

# 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

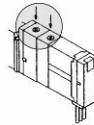
**Common**

—	Positive common
N	Negative common

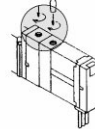
Note) Put nothing for single grommet and single without indicator light and surge voltage suppresser.

**Manual override**

—: Non-locking push style



D: Push-turn-locking slotted style

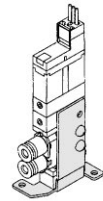


**Indicator light and surge voltage suppressor**

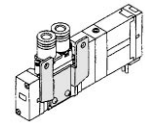
—	Without indicator light and surge voltage suppressor
S	With surge voltage suppressor
Z	With indicator light and surge voltage suppressor

**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	

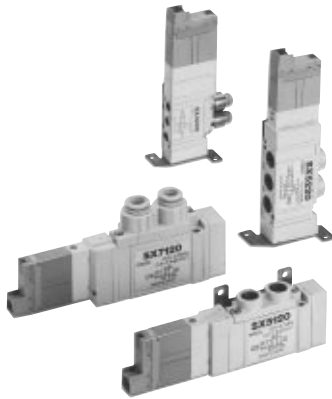
**Electrical entry**

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			3.6 (0.2)	3.42 (0.19)	70	72
	3 position	Closed center			3.6 (0.2)	3.78 (0.21)	73	74
		Exhaust center			3.6 (0.2)	[2.7 (0.15)]		
		Pressure center			3.96 (0.22)	3.6 (0.2)		
					[2.88 (0.16)]			
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			3.42 (0.19)	3.42 (0.19)	80	81
	3 position	Closed center			3.42 (0.19)	3.78 (0.21)	82	84
		Exhaust center			3.42 (0.19)	[2.7 (0.15)]		
		Pressure center			3.6 (0.2)	3.6 (0.2)		
					[2.16 (0.12)]			
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			3.6 (0.2)	3.96 (0.22)	76	77
	3 position	Closed center			3.6 (0.2)	4.5 (0.25)	78	80
		Exhaust center			3.78 (0.21)	[3.06 (0.17)]		
		Pressure center			3.96 (0.22)	3.96 (0.22)		
					[2.88 (0.16)]			



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			7.38 (0.41)	7.92 (0.44)	83	84
	3 position	Closed center			7.56 (0.42)	12.06 (0.67)	88	90
		Exhaust center			10.62 (0.59)	[8.28 (0.46)]		
		Pressure center			10.62 (0.59)	8.46 (0.47)		
					[4.32 (0.24)]			
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			5.3 (0.29)	3.9 (0.22)	91	92
	3 position	Closed center			5.3 (0.29)	3.9 (0.22)	96	97
		Exhaust center			5.7 (0.32)	3.9 (0.22)		
		Pressure center						
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			7.2 (0.4)	7.38 (0.41)	86	87
	3 position	Closed center			7.38 (0.41)	9.72 (0.54)	91	92
		Exhaust center			10.62 (0.59)	[7.2 (0.4)]		
		Pressure center			10.62 (0.59)	7.2 (0.4)		
					[4.32 (0.24)]			
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			7.38 (0.41)	7.92 (0.44)	87	88
	3 position	Closed center			7.38 (0.41)	11.88 (0.66)	92	93
		Exhaust center			10.62 (0.59)	[7.74 (0.43)]		
		Pressure center			10.62 (0.59)	7.92 (0.44)		
					[4.32 (0.24)]			



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

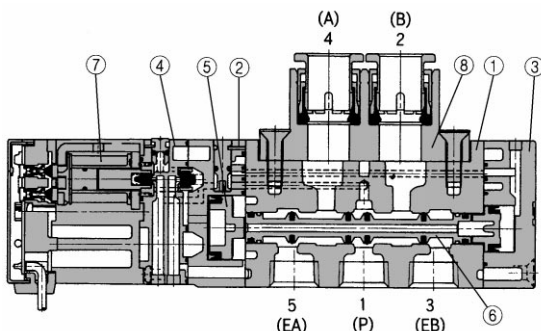
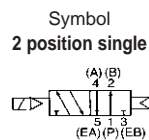


Note) [ ]: Normal position

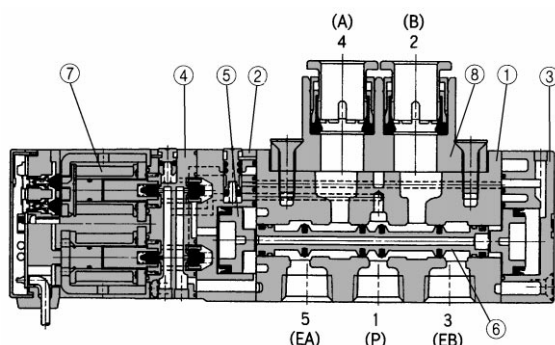
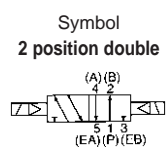
# SX3000/5000/7000 Body Ported Valve

## Construction

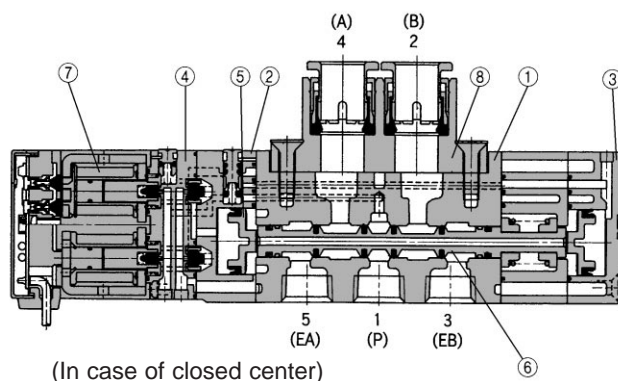
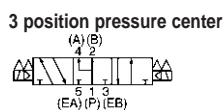
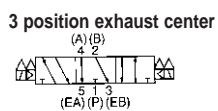
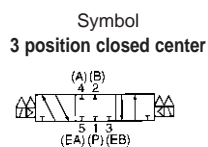
### 2 position single



### 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- [ ]

### Negative common

For single solenoid : SX100 - 41-4S- [ ]

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

### 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)

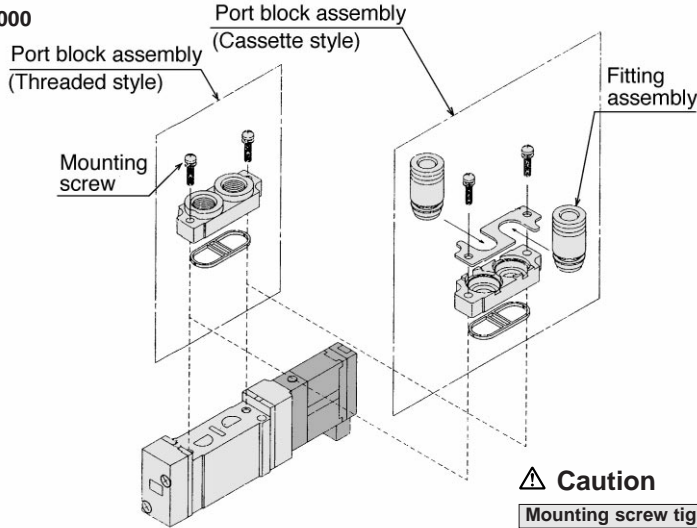
# SX3000/5000/7000

## 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

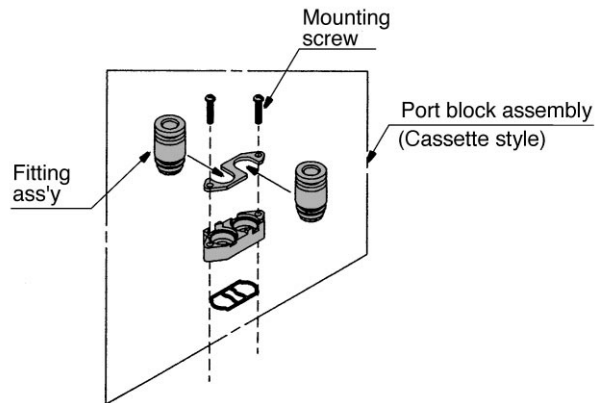
### A/B port size

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

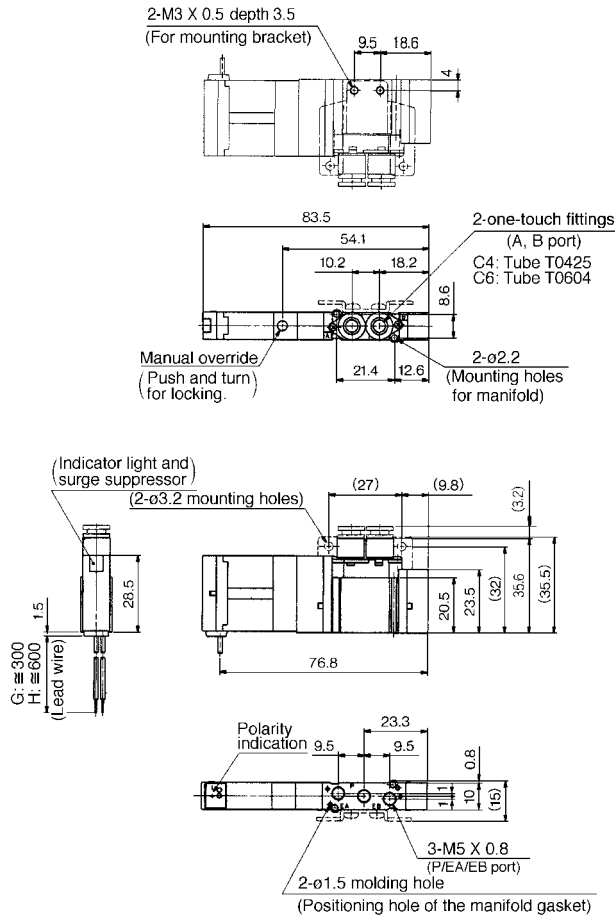
M2: 0.15Nm  
M3: 0.6Nm  
M4: 1.4Nm

# SX3000/5000/7000 Body Ported Valve

## Dimensions/Series SX3000

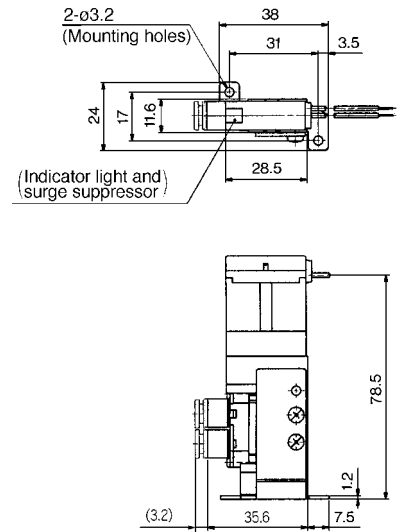
### 2 position single

Grommet (G), (H): SX3120-□<sub>G</sub>□□□ - C<sub>4</sub> C<sub>6</sub> (-F2)

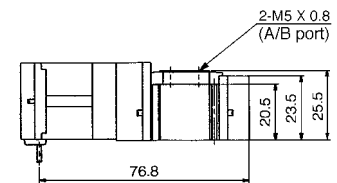


### With foot bracket

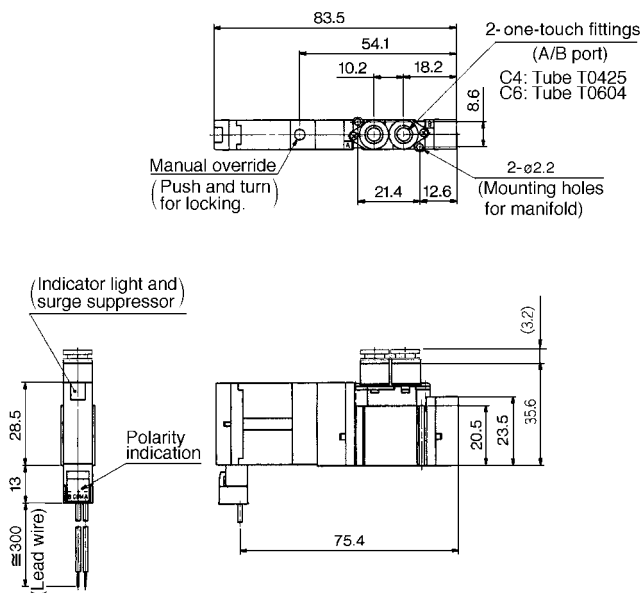
SX3120-□<sub>G</sub>□□□ - C<sub>4</sub> F1



