)	126	128
		Exhaust center					11.88 (0.66)	16.2 (0.89) [11.34 (0.63)]		
		Pressure center					16.74 (0.93) [11.16 (0.62)]	11.34 (0.63)		

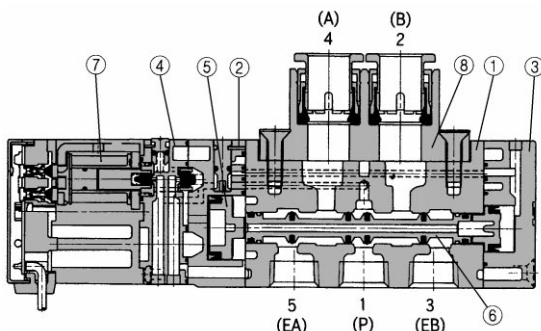
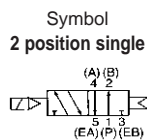


Note) [ ]: Normal position

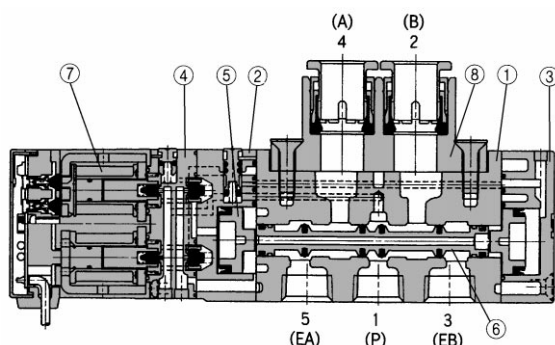
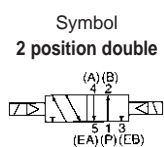
# SX3000/5000/7000 Body Ported Valve

## Construction

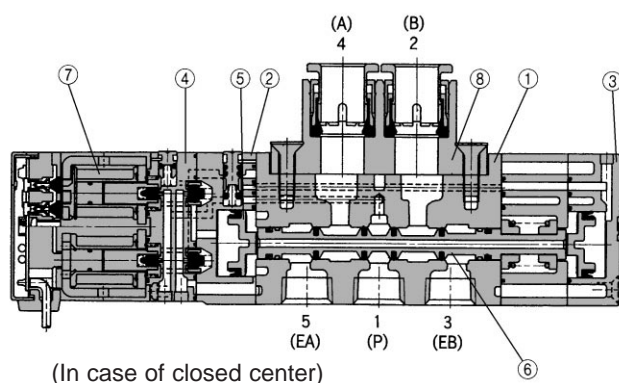
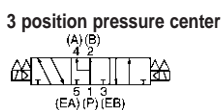
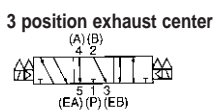
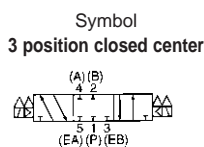
### 2 position single



### 2 position double



### 3 position closed center/exhaust center/pressure center



## Component Parts

No.	Description	Material	Note
①	Body	Aluminum die cast (SX3000: Zinc die cast)	White
②	Adaptor plate	Resin	White
③	End plate	Resin	White
④	Pilot body	Resin	White
⑤	Piston	Resin	—
⑥	Spool ass'y	Aluminum/NBR	—
⑦	Mold coil	Resin	Gray

## Replacement Parts

No.	Description	Part No.
⑧	Port block ass'y	See "How to Order Port Block Ass'y" on p.1.3-14

## How to Order Connector Ass'y for L and M Plug Connector

### Positive common

For single solenoid : SX100 - 40-4S-

For double solenoid, : SX100 - 40-4D-

3 position

### Negative common

For single solenoid : SX100 - 41-4S-

For double solenoid, : SX100 - 41-4D-

3 position

Lead wire length ●

—	300mm
6	600mm
10	1000mm
15	1500mm
20	2000mm
25	2500mm
30	3000mm
50	5000mm



Refer to p.1.3-6 for further information on connector ass'y.

SY

SYJ

SX

VK

VZ

VF

VFR

VP7

VP4

VQ

VQ4

VQZ

VQD

VZS

VFS

VS

VS7

## Bracket Assembly No.

Description	Part No.
Bracket (For F1)	SX <sup>3</sup> 000-16-2A (With mounting screw)
Bracket (For F2)	SX <sup>3</sup> 000-16-1A (With mounting screw)

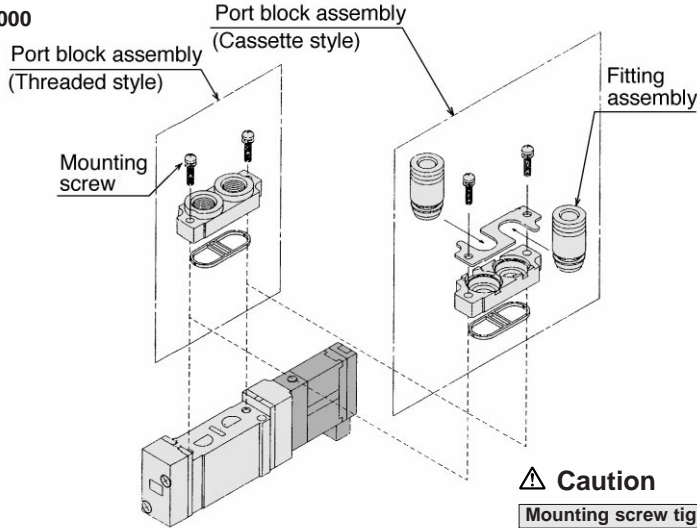
# SX3000/5000/7000

## How to Change Port Block Assembly

The cylinder port block assembly can easily be changed. When changing block ass'y, correct screw torque must be achieved.

Cut off the air supply to confirm that no air is left in the manifold before starting operation. Remaining air or inappropriate installation may cause an accident.

### ●SX5000



### ⚠ Caution

#### Mounting screw tightening torque

SX3000(M2): 0.09Nm  
SX5000(M2): 0.6Nm



\* See "How to Order Port Block Assembly below for parts no.

## How to Order Cylinder Port Block Assembly

SY   000—6A— 

### ● Series

Symbol	Series
3	SX3000
5	SX5000
7	SX7000

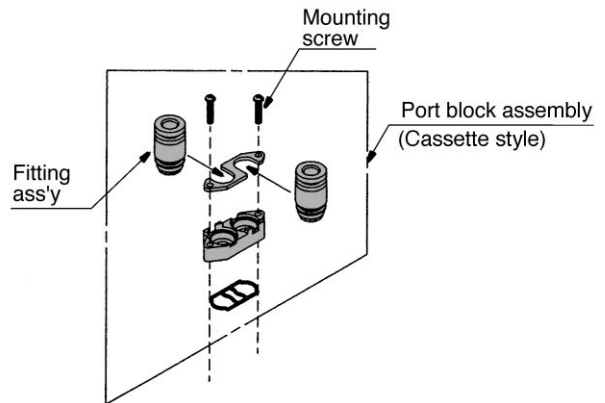
### A/B port size

Symbol	Port size	Series
M5	M5 X 0.8	SX3000
C4	One-touch fitting for ø4	
C6	One-touch fitting for ø6	
01	Rc(PT) 1/8	SX5000
C4	One-touch fitting for ø4	
C6	One-touch fitting for ø6	
C8	One-touch fitting for ø8	SX7000
02	Rc(PT) 1/4	
C8	One-touch fitting for ø8	
C10	One-touch fitting for ø10	

### SX3000/5000

\* In case of SX3000/5000 port block assembly, only replacement of the fittings assembly is possible. Refer to the following numbers.

SX3000	One-touch fitting for ø4	VVQ1000-50A-C4
	One-touch fitting for ø6	VVQ1000-50A-C6
SX5000	One-touch fitting for ø4	VVQ1000-51A-C4
	One-touch fitting for ø6	VVQ1000-51A-C6
	One-touch fitting for ø8	VVQ1000-51A-C8



### ⚠ Caution

#### Mounting screw tightening torque

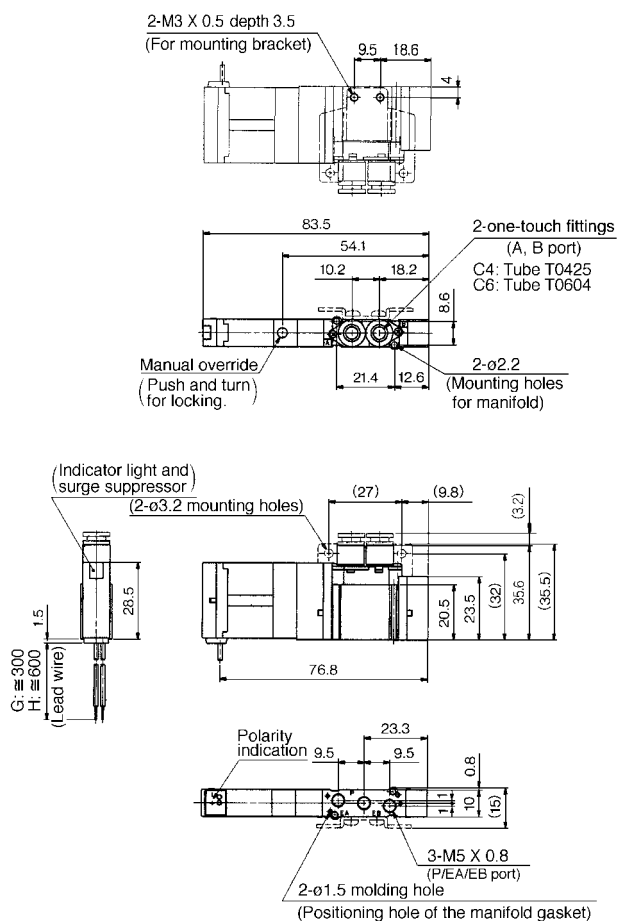
M2: 0.15Nm  
M3: 0.6Nm  
M4: 1.4Nm

# SX3000/5000/7000 Body Ported Valve

## Dimensions/Series SX3000

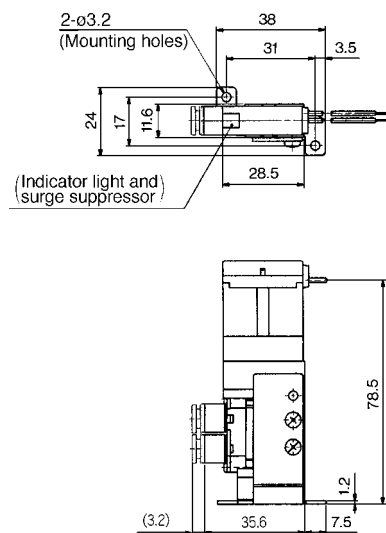
### 2 position single

Grommet (G), (H): SX3120-□<sub>G</sub>□□□ -C4<sub>C6</sub> (-F2)

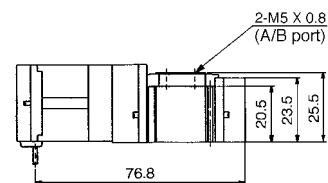


### With foot bracket

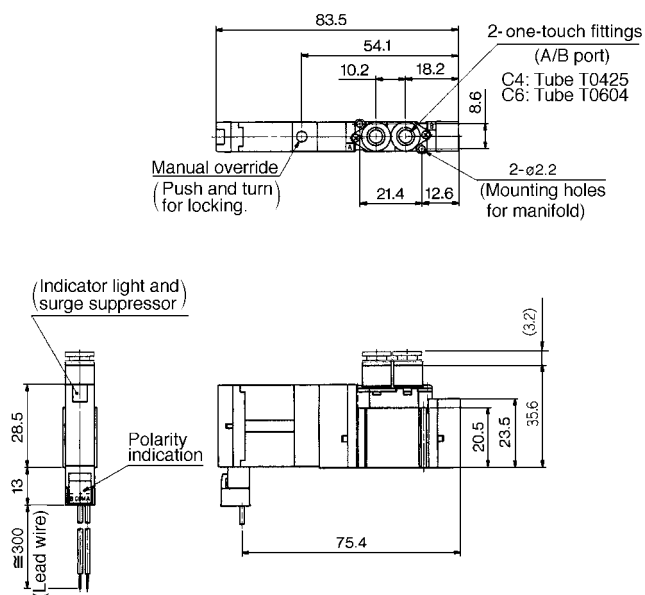
SX3120-□<sub>G</sub>□□□ -C4<sub>C6</sub> F1



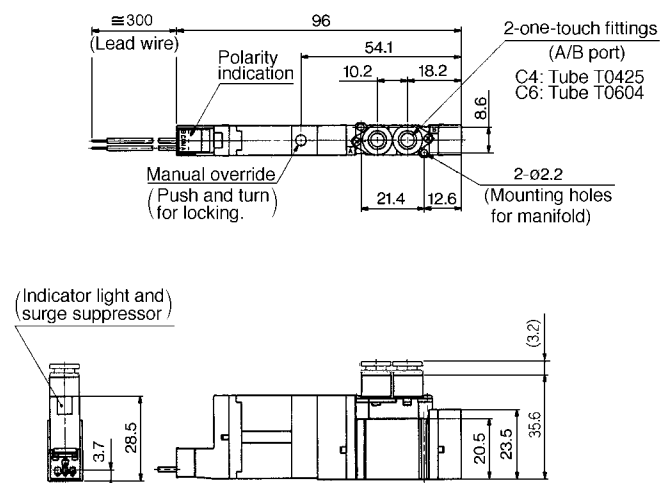
SX3120-□<sub>G</sub>□□□ -M5



L plug connector (L): SX3120-□L□□ -C4<sub>C6</sub>



M plug connector (M): SX3120-□M□□ -C4<sub>C6</sub>



SY

SYJ

SX

VK

VZ

VF

VFR

VP7

VP4

VQ

VQ4

VQZ

VQD

VZS

VFS

VS

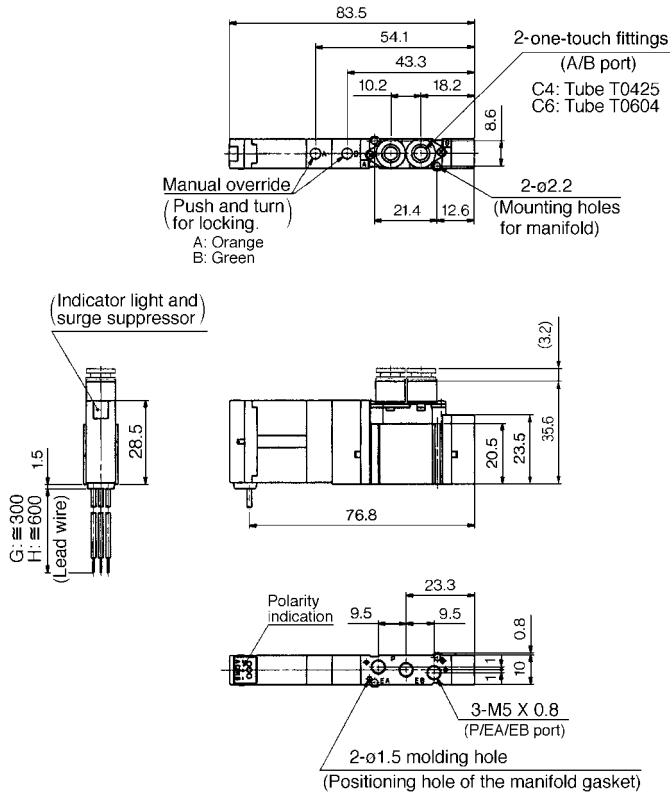
VS7

# SX3000/5000/7000

## Dimensions/Series SX3000

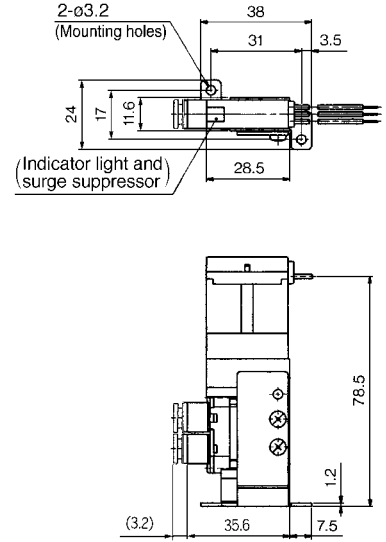
### 2 position double

Grommet (G), (H): SX3220-□<sup>G</sup>□□ - C<sub>4</sub>

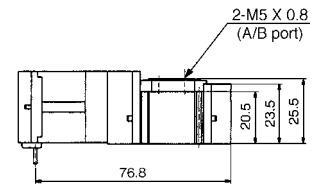


### With foot bracket

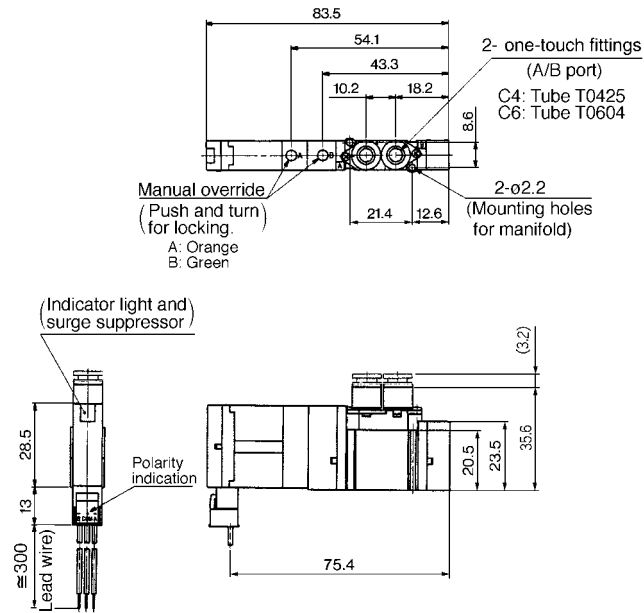
SX3220-□<sup>G</sup>□□ - C<sub>4</sub>-F1



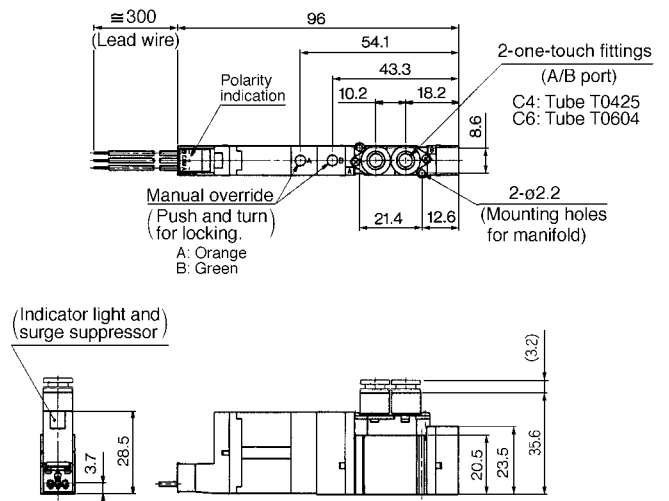
SX3220-□<sup>G</sup>□□ - M5



L plug connector (L): SX3220-□L□□ - C<sub>4</sub>



M plug connector (M): SX3220-□M□□ - C<sub>4</sub>

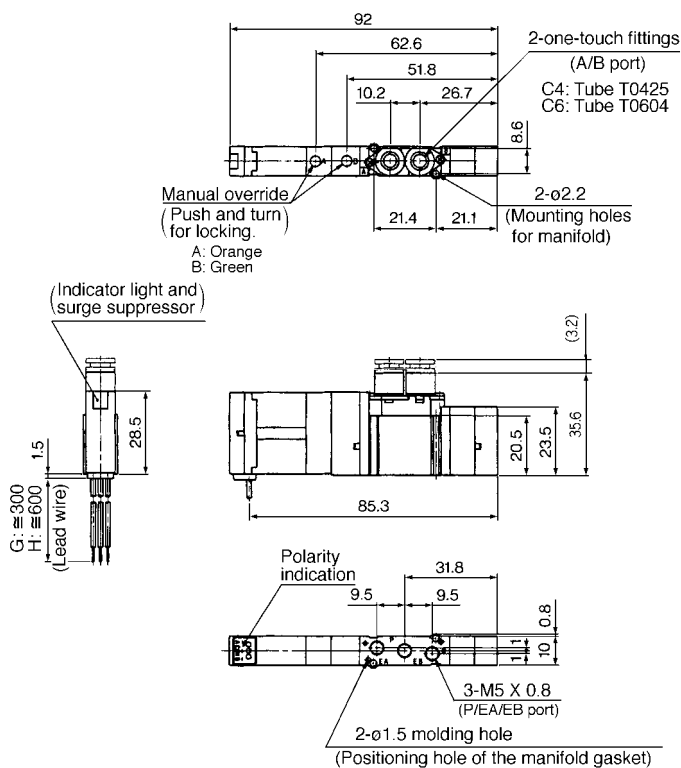




# SX3000/5000/7000 Body Ported Valve

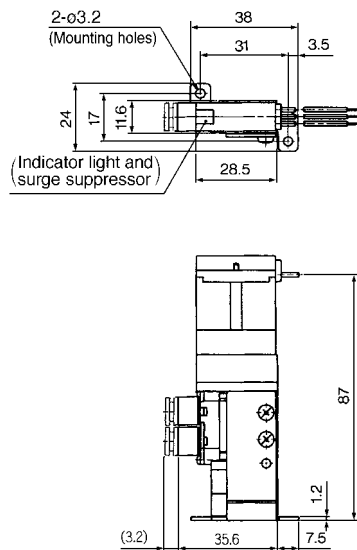
3 position closed center/exhaust center/pressure center

Grommet (G), (H):  $SX3\frac{3}{4}20-\square^G_H\square\square-C_4$

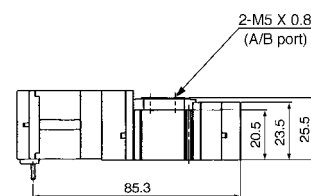


With foot bracket

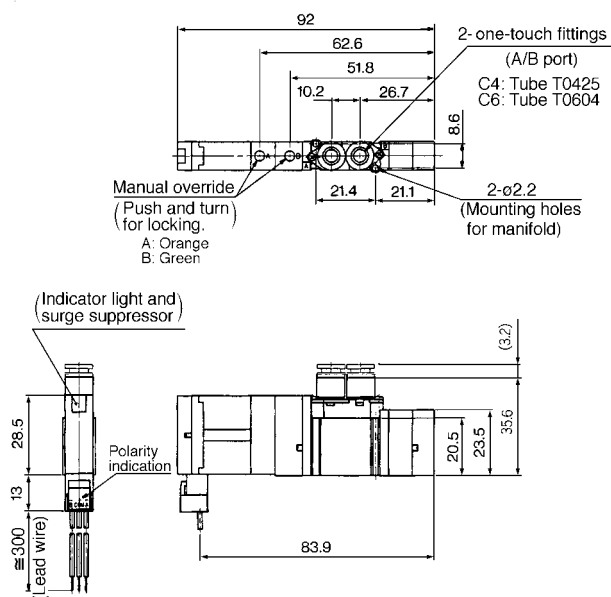
$SX3\frac{3}{4}20-\square^G_H\square\square-C_6-F1$



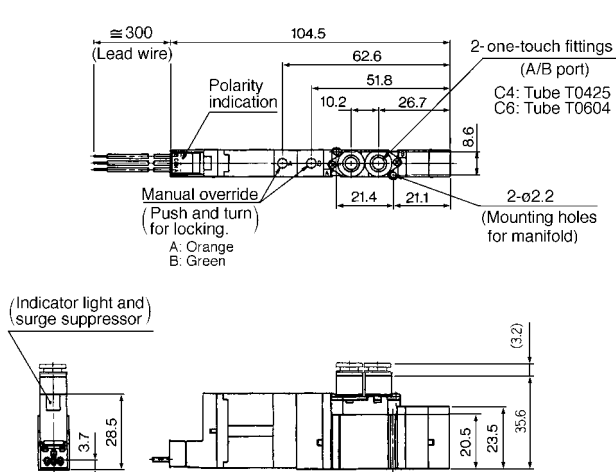
$SX3\frac{3}{4}20-\square^G_H\square\square-M5$



L plug connector (L):  $SX3\frac{3}{4}20-\square^L\square\square-C_4$



M plug connector (M):  $SX3\frac{3}{4}20-\square^M\square\square-C_4$



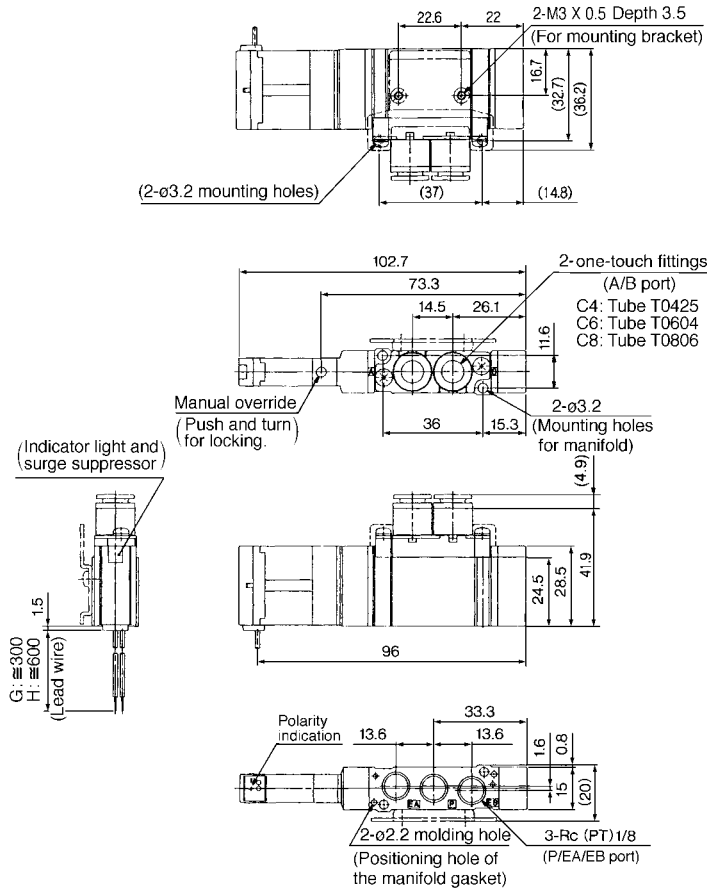
- SY
- SYJ
- SX**
- VK
- VZ
- VF
- VFR
- VP7
- VP4
- VQ
- VQ4
- VQZ
- VQD
- VZS
- VFS
- VS
- VS7

# SX3000/5000/7000

## Dimensions/Series SX5000

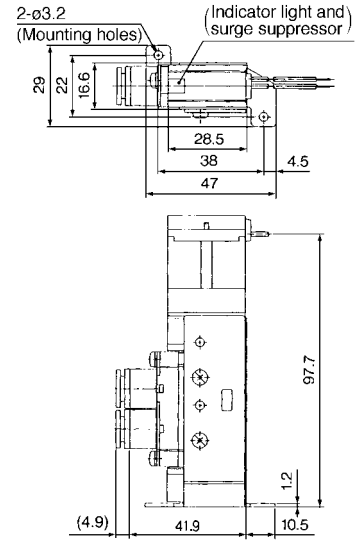
2 position single

Grommet (G), (H): SX5120-□<sup>G</sup><sub>H</sub>□□ - <sup>C4</sup><sub>C6</sub><sup>C8</sup> (-F2)

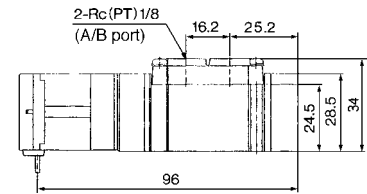


With foot bracket

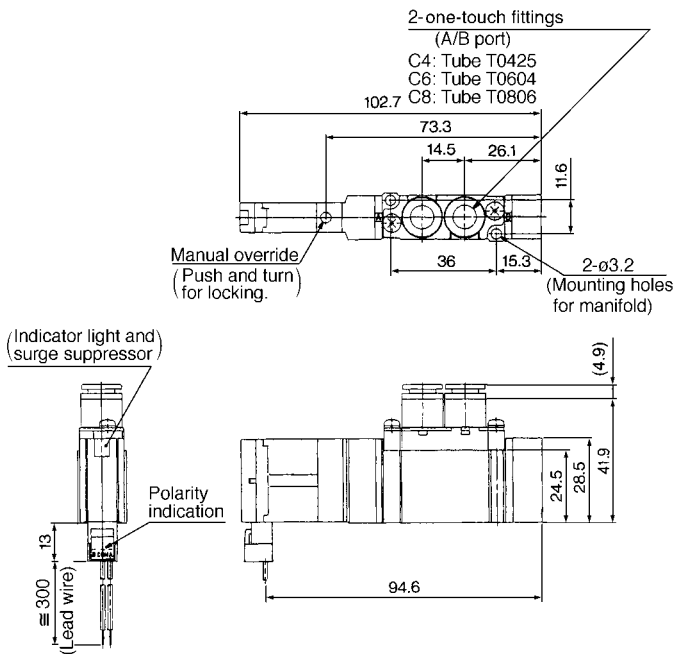
SX5120-□<sup>G</sup><sub>H</sub>□□ - <sup>C4</sup><sub>C6</sub><sup>C8</sup> -F1



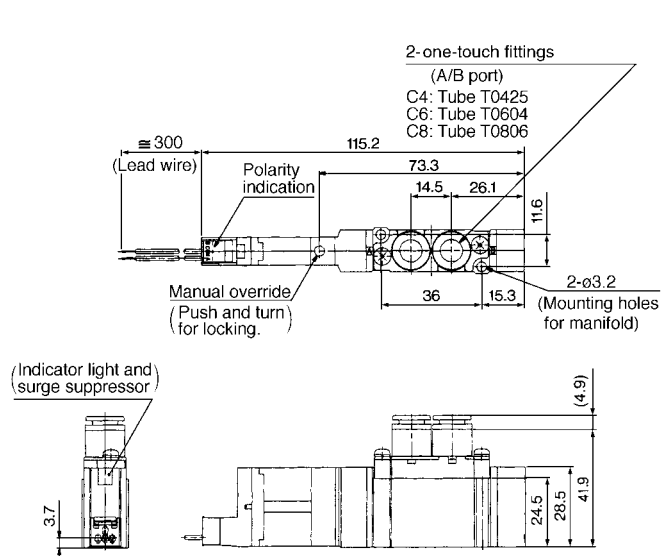
SX5120-□<sup>G</sup><sub>H</sub>□□-01



L plug connector (L): SX5120-□L□□ - <sup>C4</sup><sub>C6</sub><sup>C8</sup>



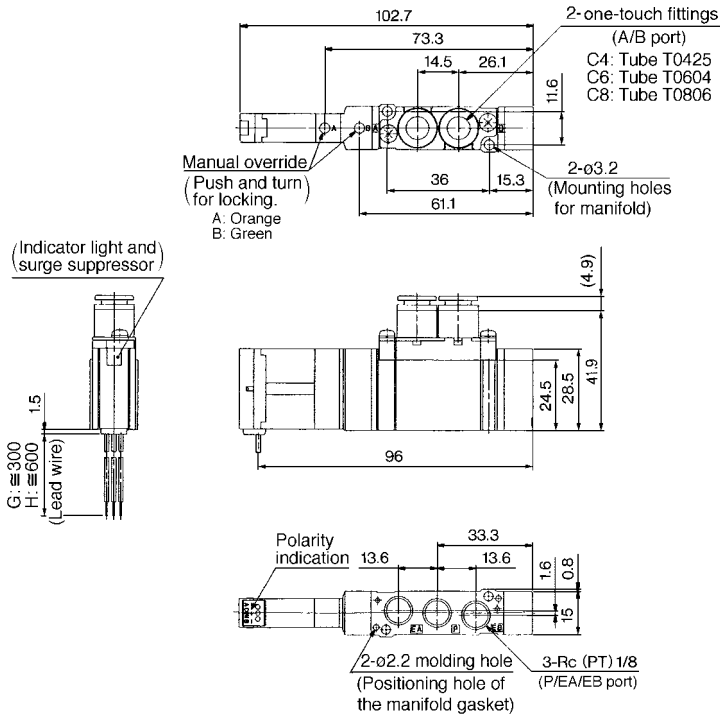
M plug connector (M): SX5120-□M□□ - <sup>C4</sup><sub>C6</sub><sup>C8</sup>



# SX3000/5000/7000 Body Ported Valve

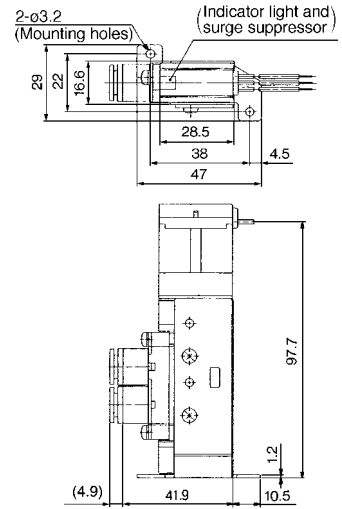
## 2 position double

Grommet (G), (H): SX5220-□<sup>G</sup>□<sup>H</sup>□□ - C4  
C6  
C8

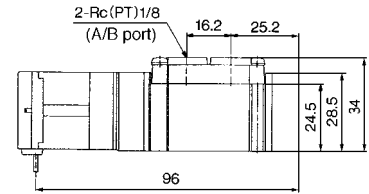


## With foot bracket

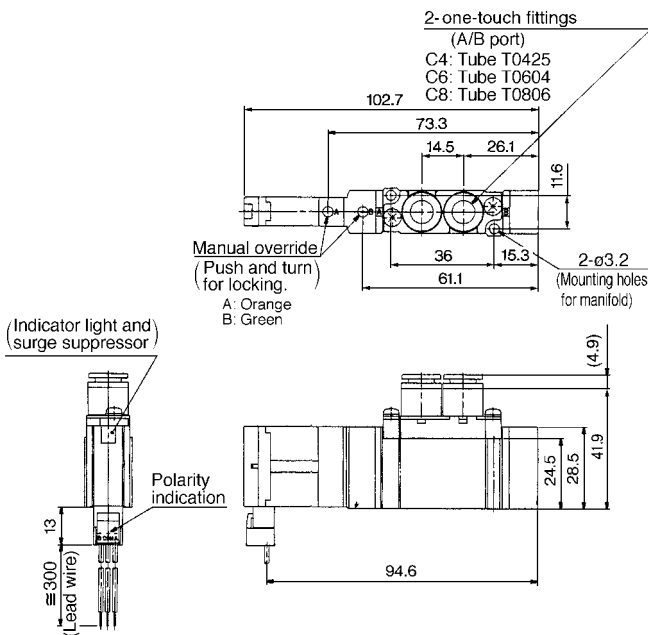
SX5220-□<sup>G</sup>□<sup>H</sup>□□ - F1  
C4  
C6  
C8



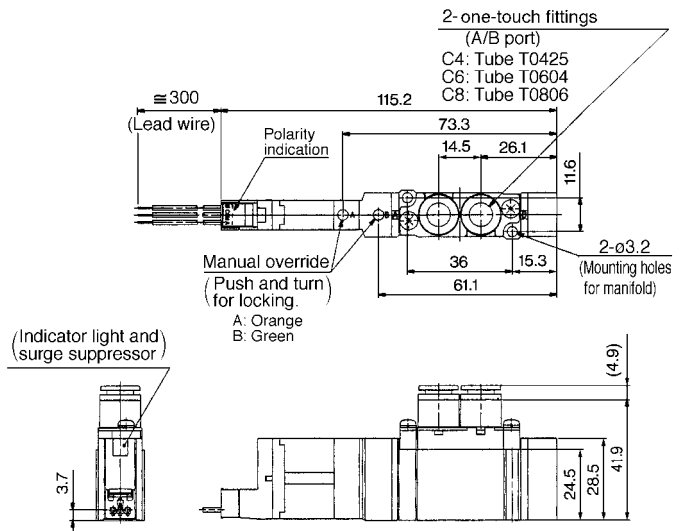
SX5220-□<sup>G</sup>□<sup>H</sup>□□ - 01



L plug connector (L): SX5220-□<sup>L</sup>□□ - C4  
C6  
C8



M plug connector (M): SX5220-□<sup>M</sup>□□ - C4  
C6  
C8



SY

SYJ

SX

VK

VZ

VF

VFR

VP7

VP4

VQ

VQ4

VQZ

VQD

VZS

VFS

VS

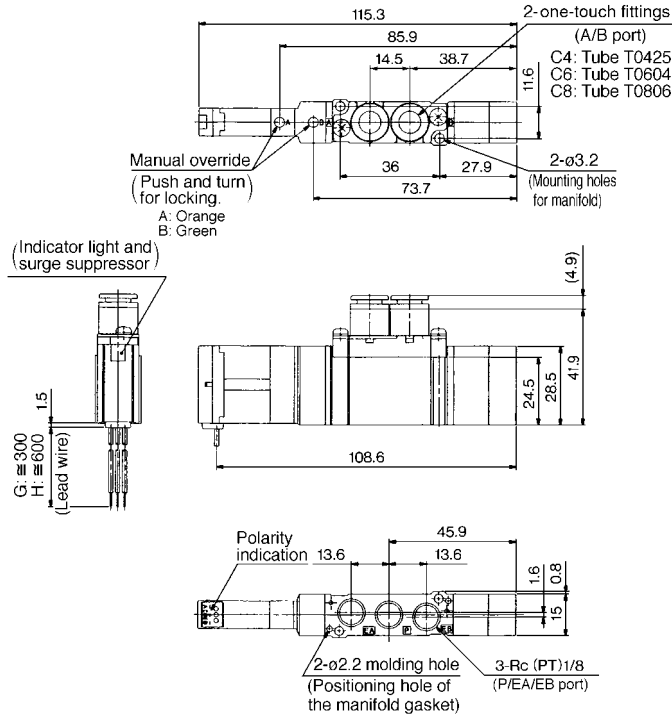
VS7

# SX3000/5000/7000

## Dimensions/Series SX5000

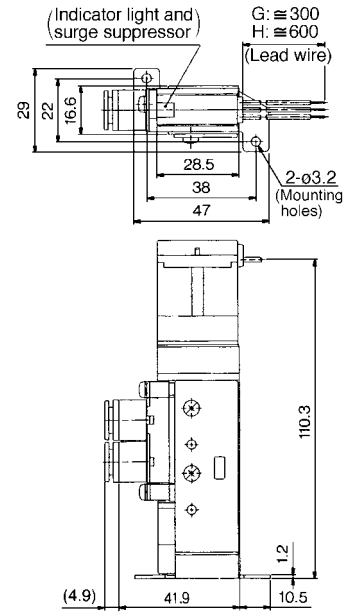
3 position closed center/exhaust center/pressure center

Grommet (G), (H):  $SX5 \frac{3}{4} 20-\square \square \square \square - \square \square \square \square$   
C4  
C6  
C8

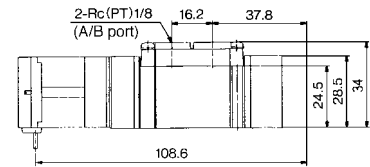


With foot bracket

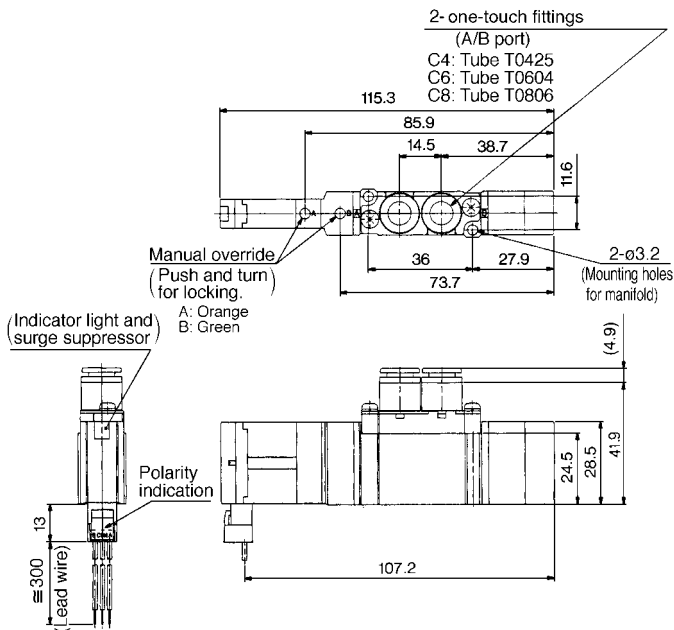
$SX5 \frac{3}{4} 20-\square \square \square \square - F1$   
C4  
C6  
C8



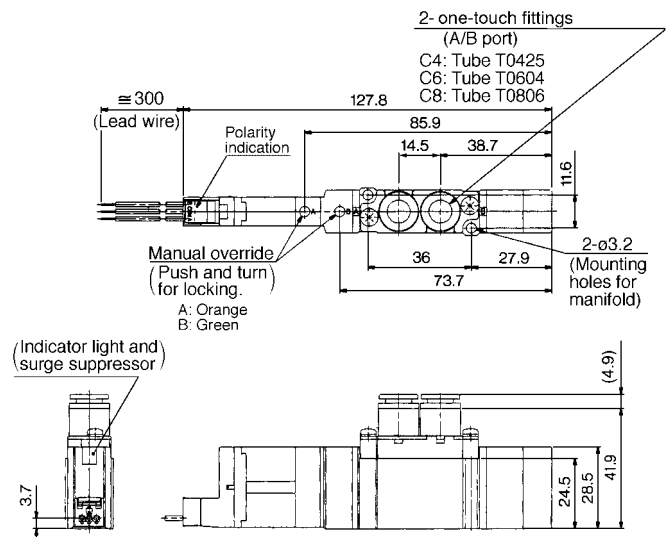
$SX5 \frac{3}{4} 20-\square \square \square \square - 01$   
C4  
C6  
C8



L plug connector (L):  $SX5 \frac{3}{4} 20-\square \square \square \square - \square \square \square \square$   
C4  
C6  
C8



M plug connector (M):  $SX5 \frac{3}{4} 20-\square \square \square \square - \square \square \square \square$   
C4  
C6  
C8

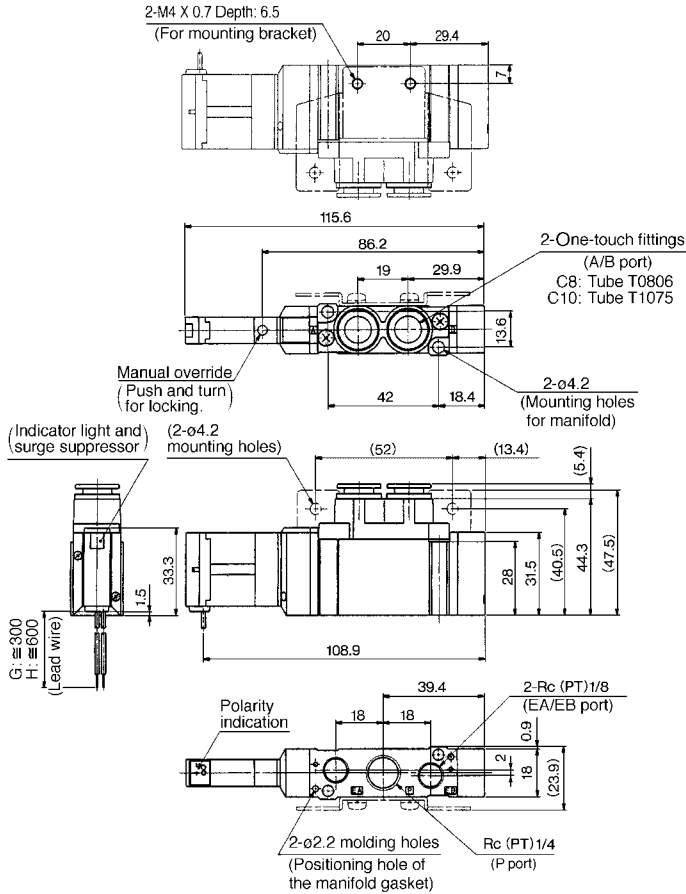


# SX3000/5000/7000 Body Ported Valve

## Dimensions/Series SX7000

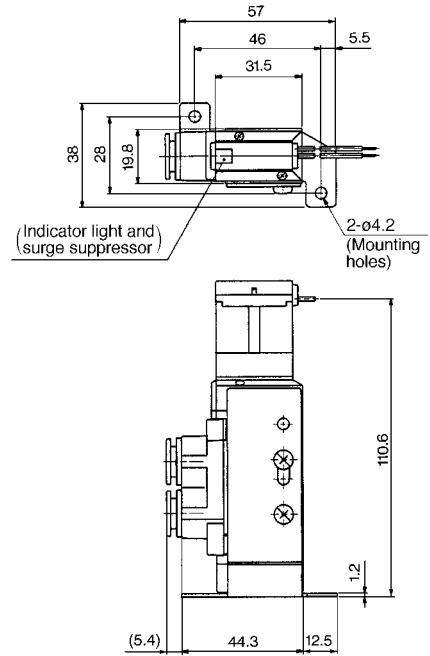
### 2 position single

Grommet (G), (H): SX7120-□<sub>G</sub>□<sub>H</sub>□□ - C<sub>8</sub><sup>8</sup>/<sub>10</sub> (-F2)

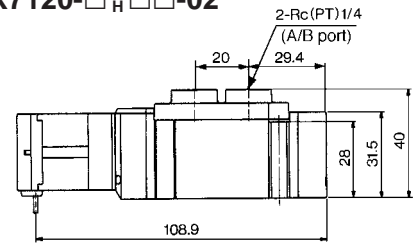


### With foot bracket

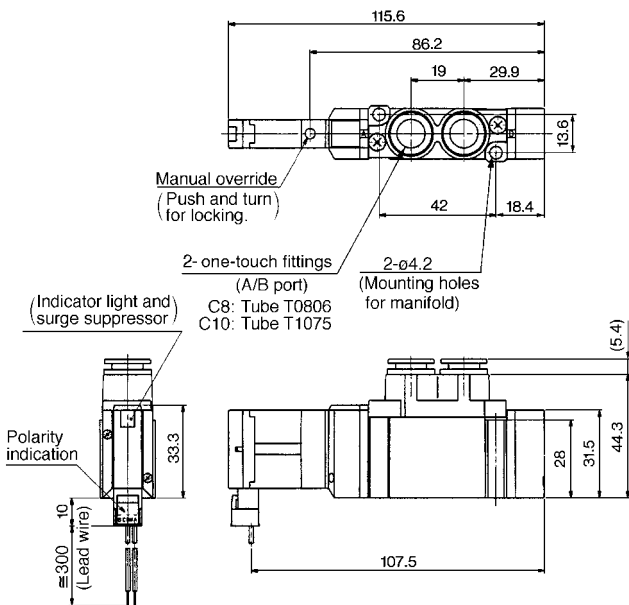
SX7120-□<sub>G</sub>□<sub>H</sub>□□ - C<sub>8</sub><sup>8</sup>/<sub>10</sub> -F1



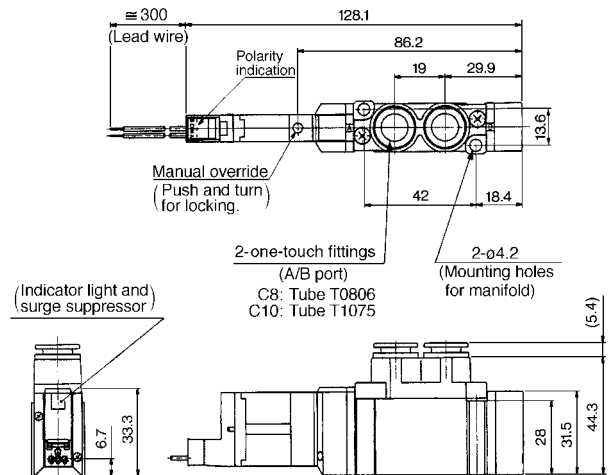
SX7120-□<sub>G</sub>□<sub>H</sub>□□ -02



L plug connector (L): SX7120-□L□□ - C<sub>8</sub><sup>8</sup>/<sub>10</sub>



M plug connector (M): SX7120-□M□□ - C<sub>8</sub><sup>8</sup>/<sub>10</sub>



SY

SYJ

SX

VK

VZ

VF

VFR

VP7

VP4

VQ

VQ4

VQZ

VQD

VZS

VFS

VS

VS7

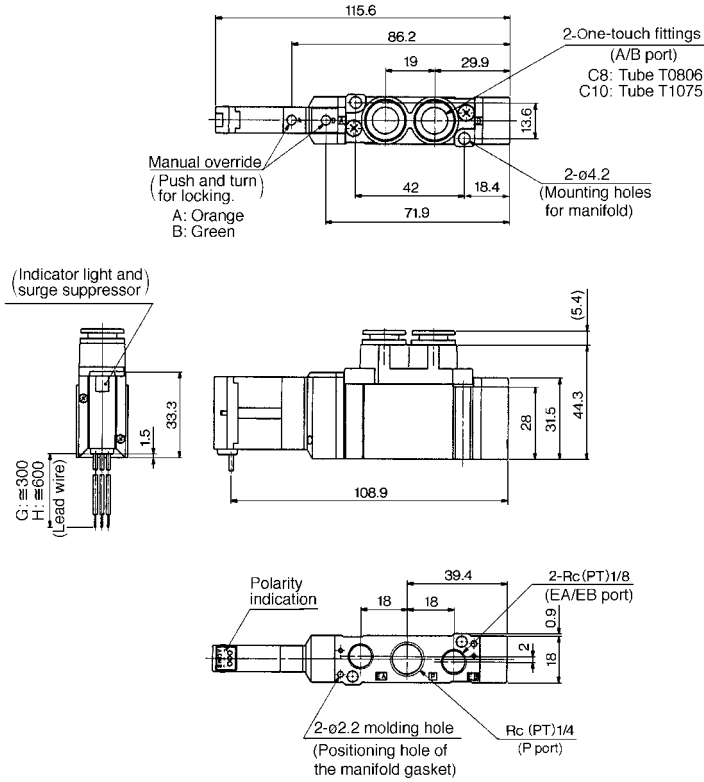


# SX3000/5000/7000

## Dimensions/Series SX7000

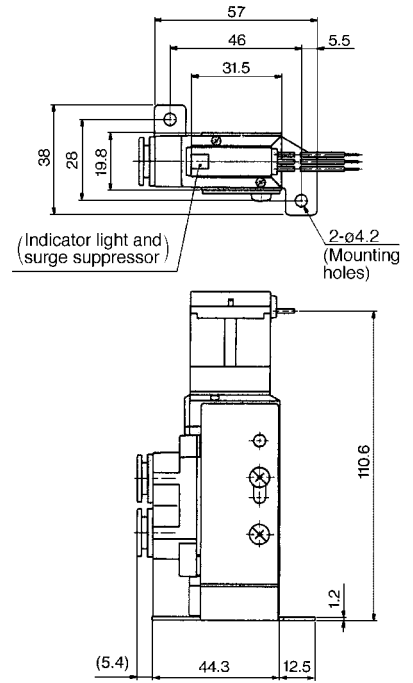
### 2 position double

Grommet (G), (H): SX7220-□<sub>G</sub>□<sub>H</sub>□□ - C<sub>8</sub>  
C<sub>10</sub>

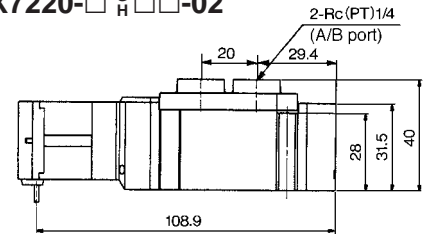


### With foot bracket

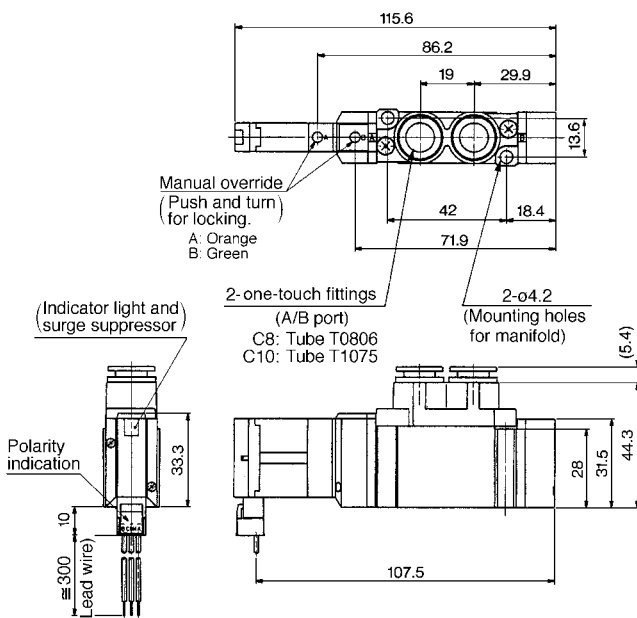
SX7220-□<sub>G</sub>□<sub>H</sub>□□ - C<sub>8</sub>  
C<sub>10</sub> -F1



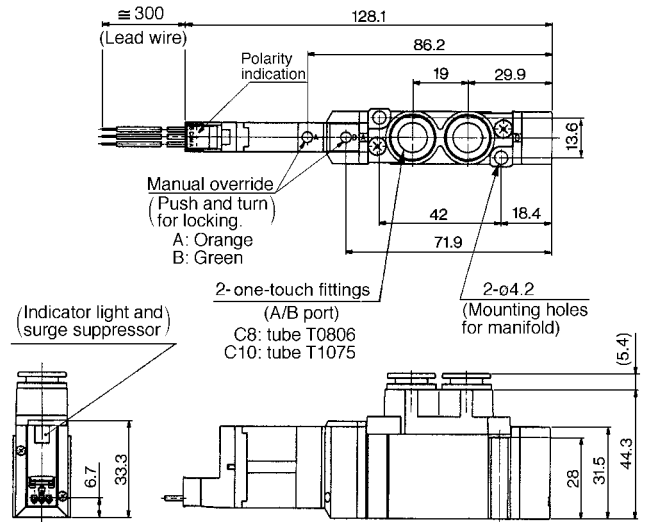
SX7220-□<sub>G</sub>□<sub>H</sub>□□ -02



L plug connector (L): SX7220-□<sub>L</sub>□□ - C<sub>8</sub>  
C<sub>10</sub>



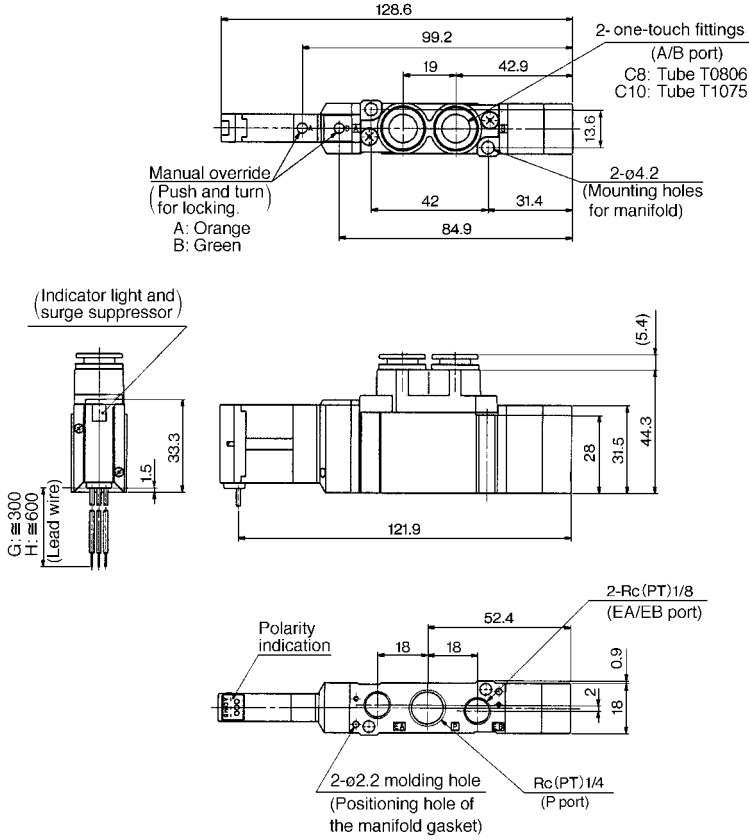
M plug connector (M): SX7220-□<sub>M</sub>□□ - C<sub>8</sub>  
C<sub>10</sub>



# SX3000/5000/7000 Body Ported Valve

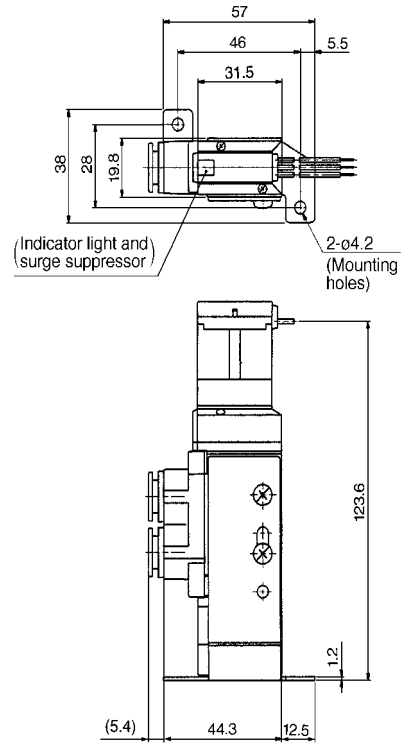
3 position closed center/exhaust center/pressure center

Grommet (G), (H):  $SX7 \frac{3}{4} 20-\square \square \square \square -C8$

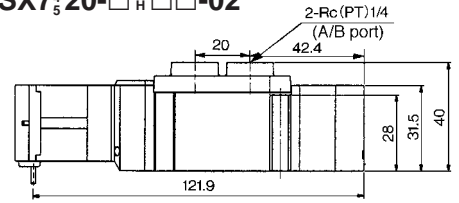


With foot bracket

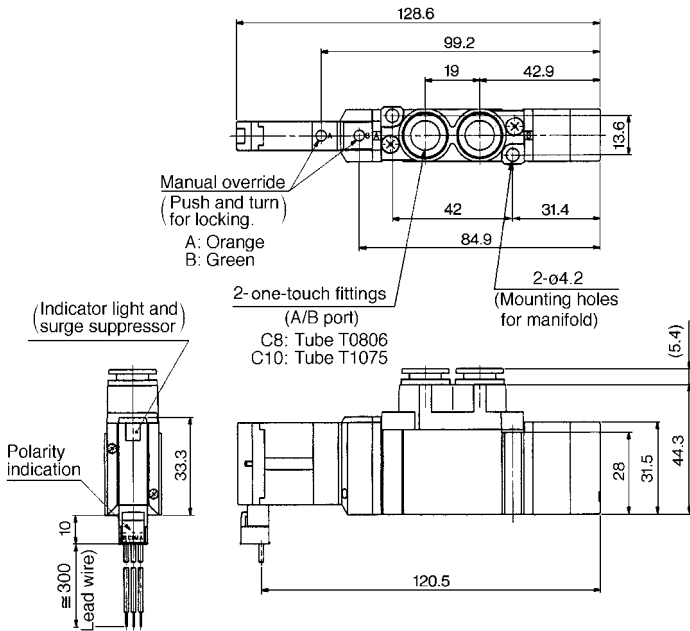
$SX7 \frac{3}{4} 20-\square \square \square \square -C8$  -F1



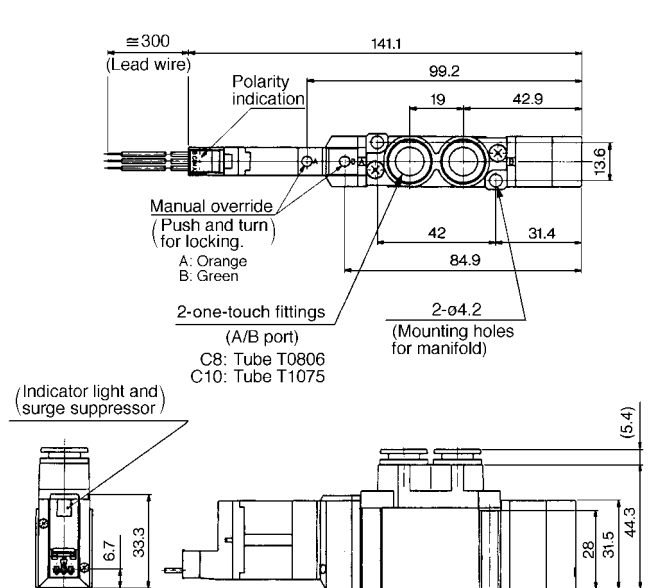
$SX7 \frac{3}{4} 20-\square \square \square \square -02$



L plug connector (L):  $SX7 \frac{3}{4} 20-\square L \square \square -C8$



M plug connector (M):  $SX7 \frac{3}{4} 20-\square M \square \square -C8$



SY

SYJ

SX

VK

VZ

VF

VFR

VP7

VP4

VQ

VQ4

VQZ

VQD

VZS

VFS

VS

VS7

# SX3000/5000/7000

## Base Mounted Valve

### How to Order

SX 5 2 40 [ ] 5 N L [ ] [ ] [ ]

#### Series

3	SX3000
5	SX5000
7	SX7000

#### Configuration

1	2 position single (A)(B) 4 2 5 1 3 (EA)(P)(EB)
2	2 position double (A)(B) 4 2 5 1 3 (EA)(P)(EB)
3	3 position closed center (A)(B) 4 2 5 1 3 (EA)(P)(EB)
4	3 position exhaust center (A)(B) 4 2 5 1 3 (EA)(P)(EB)
5	3 position pressure center (A)(B) 4 2 5 1 3 (EA)(P)(EB)

#### Pilot


—	Internal pilot
R	External pilot

#### Rated voltage

5	24V DC
6	12V DC
V	6V DC
S	5V DC
R	3V DC

#### Common specification

—	Positive common
N	Negative common

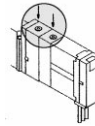
 Note) Put nothing for single grommet style and single without indicator light and surge suppressor.

#### Port size

Symbol	Port size	Series
—	Without subplate	
01	Rc(PT) 1/8 With subplate	SX3000
02	Rc(PT) 1/4 With subplate	SX5000 SX7000
03	Rc(PT) 3/8 With subplate	SX7000

#### Manual override

—: Non-locking push style



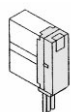
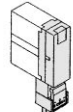
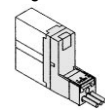
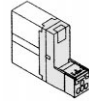
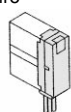
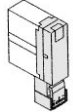
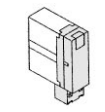
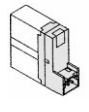
D: Push-turn-locking slotted style




#### Indicator light and surge voltage suppressor

—	Without indicator light and surge voltage suppressor
S	With surge voltage suppressor
Z	With indicator light and surge voltage suppressor

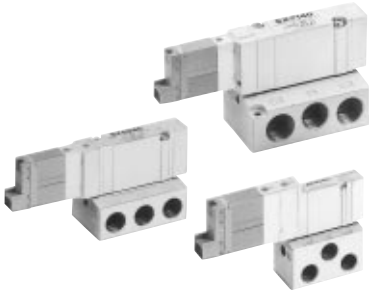
#### Electrical entry

Grommet	L plug connector	M plug connector	
<b>G:</b> 300mm lead wire 	<b>L:</b> 300mm lead wire 	<b>M:</b> With lead wire (Length: 300mm) 	<b>MN:</b> Without lead wire 
<b>H:</b> 600mm lead wire 	<b>LN:</b> Without lead wire 	<b>LO:</b> Without connector 	<b>MO:</b> Without connector 

 \* The LN or MN option includes 2 sockets for single solenoid valves and 3 sockets for double solenoid valves.

