

# Body Ported Valves

## Series SY3/5/7/9000



### Features

- ➔ Wide range of sizes.
- ➔ Choice of electrical entries.
- ➔ Body ported valves can be manifold mounted.
- ➔ One touch fittings for direct connection.
- ➔ Very low power consumption.



### How to Order

SY 5 1 20 — 5 LO — 01F — Q

Series	Description
3	SY3000
5	SY5000
7	SY7000
9	SY9000

Type of actuation	Description
1	2 position single
2	2 position double
3	3 position closed centre
4	3 position exhaust centre
5	3 position pressure centre

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

AC (50/60Hz)	
1	100 VAC
2	200 VAC
3	110 VAC [115 VAC]
4	220 VAC [230 VAC]

#### Rated voltage

24, 12, 6, 5, 3 VDC			24, 12 VDC / 100, 110, 200, 220 VAC
Grommet	L plug connector	M plug connector	DIN terminal
G: Lead wire length 300 mm	LO: Without connector	MO: Without connector	Y: DIN plug * D: DIN plug *

24, 12, 6, 5, 3 VDC
M8 connector
WO: Without connector cable

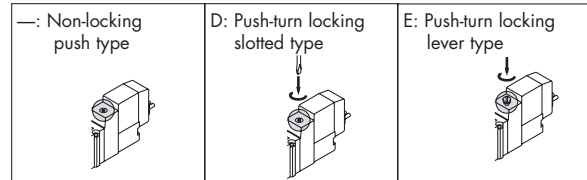
Note: For connector cables see Cable appendix.

\* "D" denotes a DIN plug DIN43650 class with industry standard pin spacing.  
The "Y" plug is externally identical but has DIN 43650C pin spacing of 8 mm.

#### A, B port size

Symbol	Description	SY3000	SY5000	SY7000	SY9000
M5	M5 thread	○			
O1F	1/8 thread		○		
O2F	1/4 thread			○	○
O3F	3/8 thread				○
C4	4mm tube	○	○		
C6	6mm tube	○			
C8	8mm tube		○	○	○
C10	10mm tube			○	○
C12	12mm tube				○

#### Manual override



#### Light/Surge voltage suppressor

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

—	Without light/surge voltage suppressor
Z	With light/surge voltage suppressor
U	With light/surge voltage suppressor (Non-polar type)

##### Electrical entry for Y, D

—	Without light/surge voltage suppressor
Z	With light/surge voltage suppressor

### Symbols

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

Note: AC voltages can only be specified in conjunction with a DIN plug (Y entry).

### Valve Specifications

Series		SY3000	SY5000	SY7000	SY9000
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			
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			
Enclosure		Dustproof (DIN terminal, M8 connector conform to IP65)			

### Solenoid Specifications

Electrical entry		Grommet (G)      DIN terminal (Y), (D) L plug connector (L)      M8 connector (W) M plug connector (M)	
Coil rated voltage (V)	DC	24, 12, 6, 5, 3	
	AC 50/60 Hz	100, 110, 200, 220*	
Allowable voltage fluctuation (%)		±10% of rated voltage	
Power consumption (W)	DC	Standard	0.35 (With indicator light: 0.4 DIN terminal with indicator light: 0.45)
	AC		
Apparent power (VA)	AC	100 V	0.78 (With indicator light: 0.87)
		110 V	0.86 (With indicator light: 0.97)
		200 V *	1.15 (With indicator light: 1.30)
		220 V *	1.27 (With indicator light: 1.46)
		[230 V]*	[1.39 (With indicator light: 1.60)]
Surge voltage suppressor		Diode (DIN terminal is ZNR. G, L or M (Non-polar) is zener diode.)	
Indicator light		LED	

\* DIN plug only.

