

5 Port Solenoid Valve

Body Ported/Single Unit

SY3000/5000/7000/9000 Series



[Option]
Note) AC-type models that are CE/UKCA-compliant have DIN terminals only.

How to Order

SY 5 1 20 - 5 L - 01 - - - -

Series

3	SY3000
5	SY5000
7	SY7000
9	SY9000

Type of actuation

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

Note) For details about Symbol of the 3 position type of the SY9000 series, refer to page 735.

Coil specifications

	Standard
T	With power saving circuit (24, 12 VDC only)

* Power saving circuit is not available in the case of D, DO, Y, YO or W□ type.

For DC

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

Rated voltage

For AC (%Hz)

1	100 VAC
2	200 VAC
3	110 VAC [115 VAC]
4	220 VAC [230 VAC]

* DC specifications of type D, Y, DO and YO is only available with 12 and 24 VDC.
* For type W□, DC voltage is only available.
Note) AC-type models that are CE/UKCA-compliant have DIN terminals only.

Electrical entry

24, 12, 6, 5, 3 VDC/100, 110, 200, 220 VAC	24, 12 VDC/100, 110, 200, 220 VAC
Grommet	DIN terminal
G: Lead wire length 300 mm	D, Y: With connector
L: With lead wire (Length 300 mm)	DO, YO: Without connector
M: With lead wire (Length 300 mm)	
MN: Without lead wire	
H: Lead wire length 600 mm	
LN: Without lead wire	
LO: Without connector	
MO: Without connector	

CE/UKCA-compliant

24, 12 VDC
6, 5, 3 VDC

M8 connector

W□: Without connector cable



W□: With connector cable (Note)



CE/UKCA-compliant

24, 12 VDC
6, 5, 3 VDC

W□: Without connector cable



- * LN, MN type: with 2 sockets.
- * For DIN terminal of SY3000 series, refer to page 958.
- * "Y" type is a DIN terminal conforming to EN-175301-803C (former DIN43650C). For details, refer to page 957.
- * For connector cable of M8 connector, refer to page 960.
- * M8 connector conforming to IEC60947-5-2 standard is also available. Refer to page 941 for details.
- * Refer to page 957 for the lead wire length of L and M plug connectors.
- * Refer to page 958 for the connector assembly with cover for L and M plug connectors.
- Note) Enter the cable length symbols in □. Please be sure to fill in the blank referring to page 961.

A, B port size

Thread piping

Symbol	Port size	Applicable series
M5	M5 x 0.8	SY3000
01	1/8	SY5000
02	1/4	SY7000
02	1/4	SY9000
03	3/8	SY9000

One-touch fitting (Metric size)

Symbol	Port size	Applicable series
C4	One-touch fitting for ø4	SY3000
C6	One-touch fitting for ø6	SY3000
C4	One-touch fitting for ø4	SY5000
C6	One-touch fitting for ø6	SY5000
C8	One-touch fitting for ø8	SY5000
C8	One-touch fitting for ø8	SY7000
C10	One-touch fitting for ø10	SY7000
C8	One-touch fitting for ø8	SY9000
C10	One-touch fitting for ø10	SY9000
C12	One-touch fitting for ø12	SY9000

One-touch fitting (Inch size)

Symbol	Port size	Applicable series
N3	One-touch fitting for ø 5/32	SY3000
N7	One-touch fitting for ø 1/4	SY3000
N3	One-touch fitting for ø 5/32	SY5000
N7	One-touch fitting for ø 1/4	SY5000
N9	One-touch fitting for ø 5/16	SY5000
N9	One-touch fitting for ø 5/16	SY7000
N11	One-touch fitting for ø 3/8	SY7000
N9	One-touch fitting for ø 5/16	SY9000
N11	One-touch fitting for ø 3/8	SY9000

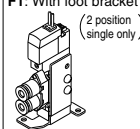
Manual override

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

Bracket

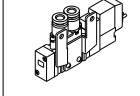
Nil: Without bracket

F1: With foot bracket



(2 position single only)

F2: With side bracket



* SY9000 has no bracket.

Thread type

Nil	Rc
F	G
N	NPT
T	NPTF

* Except for M5

Made to Order

Nil	—
X20	Body ported external pilot (Refer to page 942)
X90	Main valve rubber flapper (Refer to page 942)
X701	4-position dual 3-port valve (Refer to page 942-1)

* "X701" is only available for the SY5000/7000.

CE/UKCA-compliant

Nil	—
Q	CE/UKCA-compliant

Note) AC-type models that are CE/UKCA-compliant have DIN terminals only.

Light/Surge voltage suppressor

Electrical entry for G, H, L, M, W

Nil	Without light/surge voltage suppressor
S	With surge voltage suppressor
Z	With light/surge voltage suppressor
R	With surge voltage suppressor (Non-polar type)
U	With light/surge voltage suppressor (Non-polar type)

- * For AC voltage valves there is no "S" option. It is already built-in to the rectifier circuit.
- * For "R" and "U", DC voltage is only available.
- * Power saving circuit is only available in the "Z" type.

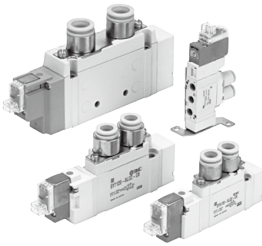
Electrical entry for D, Y

Nil	Without light/surge voltage suppressor
S	With surge voltage suppressor (Non-polar type)
Z	With light/surge voltage suppressor (Non-polar type)

- * DOZ and YOZ are not available.
- * For AC voltage valves there is no "S" option. It is already built-in to the rectifier circuit.

Note) Manifold mounting screws and gaskets are included with the manifold, but they are not included when ordering a body ported solenoid valve as a single unit. Order them separately if necessary. (For details, refer to page 795.)

Specifications



Series		SY3000	SY5000	SY7000	SY9000
Fluid		Air			
Internal pilot	2 position single	0.15 to 0.7			
Operating pressure	2 position double	0.1 to 0.7			
range (MPa)	3 position	0.2 to 0.7			
Ambient and fluid temperature (°C)		-10 to 50 (No freezing)			
Max. operating frequency (Hz)	2 position single, double	10	5	5	5
	3 position	3	3	3	3
Manual override (Manual operation)		Non-locking push type, Push-turn locking slotted type, Push-turn locking lever type			
Pilot exhaust method		Common exhaust type for main and pilot valve			
Lubrication		Not required			
Mounting orientation		Unrestricted			
Impact/Vibration resistance (m/s ²) ^{Note}		150/30			
Enclosure		Dust proof (* DIN terminal and M8 connector: IP65)			

* Based on IEC60529

Note) Impact resistance: No malfunction occurred when it is tested 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)



Made to Order

(For details, refer to pages 934 to 947.)

