

Non Plug-in

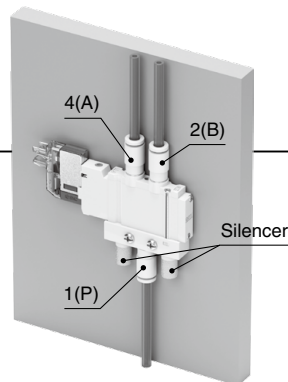
Body Ported

Single Unit (For Mounting P.E Plate)

# Compact 5-Port Solenoid Valve



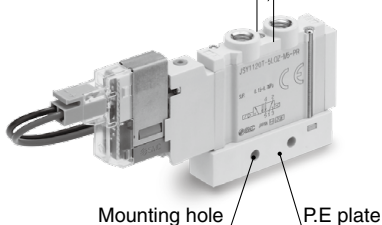
A body ported type (single unit) has been added.



Can drive  $\varnothing 32^{*1}$  bore cylinders

JSY1000

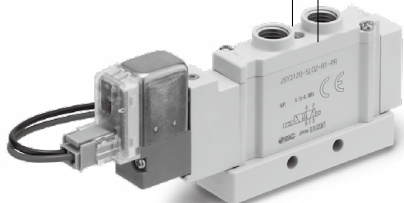
6.4 mm



Can drive  $\varnothing 50^{*1}$  bore cylinders

JSY3000

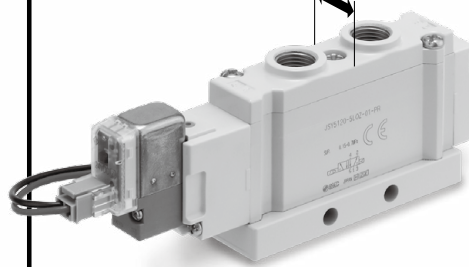
10 mm



Can drive  $\varnothing 80^{*1}$  bore cylinders

JSY5000

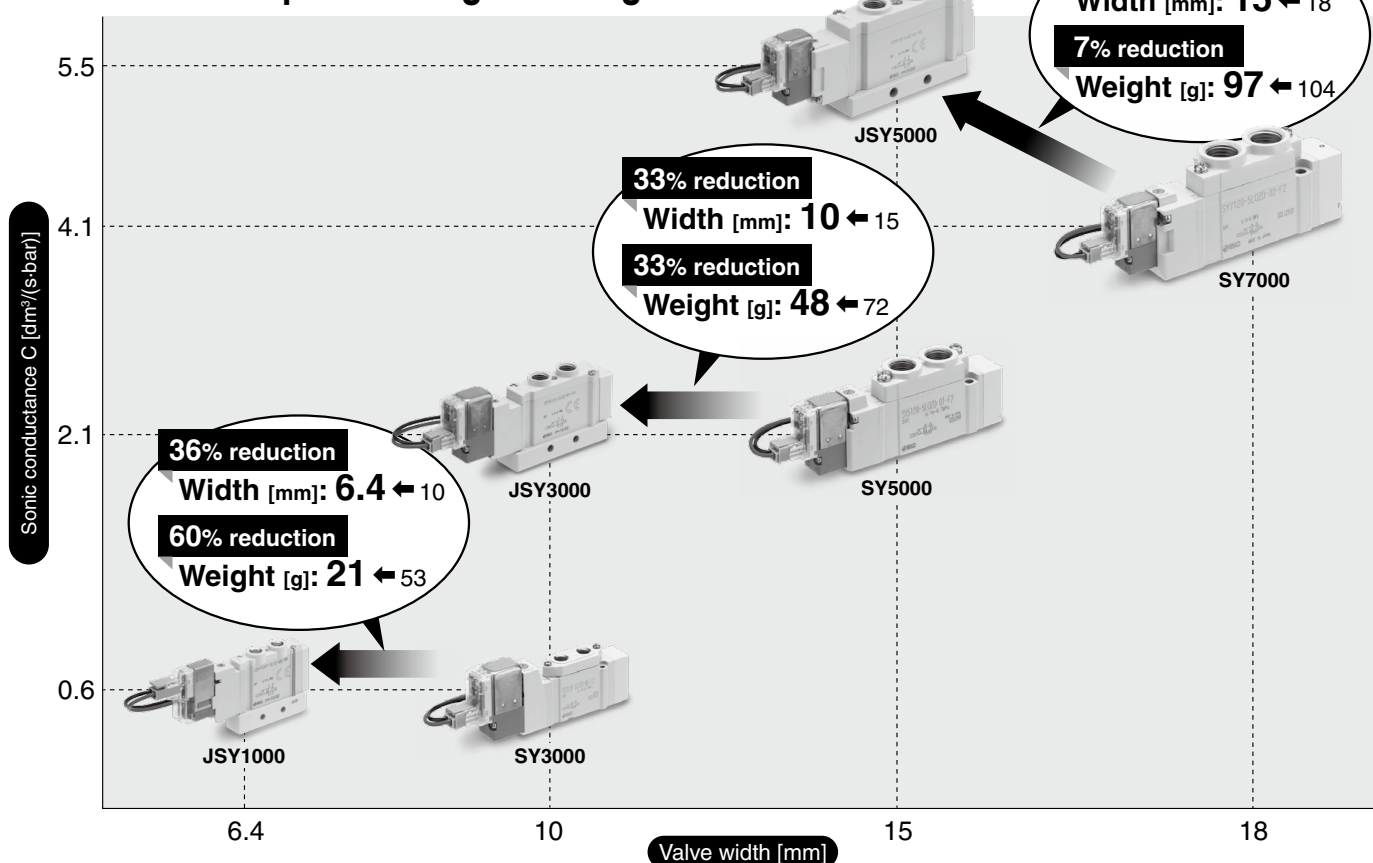
15 mm



\*1 The cylinder speed is 300 mm/s.

The valve size can be reduced.

This allows for space saving and weight reduction.



**JSY1000/3000/5000 Series**



# JSY1000/3000/5000 Series Valve Specifications

## Valve Specifications

Valve type			Rubber seal	
Fluid			Air	
Internal pilot operating pressure range [MPa]	2-position single		0.15 to 0.7	
	2-position double		0.1 to 0.7	
Ambient and fluid temperatures [°C]			-10 to 50 (No freezing)	
Max. operating frequency [Hz]	JSY1000	2-position single/double	5	
	JSY3000			
Max. operating frequency [Hz]	JSY5000	2-position single/double	5	
Manual override			Non-locking push type	
			Push-turn locking slotted type	
			Push-turn locking lever type	
Pilot exhaust type	Internal pilot		Individual exhaust	
Lubrication			Not required	
Mounting orientation*1			Unrestricted	
Impact/Vibration resistance*1 [m/s <sup>2</sup> ]			150/30	
Enclosure			IP40	
Electrical entry			L plug connector (L), M plug connector (M)	
Coil rated voltage [V]			24 VDC	