# SX3000/5000/7000 Base Mounted Valve

## Specifications



P.1.3-112 to 1.3-126

Series		SX3000	SX5000	SX7000
Fluid		Air		
Internal pilot operating pressure range (MPa)	2 position single	0.15 to 0.7		
	2 position double	0.1 to 0.7		
	3 position	0.2 to 0.7		
External pilot operating pressure range (MPa)	Operating pressure range		-100kPa to 0.7	
	Pilot pressure range	2 position single	0.25 to 0.7	
		2 position double	0.25 to 0.7	
		3 position	0.25 to 0.7	
Ambient and fluid temperature °C		Max. 50		
Max. operating frequency (Hz)	2 position single, double	10	5	5
	3 position	3	3	3
Manual override		Non-locking push style, Push-turn-locking slotted style		
Pilot exhaust	Internal pilot	Common exhaust for main and pilot valve		
	External pilot	Individual exhaust for pilot valve		
Lubrication		Not required		
Mounting position		Free		
Impact/Vibration resistance (m/s <sup>2</sup> )		150/30		
Protection structure		Dust proof		



Note) Shock resistance: No malfunction resulted from the impact test using a drop impact tester. The test was performed on the axis and right angle direction of the main valve and armature, for both energized and de-energized states.

Vibration resistance: No malfunction occurred in a one-sweep test between 8.3 and 2000Hz. Test was performed at both energized and de-energized states to the axis and right angle direction of the main valve and armature. (Value in the initial stage.)

## Solenoid Specifications

Electrical entry		Grommet (G)/(H), L plug connector (L), M plug connector (M)
Coil rated voltage (V)	DC	24, 12, 6, 5, 3
Allowable voltage		±10% rated voltage
Power consumption (W)	DC	0.6 (With light: 0.65)
Surge voltage suppressor		Diode
Indicator light		LED

## Response Time



Note) According to JISB8375-1981, kinetic ability test (Coil test: 20°C, at rated voltage)

### SX3000

Configuration	Response time (ms) (0.5MPa)	
	Without indicator light and surge voltage suppressor	W/ indicator light and surge suppressor S, Z type
2 position single	12 or less	15 or less
2 position double	10 or less	13 or less
3 position	15 or less	20 or less

### SX5000

Configuration	Response time (ms) (0.5MPa)	
	Without indicator light and surge voltage suppressor	W/ indicator light and surge suppressor S, Z type
2 position single	19 or less	26 or less
2 position double	18 or less	22 or less
3 position	32 or less	38 or less

### SX7000

Configuration	Response time (ms) (0.5MPa)	
	Without indicator light and surge voltage suppressor	W/ indicator light and surge suppressor S, Z type
2 position single	31 or less	38 or less
2 position double	27 or less	30 or less
3 position	50 or less	56 or less

SY

SYJ

SX

VK

VZ

VF

VFR

VP7

VP4

VQ

VQ4

VQZ

VQD

VZS

VFS

VS

VS7

# SX3000/5000/7000

## Series SX3000

Valve	Configuration		Port size	Effective area (mm <sup>2</sup> ) (Cv factor) <sup>(1)</sup>		Weight (g) <sup>(2)</sup>	
				P→A/B	A/B→EA/EB	Grommet	L, M plug connector
SX3□40-□-01	2 position	Single	Rc(PT) 1/8	4.86 (0.27)	5.4 (0.3)	100 (66)	101 (67)
		Double		4.86 (0.27)	5.4 (0.3)	108 (74)	110 (75)
	3 position	Closed center		4.68 (0.26)	4.86 (0.27)	111 (76)	112 (78)
		Exhaust center		4.86 (0.27)	5.94 (0.33) [3.24 (0.18)]		
		Pressure center		6.66 (0.37) [3.24 (0.18)]	5.22 (0.29)		



Note 1) [ ]: Normal position Note 2) ( ): Without subplate

## Series SX5000

Valve	Configuration		Port size	Effective area (mm <sup>2</sup> ) (Cv factor) <sup>(1)</sup>		Weight (g) <sup>(2)</sup>	
				P→A/B	A/B→EA/EB	Grommet	L, M plug connector
SX5□40-□-02	2 position	Single	Rc(PT) 1/4	12.78 (0.71)	12.6 (0.7)	136 (74)	137 (75)
		Double		12.78 (0.71)	12.6 (0.7)	144 (82)	145 (83)
	3 position	Closed center		7.56 (0.42)	8.1 (0.45)	149 (87)	151 (89)
		Exhaust center		7.92 (0.44)	14.4 (0.8) [9.0 (0.5)]		
		Pressure center		15.84 (0.88) [4.5 (0.25)]	8.64 (0.48)		



Note 1) [ ]: Normal position Note 2) ( ): Without subplate

## Series SX7000

Valve	Configuration		Port size	Effective area (mm <sup>2</sup> ) (Cv factor) <sup>(1)</sup>		Weight (g) <sup>(2)</sup>	
				P→A/B	A/B→EA/EB	Grommet	L, M plug connector
SX7□40-□-02 03	2 position	Single	Rc(PT) 1/4 Rc(PT) 3/8	23.22 (1.29)	21.6 (1.2)	222 (100)	223 (101)
		Double		23.22 (1.29)	21.6 (1.2)	229 (107)	231 (109)
	3 position	Closed center		14.04 (0.78)	12.24 (0.68)	238 (116)	240 (118)
		Exhaust center		14.04 (0.78)	20.88 (1.16) [12.96 (0.72)]		
		Pressure center		24.48 (1.36) [13.5 (0.75)]	12.42 (0.69)		

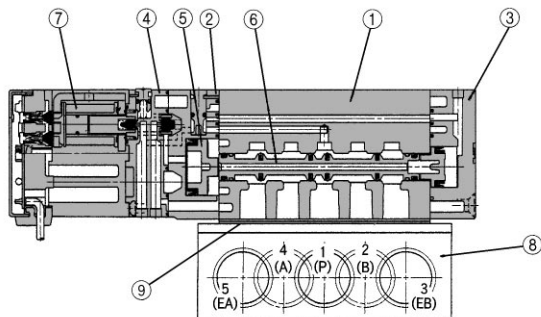
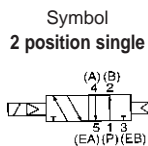


Note 1) [ ]: Normal position Note 2) ( ): Without subplate

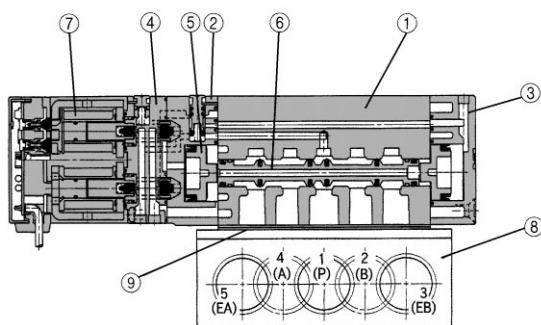
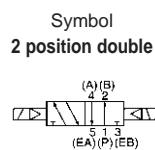
# SX3000/5000/7000 Base Mounted Valve

## Construction

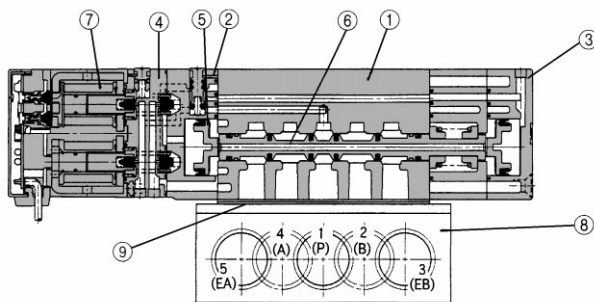
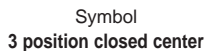
### 2 position single



### 2 position double



### 3 position closed center/exhaust center/pressure center



(In case of closed center)

## Component Parts

No.	Description	Material	Note
①	Body	Aluminum die cast (SX3000: Zinc die cast)	White
②	Adaptor plate	Resin	White
③	End plate	Resin	White
④	Pilot body	Resin	White
⑤	Piston	Resin	—
⑥	Spool ass'y	Aluminum/NBR	—
⑦	Mold coil	Resin	Gray

## Replacement Parts

No.	Description	Part No.			Note
		SX3□40	SX5□40	SX7□40	
⑧	Subplate	SY3000-27-1	SY5000-27-1	Rc(PT) 1/4: SY7000-27-1 Rc(PT) 3/8: SY7000-27-2	Aluminum die cast
⑨	Gasket	SY3000-11-8	SY5000-11-2	SY7000-11-2	NBR
—	Phillips head screw	SX3000-22-2 (M2 X 24)	M3 X 30	M4 X 35	For mounting valves (Matted nickel plated)

## How to Order Connector Ass'y for L and M Plug Connector

### Positive common

For single solenoid: SX100 - 40-4S

For double solenoid: SX100 - 40-4D  
3 position

### Negative common

For single solenoid: SX100 - 41-4S

For double solenoid: SX100 - 41-4D  
3 position

### Lead wire length

—	300mm
6	600mm
10	1000mm
15	1500mm
20	2000mm
25	2500mm
30	3000mm
50	5000mm



Refer to p.1.3-6 for further information on connector ass'y.

SY

SYJ

SX

VK

VZ

VF

VFR

VP7

VP4

VQ

VQ4

VQZ

VQD

VZS

VFS

VS

VS7

### ⚠ Caution

Mounting screw tightening torque

M2: 0.15Nm

M3: 0.6Nm

M4: 1.4Nm

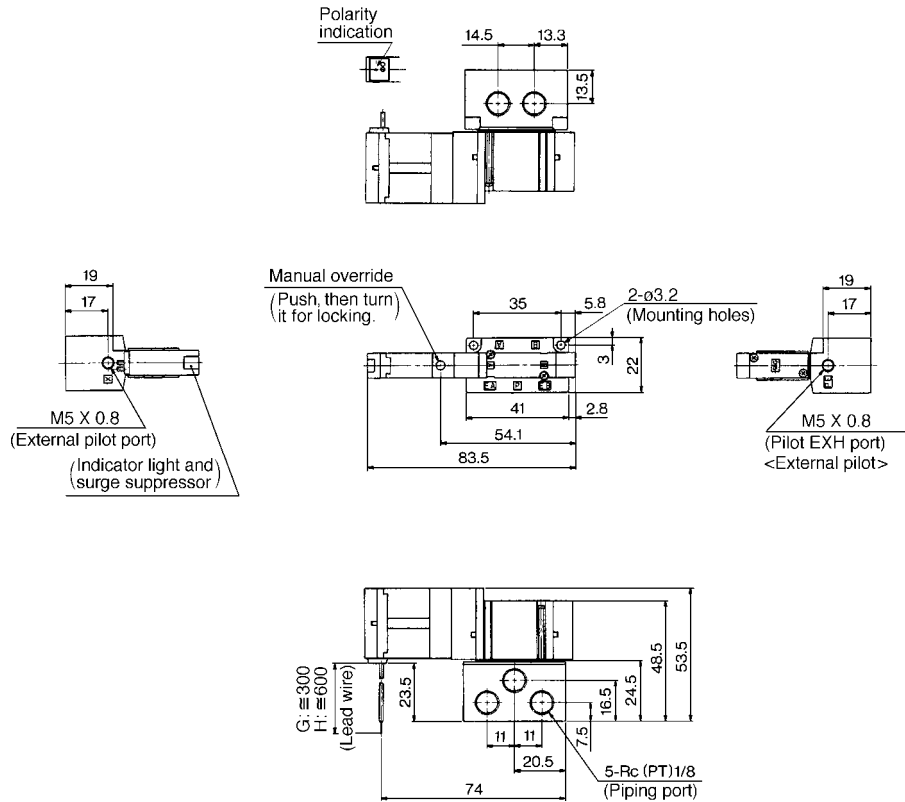


# SX3000/5000/7000

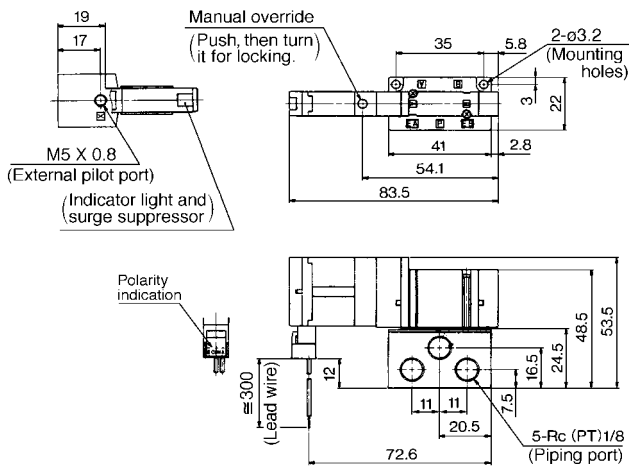
## Dimensions/Series SX3000

2 position single

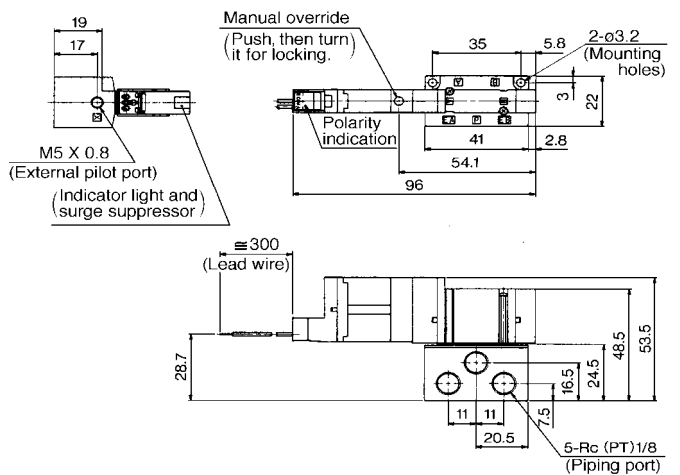
Grommet (G), (H): SX3140(R)-□<sup>G</sup>□□-01



### L plug connector (L): SX3140(R)-□L□□-01

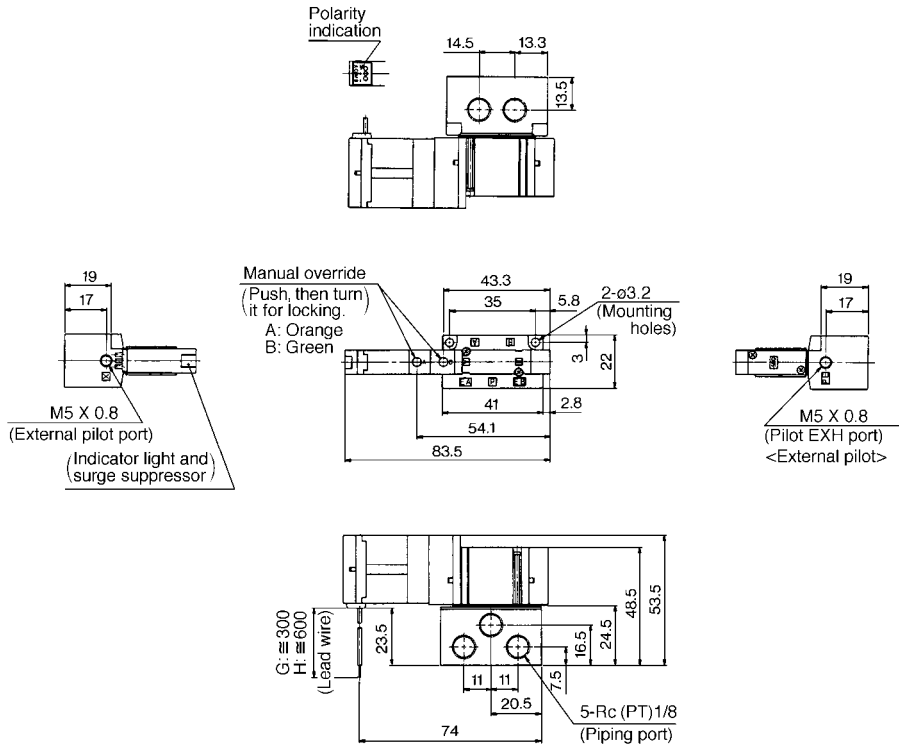


### M plug connector (M): SX3140(R)-□M□□-01

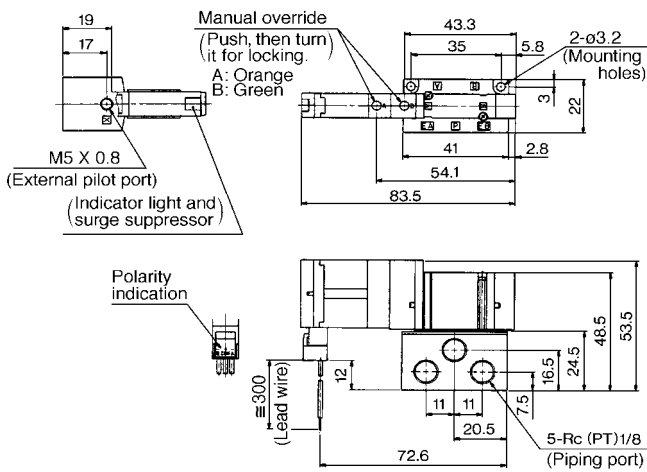


# SX3000/5000/7000 Base Mounted Valve

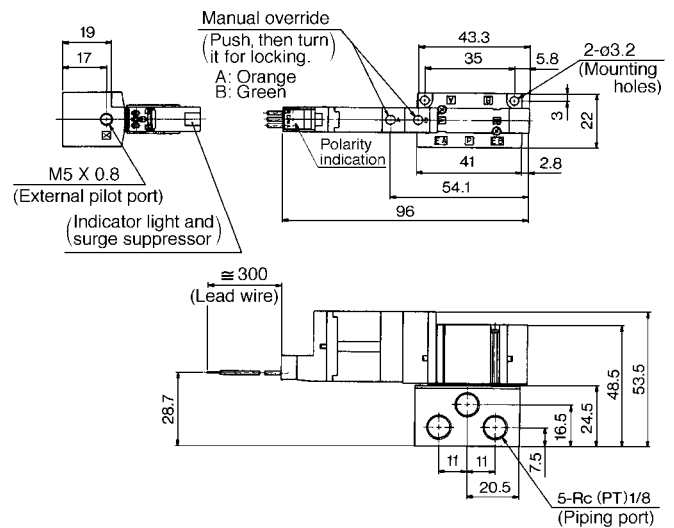
2 position double  
Grommet (G), (H): SX3240(R)-□<sup>G</sup>□□-01



L plug connector (L): SX3240(R)-□L□□-01



M plug connector (M): SX3240(R)-□M□□-01



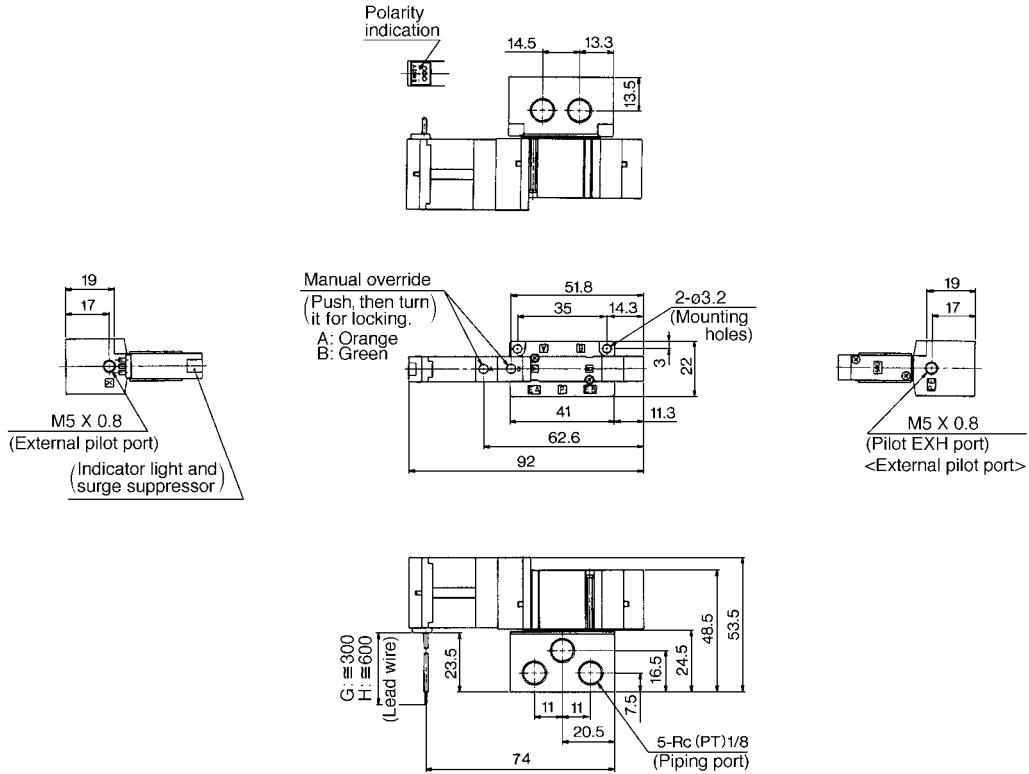
- SY
- SYJ
- SX**
- VK
- VZ
- VF
- VFR
- VP7
- VP4
- VQ
- VQ4
- VQZ
- VQD
- VZS
- VFS
- VS
- VS7

# SX3000/5000/7000

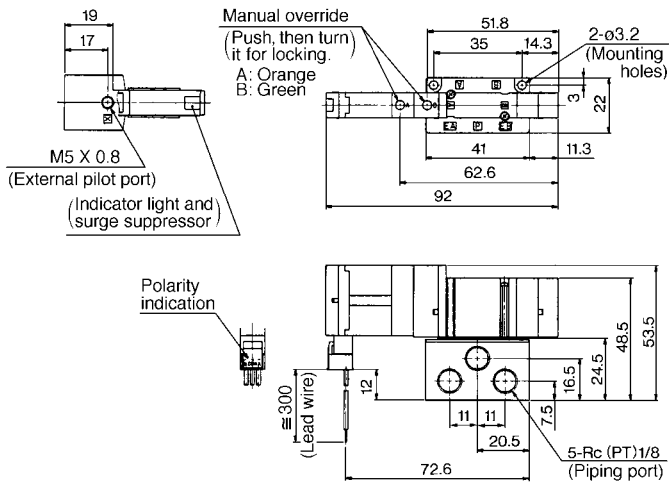
## Dimensions/Series SX3000

3 position closed center/exhaust center/pressure center

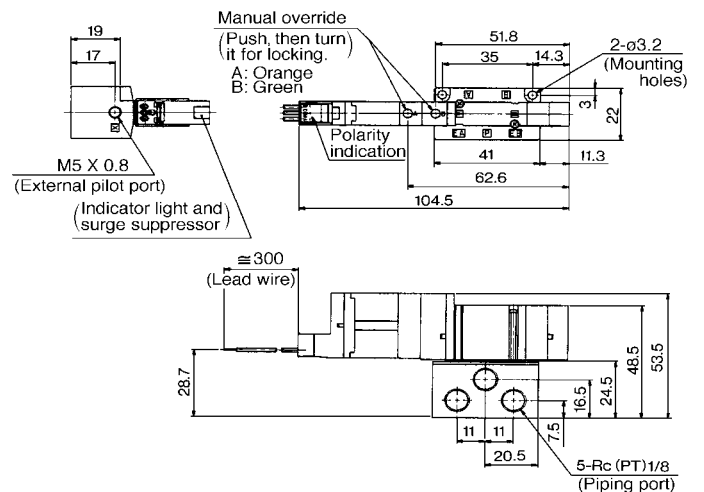
Grommet (G), (H): SX3<sup>3</sup>/<sub>5</sub>40(R)-□<sup>G</sup>□□-01



L plug connector (L): SX3<sup>3</sup>/<sub>5</sub>40(R)-□L□□-01



M plug connector (M): SX3<sup>3</sup>/<sub>5</sub>40(R)-□M□□-01

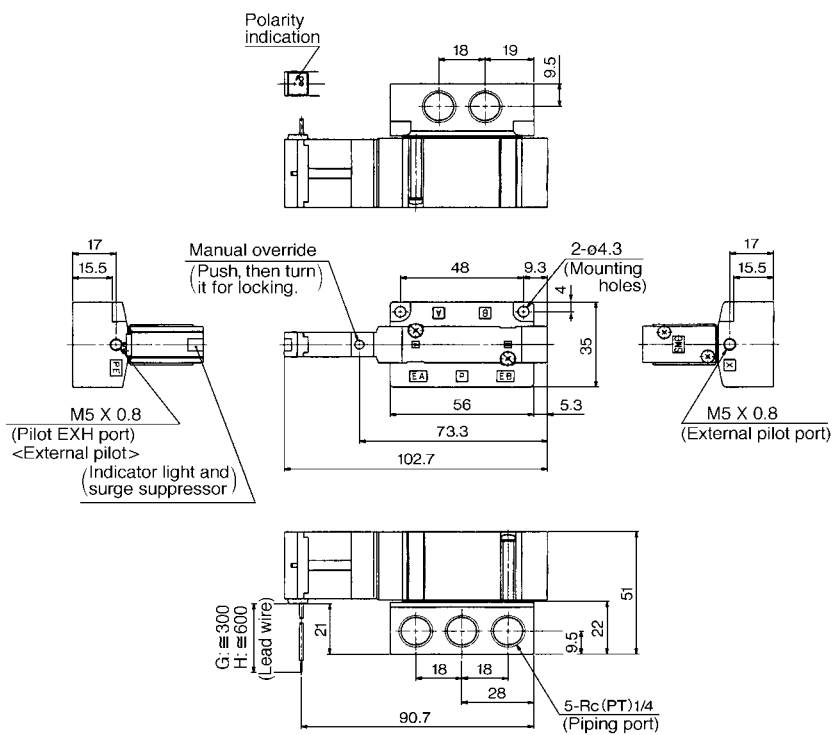


# SX3000/5000/7000 Base Mounted Valve

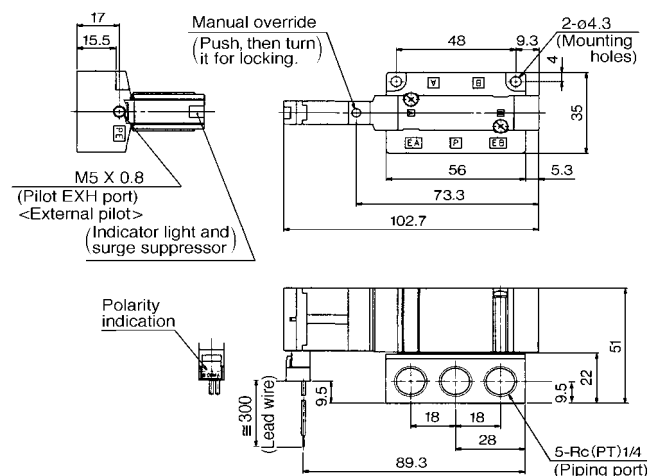
## Dimensions/Series SX5000

2 position single

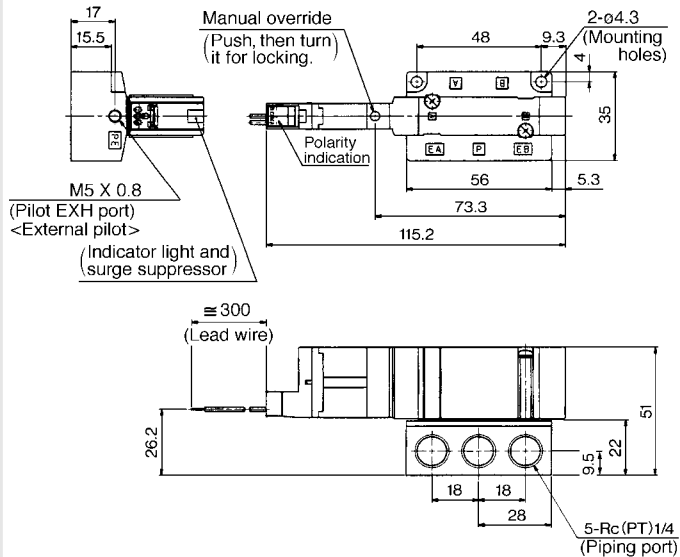
Grommet (G), (H): SX5140(R)-□<sup>G</sup>□□-02



### L plug connector (L): SX5140(R)-□L□□-02



### M plug connector (M): SX5140(R)-□M□□-02



SY

SYJ

**SX**

VK

VZ

VF

VFR

VP7

VP4

VQ

VQ4

VQZ

VQD

VZS

VFS

VS

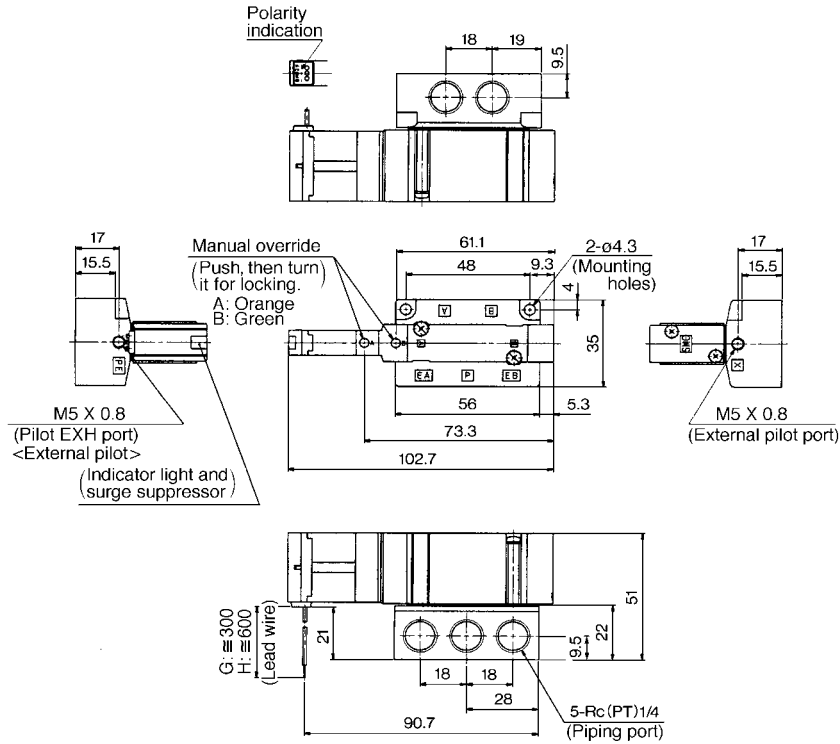
VS7

# SX3000/5000/7000

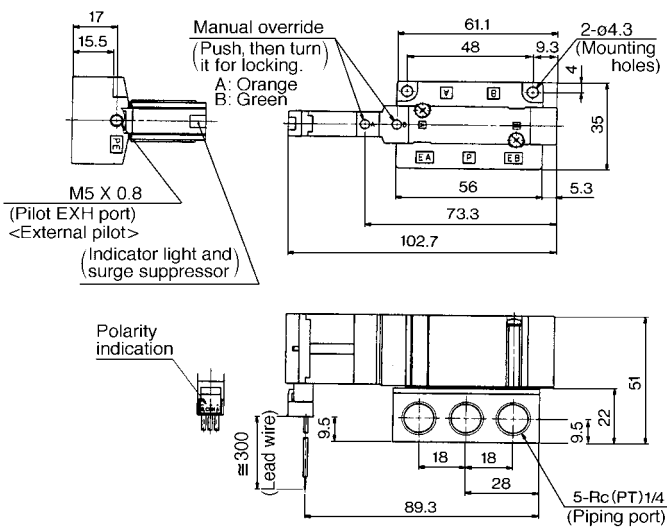
## Dimensions/Series SX5000

2 position double

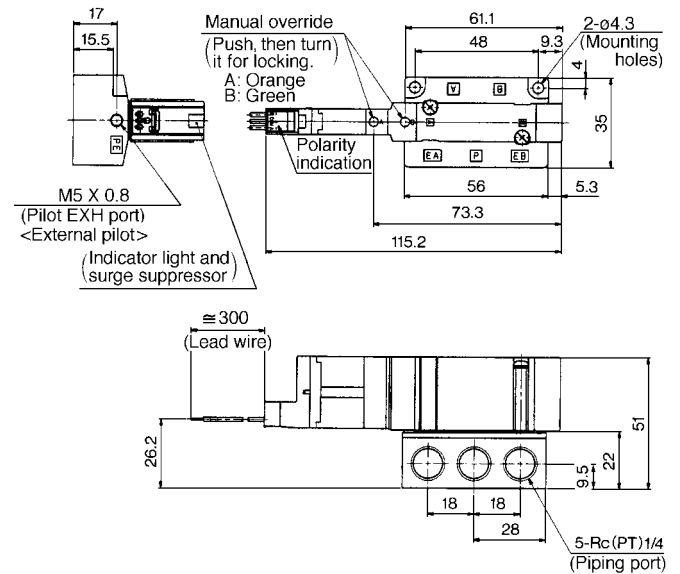
Grommet (G), (H): SX5240(R)-□<sup>G</sup>□□-02



L plug connector (L): SX5240(R)-□L□□-02



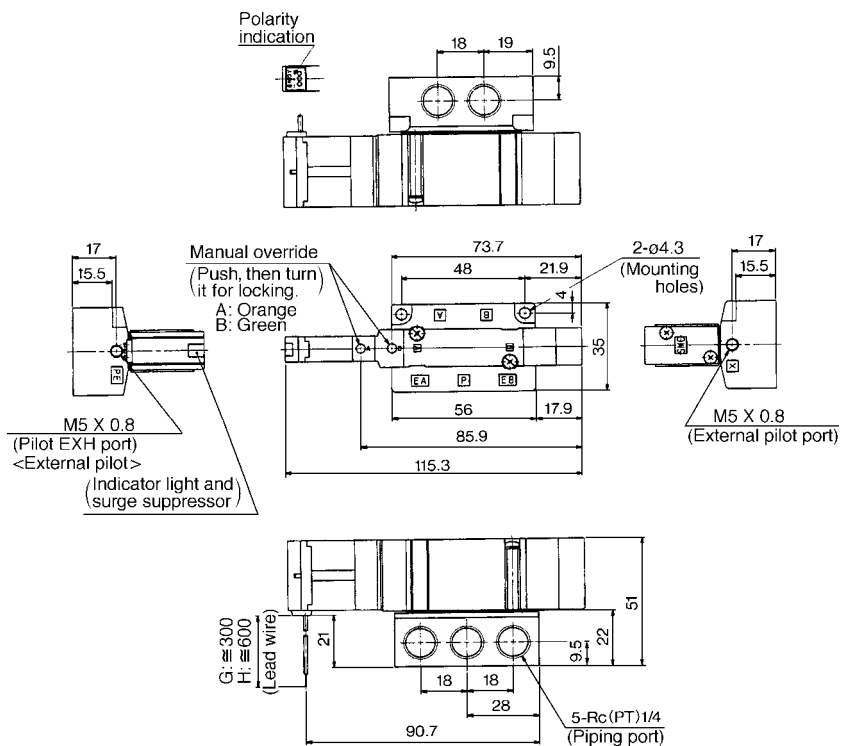
M plug connector (M): SX5240(R)-□M□□-02



# SX3000/5000/7000 Base Mounted Valve

3 position closed center/exhaust center/pressure center

Grommet (G), (H):  $SX5\frac{3}{4}40(R)-\square\text{H}\square\square-02$



SY

SYJ

**SX**

VK

VZ

VF

VFR

VP7

VP4

VQ

VQ4

VQZ

VQD

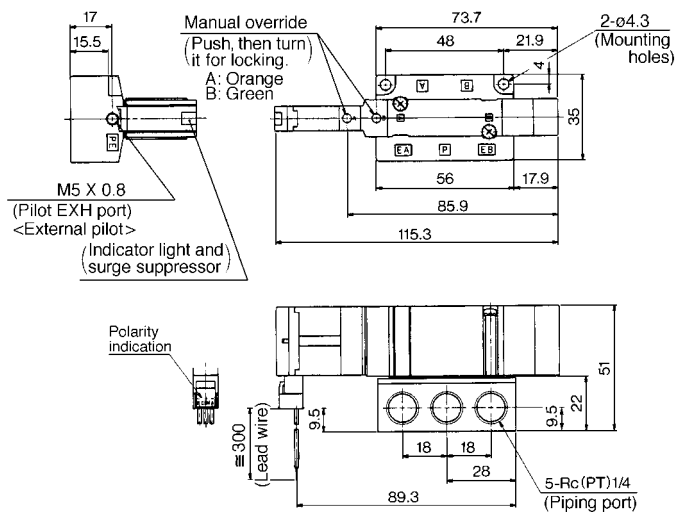
VZS

VFS

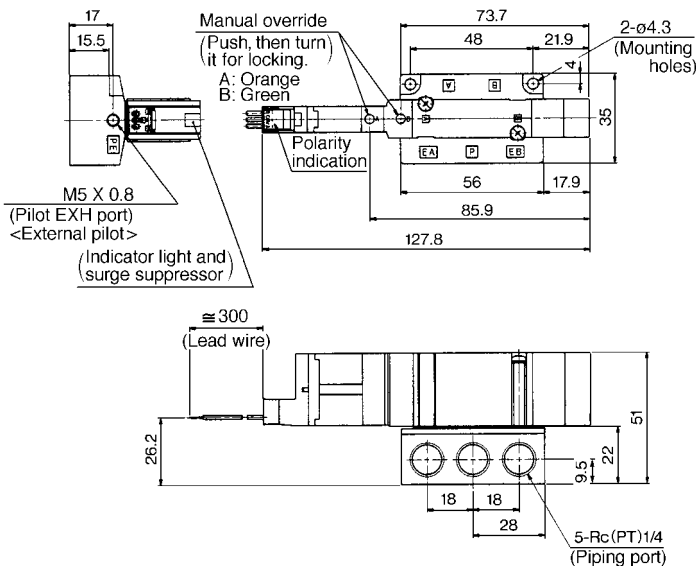
VS

VS7

L plug connector (L):  $SX5\frac{3}{4}40(R)-\square\text{L}\square\square-02$



M plug connector (M):  $SX5\frac{3}{4}40(R)-\square\text{M}\square\square-02$



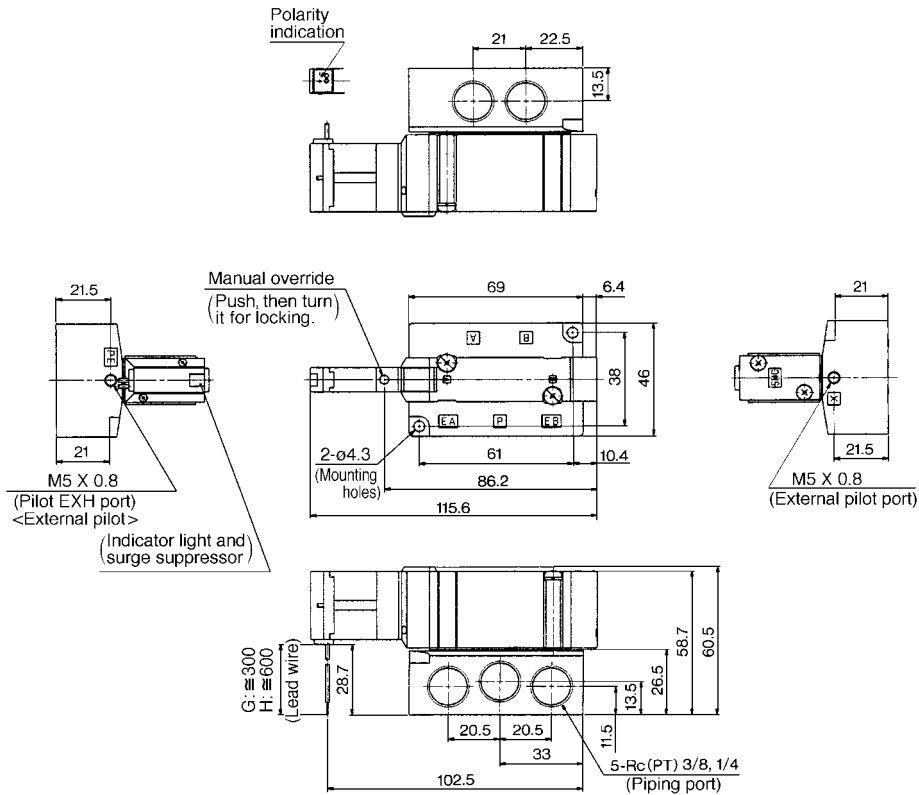


# SX3000/5000/7000

## Dimensions/Series SX7000

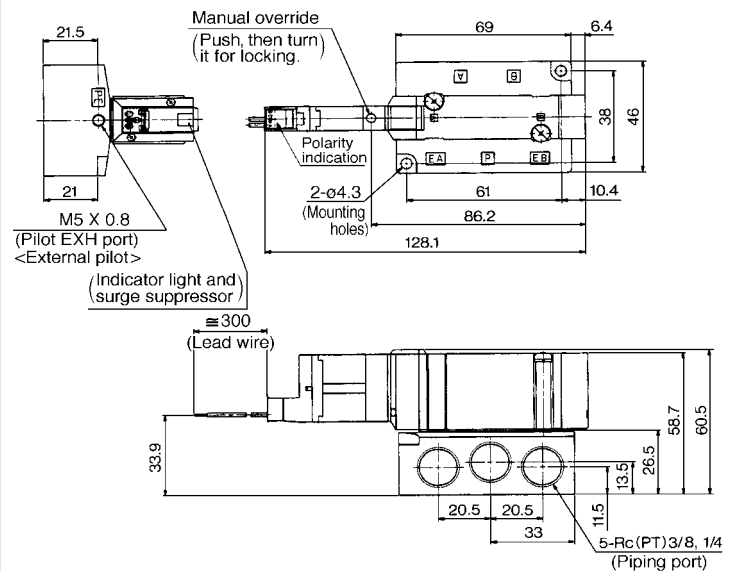
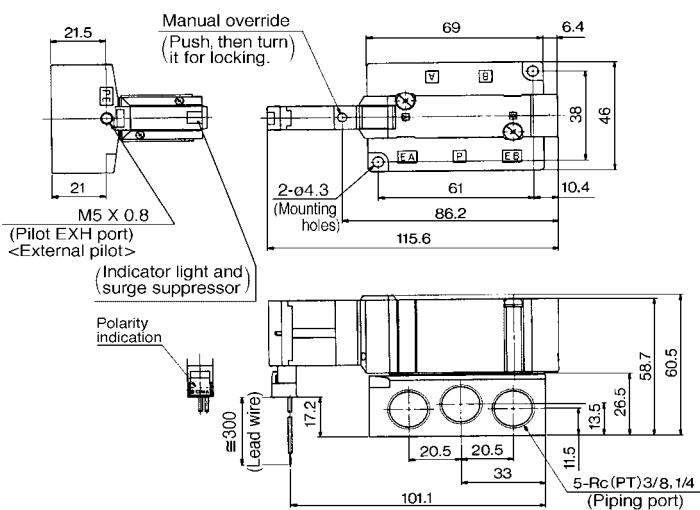
2 position single

Grommet (G), (H): SX7140(R)-□<sup>G</sup>□□<sup>02</sup><sub>-03</sub>



L plug connector (L): SX7140(R)-□L□□<sup>02</sup><sub>-03</sub>

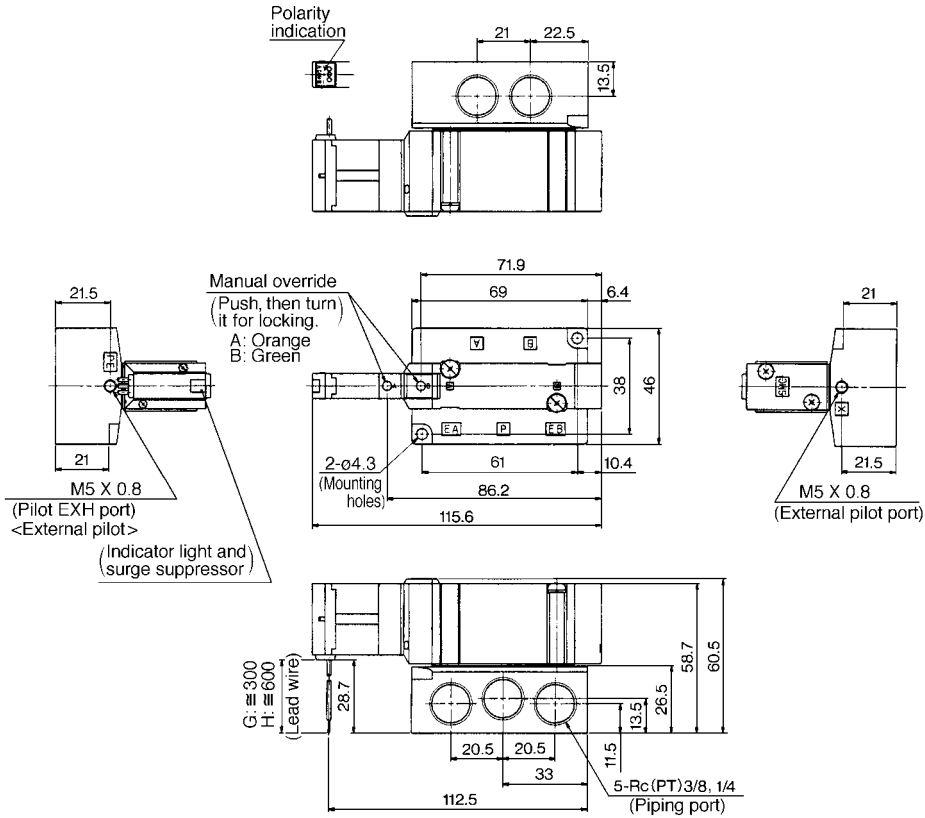
M plug connector (M): SX7140(R)-□M□□<sup>02</sup><sub>-03</sub>



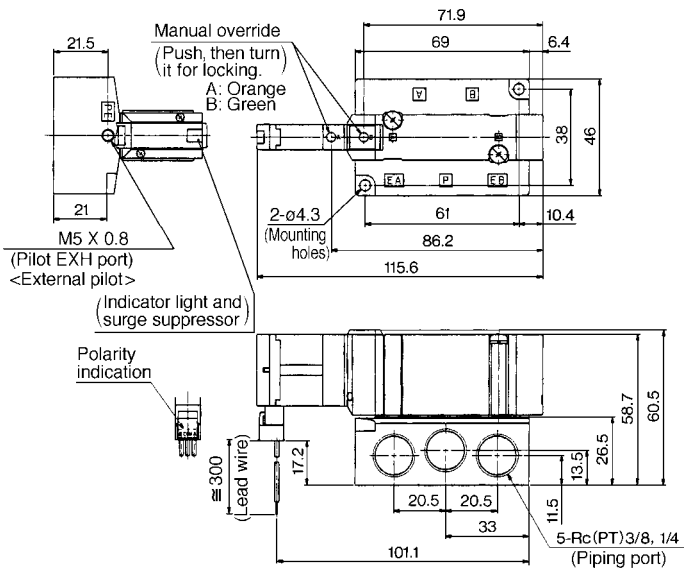
# SX3000/5000/7000 Base Mounted Valve

## 2 position double

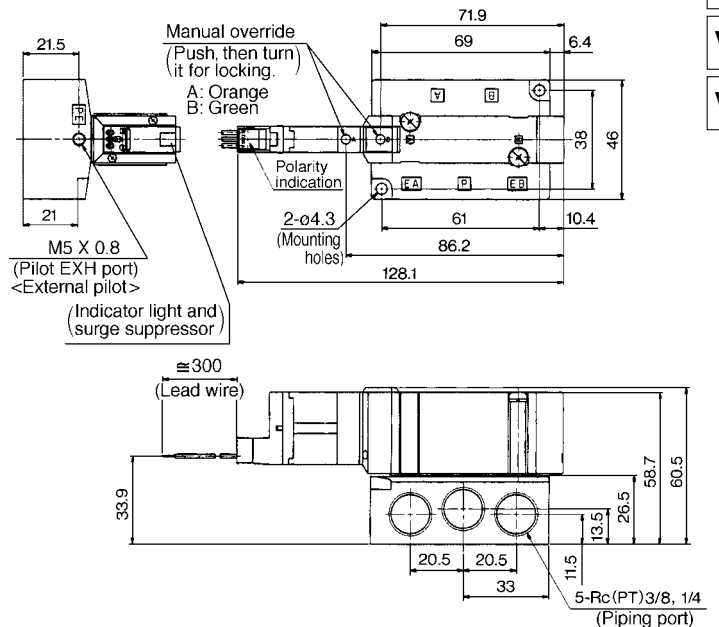
Grommet (G), (H): SX7240(R)-□<sup>G</sup>□□<sup>0.2</sup><sub>-0.3</sub>



L plug connector (L): SX7240(R)-□L□□<sup>0.2</sup><sub>-0.3</sub>



M plug connector (M): SX7240(R)-□M□□<sup>0.2</sup><sub>-0.3</sub>



SY

SYJ

**SX**

VK

VZ

VF

VFR

VP7

VP4

VQ

VQ4

VQZ

VQD

VZS

VFS

VS

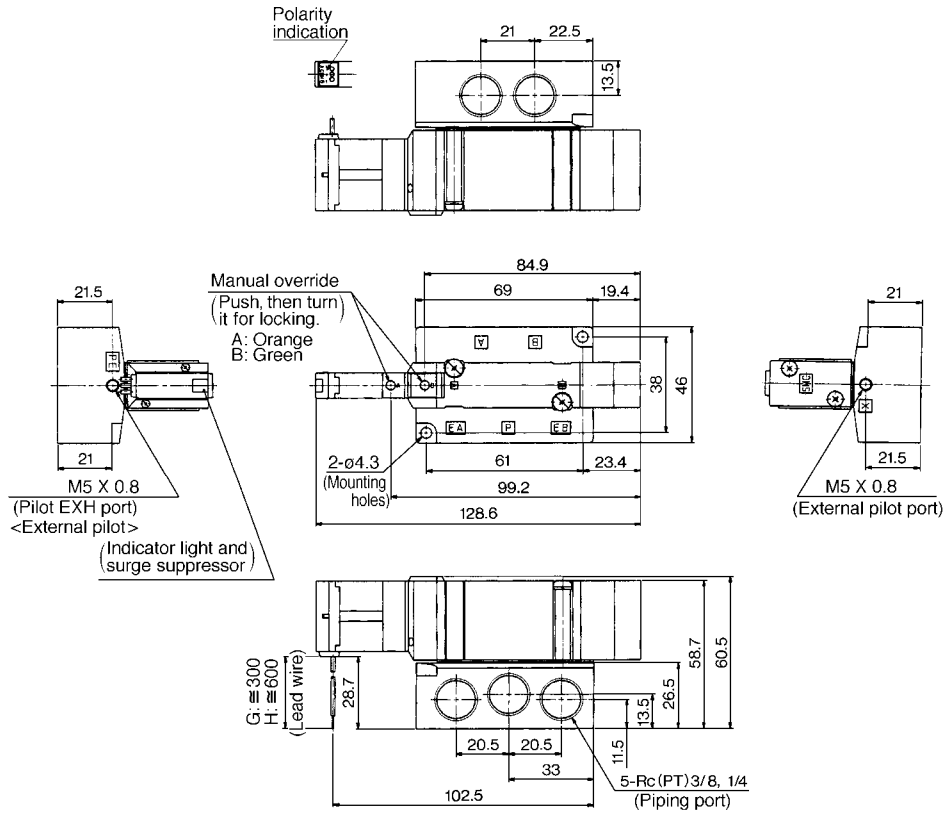
VS7

# SX3000/5000/7000

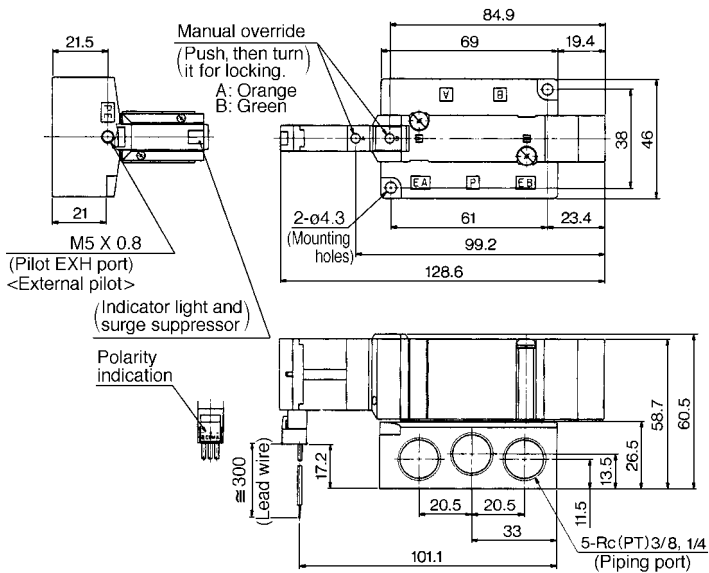
## Dimensions/Series SX7000

3 position closed center/exhaust center/pressure center

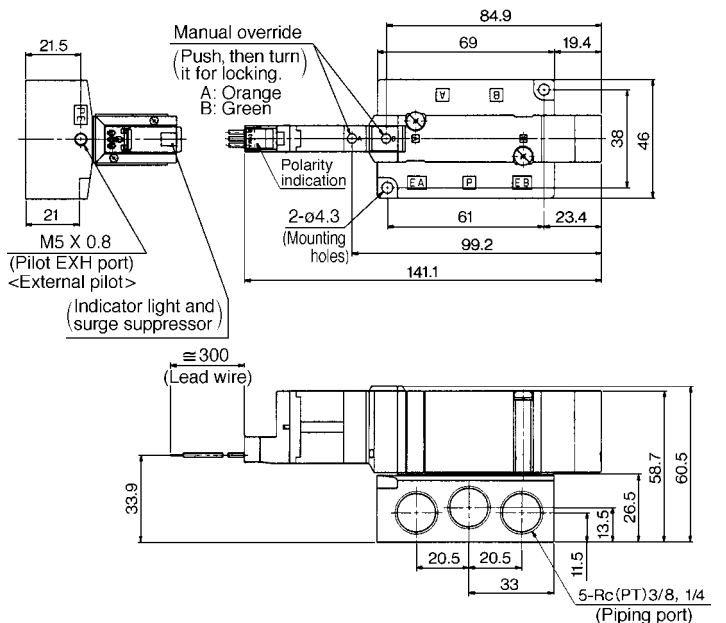
Grommet (G), (H):  $SX7 \frac{3}{4} 40(R) - \square \square \square \square - 0 \frac{2}{3}$



L plug connector (L):  $SX7 \frac{3}{4} 40(R) - \square \square \square \square - 0 \frac{2}{3}$



M plug connector (M):  $SX7 \frac{3}{4} 40(R) - \square \square \square \square - 0 \frac{2}{3}$



# SX3000/5000/7000 Body Ported Bar Manifold/Individual Wiring

## How to Order Manifold

SS5X **5** - 20 - **05**

### Manifold series

3	SX3000
5	SX5000
7	SX7000

### Stations

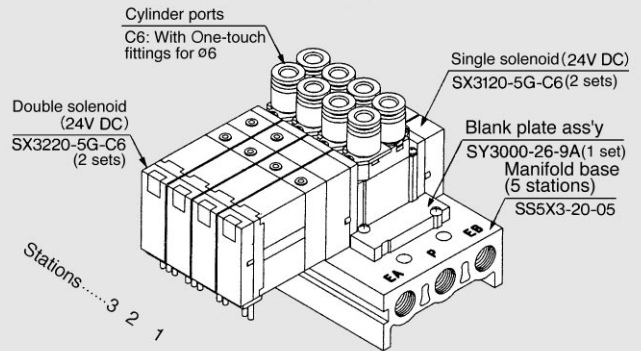
02	2 stations
⋮	⋮
20	20 stations



- Connector ass'y for L and M types ····· Refer to p.1.3-6.
- Common connector ass'y for manifold · Refer to p.1.3-7.

## How to Order Valve Manifold Ass'y (Example)

### Ordering example



SS5X3-20-05 ····· 1set (20 type 5-station manifold base No.)  
 \* SY3000-26-9A ····· 1set (Blank plate assembly No.)  
 \* SX3120-5G-C6 ····· 2sets (Single solenoid No.)  
 \* SX3220-5G-C6 ····· 2sets (Double solenoid No.)

→ To order valves and options mounted onto the manifold at the factory, list the valve/options with an asterisk in front of each part number.

Add the valve and option numbers under the manifold base number. When arrangement is complicated, specify it in the manifold specification.

## How to Order Valve

SX **5** **1** 20 - **5** **N** **L** - - - - **01**

### Series

3	SX3000
5	SX5000
7	SX7000

### Configuration

1	2 position single
2	2 position double
3	3 position closed center
4	3 position exhaust center
5	3 position puressure center

### Rated voltage

5	24V DC
6	12V DC
V	6V DC
S	5V DC
R	3V DC

### Common

—	Positive common
N	Negative common

### Electrical entry

Grommet	L plug connector	M plug connector
<b>G:</b> 300mm lead wire	<b>L:</b> 300mm lead wire	<b>M:</b> 300mm lead wire
<b>H:</b> 600mm lead wire	<b>LN:</b> Without lead wire	<b>MN:</b> Without lead wire
	<b>LO:</b> Without connector	<b>MO:</b> Without connector

\* The LN or MN option includes 2 sockets for single solenoid valves and 3 sockets for double solenoid valves.

### A/B port size

Symbol	Port size	Series
M5	M5 X 0.8	SX3000
C4	One-touch fittings for ø4	
C6	One-touch fittings for ø6	SX5000
C8	One-touch fittings for ø8	
01	Rc(PT) 1/8	SX7000
02	Rc(PT) 1/4	
C8	One-touch fittings for ø8	SX7000
C10	One-touch fittings for ø10	

### Manual override

—	Non-locking push style
D	Push-turn-locking slotted style

### Indicator light and surge voltage suppressor

—	Without indicator light and surge voltage suppressor
S	With surge voltage suppressor
Z	With indicator light and surge voltage suppressor

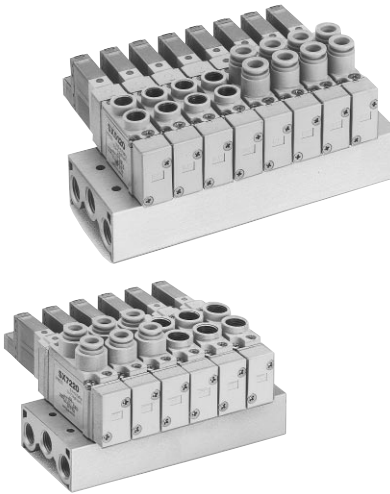
Note) For single solenoid valves with the 'G' electrical entry only positive common wiring is available. For single solenoid valves without the 'S' or 'Z' protection circuit only positive common wiring is available.

## Manifold Specifications

Model	SS5X3-20	SS5X5-20	SS5X7-20	
Applicable valve	SX3□20	SX5□20	SX7□20	
Manifold style	Single base/B mount			
P(SUP)/R(EXH) sytle	Common supply/Common exhaust			
Valve stations <sup>(1)</sup>	2 to 20 stations			
A/B port location	Valve			
Port size	P/EA/EB port	Rc(PT)1/8	Rc(PT)1/4	Rc(PT)1/4
	A/B port	M5 X 0.8 C4 (One-touch fittings for ø4) C6 (One-touch fittings for ø6)	Rc(PT)1/8 C4 (One-touch fittings for ø4) C6 (One-touch fittings for ø6) C8 (One-touch fittings for ø8)	Rc(PT)1/4 C8 (One-touch fittings for ø8) C10 (One-touch fittings for ø10)
Valve effective area <sup>(2)</sup> (mm <sup>2</sup> ) (Cv factor)	P→A/B 3.6 (0.2) C6: A/B→EA/EB 4.14 (0.23)	P→A/B 9.18 (0.51) C8: A/B→EA/EB 9.9 (0.55)	P→A/B 15.84 (0.88) A/B→EA/EB 14.94 (0.83)	
Manifold base weight W(g) n: Station	W=13n+35	W=36n+64	W=43n+64	

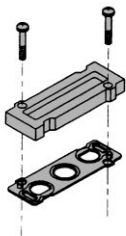


Note 1) For more than 10 stations (more than 5 stations in case of SS5X7), supply pressure to P port on both sides and exhaust from EA and EB port on both sides.  
Note 2) Values for single operation of 2 position valves mounted on manifold base (5 stations).



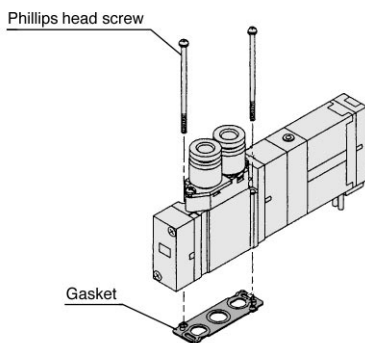
## Manifold Options

### Blank plate assembly



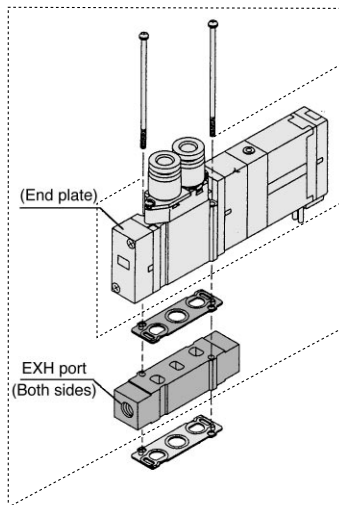
Series	Ass'y No.
SX3000	SY3000-26-9A
SX5000	SY5000-26-1A
SX7000	SY7000-26-1A

### Bolt and Gasket



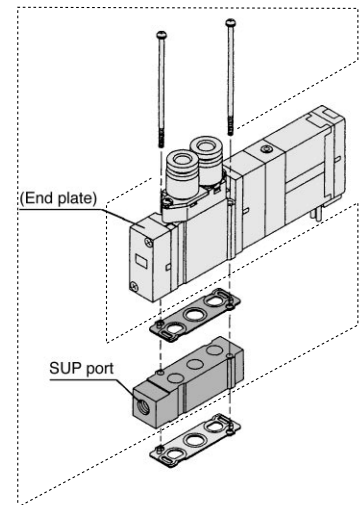
Series	Phillips head screw	Gasket
SX3000	SX3000-22-2 (M2 X 24)	SY3000-11-24
SX5000	M3 X 30 (Matted nickel plated)	SY5000-11-1
SX7000	M4 X 35 (Matted nickel plated)	SY7000-11-1

### Individual EXH spacer ass'y



Series	Ass'y No.	Port size
SX3000	SX3000-39-20A	M5 X 0.8
SX5000	SX5000-39-1A	Rc(PT)1/8
SX7000	SX7000-39-1A	Rc(PT)1/4

### Individual SUP spacer ass'y



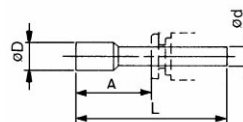
Series	Ass'y No.	Port size
SX3000	SX3000-38-20A	M5 X 0.8
SX5000	SX5000-38-1A	Rc(PT)1/8
SX7000	SX7000-38-1A	Rc(PT)1/4

Note) The SUP port may be either on the lead wire side or on the end plate side. (An assembly is shipped under the condition shown in the figure.)

### Plug

Inserted into an unused cylinder port and SUP/EXH ports.  
The minimum order quantity is 10 pcs.