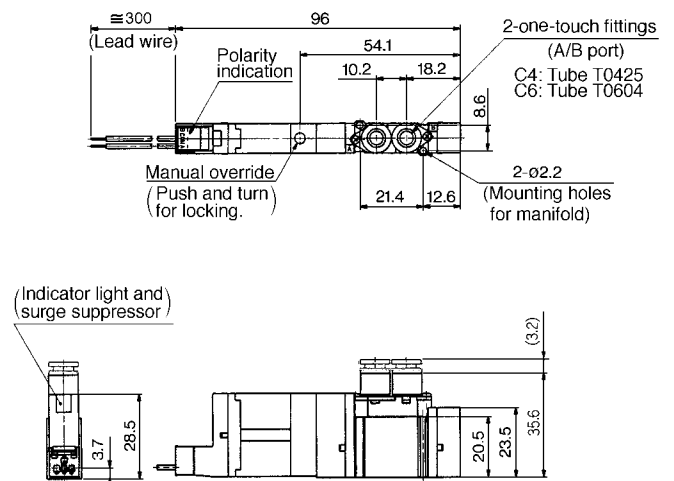
SX3120-□<sub>G</sub>□□□ - M5



L plug connector (L): SX3120-□L□□ - C<sub>4</sub> C<sub>6</sub>



M plug connector (M): SX3120-□M□□ - C<sub>4</sub> C<sub>6</sub>



SY

SYJ

SX

VK

VZ

VF

VFR

VP7

VP4

VQ

VQ4

VQZ

VQD

VZS

VFS

VS

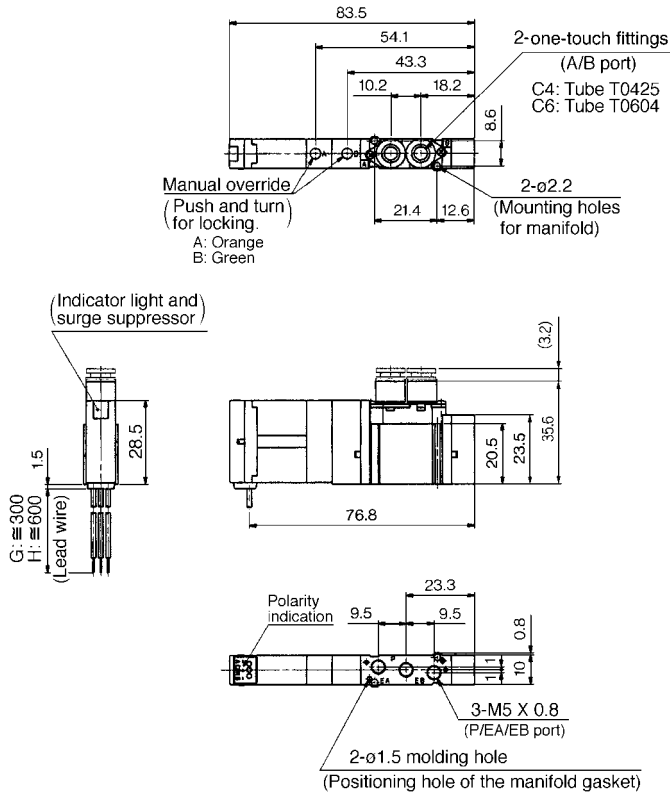
VS7

# SX3000/5000/7000

## Dimensions/Series SX3000

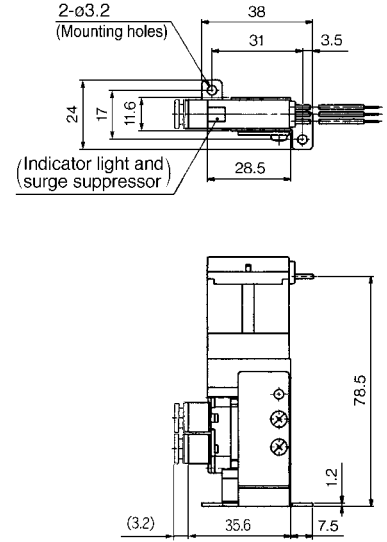
### 2 position double

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

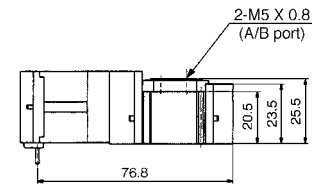


### With foot bracket

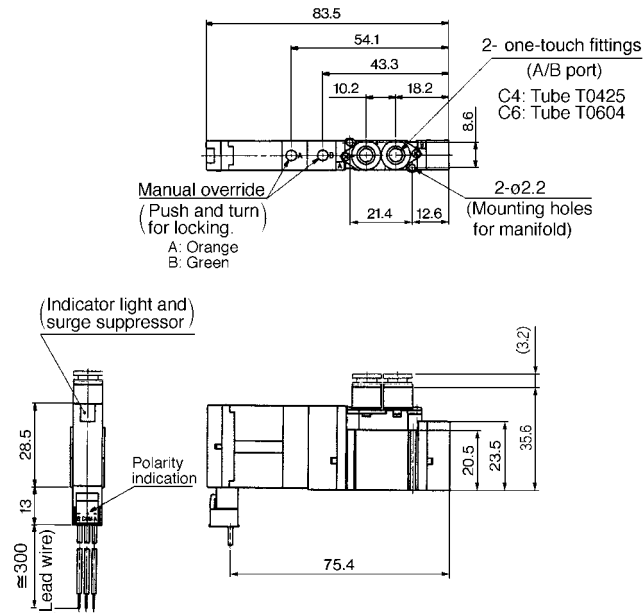
SX3220-□<sup>G</sup>□□ - C<sub>4</sub>-F1



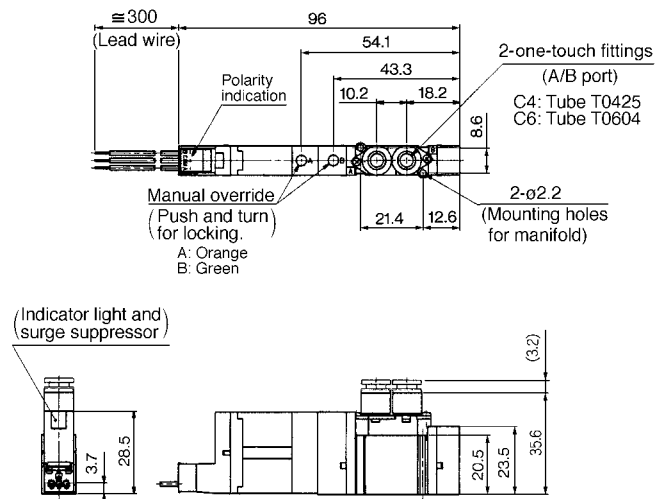
SX3220-□<sup>G</sup>□□ - M5



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



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





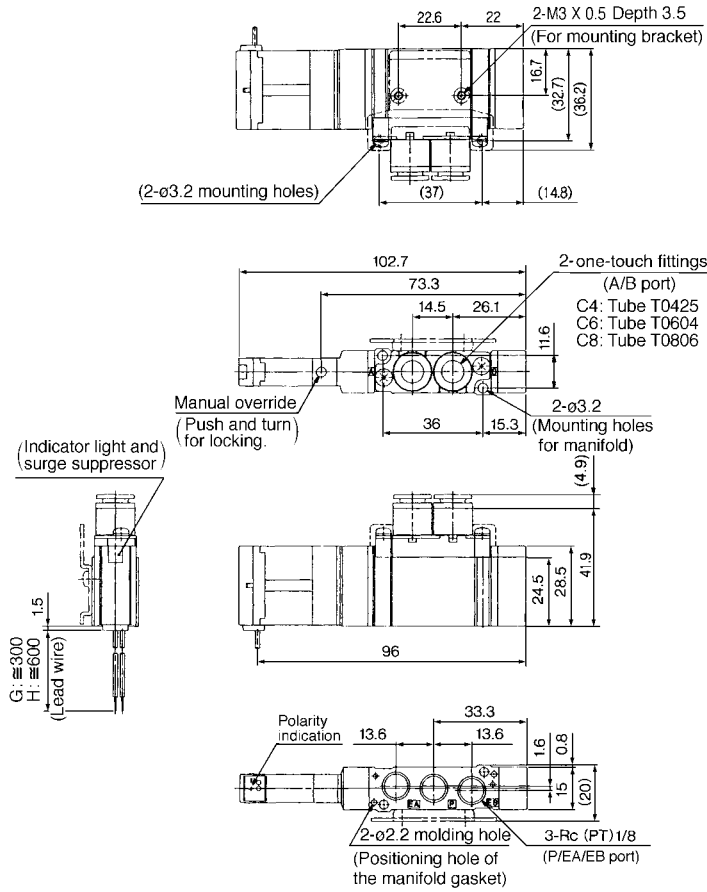


# SX3000/5000/7000

## Dimensions/Series SX5000

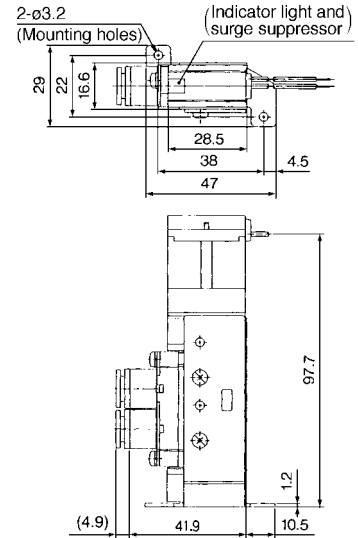
2 position single

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

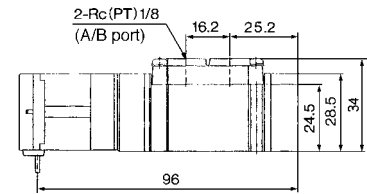


With foot bracket

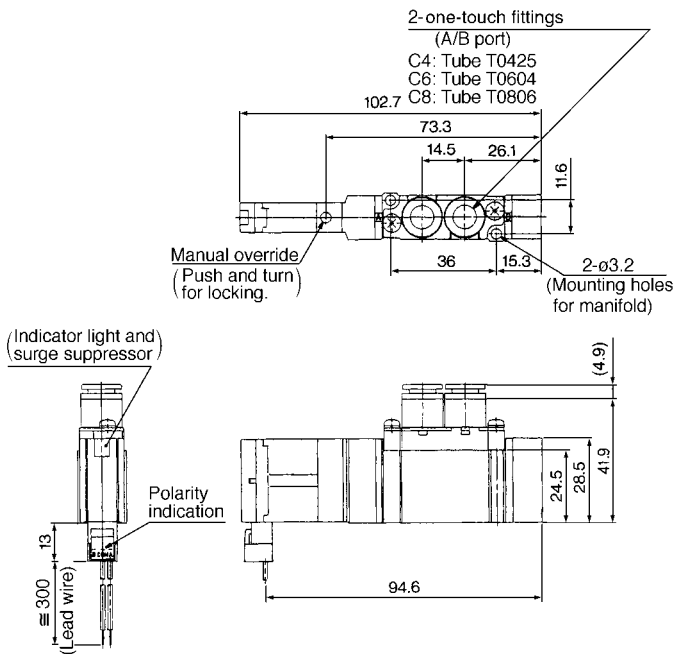
SX5120-□<sup>G</sup><sub>H</sub>□□ - <sup>C4</sup><sub>C6</sub><sup>C8</sup> -F1