Solenoid Specifications

Electrical entry		Grommet (G), (H) L plug connector (L) M plug connector (M)	DIN terminal (D), (Y) M8 connector (W)
		G, H, L, M, W	D, Y
Coil rated voltage (V)	DC	24, 12, 6, 5, 3	24, 12
	AC 50/60 Hz	100, 110, 200, 220	
Allowable voltage fluctuation		±10% of rated voltage *	
Power consumption (W)	Standard	0.35 (With indicator light: 0.4 DIN terminal with indicator light: 0.45)	
	DC With power saving circuit	0.1 (With indicator light only) * [Starting 0.4, Holding 0.1]	
Apparent power (VA) *	AC	100 V	0.78 (With indicator light: 0.81) 0.78 (With indicator light: 0.87)
		110 V	0.86 (With indicator light: 0.89) 0.86 (With indicator light: 0.97)
		[115 V]	[0.94 (With indicator light: 0.97)] [0.94 (With indicator light: 1.07)]
		200 V	1.18 (With indicator light: 1.22) 1.15 (With indicator light: 1.30)
		220 V [230 V]	1.30 (With indicator light: 1.34) 1.27 (With indicator light: 1.46) [1.42 (With indicator light: 1.46)] [1.39 (With indicator light: 1.60)]
Surge voltage suppressor		Diode (Varistor is for DIN terminal and Non-polar type.)	
Indicator light		LED (AC of DIN connector is neon light.)	

* In common between 110 VAC and 115 VAC, and between 220 VAC and 230 VAC.

* For 115 VAC and 230 VAC, the allowable voltage is -15% to +5% of rated voltage.

* DIN terminal and M8 connector with power saving circuit are not available.

* For details, refer to page 955.

Response Time

Note) Based on dynamic performance test, JIS B 8419: 2010. (Coil temperature: 20°C, at rated voltage)

SY3000

Type of actuation	Response time (ms) (at the pressure of 0.5 MPa)		
	Without light/surge voltage suppressor	With light/surge voltage suppressor	
		Type S, Z	Type R, U
2 position single	12 or less	15 or less	12 or less
2 position double	10 or less	13 or less	10 or less
3 position	15 or less	20 or less	16 or less

SY5000

Type of actuation	Response time (ms) (at the pressure of 0.5 MPa)		
	Without light/surge voltage suppressor	With light/surge voltage suppressor	
		Type S, Z	Type R, U
2 position single	19 or less	26 or less	19 or less
2 position double	18 or less	22 or less	18 or less
3 position	32 or less	38 or less	32 or less

SY7000

Type of actuation	Response time (ms) (at the pressure of 0.5 MPa)		
	Without light/surge voltage suppressor	With light/surge voltage suppressor	
		Type S, Z	Type R, U
2 position single	31 or less	38 or less	33 or less
2 position double	27 or less	30 or less	28 or less
3 position	50 or less	56 or less	50 or less

SY9000

Type of actuation	Response time (ms) (at the pressure of 0.5 MPa)		
	Without light/surge voltage suppressor	With light/surge voltage suppressor	
		Type S, Z	Type R, U
2 position single	35 or less	41 or less	35 or less
2 position double	35 or less	41 or less	35 or less
3 position	62 or less	64 or less	62 or less

SY3000/5000/7000/9000 Series

Flow Rate Characteristics/Weight

SY3000 series

Valve model	Type of actuation	Port size		Flow rate characteristics						Weight (g)		
		1, 5, 3 P (A, B)	4, 2 (A, B)	1→4/2 (P→A/B)			4/2→5/3 (A/B→EA/EB)			Gro-mmet	L/M plug connector	W M8 connector
				C (dm ³ /s-bar)	b	Cv	C (dm ³ /s-bar)	b	Cv			
SY3□20 -□M5	2 position	M5 x 0.8		0.61	0.44	0.16	0.64	0.45	0.18	51	53	57
	Double								68	74	82	
	Closed center											
	3 position											
SY3□20 -□C4	2 position	M5 x 0.8	C4 (One-touch fitting for ø4)	0.47	0.42	0.13	0.47	0.41	0.13	71	76	84
	Double											
	Closed center											
	3 position											
SY3□20 -□C6	2 position		C6 (One-touch fitting for ø6)	0.50	0.48	0.15	0.47	0.43	0.13			
	Double											
	Closed center											
	3 position											

Note) []: denotes normal position.

SY7000 series

Valve model	Type of actuation	Port size		Flow rate characteristics						Weight (g)			
		1, 5, 3 (P, EA, EB)	4, 2 (A, B)	1→4/2 (P→A/B)		4/2→5/3 (A/B→EA/EB)		Gro-mmet	L/M plug connector	DIN terminating	W M8 connector		
		C (dm ³ /s-bar)	b	Cv	C (dm ³ /s-bar)	b	Cv						
SY7□20 -□02	2 position	Single Double Closed center Exhaust center Pressure center	1/4	4.1	0.23	0.93	3.3	0.33	0.81	101	104	125	108
	2.9			0.31	0.70	2.4	0.38	0.63	120	125	167	133	
	2.5			0.39	0.65	3.4	0.35	0.82	128	133	175	141	
	2.5			0.39	0.65	3.4	0.35	0.82	128	133	175	141	
SY7□20 -□C8	2 position	1 (P) Port 1/4	C8 One-touch fitting for ø8	3.2	0.26	0.77	3.2	0.37	0.82	107	110	131	114
	2.6			0.24	0.63	2.4	0.31	0.62	126	132	174	140	
	2.4			0.25	0.57	2.6	0.42	0.70	134	140	182	148	
	3.3			0.28	0.78	3.2	0.34	0.60					
SY7□20 -□C10	2 position	5.3 (EA, EB) Port 1/8	C10 One-touch fitting for ø10	3.3	0.28	0.78	3.3	0.42	0.82	103	105	126	109
	2.8			0.27	0.67	2.4	0.21	0.59	122	127	169	135	
	2.5			0.25	0.59	2.7	0.38	0.70	130	135	177	143	
	3.8			0.25	0.89	2.3	0.38	0.61					

Note) []: denotes normal position.

SY5000 series

Valve model	Type of actuation	Port size 1, 5, 3 (P, EA, EB)	4, 2 (A, B)	Flow rate characteristics						Weight (g)			
				1→4/2 (P→A/B)		4/2→5/3 (A/B→EA/EB)		Gro-mmet	L/M plug connector	DIN terminal	W M8 connector		
SY5□20 -□01	2 position	1/8		1.9	0.35	0.49	2.4	0.39	0.61	70	72	93	76
	Double								88	93	135	101	
	Closed center			1.7	0.43	0.45	1.8	0.35	0.46				
	3 position			1.5	0.44	0.41	2.5 (1.5)	0.32 (0.43)	0.59 (0.40)	93	98	140	106
SY5□20 -□C4	2 position	1/8	C4 (One-touch fitting for ø4)	2.2 (0.91)	0.46 (0.38)	0.61 (0.28)	2.2	0.46	0.61				
	Double												
	Closed center			0.75	0.43	0.20	0.85	0.64	0.30	94	96	117	100
	3 position			0.74	0.40	0.19	0.84	0.57	0.28	111	117	159	125
SY5□20 -□C6	2 position	1/8	C6 (One-touch fitting for ø6)	0.75	0.36	0.19	0.84 (0.84)	0.64 (0.53)	0.30 (0.27)	117	122	164	130
	Double												
	Closed center			0.78 (0.71)	0.44 (0.37)	0.61 (0.18)	0.84	0.57	0.27				
	3 position			1.5	0.33	0.33	2.0	0.37	0.52	88	91	112	95
SY5□20 -□C8	2 position	1/8	C8 (One-touch fitting for ø8)	1.3	0.31	0.33	1.6	0.32	0.39	106	111	153	119
	Double												
	Closed center			1.3	0.33	0.33	1.8 (1.4)	0.35 (0.37)	0.44 (0.33)	111	116	158	124
	3 position			1.7 (0.80)	0.41 (0.47)	0.42 (0.23)	1.7	0.33	0.44				
SY5□20 -□C10	2 position	1/8	C10 (One-touch fitting for ø10)	1.9	0.21	0.45	2.3	0.29	0.57	80	82	103	86
	Double									98	103	145	111
	Closed center			1.6	0.29	0.39	1.7	0.38	0.46				
	3 position			1.4	0.38	0.39	2.0 (1.5)	0.37 (0.41)	0.43 (0.43)	103	108	150	116
SY5□20 -□C12	2 position	1/8	C12 (One-touch fitting for ø12)	2.2 (1.6)	0.32 (0.44)	0.56 (0.46)	1.8	0.41	0.50				
	Double												
	Closed center			1.4	0.38	0.39	2.0 (1.5)	0.37 (0.41)	0.43 (0.43)	103	108	150	116
	3 position			2.2 (1.6)	0.32 (0.44)	0.56 (0.46)	1.8	0.41	0.50				

Note) []: denotes normal position.