KQP-04-06-08-10 X19  
● White color



### Caution

Mounting screw tightening torque

M2: 0.15Nm  
M3: 0.6Nm  
M4: 1.4Nm

### Dimensions

Applicable fitting size ød	Model	A	L	D
4	KQP-04-X19	16	32	6
6	KQP-06-X19	18	35	8
8	KQP-08-X19	20.5	39	10
10	KQP-10-X19	22	43	12

SY

SYJ

SX

VK

VZ

VF

VFR

VP7

VP4

VQ

VQ4

VQZ

VQD

VZS

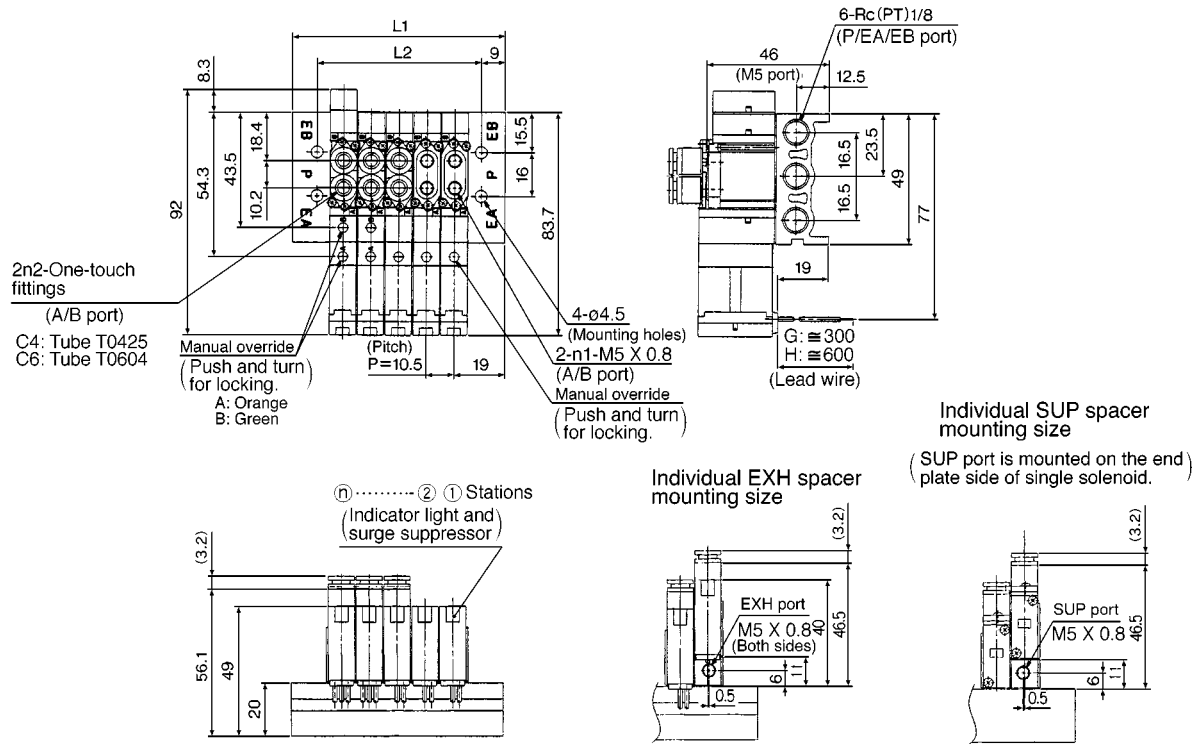
VFS

VS

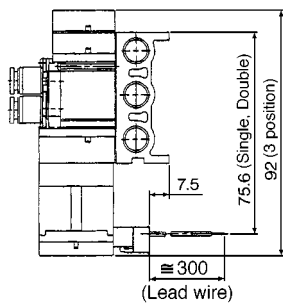
VS7

SX3000: SS5X3-20- Stations

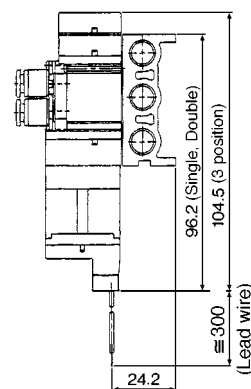
Grommet (G)



L plug connector (L)



M plug connector (M)

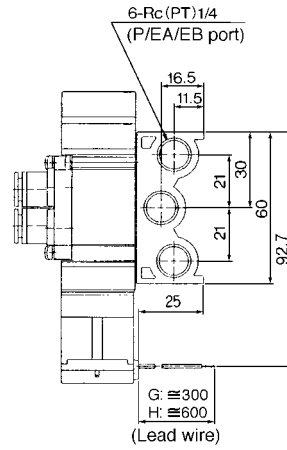
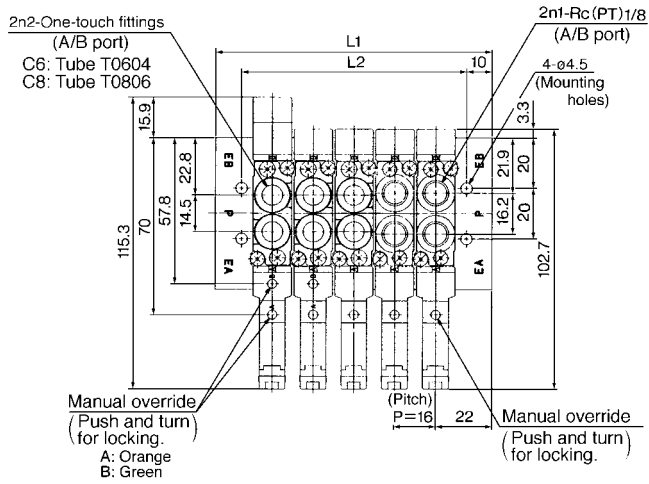


Stations	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L1	48.5	59	69.5	80	90.5	101	111.5	122	132.5	143	153.5	164	174.5	185	195.5	206	216.5	227	237.5
L2	30.5	41	51.5	62	72.5	83	93.5	104	114.5	125	135.5	146	156.5	167	177.5	188	198.5	209	219.5



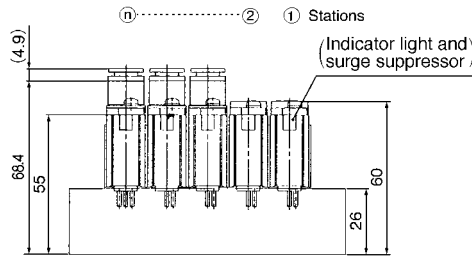
## SX5000: SS5X5-20- Stations

### Grommet (G)

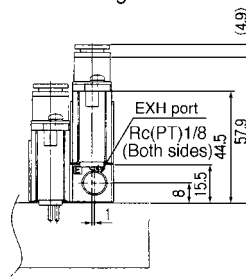


Manual override (Push and turn) for locking.  
A: Orange  
B: Green

Manual override (Push and turn) for locking.

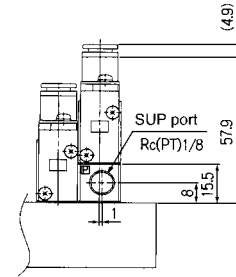


Individual EXH spacer mounting size

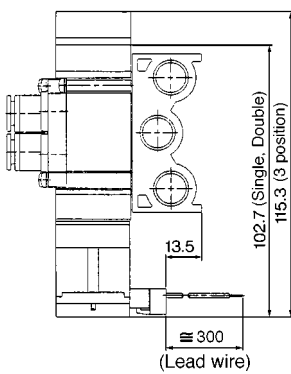


Individual SUP spacer mounting size

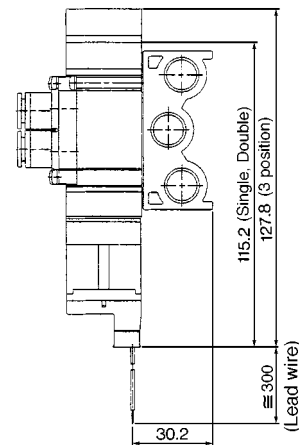
(SUP port is mounted on the end) (plate side of single solenoid.)



### L plug connector (L)



### M plug connector (M)

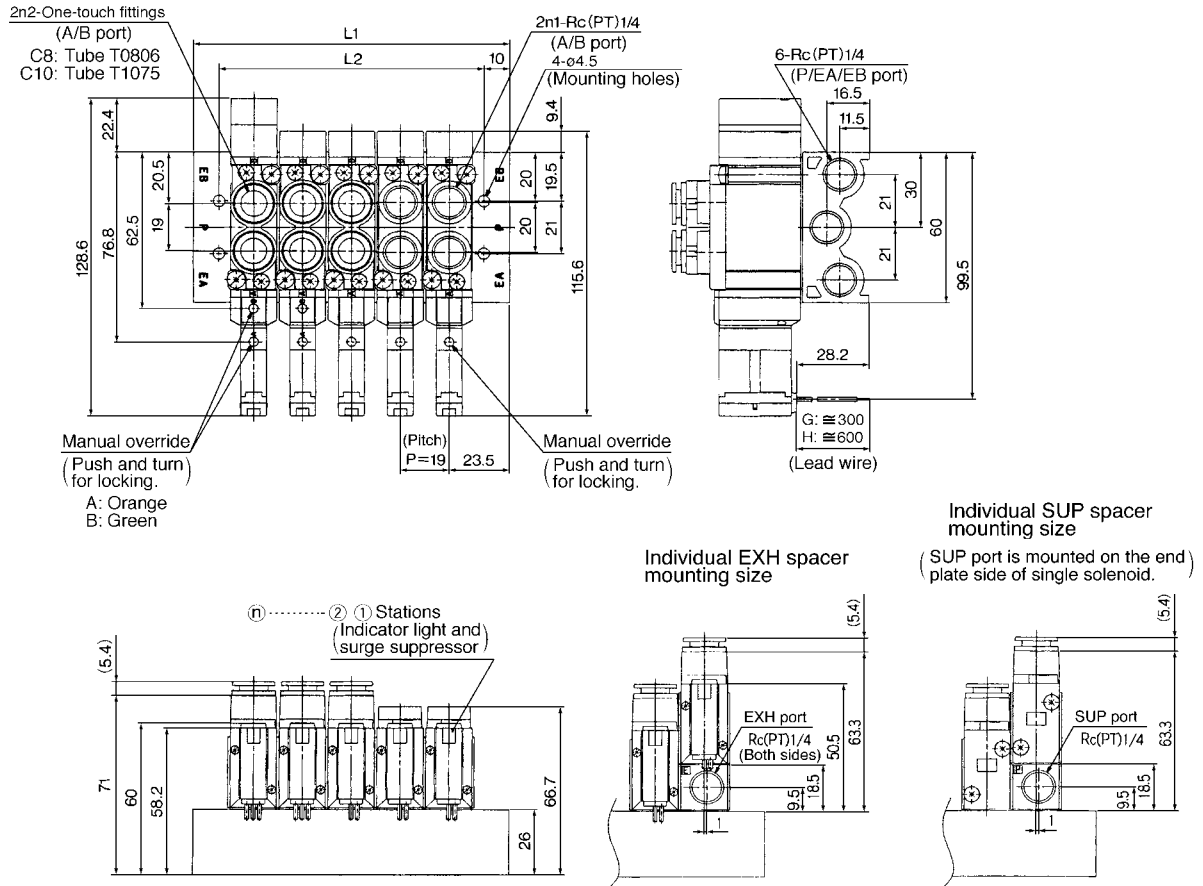


Stations	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L1	60	76	92	108	124	140	156	172	188	204	220	236	252	268	284	300	316	332	348
L2	40	56	72	88	104	120	136	152	168	184	200	216	232	248	264	280	296	312	328

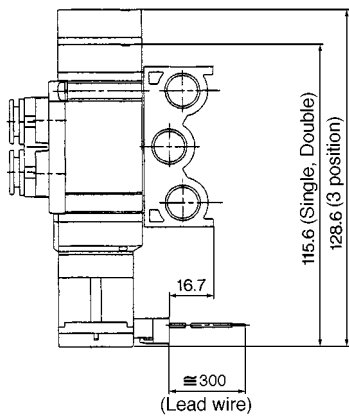
- SY
- SYJ
- SX**
- VK
- VZ
- VF
- VFR
- VP7
- VP4
- VQ
- VQ4
- VQZ
- VQD
- VZS
- VFS
- VS
- VS7

SX7000: SS5X7-20- Stations

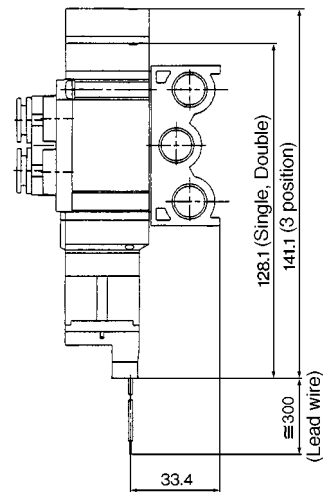
Grommet (G)



L plug connector (L)



M plug connector (M)

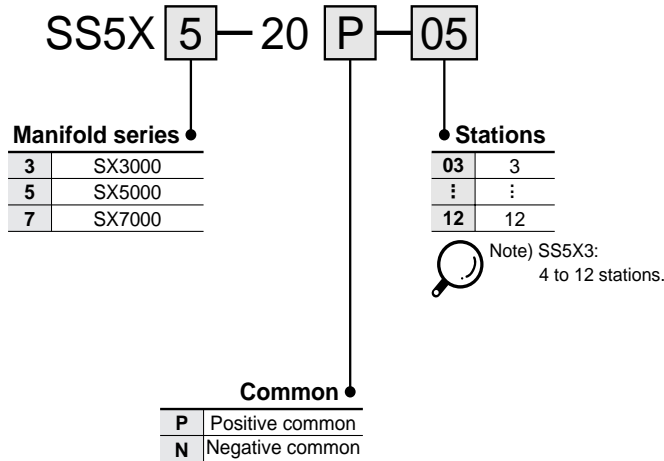


Stations	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L1	66	85	104	123	142	161	180	199	218	237	256	275	294	313	332	351	370	389	408
L2	46	65	84	103	122	141	160	179	198	217	236	255	274	293	312	331	350	369	388

20<sup>P</sup>  
NType

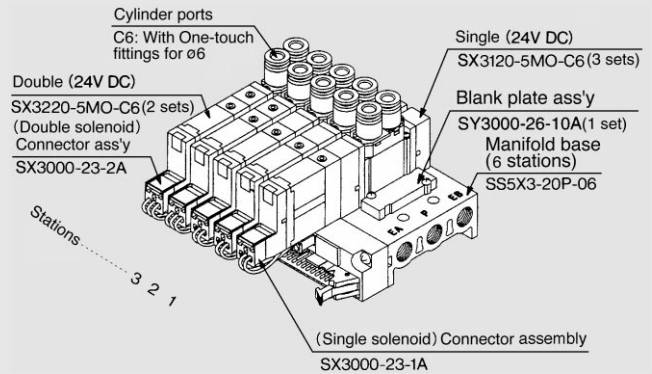
# SX3000/5000/7000 Body Ported Bar Manifold/Flat Cable

## How to Order Manifold



## How to Order Valve Manifold Ass'y (Example)

### Ordering example

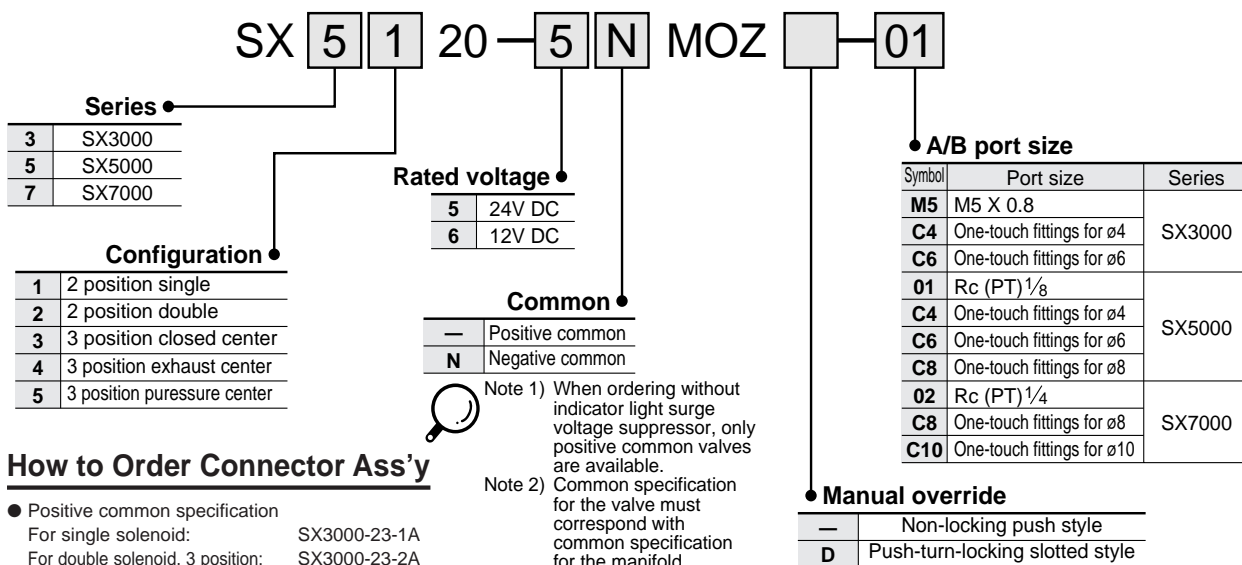


SS5X3-20P-06 ······ 1set (20P type 6-station manifold No.)  
 \* SY3000-26-10A ······ 1set (Blank plate ass'y No.)  
 \* SX3120-5MO-C6 ······ 3sets (Single solenoid No.)  
 \* SX3220-5MO-C6 ······ 2sets (Double solenoid No.)  
 \* SX3000-23-1A ······ 3sets (Connector ass'y No.)  
 \* SX3000-23-2A ······ 2sets (Connector ass'y No.)

To order valves and options mounted onto the manifold at the factory, list the valve/options with an asterisk in front of each part number.

List valve and option part numbers to be mounted under the manifold base part number in order from the first station. For more complicated assemblies, refer to the manifold specifications.

## How to Order Valve



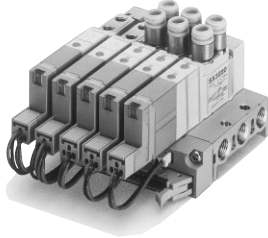
## How to Order Connector Ass'y

- Positive common specification  
 For single solenoid: SX3000-23-1A  
 For double solenoid, 3 position: SX3000-23-2A
- Negative common specification  
 For single solenoid: SX3000-24-1A  
 For double solenoid, 3 position: SX3000-24-2A

Refer to p.1.3-7 for further information on connector ass'y.

- Multiple valve wiring is simplified through the use of the flat cable connector.
- Clean appearance

With the flat cable manifold, each valve is wired to the manifold base. A single MIL flat cable connects the entire manifold to your power source. This greatly reduces installation time.



## Manifold Specifications

Model	SS5X3-20 <sup>P</sup> <sub>N</sub>	SS5X5-20 <sup>P</sup> <sub>N</sub>	SS5X7-20 <sup>P</sup> <sub>N</sub>	
Applicable valve	SX3□20	SX5□20	SX7□20	
Manifold style	Single base/B mount			
P(SUP)/R(EXH) style	Common supply/Common exhaust			
Valve stations <sup>(1)</sup>	4 to 12	3 to 12		
A/B porting location	Valve			
Port size	P/EA/EB port	Rc(PT) 1/8	Rc(PT) 1/4	Rc(PT) 1/4
	A/B port	M5 X 0.8 C4 (One-touch fittings for ø4) C6 (One-touch fittings for ø6)	Rc(PT) 1/8 C4 (One-touch fittings for ø4) C6 (One-touch fittings for ø6) C8 (One-touch fittings for ø8)	Rc(PT) 1/4 C8 (One-touch fittings for ø8) C10 (One-touch fittings for ø10)
Valve effective area <sup>(2)</sup> (mm <sup>2</sup> ) (Cv factor)	P → A/B 3.6 (0.2) C6: A/B → EA/EB 4.14 (0.23)	P → A/B 9.18 (0.51) C8: A/B → EA/EB 9.9 (0.55)	P → A/B 15.84 (0.88) C10: A/B → EA/EB 14.94 (0.83)	
Manifold base weight W(g) n: Station	W=19n+45	W=43n+77	W=51n+81	
Connector	Socket: 26 poles MIL with strain relief; conforms to MIL-C-83503			
Internal wiring <sup>(3)</sup>	Both for +COM (20P type) and -COM (20N type)			
Voltage	12, 24V DC			

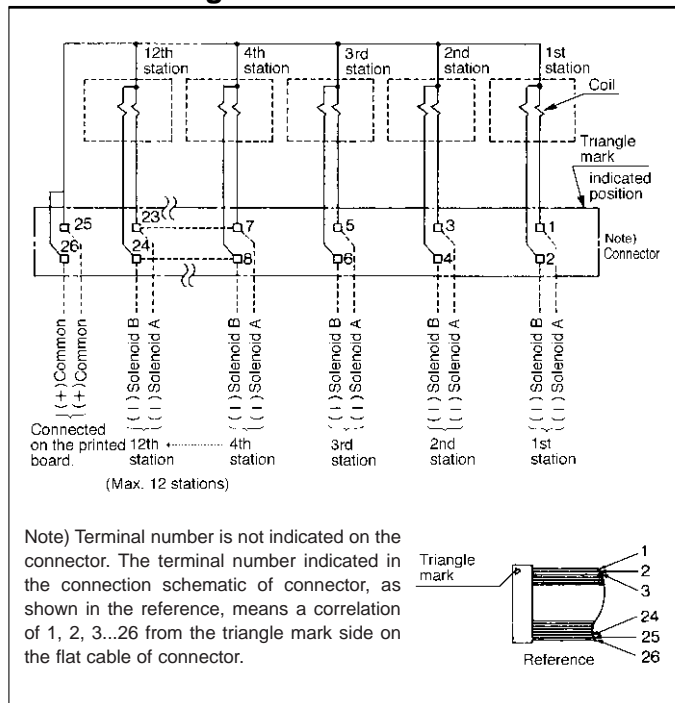


Note 1) For more than 10 stations (more than 5 stations in case of SS5X7), supply pressure to P port on both sides and exhaust from EA and EB port on both sides.

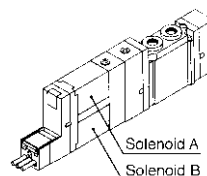
Note 2) Values for single operation of 2 position valve mounted on manifold base (5 stations).

Note 3) The withstand voltage specification for the wiring unit section is JIS C0704, Grade 1 or its equivalent.

## Internal Wiring of Manifold



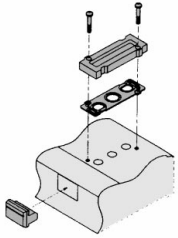
- For more than 9 stations, both poles of the common should be wired.
- For single solenoid, connect to the solenoid A side.
- The maximum number of stations is 12. If more than 12 stations are required, consult SMC.
- -COM and +COM specifications are available. (Diagram above is for +COM specifications.)



- SY
- SYJ
- SX
- VK
- VZ
- VF
- VFR
- VP7
- VP4
- VQ
- VQ4
- VQZ
- VQD
- VZS
- VFS
- VS
- VS7

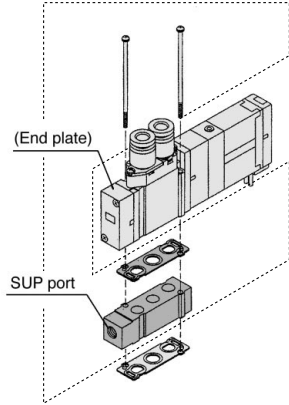
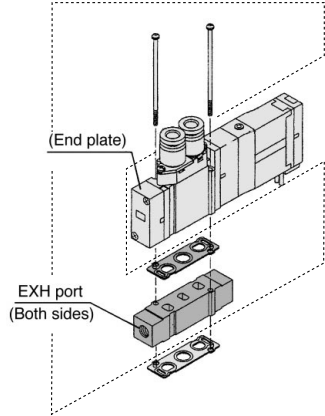
## Manifold Options

### Blank plate assembly



Series	Ass'y No.
<b>SX3000</b>	SY3000-26-10A
<b>SX5000</b>	SY5000-26-3A
<b>SX7000</b>	SY7000-26-3A

### Individual EXH spacer ass'y ■ Individual SUP spacer ass'y



Series	Ass'y No.	Port size
<b>SX3000</b>	SX3000-39-20A	M5 X 0.8
<b>SX5000</b>	SX5000-39-1A	Rc(PT)1/8
<b>SX7000</b>	SX7000-39-1A	Rc(PT)1/4

Note) For protection of the wiring unit section from drain, piped at the EA port shall be so arranged that it will not be directly exposed to exhaust from the valve.

Series	Ass'y No.	Port size
<b>SX3000</b>	SX3000-38-20A	M5 X 0.8
<b>SX5000</b>	SX5000-38-1A	Rc(PT)1/8
<b>SX7000</b>	SX7000-38-1A	Rc(PT)1/4

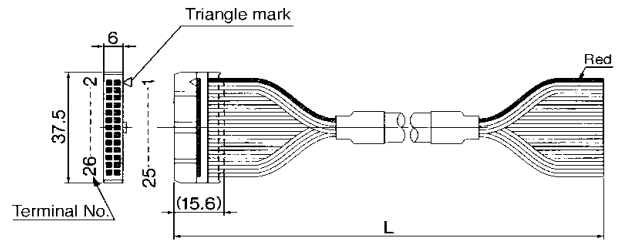
Note) The SUP port may be either on the lead wire side or on the end plate side. (Factory assembled spacer will be shipped with the orientation shown in the figure.)

### Caution

#### Mounting screw tightening torque

M2: 0.15Nm  
M3: 0.6Nm  
M4: 1.4Nm

### Cable assembly AXT100-FC26-1 to 3



### Connector assembly for flat cables

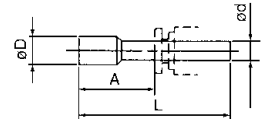
Cable length (L)	Ass'y No.	Note
1.5m	AXT100-FC26-1	Cable 26 poles X 28AWG
3m	AXT100-FC26-2	
5m	AXT100-FC26-3	

\* For other commercial connectors, use 26-pole type with strain relief made in conformity with MIL-C-83503.

### Plug

Inserted into an unused cylinder port and SUP/EXH ports. The minimum order quantity is 10 pcs.

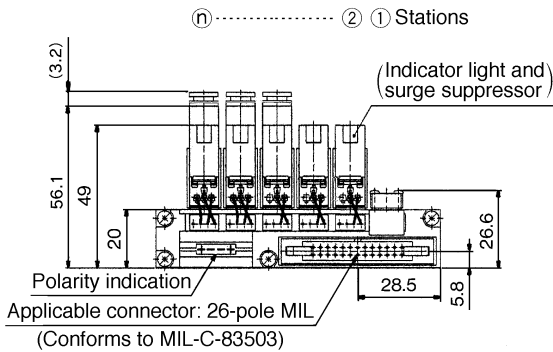
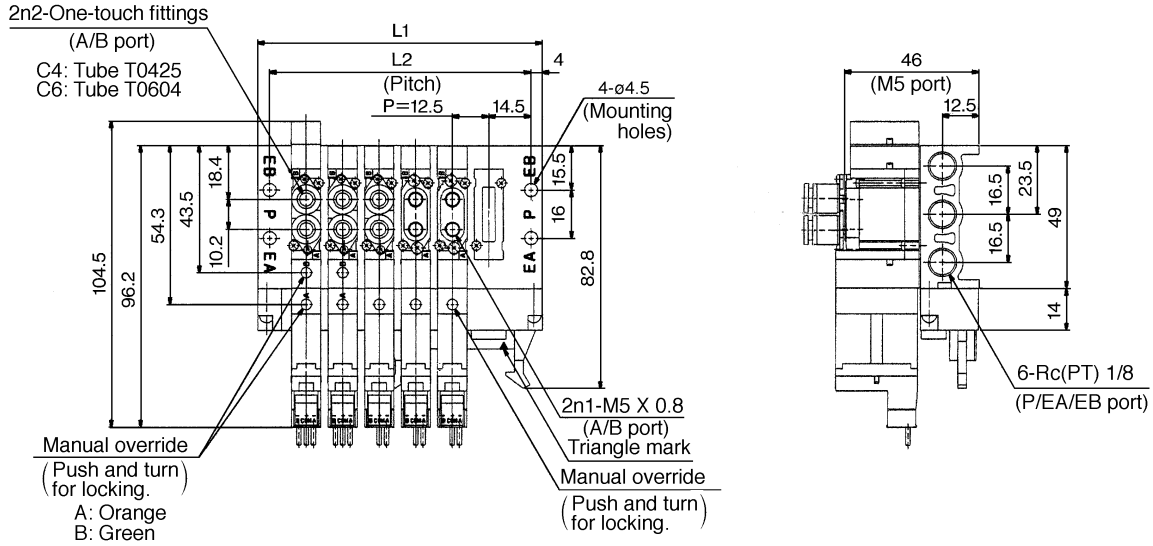
**KQP-04-06-08-10-X19**  
● White color



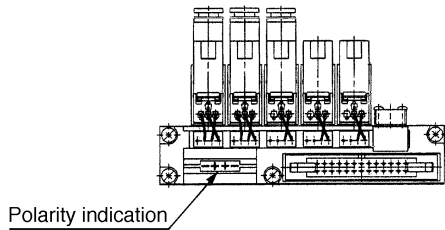
### Dimensions

Applicable fittings size øD	Model	A	L	D
4	<b>KQP-04-X19</b>	16	32	6
6	<b>KQP-06-X19</b>	18	35	8
8	<b>KQP-08-X19</b>	20.5	39	10
10	<b>KQP-10-X19</b>	22	43	12

## SX3000: SS5X3-20P- Stations



### In case of SS5X3-20N

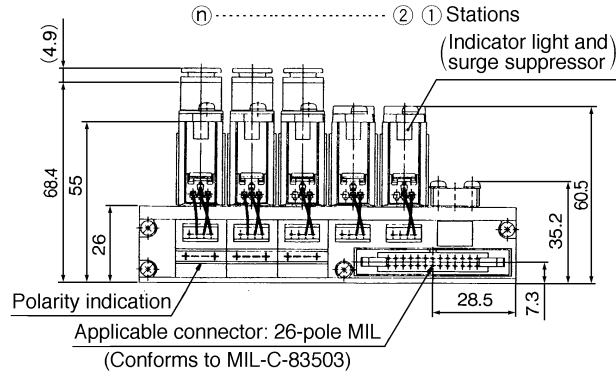
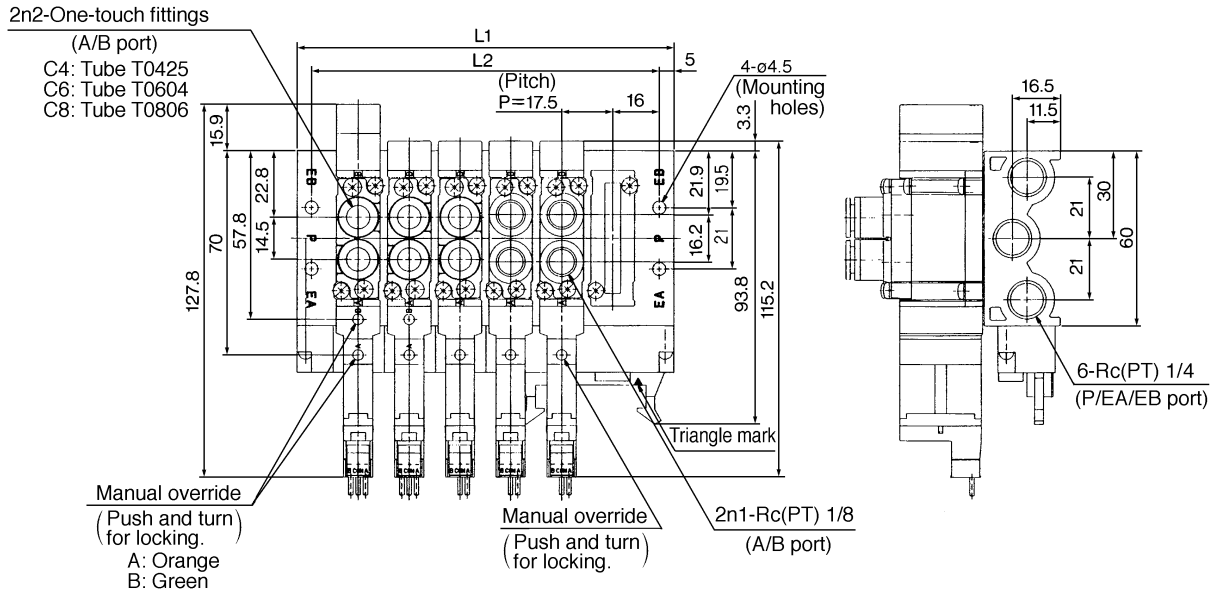


Stations	4	5	6	7	8	9	10	11	12
L1	72.5	85	97.5	110	122.5	135	147.5	160	172.5
L2	64.5	77	89.5	102	114.5	127	139.5	152	164.5

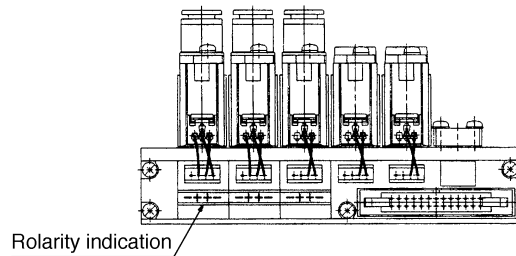
- SY
- SYJ
- SX**
- VK
- VZ
- VF
- VFR
- VP7
- VP4
- VQ
- VQ4
- VQZ
- VQD
- VZS
- VFS
- VS
- VS7



**SX5000: SS5X5-20P- Stations**

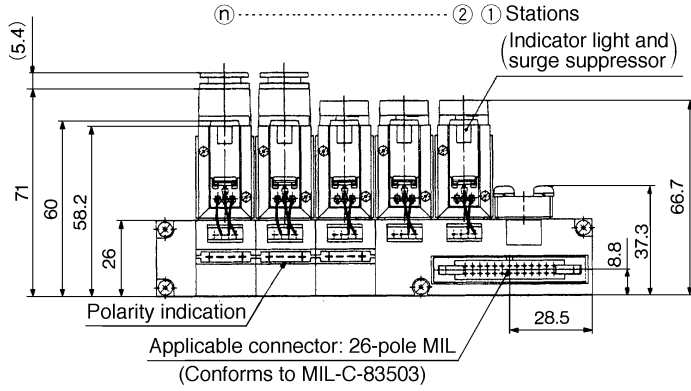
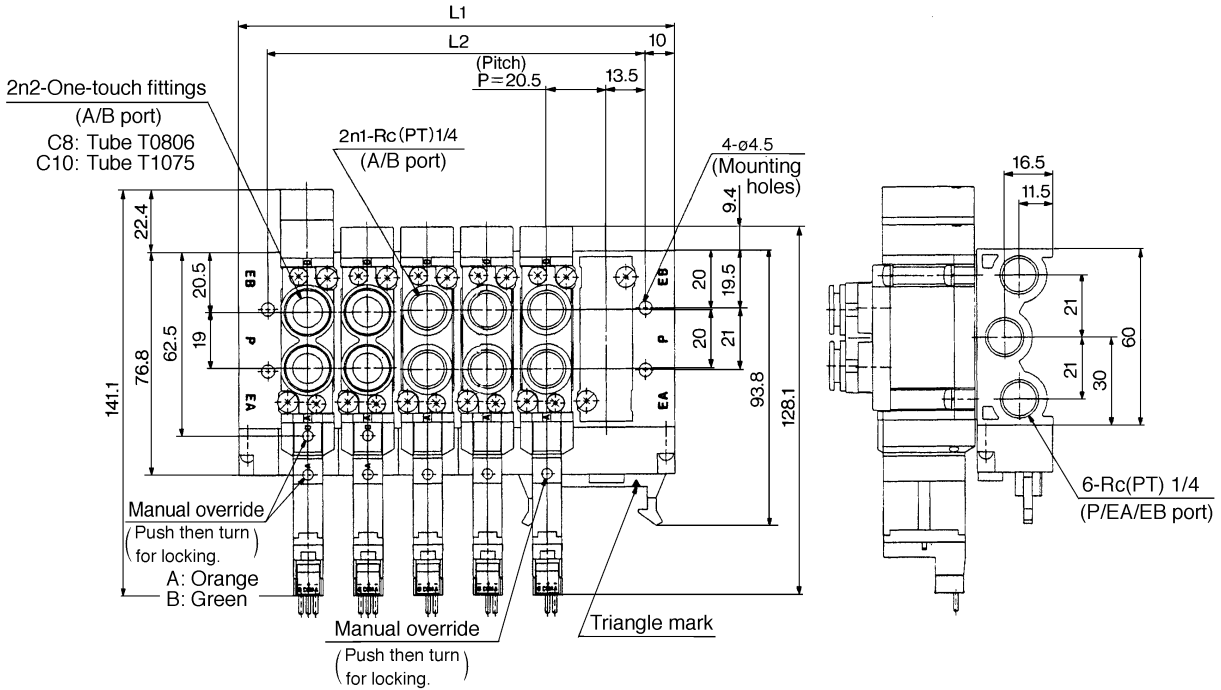


**In case of SS5X5-20N**

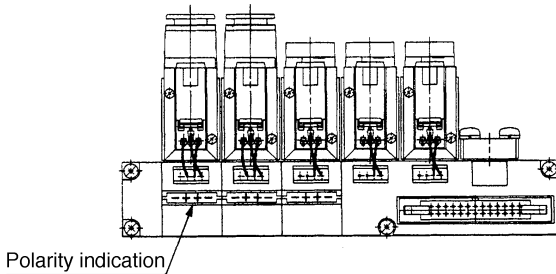


Stations	3	4	5	6	7	8	9	10	11	12
L1	77	94.5	112	129.5	147	164.5	182	199.5	217	234.5
L2	67	84.5	102	119.5	137	154.5	172	189.5	207	224.5

## SX7000: SS5X7-20P- Stations



### In case of SS5X7-20N



Station	3	4	5	6	7	8	9	10	11	12
L1	88	108.5	129	149.5	170	190.5	211	231.5	252	272.5
L2	68	88.5	109	129.5	150	170.5	191	211.5	232	252.5

- SY
- SYJ
- SX**
- VK
- VZ
- VF
- VFR
- VP7
- VP4

- VQ
- VQ4
- VQZ
- VQD
- VZS
- VFS
- VS
- VS7

# 41 Type

# 42 Type

## SX3000/5000/7000 Base Mounted Bar Manifold/Individual Wiring

### How to Order Manifold

#### 41 Type/Compact

SS5X **5** — 41 — **05** — **C8**

Manifold series	
3	SX3000
5	SX5000

Stations	
02	2 stations
⋮	⋮
20	20 stations

A/B port size		
Symbol	Port size	Series
M5	M5 X 0.8	SX3000
C4	One-touch fittings for ø4	
C6	One-touch fittings for ø6	
01	Rc (PT) 1/8	SX5000
C6	One-touch fittings for ø6	
C8	One-touch fittings for ø8	

#### 42 Type/Common external pilot

SS5X **5** — 42 — **05** — **C8**

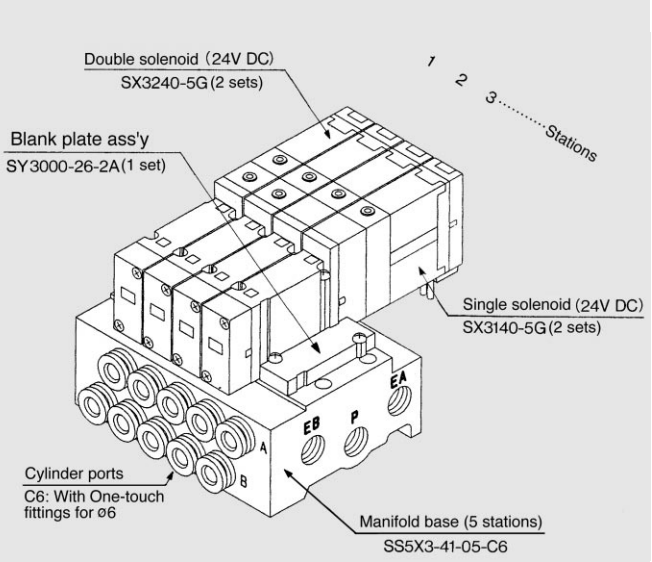
Manifold series	
3	SX3000
5	SX5000
7	SX7000

Stations	
02	2 stations
⋮	⋮
20	20 stations

A/B port size		
Symbol	Port size	Series
01	Rc (PT) 1/8	SX3000
C4	One-touch fittings for ø4	
C6	One-touch fittings for ø6	
02	Rc (PT) 1/4	SX5000
C6	One-touch fittings for ø6	
C8	One-touch fittings for ø8	
02	Rc (PT) 1/4	SX7000
C10	One-touch fittings for ø10	

### How to Order Valve Manifold Ass'y (Example)

#### Ordering example



SS5X3-41-05-C6 . . . . . 1set (41 type 5-station manifold base No.)  
 \* SX3240-5G . . . . . 2sets (Double solenoid No.)  
 \* SX3140-5G . . . . . 2sets (Single solenoid No.)  
 \* SY3000-26-2A . . . . . 1sets (Blank plate assembly No.)

To order valves and options mounted onto the manifold at the factory, list the valve/options with an asterisk in front of each part number. Add the valve and option numbers under the manifold base number. When arrangement is complicated, specify it in the manifold specifications.



- Connector ass'y for L and M type . . . . . Refer to p.1.3-6.
- Common connector ass'y for manifold . . . Refer to p.1.3-7.

How to Order Valve

SX 5 2 40 5 N L

Series

3	SX3000
5	SX5000
7	SX7000

Configuration

1	2 position single
2	2 position double
3	3 position closed center
4	3 position exhaust center
5	3 position pressure center

Manual override

—	Non-locking push style
D	Push-turn-locking slotted style

Indicator light and surge voltage suppressor

—	Without indicator light and surge voltage suppressor
S	With surge voltage suppressor
Z	With indicator light and surge voltage suppressor

Electrical entry

Grommet	L plug connector	M plug connector
<b>G:</b> 300mm lead wire:	<b>L:</b> 300mm lead wire	<b>M:</b> 300mm lead wire
<b>H:</b> 600mm lead wire:	<b>LN:</b> Without lead wire	<b>MN:</b> Without lead wire
	<b>LO:</b> Without connector	<b>MO:</b> Without connector

\* The LN or MN option includes 2 sockets for single solenoid valves and 3 sockets for double solenoid valves.

Pilot

—	Internal pilot
R	External pilot

Rated voltage

5	24V DC
6	12V DC
V	6V DC
S	5V DC
R	3V DC

Common

—	Positive common
N	Negative common

Note) For single solenoid valves with the 'G' electrical entry only positive common wiring is available. For single solenoid valves without the 'S' or 'Z' protection circuit only positive common wiring is available.

- SY
- SYJ
- SX**
- VK
- VZ
- VF
- VFR
- VP7
- VP4
- VQ
- VQ4
- VQZ
- VQD
- VZS
- VFS
- VS
- VS7



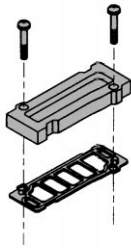
### Manifold Specifications

Model	SS5X3-41	SS5X3-42	SS5X5-41	SS5X5-42	SS5X7-42
Applicable valve	SX3□40	SX3□40(R)	SX5□40	SX5□40(R)	SX7□40(R)
Manifold style	Single base/B mount				
P(SUP)/R(EXH) style	Common supply/Common exhaust				
Valve stations <sup>(1)</sup>	2 to 20 stations				
A/B porting spec.	Base				
Location	Side				
Direction	Side				
Port size	P/EA/EB port	Rc(PT) 1/8		Rc(PT) 1/4	
	A/B port	M5 X 0.8	Rc(PT) 1/8	Rc(PT) 1/8	Rc(PT) 1/4
Valve effective area <sup>(2)</sup> (mm <sup>2</sup> ) (Cv factor)	C4 (One-touch for ø4)	C4 (One-touch for ø4)	C6 (One-touch for ø6)	C6 (One-touch for ø6)	C10 (One-touch for ø10)
	C6 (One-touch for ø6)	C6 (One-touch for ø6)	C8 (One-touch for ø8)	C8 (One-touch for ø8)	
Manifold base weight W(g) n: Stations	P→A/B 3.96 (0.22) C6: A/B→EA/EB 4.14 (0.23)		P→A/B 9.54 (0.53) C8: A/B→EA/EB 9.0 (0.5)		P→A/B 16.2 (0.9) C10: A/B→EA/EB 16.2 (0.9)
	W=30n+50	W=37n+63	W=61n+101	W=79n+127	W=100n+151

Note 1) For more than 10 stations, supply pressure to P port on both sides and exhaust from EA and EB port on both sides.  
 Note 2) Valve for single operation of 2 position valve mounted on manifold base (5 stations).

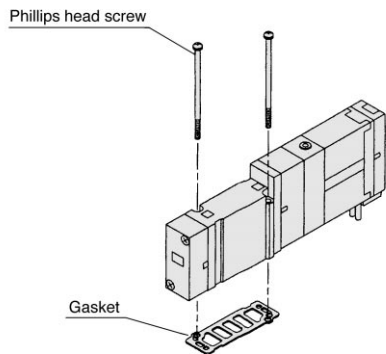
### Manifold Options

#### Blank plate assembly



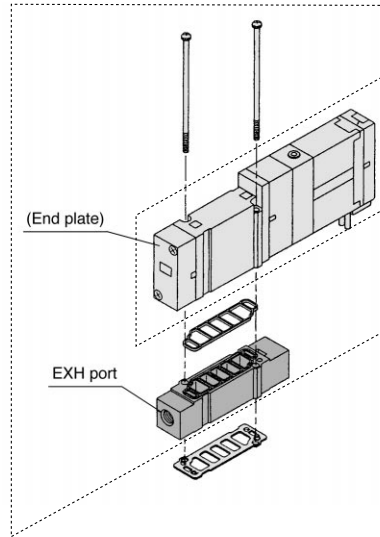
Series	Ass'y No.
SX3000	SY3000-26-2A
SX5000	SY5000-26-2A
SX7000	SY7000-26-2A

#### Bolt and Gasket



Series	Phillips head screw	Gasket
SX3000	SX3000-22-2 (M2 X 24)	SY3000-11-8
SX5000	M3 X 30 (Matted nickel plated)	SY5000-11-2
SX7000	M4 X 35 (Matted nickel plated)	SY7000-11-2

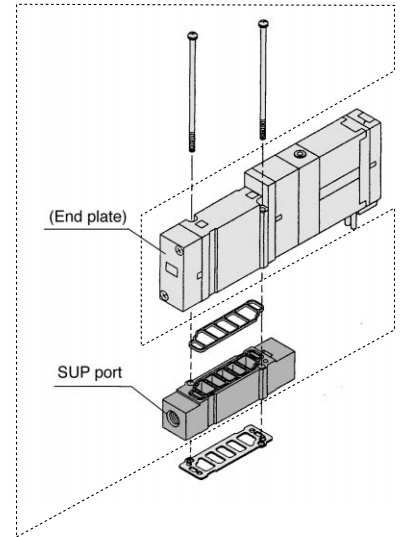
#### Individual EXH spacer ass'y



Series	Ass'y no.	Port size
SX3000	SX3000-39-2A	M5 X 0.8
SX5000	SX5000-39-2A	Rc(PT) 1/8
SX7000	SX7000-39-2A	Rc(PT) 1/4

Note) The EXH port may be either on the lead wire side or on the end plate side. (An assembly is shipped under the condition shown in the figure.)

#### Individual SUP spacer ass'y



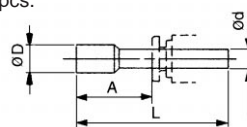
Series	Ass'y no.	Port size
SX3000	SX3000-38-2A	M5 X 0.8
SX5000	SX5000-38-2A	Rc(PT) 1/8
SX7000	SX7000-38-2A	Rc(PT) 1/4

Note) The SUP port may be either on the lead wire side or on the end plate side. (An assembly is shipped under the condition shown in the figure.)

#### Plug

Inserted into an unused cylinder port and SUP/EXH ports. The minimum order quantity is 10 pcs.

KQP-<sup>04</sup>/<sub>08</sub>-X19  
 10 ● White color



#### Dimensions

Fitting size ød	Model	A	L	D
4	KQP-04-X19	16	32	6
6	KQP-06-X19	18	35	8
8	KQP-08-X19	20.5	39	10
10	KQP-10-X19	22	43	12

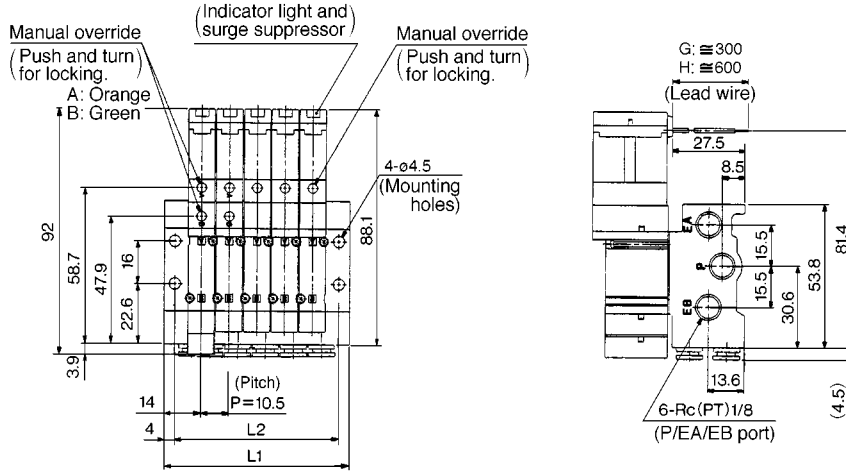
#### Caution

Mounting screw tightening torque

M2: 0.15Nm  
 M3: 0.6Nm  
 M4: 1.4Nm

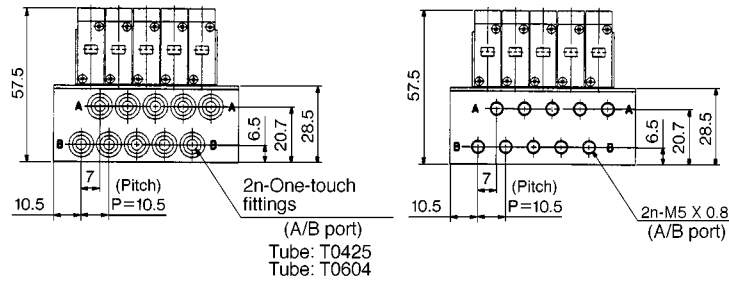
## SX3000: SS5X3-41 - Stations -M5/C4/C6

### Grommet (G)

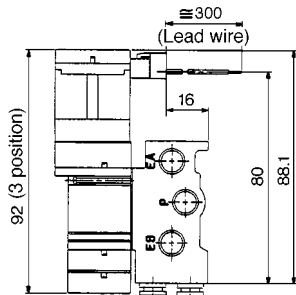


Stations ① ② ..... ①

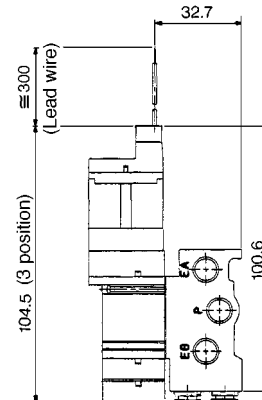
In case of M5



### L plug connector (L)



### M plug connector (M)

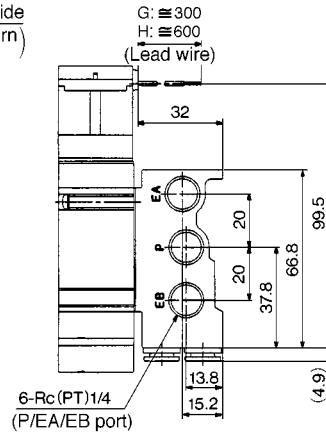
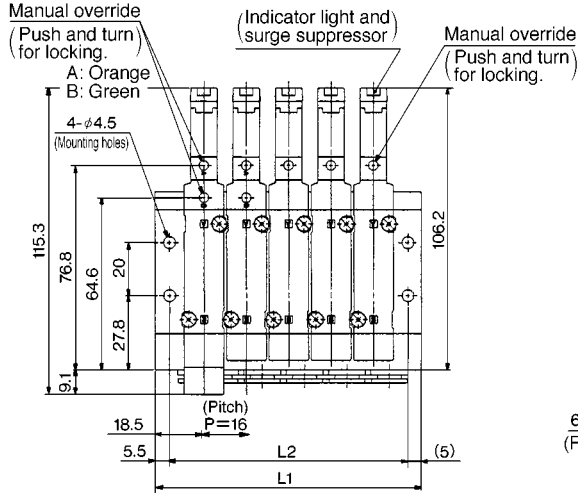


Stations	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L1	38.5	49	59.5	70	80.5	91	101.5	112	122.5	133	143.5	154	164.5	175	185.5	196	206.5	217	227.5
L2	30.5	41	51.5	62	72.5	83	93.5	104	114.5	125	135.5	146	156.5	167	177.5	188	198.5	209	219.5

- SY
- SYJ
- SX**
- VK
- VZ
- VF
- VFR
- VP7
- VP4
- VQ
- VQ4
- VQZ
- VQD
- VZS
- VFS
- VS
- VS7

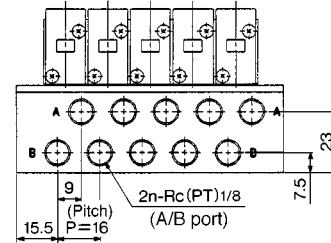
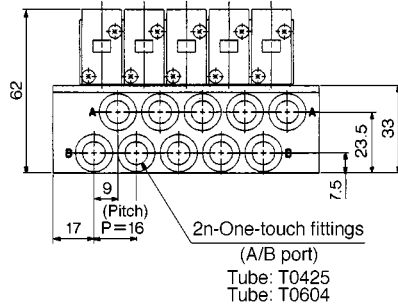
SX5000: SS5X5-41- Stations -01/C6/C8

Grommet (G)

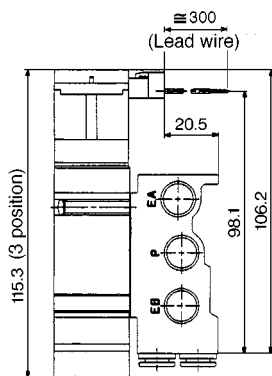


In case of Rc(PT)1/8

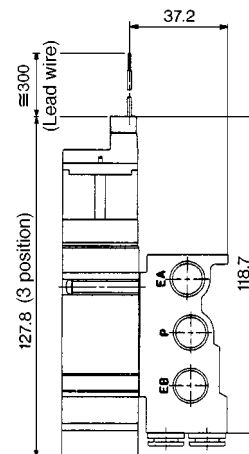
Stations ① ② ..... ①



L plug connector (L)



M plug connector (M)

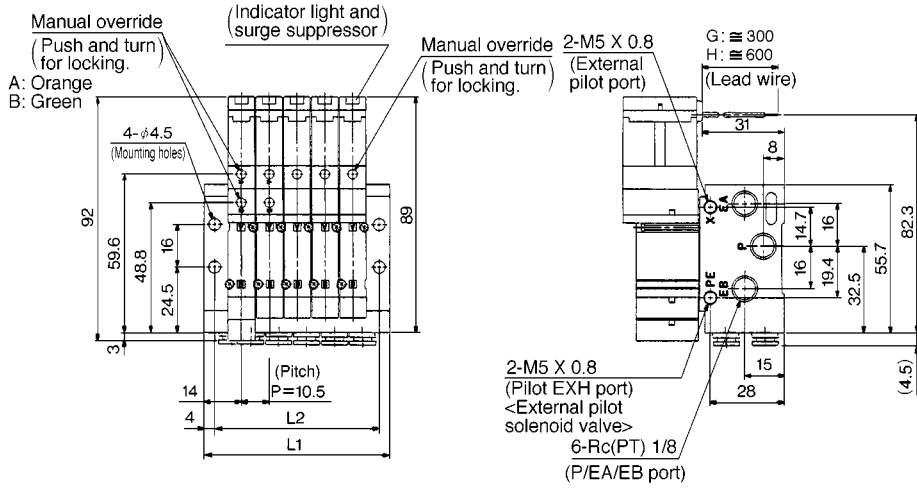


Stations	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L1	52.5	68.5	84.5	100.5	116.5	132.5	148.5	164.5	180.5	196.5	212.5	228.5	244.5	260.5	276.5	292.5	308.5	324.5	340.5
L2	42	58	74	90	106	122	138	154	170	186	202	218	234	250	266	282	298	314	330

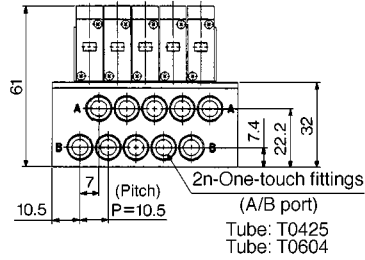


## SX3000: SS5X3-42- Stations -C4/C6

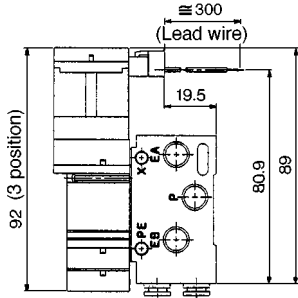
### Grommet (G)



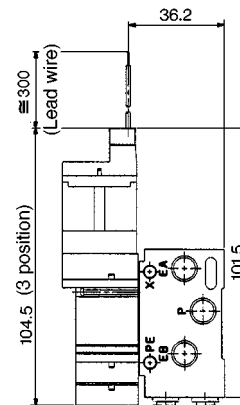
Stations ① ② ..... ①



### L plug connector (L)



### M plug connector (M)



Stations	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L1	38.5	49	59.5	70	80.5	91	101.5	112	122.5	133	143.5	154	164.5	175	185.5	196	206.5	217	227.5
L2	30.5	41	51.5	62	72.5	83	93.5	104	114.5	125	135.5	146	156.5	167	177.5	188	198.5	209	219.5

SY

SYJ

**SX**

VK

VZ

VF

VFR

VP7

VP4

VQ

VQ4

VQZ

VQD

VZS

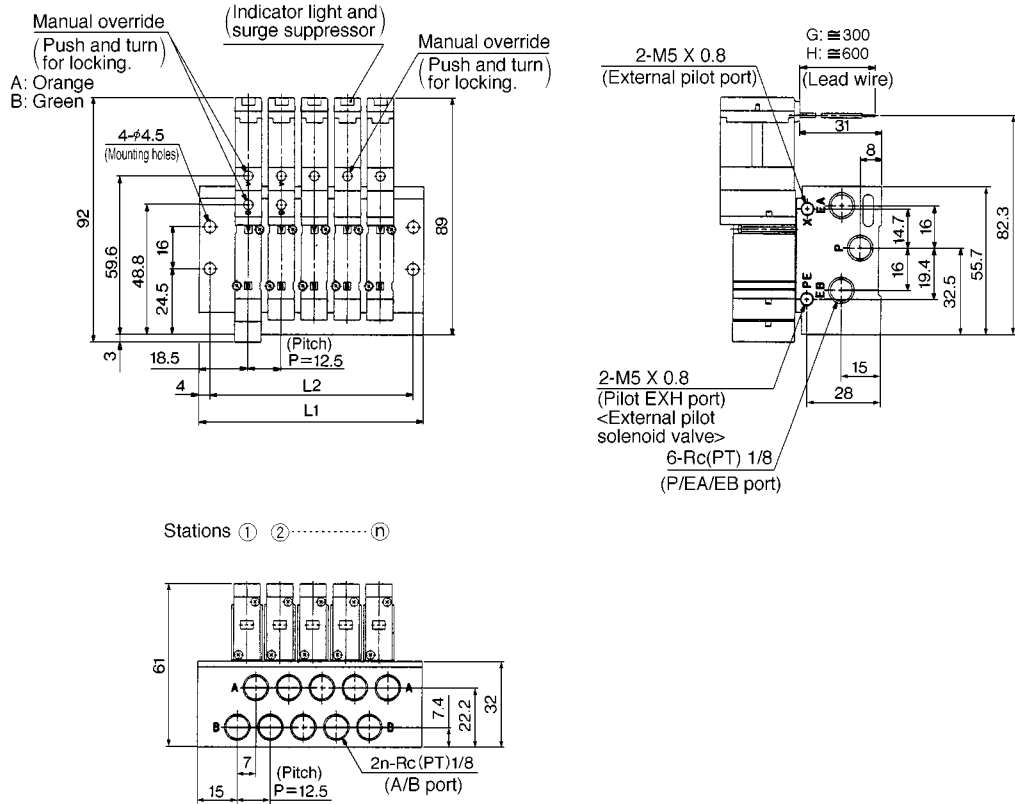
VFS

VS

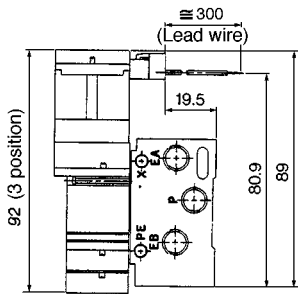
VS7

SX3000: SS5X3-42- Stations -01

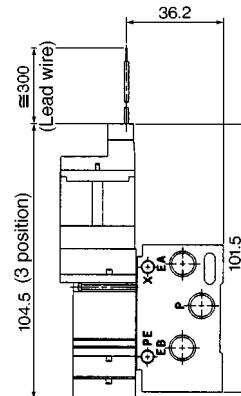
Grommet (G)



L plug connector (L)



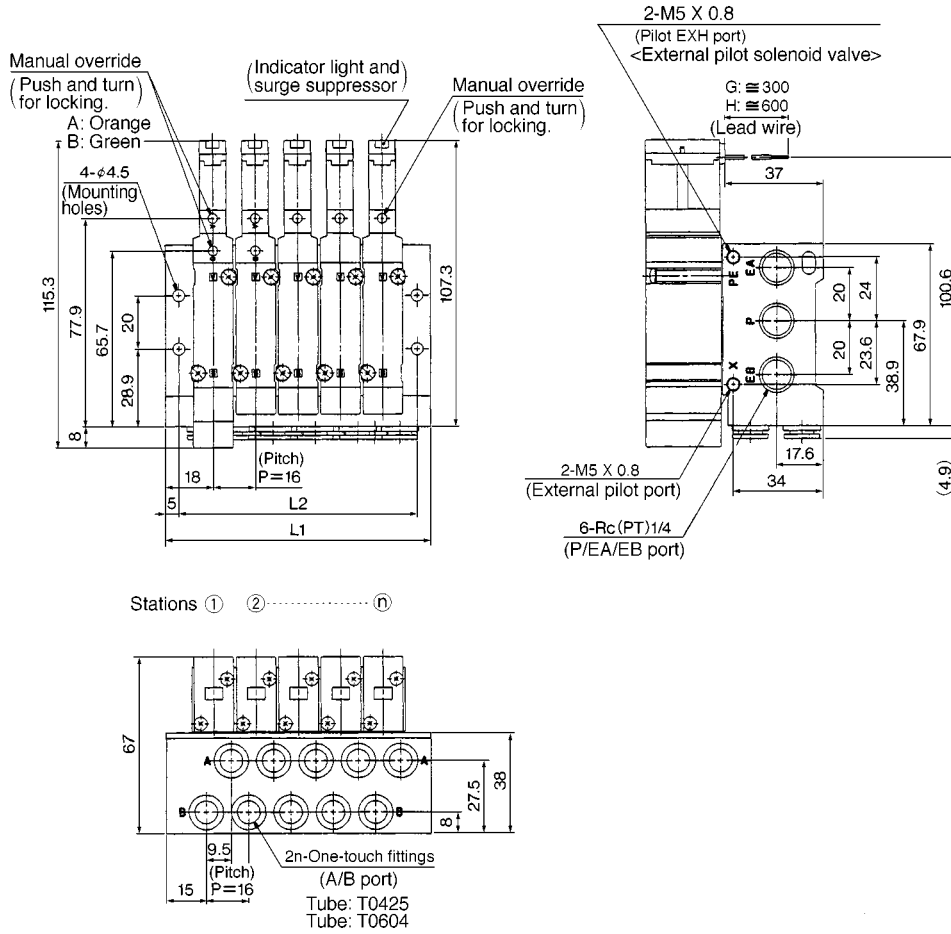
M plug connector (M)