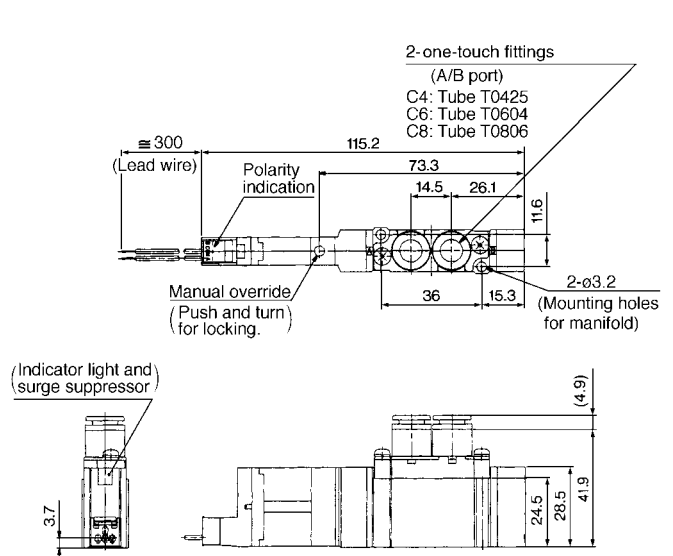
SX5120-□<sup>G</sup><sub>H</sub>□□-01



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



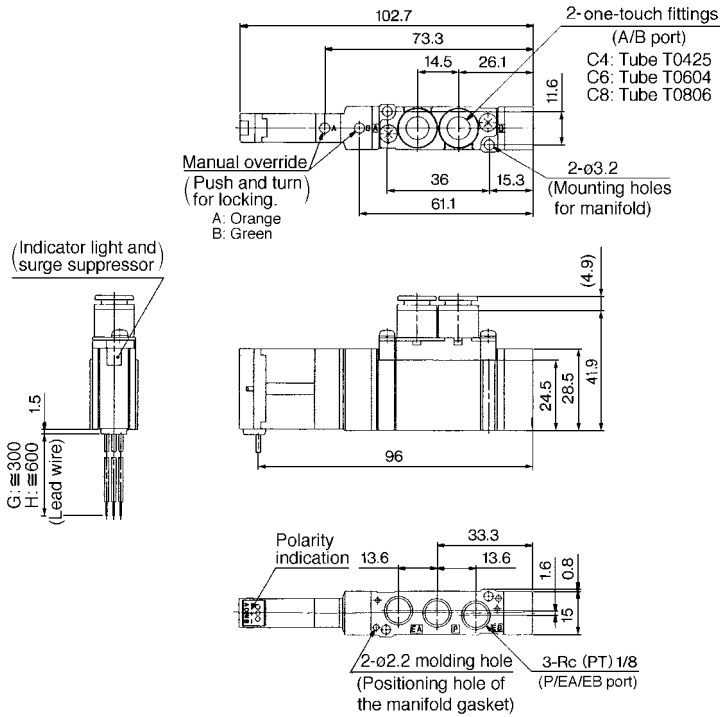
M plug connector (M): SX5120-□M□□ - <sup>C4</sup><sub>C6</sub><sup>C8</sup>



# SX3000/5000/7000 Body Ported Valve

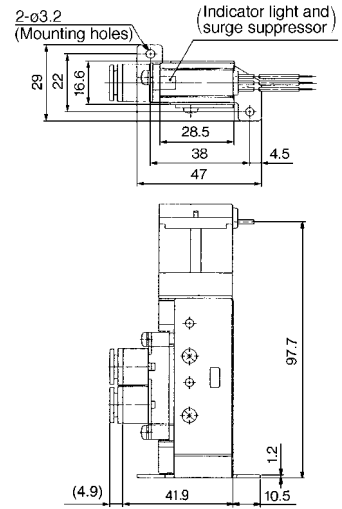
## 2 position double

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

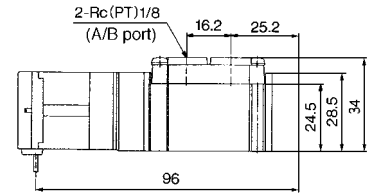


## With foot bracket

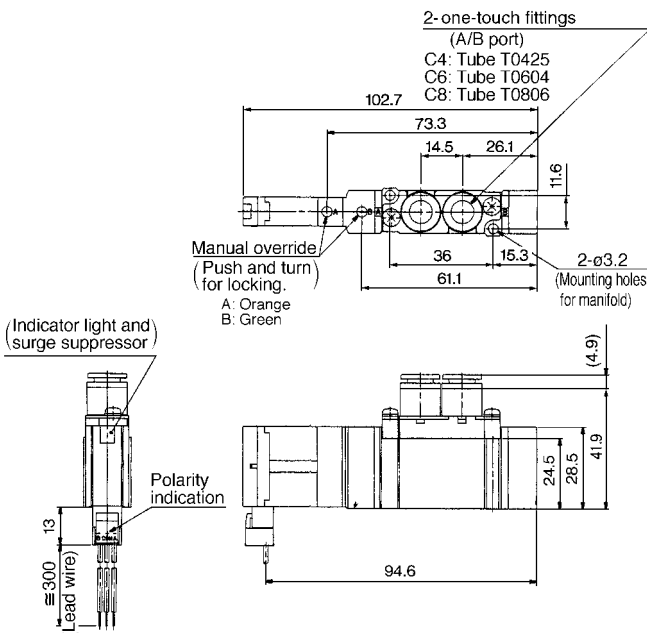
SX5220-□<sup>G</sup>□<sup>H</sup>□□ - C4  
C6  
C8 -F1



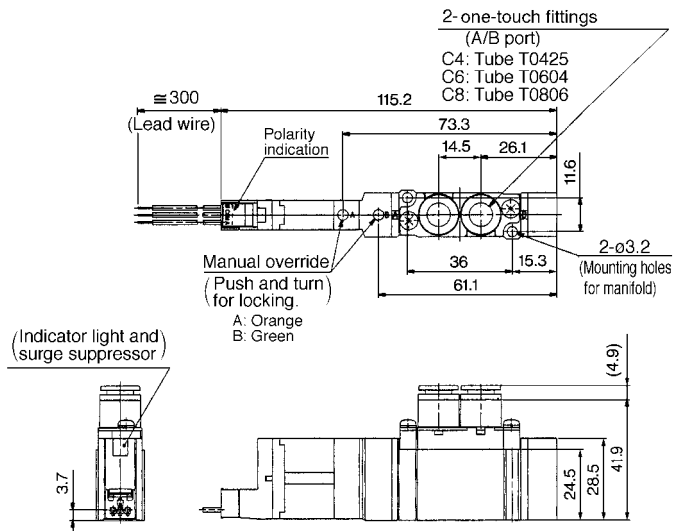
SX5220-□<sup>G</sup>□<sup>H</sup>□□ -01



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

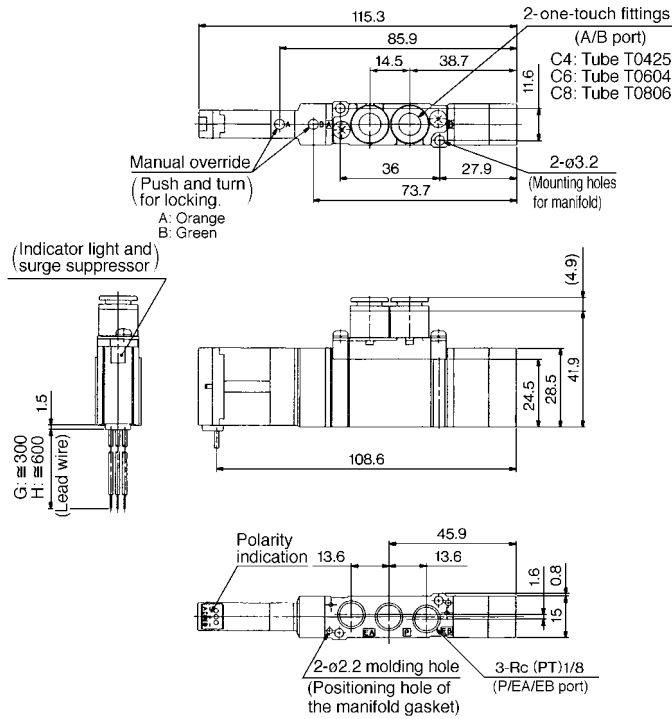
VS7

# SX3000/5000/7000

## Dimensions/Series SX5000

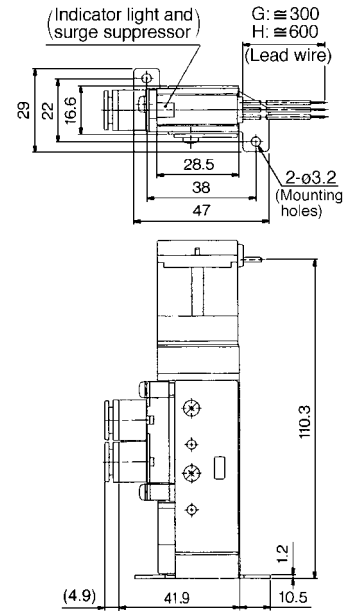
3 position closed center/exhaust center/pressure center

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

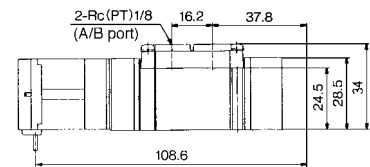


With foot bracket

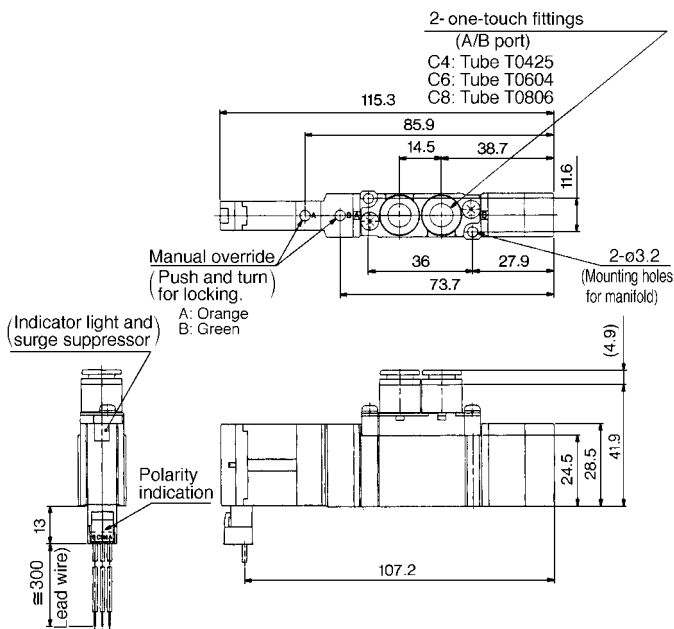
$SX5 \frac{3}{4} 20-\square \square \square \square - F1$   
C4  
C6  
C8



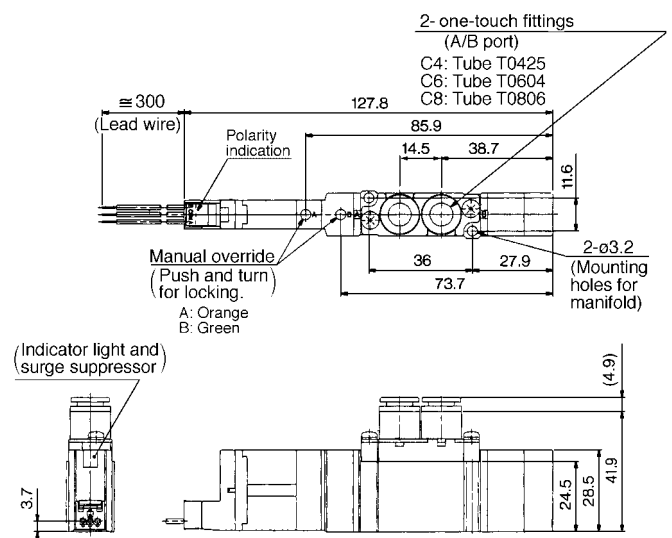
$SX5 \frac{3}{4} 20-\square \square \square \square - 01$