Allowable voltage fluctuation		JSY1000	-7% to +10% of the rated voltage (24 VDC)	
		JSY3000/5000	±10% of rated voltage	
Power consumption [W]	DC	Standard	JSY3000/5000	0.4
		With power-saving circuit	JSY1000	0.2*2 [Inrush: 0.5, Holding: 0.2]
			JSY3000/5000 (Made to Order)	0.1 [Inrush: 0.4, Holding: 0.1]
Surge voltage suppressor			Diode	
Indicator light			LED	

\*1 Impact resistance: No malfunction occurred when tested in the axial direction and at a right angle to the main valve and armature in both an energized and a de-energized state, once in each condition. (Value in the initial state)

Vibration resistance: No malfunction occurred in a one-sweep test between 45 and 2000 Hz. Test was performed at both an energized and a de-energized state in the axial direction and at a right angle to the main valve and armature. (Value in the initial state)

\*2 JSY1000 series available as power-saving type only. Standard type (without power-saving circuit) cannot be selected.

## Response Time/Valve Weight

### Body Ported

Series	Seal type	Model	Type of actuation	Response time [ms] (at 0.5 MPa)*1		Valve weight [g]
				Standard		
				With light/surge voltage suppressor		
				Z type		
JSY1000	Rubber seal	JSY1120T	2-position single	15		21
		JSY1220T	2-position double	5		28
JSY3000		JSY3120	2-position single	27		48
		JSY3220	2-position double	10		63
JSY5000		JSY5120	2-position single	42		97
		JSY5220	2-position double	13		113

\*1 Based on the JIS B 8419: 2010 dynamic performance test (Coil temperature 20°C, at rated voltage)