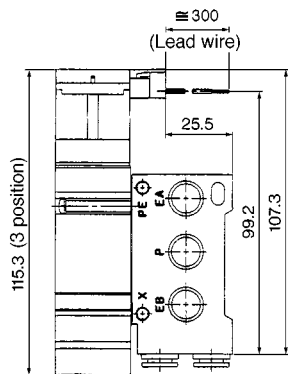
Stations	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L1	47.5	60	72.5	85	97.5	110	122.5	135	147.5	160	172.5	185	197.5	210	222.5	235	247.5	260	272.5
L2	39.5	52	64.5	77	89.5	102	114.5	127	139.5	152	164.5	177	189.5	202	214.5	227	239.5	252	264.5

## SX5000: SS5X5-42- Stations -C6/C8

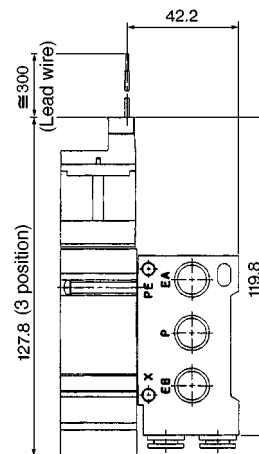
### Grommet (G)



### L plug connector (L)



### M plug connector (M)



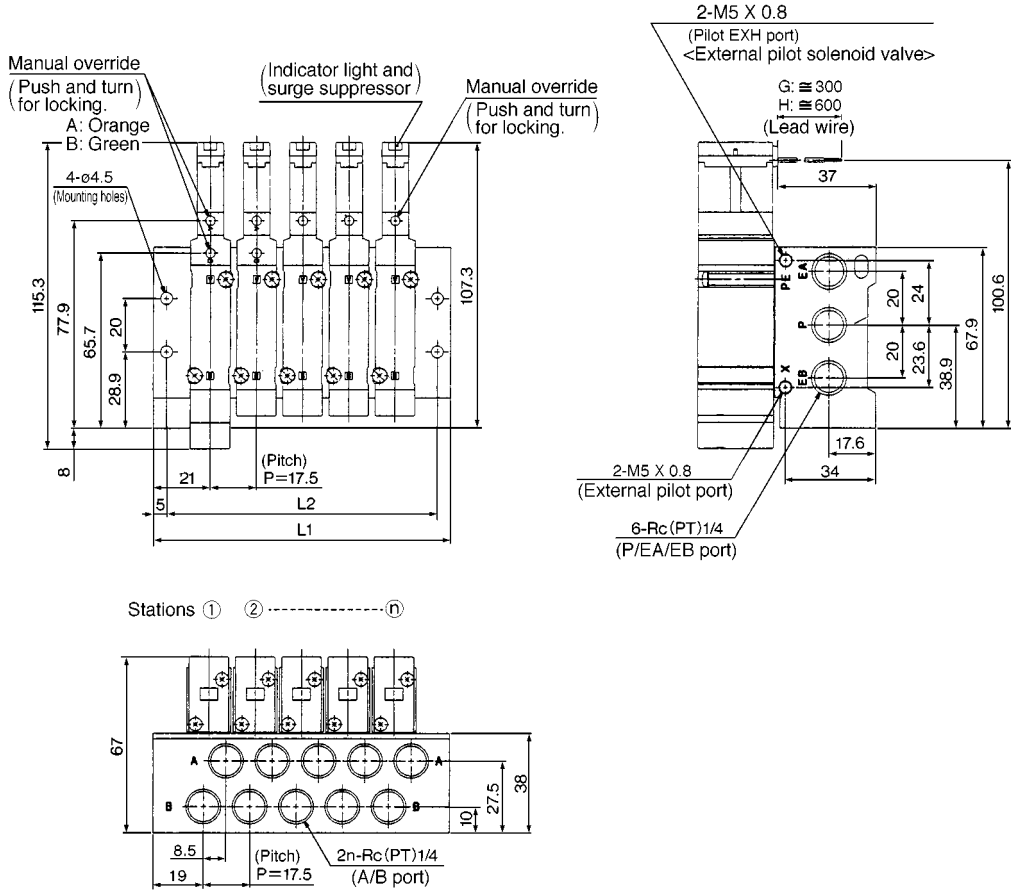
Stations	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L1	52	68	84	100	116	132	148	164	180	196	212	228	244	260	276	292	308	324	340
L2	42	58	74	90	106	122	138	154	170	186	202	218	234	250	266	282	298	314	330

- SY
- SYJ
- SX**
- VK
- VZ
- VF
- VFR
- VP7
- VP4

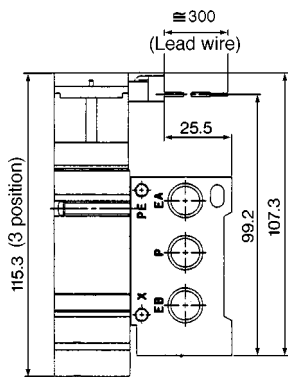
- VQ
- VQ4
- VQZ
- VQD
- VZS
- VFS
- VS
- VS7

SX5000: SS5X5-42- Stations -02

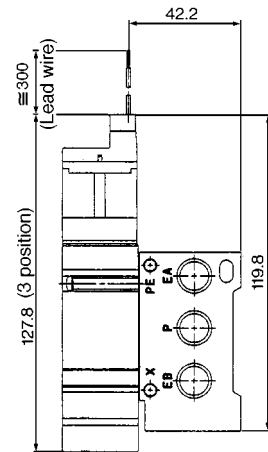
Grommet (G)



L plug connector (L)



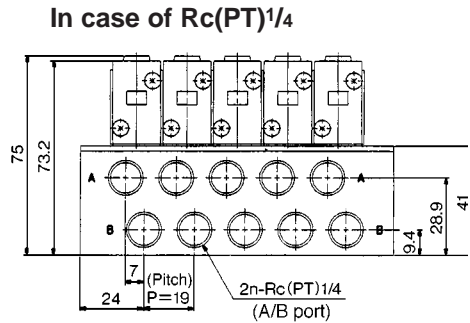
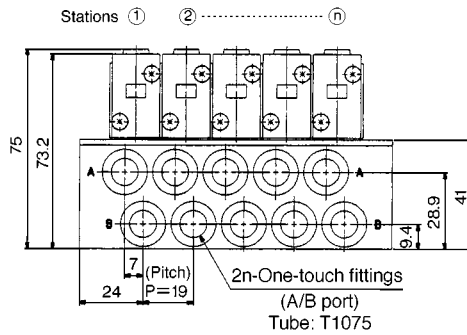
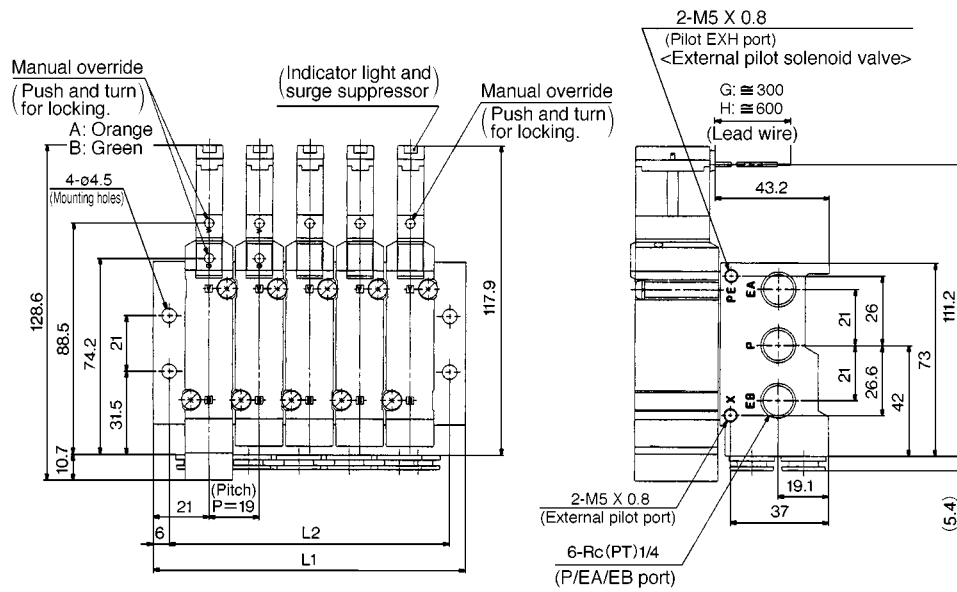
M plug connector (M)



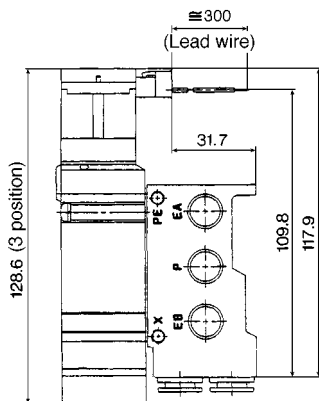
Stations	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L1	59.5	77	94.5	112	129.5	147	164.5	182	199.5	217	234.5	252	269.5	287	304.5	322	339.5	357	374.5
L2	49.5	67	84.5	102	119.5	137	154.5	172	189.5	207	224.5	242	259.5	277	294.5	312	329.5	347	364.5

## SX7000: SS5X7-42- Stations -02/C10

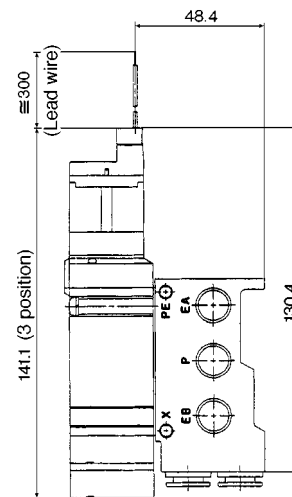
### Grommet (G)



### L plug connector (L)



### M plug connector (M)



Stations	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L1	61	80	99	118	137	156	175	194	213	232	251	270	289	308	327	346	365	384	403
L2	49	68	87	106	125	144	163	182	201	220	239	258	277	296	315	334	353	372	391

- SY
- SYJ
- SX**
- VK
- VZ
- VF
- VFR
- VP7
- VP4
- VQ
- VQ4
- VQZ
- VQD
- VZS
- VFS
- VS
- VS7

41<sup>P</sup><sub>N</sub>Type

42<sup>P</sup><sub>N</sub>Type

# SX3000/5000/7000 Base Mounted Manifold Integral Base/Flat Cable

## How to Order Manifold

### 41<sup>P</sup><sub>N</sub> Type/Compact

SS5X **5** - 41 **P** - **05** - **C8**

#### Manifold series

3	SX3000
5	SX5000

#### Common

P	Positive common
N	Negative common

#### Stations

03	3 stations
⋮	⋮
12	12 stations

Note) SS5X3 has 4 to 12 stations.

#### A/B port size

Symbol	Port size	Series
M5	M5 X 0.8	SX3000
C4	One-touch fittings for ø4	
C6	One-touch fittings for ø6	
01	Rc(PT) 1/8	SX5000
C6	One-touch fittings for ø6	
C8	One-touch fittings for ø8	

### 41<sup>P</sup><sub>N</sub> Type/Common external pilot

SS5X **5** - 42 **P** - **05** - **C8**

#### Manifold series

3	SX3000
5	SX5000
7	SX7000

#### Common

P	Positive common
N	Negative common

#### Stations

03	3 stations
⋮	⋮
12	12 stations

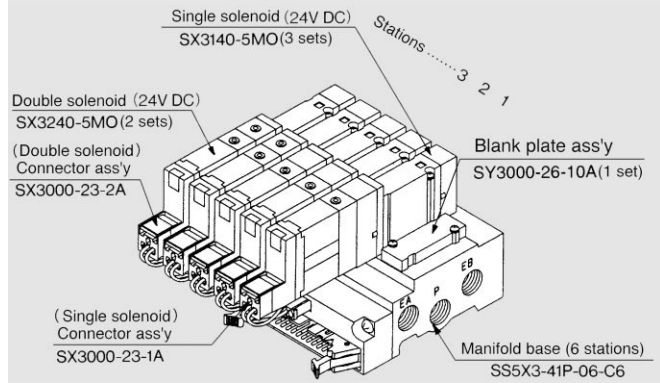
Note) SS5X3 has 4 to 12 stations.

#### A/B port size

Symbol	Port size	Series
01	Rc(PT) 1/8	SX3000
C4	One-touch fittings for ø4	
C6	One-touch fittings for ø6	
02	Rc(PT) 1/4	SX5000
C6	One-touch fittings for ø6	
C8	One-touch fittings for ø8	
02	Rc(PT) 1/4	SX7000
C10	One-touch fittings for ø10	

## How to Order Valve Manifold Ass'y (Example)

### Ordering example

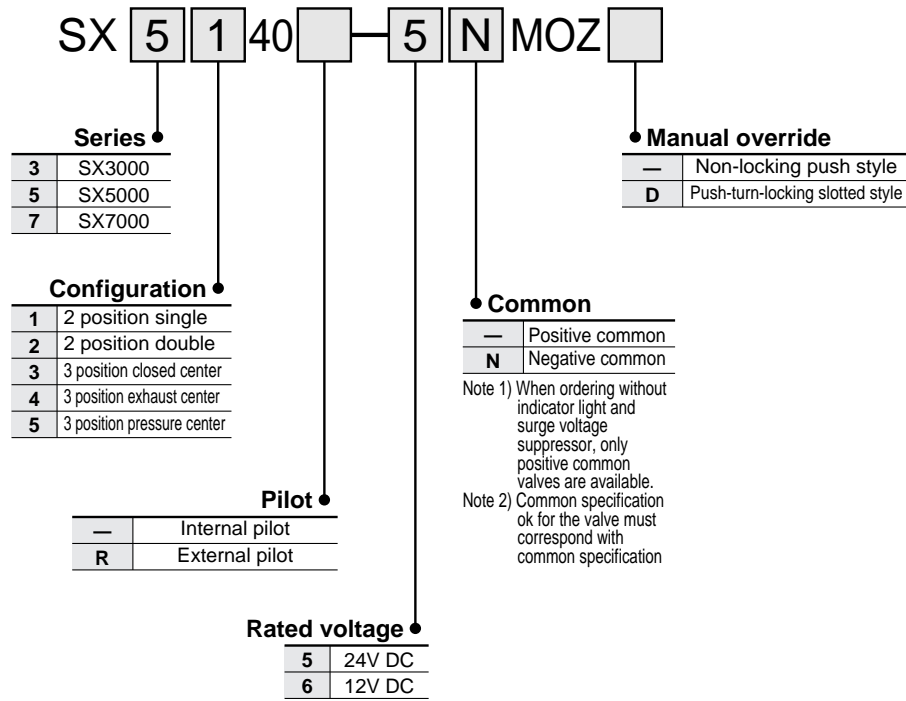


- SS5X3-41P-06-C6 ····· 1set (41P type 6-station manifold base No.)
- \* SY3000-26-10A ····· 1set (Blank plate assembly No.)
- \* SX3140-5MO ····· 3sets (Single solenoid No.)
- \* SX3240-5MO ····· 2sets (Double solenoid No.)
- \* SX3000-23-1A ····· 3sets (Connector assembly No.)
- \* SX3000-23-2A ····· 2sets (Connector assembly No.)

To order valves and options mounted onto the manifold at the factory, list the valve/options with an asterisk in front of each part number.

Add the valve and option numbers under the manifold base number. When arrangement is complicated, specify it in the manifold specifications.

## How to Order Valve



## How to Order Connector Ass'y

- Positive common specification  
 For single solenoid: SX3000-23-1A  
 For double solenoid, 3 position: SX3000-23-2A
- Negative common specification  
 For single solenoid: SX3000-24-1A  
 For double solenoid, 3 position: SX3000-24-2A

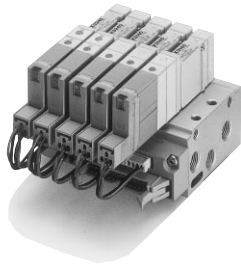
Refer to p.1.3-7 for further information on connector ass'y.

- SY
- SYJ
- SX
- VK
- VZ
- VF
- VFR
- VP7
- VP4
- VQ
- VQ4
- VQZ
- VQD
- VZS
- VFS
- VS
- VS7



- Multiple valve wiring is simplified through the use of the flat cable connector.
- Clean appearance**

With the flat cable manifold, each valve is wired to the manifold base. A single MIL flat cable connects the entire manifold to your power source. This greatly reduces installation time.

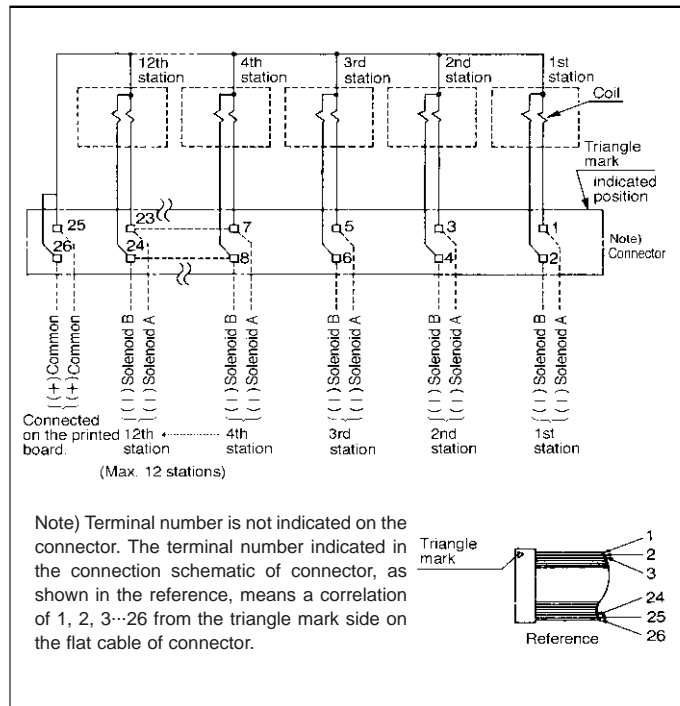


### Flat Cable Manifold Specifications

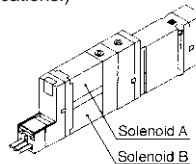
Model	SS5X3-41 <sup>P</sup> <sub>N</sub>	SS5X3-42 <sup>P</sup> <sub>N</sub>	SS5X5-41 <sup>P</sup> <sub>N</sub>	SS5X5-42 <sup>P</sup> <sub>N</sub>	SS5X7-42 <sup>P</sup> <sub>N</sub>
Applicable valve	SX3□40	SX3□40(R)	SX5□40	SX5□40(R)	SX7□40(R)
Manifold style	Single base/B mount				
P(SUP)/R(EXH)	Common supply/Common exhaust				
Valve stations <sup>(1)</sup>	4 to 12 stations		3 to 12 stations		
A/B port	Location	Base			
	Direction	Side			
Port size	P/EA/EB port	Rc(PT)1/8		Rc(PT)1/4	
	A/B port	M5 X 0.8	Rc(PT)1/8	Rc(PT)1/8	Rc(PT)1/4
Valve effective area <sup>(2)</sup> (mm) <sup>2</sup> (Cv factor)	C4 (One-touch for ø4) C6 (One-touch for ø6)		C6 (One-touch for ø6) C8 (One-touch for ø8)		C10 (One-touch for ø10)
	P→A/B 3.96 (0.22) C6: A/B→EA/EB 4.14 (0.23)		C8: P→A/B 9.54 (0.53) A/B→EA/EB 9.0 (0.5)		C10: P→A/B 16.2 (0.9) A/B→EA/EB 16.2 (0.9)
Manifold base weight W(g) n: Stations	W=39n+83	W=48n+99	W=67n+118	W=88n+151	W=109n+174
Connector	Socket: 26 poles MIL with strain relief; conforms to MIL-C-83503				
Internal wiring <sup>(3)</sup>	Both for +COM (41P, 42P type) and -COM (41N, 42N type)				
Rated voltage	12, 24V DC				

- Note 1) For more than 10 stations, supply pressure to P port on both sides and exhaust from EA and EB port on both sides.
- Note 2) Values for single operation of 2 position valve mounted on manifold base (5 stations).
- Note 3) The withstand voltage specification for the wiring unit section is JISC0704, Class 1 or its equivalent.

### Internal Wiring of Manifold

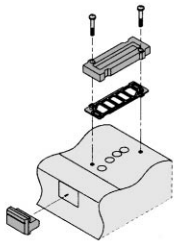


- For more than 9 stations, both poles of the common should be wired.
- For single solenoid, connect to the solenoid A side.
- The maximum number of stations is 12. If more than 12 stations are required, consult SMC.
- COM and +COM specifications are available. (Above diagram is for +COM specifications.)



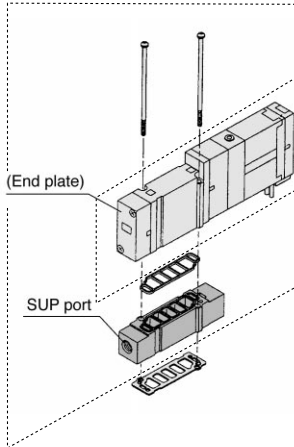
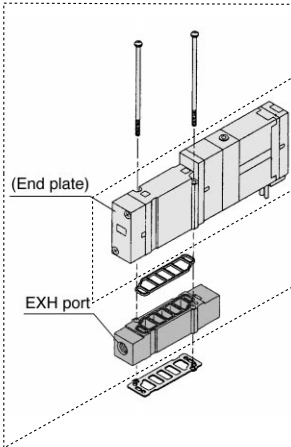
## Manifold Options

### Blank plate assembly



Series	Ass'y No.
<b>SX3000</b>	SY3000-26-10A
<b>SX5000</b>	SY5000-26-4A
<b>SX7000</b>	SY7000-26-4A

### Individual EXH spacer ass'y    Individual SUP spacer ass'y



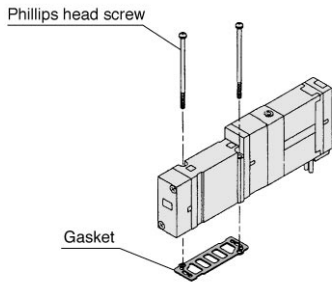
Series	Ass'y No.	Port size
<b>SX3000</b>	SX3000-39-2A	M5 X 0.8
<b>SX5000</b>	SX5000-39-2A	Rc(PT)1/8
<b>SX7000</b>	SX7000-39-2A	Rc(PT)1/4

Note) For protection of the wiring unit section, the EXH port is on the end plate side.

Series	Ass'y No.	Port size
<b>SX3000</b>	SX3000-38-2A	M5 X 0.8
<b>SX5000</b>	SX5000-38-2A	Rc(PT)1/8
<b>SX7000</b>	SX7000-38-2A	Rc(PT)1/4

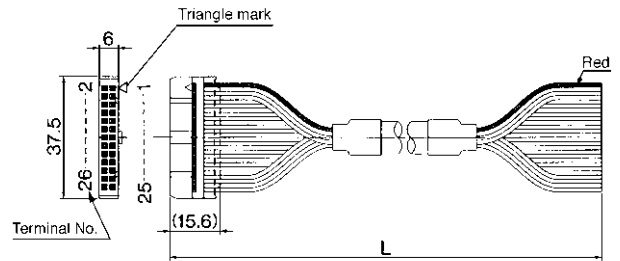
Note) The SUP port may be either on the lead wire side or on the end plate side, an ass'y is shipped on the end plate side when it is attached onto manifold base.

### Bolt and Gasket



Series	Phillips head screw	Gasket
<b>SX3000</b>	SX3000-22-2 (M2 X 24)	SY3000-11-8
<b>SX5000</b>	M3 X 30 (Matted nickel plated)	SY5000-11-2
<b>SX7000</b>	M4 X 35 (Matted nickel plated)	SY7000-11-2

### Cable assembly AXT100-FC26-1 to 3



### Connector assembly for flat cables

Cable length (L)	Assembly No.	Note
1.5m	AXT100-FC26-1	Cable 26-pole X28AWG
3m	AXT100-FC26-2	
5m	AXT100-FC26-3	

\* For other commercial connectors, use 26-pole type with strain relief made in conformity with MIL-C-83503.

### Plug

Inserted into an unused cylinder port and SUP/EXH ports. The minimum order quantity is 10 pcs.



### Dimensions

Fittings size ød	Model	A	L	D
4	<b>KQP-04-X19</b>	16	32	6
6	<b>KQP-06-X19</b>	18	35	8
8	<b>KQP-08-X19</b>	20.5	39	10
10	<b>KQP-10-X19</b>	22	43	12

### Caution

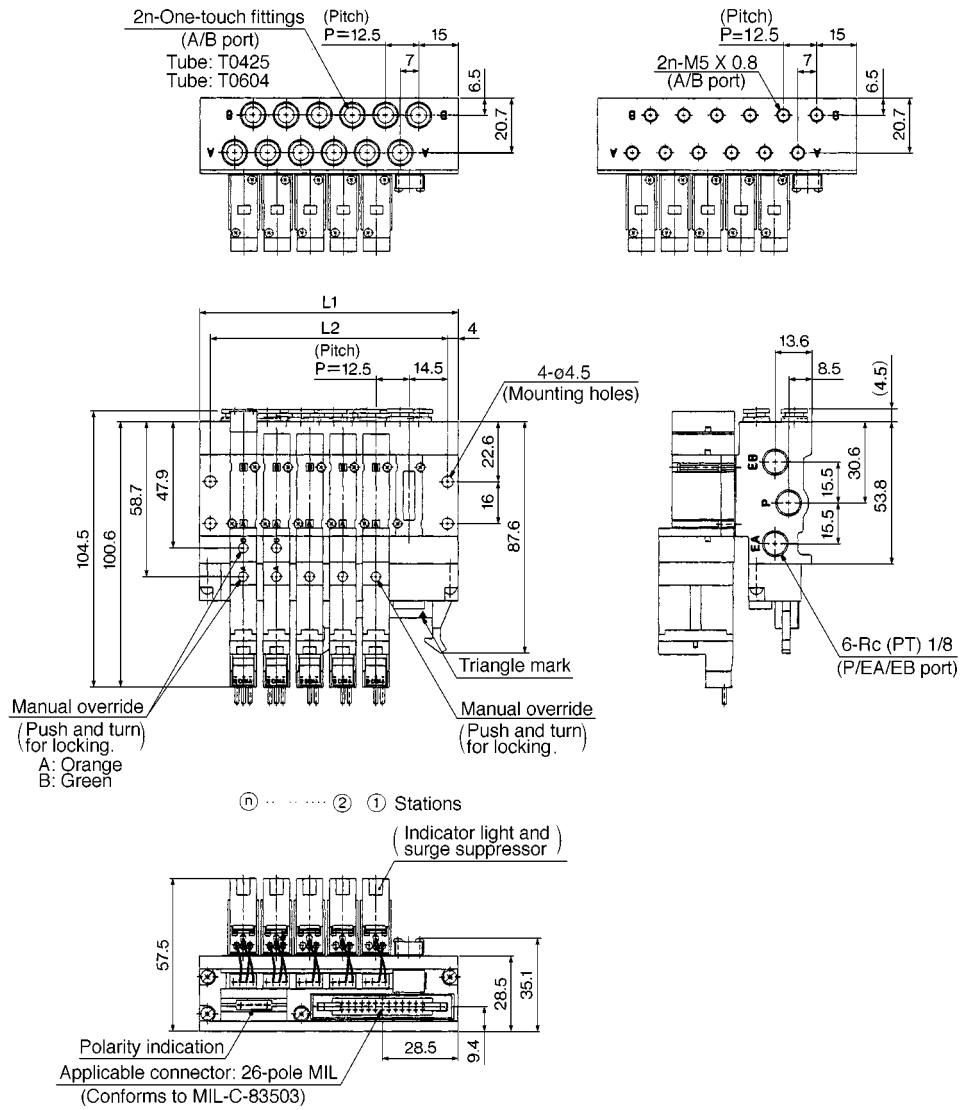
Mounting screw tightening torque

M2: 0.15Nm  
M3: 0.6Nm  
M4: 1.4Nm

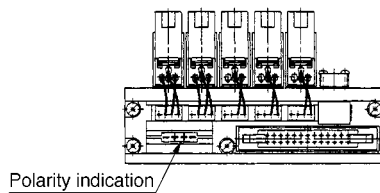
- SY
- SYJ
- SX**
- VK
- VZ
- VF
- VFR
- VP7
- VP4
- VQ
- VQ4
- VQZ
- VQD
- VZS
- VFS
- VS
- VS7

**SX3000: SS5X3-41P- Stations -M5/C4/C6**

**In case of M5**



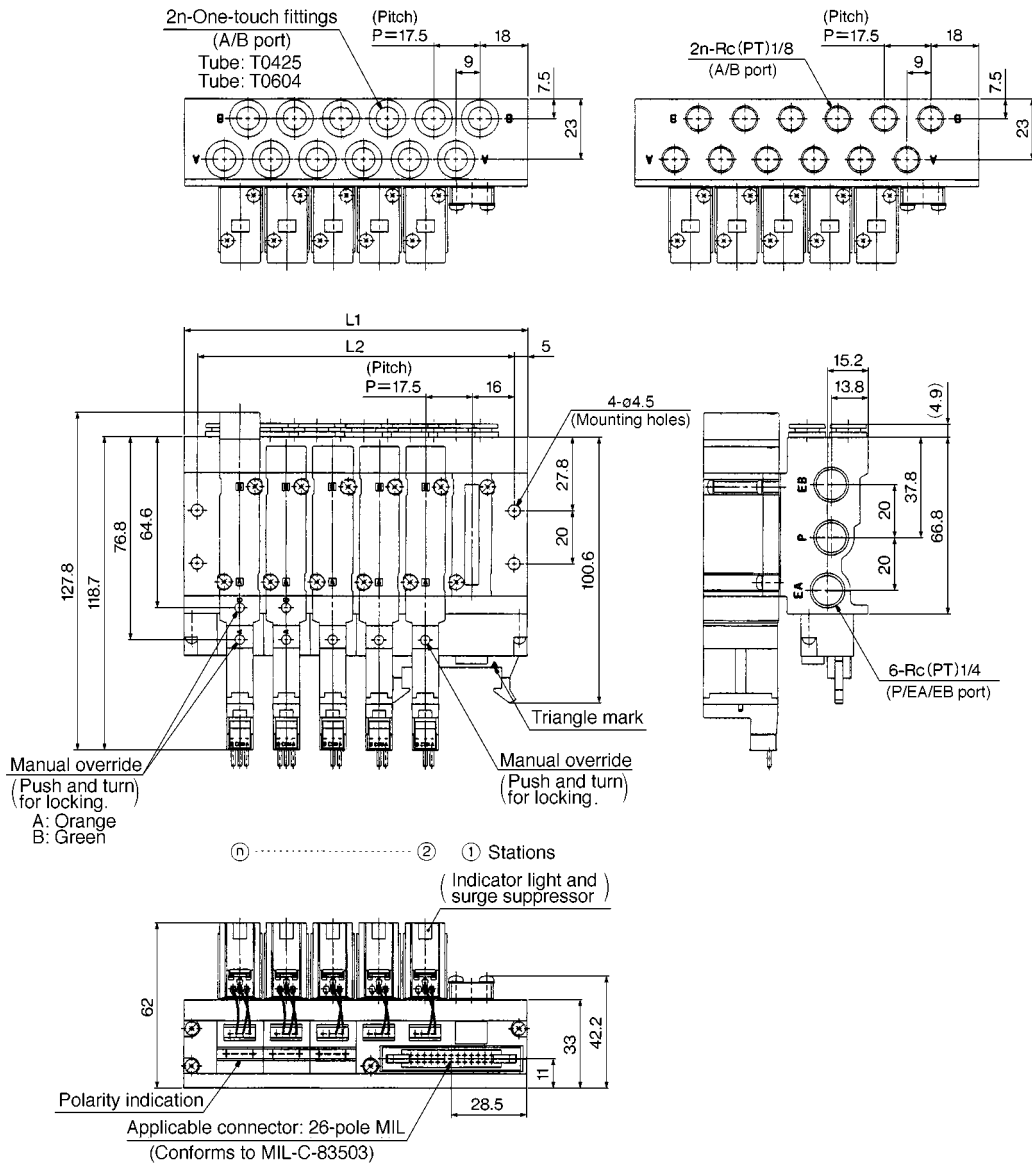
**In case of SS5X3-41N**



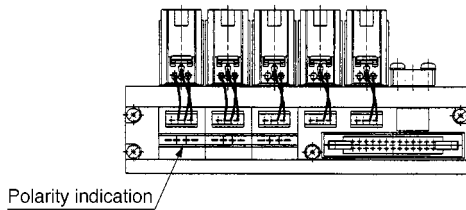
Stations	4	5	6	7	8	9	10	11	12
<b>L1</b>	72.5	85	97.5	110	122.5	135	147.5	160	172.5
<b>L2</b>	64.5	77	89.5	102	114.5	127	139.5	152	164.5

## SX5000: SS5X5-41P- Stations -01/C6/C8

In case of Rc(PT)1/8



In case of SS5X5-41N

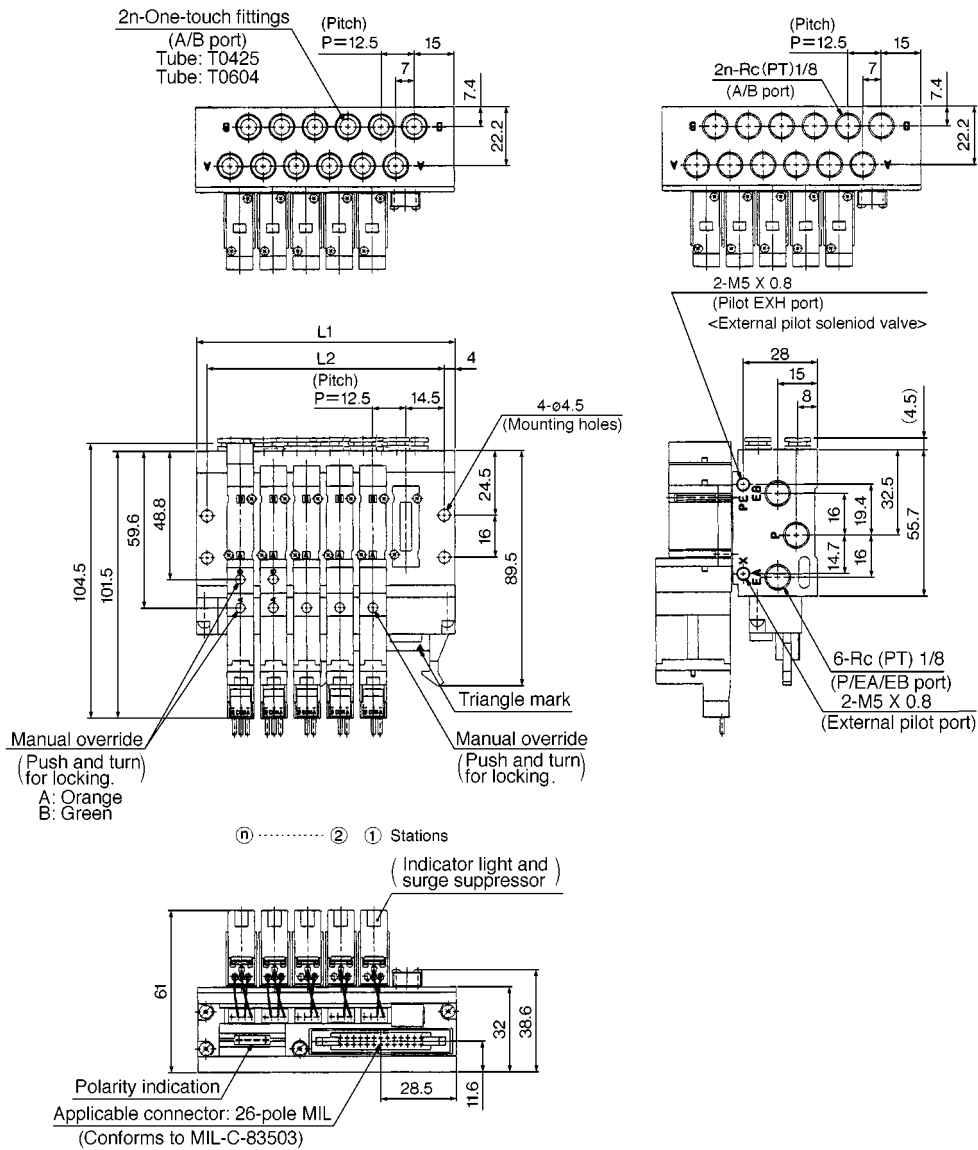


Stations	3	4	5	6	7	8	9	10	11	12
L1	77	94.5	112	129.5	147	164.5	182	199.5	217	234.5
L2	67	84.5	102	119.5	137	154.5	172	189.5	207	224.5

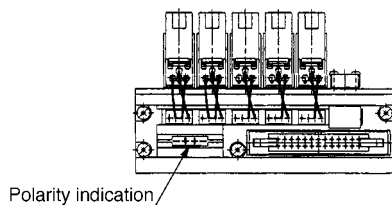
- SY
- SYJ
- SX**
- VK
- VZ
- VF
- VFR
- VP7
- VP4
- VQ
- VQ4
- VQZ
- VQD
- VZS
- VFS
- VS
- VS7

SX3000: SS5X3-42P- Stations -01/C4/C6

In case of Rc(PT)1/8



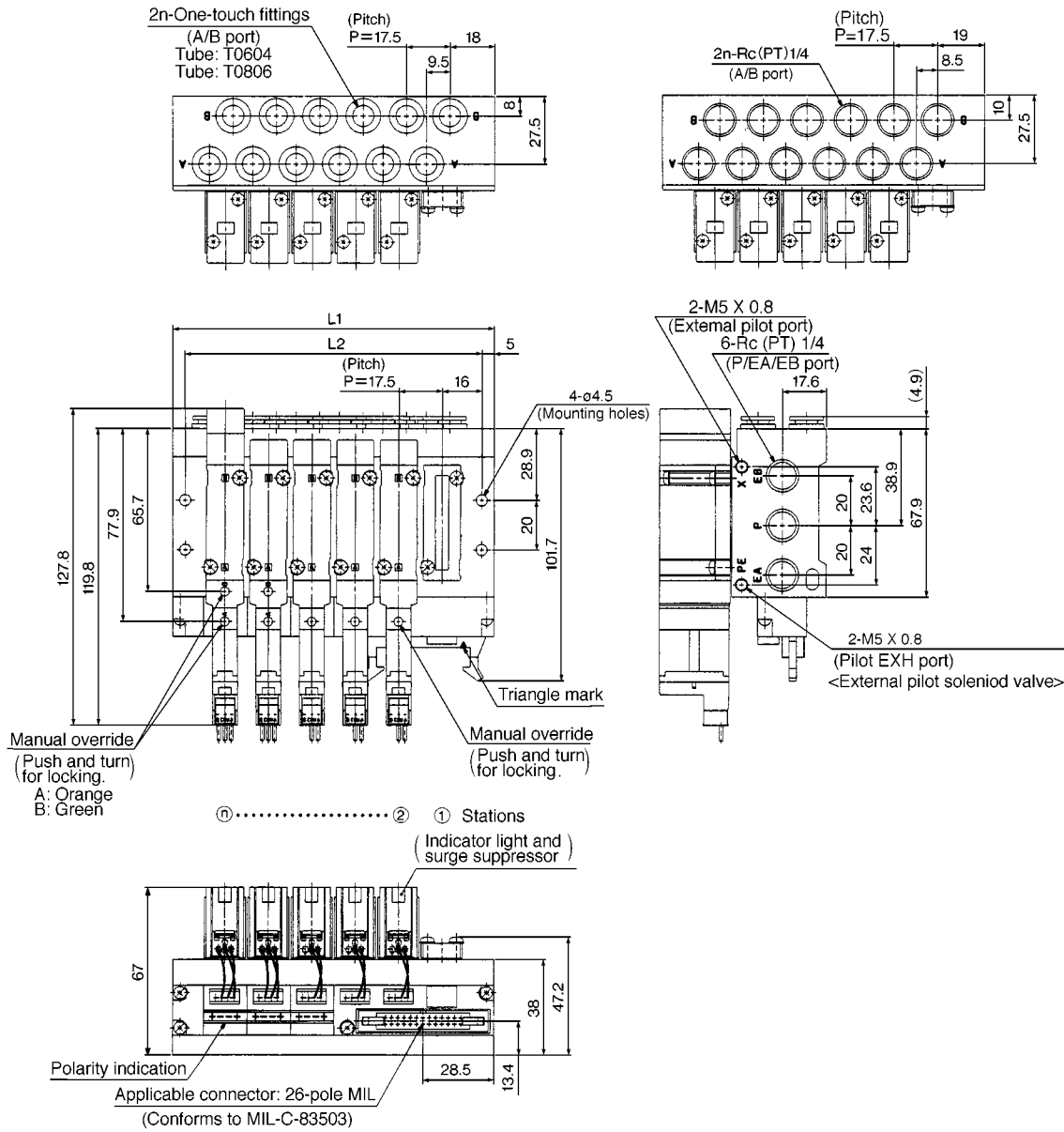
In case of SS5X3-42N



Stations	4	5	6	7	8	9	10	11	12
L1	72.5	85	97.5	110	122.5	135	147.5	160	172.5
L2	64.5	77	89.5	102	114.5	127	139.5	152	164.5

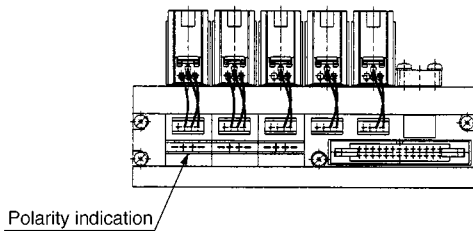
## SX5000: SS5X5-42P- Stations -02/C6/C8

### In case of Rc(PT)1/4



- SY
- SYJ
- SX**
- VK
- VZ
- VF
- VFR
- VP7
- VP4
- VQ
- VQ4
- VQZ
- VQD
- VZS
- VFS
- VS
- VS7

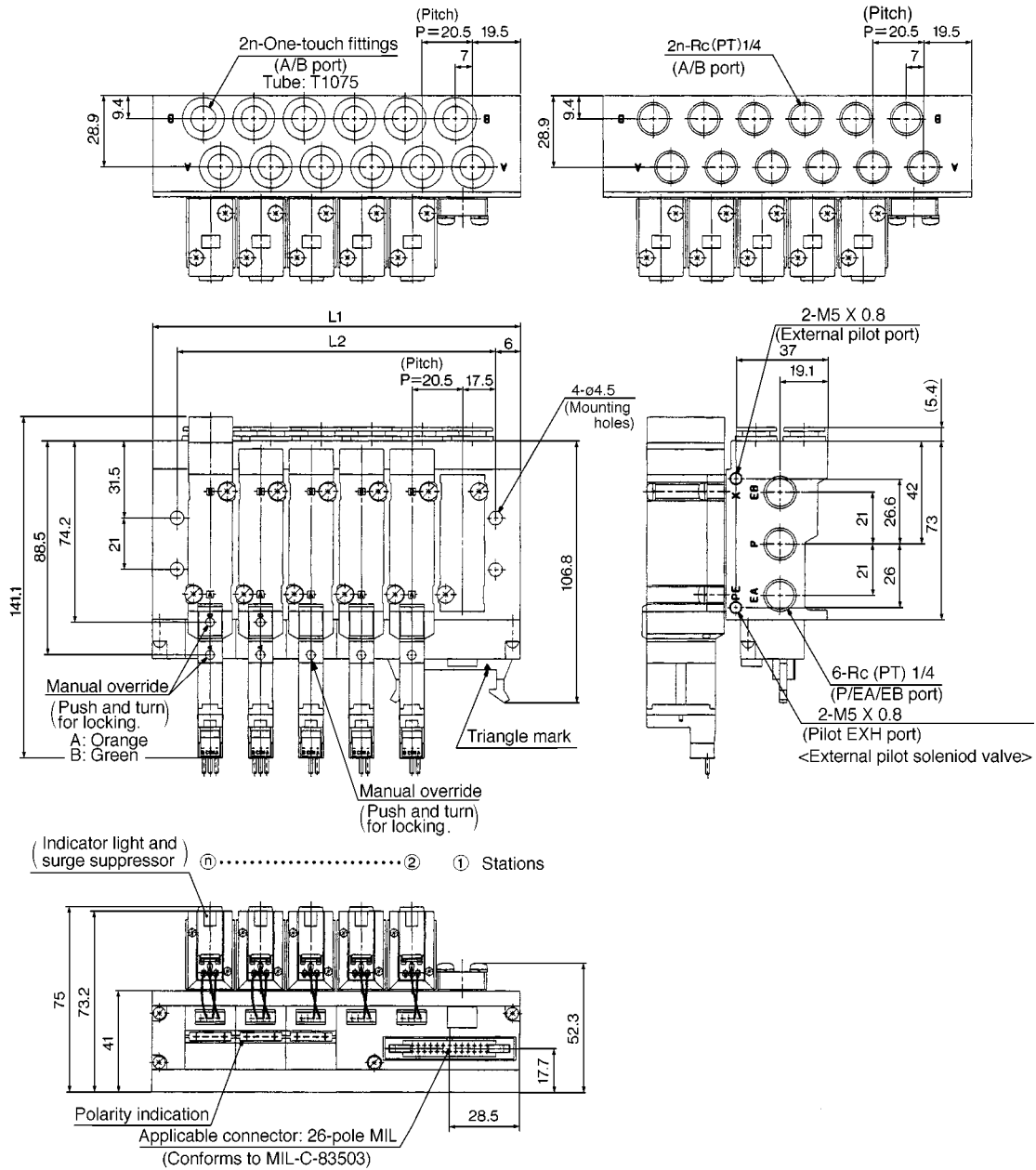
### In case of SS5X5-42N



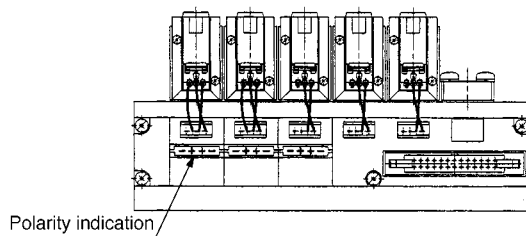
Stations	3	4	5	6	7	8	9	10	11	12
L1	77	94.5	112	129.5	147	164.5	182	199.5	217	234.5
L2	67	84.5	102	119.5	137	154.5	172	189.5	207	224.5

SX7000: SS5X7-42P- Stations -02/C10

In case of Rc(PT)1/4



In case of SS5X7-42N



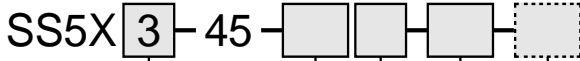
Stations	3	4	5	6	7	8	9	10	11	12
L1	88	108.5	129	149.5	170	190.5	211	231.5	252	272.5
L2	76	96.5	117	137.5	158	178.5	199	219.5	240	260.5



45<sub>Type</sub>

# SX3000/5000 Base Mounted Stacking Manifold/DIN Rail Mounted Individual Wiring

## How to Order Manifold



### Manifold series

3	SX3000
5	SX5000

### Stations

02	2 stations
⋮	⋮
20	20 stations

### Supply/Exhaust block ass'y mounting position

Symbol	Mounting position	Applicable series
U	U-side	2 to 10 stations
D	D-side	
B	Both sides	2 to 20 stations
M*	Special specification	

\* Special specification available by special order.

### A/B port size

#### SX3000

Symbol	Port size
C4	One-touch fittings for ø4
C6	One-touch fittings for ø6
M*	Mixed

#### SX5000

Symbol	Port size
C4	One-touch fittings for ø4
C6	One-touch fittings for ø6
C8	One-touch fittings for ø8
M*	Mixed

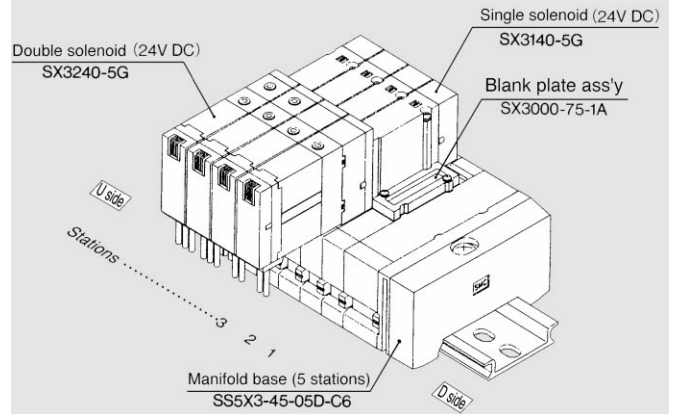
\* Mixed porting available by special order.

### Option

If a longer DIN rail than the one with designated station is required, specify the required station number. (Maximum: 20 stations)

## How to Order Valve Manifold Ass'y (Example)

### Ordering example



- SS5X3-45-05D-C6 ····· 1set (45 type 5-station manifold base No.)  
 \* SX3000-75-1A ····· 1set (Blank plate assembly No.)  
 \* SX3140-5G ····· 2sets (Single solenoid No.)  
 \* SX3240-5G ····· 2sets (Double solenoid No.)

To order valves and options mounted onto the manifold at the factory, list the valve/options with an asterisk in front of each part number.

They are assembled in the order listed starting at the first station at the D side even if the air supply/exhaust block assembly is located at either end. For more complicated assemblies, refer to the manifold specifications.



- Connector assembly for L and M type ····Refer to p.1.3-6.
- Common connector ass'y for manifold ····Refer to p.1.3-7.

## How to Order Valve

SX **5** **2** 40 — **5** **N** **L**

### Series

3	SX3000
5	SX5000

### Configuration

1	2 position single
2	2 position double
3	3 position closed center
4	3 position exhaust center
5	3 position puressure center

### Rated voltage

5	24V DC
6	12V DC
V	6V DC
S	5V DC
R	3V DC

### Common

—	Positive common
N	Negative common



Note) For single solenoid valves with the 'G' electrical entry only positive common wiring is available. For single solenoid valves without the 'S' or 'Z' protection circuit only positive common wiring is available.

### Manual override

—	Non-locking push style
D	Push-turn-locking slotted style

### Indicator light and surge voltage suppressor

—	Without indicator light and surge voltage suppressor
S	With surge voltage suppressor
Z	With indicator light and surge voltage suppressor

### Electrical entry

Grommet	L type connector	M type connector
G: 300mm lead wire	L: 300mm lead wire	M: 300mm lead wire
H: 600mm lead wire	LN: Without lead wire	MN: Without lead wire
	LO: Without connector	MO: Without connector



\* The LN or MN option includes 2 sockets for single solenoid valves and 3 sockets for double solenoid valves.

SY

SYJ

**SX**

VK

VZ

VF

VFR

VP7

VP4

VQ

VQ4

VQZ

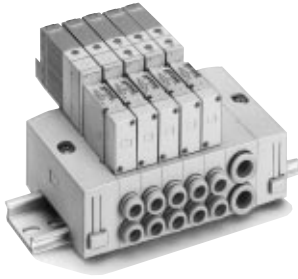
VQD

VZS

VFS

VS

VS7



### Manifold Specifications

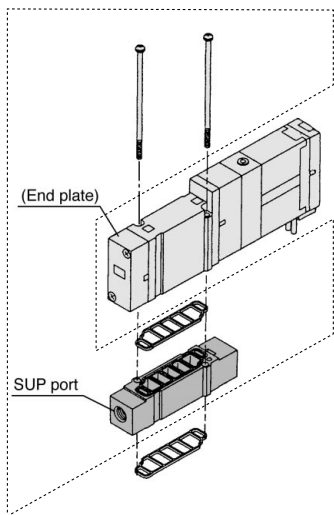
Model		<b>SS5X3-45</b>	<b>SS5X5-45</b>
Applicable valve		<b>SX3□40</b>	<b>SX5□40</b>
Manifold style		Stacking DIN rail mounted	
P(SUP)/R(EXH) style		Common supply/Common exhaust	
Valve stations <sup>(1)</sup>		2 to 20 stations	
A/B porting specifications	Location	Base	
	Direction	Side	
Port size	P/R port	C8 (One-touch fittings for ø8)	C10 (One-touch fittings for ø10)
	A/B port	C4 (One-touch fittings for ø4) C6 (One-touch fittings for ø6)	C4 (One-touch fittings for ø4) C6 (One-touch fittings for ø6) C8 (One-touch fittings for ø8)
Valve effective area <sup>(2)</sup> (mm <sup>2</sup> ) (Cv factor)		C6: P→A/B 4.68 (0.26) A/B→R 4.68 (0.26)	C8: P→A/B 12.6 (0.7) A/B→R 12.6 (0.7)
Manifold base weight W(g)		2 to 10 stations: W=22n+118	2 to 10 stations: W=47n+156
n: Stations		11 to 20 stations: W=22n+140	11 to 20 stations: W=47n+190



Note 1) For more than 11 stations, supply pressure to P port on both sides and exhaust from R port on both sides.  
 Note 2) Valve for single operation of 2 position valve mounted on manifold base (5 stations).

## Manifold Options

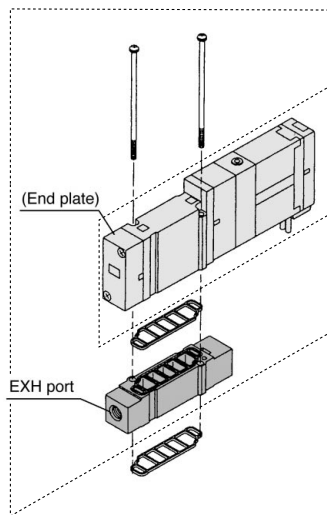
### Individual SUP spacer ass'y



Series	Ass'y No.	Port size
SX3000	SX3000-38-2A	M5 X 0.8
SX5000	SX5000-38-2A	Rc (PT) 1/8

Note) SUP port may be either on the lead wire side or the end plate side. (Factory assembled spacer will be shipped with the orientation shown in the figure.)

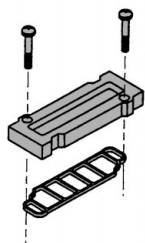
### Individual EXH spacer ass'y



Series	Ass'y No.	Port size
SX3000	SX3000-39-2A	M5 X 0.8
SX5000	SX5000-39-2A	Rc (PT) 1/8

Note) The EXH port may be either on the lead wire side or on the end plate side.

### Blank plate assembly



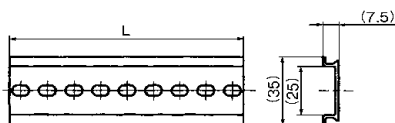
Series	Ass'y No.
SX3000	SX3000-75-1A
SX5000	SX5000-76-1A

### Dimensions/DIN rail

VZ1000-11-1-□

See L dimensions

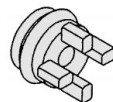
\* Fill in □ with an appropriate no. listed on the table of DIN rail dimensions shown below.



No.	0	1	2	3	4	5	6	7	8	9	10
L	98	110.5	123	135.5	148	160.5	173	185.5	198	210.5	223
No.	11	12	13	14	15	16	17	18	19	20	21
L	235.5	248	260.5	273	285.5	298	310.5	323	335.5	348	360.5
No.	22	23	24	25	26	27	28	29	30	31	32
L	373	385.5	398	410.5	423	435.5	448	460.5	473	485.5	498
No.	33	34	35	36	37	38	39	40	41	42	43
L	510.5	523	535.5	548	560.5	573	585.5	598	610.5	623	635.5
No.	44	45	46	47	48	49	50	51	52	53	54
L	648	660.5	673	685.5	698	710.5	723	735.5	748	760.5	773
No.	55	56	57	58	59	60	61	62	63	64	65
L	785.5	798	810.5	823	835.5	848	860.5	873	885.5	898	910.5
No.	66	67	68	69	70	71					
L	923	935.5	948	960.5	973	985.5					

### SUP block disc

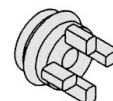
Different pressures can be supplied into one manifold by attaching supply block disks to pressure supply groove.



Series	Part No.
SX3000	SX3000-77-1A
SX5000	SX5000-77-1A

### EXH block disc

Exhausted air from valves can be divided in order not to affect other valves by attaching exhaust block disks to pressure exhaust groove.



Series	Part No.
SX3000	SX3000-77-1A
SX5000	SX5000-77-1A

### Block disc indication label

These labels are stuck on the block with SUP and EXH block discs inside for confirmation from outside. (3 sheets respectively)

#### VZ3000-123-1A

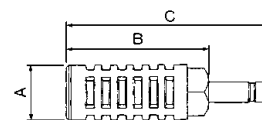
Label for SUP block disc    Label for EXH block disc    Label for SUP, EXH block disc



Note) When ordering block disc installed at the factory, labels will be attached to the manifold showing the locations.

### Silencer for One-touch fittings

The silencer plugs directly into the One-touch fittings of the manifold.

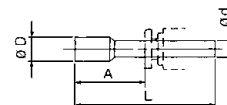


Series	Model	Effective area	A	B	C
SX3000 (ø8)	AN203-KM8	14mm <sup>2</sup>	ø16	26	51
SX5000 (ø10)	AN200-KM10	26mm <sup>2</sup>	ø22	53.8	80.8
	AN300-KM10	30mm <sup>2</sup>	ø25	70	97

### Plug

Inserted into an unused cylinder port and SUP/EXH ports. The minimum order quantity is 10 pcs.