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

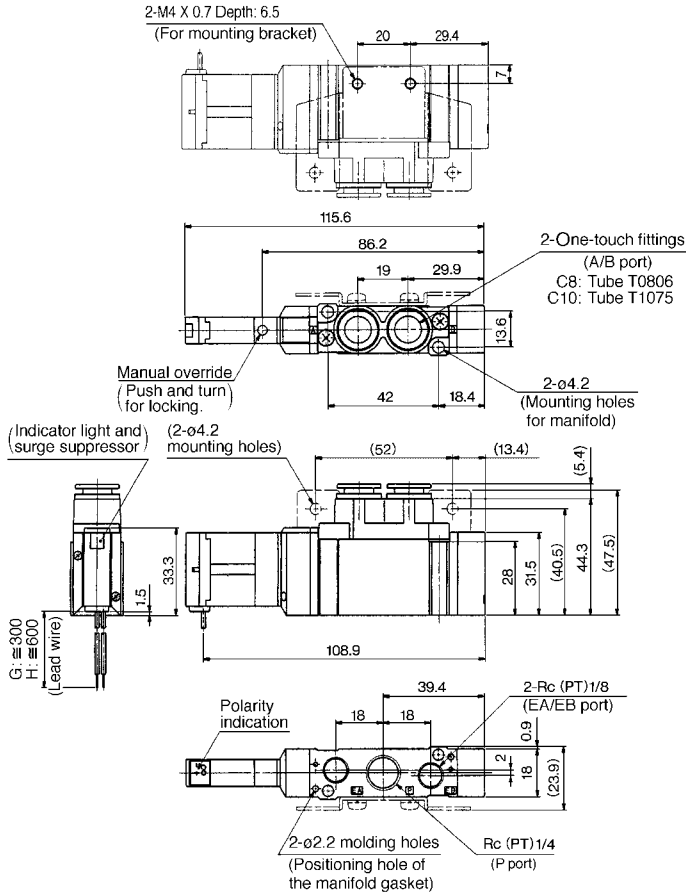


# SX3000/5000/7000 Body Ported Valve

## Dimensions/Series SX7000

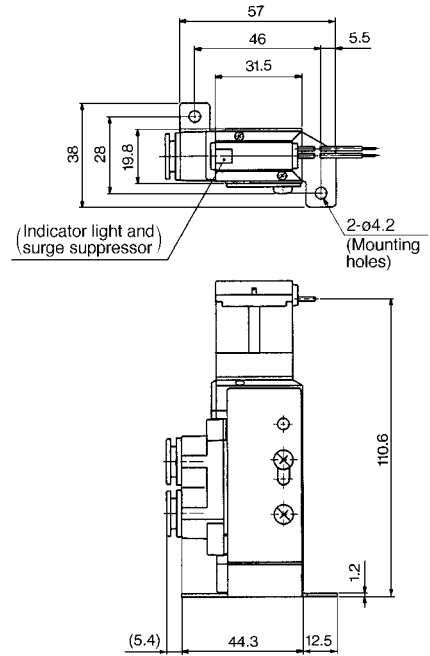
### 2 position single

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

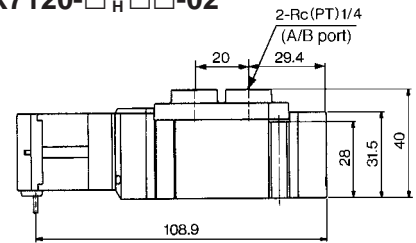


### With foot bracket

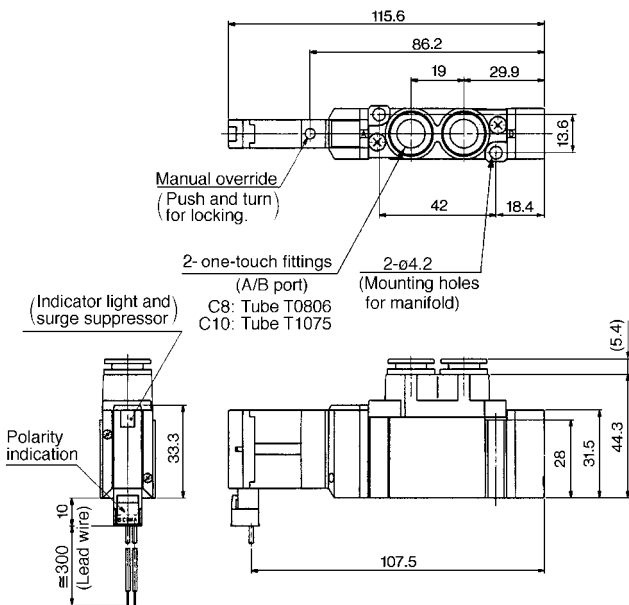
SX7120-□<sub>G</sub>□<sub>H</sub>□□ - C<sub>8</sub><sup>8</sup>/<sub>10</sub> -F1



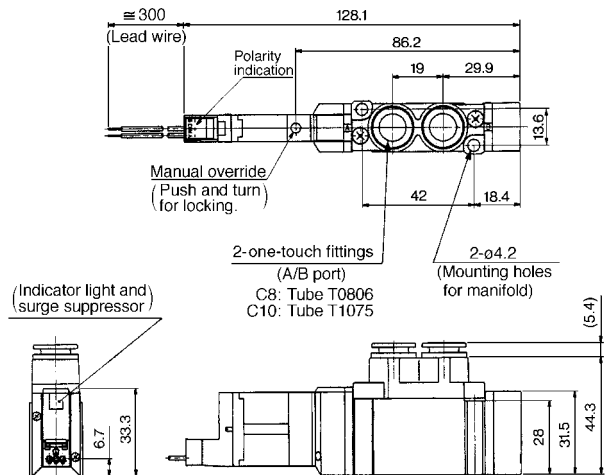
SX7120-□<sub>G</sub>□<sub>H</sub>□□ -02



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

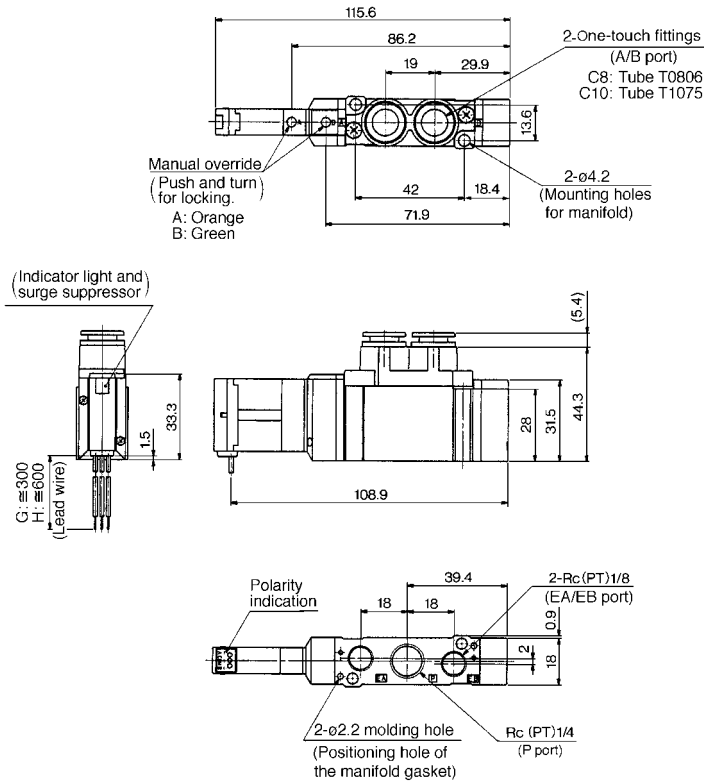
VS7

# SX3000/5000/7000

## Dimensions/Series SX7000

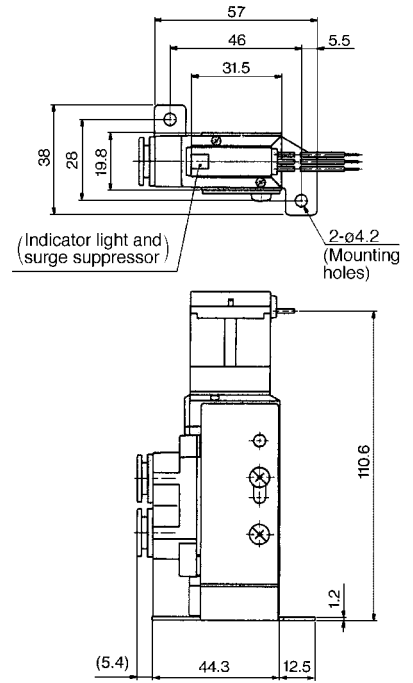
### 2 position double

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

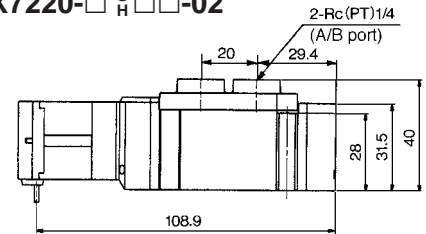


### With foot bracket

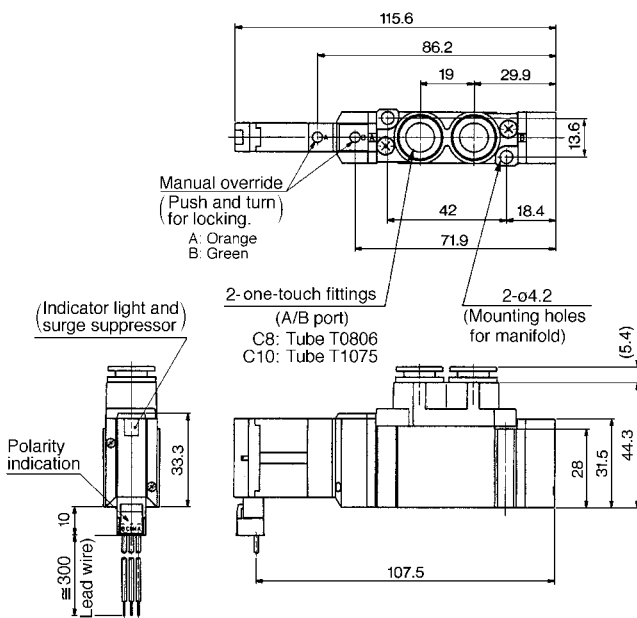
SX7220-□<sub>G</sub>□<sub>H</sub>□□ - C<sub>8</sub>  
C<sub>10</sub> -F1



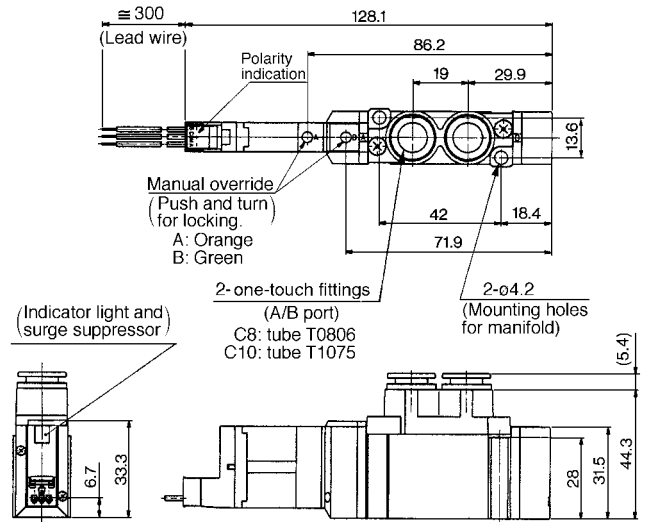
SX7220-□<sub>G</sub>□<sub>H</sub>□□ -02



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



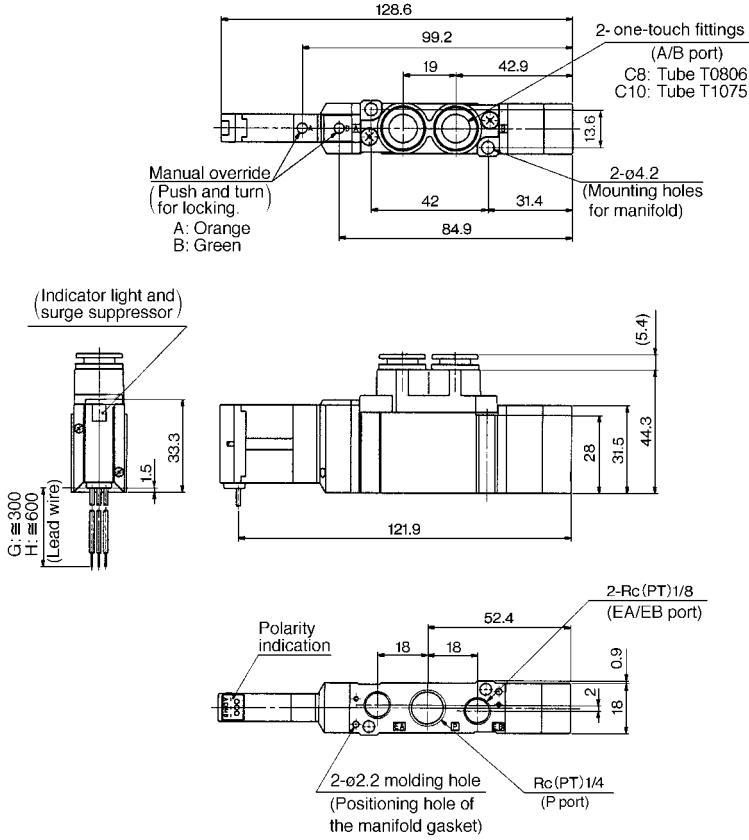
M plug connector (M): SX7220-□M□□ - C<sub>8</sub>  
C<sub>10</sub>