# JSY1000/3000/5000 Series **Type 20**

## Non Plug-in Body Ported Single Unit (For Mounting P.E Plate)

### Single Unit Specifications



Model		Non plug-in, For mounting P.E plate	
Port size	1(P), 3/5(E) port	JSY1000	M5 x 0.8
		JSY3000	1/16
		JSY5000	1/8
	4(A), 2(B) port	JSY1000	M3 x 0.5, M5 x 0.8
		JSY3000	1/16
		JSY5000	1/8

### Flow Rate Characteristics

Model	Port size		Valve flow rate characteristics			
	1, 5, 3 (P, EA, EB)	4, 2 (A, B)	1 → 4/2 (P → A/B)		4/2 → 5/3 (A/B → E)	
			C [dm <sup>3</sup> /(s·bar)]	b	C [dm <sup>3</sup> /(s·bar)]	b
JSY1000	M5	M5	0.6	0.48	0.6	0.39
JSY3000	1/16	1/16	2.0	0.41	2.1	0.35
JSY5000	1/8	1/8	5.5	0.38	5.4	0.36

\* Calculation of effective area S and sonic conductance C:  $S = 5.0 \times C$

# Non Plug-in Body Ported

Single Unit (For Mounting P.E Plate)

Type 20  
Top Ported

# JSY1000/3000/5000 Series



## How to Order Valves

JSY1000

JSY 1 1 20 T - 5 L Z - M3 - PE

JSY3000/5000

JSY 3 1 20 - 5 L Z - R1 - PE

1 2 3

4 5 6 7 8 9

Body ported

With power-saving circuit

### 1 Series

1	JSY1000
3	JSY3000
5	JSY5000

### 2 Type of actuation

1	2-position single
2	2-position double

### 3 Body option

0	Pilot valve exhaust method
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### 4 Rated voltage

5	24 VDC
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### 5 Electrical entry

	L plug connector		M plug connector	
	L	LO	M	MO
JSY1000	L: With lead wire (300 mm) 	LO: Without connector 	M: With lead wire (300 mm) 	MO: Without connector 
JSY3000 JSY5000	L: With lead wire (300 mm) 	LO: Without connector 	M: With lead wire (300 mm) 	MO: Without connector 

\* Refer to the **Web Catalog** for the lead wire lengths of "L" and "M" plug connectors.

### 6 Light/surge voltage suppressor and common specifications

Z	With light/surge voltage suppressor
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### 7 Manual override

JSY1000	Nil: Non-locking push type 	D: Push-turn locking slotted type 	E: Push-turn locking lever type 
	JSY3000 JSY5000	Nil: Non-locking push type 	D: Push-turn locking slotted type 

### 8 4(A)/2(B) port size thread piping

Symbol	Thread piping	JSY1000	JSY3000	JSY5000
M3	M3 x 0.5	●	—	—
M5	M5 x 0.8	●	—	—
R1	Rc1/16	—	●	—
01	Rc1/8	—	—	●

### 9 With P.E plate

Symbol	Port size	JSY1000	JSY3000	JSY5000
PE	M5	●	—	—
	Rc1/16	—	●	—
	Rc1/8	—	—	●

### Caution

If the JSY3000/5000 series is to be continuously energized, please be sure to select the power-saving circuit (continuous duty type) specification. Refer to "Made to Order" on the back cover. Additionally, if it is to be used at an energizing rate of over 50%, please select the product with a power-saving circuit. For the JSY1000 series, only the power-saving circuit specification is available.

**Made to Order**  
Made to Order (Refer to the back cover for details.)

Specification
With power-saving circuit (Continuous duty type): 0.1 W (JSY3000/5000)

### Caution

Refer to the following to order the fitting/silencer for the 1/16 thread piping of the JSY3000 separately.

Description	Part number	Port size Piping/Type
One-touch fittings (Applicable tubing O.D.: ø6)	KQ2S06-R1AS-X1517*1	Rc1/16
One-touch fittings (Applicable tubing O.D.: ø8)	KQSY-S08R1S*1	
Silencer	INA-25-98	

\*1 The part number is for 1 piece. (Sales unit: 10 pcs.)