SY9000 series

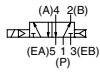
Valve model	Type of actuation	Port size 1, 5, 3 (P, EA, EB)	4, 2 (A, B)	Flow rate characteristics						Weight (g)					
				1→4/2 (P→A/B)			4/2→5/3 (A/B→EA/EB)			Gro-mmet	L/M plug connector	DIN termi-nal	W M8 connector		
				C (dm ³ /s-bar)	b	Cv	C (dm ³ /s-bar)	b	Cv						
SY9□20 -□02	2 position	1 position	Single Double Closed center Exhaust center Pressure center	1/4	7.0	0.33	1.7	7.6	0.35	2.0	241 260	244 266	265 308	248 274	
	6.7				0.37	1.7	6.4	0.34	1.6						
	6.4				0.36	1.6	8.3 (4.1)	0.41 (2.7)	2.2 (0.9)	284	290	332	298		
	8.0 (3.2)				0.27 (0.4)	1.8 (0.76)	6.5	0.22	1.4						
SY9□20 -□03	2 position	1 position	Single Double Closed center Exhaust center Pressure center	3/8	8.0	0.29	1.9	8.0	0.33	2.0	236 255	239 261	260 303	243 269	
	7.9				0.33	1.9	6.6	0.27	1.6						
	8.0				0.33	1.9	8.7 (8.3)	0.34 (0.40)	2.2 (2.3)	279	285	327	293		
	8.9 (3.3)				0.34 (0.40)	2.2 (0.82)	6.5	0.25	1.5						
SY9□20 -□C8	2 position	1 position	Single Double Closed center Exhaust center Pressure center	1/4	C8 One-touch fitting for ø8	4.3	0.28	0.96	7.1	0.32	1.7	293 312	296 318	317 360	300 326
	4.3					0.31	0.99	6.1	0.28	1.4					
	4.3					0.3	0.99	7.4 (3.8)	0.36 (0.29)	1.9 (0.8)	336	342	384	350	
	4.4 (3.2)					0.35 (0.26)	1.0 (0.71)	2.1	0.41	0.53					
SY9□20 -□C10	2 position	1 position	Single Double Closed center Exhaust center Pressure center	1/4	C10 One-touch fitting for ø10	6.1	0.28	1.4	7.9	0.33	1.9	279 298	282 304	303 346	286 312
	5.9					0.30	1.4	6.5	0.26	1.5					
	5.8					0.25	1.3	8.4 (4.1)	0.33 (0.27)	2.0 (0.9)	322	328	370	336	
	6.3 (3.2)					0.29 (0.29)	1.5 (0.72)	6.4	0.25	1.5					
SY9□20 -□C12	2 position	1 position	Single Double Closed center Exhaust center Pressure center	1/4	C12 One-touch fitting for ø12	7.0	0.25	1.6	8.6	0.41	2.2	265 284	268 290	289 332	272 298
	6.9					0.24	1.6	7.0	0.33	1.7					
	6.6					0.23	1.4	9.4 (4.5)	0.48 (0.32)	2.6 (1.0)	308	314	356	322	
	7.4 (3.2)					0.25 (0.34)	1.7 (0.74)	6.6	0.23	1.5					

Note) []: denotes normal position.

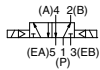
Construction

SY series

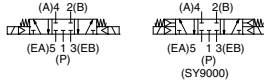
Symbol 2 position single



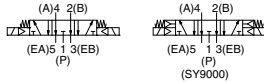
Symbol 2 position double



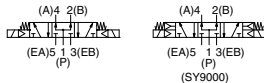
Symbol 3 position closed center



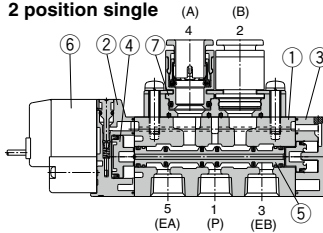
3 position exhaust center



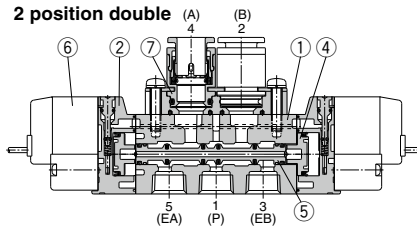
3 position pressure center



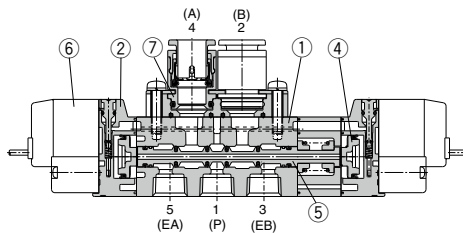
2 position single



2 position double



3 position closed center / exhaust center / pressure center



(This figure shows a closed center type.)

Component Parts

No.	Description	Material	Note
1	Body	Aluminum die-casted (SY3000: Zinc die-casted)	White
2	Adapter plate	Resin	White (SY9000: Gray)
3	End plate	Resin	White
4	Piston	Resin	—
5	Spool valve assembly	Aluminum, H-NBR	—

Replacement Parts

No.	Description	Part no.
6	Pilot valve assembly	Refer to "How to Order Pilot Valve Assembly" on page 948.
7	M5 port block assembly	Refer to "How to Order Port Block Assembly" on page 948.

Bracket Assembly No.

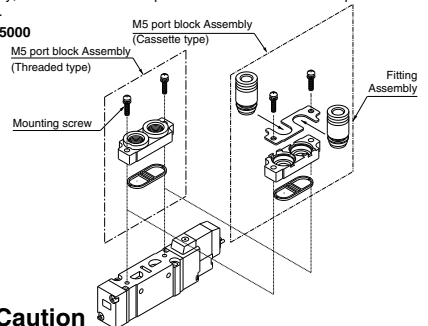
Description	Part no.
Bracket (For F1)	SX000-16-2A (with mounting screw)
Bracket (For F2)	SX000-16-1A (with mounting screw)

* SY9000 has no bracket.

How to Change Port Block Assembly

If using body port type, both A and B port sizes can be changed by replacing the port block assembly mounted on the body. When changing this block assembly, the correct screw torque must be achieved to avoid possible air leakage.

For SY5000



Caution

Mounting screw tightening torques

SY3000 (M2): 0.12 N·m
SY5000 (M3): 0.6 N·m
SY9000 (M4): 1.4 N·m

* Refer to "How to Order Port Block Assembly" on page 948 for part no.