# SX3000/5000/7000 Body Ported Valve

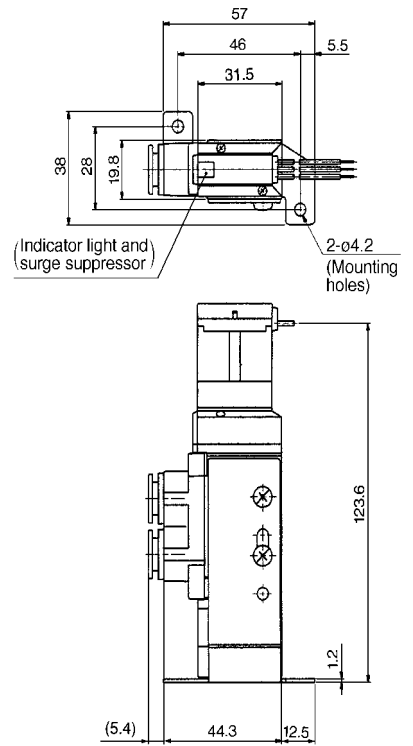
3 position closed center/exhaust center/pressure center

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

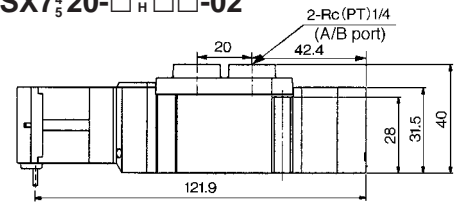


With foot bracket

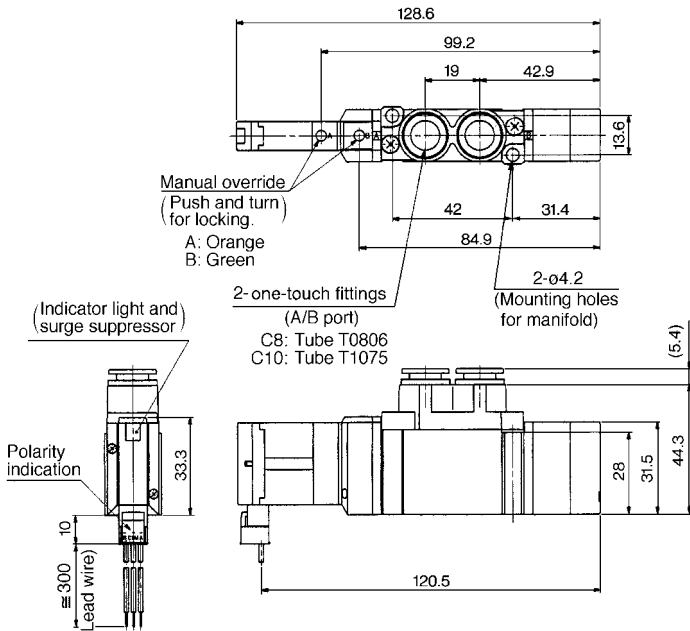
$SX7 \frac{3}{4} 20-\square \square \square \square -C8$  -F1



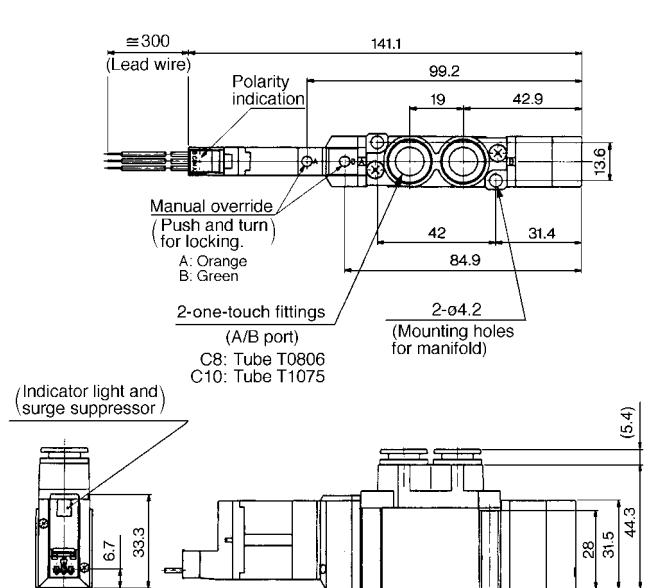
$SX7 \frac{3}{4} 20-\square \square \square \square -02$



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

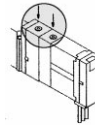
 Note) Put nothing for single grommet style and single without indicator light and surge suppressor.

#### 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



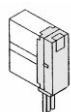
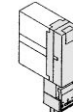
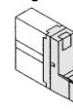
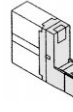
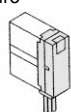
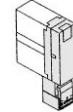
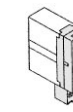
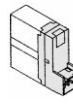
D: Push-turn-locking slotted style




#### 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

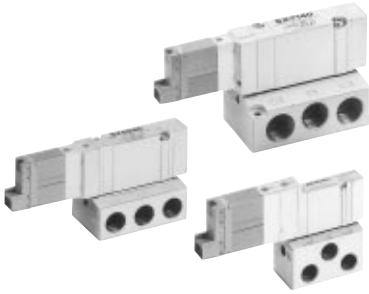
#### Electrical entry

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)		



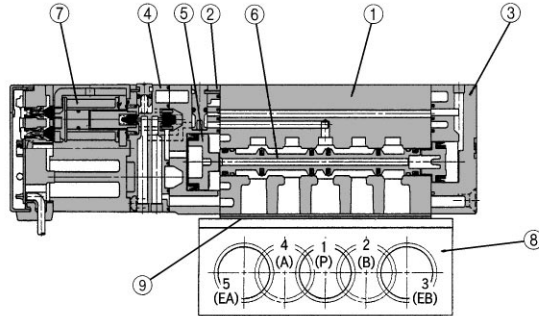
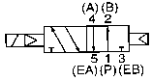
Note 1) [ ]: Normal position Note 2) ( ): Without subplate

# SX3000/5000/7000 Base Mounted Valve

## Construction

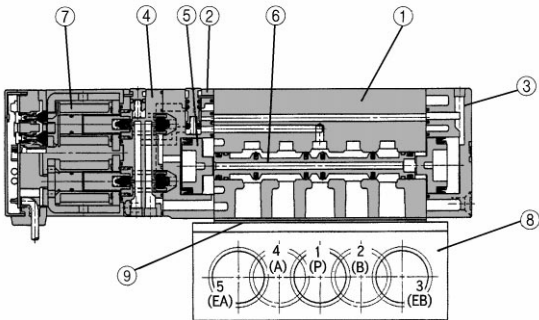
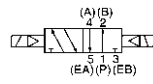
### 2 position single

Symbol  
2 position single



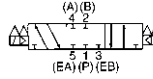
### 2 position double

Symbol  
2 position double

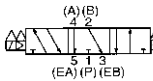


### 3 position closed center/exhaust center/pressure center

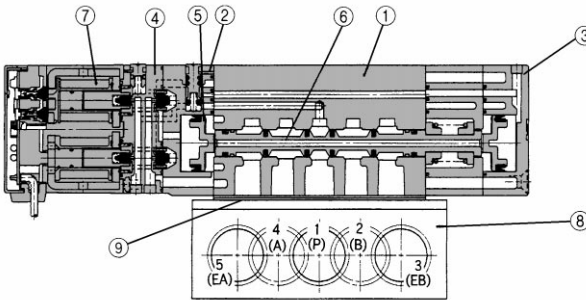
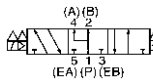
Symbol  
3 position closed center



3 position exhaust center



3 position 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

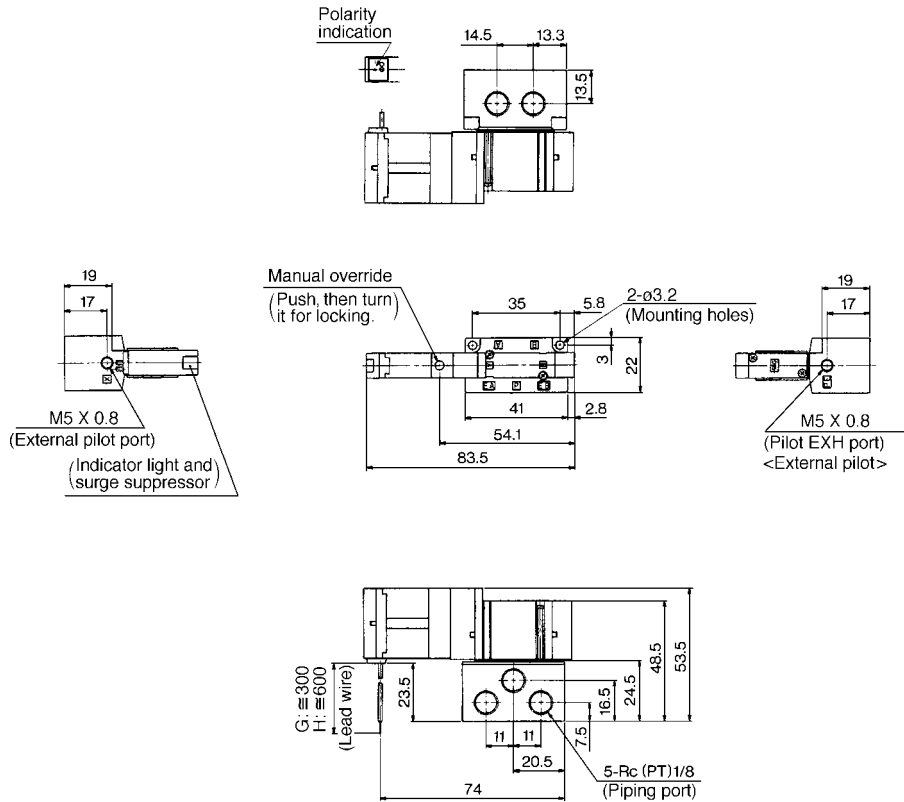
M4: 1.4Nm

# SX3000/5000/7000

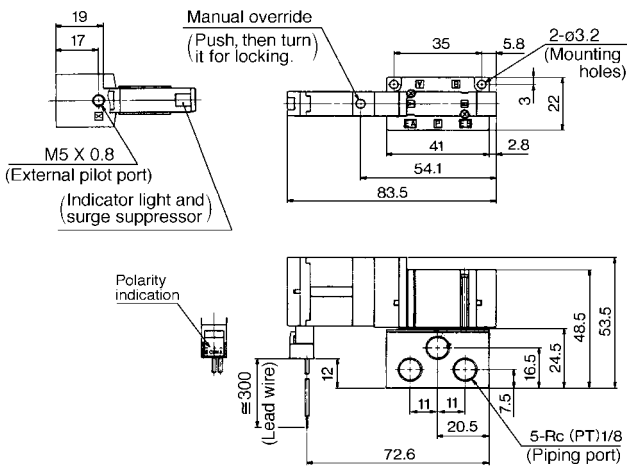
## Dimensions/Series SX3000

2 position single

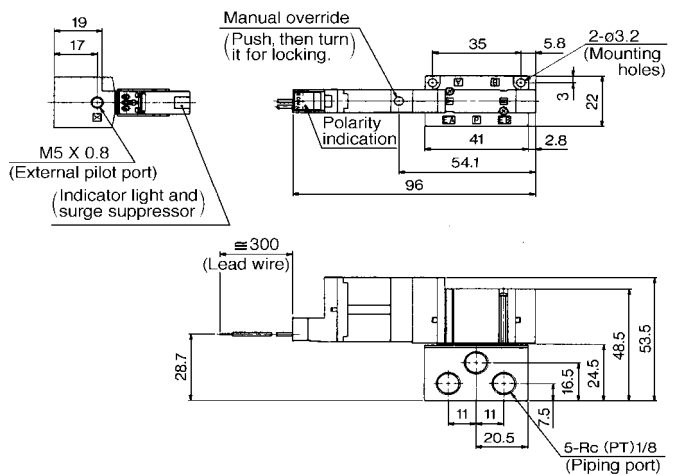
Grommet (G), (H): SX3140(R)-□<sup>G</sup>□□-01