### Response Time

#### 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 Z	Type 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

#### 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 Z	Type 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

#### 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 Z	Type 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

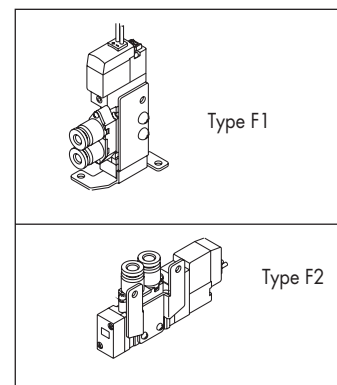
#### SY9000

Type of actuation	Response time (ms) (at the pressure of 0.5 MPa)		
	Without light/surge voltage suppressor	With light/surge voltage suppressor	
		Type Z	Type 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

### SY Valve Accessories

#### Mounting Bracket Assemblies for Body Ported Valve

Description	part no.
Bracket (Type F1)	SX <sup>3</sup> 000-16-2A (with mounting screw) for single solenoid valves only
Bracket (Type F2)	SX <sup>3</sup> 000-16-1A (with mounting screw)



Type F1

Type F2

Flow Characteristics/Weight

Type of actuation		Port size		Flow 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)			Grom- met	Response times (m/s)		W M8 connector				
		C (dm <sup>3</sup> / s-bar)	b	Cv	C (dm <sup>3</sup> / s-bar)	b	Cv	b	Cv								
2 position Single Double Closed centre	M5	1/4	0.61	0.44	0.16	0.64	0.45	0.18	51	15	57						
			0.48	0.46	0.13	0.47	0.43	0.13	68	13	82						
			0.47	0.42	0.13	0.47	0.41	0.13	71	20	84						
	3 position Exhaust centre Pressure centre	M5	1/4	0.50	0.48	0.15	0.47	0.43	0.13	60	15	67					
				0.72	0.29	0.18	0.64	0.34	0.17	78	13	101					
				0.59	0.28	0.15	0.59	0.30	0.15	81	20	94					
2 position Single Double Closed centre	M5	C4 (One-touch fitting for ø4)	0.63	0.35	0.16	0.42	0.34	0.11	76	0.42	0.21	0.59	0.29	0.15	56	15	63
			0.76	0.42	0.21	0.59	0.29	0.15	74	13	87						
			0.76	0.30	0.19	0.65	0.39	0.17	77	20	90						
	3 position Exhaust centre Pressure centre	M5	C6 (One-touch fitting for ø6)	0.76	0.55	0.24	0.60	0.33	0.16	77	20	90					
				0.65	0.32	0.16	0.64	0.31	0.17	77	20	90					
				0.77	0.34	0.21	0.61	0.34	0.16	77	20	90					

Type of actuation		Port size		Flow 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)			Grom- met	Response times (m/s)		DIN terminal	W M8 connector
		C (dm <sup>3</sup> / s-bar)	b	Cv	C (dm <sup>3</sup> / s-bar)	b	Cv	b	Cv					
2 position Single Double Closed centre	1/4	1/4	4.1	0.23	0.93	3.3	0.33	0.81	101	38	125	129		
			2.9	0.31	0.70	2.4	0.38	0.63	120	30	167	175		
			2.5	0.39	0.65	3.4	0.35	0.82	128	56	175	183		
	3 position Exhaust centre Pressure centre	1/4	1/4	4.3	0.23	0.97	2.2	0.39	0.58	107	38	131	135	
				3.2	0.26	0.77	3.2	0.37	0.82	126	30	174	182	
				2.6	0.24	0.63	2.4	0.31	0.62	134	56	182	190	
2 position Single Double Closed centre	3/8	3/8	2.4	0.25	0.57	2.6	0.42	0.70	103	38	126	130		
			3.3	0.28	0.78	2.2	0.34	0.60	122	30	169	177		
			3.8	0.26	0.86	3.2	0.34	0.82	103	38	126	130		
	3 position Exhaust centre Pressure centre	3/8	3/8	2.8	0.27	0.67	2.4	0.21	0.59	130	56	177	185	
				2.5	0.25	0.59	2.7	0.38	0.70	130	56	177	185	
				3.8	0.25	0.89	2.3	0.38	0.61	130	56	177	185	