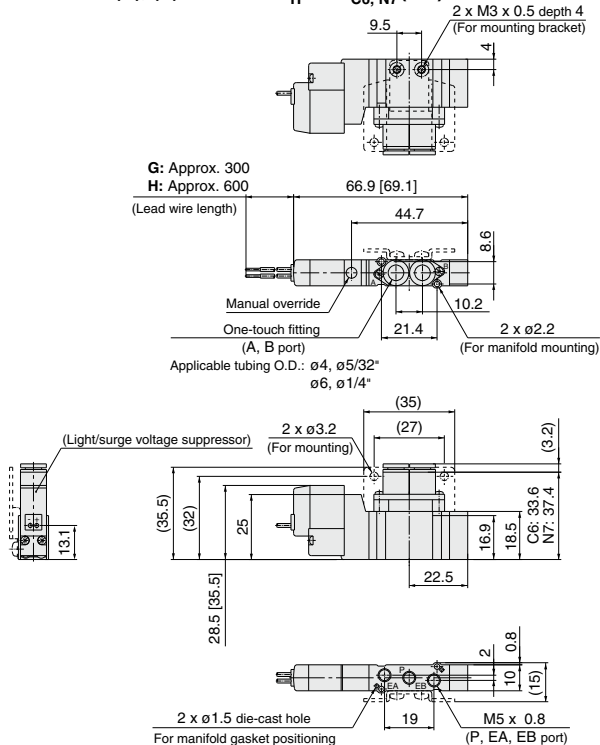
SY3000/5000/7000/9000 Series

Dimensions: SY3000 Series

[]: AC

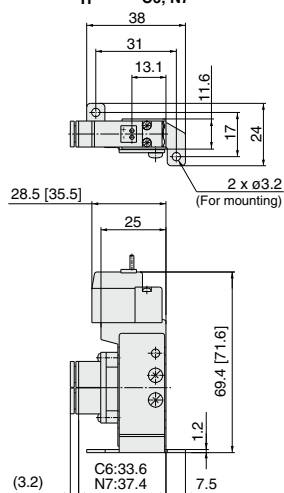
2 position single

Grommet (G), (H): SY3120-□^G□□-C₄, N₃-C₆, N₇-(F₂)

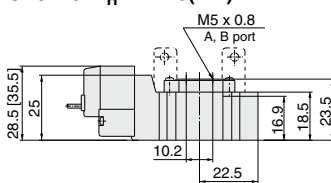


Foot bracket

SY3120-□^G□□-C₄, N₃-C₆, N₇-F₁

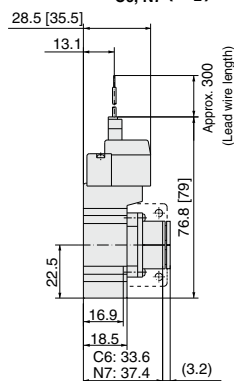


SY3120-□^G□□-M5-(F₂)



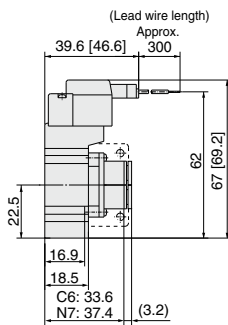
L plug connector (L):

SY3120-□L□□-C₄, N₃-C₆, N₇-(F₂)



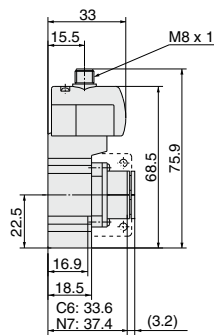
M plug connector (M):

SY3120-□M□□-C₄, N₃-C₆, N₇-(F₂)



M8 connector (WO):

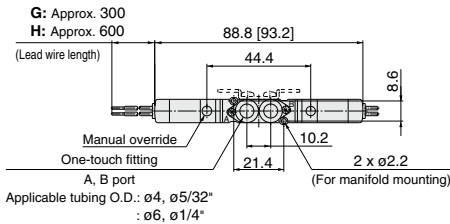
SY3120-□WO□□-C₄, N₃-C₆, N₇-(F₂)



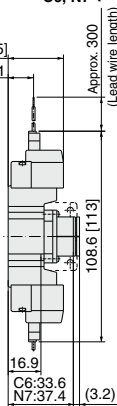
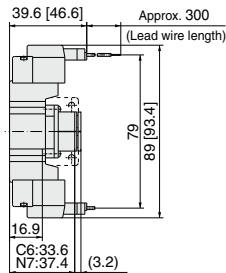
(Note) Refer to page 961 for dimensions of connector types.

[]: AC

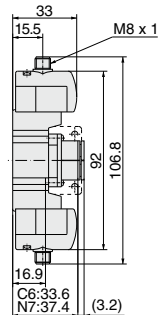
**Grommet (G), (H): SY3220-□_G□□-C₄, N₃
C₆, N₇(-F2)**



SY3220-□L□□- $\begin{matrix} C4, N3 \\ C6, N7 \end{matrix}$ (-F2)

SY3220-□M□□- $\frac{C_4, N_3}{C_6, N_7}(-F2)$ 

SY3220-WO□□- $\begin{matrix} C_4, N_3 \\ C_6, N_7 \end{matrix}(-F_2^1)$



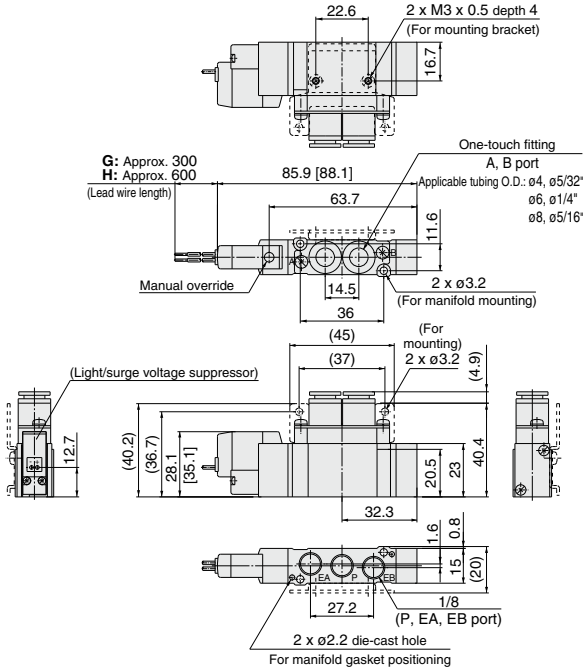
Note) Refer to page 961 for dimensions of connector types.