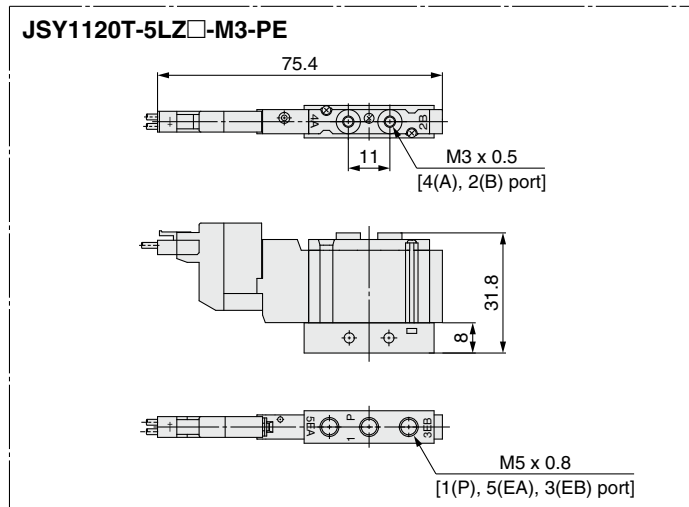
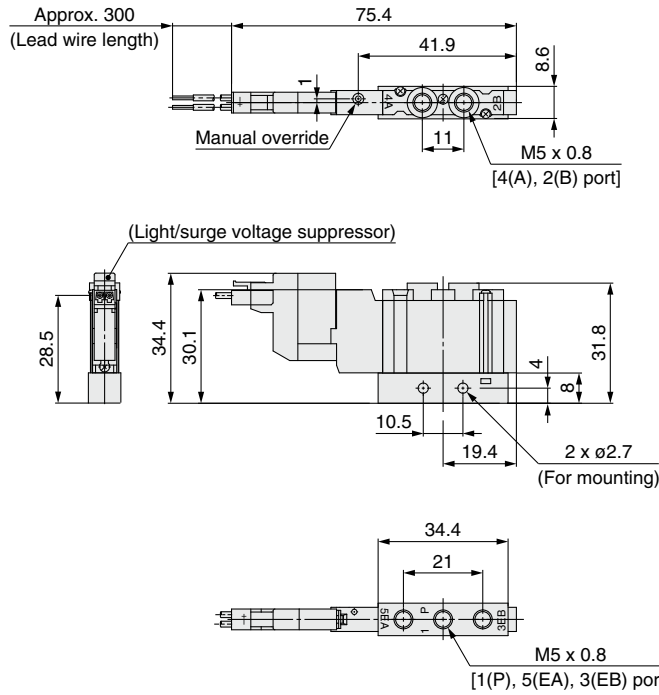
\*1 Tightening torque: 2 to 3 N·m (One-touch fitting)

## Dimensions: JSY1000 Series

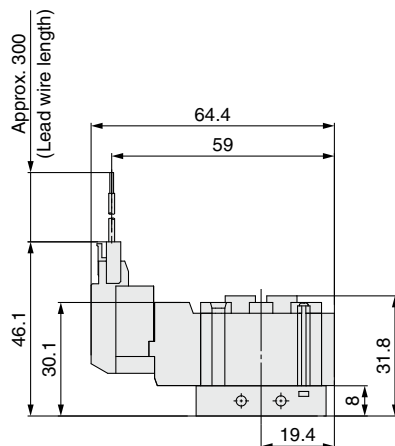
**Body Ported** Type 20/Top Ported  
**Single Unit** Port Size: M3, M5