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

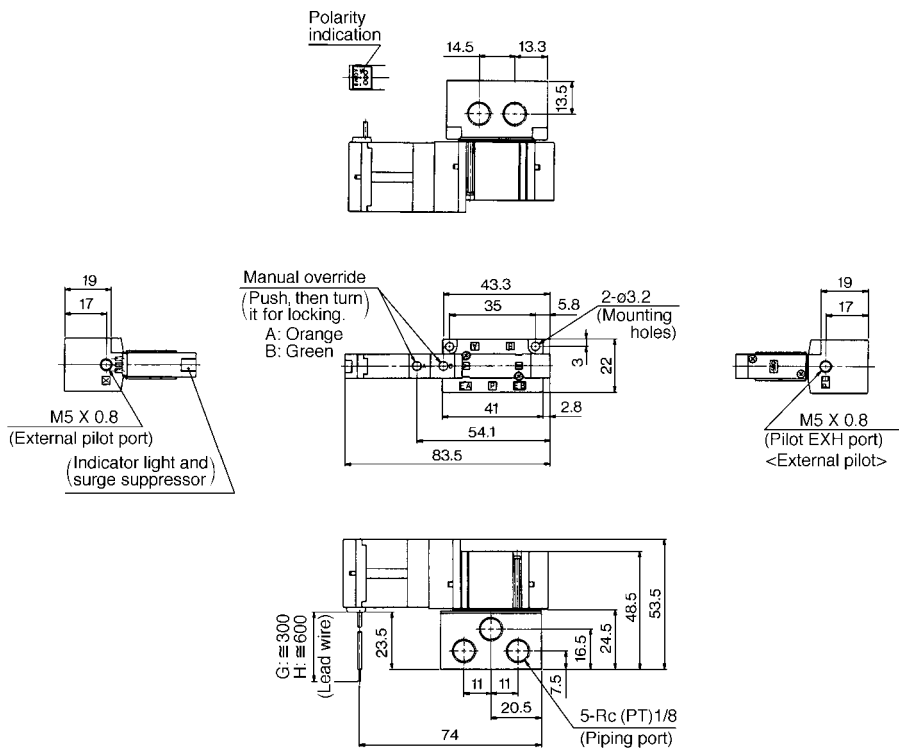


### M plug connector (M): SX3140(R)-□M□□-01

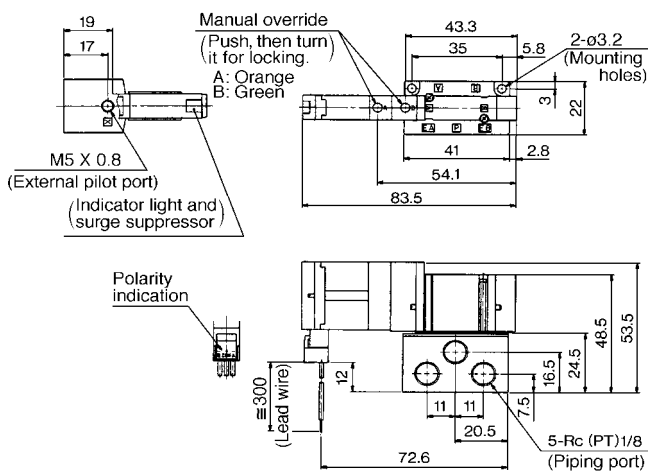


# SX3000/5000/7000 Base Mounted Valve

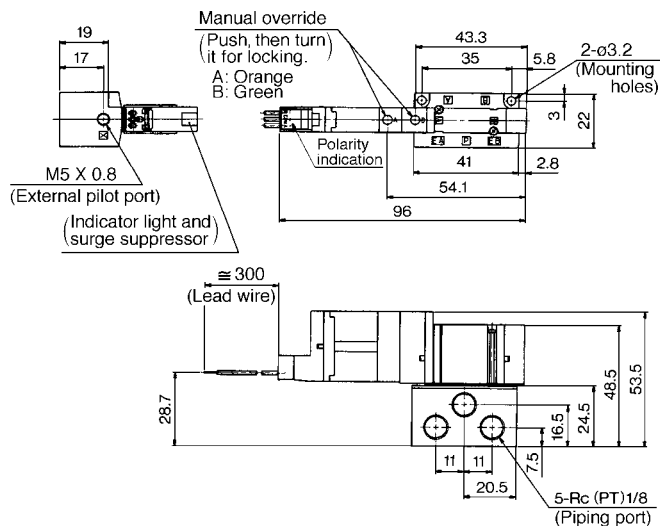
2 position double  
Grommet (G), (H): SX3240(R)-□<sup>G</sup>□□-01



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

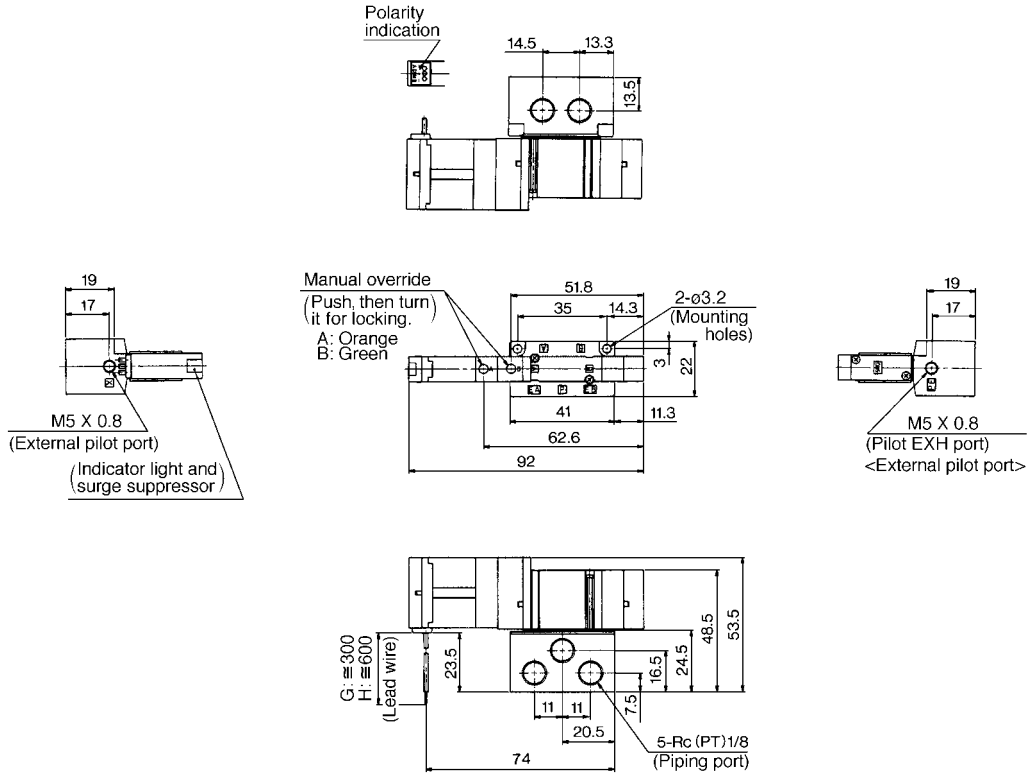
VS7

# SX3000/5000/7000

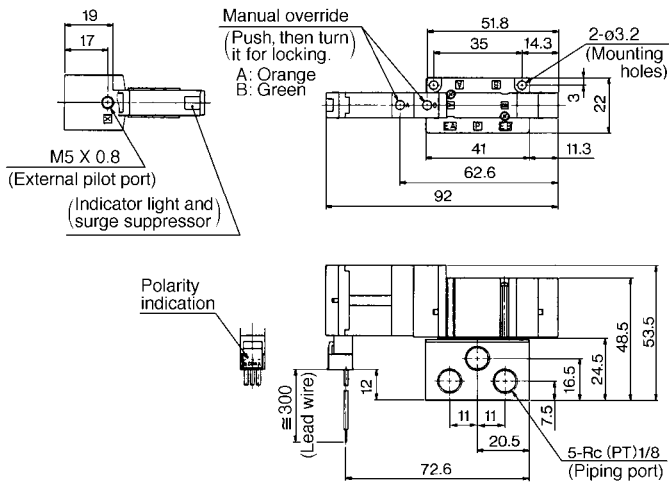
## Dimensions/Series SX3000

3 position closed center/exhaust center/pressure center

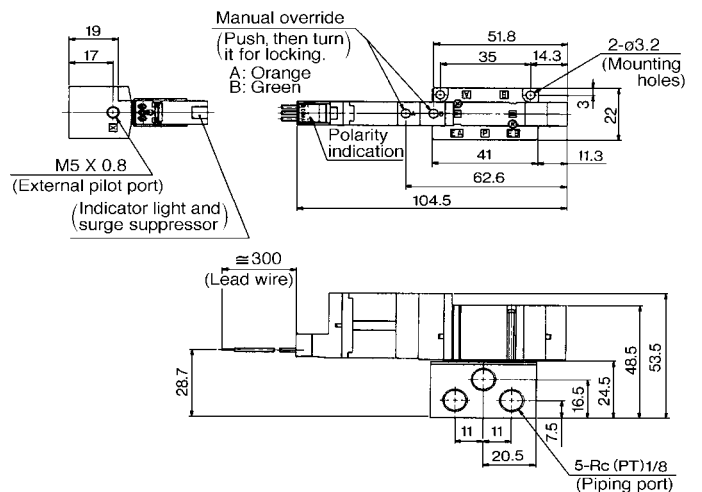
Grommet (G), (H): SX3<sup>3</sup>/<sub>5</sub>40(R)-□<sup>G</sup>□□-01



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

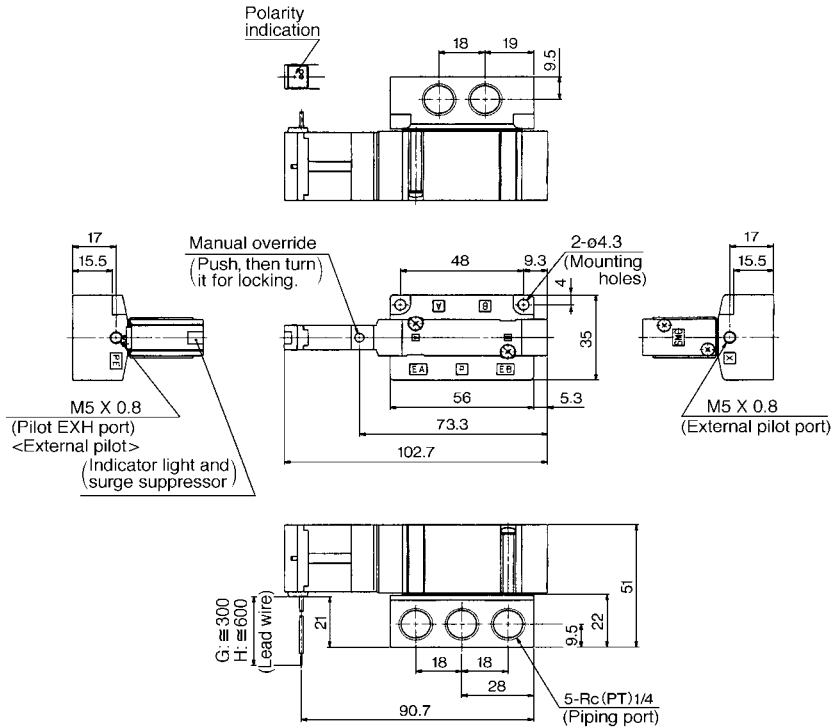


# SX3000/5000/7000 Base Mounted Valve

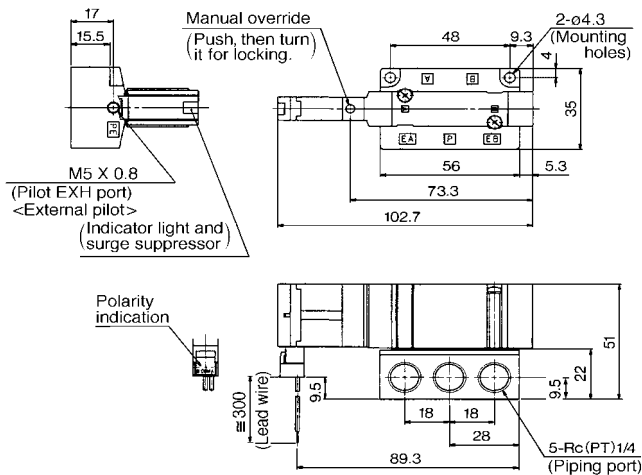
## Dimensions/Series SX5000

2 position single

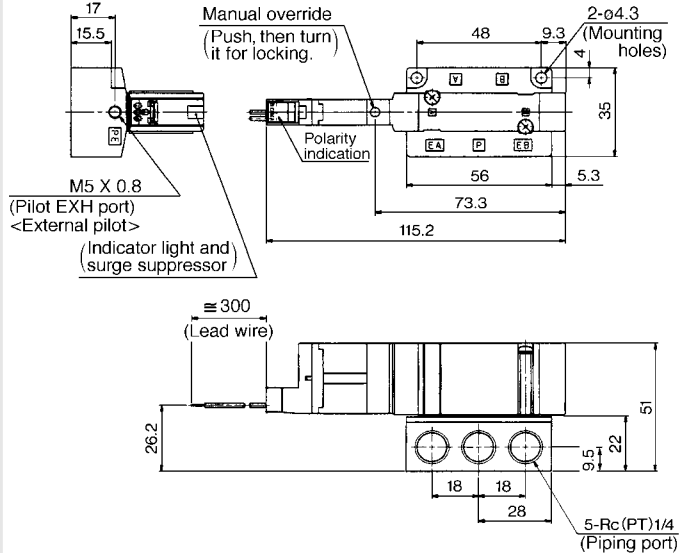
Grommet (G), (H): SX5140(R)-□<sup>G</sup>□□-02