Dimensions: SY5000 Series

[]: AC

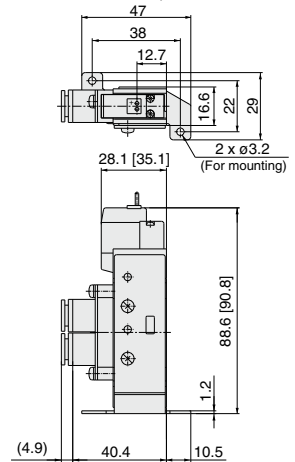
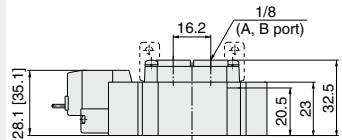
2 position single

Grommet (G), (H): SY5120- $\square_{\text{G}}\square_{\text{H}}$ - $\begin{matrix} \text{C4, N3} \\ \text{C6, N7} \\ \text{C8, N9} \end{matrix}\square_{\text{(-F2)}}$



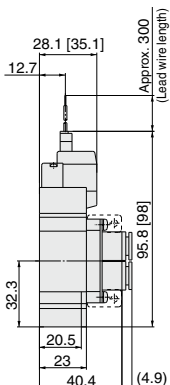
Foot bracket

**SY5120- $\square_{\text{H}}\square\square$ -C4, N3
C6, N7 $\square$ -F1
C8, N9**

SY5120-□_H^G□□-01□(-F₂¹)

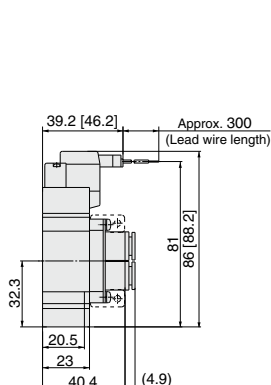
L plug connector (L):

SY5120-□L□□-C₄, N₃
C₆, N₇ □(-F₂¹)
C₈, N₉



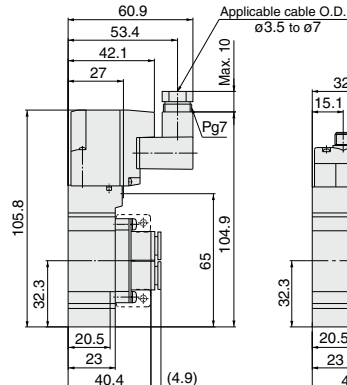
M plug connector (M):

SY5120-□M□□- $\begin{matrix} \text{C4, N3} \\ \text{C6, N7} \\ \text{C8, N9} \end{matrix}$ □(-F₂¹)



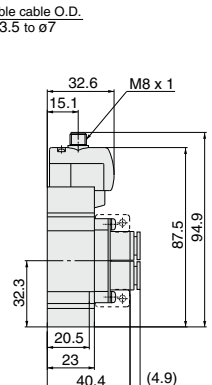
DIN terminal (D, Y):

SY5120-□_Y□□-^{C4, N3}_{C6, N7}□(-F₂¹_{C8, N9})



M8 connector (WO):

SY5120-□WO□□- $\begin{matrix} \text{C4, N3} \\ \text{C6, N7} \\ \text{C8, N9} \end{matrix}$ □(-F₂¹)



Note) Refer to page 961 for dimensions of connector types.

SY3000/5000/7000/9000 Series

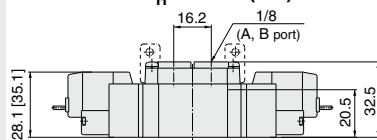
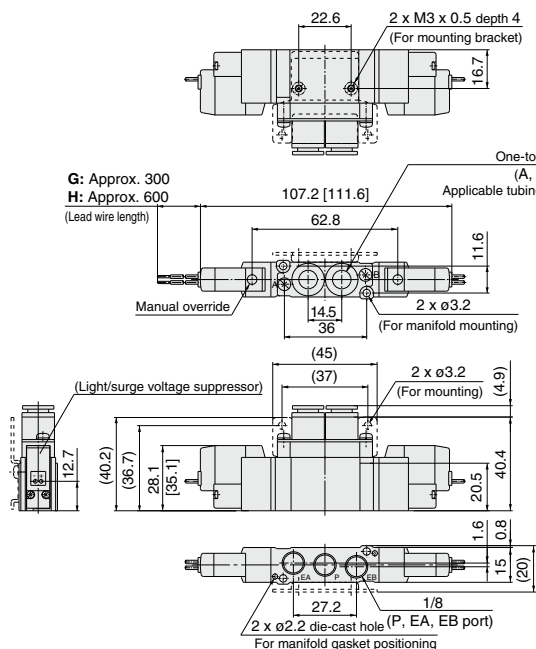
Dimensions: SY5000 Series

[]: AC

2 position double

Grommet (G), (H): SY5220-□^G□^H□^{C4, N3}□^{C6, N7}□^{C8, N9}□^(-F2)

SY5220-□^G□^H□⁰¹□^(-F2)



L plug connector (L):

SY5220-□^L□^{C4, N3}□^{C6, N7}□^{C8, N9}□^(-F2)

M plug connector (M):

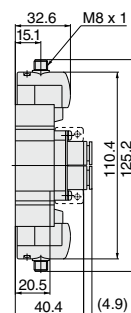
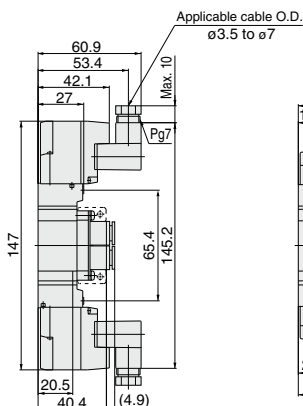
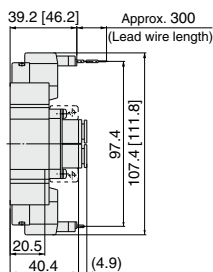
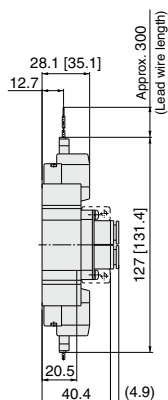
SY5220-□^M□^{C4, N3}□^{C6, N7}□^{C8, N9}□^(-F2)

DIN terminal (D, Y):

SY5220-□^D□^{C4, N3}□^{C6, N7}□^{C8, N9}□^(-F2)

M8 connector (WO):

SY5220-□^{WO}□^{C4, N3}□^{C6, N7}□^{C8, N9}□^(-F2)

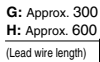


Note) Refer to page 961 for dimensions of connector types.