### 2-position single/L plug connector (L) JSY1120T-5LZ□-M5-PE



### M plug connector (M) JSY1120T-5MZ□-M5-PE

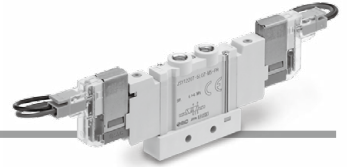


# JSY1000/3000/5000 Series

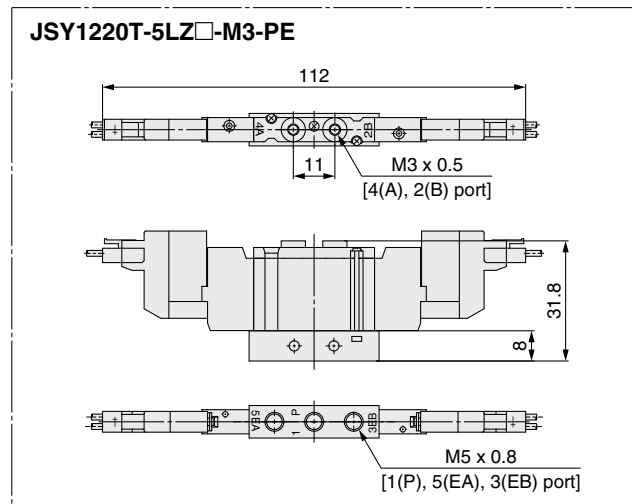
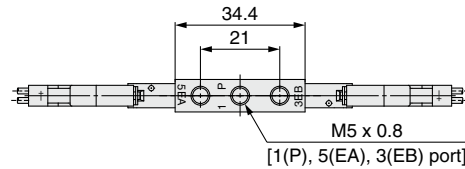
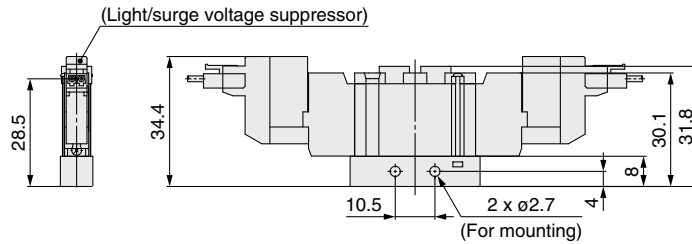
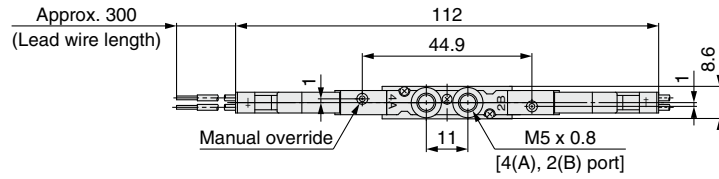
Dimensions: **JSY1000 Series**

**Body Ported  
Single Unit**

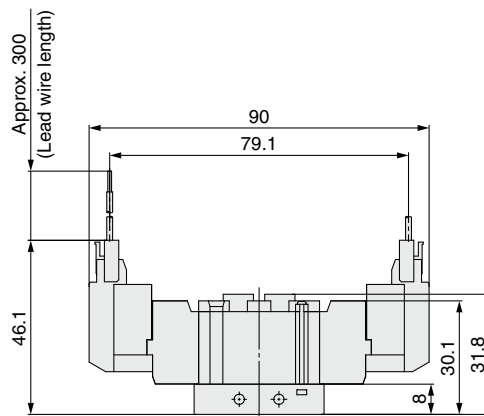
**Type 20/Top Ported  
Port Size: M3, M5**