KQP-<sup>04</sup>/<sub>06</sub>/<sub>08</sub>/<sub>10</sub>-X19  
 ● White color



### Dimensions

Fittings size ød	Model	A	L	D
4	KQP-04-X19	16	32	6
6	KQP-06-X19	18	35	8
8	KQP-08-X19	20.5	39	10
10	KQP-10-X19	22	43	12

### Caution

Mounting screw tightening torque

M2: 0.15Nm  
 M3: 0.6Nm  
 M4: 1.4Nm

SY

SYJ

SX

VK

VZ

VF

VFR

VP7

VP4

VQ

VQ4

VQZ

VQD

VZS

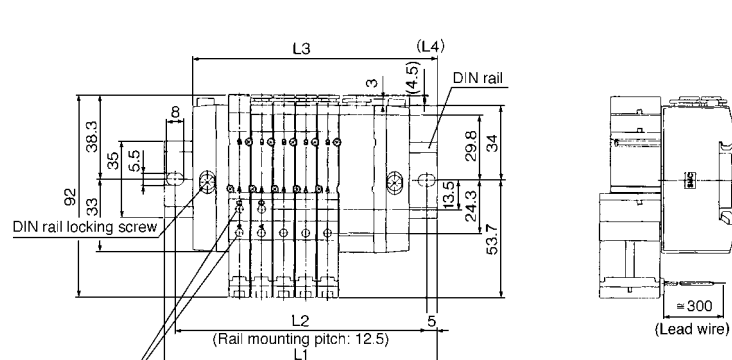
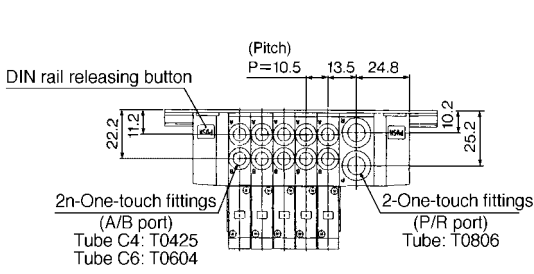
VFS

VS

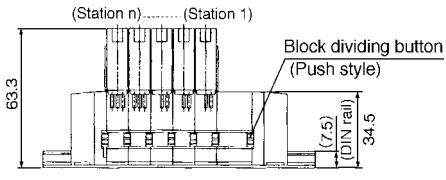
VS7

Dimensions/Series SX3000

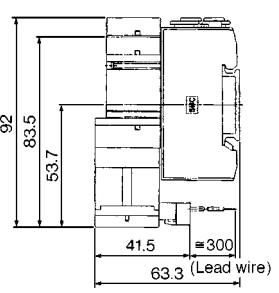
SS5X3-45-Stations D-C<sub>6</sub><sup>4</sup>



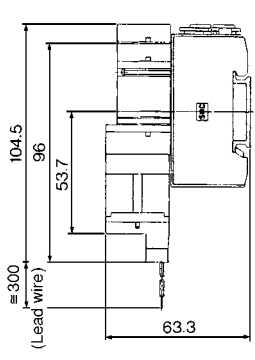
Manual override  
(Push and turn)  
for locking.  
A: Orange  
B: Green



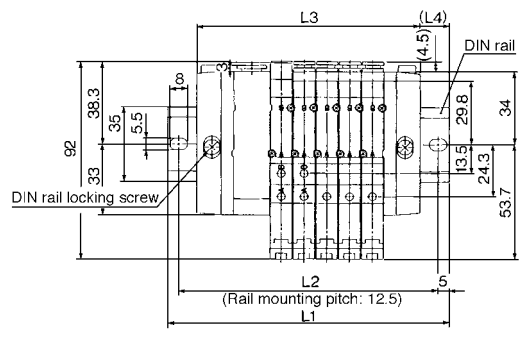
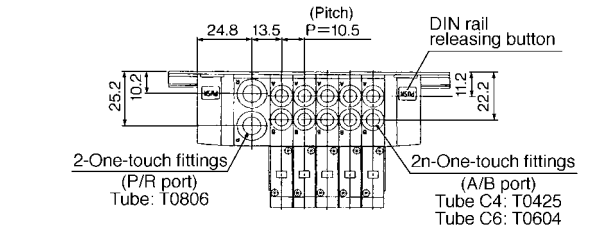
L plug connector



M plug connector

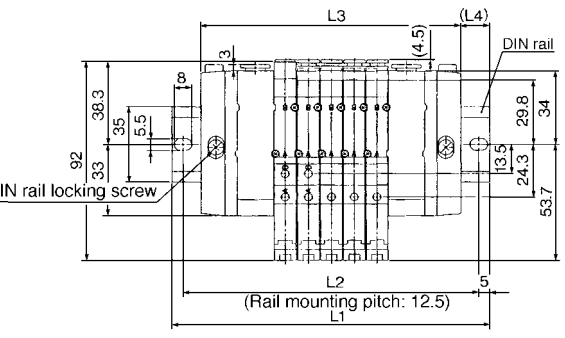
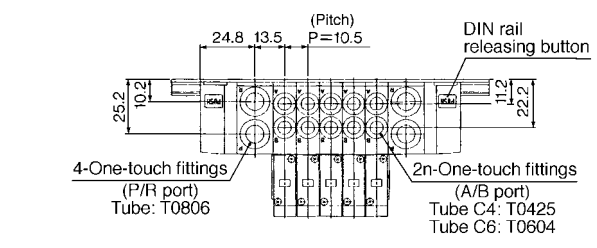


SS5X3-45-Stations U-C<sub>6</sub><sup>4</sup>



Stations	2	3	4	5	6	7	8	9	10
L1	98	110.5	123	135.5	148	148	160.5	173	185.5
L2	87.5	100	112.5	125	137.5	137.5	150	162.5	175
L3	70.5	81	91.5	102	112.5	123	133.5	144	154.5
L4	13.5	14.5	15.5	16.5	17.5	12.5	13.5	14.5	15.5

SS5X3-45-Stations B-C<sub>6</sub><sup>4</sup>

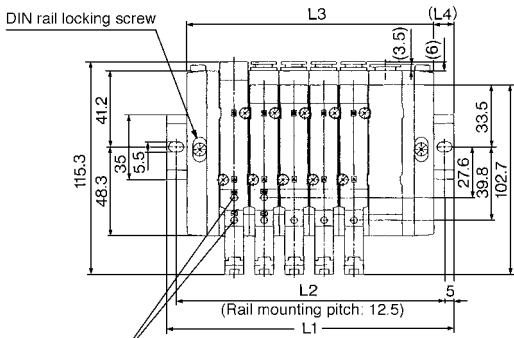
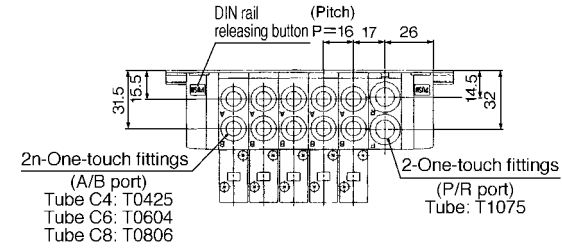


Stations	2	3	4	5	6	7	8	9	10
L1	110.5	123	135.5	148	160.5	173	185.5	185.5	198
L2	100	112.5	125	137.5	150	162.5	175	175	187.5
L3	87	97.5	108	118.5	129	139.5	150	160.5	171
L4	11.5	12.5	13.5	14.5	15.5	16.5	17.5	12.5	13.5

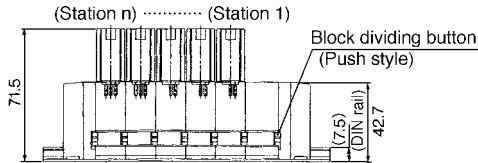
Stations	11	12	13	14	15	16	17	18	19	20
L1	210.5	223	235.5	248	248	260.5	273	285.5	298	310.5
L2	200	212.5	225	237.5	237.5	250	262.5	275	287.5	300
L3	181.5	192	202.5	213	223.5	234	244.5	255	265.5	276
L4	14.5	15.5	16.5	17.5	12	13	14	15	16	17

## Dimensions/Series SX5000

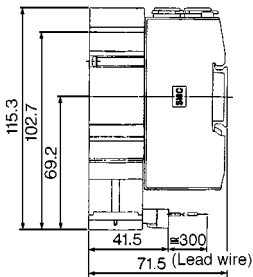
### SS5X5-45-Stations D<sub>C4, C6, C8</sub>



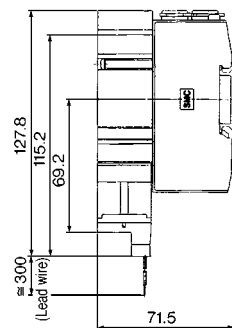
Manual override  
(Push and turn)  
for locking.  
A: Orange  
B: Green



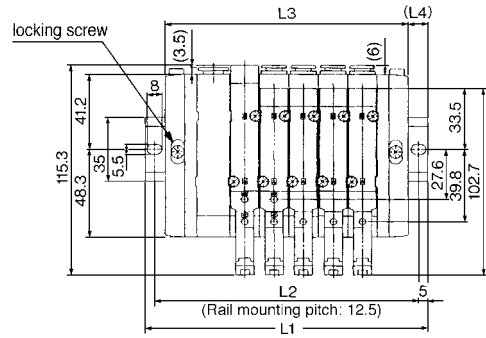
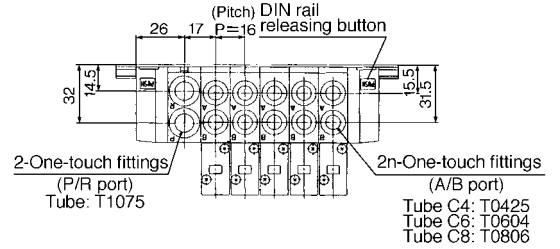
### L plug connector



### M plug connector

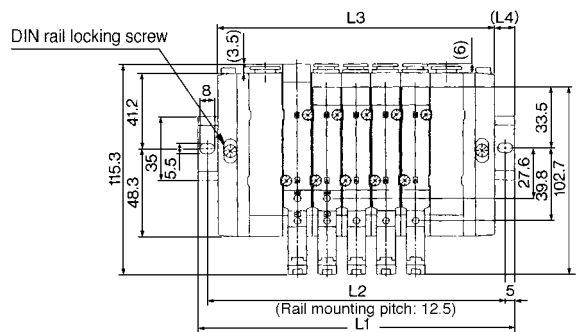
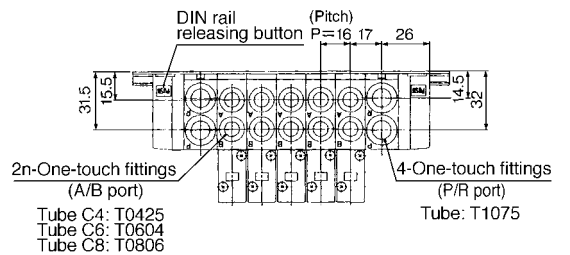


### SS5X5-45-Stations U<sub>C4, C6, C8</sub>



Stations	2	3	4	5	6	7	8	9	10
L1	110.5	135.5	148	160.5	173	198	210.5	223	235.5
L2	100	125	137.5	150	162.5	187.5	200	212.5	225
L3	84	100	116	132	148	164	180	196	212
L4	13	17.5	16	14	12.5	17	15	13.5	11.5

### SS5X5-45-Stations B<sub>C4, C6, C8</sub>



Stations	2	3	4	5	6	7	8	9	10
L1	135.5	148	160.5	185.5	198	210.5	223	248	260.5
L2	125	137.5	150	175	187.5	200	212.5	237.5	250
L3	102	118	134	150	166	182	198	214	230
L4	16.5	15	13	17.5	16	14	12.5	17	15

Stations	11	12	13	14	15	16	17	18	19	20
L1	273	285.5	310.5	323	335.5	360.5	373	385.5	398	423
L2	262.5	275	300	312.5	325	350	362.5	375	387.5	412.5
L3	246	262	278	294	310	326	342	358	374	390
L4	13.5	11.5	16	14.5	12.5	17	15.5	13.5	12	16.5

SY

SYJ

SX

VK

VZ

VF

VFR

VP7

VP4

VQ

VQ4

VQZ

VQD

VZS

VFS

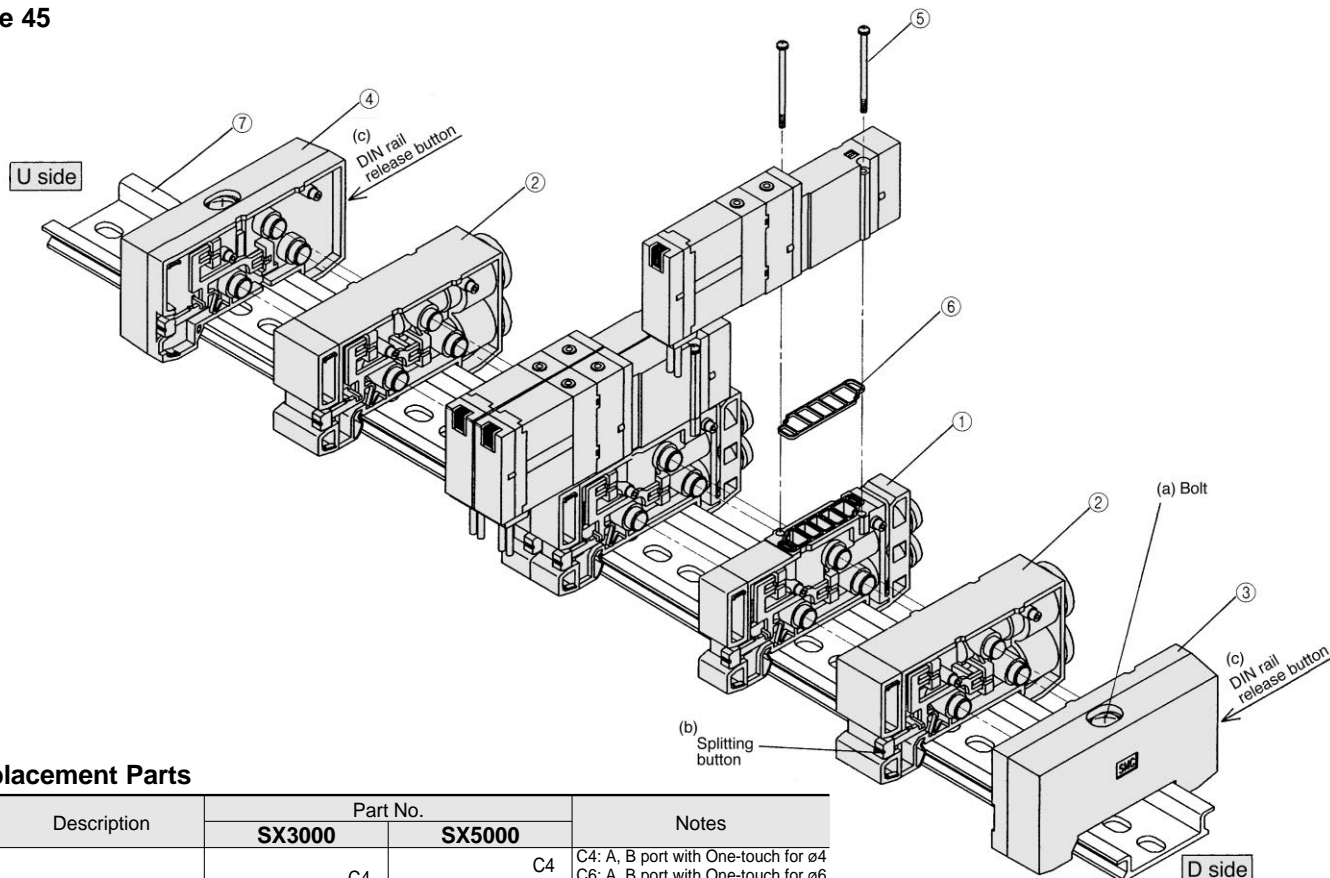
VS

VS7



## Exploded View/DIN Rail Manifold

### Type 45



### Replacement Parts

No.	Description	Part No.		Notes
		SX3000	SX5000	
①	Manifold block Ass'y	SX3000-50-1A-C4 C6	SX5000-50-1A-C6 C8	C4: A, B port with One-touch for ø4 C6: A, B port with One-touch for ø6 C8: A, B port with One-touch for ø8 (Gasket ⑥ is an accessory)
②	SUP/EXH block Ass'y	SX3000-51-1A	SX5000-51-1A	P, R port SX3000 with One-touch for ø8 P, R port SX5000 with One-touch for ø10
③	End block Ass'y R	SX3000-52-1A	SX5000-52-1A	For D side
④	End block Ass'y L	SX3000-53-1A	SX5000-53-1A	For U side
⑤	Phillips head screw	SX3000-22-2 (M2 X 24)	M3 X 30 (Matted nickel plated)	
⑥	Gasket	SX3000-57-4	SX5000-57-1	
⑦	DIN rail	VZ1000-11-1-□		Refer to p.1.3-73

### How to increase manifold bases (Manifold bases can be added at any location.)

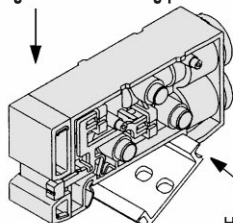
Cut off the air supply to confirm that no air is left in the manifold before starting operation. Remaining air or inappropriate installation may cause an accident.

- Loosen bolt (a) fixing the manifold base until it begins to turn idly. (While pressing DIN rail release buttons (c) at two locations, separate the manifold base from the DIN rail.)
- Press manifold block ass'y splitting button (b), that are at the location where manifold bases are to be added, until button (b) locks, and then separate the block assemblies.
- Mount additional manifold block assemblies on the DIN rail as shown in the figure.
- Press block assemblies until a click sound is produced, and tighten bolt (a) to fix them to the DIN rail. (Torque: 1 Nm) (While lightly holding the blocks with hands after fixing an end block on one side, tighten the other end block for better sealing.)

#### Caution

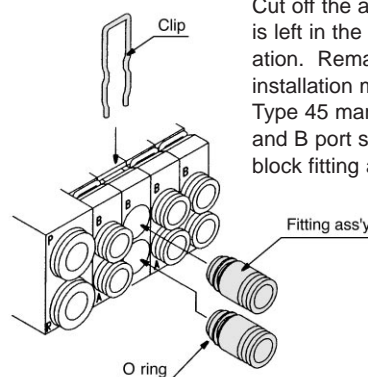
- When adding manifold bases to use more than 10 stations, add SUP/EXH block ass'ys, as well.
- When bolt (a) for the end block is not sufficiently tightened during reassembly, air leakage may result. Before supplying air, check that there is no gap between blocks and that the manifold block is firmly fixed to the DIN rail in order to ensure air supply without leakage.

Fig.1 Block mounting procedure



Hook this part on the DIN rail and then press in the direction of the arrow until a click sound is produced.

### How to change fitting assembly



Cut off the air supply to confirm that no air is left in the manifold before starting operation. Remaining air or inappropriate installation may cause an accident.

Type 45 manifold permits change in the A and B port sizes by changing the manifold block fitting assembly. After removing the valve, remove the clip with a screwdriver, etc. For mounting a new fitting ass'y, insert it and then insert a clip until it will not come out of the manifold block.

### Fitting ass'y

Port size	SX3000	SX5000
One-touch fittings for ø4	VVQ1000-50A-C4	VVQ1000-51A-C4
One-touch fittings for ø6	VVQ1000-50A-C6	VVQ1000-51A-C6
One-touch fittings for ø8	—	VVQ1000-51A-C8

- Note 1) P and R ports cannot be changed.  
Note 2) Protect O rings from scratches and dust to prevent air leakage.





## How to Order Manifold

### 45P□type (Flat cable)



**Manifold series**

3	SX3000
5	SX5000

**Common**

—	Positive common
N	Negative common

**Connector poles**

Symbol	Poles	Applicable stations
—	26	2 to 20 stations
G	20	2 to 16 stations
H	10	2 to 8 stations

**Connector mounting position**

Symbol	Mounting position
U	U side
D	D side

**A/B port size**

Symbol	Port size
C4	One-touch fittings for ø4
C6	One-touch fittings for ø6
M*	Mixed

**SX3000**

Symbol	Port size
C4	One-touch fittings for ø4
C6	One-touch fittings for ø6
C8	One-touch fittings for ø8
M*	Mixed

**SX5000**

\* Mixed porting available by special order.

**SUP/EXH block assembly mounting position**

Symbol	Mounting position	Stations
U	U side	2 to 10
D	D side	2 to 10
B	Both side	2 to 20
M*	Special specification	

\* Special specification available by special order.

**Voltage**

—	24V DC
12V	12V DC

**Valve stations (Blank plate ass'ys are included.)**

**26 pin (P) connector**

Symbol	Stations	Note
02	2	Double wiring specification
⋮	⋮	
10	10	Applicable up to 20 solenoids. Use manifold specification form to specify wiring.
11	11	
⋮	⋮	
20	20	

**20 pin (PG) connector**

Symbol	Stations	Note
02	2	Double wiring specification
⋮	⋮	
08	8	Applicable up to 16 solenoids. Use manifold specification form to specify wiring.
09	9	
⋮	⋮	
16	16	

**10 pin (PH) connector**

Symbol	Stations	Note
02	2	Double wiring specification
⋮	⋮	
04	4	Applicable up to 8 solenoids. Use manifold specification form to specify wiring.
05	5	
⋮	⋮	
08	8	

### 45T type (9 pin terminal block)



**Series**

3	SX3000
5	SX5000

**Terminal block mounting position**

Symbol	Mounting position
U	U side
D	D side

**Stations**

Symbol	Stations	Note
02	2	Double wiring specification
⋮	⋮	
04	4	Applicable up to 8 solenoids. Use manifold specification form to specify wiring.
05	5	
⋮	⋮	
08	8	

The number of blank plate ass'ys is included.

**SUP/EXH block ass'y mounting position**

Symbol	Mounting position	Stations
U	U side	2 to 8
D	D side	2 to 8
B	Both side	2 to 8
M*	Special specification	

\* Indicate special locations in the manifold specification form.

**A/B port size**

Symbol	Port size
C4	One-touch fittings for ø4
C6	One-touch fittings for ø6
M*	Mixed

**SX3000**

Symbol	Port size
C4	One-touch fittings for ø4
C6	One-touch fittings for ø6
C8	One-touch fittings for ø8
M*	Mixed

**SX5000**

\* Mixed porting is available by special order.

### 45T1 type (18 pin terminal block)



**Series**

3	SX3000
5	SX5000

**Terminal block mounting position**

Symbol	Mounting position
U	U side
D	D side

**Stations**

Symbol	Stations	Note
02	2	Double wiring specification
⋮	⋮	
08	8	Applicable up to 17 solenoids. Use manifold specification form to specify wiring.
09	9	
⋮	⋮	
17	17	

The number of blank plate ass'ys is included.

**SUP/EXH block ass'y mounting position**

Symbol	Mounting position	Stations
U	U side	2 to 10
D	D side	2 to 10
B	Both side	2 to 17
M	Special specification	

\* Special specification available by special order.

**A/B port size**

Symbol	Port size
C4	One-touch fittings for ø4
C6	One-touch fittings for ø6
M*	Mixed

**SX3000**

Symbol	Port size
C4	One-touch fittings for ø4
C6	One-touch fittings for ø6
C8	One-touch fittings for ø8
M*	Mixed

**SX5000**

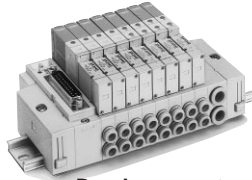
\* Mixed porting is available by special order.



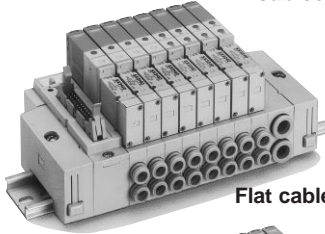
Note) The terminal block (45T□type) manifold has no common polarity. It can be used for both positive and negative common.

- SY
- SYJ
- SX
- VK
- VZ
- VF
- VFR
- VP7
- VP4

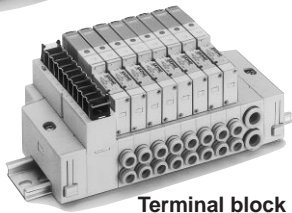
- VQ
- VQ4
- VQZ
- VQD
- VZS
- VFS
- VS
- VS7



D-sub connector style



Flat cable style



Terminal block style

## Manifold Specifications

Type	D-sub connector 45F	Flat cable 45P□			Terminal block	
		45P	45PG	45PH	45T	45T1
Manifold style	Plug-in					
P(SUP)/R(EXH) style	Common supply/Common exhaust					
Valve stations <sup>(1)</sup>	2 to 20	2 to 16	2 to 8	2 to 17		
A/B port specifications	Location	Base				
	Direction	Side				
Port size	P/R port	C8 (One-touch fittings for ø8)				
	A/B port	C10 (One-touch fittings for ø10)				
Valve effective area <sup>(2)</sup> (mm <sup>2</sup> ) (Cv factor)	SX3000	C4 (One-touch fittings for ø4)/C6 (One-touch fittings for ø6)				
	SX5000	C4 (One-touch fittings for ø4)/C6 (One-touch fittings for ø6)/C8 (One-touch fittings for ø8)				
Connector	SX3000	C6: P→A/B 4.68 (0.26) A/B→R 4.68 (0.26)				
	SX5000	C8: P→A/B 12.6 (0.7) A/B→R 12.6 (0.7)				
Internal wiring	+COM (45□type), -COM (45N□type)				Both for +COM and -COM	
	Manifold base weight W (g)		2 to 10 stations : W=26n+172 11 to 20 stations : W=26n+199			
n: Stations (D-sub connector)	SX3000	2 to 10 stations : W=54n+227 11 to 20 stations : W=54n+264				
	SX5000					

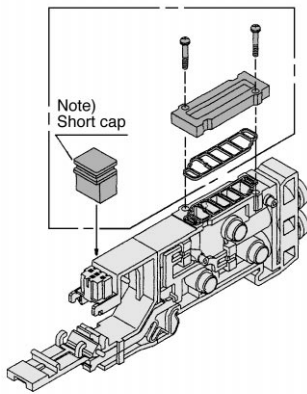


Note 1) There is limit to the number of stations available depending on the number of solenoids required. Please refer to the "How to Order". For more than 10 stations, supply pressure through the 'P' ports at both ends of the manifold exhaust through both ends as well.

Note 2) Valve for single operation of 2 position valve mounted on manifold base (5 stations).

## Manifold Options

### Blank plate assembly



Note) Short cap

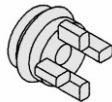
Series	Ass'y No.
SX3000	SX3000-75-2A
SX5000	SX5000-76-2A



Note) When mounting a blank plate, be sure to mount a short cap.

### SUP block disc

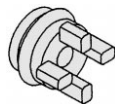
Different pressures can be supplied into one manifold by inserting supply block discs between stations.



Series	Part No.
SX3000	SX3000-77-1A
SX5000	SX5000-77-1A

### EXH block disc

Exhausted air from valves can be divided in order not to affect other valves by inserting exhaust block discs between stations.



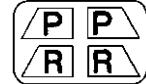
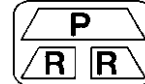
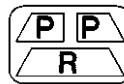
Series	Part No.
SX3000	SX3000-77-1A
SX5000	SX5000-77-1A

### Block disc indication label

These labels are stuck on the block with SUP and EXH block discs inside for confirmation from outside. (3 sheets respectively)

#### VZ3000-123-1A (Both for SX3000, 5000)

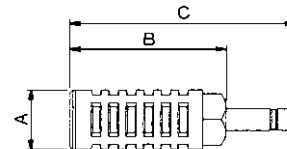
Label for SUP block disc    Label for EXH block disc    Label for SUP, EXH block disc



Note) When ordering block disc installed at the factory, labels are attached to the manifold showing the locations.

### Silencer for One-touch fittings

The silencer plugs directly into the One-touch fittings of the manifold.

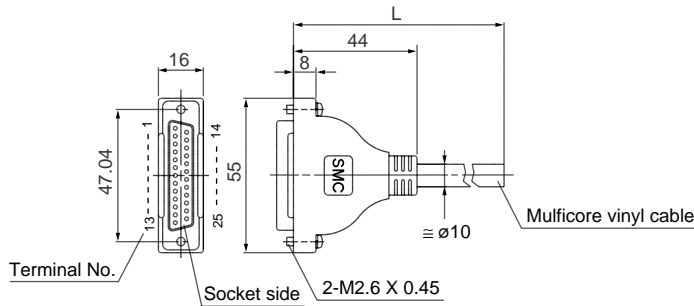


Series	Model	Effective area	A	B	C
SX3000 (ø8)	AN203-KM8	14mm <sup>2</sup>	ø16	26	51
	AN200-KM10	26mm <sup>2</sup>	ø22	53.8	80.8
SX5000 (ø10)	AN300-KM10	30mm <sup>2</sup>	ø25	70	97

## Manifold Options

### ■ D-sub Connector (25 pin)/Cable assembly

AXT100-DS25-  
015  
030  
050



### Wire color table by terminal number of D-sub connector cable ass'y

Terminal no.	Lead wire color	Dot marking
1	Black	—
2	Brown	—
3	Red	—
4	Orange	—
5	Yellow	—
6	Pink	—
7	Blue	—
8	Violet	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	Violet	—
18	Gray	—
19	Orange	Black
20	Red	White
21	Brown	White
22	Pink	Red
23	Gray	Red
24	Black	White
25	White	—

### D-sub connector cable assembly

Cable length (L)	Assembly No.	Note
1.5m	AXT100-DS25-015	Cable 25 pin X 24AWG
3m	AXT100-DS25-030	
5m	AXT100-DS25-050	

### Electric characteristics

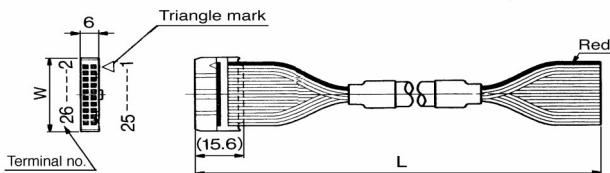
Item	
Conductor resistance Ω/km, 20°C	65 or less
Voltage limit V, 1min, AC	1000
Insulation resistance MΩkm, 20°C	5 or more

\* For other commercial connectors, use a 25 pin female connector made in conformity with MIL-C-24308.

\* The min. bending radius of D-sub connector cable ass'y is 20 mm.

### ■ Flat Cable Connector/Cable assembly

AXT100-FC□-1 to 3



### Flat Cable connector assembly

Cable length (L)	10 pin	20 pin	26 pin
1.5m	AXT100-FC10-1	AXT100-FC20-1	AXT100-FC26-1
3m	AXT100-FC10-2	AXT100-FC20-2	AXT100-FC26-2
5m	AXT100-FC10-3	AXT100-FC20-3	AXT100-FC26-3
Connector width (W)	17.2	30	37.5

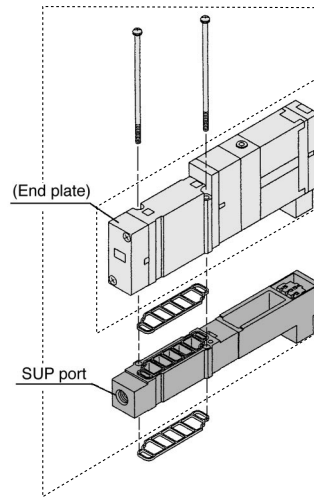
\* For other commercial connectors, use strain relief made in conformity with MIL-C-83503.

### ⚠ Caution

#### Mounting screw tightening torque

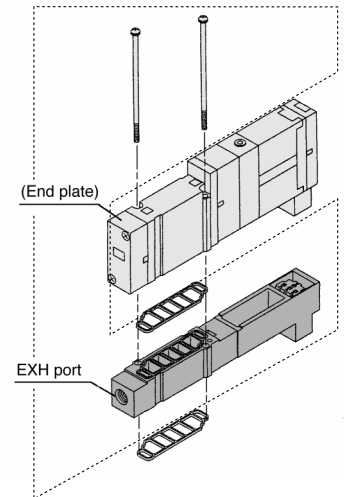
M2: 0.15Nm  
M3: 0.6Nm  
M4: 1.4Nm

### ■ Individual SUP spacer ass'y



Series	Ass'y No.	Port size
SX3000	SX3000-38-3A	M5 X 0.8
SX5000	SX5000-38-3A	Rc(PT) 1/8

### ■ Individual EXH spacer ass'y

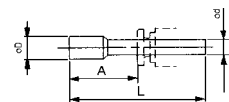


Series	Ass'y No.	Port size
SX3000	SX3000-39-3A	M5 X 0.8
SX5000	SX5000-39-3A	Rc(PT) 1/8

### ■ Plug

Inserted into an unused cylinder port and SUP/EXH ports. The minimum order quantity is 10 pcs.

KQP-<sup>04</sup>/<sub>06</sub>/<sub>08</sub>/<sub>10</sub>-X19  
● White color



### Dimensions

Fittings size ød	Model	A	L	D
4	KQP-04-X19	16	32	6
6	KQP-06-X19	18	35	8
8	KQP-08-X19	20.5	39	10
10	KQP-10-X19	22	43	12

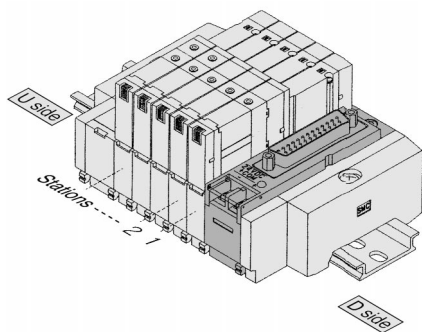
SY  
SYJ  
SX  
VK  
VZ  
VF  
VFR  
VP7  
VP4

VQ  
VQ4  
VQZ  
VQD  
VZS  
VFS  
VS  
VS7

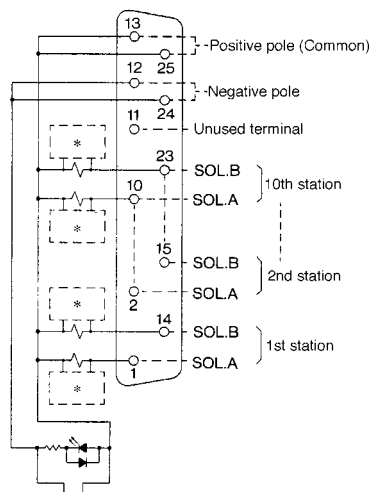
## Manifold Internal Wiring

### 45(N)F/D-sub Connector Style

A D-sub connector used for electric wiring reduces labor during wiring operation. Connectors conforming to MIL are used for interchangeability.



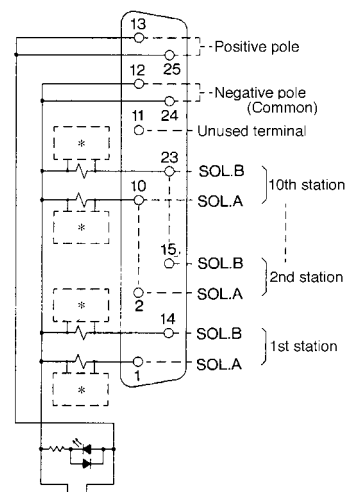
#### <Positive COM (45F)>



Power source terminal

\* Indicator light and surge voltage suppressor

#### <Negative COM (45NF)>

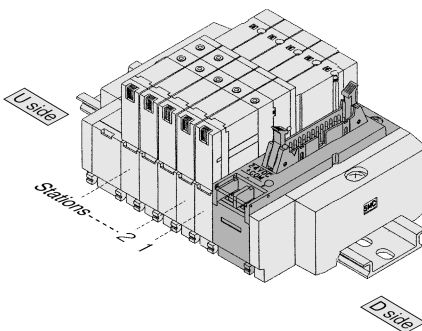


Power source terminal

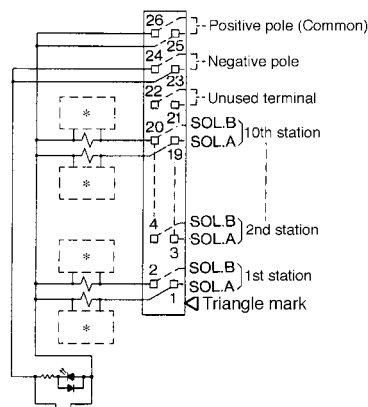
- The power source terminal is used for connecting to an external power source.
- The above diagram is for a 10 station double solenoid specification. When custom manifolds are ordered using the manifold specification form, the wiring may differ from above. Please contact SMC for more information.
- When using a single solenoid valve, connect wire to SOL. A.
- The maximum number of stations is 20 in terms of manifold bases, as well as solenoids. (Contact SMC for more stations.)
- Irrespective of the connector mounting position, stations are counted from the D side.

### 45(N)P/Flat Cable Style (26 pin)

A flat cable connector used for electric wiring reduces labor during wiring operation. Connectors conforming to MIL are used for interchangeability.



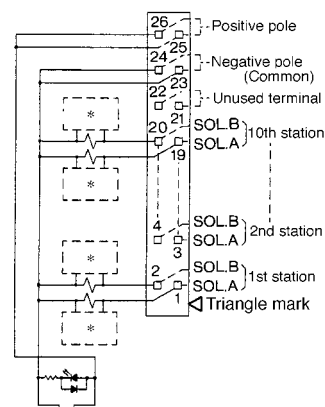
#### <Positive COM (45P)>



Power source terminal

\* Indicator light and surge voltage suppressor

#### <Negative COM (45NP)>



Power source terminal

\* Indicator light and surge voltage suppressor

Note) Terminal number is not indicated on the connector.

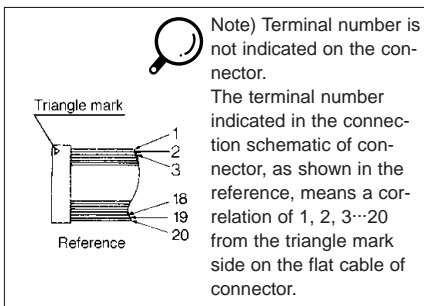
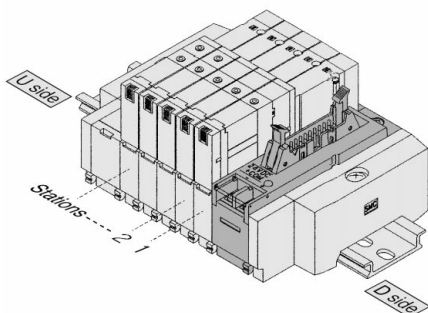
The terminal number indicated in the connection schematic of connector as shown in the reference, means a correlation of 1, 2, 3...26 from the triangle mark side on the flat cable of connector.

- The power source terminal is used for connecting to an external power source.
- The above diagram is for a 10 station double solenoid specification. When custom manifolds are ordered using the manifold specification form, the wiring may differ from above. Please contact SMC for more information.
- When using a single solenoid valve, connect wire to SOL. A.
- The maximum number of stations is 20 in terms of manifold bases, as well as solenoids. (Contact SMC for more stations.)
- Regardless of the connector mounting position, stations are counted from the D side.



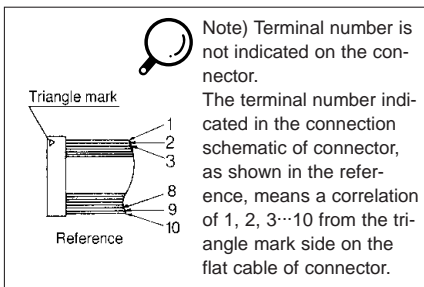
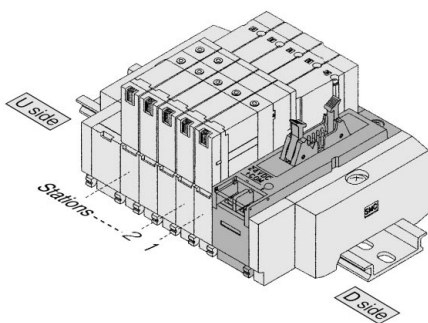
## 45(N)PG/Flat Cable Style (20 pin)

A flat cable connector used for electric wiring reduces labor during wiring operation. Connectors conforming to MIL are used for wide interchangeability.

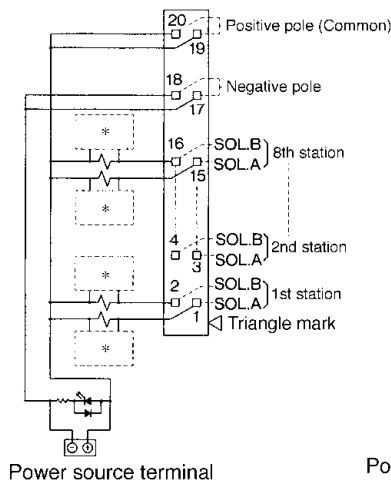


## 45(N)PH/Flat Cable Style (10 pin)

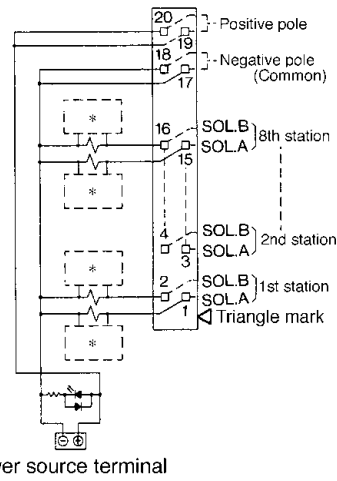
A flat cable connector used for electric wiring reduces labor during wiring operation. Connectors conforming to MIL are used for wide interchangeability.



### <Positive COM (45PG)>



### <Negative COM (45NPG)>



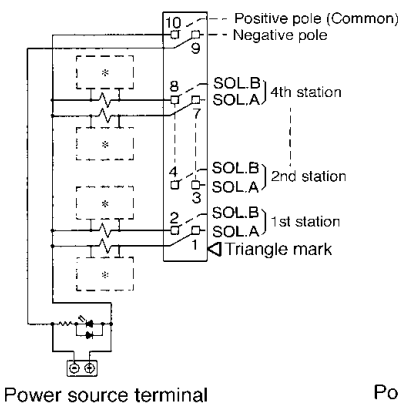
Power source terminal

Power source terminal

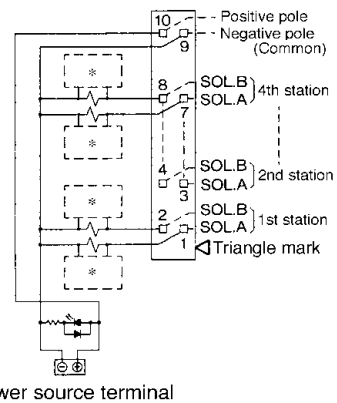
\* Indicator light and surge voltage suppressor

- The power source terminal is used for connecting to an external power source.
- The above diagram is for a 8 station double solenoid specification. When custom manifolds are ordered using the manifold specification form, the wiring may differ from above. Please contact SMC for more information.
- When using a single solenoid valve, connect wire to SOL. A.
- The maximum number of stations is 16 in terms of manifold bases, as well as solenoids. (Contact SMC for more stations.)
- Irrespective of the connector mounting position, stations are counted from the D side.

### <Positive COM (45PH)>



### <Negative COM (45NPH)>



Power source terminal

Power source terminal

\* Indicator light and surge voltage suppressor

- The power source terminal is used for connecting to an external power source.
- The above diagram is for a 4 station double solenoid specification. When custom manifolds are ordered using the manifold specification form, the wiring may differ from above. Please contact SMC for more information.
- When using a single solenoid valve, connect wire to SOL. A.
- The maximum number of stations is 8 in terms of manifold bases, as well as solenoids. (Contact SMC for more stations.)
- Irrespective of the connector mounting position, stations are counted from the D side.

SY

SYJ

SX

VK

VZ

VF

VFR

VP7

VP4

VQ

VQ4

VQZ

VQD

VZS

VFS

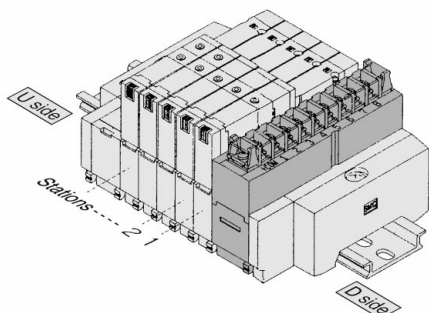
VS

VS7

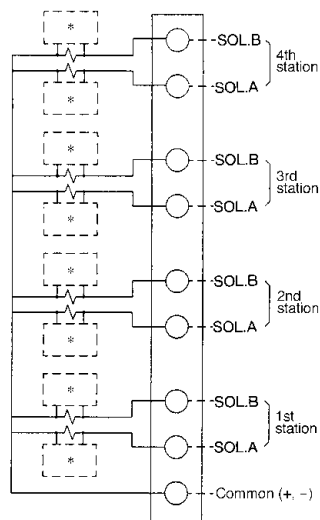
## Manifold Internal Wiring

### 45T/Terminal Block Style

A terminal block type permits direct cable connection without treatment of lead wires.



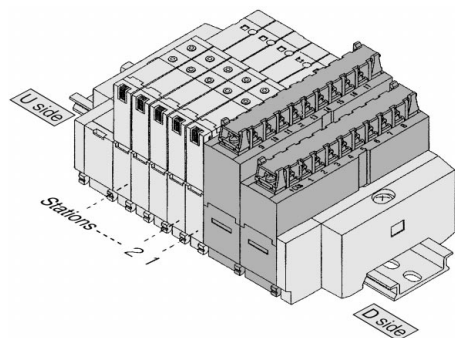
<45T>



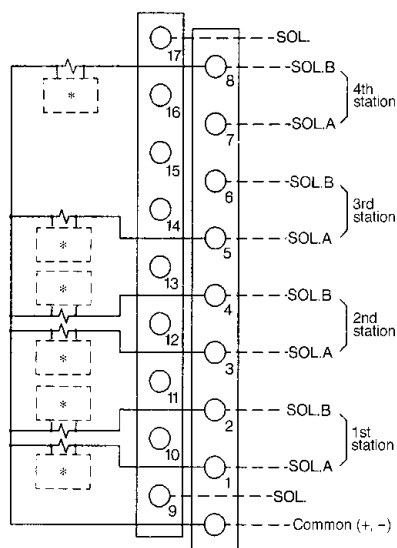
\* Indicator light and surge voltage suppressor

- The maximum number of stations is 8 in terms of manifold bases, as well as solenoids. (Contact SMC for more stations.)
- The above diagram is for a 4 station double solenoid specification. When custom manifolds are ordered using the manifold specification form, the wiring may differ from above. Please contact SMC for more information.
- When using a single solenoid valve, connect wire to SOL. A.
- Irrespective of the connector mounting position, stations are counted from the D side.
- There is no polarity in the COM wiring. Supply positive power for +COM specification and negative power for -COM specification.

### 45T1/Terminal Block Style



<45T1>



\* Indicator light and surge voltage suppressor

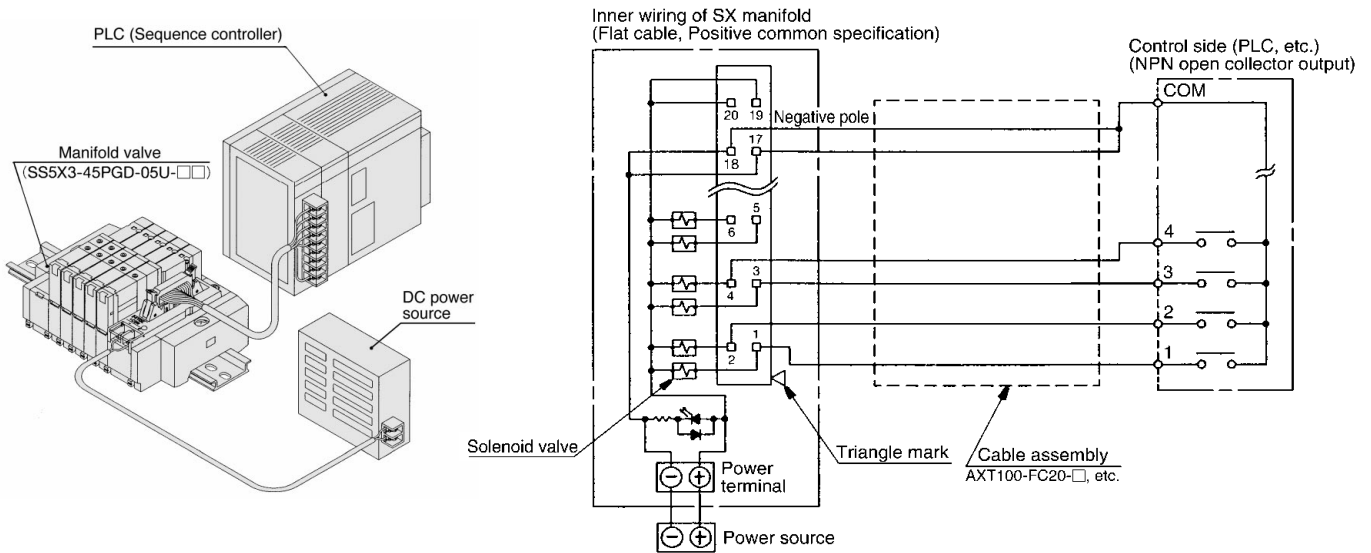
- The maximum number of stations is 17 in terms of manifold bases, as well as solenoids. (Contact SMC for more stations.)
- Irrespective of the connector mounting position, stations are counted from the D side.
- There is no polarity in the COM wiring. Supply positive power for +COM specification and negative power for -COM specification.



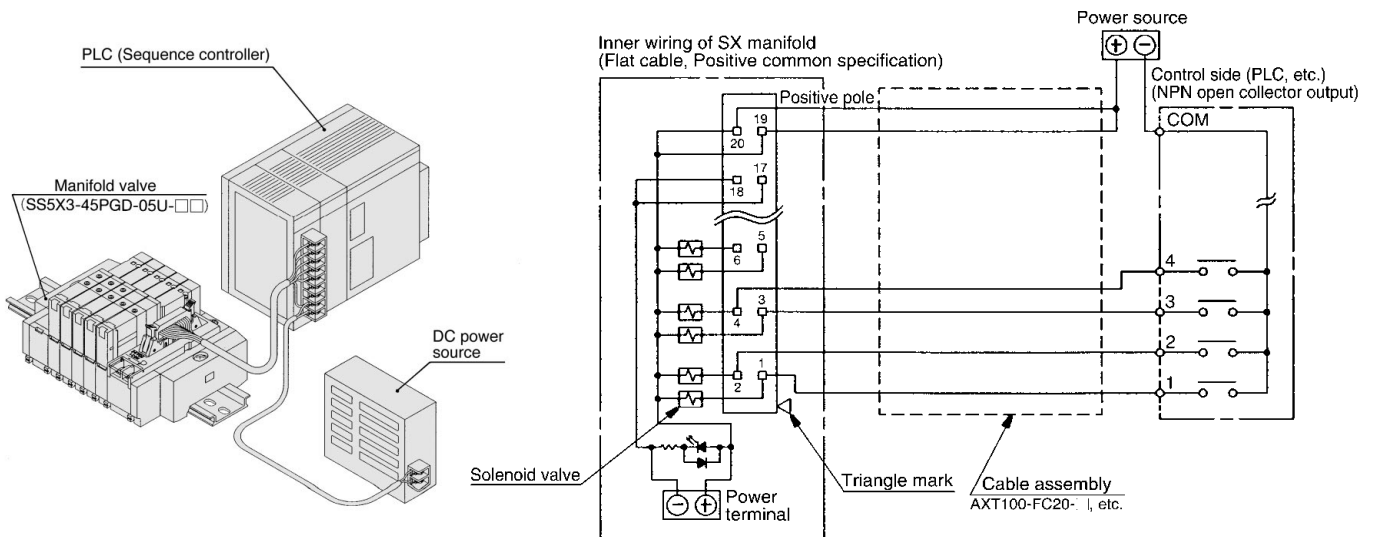
## SS5X□-45□Wiring of Plug-in Style

Power terminal is installed in the plug-in manifold series SX as standard. It enables power for driving the valves to be supplied from both the control side and manifold side.

### 1. Wiring example when the power terminal of the manifold is used



### 2. Wiring example when the power terminal of the manifold is not used



### ⚠ Precaution

For connecting the valves with PLC (sequence controller) and the like, signal wire, COM (common) positions, etc., are different depending on the manufacturers. Make sure that the electrical circuits are suitable for each other by referring to information within the catalogs before connecting them. If wiring is incorrect, not only the manifold and the valves but also the PLC (on the control side) and the power source may be damaged.

- SY
- SYJ
- SX**
- VK
- VZ
- VF
- VFR
- VP7
- VP4

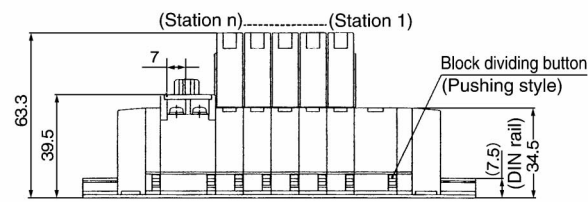
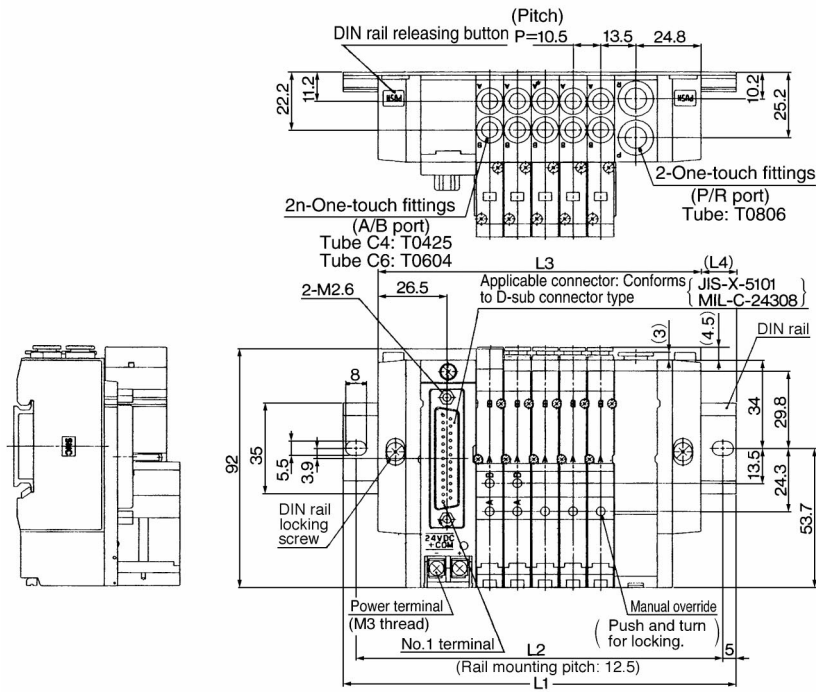
- VQ
- VQ4
- VQZ
- VQD
- VZS
- VFS
- VS
- VS7

# SX3000: D-sub Connector/Plug-in

## SS5X3-45FU- Stations D-C<sub>6</sub><sup>4</sup>

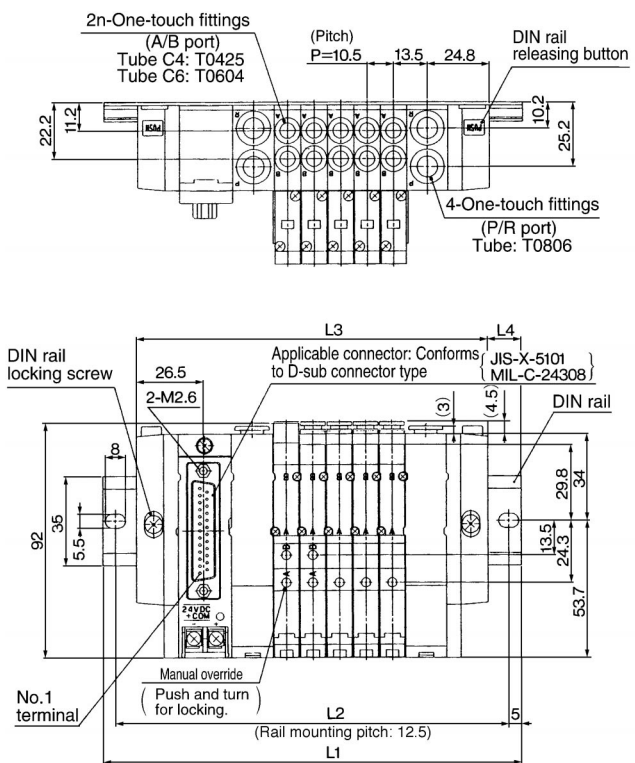


Note) The L1 to L4 dimensions of SS5X3-45FU- Stations U-□ are identical to those of SS5X3-45FU- Stations D-□.



Stations	2	3	4	5	6	7	8	9	10
L1	123	135.5	148	148	160.5	173	185.5	198	210.5
L2	112.5	125	137.5	137.5	150	162.5	175	187.5	200
L3	91.5	102	112.5	123	133.5	144	154.5	165	175.5
L4	15.5	16.5	17.5	12.5	13.5	14.5	15.5	16.5	17.5

## SS5X3-45FU- Stations B-C<sub>6</sub><sup>4</sup>



Stations	2	3	4	5	6	7	8	9	10
L1	135.5	148	160.5	173	185.5	185.5	198	210.5	223
L2	125	137.5	150	162.5	175	175	187.5	200	212.5
L3	108	118.5	129	139.5	150	160.5	171	181.5	192
L4	13.5	14.5	15.5	16.5	17.5	12.5	13.5	14.5	15.5

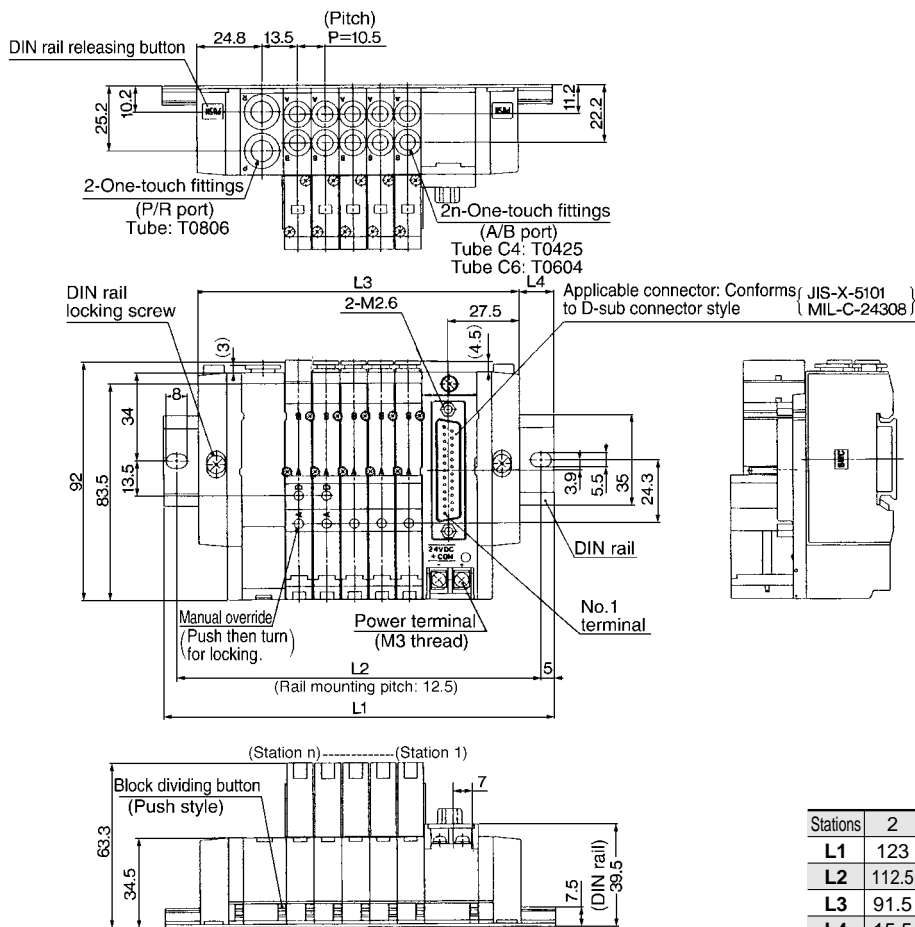
  

Stations	11	12	13	14	15	16	17	18	19	20
L1	235.5	248	248	260.5	273	285.5	298	310.5	310.5	323
L2	225	237.5	237.5	250	262.5	275	287.5	300	300	312.5
L3	202.5	213	223.5	234	244.5	255	265.5	276	286.5	297
L4	16.5	17.5	12	13	14	15	16	17	12	13

## SS5X3-45FD- Stations U-C<sub>6</sub><sup>4</sup>

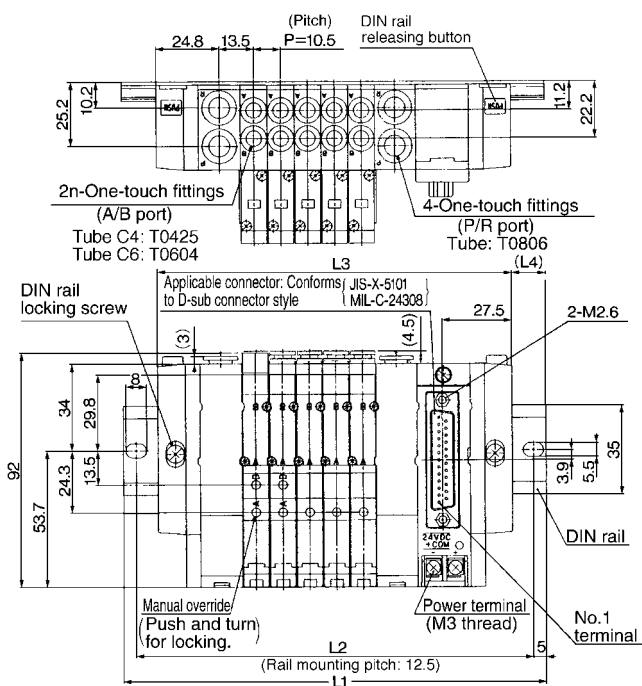


Note) The L1 to L4 dimensions of SS5X3-45FD- Stations D-□ are identical to those of SS5X3-45FD- Stations U-□.



Stations	2	3	4	5	6	7	8	9	10
L1	123	135.5	148	148	160.5	173	185.5	198	210.5
L2	112.5	125	137.5	137.5	150	162.5	175	187.5	200
L3	91.5	102	112.5	123	133.5	144	154.5	165	175.5
L4	15.5	16.5	17.5	12.5	13.5	14.5	15.5	16.5	17.5

## SS5X3-45FD- Stations B-C<sub>6</sub><sup>4</sup>



Stations	2	3	4	5	6	7	8	9	10
L1	135.5	148	160.5	173	185.5	185.5	198	210.5	223
L2	125	137.5	150	162.5	175	175	187.5	200	212.5
L3	108	118.5	129	139.5	150	160.5	171	181.5	192
L4	13.5	14.5	15.5	16.5	17.5	12.5	13.5	14.5	15.5

Stations	11	12	13	14	15	16	17	18	19	20
L1	235.5	248	248	260.5	273	285.5	298	310.5	310.5	323
L2	225	237.5	237.5	250	262.5	275	287.5	300	300	312.5
L3	202.5	213	223.5	234	244.5	255	265.5	276	286.5	297
L4	16.5	17.5	12	13	14	15	16	17	12	13

SY

SYJ

SX

VK

VZ

VF

VFR

VP7

VP4

VQ

VQ4

VQZ

VQD

VZS

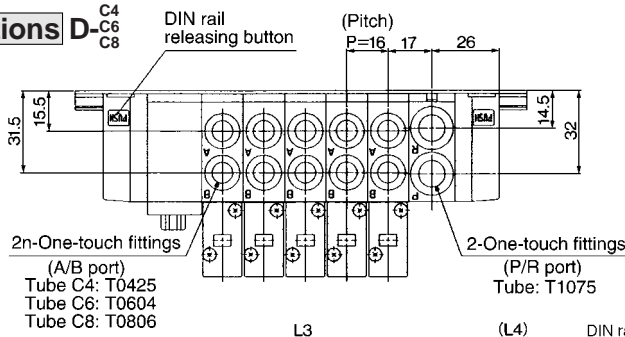
VFS

VS

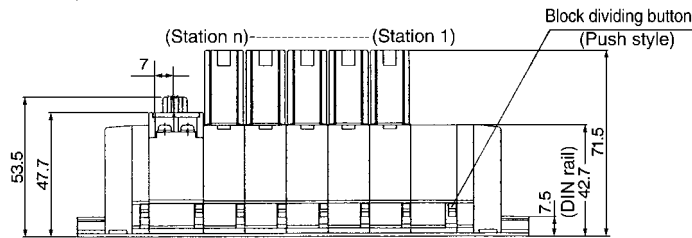
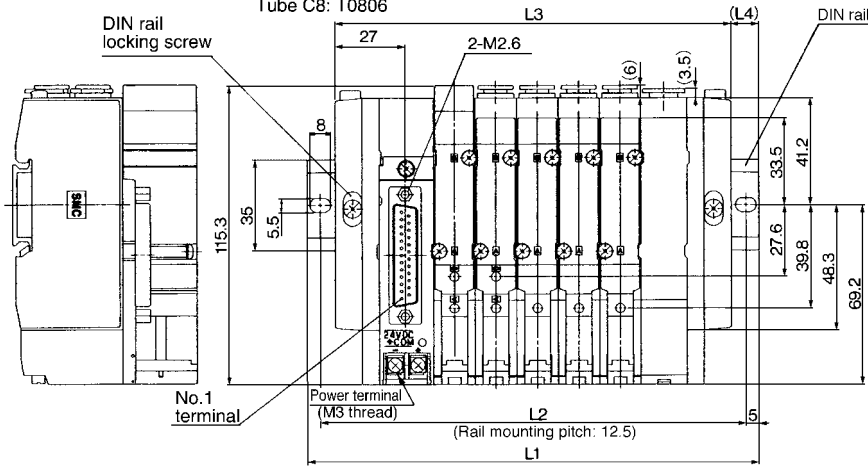
VS7

### SX5000: D-sub Connector/Plug-in

#### SS5X5-45FU- Stations D-□

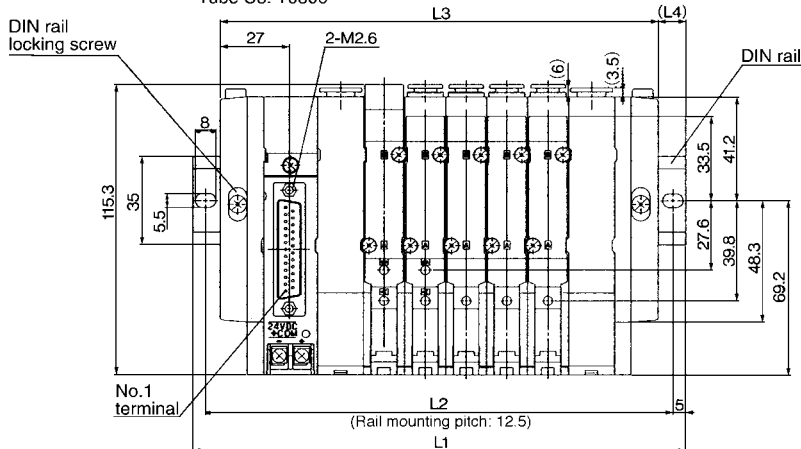
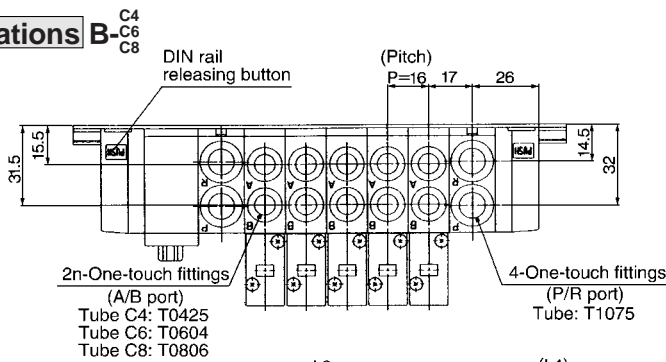


Note) The L1 to L4 dimensions of SS5X5-45FU- Stations U-□ are identical to those of SS5X5-45FU- Stations D-□.