[]: AC

Grommet (G), (H): SY5³₅20-□_H□□-C⁴₆, N³₇□(-F2)
C⁴₈, N³₉

Grommet (G), (H): SY5³₄20-□^G_H□□-C4, N3
C6, N7□(-F2)
C8, N9

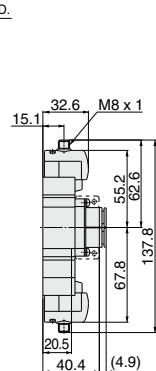


SY5³₅20-□L□□-^{C4, N3}
^{C6, N7}□
^{C8, N9}

SY5³₅20-□M□□-C4, N3
C6, N7 □
C8, N9

SY5³₅20-□^D_Y□□-C4, N3
C6, N7
C8, N9

SY5³₅420-□WO□□-C4, N
C6, N
C8, N



741

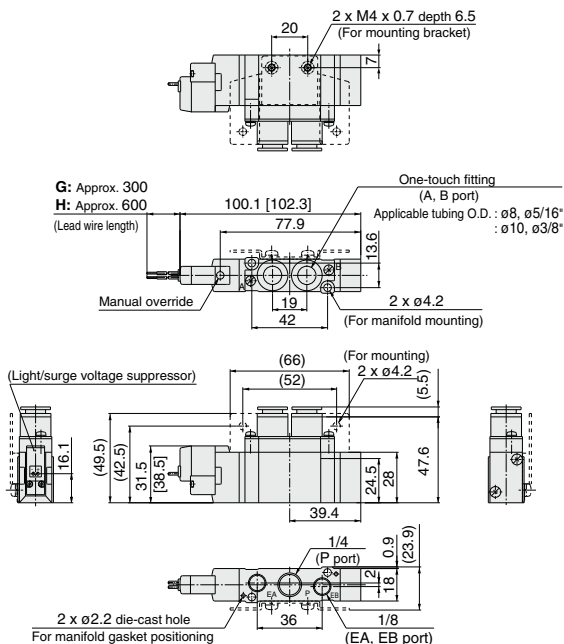
SY3000/5000/7000/9000 Series

Dimensions: SY7000 Series

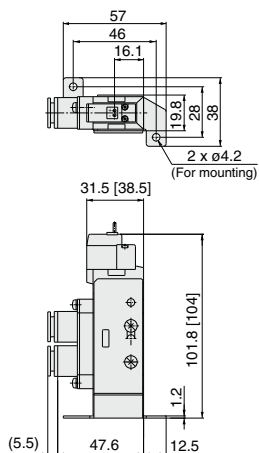
[] : AC

2 position single

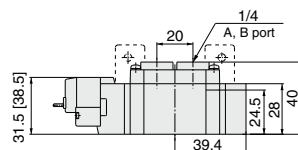
Grommet (G), (H): SY7120-□G□□-C8, N9 C10, N11 □(-F2)



SY7120-□G□□-C8, N9 C10, N11 □(-F1)



SY7120-□G□□-02□(-F2)



L plug connector (L):

SY7120-□L□□-C8, N9 C10, N11 □(-F1)

M plug connector (M):

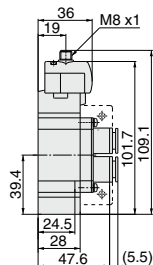
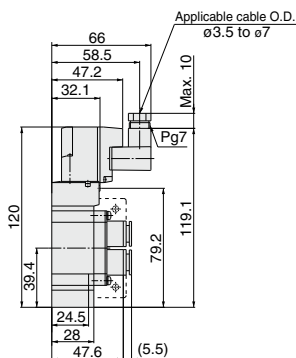
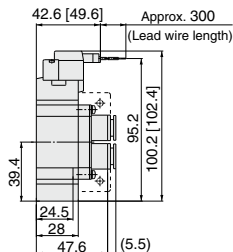
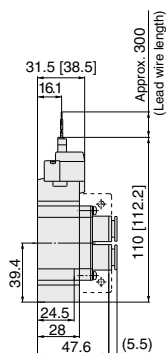
SY7120-□M□□-C8, N9 C10, N11 □(-F1)

DIN terminal (D, Y):

SY7120-□D□□-C8, N9 C10, N11 □(-F1)

M8 connector (WO):

SY7120-□WO□□-C8, N9 C10, N11 □(-F1)



(Note) Refer to page 961 for dimensions of connector types.

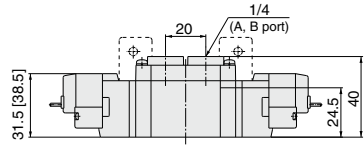
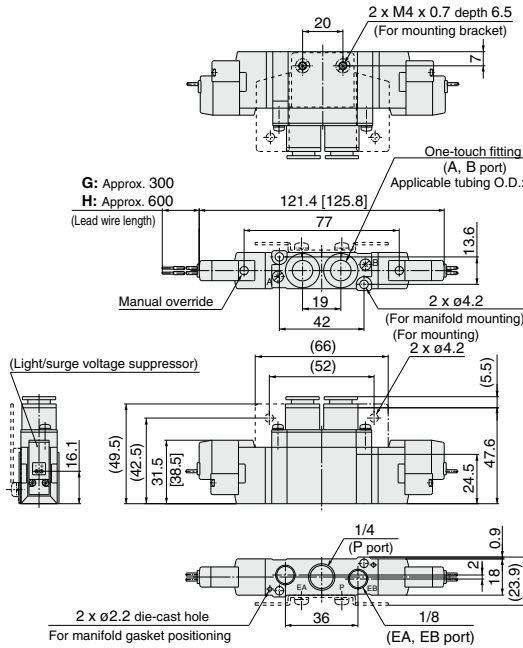
Dimensions: SY7000 Series

[]: AC

2 position double

Grommet (G), (H): SY7220-□_G□□-C8, N9
C10, N11 □(-F2)

SY7220-□_G□□-02□(-F2)



L plug connector (L):

SY7220-□_L□□-C8, N9
C10, N11 □(-F2)

M plug connector (M):

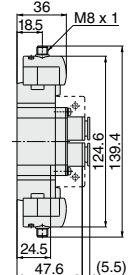
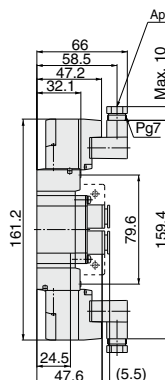
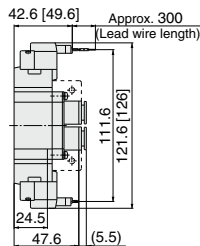
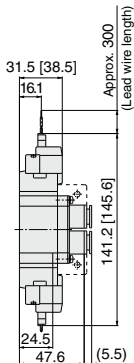
SY7220-□_M□□-C8, N9
C10, N11 □(-F2)

DIN terminal (D, Y):

SY7220-□_D□□-C8, N9
C10, N11 □(-F2)

M8 connector (WO):

SY7220-□_{WO}□□-C8, N9
C10, N11 □(-F2)



Note) Refer to page 961 for dimensions of connector types.

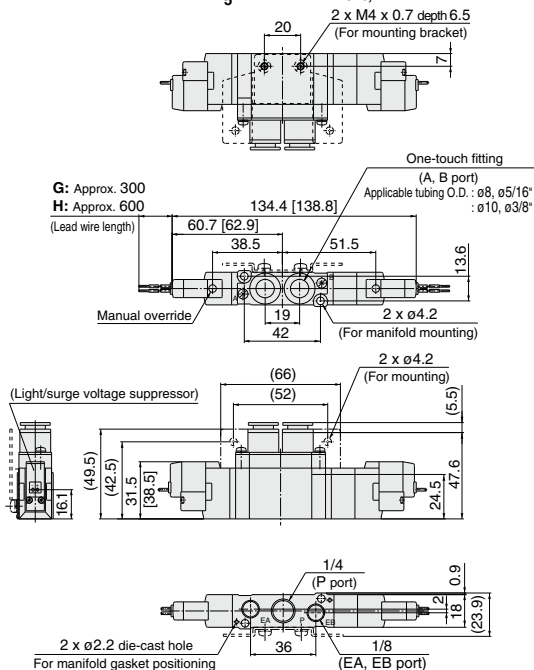
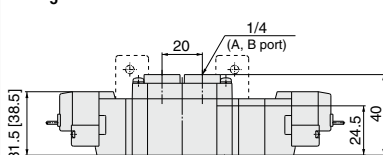
SY3000/5000/7000/9000 Series

Dimensions: SY7000 Series

[]: AC

3 position closed center / exhaust center / pressure center

Grommet (G), (H): **SY7³₄20-^G_H-C8, N9^{C10, N11}(-F2)**

SY7₄³₅20-□_H□□-02□(-F2)