**2-position double/L plug connector (L)  
JSY1220T-5LZ□-M5-PE**



**M plug connector (M)  
JSY1220T-5MZ□-M5-PE**

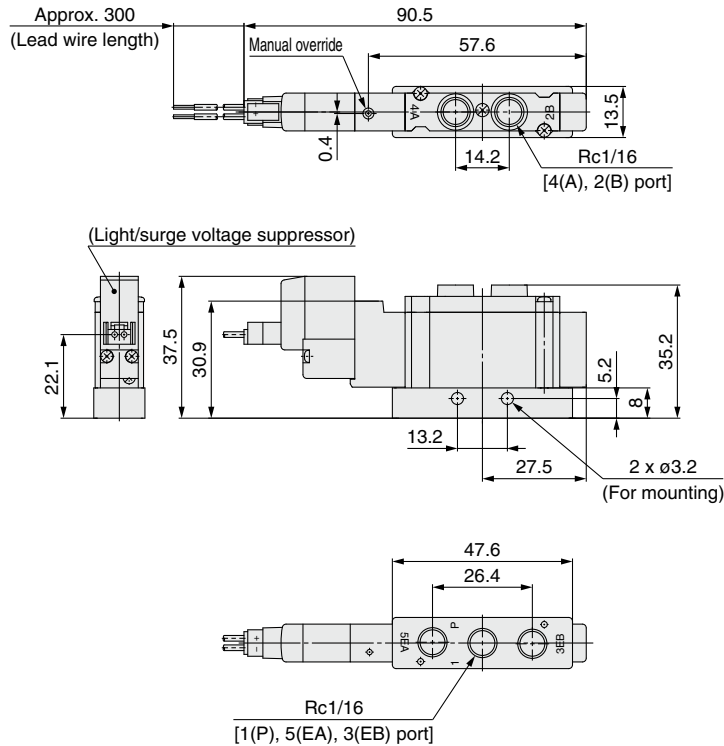


## Dimensions: JSY3000 Series

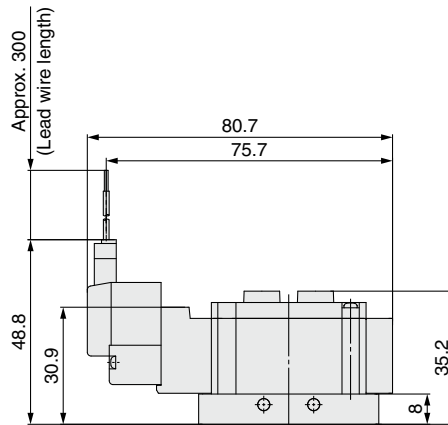
**Body Ported Single Unit**    **Type 20/Top Ported**  
**Port Size: Rc1/16**



### 2-position single/L plug connector (L) JSY3120-5LZ□-R1-PE



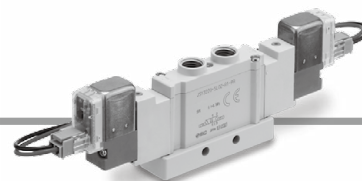
### M plug connector (M) JSY3120-5MZ□-R1-PE



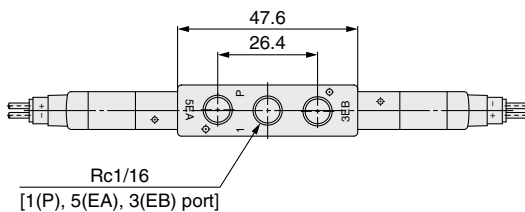
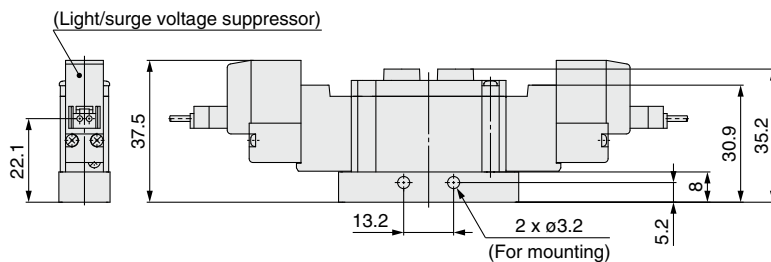
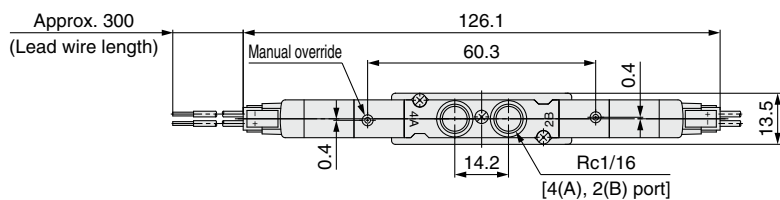
# JSY1000/3000/5000 Series

Dimensions: **JSY3000 Series**

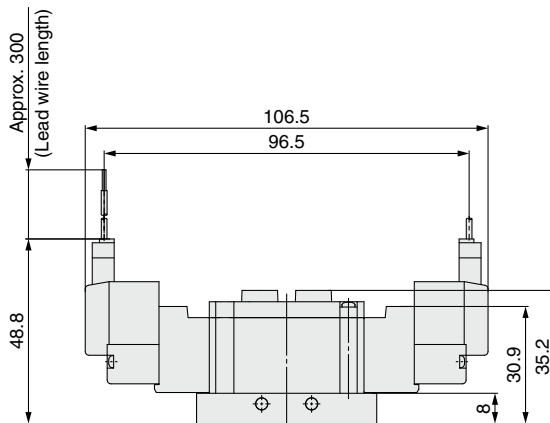
**Body Ported** Type 20/Top Ported  
**Single Unit** Port Size: Rc1/16



**2-position double/L plug connector (L)**  
**JSY3220-5LZ□-R1-PE**



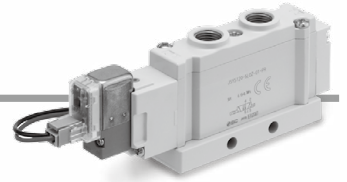
**M plug connector (M)**  
**JSY3220-5MZ□-R1-PE**