Stations	2	3	4	5	6	7	8	9	10
L1	135.5	148	160.5	185.5	198	210.5	235.5	248	260.5
L2	125	137.5	150	175	187.5	200	225	237.5	250
L3	105	121	137	153	169	185	201	217	233
L4	15	13.5	11.5	16	14.5	12.5	17	15.5	13.5

#### SS5X5-45FU- Stations B-□



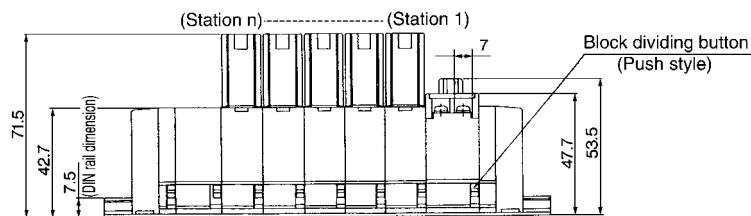
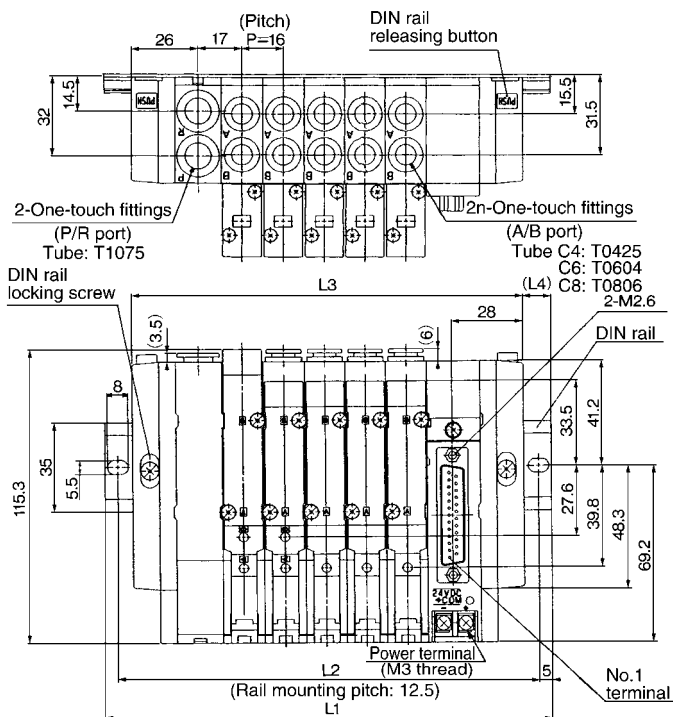
Stations	2	3	4	5	6	7	8	9	10
L1	148	173	185.5	198	210.5	235.5	248	260.5	285.5
L2	137.5	162.5	175	187.5	200	225	237.5	250	275
L3	123	139	155	171	187	203	219	235	251
L4	12.5	17	15	13.5	11.5	16	14.5	12.5	17

Stations	11	12	13	14	15	16	17	18	19	20
L1	298	310.5	323	348	360.5	373	398	410.5	423	435.5
L2	287.5	300	312.5	337.5	350	362.5	387.5	400	412.5	425
L3	267	283	299	315	331	347	363	379	395	411
L4	15.5	13.5	12	16.5	14.5	13	17.5	15.5	14	12

## SS5X5-45FD- Stations U-□

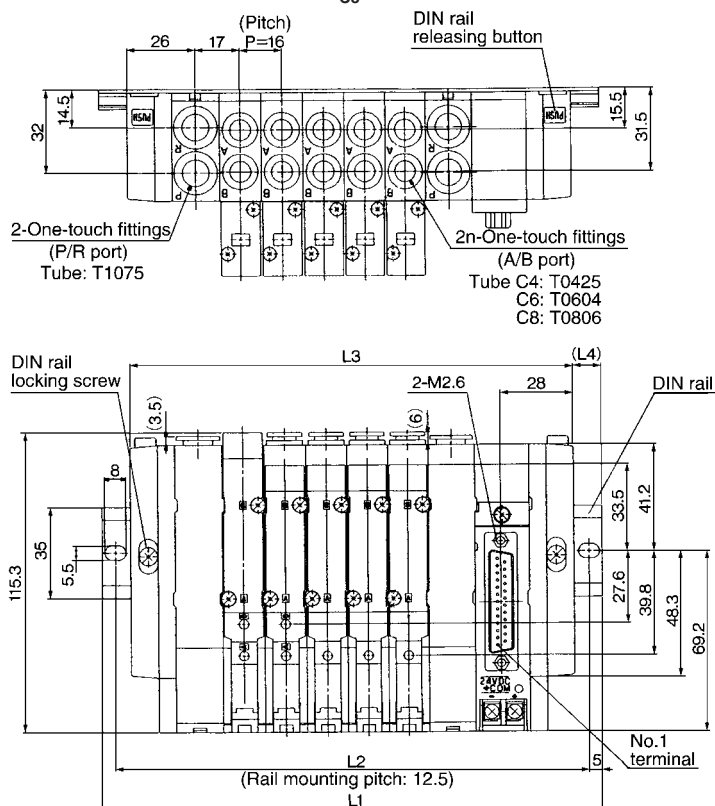


Note) The L1 to L4 dimensions of SS5X5-45FD- Stations D-□ are identical to those of SS5X5-45FD- Stations U-□.



Stations	2	3	4	5	6	7	8	9	10
L1	135.5	148	160.5	185.5	198	210.5	235.5	248	260.5
L2	125	137.5	150	175	187.5	200	225	237.5	250
L3	105	121	137	153	169	185	201	217	233
L4	15	13.5	11.5	16	14.5	12.5	17	15.5	13.5

## SS5X5-45FD- Stations B-□



Stations	2	3	4	5	6	7	8	9	10
L1	148	173	185.5	198	210.5	235.5	248	260.5	285.5
L2	137.5	162.5	175	187.5	200	225	237.5	250	275
L3	123	139	155	171	187	203	219	235	251
L4	12.5	17	15	13.5	11.5	16	14.5	12.5	17

Stations	11	12	13	14	15	16	17	18	19	20
L1	298	310.5	323	348	360.5	373	398	410.5	423	435.5
L2	287.5	300	312.5	337.5	350	362.5	387.5	400	412.5	425
L3	267	283	299	315	331	347	363	379	395	411
L4	15.5	13.5	12	16.5	14.5	13	17.5	15.5	14	12

SY

SYJ

SX

VK

VZ

VF

VFR

VP7

VP4

VQ

VQ4

VQZ

VQD

VZS

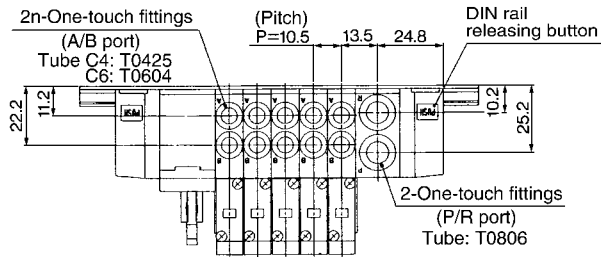
VFS

VS

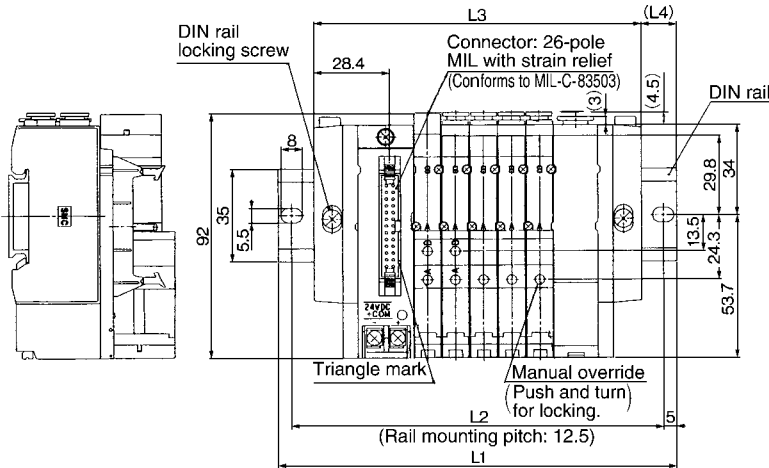
VS7

### SX3000: Flat Cable/Plug-in

#### SS5X3-45PU- Stations D -C<sub>4</sub> (26-pole)

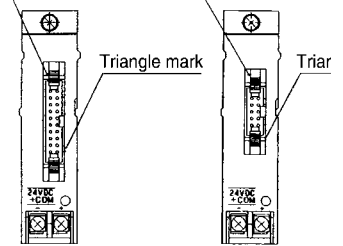


Note) The L1 to L4 dimensions of SS5X3-45P□U- Stations U-□ are identical to those of SS5X3-45PU- Stations D-□.



Connector: 20-pole MIF with strain relief (Conforms to MIL-C-83503)

Connector: 10-pole MIF with strain relief (Conforms to MIL-C-83503)

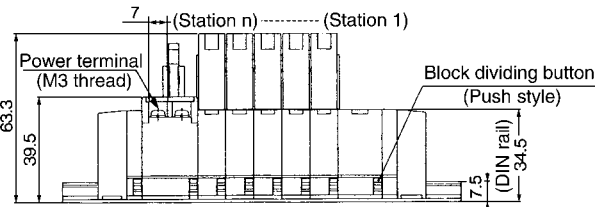


**45PG**  
(20-pole)

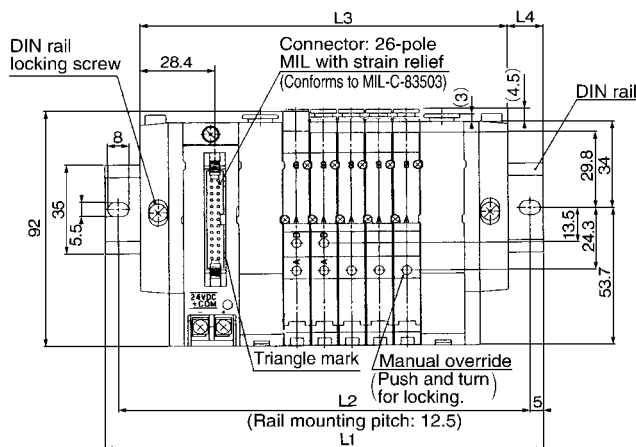
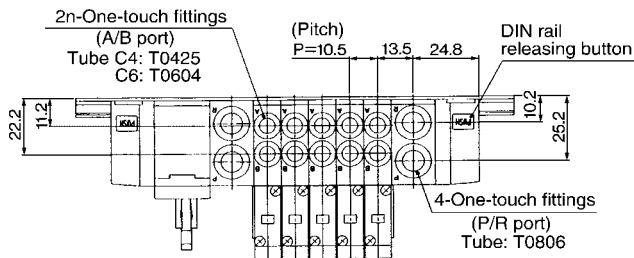
**45PH**  
(10-pole)



Note) The only difference between 45PG and 45PH is the connector. The L1-L4 dimensions are the same as those of 45P.



#### SS5X3-45PU- Stations B -C<sub>4</sub> (26-pole)



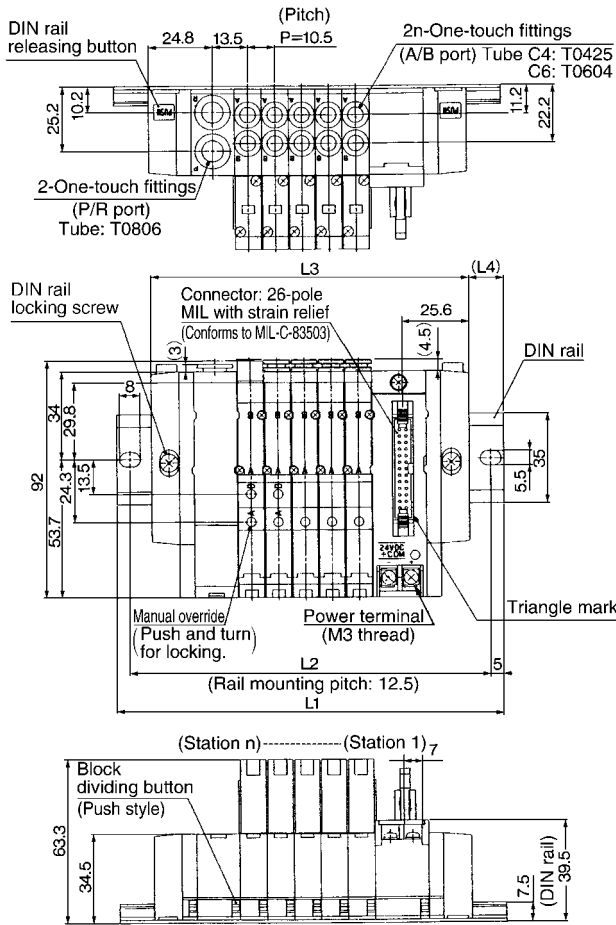
Stations	2	3	4	5	6	7	8	9	10
L1	123	135.5	148	148	160.5	173	185.5	198	210.5
L2	112.5	125	137.5	137.5	150	162.5	175	187.5	200
L3	91.5	102	112.5	123	133.5	144	154.5	165	175.5
L4	15.5	16.5	17.5	12.5	13.5	14.5	15.5	16.5	17.5

Stations	2	3	4	5	6	7	8	9	10
L1	135.5	148	160.5	173	185.5	185.5	198	210.5	223
L2	125	137.5	150	162.5	175	175	187.5	200	212.5
L3	108	118.5	129	139.5	150	160.5	171	181.5	192
L4	13.5	14.5	15.5	16.5	17.5	12.5	13.5	14.5	15.5

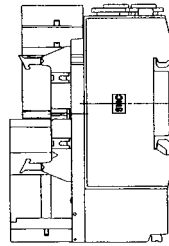
Stations	11	12	13	14	15	16	17	18	19	20
L1	235.5	248	248	260.5	273	285.5	298	310.5	310.5	323
L2	225	237.5	237.5	250	262.5	275	287.5	300	300	312.5
L3	202.5	213	223.5	234	244.5	255	265.5	276	286.5	297
L4	16.5	17.5	12	13	14	15	16	17	12	13



## SS5X3-45PD- Stations U-C<sub>6</sub><sup>4</sup> (26-pole)

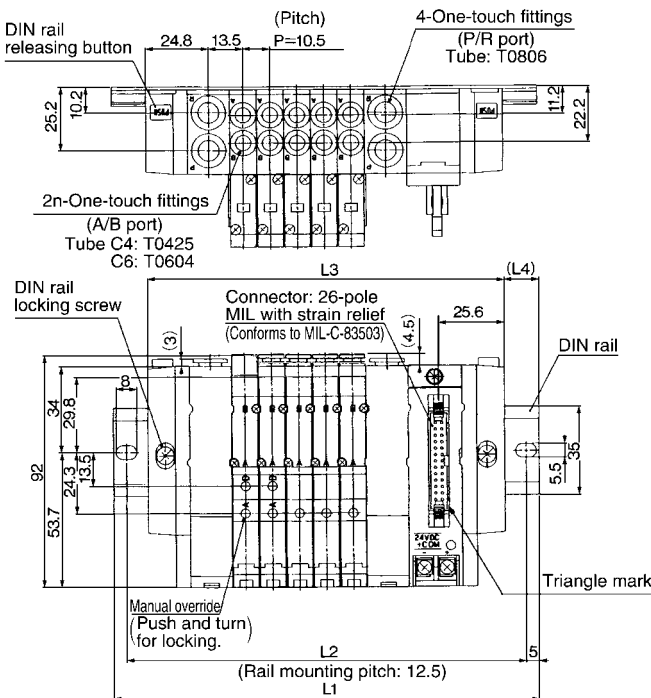


(Note) The L1 to L4 dimensions of SS5X3-45P□D- Stations D-□ are identical to those of SS5X3-45PD- Stations U-□.



Stations	2	3	4	5	6	7	8	9	10
L1	123	135.5	148	148	160.5	173	185.5	198	210.5
L2	112.5	125	137.5	137.5	150	162.5	175	187.5	200
L3	91.5	102	112.5	123	133.5	144	154.5	165	175.5
L4	15.5	16.5	17.5	12.5	13.5	14.5	15.5	16.5	17.5

## SS5X3-45PD- Stations B-C<sub>6</sub><sup>4</sup> (26-pole)



Stations	2	3	4	5	6	7	8	9	10
L1	135.5	148	160.5	173	185.5	185.5	198	210.5	223
L2	125	137.5	150	162.5	175	175	187.5	200	212.5
L3	108	118.5	129	139.5	150	160.5	171	181.5	192
L4	13.5	14.5	15.5	16.5	17.5	12.5	13.5	14.5	15.5

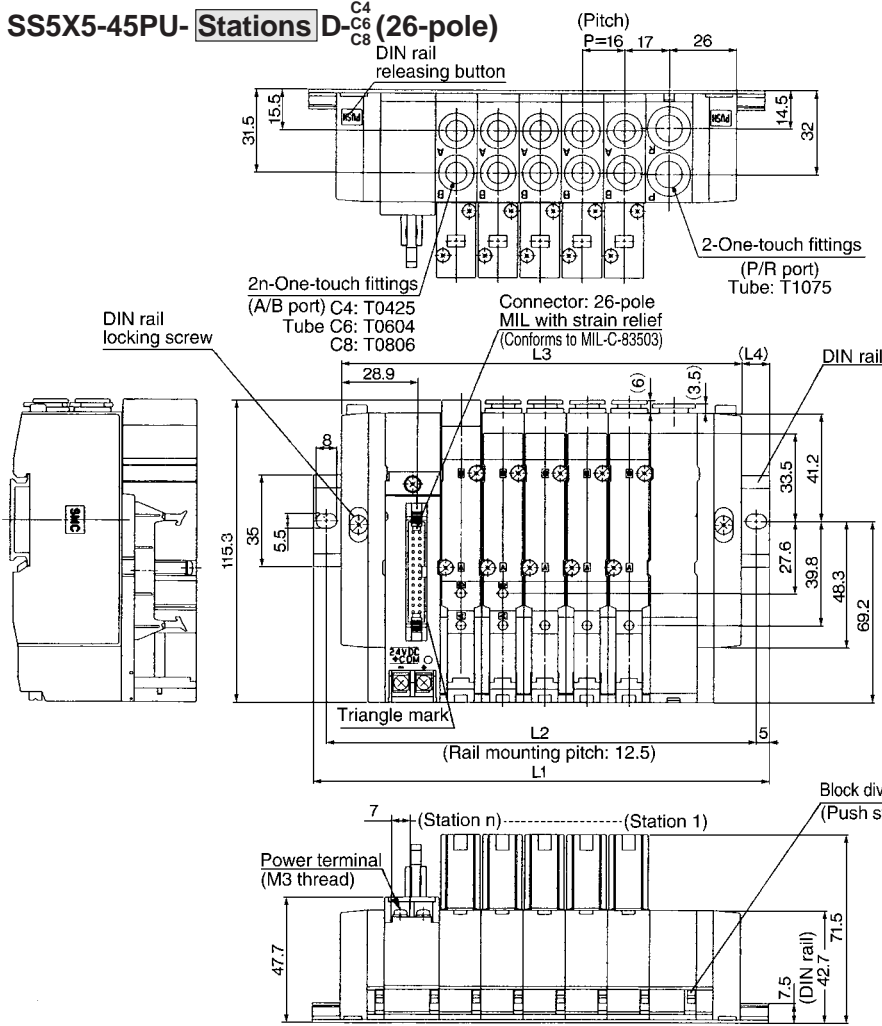
Stations	11	12	13	14	15	16	17	18	19	20
L1	235.5	248	248	260.5	273	285.5	298	310.5	310.5	323
L2	225	237.5	237.5	250	262.5	275	287.5	300	300	312.5
L3	202.5	213	223.5	234	244.5	255	265.5	276	286.5	297
L4	16.5	17.5	12	13	14	15	16	17	12	13

- SY
- SYJ
- SX**
- VK
- VZ
- VF
- VFR
- VP7
- VP4
- VQ
- VQ4
- VQZ
- VQD
- VZS
- VFS
- VS
- VS7

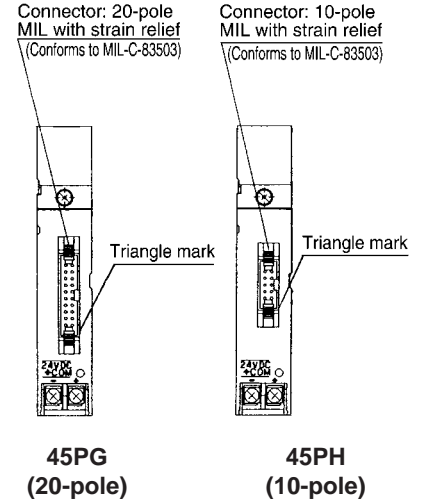


### SX5000: Flat Cable/Plug-in

#### SS5X5-45PU- Stations D-□ (26-pole)



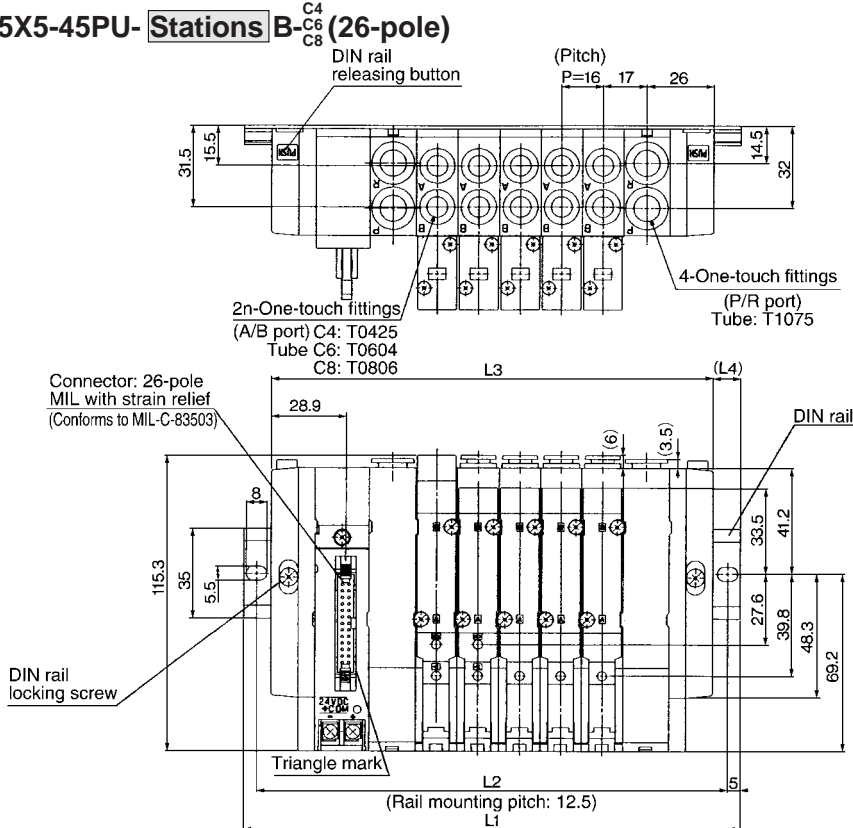
Note) The L1 to L4 dimensions of SS5X5-45P□U- Stations U-□ are identical to those of SS5X5-45PU- Stations D-□.



Note) The only difference between 45PG and 45PH is the connector. The L1-L4 dimensions are the same as those of 45P.

Stations	2	3	4	5	6	7	8	9	10
L1	135.5	148	160.5	185.5	198	210.5	235.5	248	260.5
L2	125	137.5	150	175	187.5	200	225	237.5	250
L3	105	121	137	153	169	185	201	217	233
L4	15	13.5	11.5	16	14.5	12.5	17	15.5	13.5

#### SS5X5-45PU- Stations B-□ (26-pole)

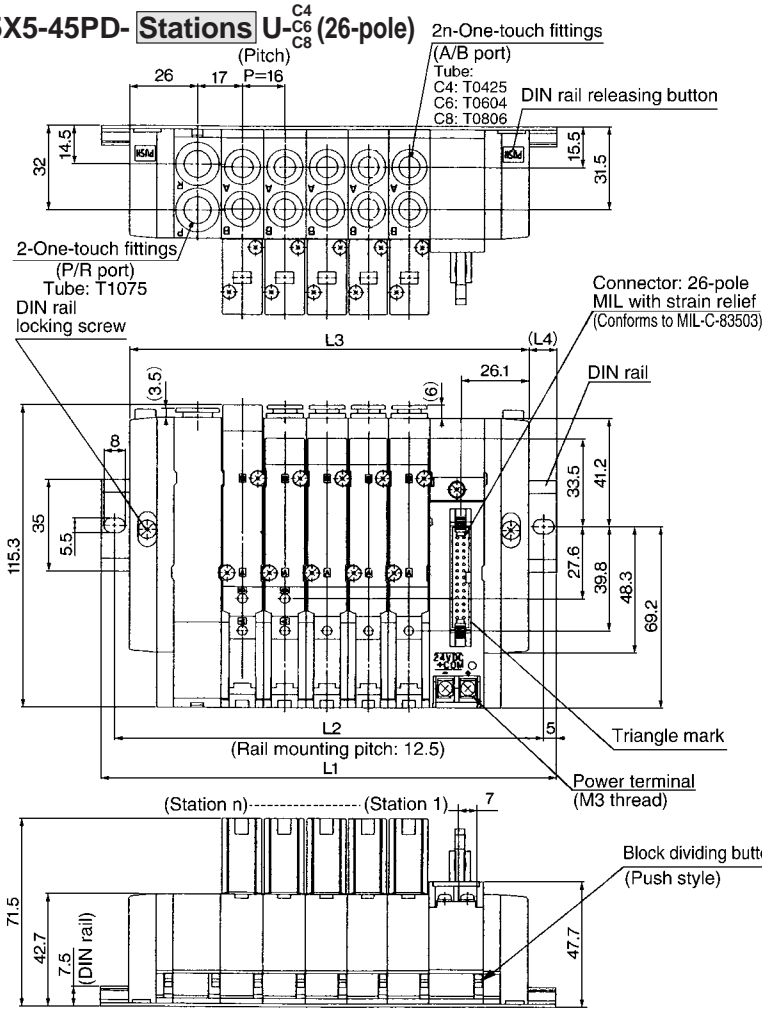


Stations	2	3	4	5	6	7	8	9	10
L1	148	173	185.5	198	210.5	235.5	248	260.5	285.5
L2	137.5	162.5	175	187.5	200	225	237.5	250	275
L3	123	139	155	171	187	203	219	235	251
L4	12.5	17	15	13.5	11.5	16	14.5	12.5	17

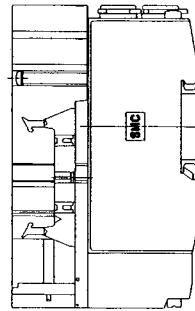
  

Stations	11	12	13	14	15	16	17	18	19	20
L1	298	310.5	323	348	360.5	373	398	410.5	423	435.5
L2	287.5	300	312.5	337.5	350	362.5	387.5	400	412.5	425
L3	267	283	299	315	331	347	363	379	395	411
L4	15.5	13.5	12	16.5	14.5	13	17.5	15.5	14	12

## SS5X5-45PD- Stations U-<sup>C4</sup>/<sub>C6</sub>/<sub>C8</sub> (26-pole)

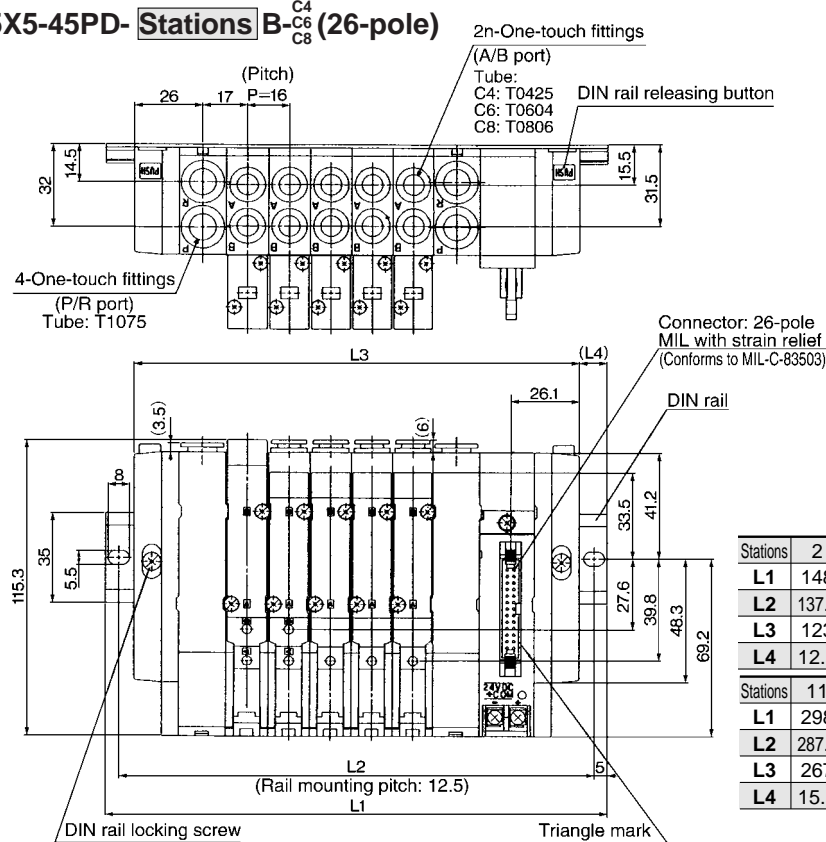


Note) The L1 to L4 dimensions of SS5X5-45PD- Stations D-□ are identical to those of SS5X5-45PD- Stations U-□.



Stations	2	3	4	5	6	7	8	9	10
L1	135.5	148	160.5	185.5	198	210.5	235.5	248	260.5
L2	125	137.5	150	175	187.5	200	225	237.5	250
L3	105	121	137	153	169	185	201	217	233
L4	15	13.5	11.5	16	14.5	12.5	17	15.5	13.5

## SS5X5-45PD- Stations B-<sup>C4</sup>/<sub>C6</sub>/<sub>C8</sub> (26-pole)



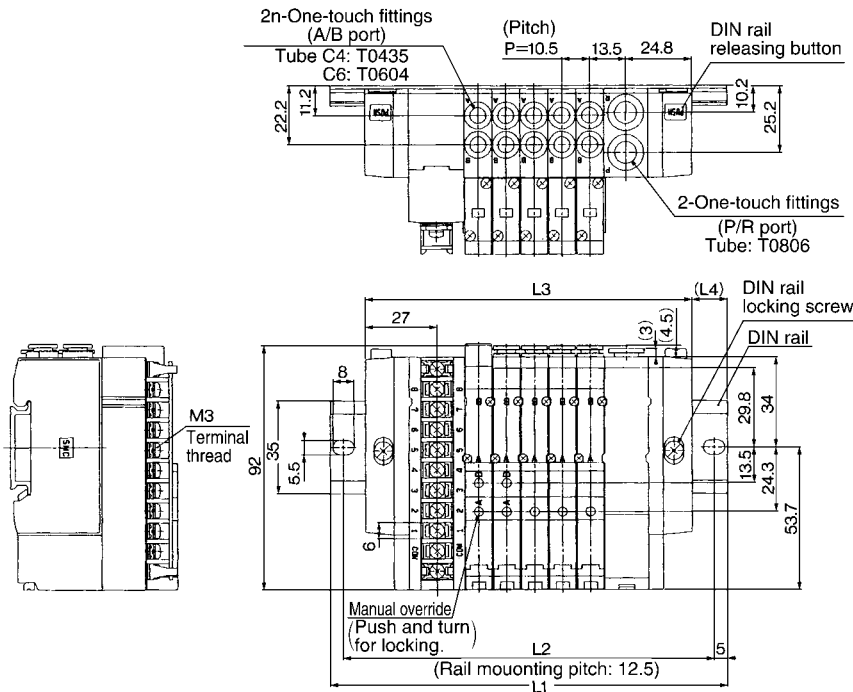
Stations	2	3	4	5	6	7	8	9	10
L1	148	173	185.5	198	210.5	235.5	248	260.5	285.5
L2	137.5	162.5	175	187.5	200	225	237.5	250	275
L3	123	139	155	171	187	203	219	235	251
L4	12.5	17	15	13.5	11.5	16	14.5	12.5	17

Stations	11	12	13	14	15	16	17	18	19	20
L1	298	310.5	323	348	360.5	373	398	410.5	423	435.5
L2	287.5	300	312.5	337.5	350	362.5	387.5	400	412.5	425
L3	267	283	299	315	331	347	363	379	395	411
L4	15.5	13.5	12	16.5	14.5	13	17.5	15.5	14	12

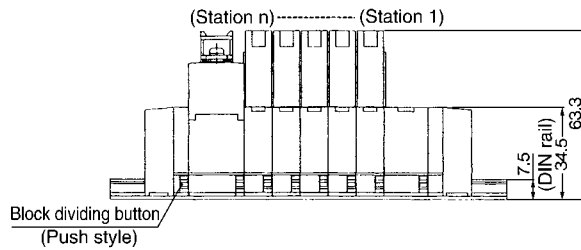
- SY
- SYJ
- SX
- VK
- VZ
- VF
- VFR
- VP7
- VP4
- VQ
- VQ4
- VQZ
- VQD
- VZS
- VFS
- VS
- VS7

## SX3000: 9 pole Terminal Block/Plug-in

### SS5X3-45TU- Stations D-C<sub>6</sub><sup>C4</sup>

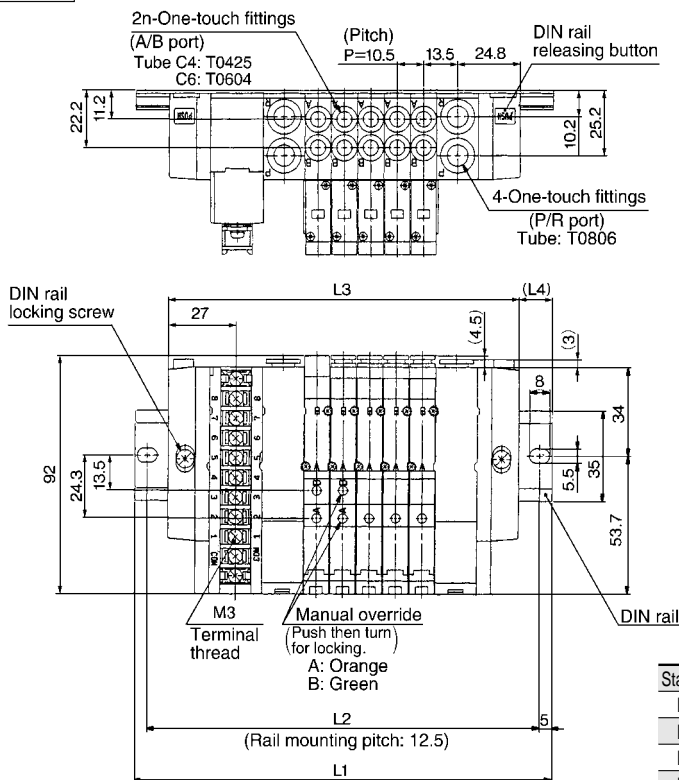


(Note) The L1 to L4 dimensions of SS5X3-45TU- Stations U-□, SS5X3-45TD- Stations U-□, SS5X3-45TD- Stations D-□, are identical to those of SS5X3-45TU- Stations D-□.



Stations	2	3	4	5	6	7	8
L1	123	135.5	148	148	160.5	173	185.5
L2	112.5	125	137.5	137.5	150	162.5	175
L3	91.5	102	112.5	123	133.5	144	154.5
L4	15.5	16.5	17.5	12.5	13.5	14.5	15.5

### SS5X3-45TU- Stations B-C<sub>6</sub><sup>C4</sup>

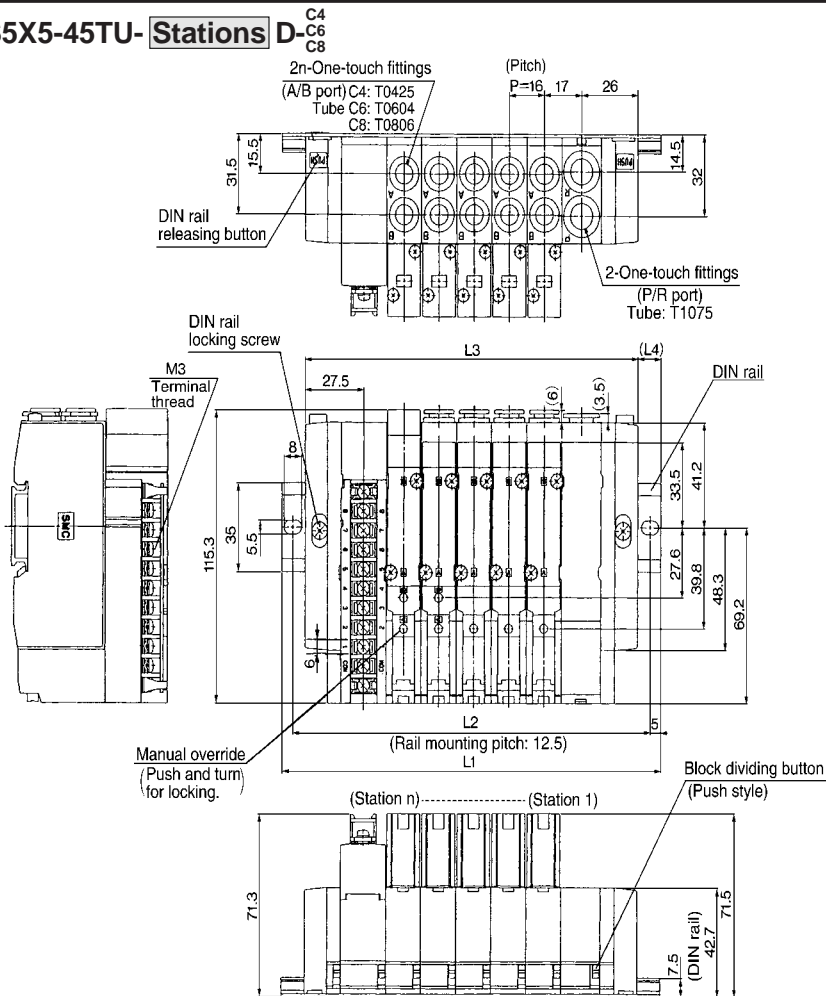


(Note) The L1 to L4 dimensions of SS5X3-45TD- Stations B-□ are identical to those of SS5X3-45TU- Stations B-□.

Stations	2	3	4	5	6	7	8
L1	135.5	148	160.5	173	185.5	185.5	198
L2	125	137.5	150	162.5	175	175	187.5
L3	108	118.5	129	139.5	150	160.5	171
L4	13.5	14.5	15.5	16.5	17.5	12.5	13.5

## SX5000: 9 pole Terminal Block/Plug-in

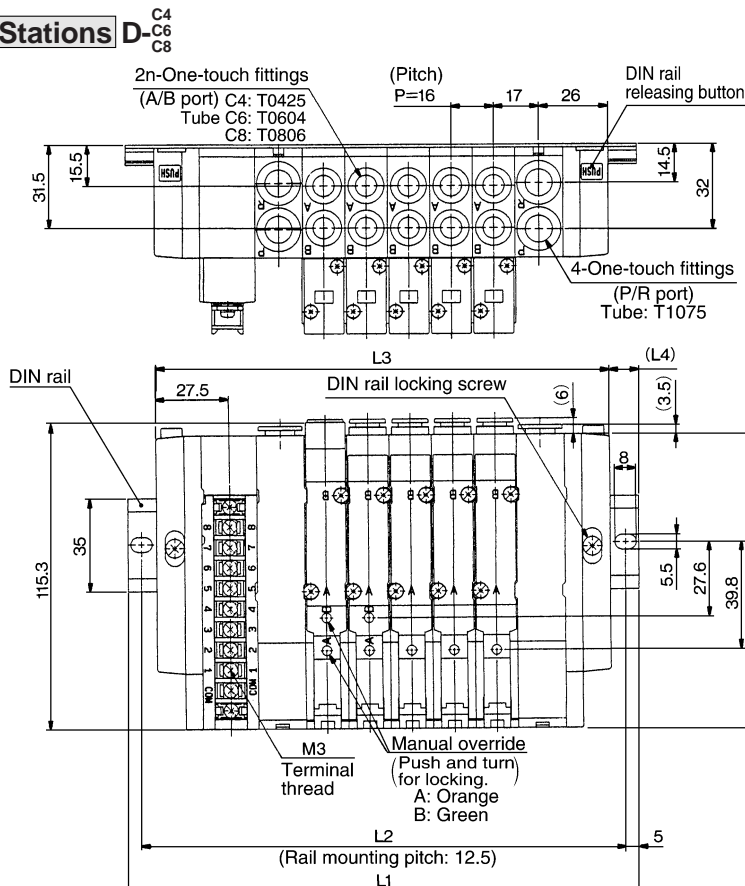
### SS5X5-45TU- Stations D-□



Note) The L1 to L4 dimensions of SS5X5-45TU- Stations U-□, SS5X5-45TD- Stations U-□, SS5X5-45TD- Stations D-□, are identical to those of SS5X5-45TU- Stations D-□.

Stations	2	3	4	5	6	7	8
L1	135.5	148	160.5	185.5	198	210.5	235.5
L2	125	137.5	150	175	187.5	200	225
L3	105	121	137	153	169	185	201
L4	15	13.5	11.5	16	14.5	12.5	17

### SS5X5-45TU- Stations B-□



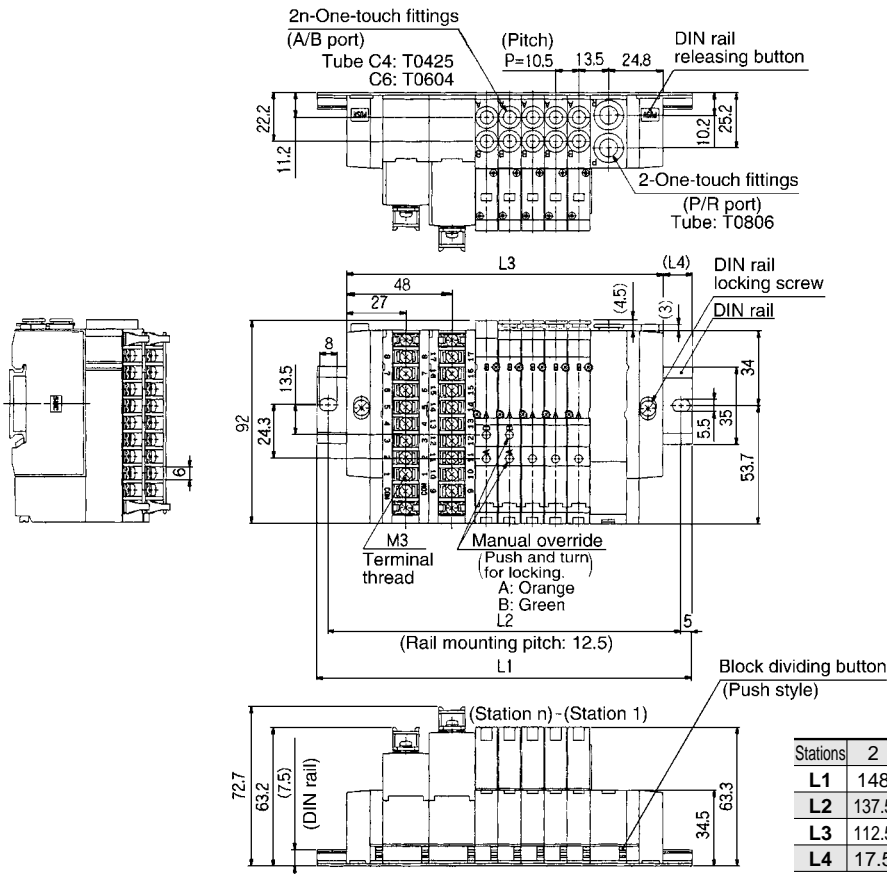
Note) The L1 to L4 dimensions of SS5X5-45TD- Stations B-□ are identical to those of SS5X5-45TU- Stations B-□.

Stations	2	3	4	5	6	7	8
L1	148	173	185.5	198	210.5	235.5	248
L2	137.5	162.5	175	187.5	200	225	237.5
L3	123	139	155	171	187	203	219
L4	12.5	17	15	13.5	11.5	16	14.5

- SY
- SYJ
- SX**
- VK
- VZ
- VF
- VFR
- VP7
- VP4
- VQ
- VQ4
- VQZ
- VQD
- VZS
- VFS
- VS
- VS7

# SX3000: 18 pole Terminal Block/Plug-in

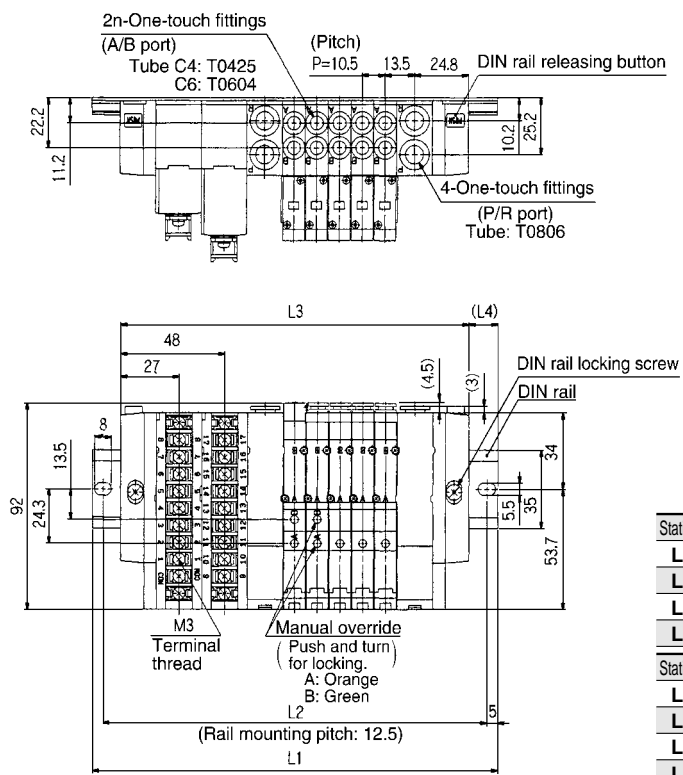
## SS5X3-45T1U- Stations D-C<sub>6</sub><sup>4</sup> (18-pole)



(Note) The L1 to L4 dimensions of **SS5X3-45T1U- Stations U-□** are identical to those of SS5X3-45T1U- Stations D-□.

Stations	2	3	4	5	6	7	8	9	10
<b>L1</b>	148	148	160.5	173	185.5	198	210.5	210.5	223
<b>L2</b>	137.5	137.5	150	162.5	175	187.5	200	200	212.5
<b>L3</b>	112.5	123	133.5	144	154.5	165	175.5	186	196.5
<b>L4</b>	17.5	12.5	13.5	14.5	15.5	16.5	17.5	12	13

## SS5X3-45T1U- Stations B-C<sub>6</sub><sup>4</sup> (18-pole)

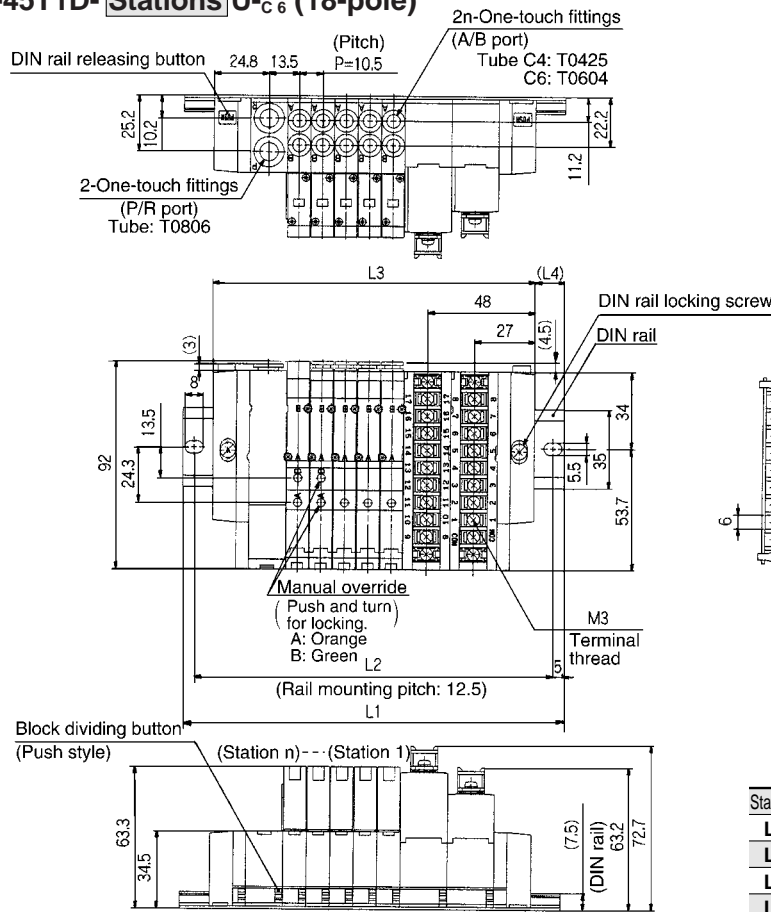


Stations	2	3	4	5	6	7	8	9
<b>L1</b>	160.5	173	185.5	185.5	198	210.5	223	235.5
<b>L2</b>	150	162.5	175	175	187.5	200	212.5	225
<b>L3</b>	129	139.5	150	160.5	171	181.5	192	202.5
<b>L4</b>	15.5	16.5	17.5	12.5	13.5	14.5	15.5	16.5

Stations	10	11	12	13	14	15	16	17
<b>L1</b>	248	248	260.5	273	285.5	298	310.5	310.5
<b>L2</b>	237.5	237.5	250	262.5	275	287.5	300	300
<b>L3</b>	213	223.5	234	244.5	255	265.5	276	286.5
<b>L4</b>	17.5	12	13	14	15	16	17	12

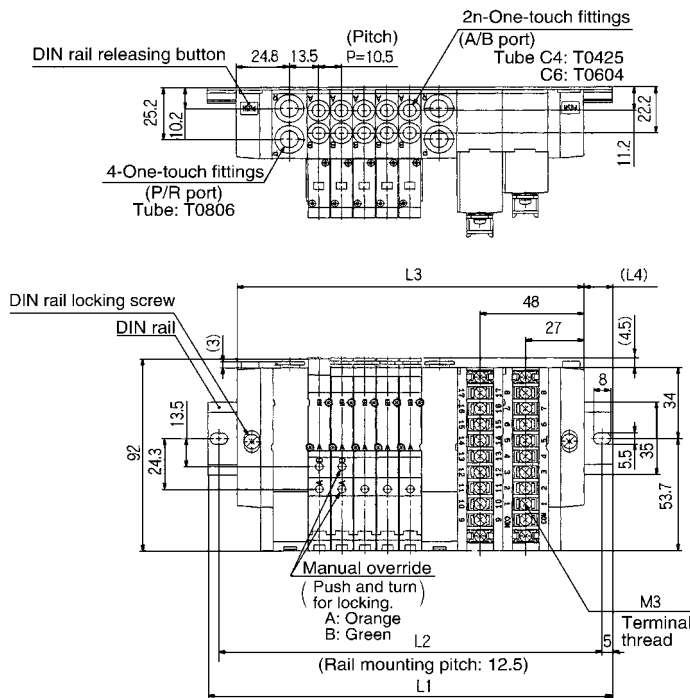
## SS5X3-45T1D- Stations U-C<sub>6</sub><sup>4</sup> (18-pole)



(Note) The L1 to L4 dimensions of **SS5X3-45T1D- Stations D-□** are identical to those of SS5X3-45T1D- Stations U-□.

Stations	2	3	4	5	6	7	8	9	10
<b>L1</b>	148	148	160.5	173	185.5	198	210.5	210.5	223
<b>L2</b>	137.5	137.5	150	162.5	175	187.5	200	200	212.5
<b>L3</b>	112.5	123	133.5	144	154.5	165	175.5	186	196.5
<b>L4</b>	17.5	12.5	13.5	14.5	15.5	16.5	17.5	12	13

## SS5X3-45T1D- Stations B-C<sub>6</sub><sup>4</sup> (18-pole)



Stations	2	3	4	5	6	7	8	9
<b>L1</b>	160.5	173	185.5	185.5	198	210.5	223	235.5
<b>L2</b>	150	162.5	175	175	187.5	200	212.5	225
<b>L3</b>	129	139.5	150	160.5	171	181.5	192	202.5
<b>L4</b>	15.5	16.5	17.5	12.5	13.5	14.5	15.5	16.5

Stations	10	11	12	13	14	15	16	17
<b>L1</b>	248	248	260.5	273	285.5	298	310.5	310.5
<b>L2</b>	237.5	237.5	250	262.5	275	287.5	300	300
<b>L3</b>	213	223.5	234	244.5	255	265.5	276	286.5
<b>L4</b>	17.5	12	13	14	15	16	17	12

- SY
- SYJ
- SX**
- VK
- VZ
- VF
- VFR
- VP7
- VP4
- VQ
- VQ4
- VQZ
- VQD
- VZS
- VFS
- VS
- VS7

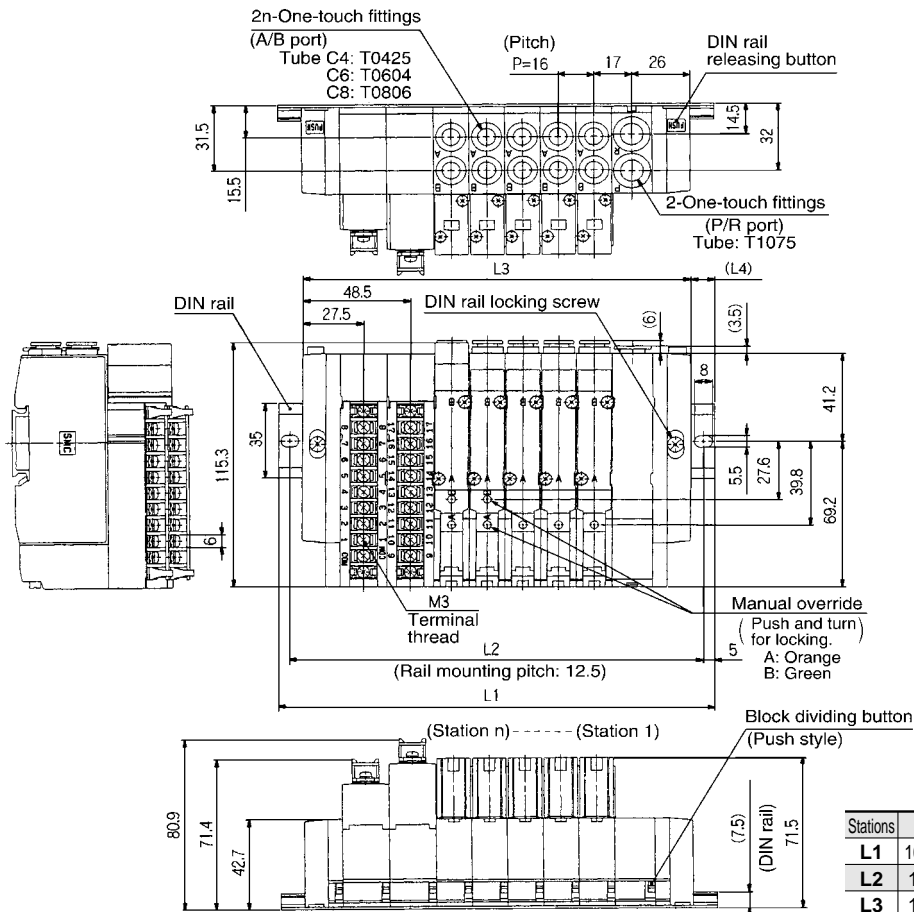


# SX5000: 18 pole Terminal Block/Plug-in

## SS5X5-45T1U- Stations D-□ (18-pole)

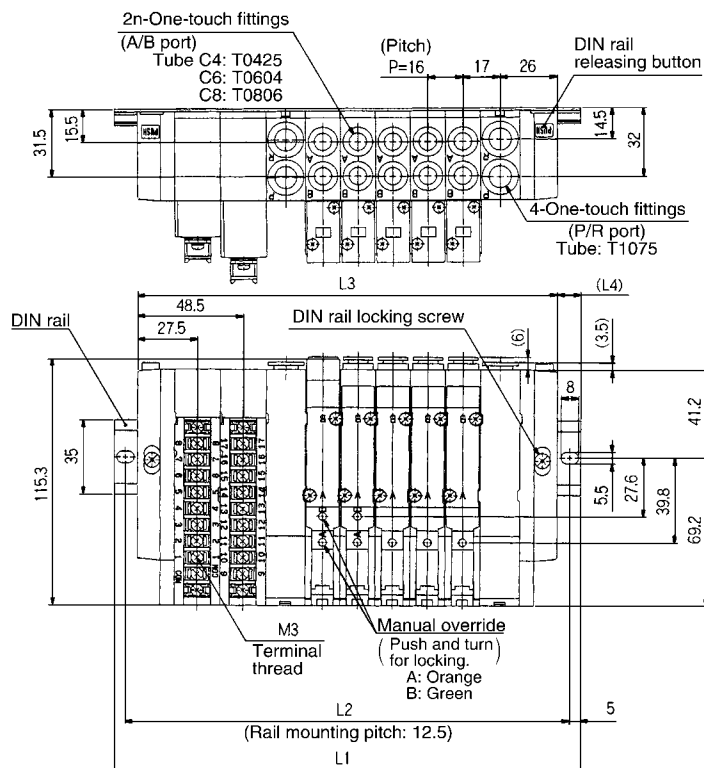


Note) The L1 to L4 dimensions of SS5X5-45T1U- Stations U-□ are identical to those of SS5X5-45T1U- Stations D-□.



Stations	2	3	4	5	6	7	8	9	10
L1	160.5	173	185.5	198	223	235.5	248	273	285.5
L2	150	162.5	175	187.5	212.5	225	237.5	262.5	275
L3	126	142	158	174	190	206	222	238	254
L4	17	15.5	13.5	12	16.5	14.5	13	17.5	15.5

## SS5X5-45T1U- Stations B-□ (18-pole)



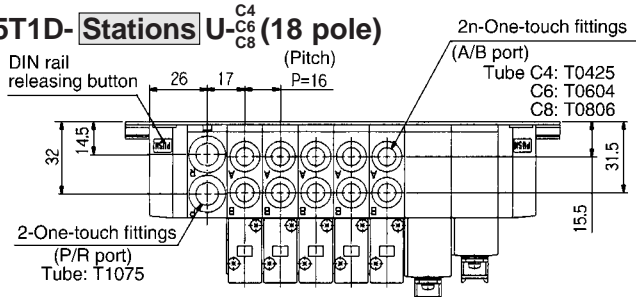
Stations	2	3	4	5	6	7	8	9
L1	173	185.5	210.5	223	235.5	248	273	285.5
L2	162.5	175	200	212.5	225	237.5	262.5	275
L3	144	160	176	192	208	224	240	256
L4	14.5	12.5	17	15.5	13.5	12	16.5	14.5

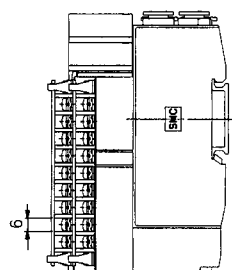
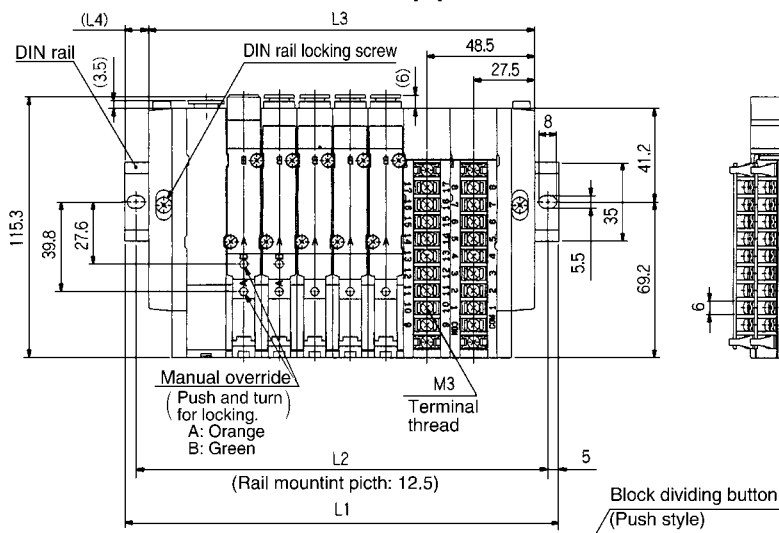
Stations	10	11	12	13	14	15	16	17
L1	298	323	335.5	348	360.5	385.5	398	410.5
L2	287.5	312.5	325	337.5	350	375	387.5	400
L3	272	288	304	320	336	352	368	384
L4	13	17.5	15.5	14	12	16.5	15	13



## SS5X5-45T1D- Stations U-□ (18 pole)

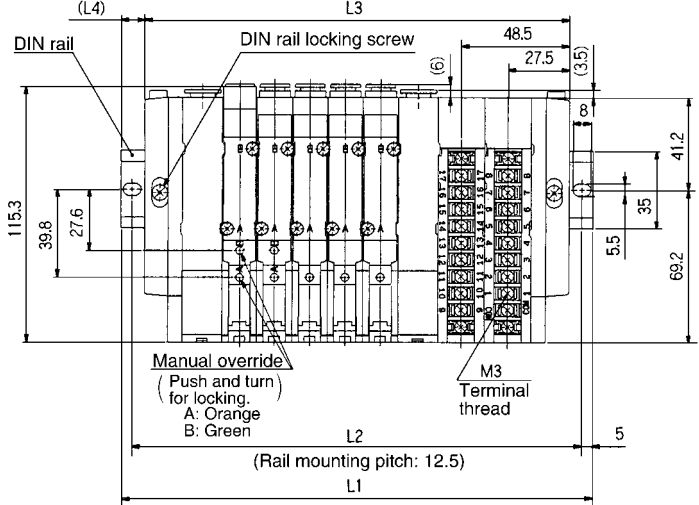
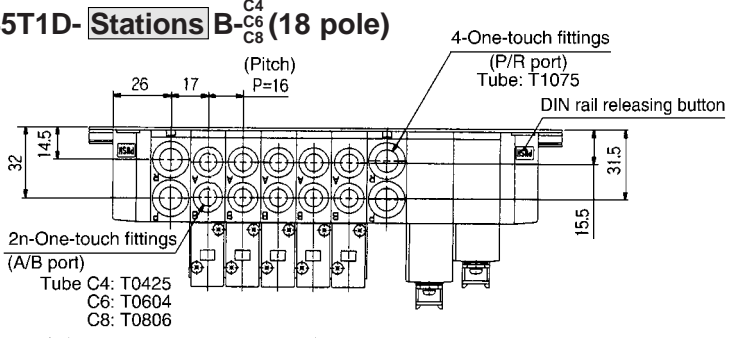


(Note) The L1 to L4 dimensions of SS5X5-45T1D- Stations D-□ are identical to those of SS5X5-45T1D- Stations U-□.