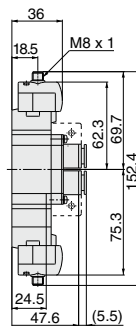
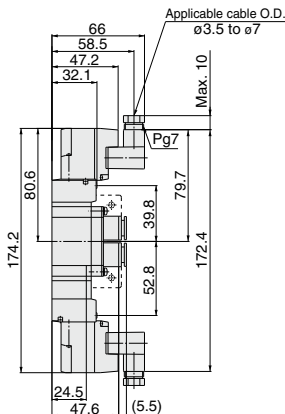
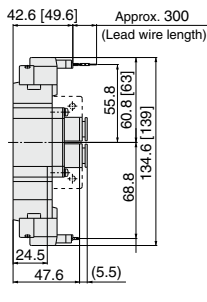
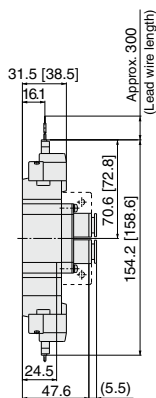
L plug connector (L):

M plug connector (M):

DIN terminal (D, Y):

M8 connector (WO):

SY7³₅20-□L□□-C8, N9
C10, N11□(-F2) SY7³₅20-□M□□-C8, N9
C10, N11□(-F2) SY7³₅20-□D□□-C8, N9
C10, N11□(-F2) SY7³₅20-□WO□□-C8, N9
C10, N11□(-F2)



Note) Refer to page 961 for dimensions of connector types.

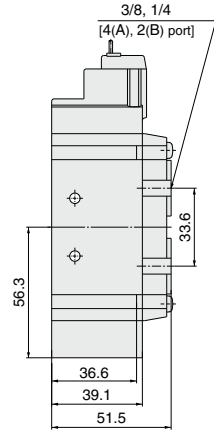
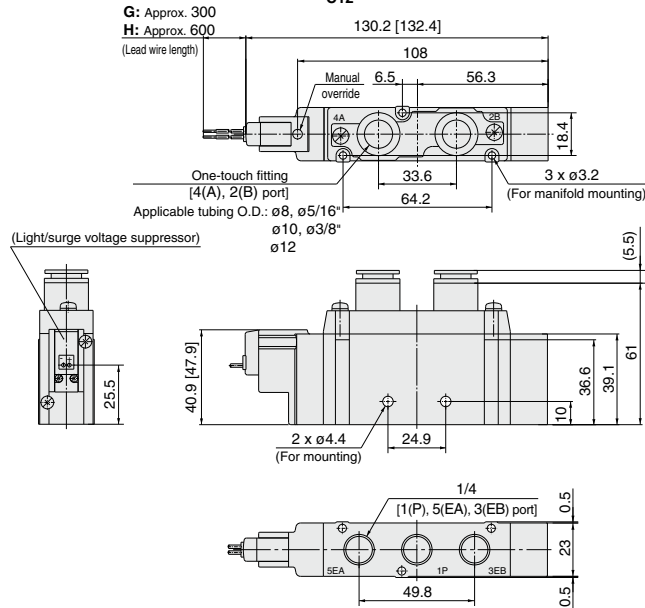
Dimensions: SY9000 Series

[] AC

2 position single Grommet (G), (H): SY9120-□

G_H □ □ □ C8, N9
C12

SY9120-□ G_H □ □ □ 02
03



L plug connector (L): SY9120-□L

C8, N9
C10, N11
C12

M plug connector (M): SY9120-□M

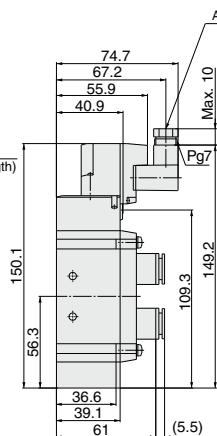
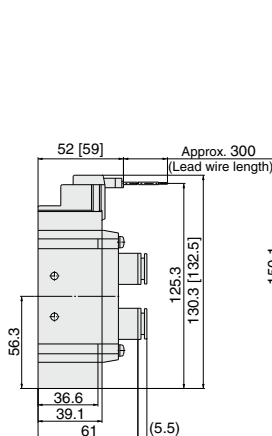
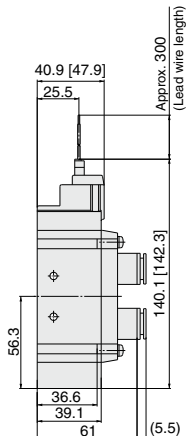
C8, N9
C10, N11
C12

DIN terminal (D, Y): SY9120-□D

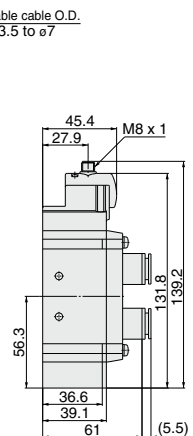
C8, N9
C10, N11
C12

M8 connector (WO): SY9120-□WO

C8, N9
C10, N11
C12



Applicable cable O.D.
ø3.5 to ø7



Note) Refer to page 961 for dimensions of connector types.

SY3000/5000/7000/9000 Series

Dimensions: SY9000 Series

[] : AC

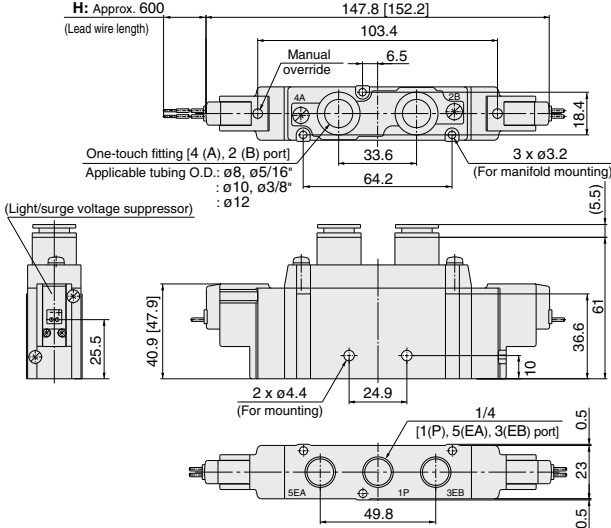
2 position double

Grommet (G), (H): SY9220-□^G□^H□^{C8, N9}□^{C10, N11}□^{C12}

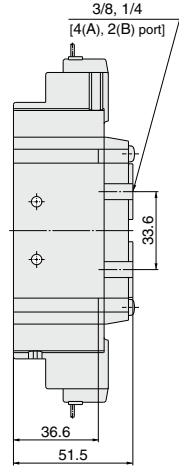
G: Approx. 300

H: Approx. 600

(Lead wire length)



SY9220-□^G□^H□⁰²□⁰³

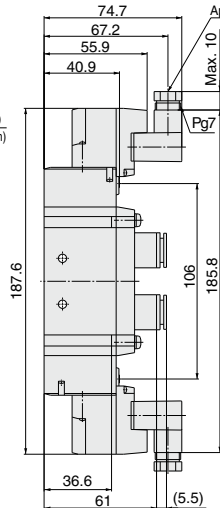
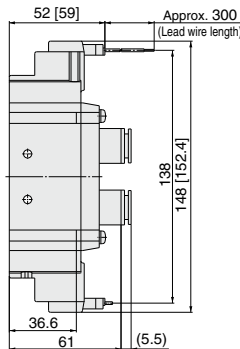
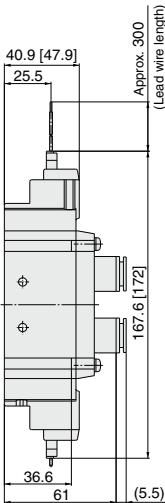


L plug connector (L): SY9220-□^L□^{C8, N9}□^{C10, N11}□^{C12}

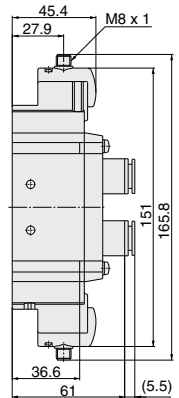
M plug connector (M): SY9220-□^M□^{C8, N9}□^{C10, N11}□^{C12}

DIN terminal (D, Y): SY9220-□^D□^{C8, N9}□^{C10, N11}□^{C12}

M8 connector (WO): SY9220-□^{WO}□^{C8, N9}□^{C10, N11}□^{C12}



Applicable cable O.D.
ø3.5 to ø7



Note) Refer to page 961 for dimensions of connector types.