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



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



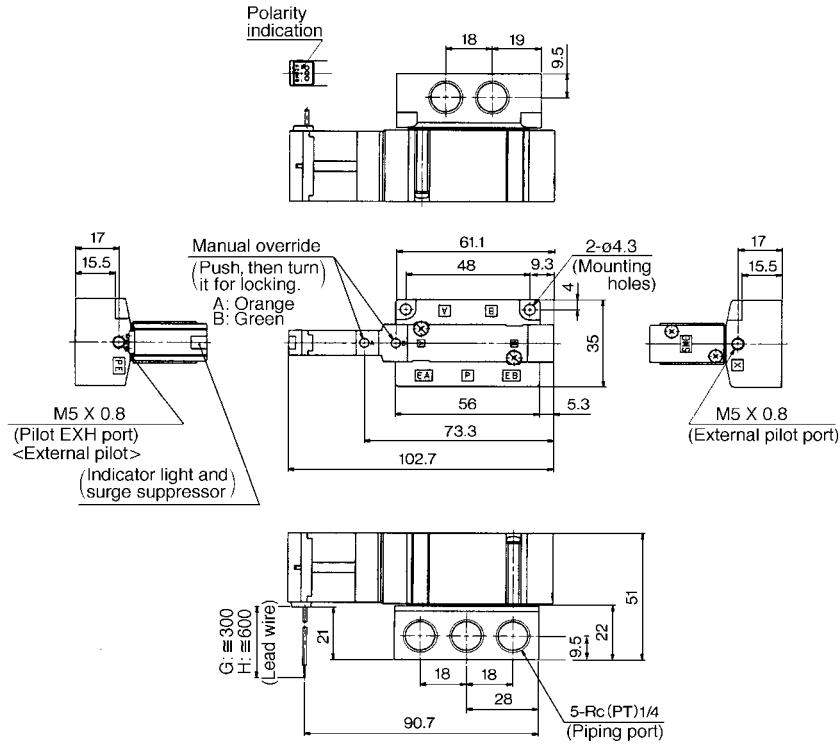
- SY
- SYJ
- SX**
- VK
- VZ
- VF
- VFR
- VP7
- VP4
- VQ
- VQ4
- VQZ
- VQD
- VZS
- VFS
- VS
- VS7

# SX3000/5000/7000

## Dimensions/Series SX5000

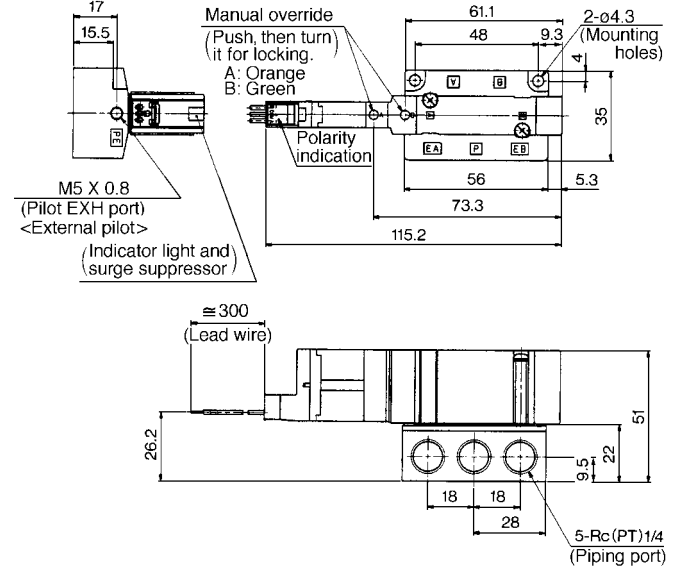
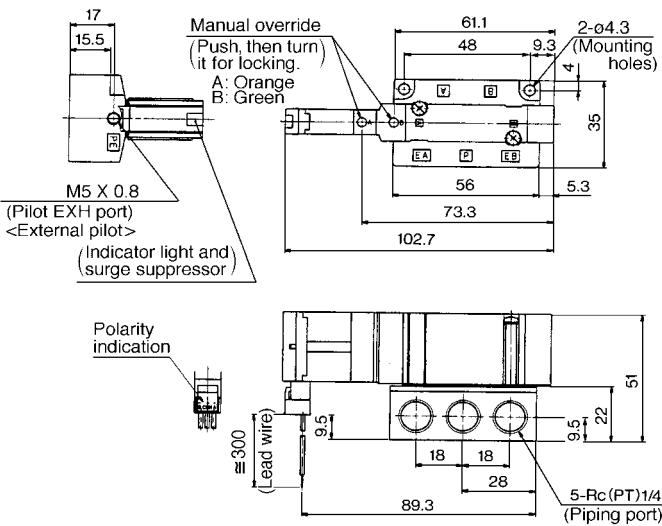
2 position double

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



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

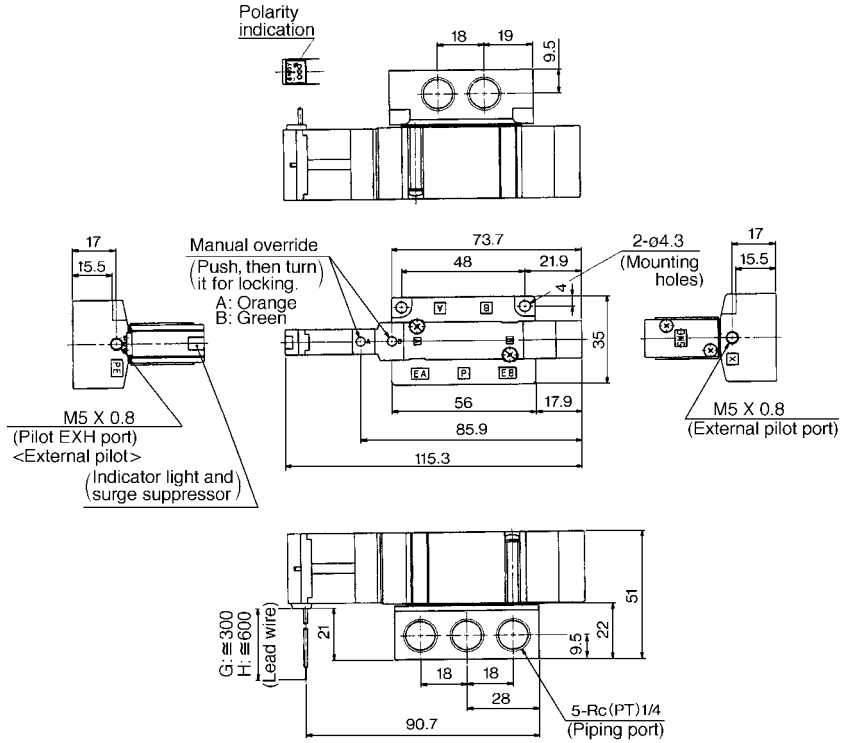
M plug connector (M): SX5240(R)-□M□□-02



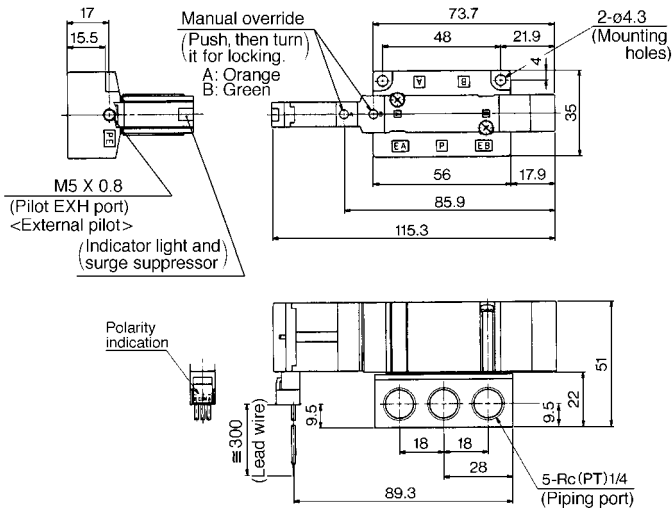
# SX3000/5000/7000 Base Mounted Valve

3 position closed center/exhaust center/pressure center

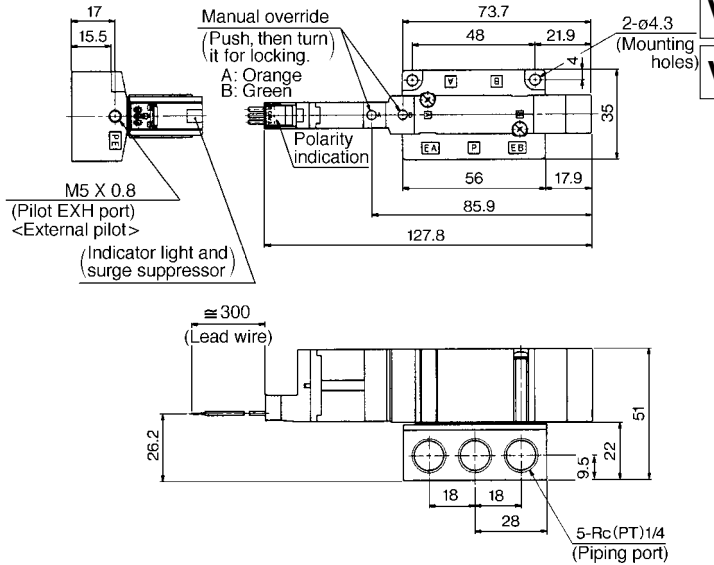
Grommet (G), (H):  $SX5 \frac{3}{4} 40(R) - \square \square \square -02$



