V100

SY

SYJ

٧K

٧Z

۷G

۷P

S070

VQ

 VKF

VQZ

٧Z

VS

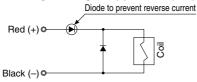
VFN

Surge Voltage Suppressor

<For DC>

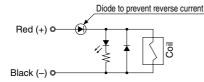
Grommet, L/M Plug Connector Type

■ Standard type (With polarity) With surge voltage suppressor (□S)



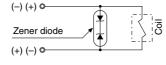
Light/Surge voltage suppressor (□Z)



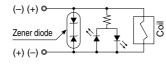


■ Non-polar type With surge voltage suppressor (□R)





Light/Surge voltage suppressor (□U)



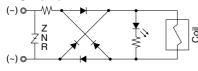
- Please connect correctly the lead wires to + (positive) and (negative) indications on the connector.
 (For non-polar type, the lead wires can be connected to either
- one.)
 For DC voltages other than 12 and 24 VDC, incorrect wiring will cause damage to the surge voltage suppressor circuit. (Wrong
- polarity will cause trouble.)

 Solenoids, whose lead wires have been pre-wired: positive side
- Solenoids, whose lead wires have been pre-wired: positive side red and negative side black.

<For AC>

Grommet, L/M Plug Connector Type

With indicator light (□Z)





⚠ Caution

In the case of zener diode and protection circuit for surge voltage of ZNR, use caution to the surge voltage protection in the controller side, since there remains the residual voltage according to the protecting element and the rated voltage.

Moreover, the residual voltage of the diode is approximately 1 V.

Connector Assembly with Protective Cover

Connector assembly with a protective cover which's taken countermeasures against dusttight.

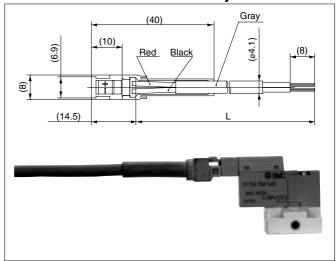
- Effective to prevent short circuit accidents caused by invasion of foreign matters into the connector section, etc.
- Cover material adopts the chloroprene rubber which is excellent in weatherability and electric insulation properties. However, use caution not to allow contact with cutting oil, etc.
- Simple and unencumbered appearance by adopting roundshaped cord.

How to Order

SY100-68-ALead wire length (L)

.og (=)					
Nil	300 mm				
6	600 mm				
10	1000 mm				
15	1500 mm				
20	2000 mm				
25	2500 mm				
30	3000 mm				
50	5000 mm				

Dimensions: Connector Assembly with Cover



How to Order

Include the connector assembly part number together with the part number for the plug connector's solenoid valve without connector.

<Example 1> For lead wire length: 2000 mm

SY114-5LOZ-M3 SY100-68-A-20

<Example 2> For lead wire length: 300 mm (Standard)

SY114-5LPZ-M3

Symbol of connector assembly with protective cover

* No part numbers of connector assembly with cover are needed to be indicated in this case.

3 Port Direct Operated Solenoid Valve Rubber Seal

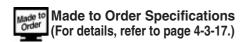
Series SY100



Body ported



Base mounted



Specifications

Fluid	Air				
Ambient and fluid temperature (°C)	-10 to 50°C (No freezing. Refer to page 4-18-4.)				
Response time (ms) (1)	10 or less				
Max. operating frequency (Hz)	20				
Manual override	Non-locking push type, Locking slotted type Push-turn locking slotted type Push-turn locking lever type {SY1½4, SY1½4A only}				
Lubrication	Not required				
Mounting position	Unrestricted				
Impact/Vibration resistance (m/s²) (2)	150/30				
Enclosure	Dustproof				

Note 1) Based on dynamic performance test, JIS B 8374-1981. (Coil temperature: 20°C, at rated voltage, without surge suppressor.)

Note 2) Impact resistance: No malfunction occurred when it is tested with a drop tester in the axial

direction and at the right angles to the main valve and armature in both energized and de-energized states every once for each condition. (Values at the initial period)

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

Solenoid Specifications

Series			SY1 ¹³ ₂₄	SY1 ¹³ A		
Electrical entry			Grommet (G)/(H), L plug connector (L) M plug connector (M)			
Coil roted voltage (V)	DC		24, 12, 6, 5, 3			
Coil rated voltage (V)	AC ⁵⁰ / ₆₀ Hz		100, 110, 200, 220	_		
Allowable voltage fluctuation			-10 to +10%			
Power consumption (W)	DC		0.5 (With indicator light: 0.55)	0.75 W (With indicator light: 0.8 W)		
	AC	100 V	0.9 (With indicator light: 1.0)			
Apparent power (VA)		110 V [115 V]	1.0 (With indicator light: 1.1) [1.1 (With indicator light: 1.2)]			
		200 V	1.8 (With indicator light: 1.9)	_		
		220 V [230 V]	1.9 (With indicator light: 2.0) [2.2 (With indicator light: 2.3)]			
Surge voltage suppressor			Diode			
Indicator light			LED			



* It is in common between 110 VAC and 115 VAC, and between 220 VAC and 230 VAC. [Low wattage [0.45 W] is available, too. For details, refer to catalog on page 4-18-4.]

Model

9	Valve	Type	pressure	Vacuum specifications (MPa)		Port size		Effective	Weight (g) ⁽²⁾	
	model Type		1(P) port	3(R) port	1(P), 3(R) port	2(A) port	area (mm²)	Grommet	L plug connector, M plug connector	
N.C.	SY11 ³	Standard	0 to 0.7	-100 kPA to 0.6	-100 kPA to 0	M3 x 0.5	M3 x 0.5	0.14	SY1□3(A): 13 SY1□4(A): 24 (12)	′1□4(A): 24 SY1□4(A): 26
N.C.	SY11 ³ A	Large flow	0 to 0.7	-100 kPA to 0.6	-100 kPA to 0	M3 x 0.5	M3 x 0.5	0.22		
N.O.	SY12 ₄ ⁽¹⁾	Standard	0 to 0.7	-100 kPA to 0	-100 kPA to 0.6	M3 x 0.5	M3 x 0.5	0.14		
N.O.	SY123A	Large flow	0 to 0.7	-100 kPA to 0	-100 kPA to 0.6	M3 x 0.5	M3 x 0.5	0.22		

Note 1) SY123/SY124 $_4^3$ and SY123/SY124 $_4^3$ A: Supply pressure to 1(R) port and exhaust air from 3(P) port. Note 2) Value for DC. Add 1 g for AC. (): Without sub-plate.