Stations	2	3	4	5	6	7	8	9	10
L1	160.5	173	185.5	198	223	235.5	248	273	285.5
L2	150	162.5	175	187.5	212.5	225	237.5	262.5	275
L3	126	142	158	174	190	206	222	238	254
L4	17	15.5	13.5	12	16.5	14.5	13	17.5	15.5

## SS5X5-45T1D- Stations B-□ (18 pole)



Stations	2	3	4	5	6	7	8	9
L1	173	185.5	210.5	223	235.5	248	273	285.5
L2	162.5	175	200	212.5	225	237.5	262.5	275
L3	144	160	176	192	208	224	240	256
L4	14.5	12.5	17	15.5	13.5	12	16.5	14.5

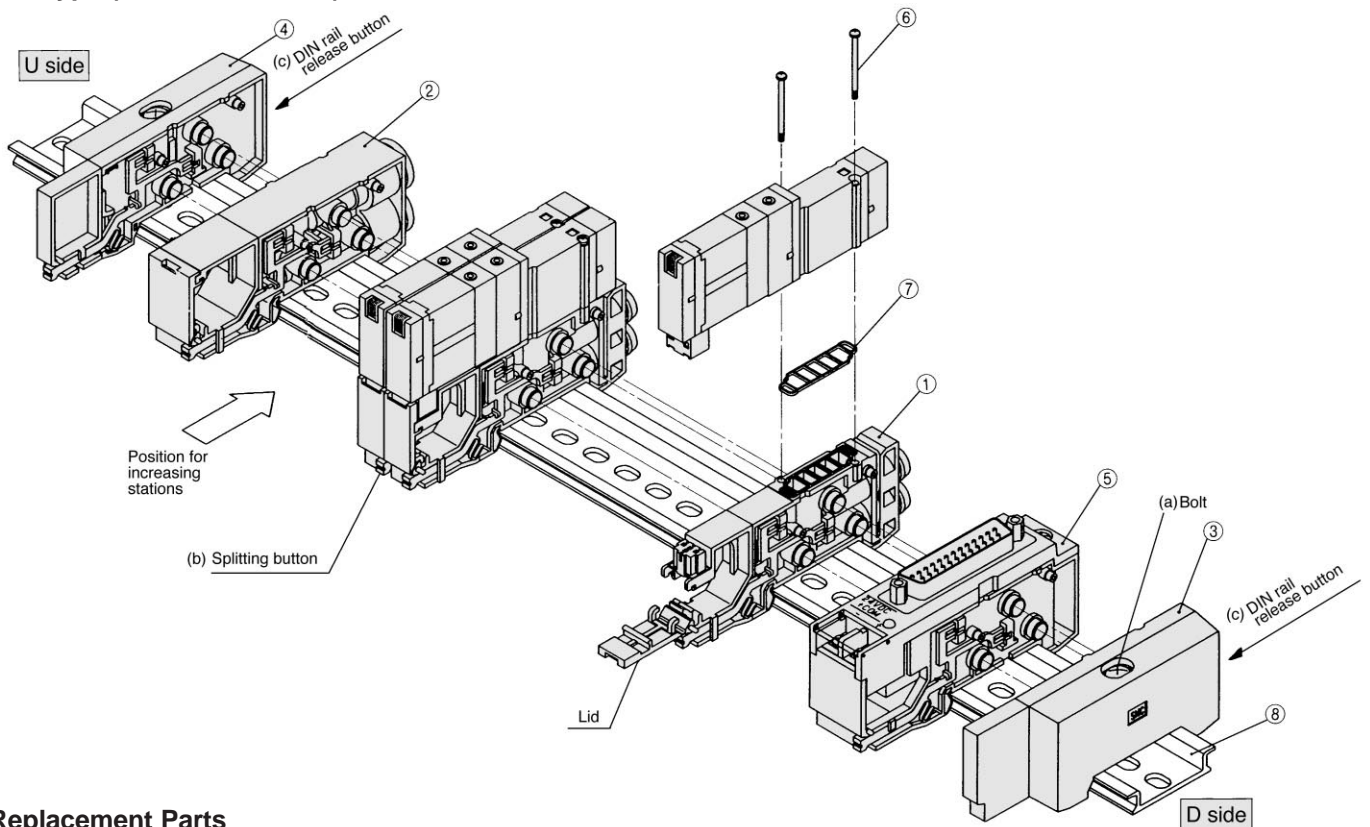
  

Stations	10	11	12	13	14	15	16	17
L1	298	323	335.5	348	360.5	385.5	398	410.5
L2	287.5	312.5	325	337.5	350	375	387.5	400
L3	272	288	304	320	336	352	368	384
L4	13	17.5	15.5	14	12	16.5	15	13

- SY
- SYJ
- SX**
- VK
- VZ
- VF
- VFR
- VP7
- VP4
- VQ
- VQ4
- VQZ
- VQD
- VZS
- VFS
- VS
- VS7

## Exploded View/DIN Rail Manifold

### 45F Type (D-sub Connector) Manifold



### Replacement Parts

No.	Description	Part No.		Notes	
		SX3000	SX5000		
①	Manifold block Ass'y	The manifold block assembly no. differs according to an attached lead wire assembly based on the connector specification (single, double) Select an appropriate no. from among the manifold block assembly nos. shown below.			
②	SUP/EXH block Ass'y	SX3000-51-2A	SX5000-51-2A	SX3000: P/R port with ø8 One-touch fittings SX5000: P/R port with ø10 One-touch fittings	
③	End block Ass'y R	SX3000-52-2A	SX5000-52-2A	For D side	
④	End block Ass'y L	SX3000-53-2A	SX5000-53-2A	For U side	
⑤-1	Connector block Ass'y (for D-sub connector)	SX3000-64- <sup>1A</sup> <sub>1NA</sub>	SX5000-64- <sup>1A</sup> <sub>1NA</sub>	-1A: +COM. -1NA: -COM.	
⑤-2	Connector block Ass'y (for 26 pin flat cable)	SX3000-64- <sup>2A</sup> <sub>2NA</sub> -26	SX5000-64- <sup>2A</sup> <sub>2NA</sub> -26	Note) 24V DC specification	
⑤-3	Connector block Ass'y (for 20 pin flat cable)	SX3000-64- <sup>2A</sup> <sub>2NA</sub> -20	SX5000-64- <sup>2A</sup> <sub>2NA</sub> -20		-2A: +COM. -2NA: -COM.
⑤-4	Connector block Ass'y (for 10 pin flat cable)	SX3000-64- <sup>2A</sup> <sub>2NA</sub> -10	SX5000-64- <sup>2A</sup> <sub>2NA</sub> -10		
⑤-5	Connector block Ass'y (for 2- to 8-station (T, T1) terminal block)	SX3000-64-3A	SX5000-64-3A	Both for +COM and -COM	
⑤-6	Connector block Ass'y (for 9- to 17-station (T1) terminal block)	SX3000-64-8A	SX5000-64-8A		
⑥	Phillips head screw	SX3000-22-2 (M2 X 24)	M3 X 30 (Matted nickel plated)		
⑦	Gasket	SX3000-57-4	SX5000-57-1		
⑧	DIN rail	VZ1000-11-1-□		Refer to p.1.3-73	

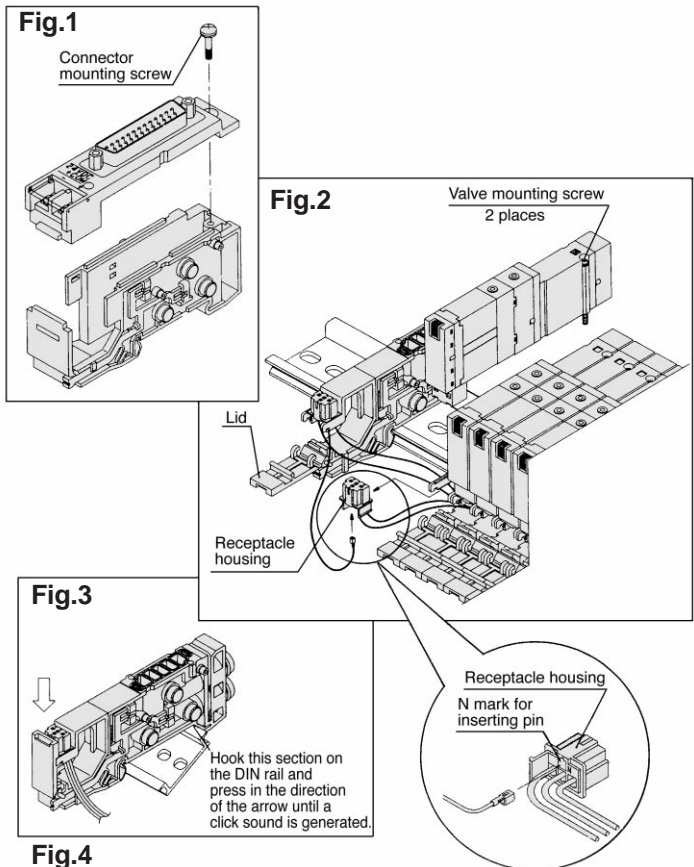
Note) The numbers ⑤-1 to -4 are for 24 V DC. For 12 V DC, suffix -12V to the parts No. (Example) SX3000-64-1A-12V

### Manifold Block Assembly Part No.

Style of manifold	Wiring	Manifold block Ass'y No.	Notes
For 45(N)F (D-sub connector)	Double	SX <sup>□</sup> 000-50-2A-□□	□□: -SX3000 C4: With One-touch for ø4 C6: With One-touch for ø6 -SX5000
	Single	SX <sup>□</sup> 000-50-3A-□□	
For 45(N) <sub>PG</sub> <sub>PH</sub> (Flat cable)	Double	SX <sup>□</sup> 000-50-4A-□□	C4: With One-touch for ø4 C6: With One-touch for ø6 C8: With One-touch for ø8 (Gasket ⑦ is supplied as an accessory.)
	Single	SX <sup>□</sup> 000-50-5A-□□	
For 45 <sub>T</sub> (Terminal block)	Double	SX <sup>□</sup> 000-50-6A-□□	
	Single	SX <sup>□</sup> 000-50-7A-□□	

## How to Increase Manifold Bases

- 1 Loosen bolt (a) fixing the manifold base until it begins to turn idly. (While pressing DIN rail release button (c), separate the manifold base from the DIN rail.)
- 2 Additional bases are to be added to the U side. Press splitting button (b) of the manifold block assembly on the U side until button (b) locks, and then separate the block assemblies.
- 3 Separate the connector block assembly in the same manner as 2, and remove the connector mounting screw shown in Fig.1.
- 4 Loosen the valve mounting screw on the U side, remove the valve, and take out the receptacle housing. (See Fig.2.)
- 5 Insert the common wire (red) of the manifold block assembly to be added into the pin insertion section (N mark) of the receptacle housing that was taken out in 4, mount it on the manifold block, and mount the removed valve.
- 6 As shown in Fig.3, mount the additional manifold block assembly on the DIN rail on the U side. Refer to the circuit diagram, and insert the lead wire (SOL.A:Black, SOL.B: White) as shown in Fig.4.
- 7 Press the blocks against each other until a click sound is produced, place the lead wire in the manifold block, and close the lid without pinching the lead wire.
- 8 Hold blocks tightly so that there will be no gap between them, and tighten the bolt (a) to fix them to the DIN rail. (Torque: 1Nm)



### ⚠ Cautions

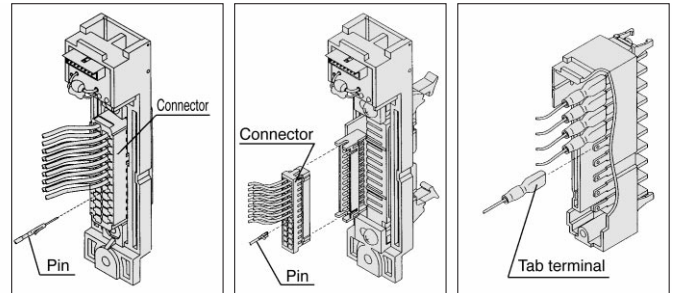
1. Depending on the connector, there is a limit to the number of solenoids. When all manifold stations are wired for double solenoid valves, expansion of the manifold may not be possible. Please consult SMC for more information.
2. The manifold block assembly mounting position for additional manifold bases is always on the U side, because wires are connected to respective connectors sequentially from the D side.
3. When bolt (a) for the end block is not sufficiently tightened during reassembly, air leakage may result. Before supplying air, check that there is no gap between blocks and that the manifold block is firmly fixed to the DIN rail in order to ensure air supply without leakage.

### Fig.4

D-sub connector (45F)

Flat cable (45P□)

Terminal block (45T)



Note) After inserting pins, pull lead wires lightly to check that the pins are locked.

Note) Insert pins after removing the connector from the main unit. After inserting pins, pull lead wires lightly to check that the pins are locked.

Note) Insert tab terminals completely.

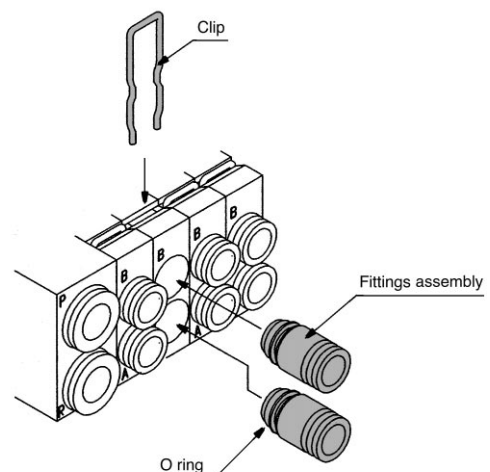
## How to change fitting assembly

Type 45 manifold permits change in the A and B port sizes by changing the manifold block fitting assembly. After removing the valve, remove the clip with a screwdriver. To mount a new fitting assembly insert it and then insert a clip so it does not come out of the manifold block.

### Fitting assembly No.

Port size	SX3000	SX5000
One-touch fittings for $\phi 4$	VVQ1000-50A-C4	VVQ1000-51A-C4
One-touch fittings for $\phi 6$	VVQ1000-50A-C6	VVQ1000-51A-C6
One-touch fittings for $\phi 8$		VVQ1000-51A-C8

- Note 1) P and R ports cannot be changed.  
 Note 2) O rings must be free from scratches and dust. Otherwise, air leakage may result.



SY  
SYJ  
SX  
VK  
VZ  
VF  
VFR  
VP7  
VP4  
VQ  
VQ4  
VQZ  
VQD  
VZS  
VFS  
VS  
VS7

# SX3000/5000 Base Mounted Stacking Manifold/DIN Rail Mounted Integral Serial Interface Unit

## How to Order Manifold

SS5X 3 - 45S A - 05 U - 05 - □

**Manifold series**

3	SX3000
5	SX5000

**Models**

Symbol	Specifications
O	No Serial Interface
A	General SI unit: Series EX300
B	SI for Mitsubishi (MELSECNET/mini-S3 data link system)
C	SI for OMRON (SYSBUS wire system)
D	SI for Sharp (Satellite I/O link system)
E	SI for Matsushita (MEWMET-F system)
F1	SI for NKE (Wiring saving system, 16 outputs)
G	SI for Allen-Bradley Co. (Remote I/O (RIO) system)
J1	SI for SUNX (S-LINK system, 16 outputs)
J2	SI for SUNX (S-LINK system, 8 outputs)
K	SI for Fuji Electric (T-LINK mini system)
Q	SI for Device Net, OMRON (CompoBus/D)
R1	SI for OMRON (CompoBus/S, 16 outputs)
R2	SI for OMRON (CompoBus/S, 8 outputs)

- SI unit must be mounted on CPU side of general type.
- DIN rail length of manifold without SI unit is long enough for future expectancy of mounting SI unit. If shorter DIN rail (same length as 45□) is required, put "0" at the end of part number.

**Stations**

Symbol	Stations	Note
02	2	Double wiring specification
∴	∴	
08	8	
09	9	Applicable up to 16 solenoids. Use manifold specification from to specify wiring.
∴	∴	
16	16	

- The number of blank plate assemblies is included.
- When special wiring is required on manifold with 2-8, stations, please use the manifold specification form.

**SUP/EXH block ass'y mounting position**

Symbol	Mounting position	Stations
U	U-side	2 to 10
D	D-side	2 to 10
B	Both sides	2 to 16
M	Special specification	

\* Special specification is available by special order.

**A/B port size**

**SX3000**

Symbol	Port size
C4	One-touch fittings for ø4
C6	One-touch fittings for ø6
M*	Mixed

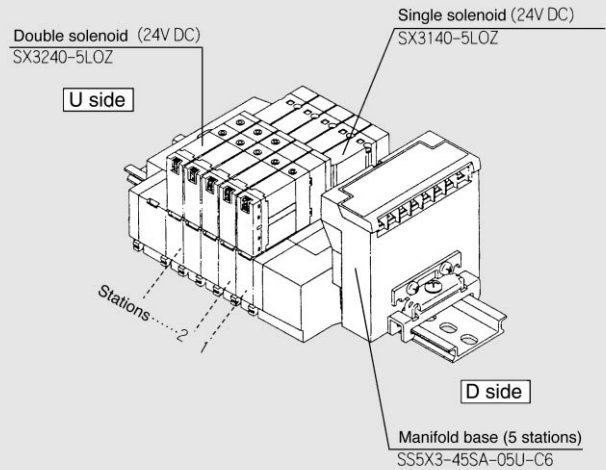
**SX5000**

Symbol	Port size
C4	One-touch fittings for ø4
C6	One-touch fittings for ø6
C8	One-touch fittings for ø8
M*	Mixed

\* Mixed porting available by special order.

## How to Order Valve Manifold Ass'y (Example)

### Ordering example



SS5X3-45SA-05U-C6 . . . . . 1 set (45S with serial 5-station manifold base No.)  
 \* SX3140-5LOZ . . . . . 2 sets (Single solenoid No.)  
 \* SX3240-5LOZ . . . . . 3 sets (Double solenoid No.)

To order valves and options mounted onto the manifold at the factory, list the valve/options with an asterisk in front of each part number.

- All manifold stations are wired for double solenoid valves. Valves are mounted in the order listed starting at the 1st station of D side of the manifold regardless of the mounting position of the SI unit.
- For manifolds with more than 8 stations (9-16), special wiring is required. Please use the manifold specification form.
- Serial unit is available for only D side mounting style.

## How to Order Valve

SX 3 2 40 - 5 LOZ □

**Series**

3	SX3000
5	SX5000

**Configuration**

1	2 position single
2	2 position double
3	3 position closed center
4	3 position exhaust center
5	3 position pressure center

**Rated voltage**

5	24V DC
---	--------

**Manual override**

—	Non-locking push style
D	Push-turn-locking slotted style

**Option**

When a DIN rail longer than standard is required, enter the number of manifold stations that corresponds with the length of DIN rail needed. (20 stations max.)

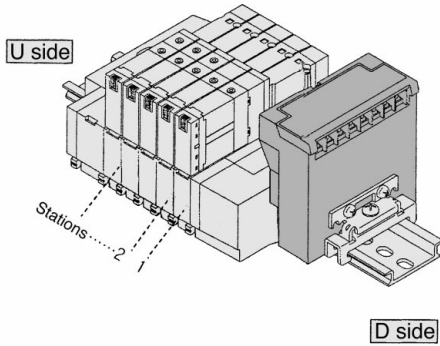
### Parts Number System of SI Units

Symbol	Specification	For SS5X□-45S	Symbol	Specification	For SS5X□-45S
A	General SI unit: Series EX300	EX322-S001	J1	SUNX (S-LINK system, 16 outputs)	EX122-SSL1
B	Mitsubishi (MELSECNET/mini-S3 data link system)	EX122-SMB1	J2	SUNX (S-LINK system, 8 outputs)	EX122-SSL2
C	OMRON (SYSBUS wire system)	EX122-STA1	K	Fuji Electric (T-LINK mini system)	EX122-SFU1
D	Sharp (Satellite I/O link system)	EX122-SSH1	Q	Device Net, OMRON (CompoBus/D)	EX122-SDN1
E	Matsushita (MEWMET-F system)	EX122-SPA1	R1	OMRON (CompoBus/S, 16 outputs)	EX122-SCS1
F1	NKE (Wiring saving system, 16 outputs)	EX122-SUW1	R2	OMRON (CompoBus/S, 8 outputs)	EX122-SCS2
G	Allen-Bradley Co. (Remote I/O (RIO) system)	EX122-SAB1			



# SX3000/5000 Base Mounted Manifold 45S□Type

- The serial transmission system minimizes wire mass and wire connection labor and promotes space savings.
- 16 stations max. (Specify a model with more than 8 stations by using manifold specification form.)



- Stations are sequentially numbered from the D side.
- Maximum station: Up to 16 solenoids (16 single solenoids).

Item	Specifications
External power supply	24V DC±10%
Current consumption (Internal unit)	0.1A SA, SB, SD, SE, SF1, SG, SJ1, SJ2, SK, SR1, SR2
	0.3A SC, SQ

	SA type applicable to Series EX300	SB type applicable to Mitsubishi Electric model MELSECNET/mini-S3 data link system																		
Name of terminal block (LED)	<table border="1"> <thead> <tr> <th>LED name</th> <th>Details</th> </tr> </thead> <tbody> <tr> <td>TRD</td> <td>Lighting during data reception</td> </tr> <tr> <td>RUN/ERR</td> <td>Blinking when data is normal; Lighting when data is abnormal</td> </tr> </tbody> </table>	LED name	Details	TRD	Lighting during data reception	RUN/ERR	Blinking when data is normal; Lighting when data is abnormal	<table border="1"> <thead> <tr> <th>LED name</th> <th>Details</th> </tr> </thead> <tbody> <tr> <td>POWER</td> <td>Lighting when power is turned ON</td> </tr> <tr> <td>RUN</td> <td>Lighting when data with master is normal</td> </tr> <tr> <td>RD</td> <td>Lighting during data reception</td> </tr> <tr> <td>SD</td> <td>Lighting during data transmission</td> </tr> <tr> <td>ERR.</td> <td>Lighting when error occurs, off when corrected.</td> </tr> </tbody> </table>	LED name	Details	POWER	Lighting when power is turned ON	RUN	Lighting when data with master is normal	RD	Lighting during data reception	SD	Lighting during data transmission	ERR.	Lighting when error occurs, off when corrected.
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Note	<ul style="list-style-type: none"> <li>● Serial transmission is possible by connecting with I/O card of T unit PLC manufacturer. EX300-TMB1...For Mitsubishi Electric model EX300-TTA1...For OMRON model EX300-TFU1...For Fuji Electric model EX300-T001...For General model * Control marks of T unit: 32 points/unit</li> <li>● Number of outputs: 16</li> </ul>	<ul style="list-style-type: none"> <li>● MELSECNET/mini-S3 data link system Master unit: AJ71PT32-S3 AJ71T32-S3 A1SJ71PT32-S3</li> <li>● Output points: 16, Occupation stations: 2</li> </ul>																		
Twisted pair cable wiring	<p>* The shielding of the shielded wire should be grounded on the reception or transmission side.</p>	<p>* The shielding of the shielded wire should be one-point grounded on the reception or transmission side.</p>																		

	SC type applicable to Omron models Applicable to SYSBUS wire system	SD type applicable to Sharp models Satellite I/O link system	SE type Applicable to Matsushita Electric models MEWNET-F system																												
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Note	<ul style="list-style-type: none"> <li>● SYSBUS wire system Master Station unit: C500-RM201 C200H-RH201</li> <li>● Output points: 16</li> </ul>	<ul style="list-style-type: none"> <li>● Satellite I/O link system Master station unit: ZW-31LM JW-31LM JW-23LM</li> <li>● Output points: 16</li> </ul>	<ul style="list-style-type: none"> <li>● MEWNET-F system Master unit: AFP3740 AFP5740</li> <li>● Output points: 16</li> </ul>																												
Twisted pair cable wiring		<p>a) Double wiring type Wiring without signal contact wire (SG)</p> <p>b) Triple wiring type Wiring with signal contact wire (SG)</p>																													

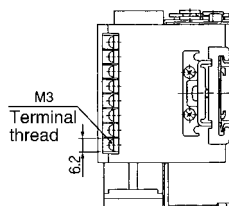
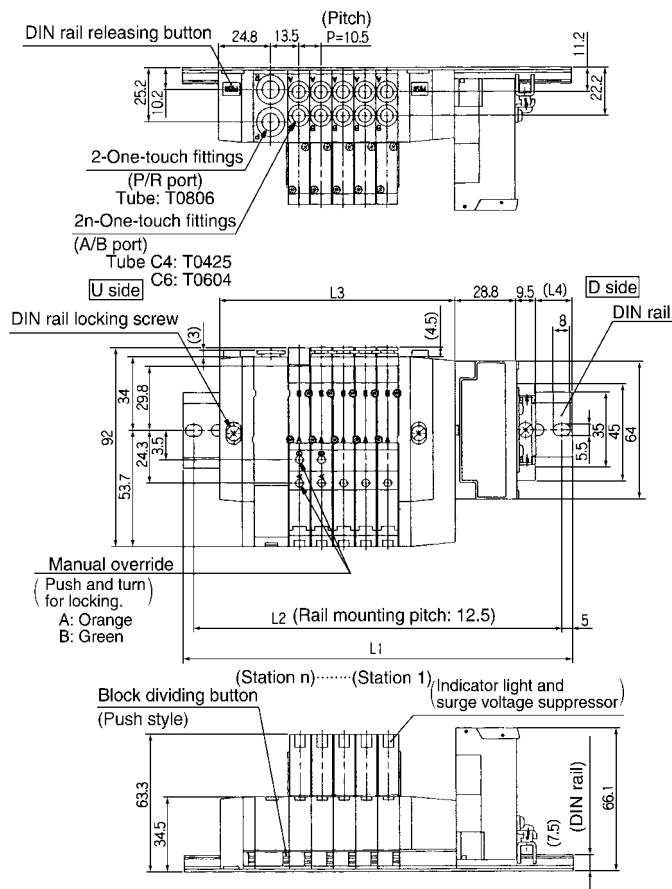
- SY
- SYJ
- SX
- VK
- VZ
- VF
- VFR
- VP7
- VP4
- VQ
- VQ4
- VQZ
- VQD
- VZS
- VFS
- VS
- VS7

	SF1 type Applicable to NKE model, Simplified wiring system	SG type Applicable to Allen-Bradley Co. model, Remote I/O (RIO) system	SJ1/SJ2 type Applicable to SUNX model, S-LINK system																				
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Notes	<ul style="list-style-type: none"> <li>●Wiring simplifying system Send unit: SD-120</li> <li>●Output points: 16</li> </ul>	<ul style="list-style-type: none"> <li>●Remote I/O (RIO) system</li> <li>●Output points: 16</li> </ul>	<ul style="list-style-type: none"> <li>●S-LINK system S-LINK controller: SL-CU1</li> <li>●Output points: 16 (SJ1) Output points: 8 (SJ2)</li> </ul>																				
Wiring of cable			<p>a) T type diverging multi drop wiring (S-LINK system)    b) Contact wiring (Sensor link system)</p> <p>The example above shows a case that S-LINK exclusive flat cable "SL-RCM*00" is used.</p>																				

	SK type Applicable to Fuji Electric model T-link mini system	SQ type Applicable to Device Net	SR1/SR2 type Applicable to OMRON model Compo Bus/S																				
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COMM	Lights when w/o trouble, OFF when trouble or waiting.																						
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Note	<ul style="list-style-type: none"> <li>●T-LINK mini system Master unit: FTM 100B Converter : FRC100A-G02 Repeater : FRC200A-C10</li> <li>●Output points: 16</li> </ul>	<ul style="list-style-type: none"> <li>●DeviceNet</li> <li>●OMRON's Compo Bus/D system Master unit: C200HW-DSM21</li> <li>●Output points: 16</li> </ul>	<ul style="list-style-type: none"> <li>●Compo Bus/S system Master unit: C200HW-SRM21 Master unit: CQM1-SRM21</li> <li>●Output points: 16 (SR1) Output points: 8 (SR2)</li> </ul>																				
Wiring of cable	<p>Connect shield wires to SD terminal. Without connecting shield wires to SD terminal, normal transmission cannot be operated even for short distance.</p>		<p>Connector with end resistance</p>																				

## SX3000: Serial Interface Unit/Plug-in Style

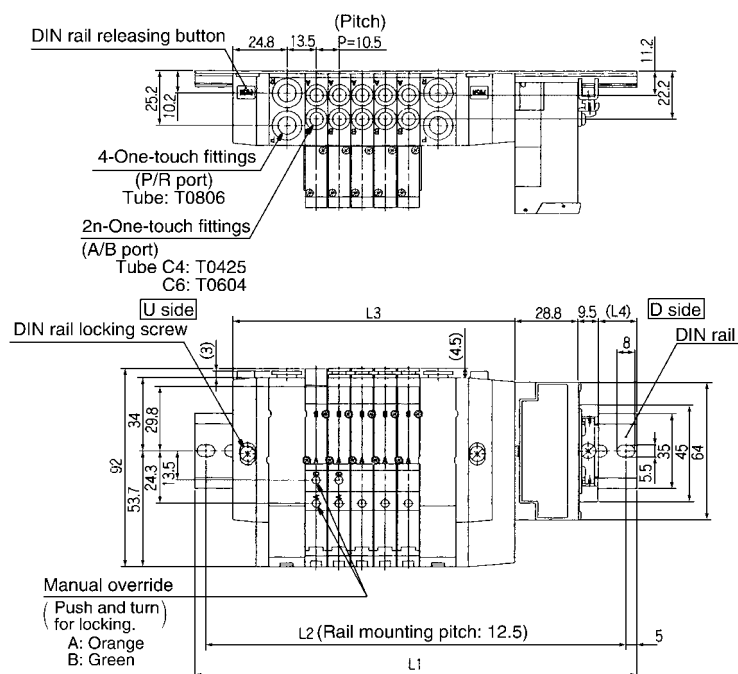
### SS5X3-45S □ - Stations D-C 4



Stations	2	3	4	5	6	7	8	9	10
<b>L1</b>	148	160.5	173	185.5	185.5	198	210.5	223	235.5
<b>L2</b>	137.5	150	162.5	175	175	187.5	200	212.5	225
<b>L3</b>	81	91.5	102	112.5	123	133.5	144	154.5	165
<b>L4</b>	14.5	15.5	16.5	17.5	12	13	14	15	16

Note) Width of SI unit applicable to "E": Matsushita Electric and "G": Allen-Bradley widens to [24.3mm]. Consult SMC for further information.

### SS5X3-45S □ - Stations B-C 5



Stations	2	3	4	5	6	7	8	9	10
<b>L1</b>	160.5	173	185.5	198	210.5	223	223	235.5	248
<b>L2</b>	150	162.5	175	187.5	200	212.5	212.5	225	237.5
<b>L3</b>	97.5	108	118.5	129	139.5	150	160.5	171	181.5
<b>L4</b>	12.5	13.5	14.5	15.5	16.5	17.5	12	13	14

Stations	11	12	13	14	15	16
<b>L1</b>	260.5	273	285.5	285.5	298	310.5
<b>L2</b>	250	262.5	275	275	287.5	300
<b>L3</b>	192	202.5	213	223.5	234	244.5
<b>L4</b>	15	16	17	12	13	14

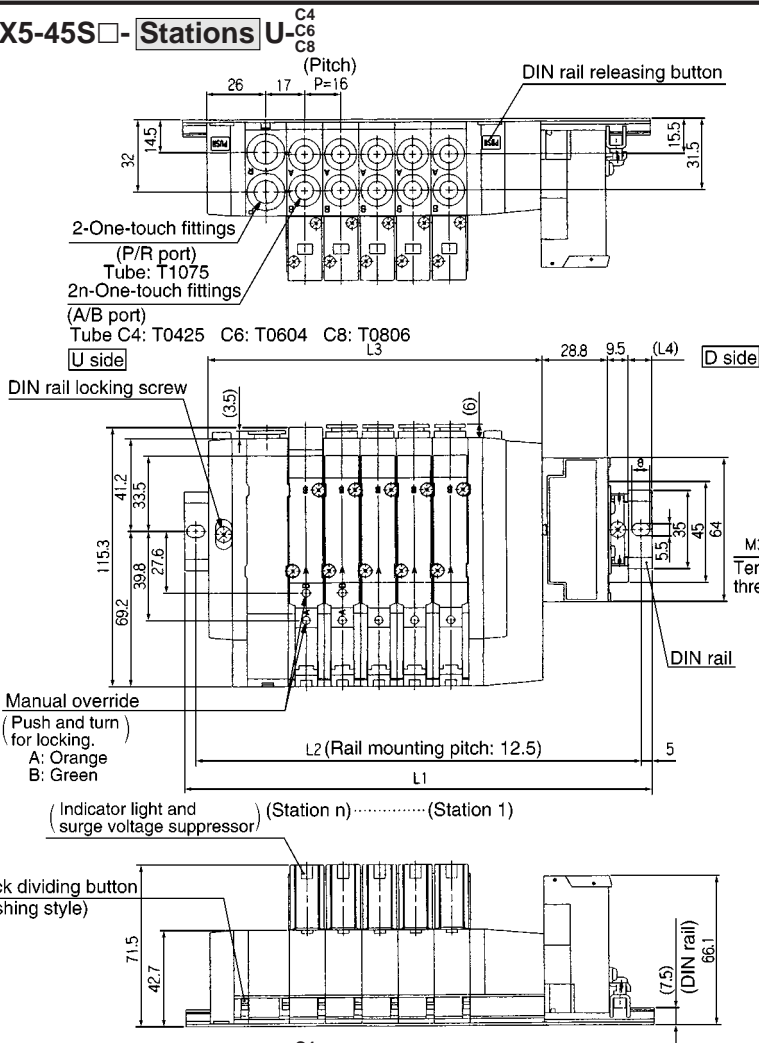
Note) Width of SI unit applicable to "E": Matsushita Electric and "G": Allen-Bradley widens to [24.3mm]. Consult SMC for further information.

- SY
- SYJ
- SX**
- VK
- VZ
- VF
- VFR
- VP7
- VP4
- VQ
- VQ4
- VQZ
- VQD
- VZS
- VFS
- VS
- VS7



# SX5000: Serial Interface Unit/Plug-in Style

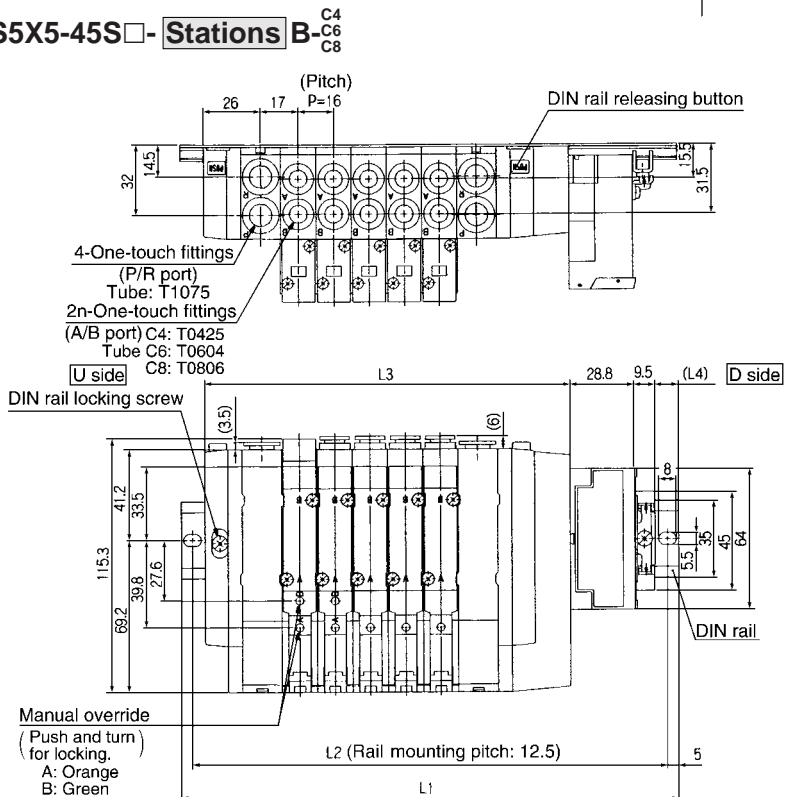
## SS5X5-45S □ - Stations U



Stations	2	3	4	5	6	7	8	9	10
L1	173	185.5	198	210.5	235.5	248	260.5	285.5	298
L2	162.5	175	187.5	200	225	237.5	250	275	287.5
L3	100	116	132	148	164	180	196	212	228
L4	17.5	15.5	14	12	16.5	15	13	17.5	16

Note) Width of SI unit applicable to "E": Matsushita Electric and "G": Allen-Bradley widens to 24.3mm. Consult SMC for further information.

## SS5X5-45S □ - Stations B



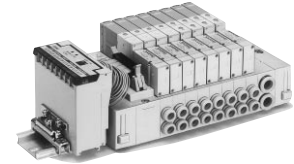
Stations	2	3	4	5	6	7	8	9	10
L1	185.5	198	223	235.5	248	260.5	285.5	298	310.5
L2	175	187.5	212.5	225	237.5	275	275	287.5	300
L3	118	134	150	166	182	214	214	230	246
L4	14.5	13	17.5	15.5	14	12	16.5	15	13

Stations	11	12	13	14	15	16
L1	335.5	348	360.5	373	398	410.5
L2	325	337.5	350	362.5	387.5	400
L3	262	278	294	310	326	342
L4	17.5	16	14	12.5	17	15

Note) Width of SI unit applicable to "E": Matsushita Electric and "G": Allen-Bradley widens to 24.3mm. Consult SMC for further information.

45S1 □ Type

# SX3000/5000 Base Mounted Stacking Manifold/DIN Rail Mounted Serial Interface (Separate Style)



## How to Order Manifold

SS5X **3** - 45S1 **A** **D** - **05** **U** - **C4** - □

**Manifold series**

3	SX3000
5	SX5000

**Models**

Symbol	Specifications
O	Without SI unit
A	General type: EX300
B	Mitsubishi Electric MELSECNET/MINI-S3 data link system
C	OMRON SYSBUS wire system
D	Sharp Satellite I/O link system
E	Matsushita Electric MEWNET-F system
F1	NKE wiring simplifying system (16 output points)
G	Allen-Bradley Co. remote I/O (RIO) system
J1	SUNX S-LINK system (16 output points)
J2	SUNX S-LINK system (8 output points)
K	Fuji Electric T-LINK mini system
Q	Device Net and OMRON CompoBus/D
R1	OMRON CompoBus/S (16 points)
R2	OMRON CompoBus/S (8 points)

- Transmission unit is required on CPU side for general style.
- Length of DIN rail without SI unit is long enough for future mounting expectancy. If SI unit with shorter DIN rail (same as 45□) is required, put "0" in the option space.

**SI unit mounting position**

Symbol	Mounting position
U	U side
D	D side

**Stations**

Symbol	Stations	Note
02	2	Double wiring specification
⋮	⋮	
08	8	
09	9	Applicable up to 16 solenoids.
⋮	⋮	Use manifold specification from to specify wiring.
16	16	

- The number of blanking plate assemblies are included.
- When special wiring is required on manifold with 2-8 stations, please use the manifold

**SUP/EXH block ass'y mounting position**

Symbol	Mounting position	Stations
U	U-side	2 to 10
D	D-side	2 to 10
B	Both sides	2 to 16
M	Special specification	

\* Special specification is available by special order.

**A/B port size**

**SX3000**

Symbol	Port size
C4	One-touch fittings for ø4
C6	One-touch fittings for ø6
M	Mixed

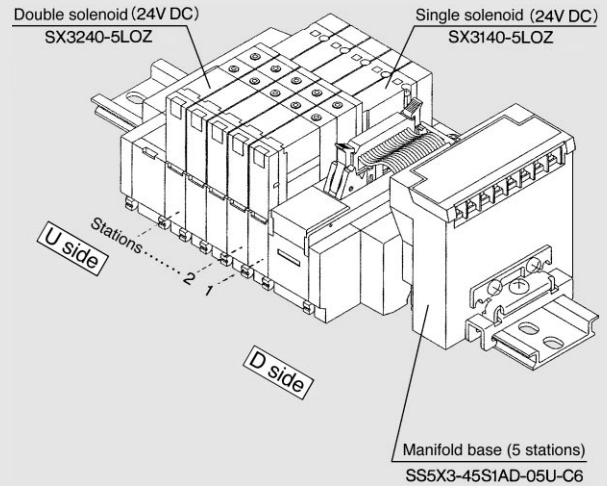
**SX5000**

Symbol	Port size
C4	One-touch fittings for ø4
C6	One-touch fittings for ø6
C8	One-touch fittings for ø8
M	Mixed

\* Mixed porting available by special order.

## How to Order Valve Manifold Ass'y (Example)

**Ordering example**



SS5X3-45S1AD-05U-C6 ··· 1 set (45S1 with serial 5-station manifold base No.)  
 \* SX3140-5LOZ ······ 2 sets (Single solenoid No.)  
 \* SX3240-5LOZ ······ 3 sets (Double solenoid No.)

To order valves and options mounted onto the manifold at the factory, list the valve/options with an asterisk in front of each part number.

- All manifold stations are wired for double solenoid valves. Valves are mounted in the order listed starting at the 1st station of D side of the manifold regardless of the mounting position of the SI unit.
- For manifolds with more than 8 stations (9-16), special wiring is required. Please use the manifold specification form.

## How to Order Valve

SX **3** **2** 40 - **5** LOZ □

**Series**

3	SX3000
5	SX5000

**Configuration**

1	2 position single
2	2 position double
3	3 position closed center
4	3 position exhaust center
5	3 position pressure center

**Rated voltage**

5	24V DC
---	--------

**Manual override**

-	Non-locking push style
D	Push-turn-locking slotted style

**Option**

When a DIN rail longer than standard is required, enter the number of manifold stations that corresponds with the length of DIN rail needed. (20 stations max.)

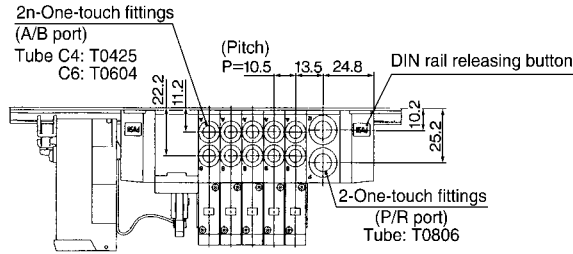
## Part Number System of SI Units

Symbol	Specification	For SS5X□-45S1	Symbol	Specification	For SS5X□-45S1
A	General type: Series EX300	EX321-S001	J1	SUNX S-LINK system (16 output points)	EX121-SSL1
B	Mitsubishi Electric MELSECNET/MINI-S3 data link system	EX121-SMB1	J2	SUNX S-LINK system (8 output points)	EX121-SSL2
C	OMRON SYSBUS wire system	EX121-STA1	K	Fuji Electric T-Link mini system	EX121-SFU1
D	Sharp Satellite I/O link system	EX121-SSH1	Q	Device Net and OMRON CompoBus/D	EX121-SDN1
E	Matsushita Electric MEWNET-F system	EX121-SPA1	R1	OMRON CompoBus/S (16 points)	EX121-SCS1
F1	NKE wiring simplifying system (16 output points)	EX121-SUW1	R2	OMRON CompoBus/S (8 points)	EX121-SCS2
G	Allen-Bradley Co. remote I/O (RIO) system	EX121-SAB1			

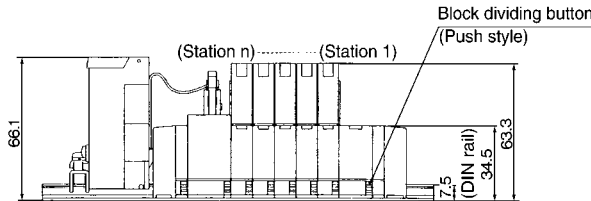
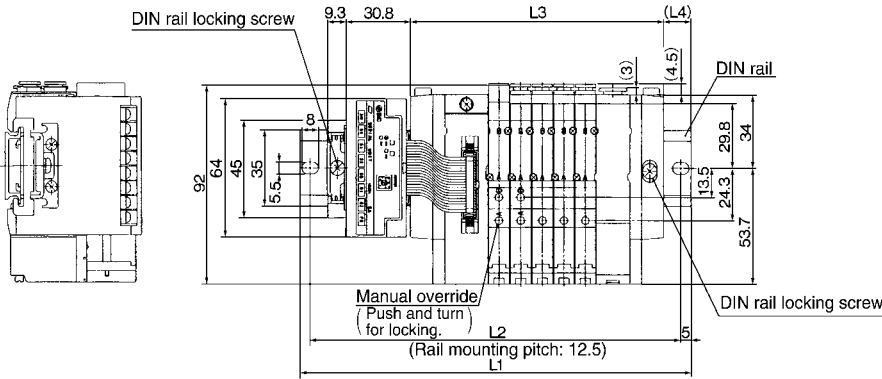
- SY
- SYJ
- SX**
- VK
- VZ
- VF
- VFR
- VP7
- VP4
- VQ
- VQ4
- VQZ
- VQD
- VZS
- VFS
- VS
- VS7

# SX3000: Serial Interface Unit/Plug-in Style

## SS5X3-45S1 □ U- Stations D-C<sup>4</sup><sub>C6</sub>



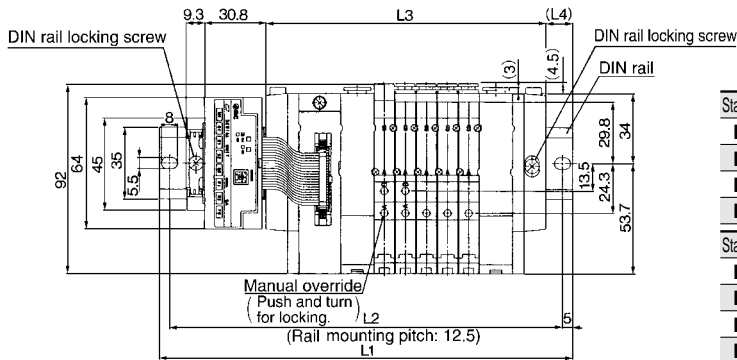
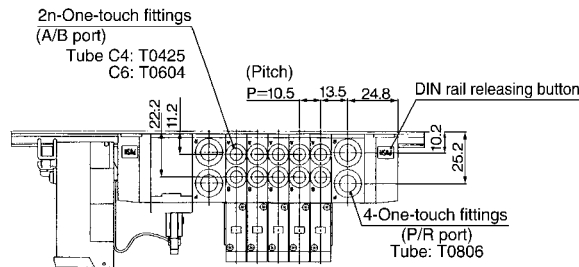
(Note) The L1 to L4 dimensions of SS5X3-45S1 □ U- Stations U-□ are identical to those of SS5X3-45S1 □ U- Stations D-□.



Stations	2	3	4	5	6	7	8	9	10
L1	160.5	173	185.5	198	198	210.5	223	235.5	248
L2	150	162.5	175	187.5	187.5	200	212.5	225	237.5
L3	91.5	102	112.5	123	133.5	144	154.5	165	175.5
L4	14	15	16	17	12	13	14	15	16

(Note) Width of SI unit applicable to "E": Matsushita Electric and "G": Allen-Bradley widens to 24.3mm. Consult SMC for further information.

## SS5X3-45S1 □ U- Stations B-C<sup>4</sup><sub>C6</sub>

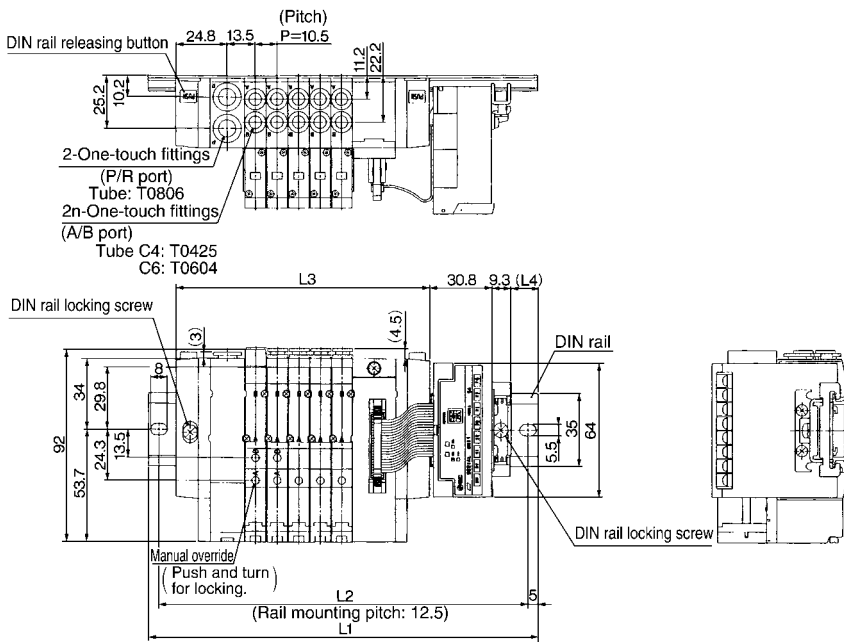


Stations	2	3	4	5	6	7	8	9	10
L1	173	185.5	198	210.5	223	235.5	235.5	248	260.5
L2	162.5	175	187.5	200	212.5	225	225	237.5	250
L3	108	118.5	129	139.5	150	160.5	171	181.5	192
L4	12	13	14	15	16	17	12	13	14

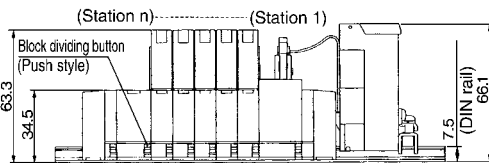
Stations	11	12	13	14	15	16
L1	273	285.5	298	298	310.5	323
L2	262.5	275	287.5	287.5	300	312.5
L3	202.5	213	223.5	234	244.5	255
L4	15	16	17	11.5	12.5	13.5

(Note) Width of SI unit applicable to "E": Matsushita Electric and "G": Allen-Bradley widens to 24.3mm. Consult SMC for further information.

## SS5X3-45S1 □ D- Stations U-C<sub>4</sub>



Note) The L1 to L4 dimensions of SS5X3-45S1 □ D- Stations are identical to those of SS5X3-45S1 □ D- Stations U-□.

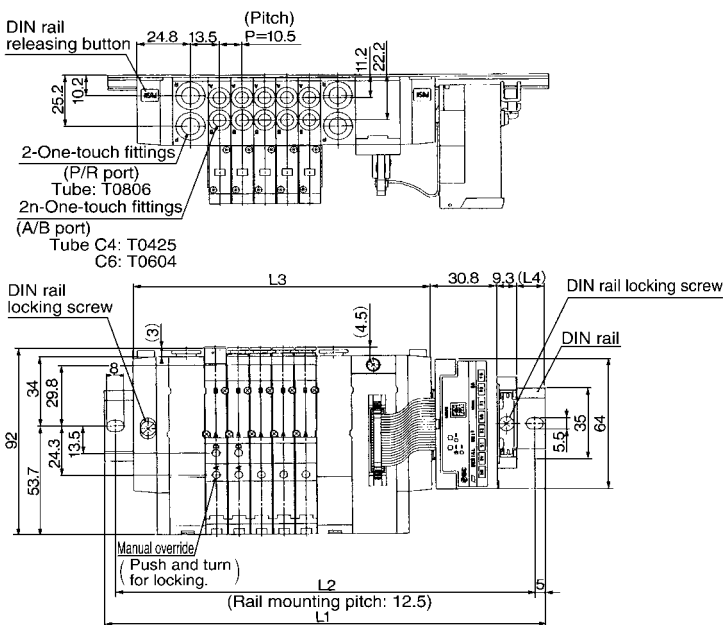


Stations	2	3	4	5	6	7	8	9	10
L1	160.5	173	185.5	198	198	210.5	223	235.5	248
L2	150	162.5	175	187.5	187.5	200	212.5	225	237.5
L3	91.5	102	112.5	123	133.5	144	154.5	165	175.5
L4	14	15	16	17	12	13	14	15	16



Note) Width of SI unit applicable to "E": Matsushita Electric and "G": Allen-Bradley widens to [24.3mm]. Consult SMC for further information.

## SS5X3-45S1 □ D- Stations B-C<sub>4</sub>



Stations	2	3	4	5	6	7	8	9	10
L1	173	185.5	198	210.5	223	235.5	235.5	248	260.5
L2	162.5	175	187.5	200	212.5	225	225	237.5	250
L3	108	118.5	129	139.5	150	160.5	171	181.5	192
L4	12	13	14	15	16	17	12	13	14

Stations	11	12	13	14	15	16
L1	273	285.5	298	298	310.5	323
L2	262.5	275	287.5	287.5	300	312.5
L3	202.5	213	223.5	234	244.5	255
L4	15	16	17	11.5	12.5	13.5



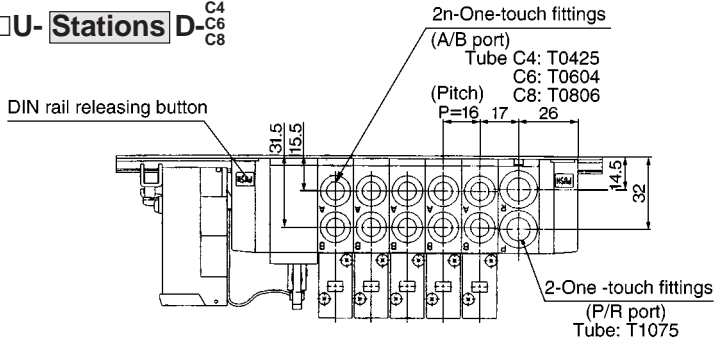
Note) Width of SI unit applicable to "E": Matsushita Electric and "G": Allen-Bradley widens to [24.3mm]. Consult SMC for further information.

- SY
- SYJ
- SX
- VK
- VZ
- VF
- VFR
- VP7
- VP4

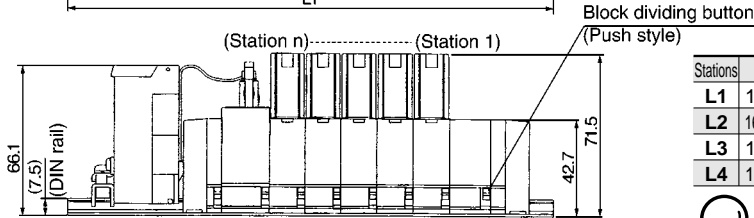
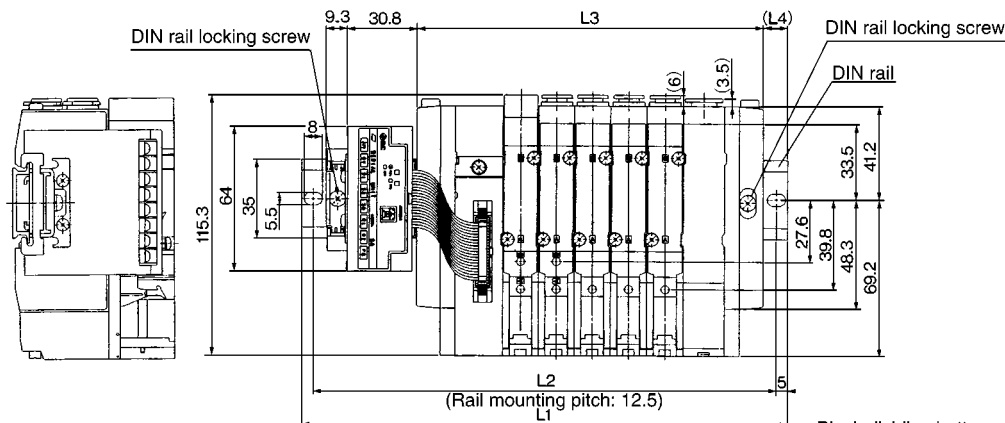
- VQ
- VQ4
- VQZ
- VQD
- VZS
- VFS
- VS
- VS7

### SX5000: Serial Transmission Unit/Plug-in Style

#### SS5X5-45S1 □ U- Stations D-□



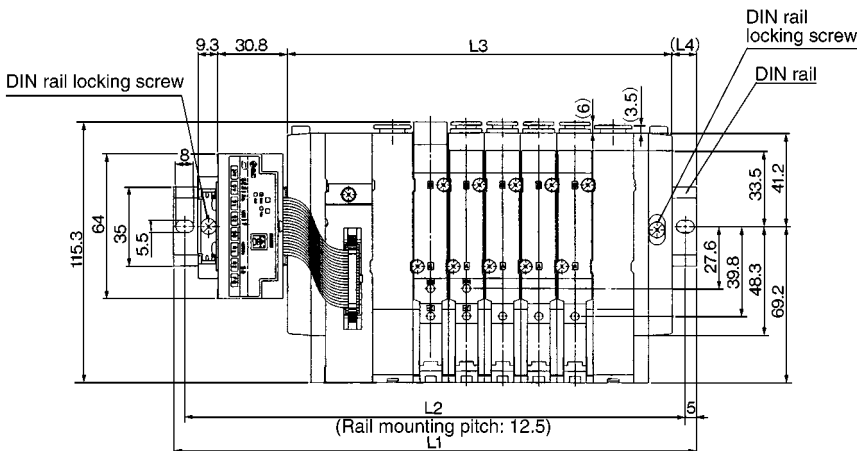
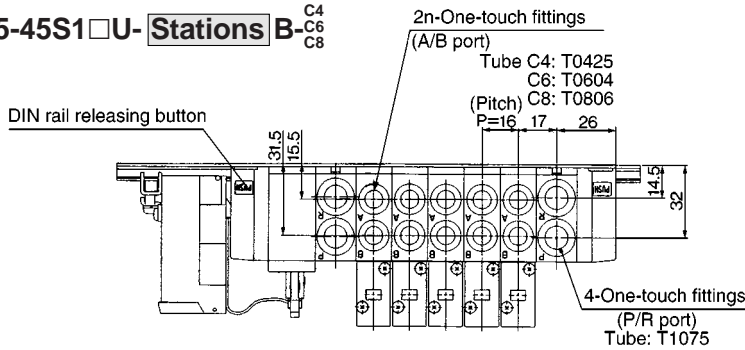
Note) The L1 to L4 dimensions of SS5X5-45S1 □ U- Stations U-□ are identical to those of SS5X5-45S1 □ U- Stations D-□.



Stations	2	3	4	5	6	7	8	9	10
L1	173	185.5	210.5	223	235.5	260.5	273	285.5	298
L2	162.5	175	200	212.5	225	250	262.5	275	287.5
L3	105	121	137	153	169	185	201	217	233
L4	13.5	12	16.5	14.5	13	17.5	15.5	14	12

Note) Width of SI unit applicable to "E":  
Matsushita Electric and "G": Allen-Bradley widens to [24.3mm]. Consult SMC for further information.

#### SS5X5-45S1 □ U- Stations B-□



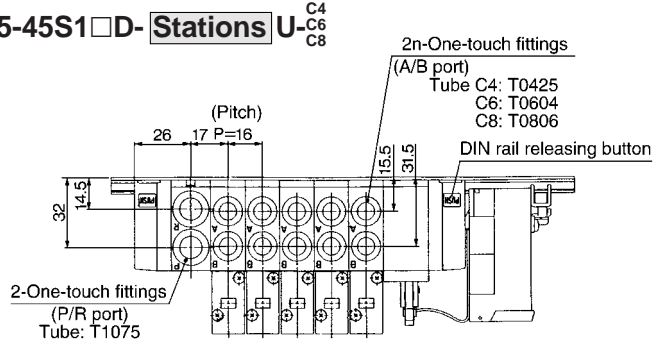
Stations	2	3	4	5	6	7	8	9	10
L1	198	210.5	223	235.5	260.5	273	285.5	310.5	323
L2	187.5	200	212.5	225	250	262.5	275	300	312.5
L3	123	139	155	171	187	203	219	235	251
L4	17	15.5	13.5	12	16.5	14.5	13	17.5	15.5

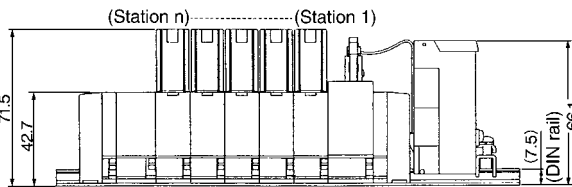
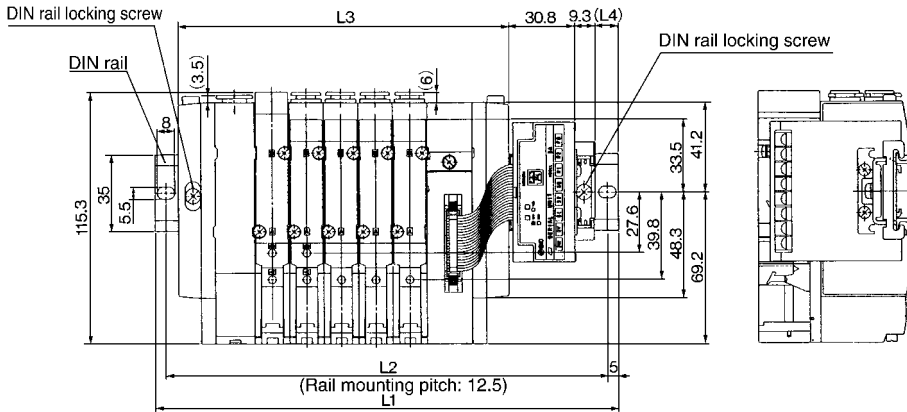
Stations	11	12	13	14	15	16
L1	335.5	348	373	385.5	398	410.5
L2	325	337.5	362.5	375	387.5	400
L3	267	283	299	315	331	347
L4	14	12	16.5	15	13	11.5

Note) Width of SI unit applicable to "E":  
Matsushita Electric and "G": Allen-Bradley widens to [24.3mm]. Consult SMC for further information.

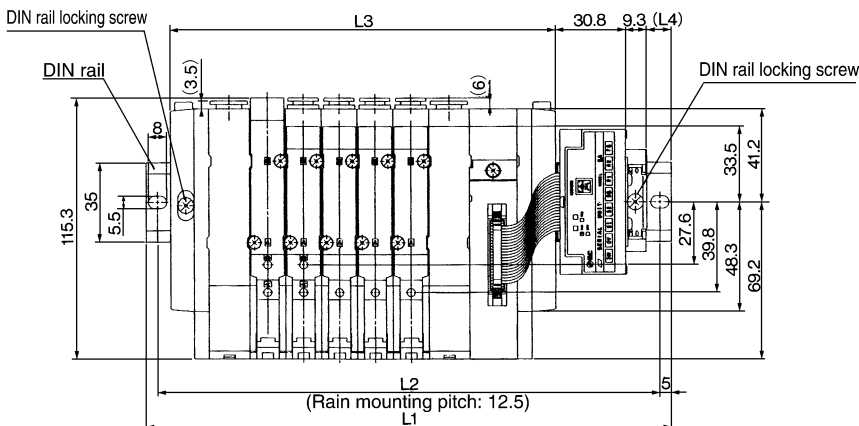
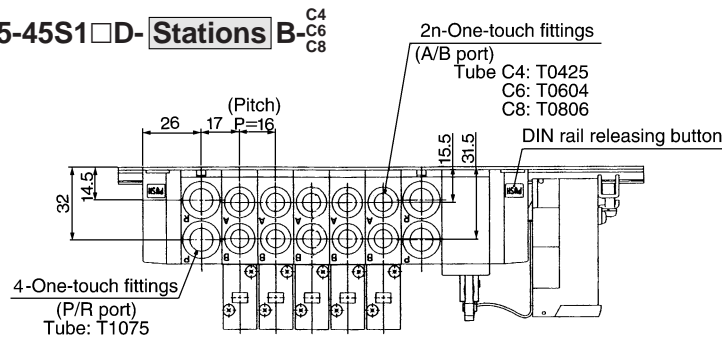
## SS5X5-45S1 □ D- Stations U- □



Note) The L1 to L4 dimensions of SS5X5-45S1 □ D- Stations U- □ are identical to those of SS5X5-45S1 □ D- Stations U- □.



## SS5X5-45S1 □ D- Stations B- □



Stations	2	3	4	5	6	7	8	9	10
L1	173	185.5	210.5	223	235.5	260.5	273	285.5	298
L2	162.5	175	200	212.5	225	250	262.5	275	287.5
L3	105	121	137	153	169	185	201	217	233
L4	13.5	12	16.5	14.5	13	17.5	15.5	14	12



Note) Width of SI unit applicable to "E": Matsushita Electric and "G": Allen-Bradley widens to [24.3mm]. Consult SMC for further information.