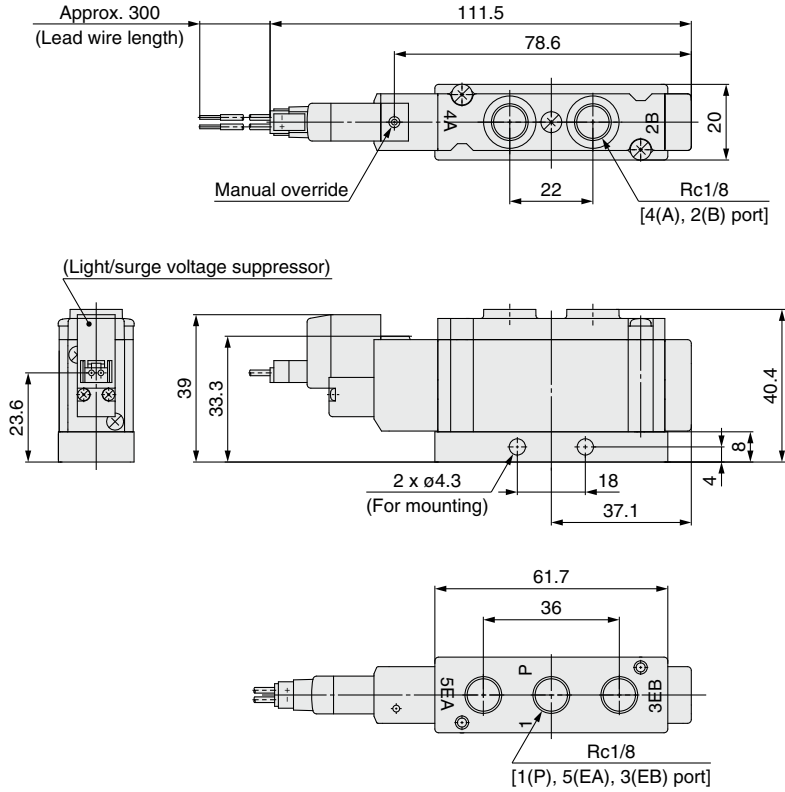


## Dimensions: JSY5000 Series

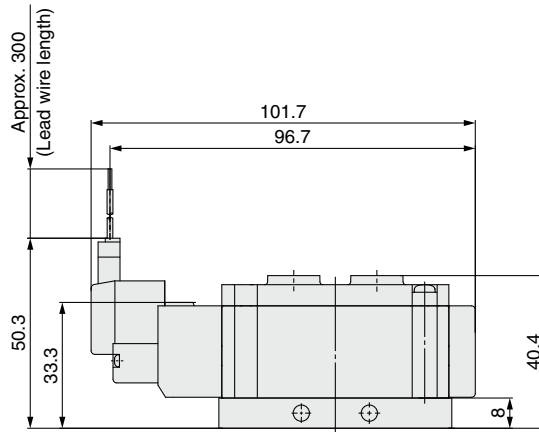
**Body Ported** Type 20/Top Ported  
**Single Unit** Port Size: Rc1/8