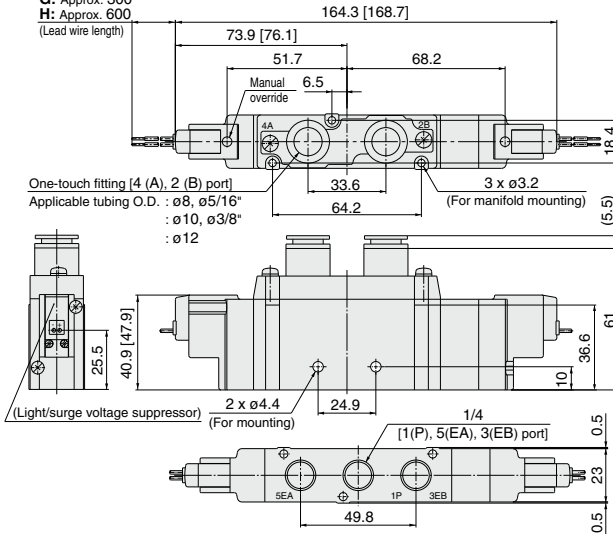
Dimensions: SY9000 Series

[]: AC

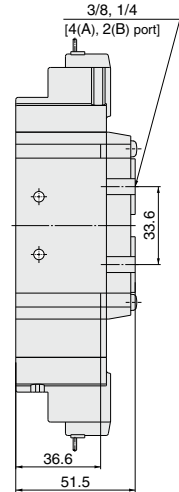
3 position closed center / exhaust center / pressure center

Grommet (G), (H): SY9³/₅20-□G□□-C8, N9
C10, N11□
C12

G: Approx. 300
H: Approx. 600
(Lead wire length)

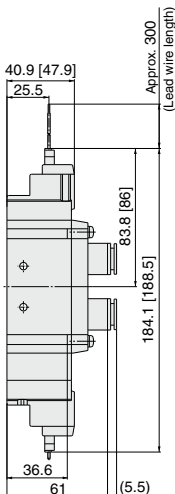


SY9³/₅20-□G□□-02□□



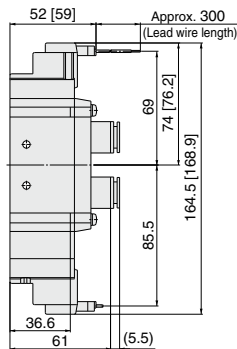
L plug connector (L):

SY9³/₅20-□L□□-C8, N9
C10, N11□
C12



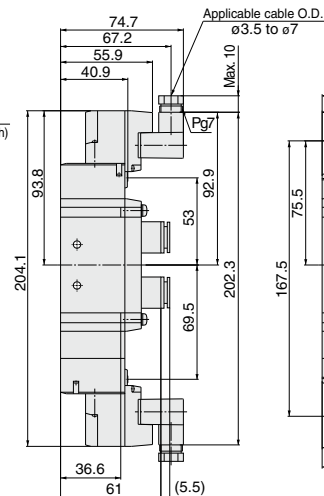
M plug connector (M):

SY9³/₅20-□M□□-C8, N9
C10, N11□
C12



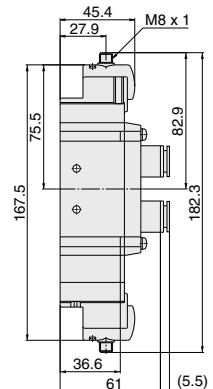
DIN terminal (D, Y):

SY9³/₅20-□D□□-C8, N9
C10, N11□
C12



M8 connector (WO):

SY9³/₅20-□WO□□-C8, N9
C10, N11□
C12



Note) Refer to page 961 for dimensions of connector types.

Body Ported External Pilot/Fluororubber for Main Valve



Best Pneumatics 1-2 Ver.7

SY5000/7000 Series

Made to Order

Body Ported/Base Mounted 4-Position Dual 3-Port Valve



[Option]

Features two 3-port valves built into one body

Body Ported

Model no. SY5720- - - -X701-

Entry is the same as standard products.

• Type of actuation

Series	A side	B side
SY□A20	N.C. valve	N.C. valve
SY□B20	N.O. valve	N.O. valve
SY□C20	N.C. valve	N.O. valve

CE/UKCA-compliant

Nil	—
Q	CE/UKCA-compliant

Note) AC-type models that are CE/UKCA-compliant have DIN terminals only.

Base Mounted

Model no. SY5740- - - -X701-

Entry is the same as standard products.

• Type of actuation

Series	A side	B side
SY□A40	N.C. valve	N.C. valve
SY□B40	N.O. valve	N.O. valve
SY□C40	N.C. valve	N.O. valve

CE/UKCA-compliant

Nil	—
Q	CE/UKCA-compliant

Note) AC-type models that are CE/UKCA-compliant have DIN terminals only.

Note) For the thread type, only Rc and G are available.

Note) For the thread type, only Rc and G are available.

Note) Only the internal pilot type is available.

Specifications

The dimensions are the same as those of the 2-position double.

Response time

Series	Response time [ms] (at the pressure of 0.5 MPa)		
	Without surge voltage suppressor	S, Z type	R, U type
SY5A/B/C□0-X701	26 or less	35 or less	26 or less
SY7A/B/C□0-X701	41 or less	51 or less	44 or less

Flow rate characteristics

1) Body ported

Series (Body ported)	Type of actuation	Port size		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 → EA/EB)	
				C [dm ³ /s-bar]	b	C [dm ³ /s-bar]	b
SY5A/B/C20-X701	N.C./N.C.	1/8	C6	1.4	0.35	1.4	0.34
	N.O./N.O.			1.3	0.36	1.2	0.32
SY7A/B/C20-X701	N.C./N.C.	1 (P) port: 1/4 5, 3 (EA, EB) port: 1/8	C10	3.5	0.25	2.3	0.40
	N.O./N.O.			3.0	0.31	2.6	0.42

2) Base mounted

Series (Base mounted)	Type of actuation	Port size		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 → EA/EB)	
				C [dm ³ /s-bar]	b	C [dm ³ /s-bar]	b
SY5A/B/C40-X701	N.C./N.C.	1/4		1.4	0.36	1.6	0.40
	N.O./N.O.			1.6	0.37	1.6	0.41
SY7A/B/C40-X701	N.C./N.C.	3/8		3.8	0.30	3.6	0.27
	N.O./N.O.			3.9	0.26	3.9	0.32

Symbol