Stations	2	3	4	5	6	7	8	9	10
L1	198	210.5	223	235.5	260.5	273	285.5	310.5	323
L2	187.5	200	212.5	225	250	262.5	275	300	312.5
L3	123	139	155	171	187	203	219	235	251
L4	17	15.5	13.5	12	16.5	14.5	13	17.5	15.5

Stations	11	12	13	14	15	16
L1	335.5	348	373	385.5	398	410.5
L2	325	337.5	362.5	375	387.5	400
L3	267	283	299	315	331	347
L4	14	12	16.5	15	13	11.5



Note) Width of SI unit applicable to "E": Matsushita Electric and "G": Allen-Bradley widens to [24.3mm]. Consult SMC for further information.

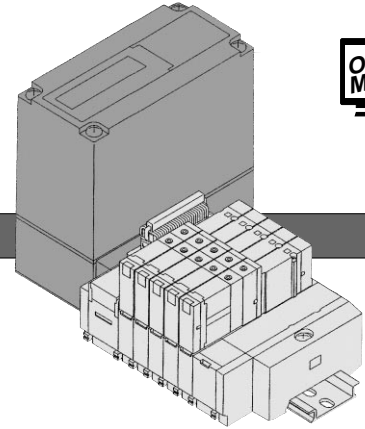
- SY
- SYJ
- SX
- VK
- VZ
- VF
- VFR
- VP7
- VP4

- VQ
- VQ4
- VQZ
- VQD
- VZS
- VFS
- VS
- VS7



45S2 Type

# Made to Order Specifications SX3000/5000 Serial Interface Unit IN313



## Serial Interface manifold equipped with IN313

### How to Order Manifold

45S2 (Serial interface unit IN313)

SS5X **3** - 45S2 **U** - **06** **D** - **C4** -  

**Manifold series**

3	SX3000
5	SX5000

**SI unit mounting position**

Symbol	Mounting position
U	U side
D	D side

**Stations**

Symbol	Stations	Note
02	2	Double wiring specification
⋮	⋮	
08	8	Applicable up to 16 solenoids. Use manifold specification from to specify wiring.
09	9	
⋮	⋮	
16	16	

The number of blank plate ass'y is included.

**SUP/EXH block ass'y mounting position**

Symbol	Mounting position	Stations
U	U-side	2 to 10
D	D-side	2 to 10
B	Both sides	2 to 16
M	Special specification	

\* Special specification is available by special order.

**A/B port size**

**SX3000**

Symbol	Port size
C4	One-touch fittings for ø4
C6	One-touch fittings for ø6
M	Mixed

**SX5000**

Symbol	Port size
C4	One-touch fittings for ø4
C6	One-touch fittings for ø6
C8	One-touch fittings for ø8
M	Mixed

\* Mixed porting available by special order.

**Option**

When a DIN rail longer than standard is required, enter the number of manifold stations that corresponds with the length of DIN rail needed. (20 stations max.)

### How to Order Applicable SI Unit

IN313 - **MB1**

**Applicable makers**

MB1	For Mitsubishi Electric
TA1	For OMRON
FU1	For Fuji Electric
SH1	For Sharp
TY1	For Toyota Machine Works
TY2	
PA1	For Matsushita Electric Works
HT1	For Hitachi
AB1	For Allen Bradley
TS1	For Toshiba

### How to Order Valve

SX **3** **2** 40 - **5** LOZ  

**Series**

3	SX3000
5	SX5000

**Configuration**

1	2 position single
2	2 position double
3	3 position closed center
4	3 position exhaust center
5	3 position pressure center

**Rated voltage**

5	24V DC
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**Manual override**

-	Non-locking push style
D	Push-turn-locking slotted style

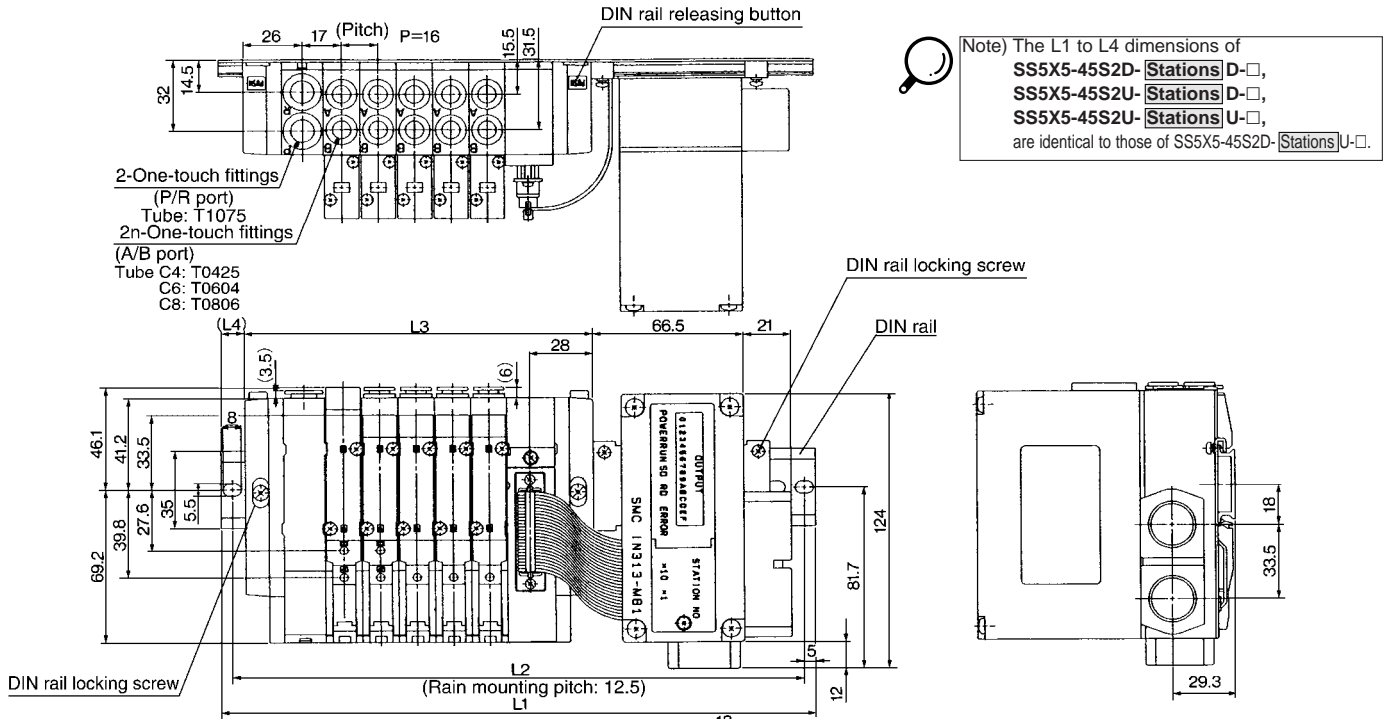




# SX3000/5000

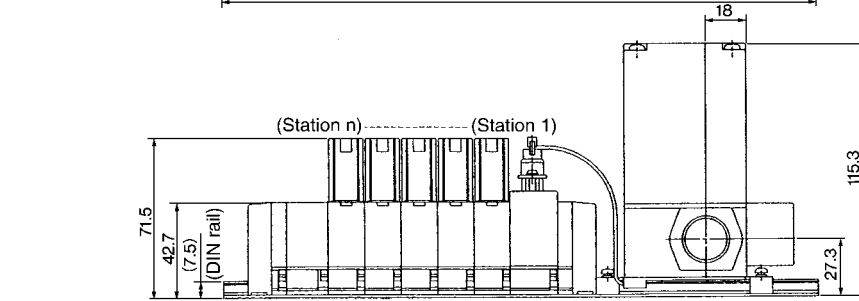
## 45S2<sub>Type</sub> SX5000: Serial Interface Unit/Plug-in Style

### SS5X5-45S2D- Stations U<sub>C4</sub> <sub>C6</sub> <sub>C8</sub>

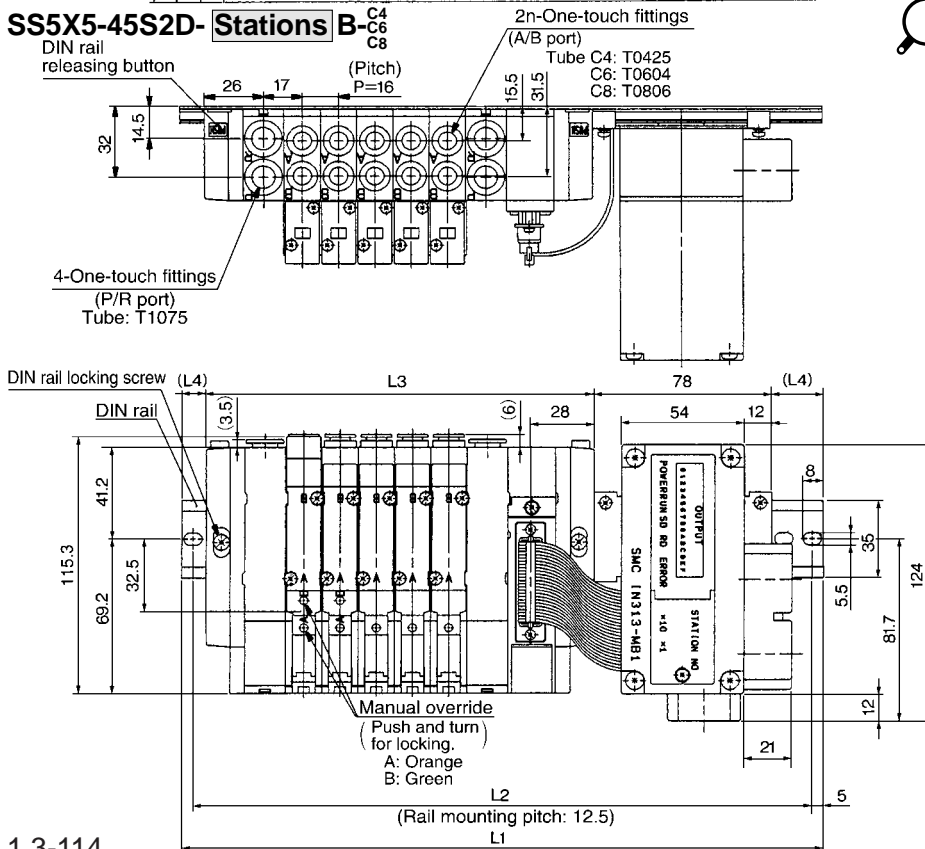


Note) The L1 to L4 dimensions of SS5X5-45S2D- Stations D-□, SS5X5-45S2U- Stations D-□, SS5X5-45S2U- Stations U-□, are identical to those of SS5X5-45S2D- Stations U-□.

Stations	2	3	4	5	6	7	8	9	10
L1	210.5	223	248	260.5	273	298	310.5	323	335.5
L2	200	212.5	237.5	250	262.5	287.5	300	312.5	325
L3	105	121	137	153	169	185	201	217	233
L4	13.5	12	16.5	14.5	13	17.5	15.5	14	12



Note) The L1 to L4 dimensions of SS5X5-45S2U- Stations B-□ are identical to those of SS5X5-45S2D- Stations B-□.



Note) The L1 to L4 dimensions of SS5X5-45S2U- Stations B-□ are identical to those of SS5X5-45S2D- Stations B-□.

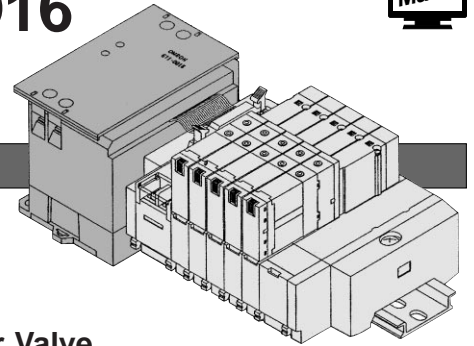
Stations	2	3	4	5	6	7	8	9
L1	235.5	248	260.5	273	298	310.5	323	348
L2	225	237.5	250	262.5	287.5	300	312.5	337.5
L3	123	139	155	171	187	203	219	235
L4	17	15.5	13.5	12	16.5	14.5	13	17.5

Stations	10	11	12	13	14	15	16
L1	360.5	373	385.5	410.5	423	435.5	460.5
L2	350	362.5	375	400	412.5	425	450
L3	251	267	283	299	315	331	347
L4	15.5	14	12	16.5	15	13	17.5

45S3 Type

# Made to Order Specifications SX3000/5000 Serial Interface Unit With OMRON's G71-OD16



Serial interface manifold equipped with OMRON's transmission unit G71-OD16

## How to Order Manifold

45S3 (Serial interface manifold with transmission unit)

SS5X **3** - 45S3 **U** - **06** **D** - **C4** - **□**

Manifold series

3	SX3000
5	SX5000

### Specifications

Symbol	Specifications
—	With transmission unit
0 (Note)	Without transmission unit

Note) Models without a transmission unit have a DIN rail that have an additional length as long as the transmission unit mounting space. Put "0" for shorter DIN rails (same as 45□type) in the option specifying space at the end of ordering part number.

### Transmission unit mounting position

Symbol	Mounting position
U	U side
D	D side

### Valve stations

Symbol	Stations	Note
02	2	Double wiring specification
⋮	⋮	
08	8	Applicable up to 16 solenoids. Use manifold specification from to specify wiring.
09	9	
⋮	⋮	
16	16	

Note) The number of blank plate ass'y is included.

### SUP/EXH block ass'y mounting position

Symbol	Mounting position	Stations
U	U-side	2 to 10
D	D-side	2 to 10
B	Both sides	2 to 16
M	Special specification	

\* Special specification is available by special order.

### A/B port size

#### SX3000

Symbol	Port size
C4	One-touch fittings for ø4
C6	One-touch fittings for ø6
M	Mixed

#### SX5000

Symbol	Port size
C4	One-touch fittings for ø4
C6	One-touch fittings for ø6
C8	One-touch fittings for ø8
M	Mixed

\* Mixed porting available by special order.

### Option

When a DIN rail longer than standard is required, enter the number of manifold stations that corresponds with the length of DIN rail needed. (20 stations max.)

## How to Order Valve

SX **3** **2** **40** - **5** **LOZ** **□**

Series

3	SX3000
5	SX5000

Configuration

1	2 position single
2	2 position double
3	3 position closed center
4	3 position exhaust center
5	3 position pressure center

Rated voltage

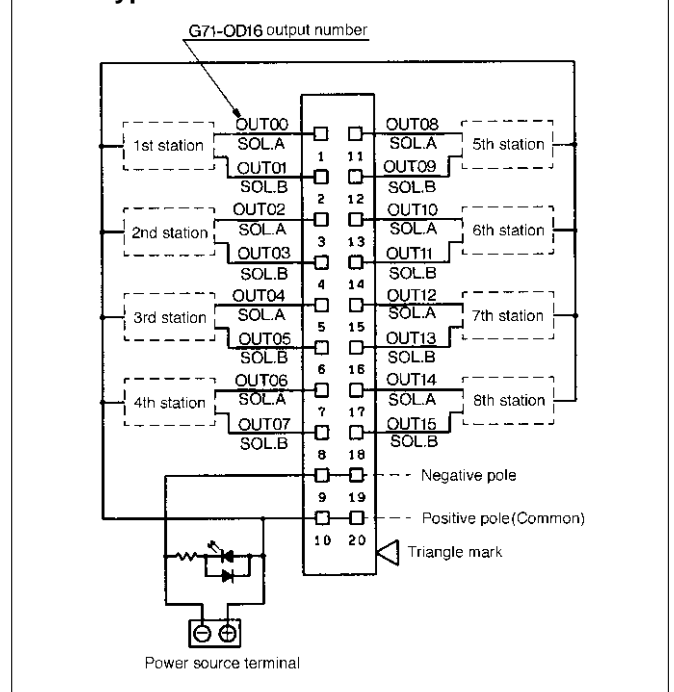
5	24V DC
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Manual override

—	Non-locking push style
D	Push-turn-locking slotted style

## Manifold Internal Wiring

### Serial type 45S3



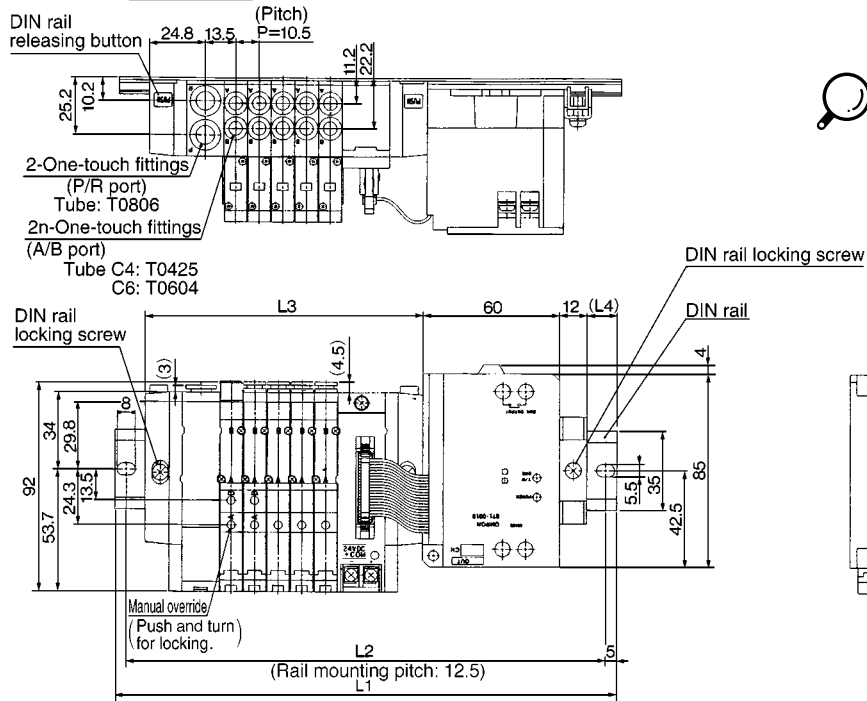
- Refer to the instruction manual for or the catalog of transmitter terminals for the specifications OMRON's transmission terminals.
- When using a single solenoid, connect wire to A side.
- The circuit above shows double wiring specification up to eight stations. When wiring is specified in manifold specification form, valves corresponding to number of transmission unit are different from circuit above.
- Maximum solenoid station: 16 (e.g. Single solenoid: 16 max.) Consult SMC for more stations.

### Caution

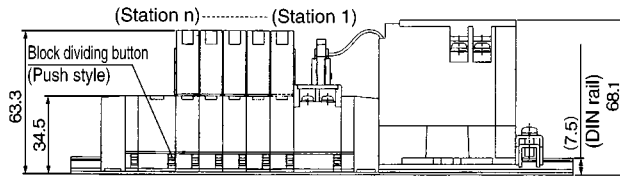
- The wiring specification for SS5X<sup>3</sup>-45S30 is different from that for SS5X<sup>3</sup>-45PG.

## 45S3<sub>Type</sub> SX3000: Serial Interface Unit/Plug-in Style

### SS5X3-45S3D- Stations U-C<sub>4</sub>

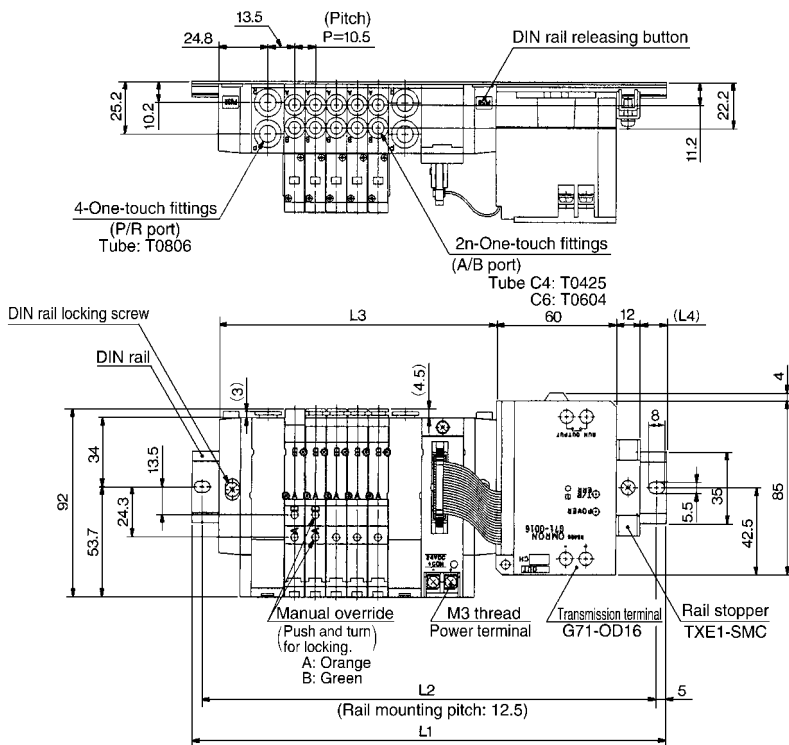


Note) The L1 to L4 dimensions of SS5X3-45S3D- Stations D-□, SS5X3-45S3U- Stations D-□, SS5X3-45S3U- Stations U-□, are identical to those of SS5X3-45S3D- Stations U-□.



Stations	2	3	4	5	6	7	8	9	10
L1	198	198	210.5	223	235.5	248	260.5	260.5	273
L2	187.5	187.5	200	212.5	225	237.5	250	250	262.5
L3	91.5	102	112.5	123	133.5	144	154.5	165	175.5
L4	17	12	13	14	15	16	17	11.5	12.5

### SS5X3-45S3D- Stations B-C<sub>4</sub>



Note) The L1 to L4 dimensions of SS5X3-45S3U- Stations B-□ are identical to those of SS5X3-45S3D- Stations B-□.

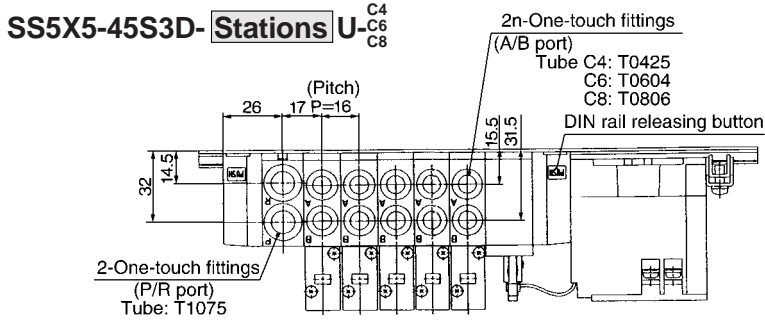
Stations	2	3	4	5	6	7	8	9
L1	210.5	223	235.5	235.5	248	260.5	273	285.5
L2	200	212.5	225	225	237.5	250	262.5	275
L3	108	118.5	129	139.5	150	160.5	171	181.5
L4	15	16	17	12	13	14	15	16

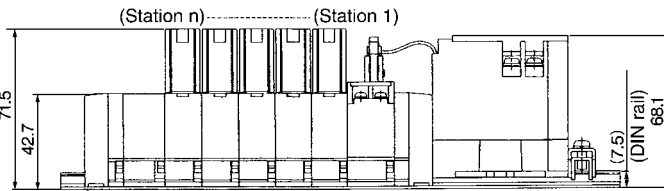
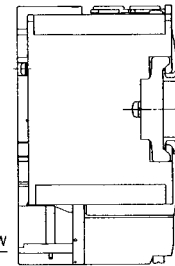
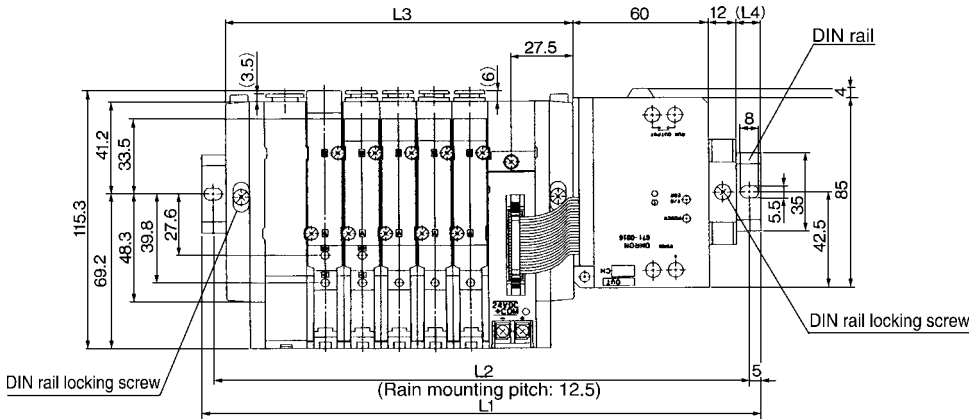
Stations	10	11	12	13	14	15	16
L1	298	298	310.5	323	335.5	348	360.5
L2	287.5	287.5	300	312.5	325	337.5	350
L3	192	202.5	213	223.5	234	244.5	255
L4	17	11.5	12.5	13.5	14.5	15.5	16.5

# SX3000/5000 Made to Order Specifications

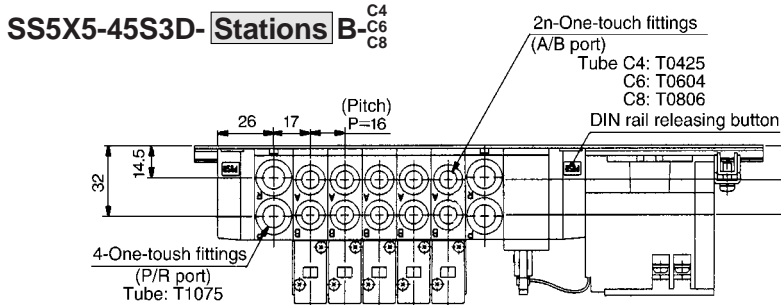
## SX5000: Serial Interface Unit/Plug-in Style



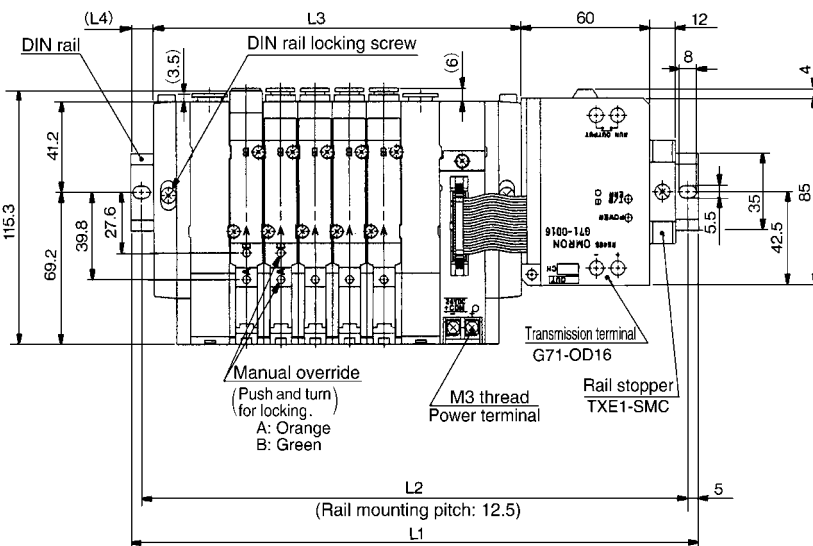
(Note) The L1 to L4 dimensions of **SS5X5-45S3D- Stations D**-□, **SS5X5-45S3U- Stations D**-□, **SS5X5-45S3U- Stations U**-□, are identical to those of **SS5X5-45S3D- Stations U**-□.



Stations	2	3	4	5	6	7	8	9	10
L1	210.5	223	235.5	260.5	273	285.5	298	323	335.5
L2	200	212.5	225	250	262.5	275	287.5	312.5	325
L3	105	121	137	153	169	185	201	217	233
L4	16.5	15	13	17.5	16	14	12.5	17	15



(Note) The L1 to L4 dimensions of **SS5X5-45S3U- Stations B**-□ are identical to those of **SS5X5-45S3D- Stations B**-□.



Stations	2	3	4	5	6	7	8	9
L1	223	235.5	260.5	273	285.5	310.5	323	335.5
L2	212.5	225	250	262.5	275	300	312.5	325
L3	123	139	155	171	187	203	219	235
L4	14	12	16.5	15	13	17.5	16	14

Stations	10	11	12	13	14	15	16
L1	348	373	385.5	398	410.5	435.5	448
L2	337.5	362.5	375	387.5	400	425	437.5
L3	251	267	283	299	315	331	347
L4	12.5	17	15	13.5	11.5	16	14.5

- SY
- SYJ
- SX**
- VK
- VZ
- VF
- VFR
- VP7
- VP4

- VQ
- VQ4
- VQZ
- VQD
- VZS
- VFS
- VS
- VS7



# Made to Order SX3000/5000 External Pilot with Built-in Silencer

External pilot manifold bases for low-pressure/vacuum use are added to split-type/DIN rail manifold. The built-in silencer has a clean-cut appearance.



45 Type

## Individual wiring

### How to Order Manifold

45 type

SS5X<sup>3</sup>/<sub>5</sub>-45-05UR-C6

**Series**

3	SX3000
5	SX5000

**Stations**

Symbol	Stations	SUP/EXH block ass'y mounting position
02	2	Symbol Mounting position Stations
:	:	
20	20	

The number of blank plate ass'y is included.

\* Special specification is available by special order.

**SUP/EXH block ass'y specifications**

Symbol	Specifications
R	External pilot specification
S	Internal pilot specification/with silencer
RS	External pilot specification/with silencer

**A/B port size**

**SX3000**

Symbol	Port size
C4	One-touch fittings for ø4
C6	One-touch fittings for ø6
M*	Mixed

**SX5000**

Symbol	Port size
C4	One-touch fittings for ø4
C6	One-touch fittings for ø6
C8	One-touch fittings for ø8
M*	Mixed

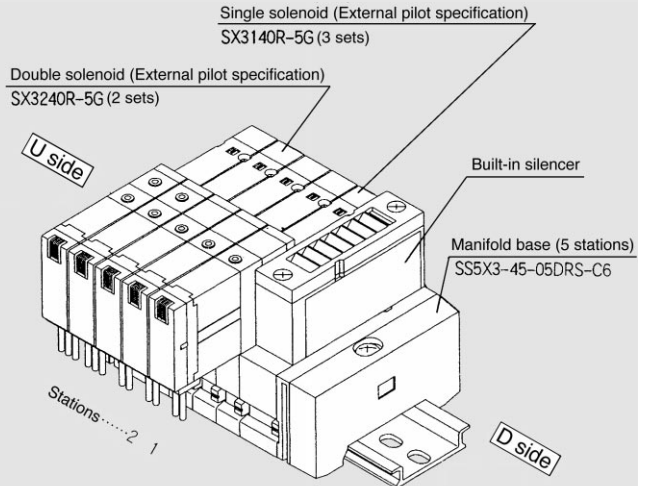
\* Mixed porting available by special order.

**Option**

When a DIN rail longer than standard is required, enter the number of manifold stations that corresponds with the length of DIN rail needed. (20 stations max.)

### How to Order Valve Manifold Ass'y (Example)

#### Ordering example



SS5X3-45-05DRS-C6 ···· 1 set (External pilot with built-in silencer No.)  
 \* SX3140R-5G ······ 3 sets (Single solenoid No.)  
 \* SX3240R-5G ······ 2 sets (Double solenoid No.)

To order valves and options mounted onto the manifold at the factory, list the valve/options with an asterisk in front of each part number.

They will be assembled in the order listed starting at the first station at the D side even if supply/exhaust block ass'y is located at either end.  
 For more complicated assemblies.  
 For manifolds with supply/exhaust block at each end of the manifold, external pilot ports and silencers will also be located at each end of the manifold.  
 To order the supply/exhaust block ass'y (SX3/5000-51-1A) mounted at a location other than the ends of manifold.

### How to Order Valve

SX 5 2 40 5 N L

**Series**

3	SX3000
5	SX5000

**Configuration**

1	2 position single
2	2 position double
3	3 position closed center
4	3 position exhaust center
5	3 position pressure center

**Pilot**

—	Internal pilot
R	External pilot

**Rated voltage**

5	24V DC
6	12V DC
V	6V DC
S	5V DC
R	3V DC

**Common**

—	Positive common
N	Negative common

Note) For single solenoid valves with the 'G' electrical entry, only positive common wiring is available. For single solenoid valves without the 'S' or 'Z' protection circuit, only positive common wiring is available.

**Manual override**

—	Non-locking push style
D	Push-turn-locking slotted style.

**Indicator light and surge voltage suppressor**

—	W/o indicator light and surge suppressor
S	With surge suppressor
Z	With indicator light and surge suppressor

**Electrical entry**

Grommet	L plug connector	M plug connector
G: 300mm lead wire	L: 300mm lead wire	M: 300mm lead wire
H: 600mm lead wire	LN: Without lead wire LO: Without connector	MN: Without lead wire MO: Without connector

\* The LN or MN option includes 2 sockets for single solenoid valves and 3 sockets for double solenoid valves.

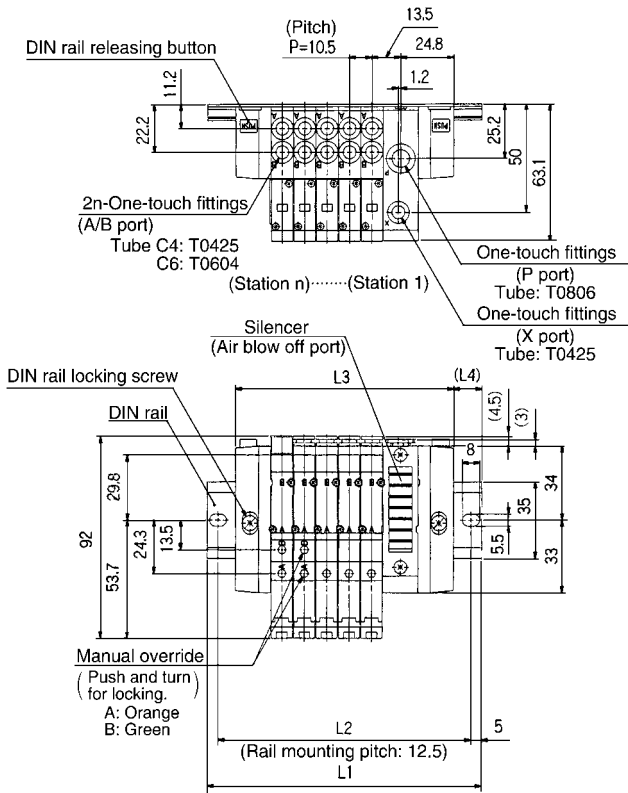




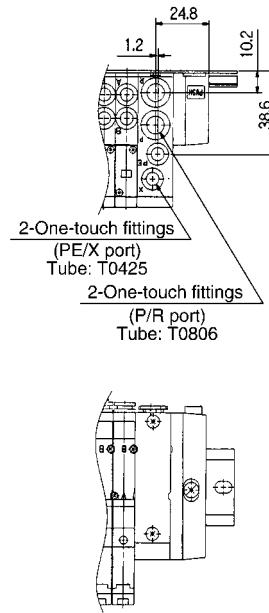
# SX3000/5000

## 45<sub>Type</sub> External pilot/Built-in Silencer

### SX3000: SS5X3-45- Stations DRS-<sup>C4</sup><sub>C6</sub>

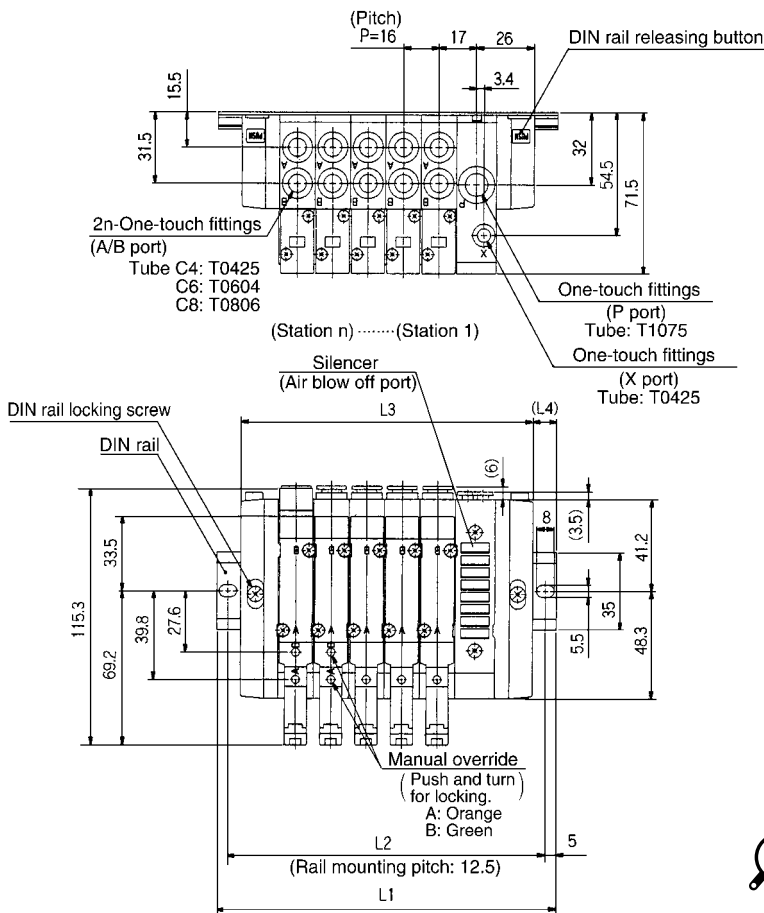


### SS5X3-45- Stations DR-<sup>C4</sup><sub>C6</sub>

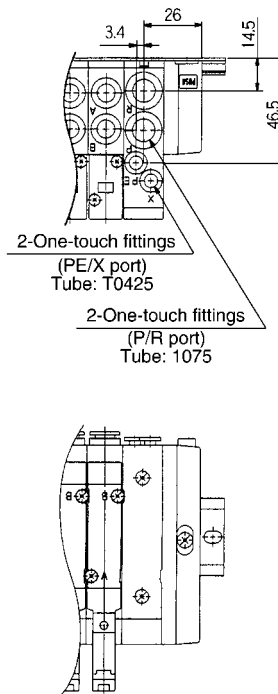


\* The dimensions L1 to L4 are identical to SS5X3-45- Stations <sup>U</sup><sub>B</sub>-<sup>C4</sup><sub>C6</sub> (P.1.3-74)

### SX5000: SS5X5-45- Stations DRS-<sup>C4</sup><sub>C6</sub> <sup>C8</sup>



### SS5X5-45- Stations DR-<sup>C4</sup><sub>C6</sub> <sup>C8</sup>

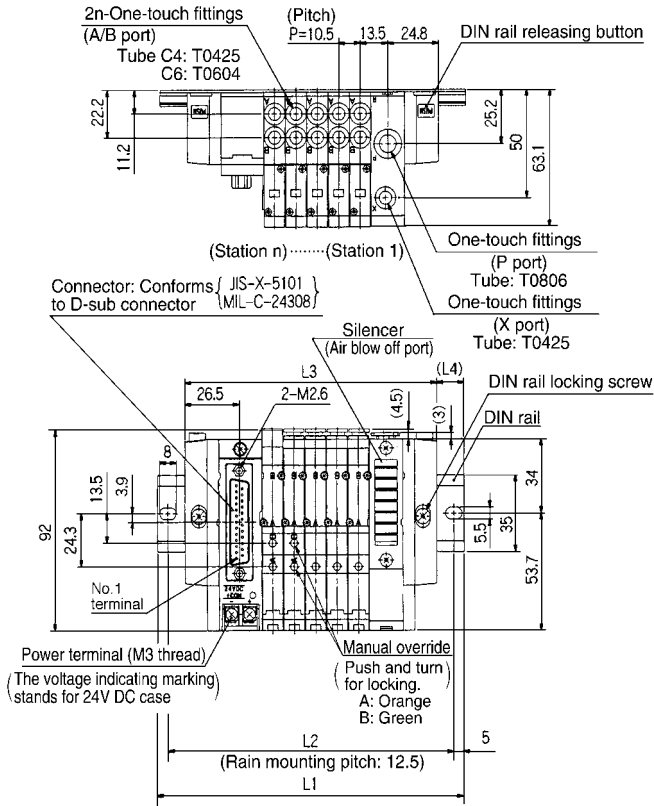


\* The dimensions L1 to L4 are identical to SS5X5-45- Stations <sup>U</sup><sub>B</sub>-<sup>C4</sup><sub>C6</sub><sup>C8</sup> (P.1.3-75)

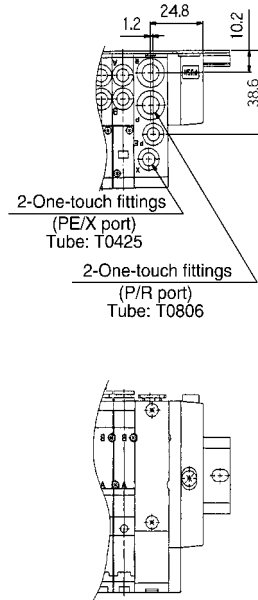
# SX3000/5000 Made to Order Specifications

## 45□ Type External Pilot/Built-in Silencer

### SX3000: SS5X3-45FU- Stations DRS-<sup>C4</sup><sub>C6</sub>

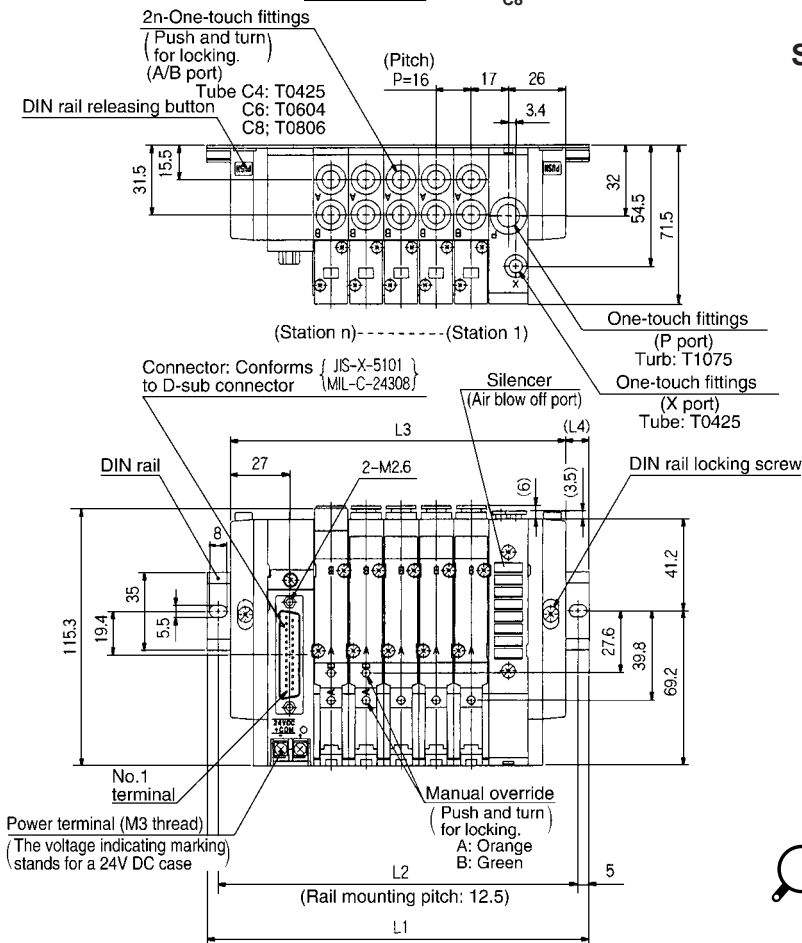


### SS5X3-45FU- Stations DR-<sup>C4</sup><sub>C6</sub>

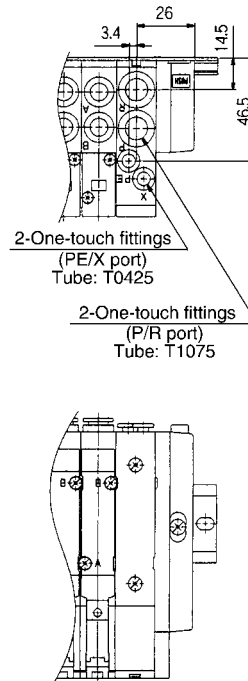


\* The dimensions L1 to L4 are identical to SS5X3-45FU- Stations <sup>U</sup><sub>B</sub>-<sup>C4</sup><sub>C6</sub> (P.1.3-86)

### SX5000: SS5X5-45FU- Stations DRS-<sup>C4</sup><sub>C6</sub> <sup>C8</sup>



### SS5X5-45FU- Stations DR-<sup>C4</sup><sub>C6</sub> <sup>C8</sup>



\* The dimensions L1 to L4 are identical to SS5X3-45FU- Stations <sup>U</sup><sub>B</sub>-<sup>C4</sup><sub>C6</sub> (P.1.3-88)

- SY
- SYJ
- SX
- VK
- VZ
- VF
- VFR
- VP7
- VP4
- VQ
- VQ4
- VQZ
- VQD
- VZS
- VFS
- VS
- VS7

# Made to Order SX3000/5000 Mixed Mounting



**M45**  
Type

Non plug-in

This manifold makes it possible to mount SX3000 onto base of SX5000.

## How to Order Manifold

### M45 type (Mixed mounting style)

SS5X5-M45-05 U C86

Mixed mounting style

#### Stations

Symbol	Stations	SUP/EXH block ass'y mounting position
02	2	U
⋮	⋮	
20	20	D

The number of blank plate ass'y is included.

\* Special specification is available by special order.

#### SUP/EXH block ass'y specifications

Symbol	Specifications
—	Standard/Internal pilot specification
S	With silencer

\* External pilot specification is unavailable for mixed mounting style.

#### Option

When a DIN rail longer than standard is required, enter the number of manifold stations that corresponds with the length of DIN rail needed. (20 stations max.)

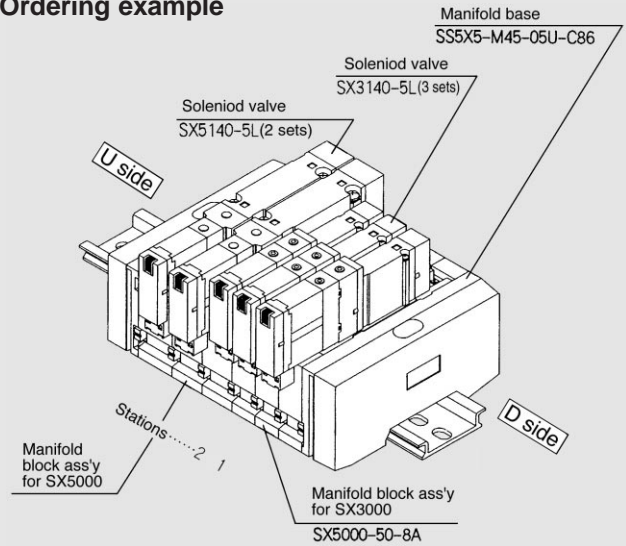
#### A/B port size

Symbol	Port size	Symbol	Port size
C44	SX5000: One-touch fittings for ø4 SX3000: One-touch fittings for ø4	C66	SX5000: One-touch fittings for ø6 SX3000: One-touch fittings for ø6
C46	SX5000: One-touch fittings for ø4 SX3000: One-touch fittings for ø6	C84	SX5000: One-touch fittings for ø8 SX3000: One-touch fittings for ø4
C64	SX5000: One-touch fittings for ø6 SX3000: One-touch fittings for ø4	C86	SX5000: One-touch fittings for ø8 SX3000: One-touch fittings for ø6
		M*	Mixed

\* Mixed porting available by special order.

## How to Order Valve Manifold Ass'y (Example)

### Ordering example



SS5X5-M45-05U-C86 ····· 1set (M45 manifold base No.)  
 \* SX3140-5G ····· 3sets (Single solenoid No.)  
 \* SX3240-5G ····· 2sets (Double solenoid No.)  
 To order valves and options mounted onto the manifold at the factory, list the valve/options with an asterisk in front of each part number.

They will be assembled in the order listed starting at the first station at the D side even if supply/exhaust block assembly is located at either end.  
 For more complicated assemblies, order with a manifold specifying form.

## How to Order Valve

SX 5 2 40-5 N L

#### Series

3	SX3000
5	SX5000

#### Configuration

1	2 position single
2	2 position double
3	3 position closed center
4	3 position exhaust center
5	3 position pressure center

#### Manual override

—	Non-locking push style
D	Push-turn-locking slotted style

#### Indicator light and surge voltage suppressor

—	W/o indicator light and surge suppressor
S	With surge suppressor
Z	With indicator light and surge suppressor

#### Electrical entry

Grommet	L plug connector	M plug connector
G: 300mm lead wire	L: 300mm lead wire	M: 300mm lead wire
H: 600mm lead wire	LN: Without lead wire LO: Without connector	MN: Without lead wire MO: Without connector

#### Rated voltage

5	24V DC
6	12V DC
V	6V DC
S	5V DC
R	3V DC

#### Common

—	Positive common
N	Negative common

Note) For single solenoid valves with the 'G' electrical entry, only positive common wiring is available. For single solenoid valves without the 'S' or 'Z' protection circuit, only positive common wiring is available.

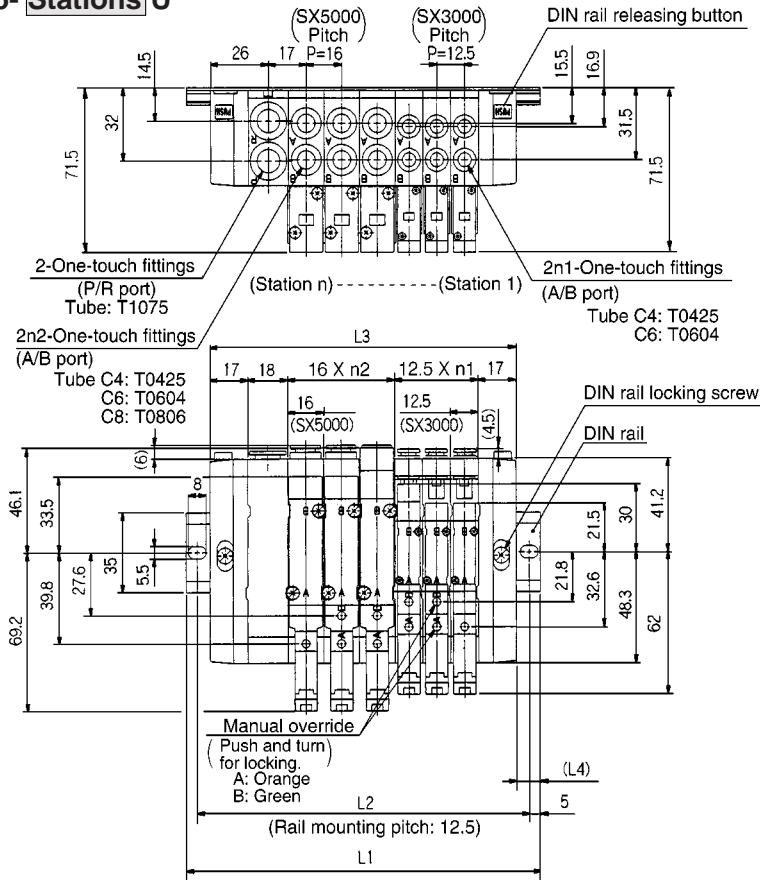
\* The LN or MN option includes 2 sockets for single solenoid valves and 3 sockets for double solenoid valves.



# SX3000/5000

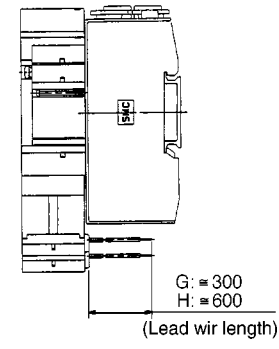
## M45<sub>Type</sub> (Non plug-in) Dimensions/Mixed mounting

### SS5X5-M45- Stations U

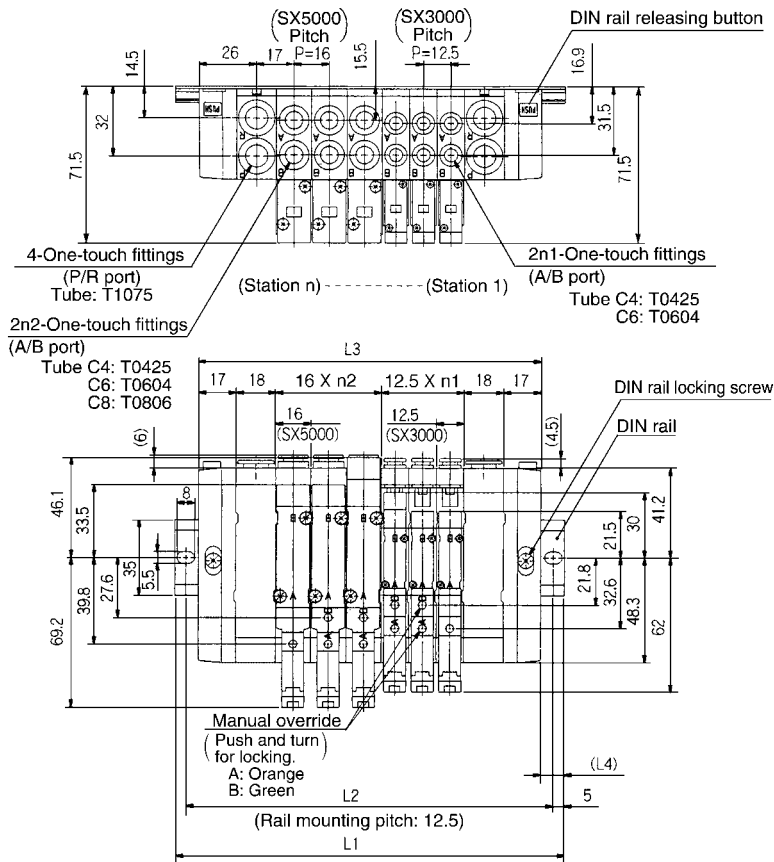


L size: Equations for L1 to L4  
 $L3 = 12.5 \times n1 + 16 \times n2 + 52$   
 $M = \left( \frac{L3}{12.5} + 1 \right)$  Omit decimals  
 $L1 = 12.5 \times M + 23$   
 $L2 = L1 - 10.5$   
 $L4 = (L1 - L3) / 2$

n1: Number of SX3000's stations  
 n2: Number of SX5000's stations



### SS5X5-M45- Stations B



L size: Equations for L1 to L4  
 $L3 = 12.5 \times n1 + 16 \times n2 + 70$   
 $M = \left( \frac{L3}{12.5} + 1 \right)$  Omit decimals  
 $L1 = 12.5 \times M + 23$   
 $L2 = L1 - 10.5$   
 $L4 = (L1 - L3) / 2$

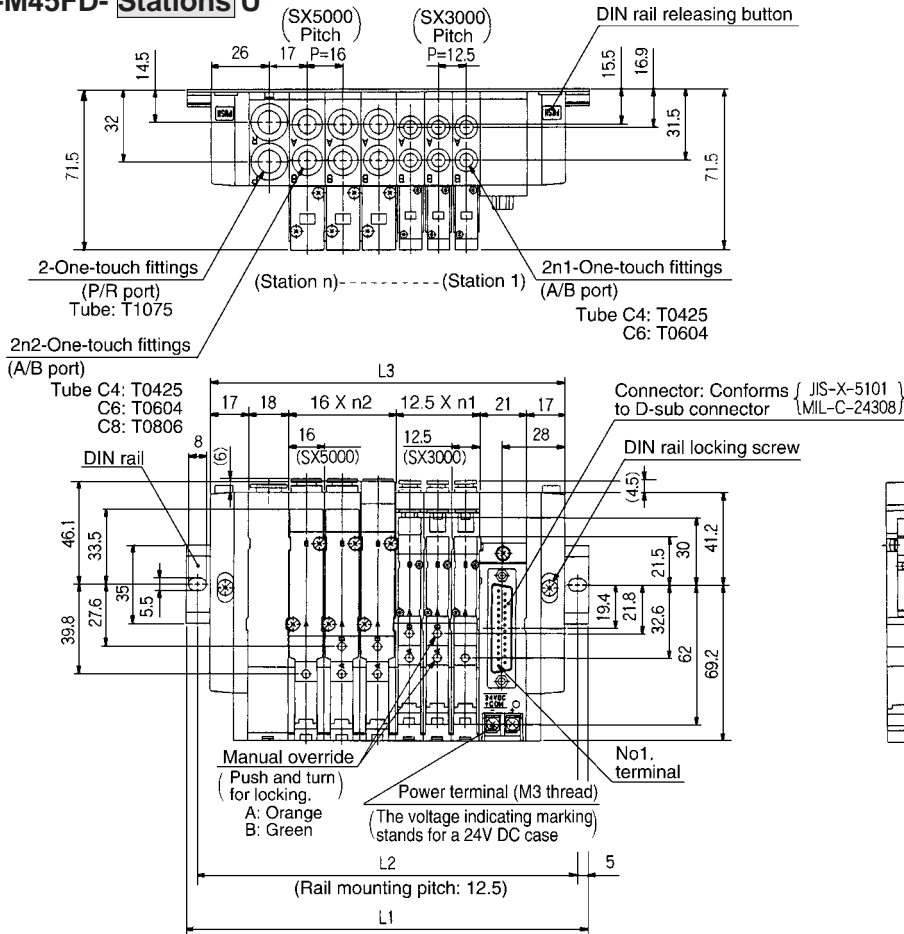
n1: Number of SX3000's stations  
 n2: Number of SX5000's stations



# SX3000/5000 Made to Order Specifications

## M45 Type (Plug-in) Dimensions/Mixed mounting

### SS5X5-M45FD- Stations U

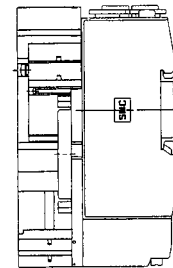


L size: Equations for L1, L3  
 $L3 = 12.5 \times n1 + 16 \times n2 + 73$

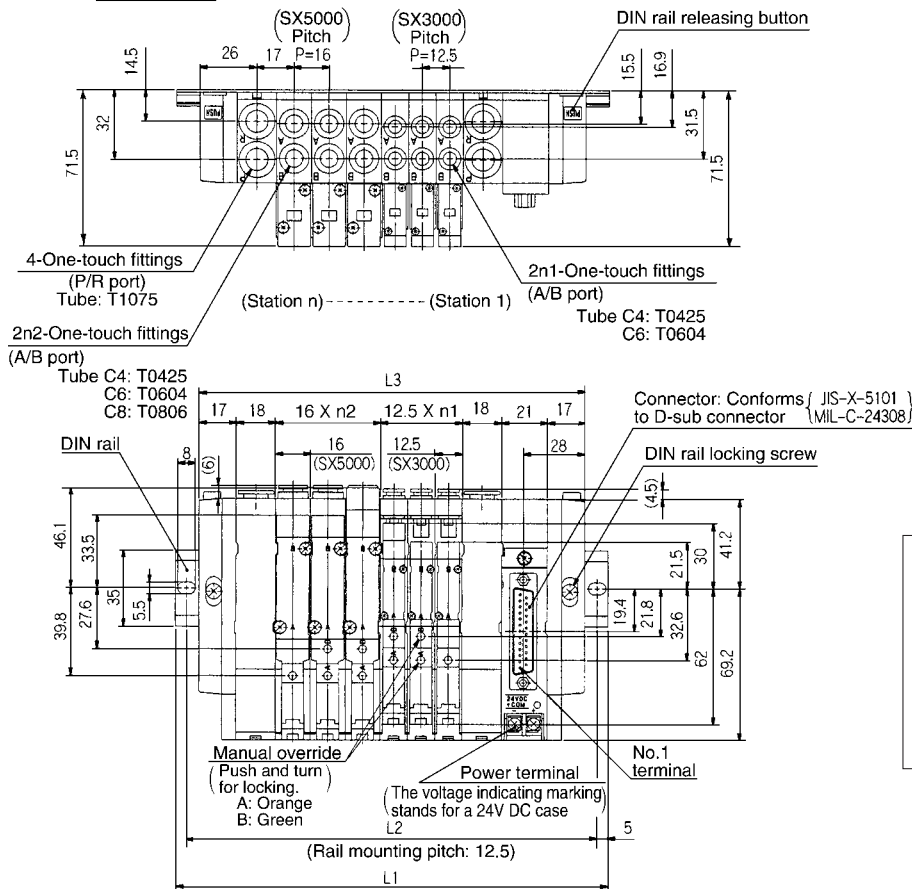
$M = (\frac{L3}{12.5} + 1)$  Omit decimals

$L1 = 12.5 \times M + 23$   
 $L2 = L1 - 10.5$

n1: Number of SX3000's stations  
 n2: Number of SX5000's stations



### SS5X5-M45FD- Stations B



L size: Equations for L1 to L4  
 $L3 = 12.5 \times n1 + 16 \times n2 + 91$

$M = (\frac{L3}{12.5} + 1)$  Omit decimals

$L1 = 12.5 \times M + 23$   
 $L2 = L1 - 10.5$   
 $L4 = (L1 - L3) / 2$

n1: Number of SX3000's stations  
 n2: Number of SX5000's stations

- SY
- SYJ
- SX
- VK
- VZ
- VF
- VFR
- VP7
- VP4

- VQ
- VQ4
- VQZ
- VQD
- VZS
- VFS
- VS
- VS7



# Made to Order Specifications

## SX3000/5000/7000



### Fluoro Rubber for Main Valve -X90

The rubber section of the main valve is made of fluoro rubber, so these models are applicable to the following:

1. When malfunction occurs or is expected to occur due to swelling of the spool valve packing when oil other than the recommended turbine oil is used.
2. When ozone enters the air source or is generated in the air source.

Applicable solenoid valves: Series SX3□□0, SX5□□0, and SX7□□0



Enter in the same way as standard models.

The specifications and performance are the same as standard models.

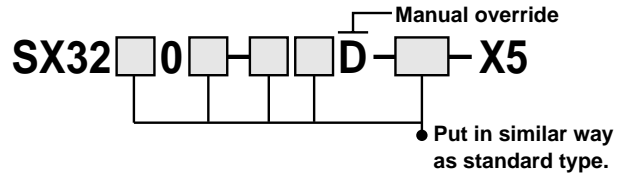


Note) With the "-X90" option, the spool seals are made of fluoro rubber. The valve, however is not rated for high temperature applications.

### Single/Double Common -X5

Single solenoid and double solenoid are exchangeable.

#### How to Order



#### Specifications

Valve	Pilot operated 2 position 5 port solenoid valve		
Configuration	Single solenoid/Double solenoid common style		
Internal pilot operating pressure range (MPa)	2 position single	0.15 to 0.7	
	2 position double	0.15 to 0.7	
External pilot operating pressure range (MPa)	Operating pressure range -100kPa to 0.7		
	Pilot press. range	2 position single	0.25 to 0.7
		2 position double	0.25 to 0.7
Ambient and fluid temperature (°C)	Max: 50		
Power (W)	0.6 (With light: 0.65)		
Weight (g)	C4: 81, C6: 77 (With bracket C4: 89, C6: 85)		

\* Other specifications (effective area, response time, etc.) are similar to standard product.

### ⚠ Caution

1. It is set as single solenoid specification when shipped. (See diagram 1.)
2. For use as double solenoid, set manual override and connector ass'y as shown below.
  - ① Get rid of the label of manual override (green) on B side and turn the screw as to make the slit of manual on B side located in the position that diagram 2 shows.
  - ② For exclusive use of B side solenoid energizing, attach the socket of optional lead wire ass'y (white) into a square hole indicated as "B" of the connector.
3. For setting of double solenoid, avoid simultaneous energizing to the solenoid valves on both sides.
4. Refer to p.1.3-6 for further information on connection and circuit of indicator light and surge voltage suppressor attached style.
5. Outer dimensions are same as standard.