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



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



SY

SYJ

**SX**

VK

VZ

VF

VFR

VP7

VP4

VQ

VQ4

VQZ

VQD

VZS

VFS

VS

VS7

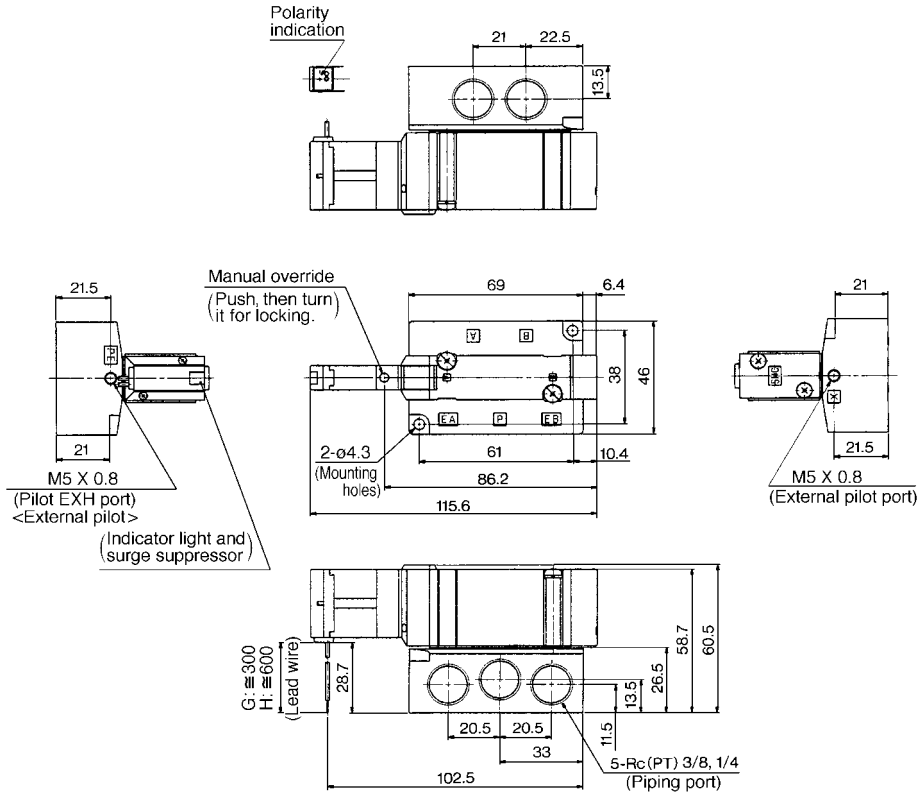


# SX3000/5000/7000

## Dimensions/Series SX7000

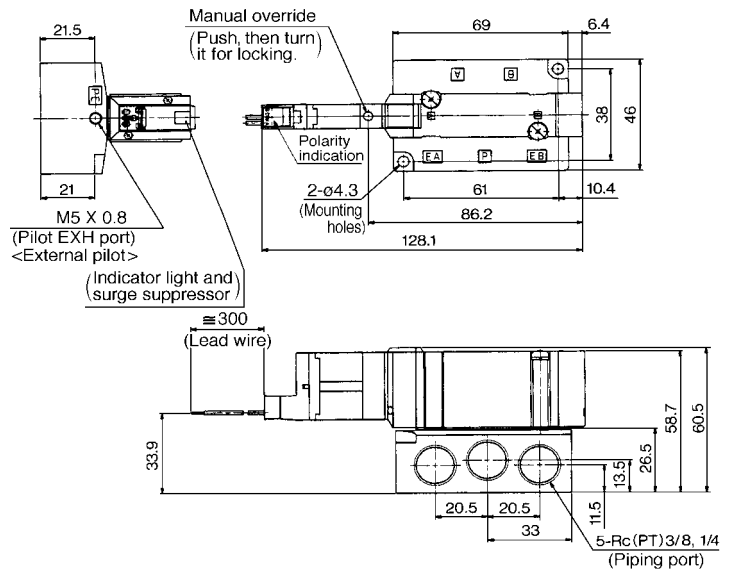
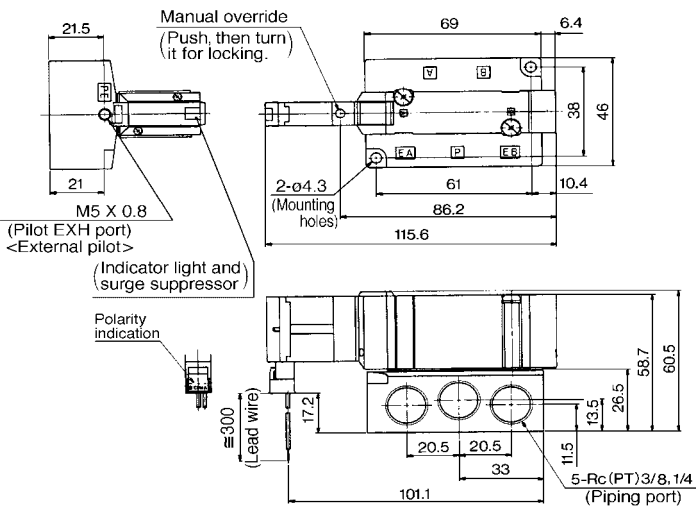
2 position single

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>

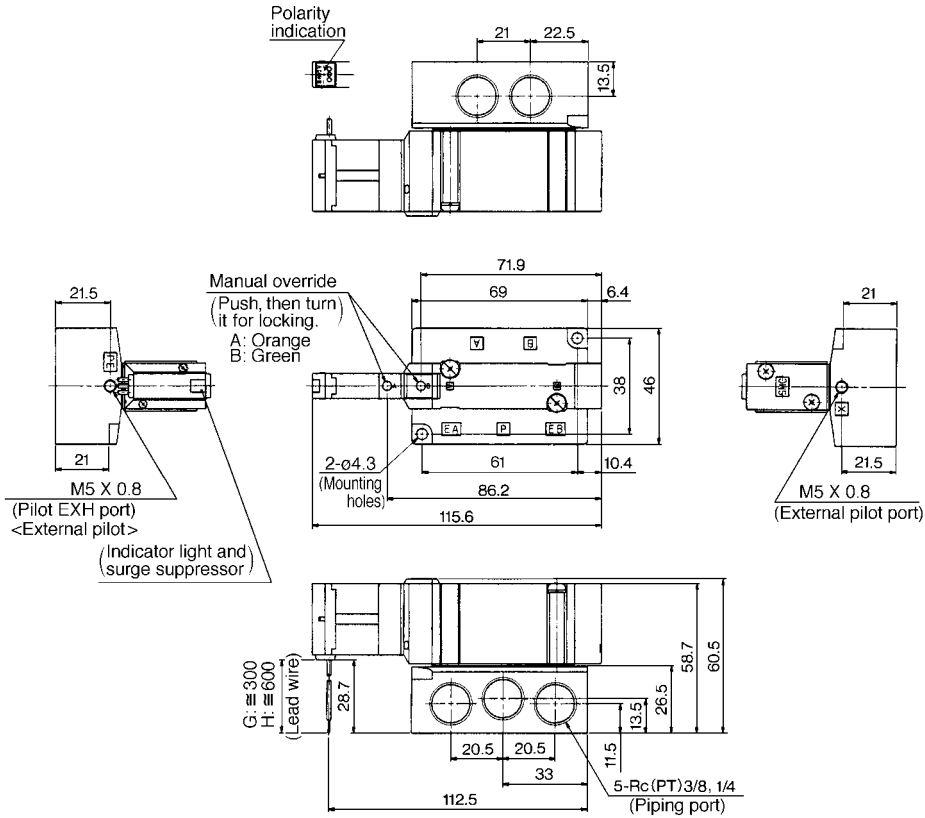
M plug connector (M): SX7140(R)-□M□□<sup>02</sup><sub>-03</sub>



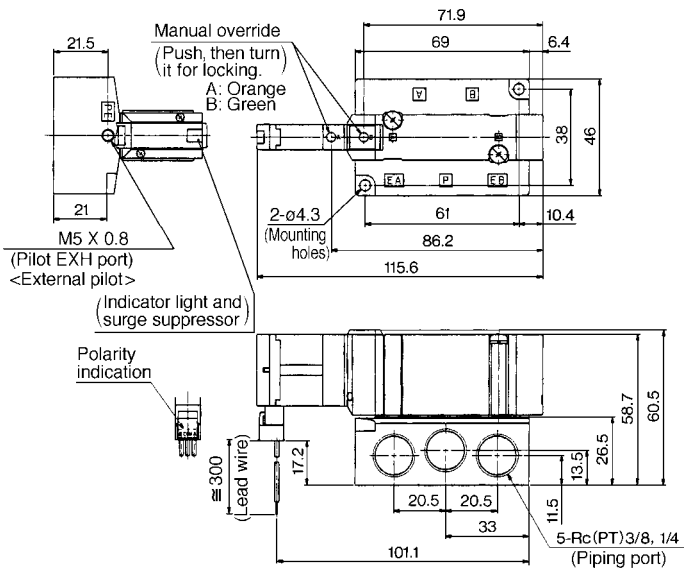
# SX3000/5000/7000 Base Mounted Valve

## 2 position double

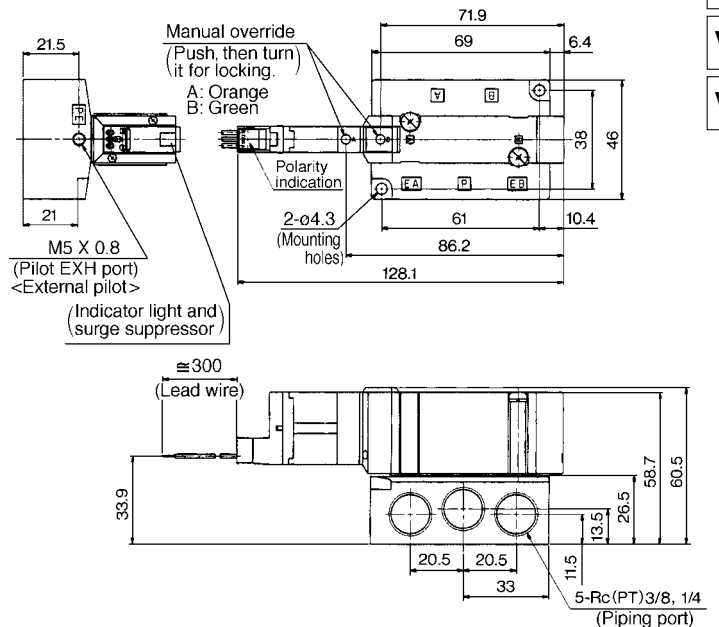
Grommet (G), (H): SX7240(R)-□<sup>G</sup>□□<sup>0.2</sup><sub>-0.3</sub>



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

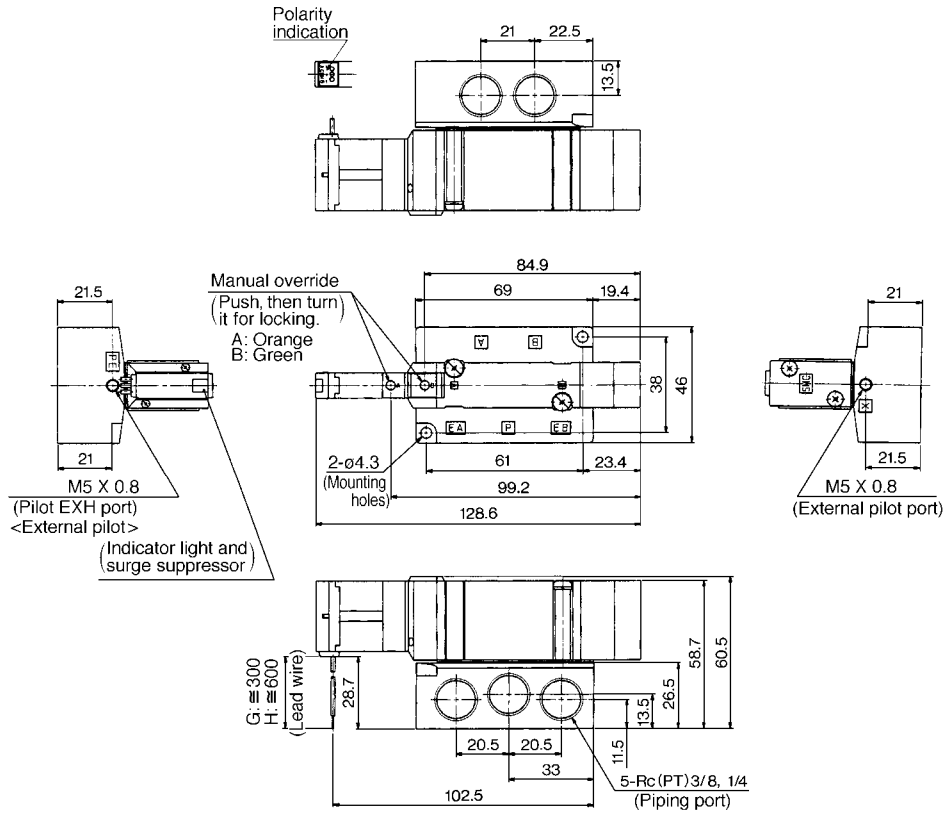
VS7

# SX3000/5000/7000

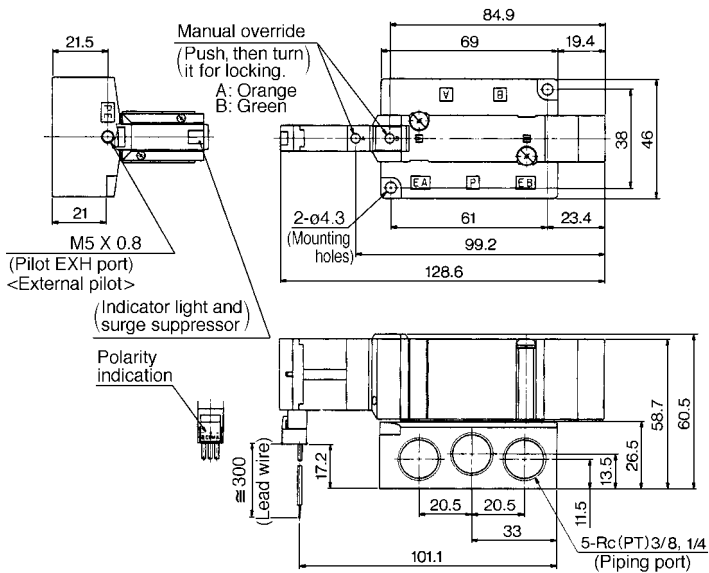
## Dimensions/Series SX7000

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



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