### 2-position single/L plug connector (L) JSY5120-5LZ□-01-PE



### M plug connector (M) JSY5120-5MZ□-01-PE



# JSY1000/3000/5000 Series

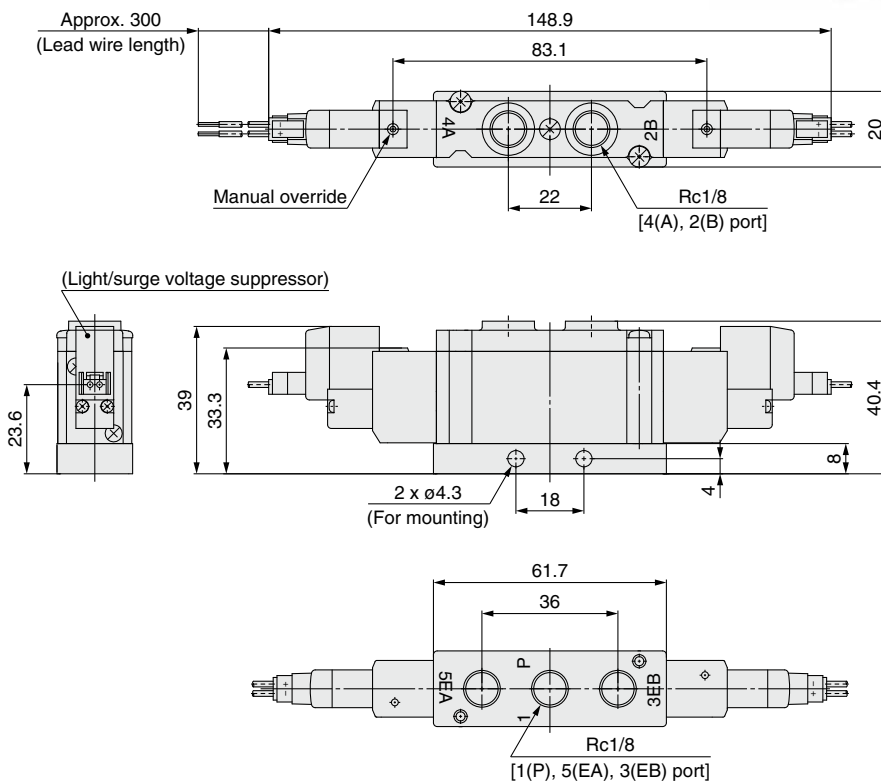
Dimensions: **JSY5000 Series**

**Body Ported  
Single Unit**

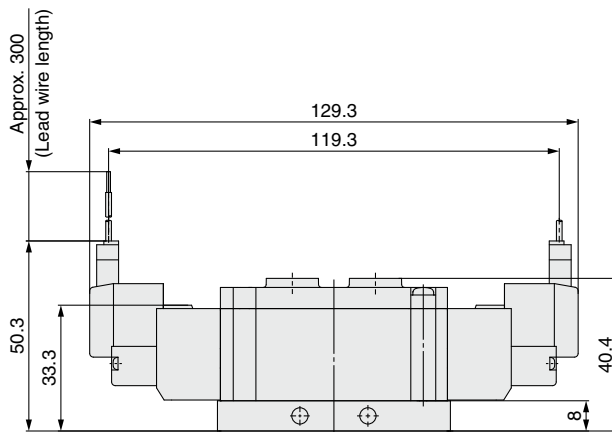
**Type 20/Top Ported  
Port Size: Rc1/8**



**2-position double/L plug connector (L)  
JSY5220-5LZ□-01-PE**

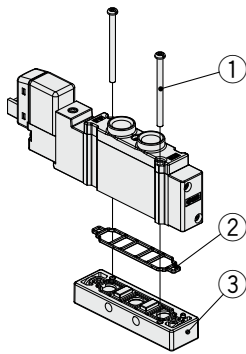


**M plug connector (M)  
JSY5220-5MZ□-01-PE**



# JSY1000/3000/5000 Series

## Non Plug-in Single Unit Parts Nos.



No.	Description	Part number			Note
		JSY1000	JSY3000	JSY5000	
①	Valve mounting screw	JSY11V-23-3A (M1.4 x 24.5)	JSY31V-23-7A (M2 x 27)	JSY51V-23-7A (M3 x 32)	Part numbers shown on the left are for 10 valves. (20 pcs.)
②	Base gasket	JSY11M-9P-1A	JSY31M-9P-1A	JSY51M-9P-1A	Part numbers shown on the left are for 10 valves. (10 pcs.)
③	P.E plate assembly	JSY11V-7A-M5	JSY31V-7A-R1	JSY51V-7A-01	With base gasket Available in units of 1 set For details, refer to the part numbers below.

### ■ P.E Plate

JSY **3** 1V-7A-**R1**

①

②

#### ① Series

1	JSY1000
3	JSY3000
5	JSY5000

#### ② Thread piping

Symbol	Thread piping	JSY1000	JSY3000	JSY5000
M5	M5 x 0.8	●	—	—
R1	Rc1/16	—	●	—
01	Rc1/8	—	—	●

# JSY1000/3000/5000 Series

## Made to Order

Please contact SMC for detailed dimensions, specifications, and delivery times.



### 1 Coil type: With power-saving circuit (Continuous duty type)

Be sure to select the power-saving circuit type when the JSY3000/5000 series is continuously energized for long periods of time.  
Be careful of the energizing time when the power-saving circuit is selected.


0.1 W: JSY3000/5000

#### How to Order Valves

JSY  $\frac{3}{5}$  □ 20 T - 5 □ Z □ - □ - PE

• Coil type

T	With power-saving circuit (Continuous duty type)
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 **Safety Instructions** Be sure to read the "Handling Precautions for SMC Products" (M-E03-3) and "Operation Manual" before use.