Type of actuation		Port size		Flow 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)			Grom- met	Response times (m/s)		DIN terminal	W M8 connector
		C (dm <sup>3</sup> / s-bar)	b	Cv	C (dm <sup>3</sup> / s-bar)	b	Cv	b	Cv					
2 position Single Double Closed centre	1/8	1/8	1.9	0.35	0.49	2.4	0.39	0.61	70	26	93	97		
			1.7	0.43	0.45	1.8	0.35	0.46	88	22	135	143		
			1.5	0.44	0.41	2.5	0.32	0.59	93	38	140	148		
	3 position Exhaust centre Pressure centre	1/8	1/8	2.2	0.46	0.61	1.8	0.38	0.46	94	26	117	121	
				0.75	0.43	0.20	0.85	0.64	0.30	111	22	159	167	
				0.74	0.40	0.19	0.84	0.57	0.28	117	38	164	172	
2 position Single Double Closed centre	3/8	3/8	0.78	0.44	0.21	0.84	0.57	0.27	88	26	112	116		
			1.5	0.33	0.33	2.0	0.37	0.52	106	22	153	161		
			1.3	0.31	0.33	1.6	0.32	0.39	111	38	158	166		
	3 position Exhaust centre Pressure centre	3/8	3/8	1.3	0.33	0.33	1.8	0.35	0.44	80	26	103	107	
				1.7	0.31	0.42	1.7	0.33	0.44	98	22	145	153	
				1.9	0.21	0.45	2.3	0.29	0.57	103	38	150	158	
2 position Single Double Closed centre	C8 (One-touch fitting for ø8)	C8	1.4	0.38	0.39	2.0	0.37	0.52	80	26	103	107		
			2.2	0.32	0.56	1.8	0.41	0.50	98	22	145	153		
			2.2	0.32	0.56	1.8	0.41	0.50	103	38	150	158		

Type of actuation		Port size		Flow 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)			Grom- met	Response times (m/s)		DIN terminal	W M8 connector
		C (dm <sup>3</sup> / s-bar)	b	Cv	C (dm <sup>3</sup> / s-bar)	b	Cv	b	Cv					
2 position Single Double Closed centre	1/4	1/4	7.0	0.33	1.7	7.6	0.35	2.0	241	41	265	269		
			6.7	0.37	1.7	6.4	0.34	1.6	260	41	308	316		
			6.4	0.36	1.6	8.3	0.41	2.2	284	64	332	340		
	3 position Exhaust centre Pressure centre	1/4	1/4	8.0	0.27	1.8	6.5	0.22	1.4	236	41	260	264	
				8.0	0.29	1.9	8.0	0.33	2.0	255	41	303	311	
				7.9	0.33	1.9	6.6	0.27	1.6	279	64	327	335	
2 position Single Double Closed centre	3/8	3/8	8.0	0.33	1.9	8.7	0.34	2.2	279	64	327	335		
			8.9	0.34	2.2	6.5	0.25	1.5	293	41	317	321		
			4.3	0.28	0.96	7.1	0.32	1.7	312	41	360	368		
	3 position Exhaust centre Pressure centre	3/8	3/8	4.3	0.31	0.99	6.1	0.28	1.4	336	64	384	392	
				4.3	0.3	0.99	7.4	0.36	1.9	336	64	384	392	
				4.4	0.35	1.0	2.1	0.41	0.53	279	64	327	335	
2 position Single Double Closed centre	C8 (One-touch fitting for ø8)	C8	4.4	0.35	1.0	2.1	0.41	0.53	293	41	317	321		
			6.1	0.28	1.4	7.9	0.33	1.9	298	41	346	354		
			5.9	0.30	1.4	6.5	0.26	1.5	322	64	370	378		
	3 position Exhaust centre Pressure centre	C10 (One-touch fitting for ø10)	C10	5.8	0.25	1.3	8.4	0.33	2.0	322	64	370	378	
				6.3	0.29	1.5	6.4	0.25	1.5	265	41	289	293	
				7.0	0.25	1.6	8.6	0.41	2.2	284	41	332	340	
2 position Single Double Closed centre	C10 (One-touch fitting for ø10)	C10	6.9	0.24	1.6	7.0	0.33	1.7	308	64	356	364		
			6.6	0.23	1.4	9.4	0.48	2.6	308	64	356	364		
			7.4	0.25	1.7	6.6	0.23	1.5	308	64	356	364		

Note 1: The weights given are for grommet entry and M8 plug. L/M connector and DIN plug weights fall between these options.  
 Note 2: Response time is 0.5MPa with Z type surge suppression.

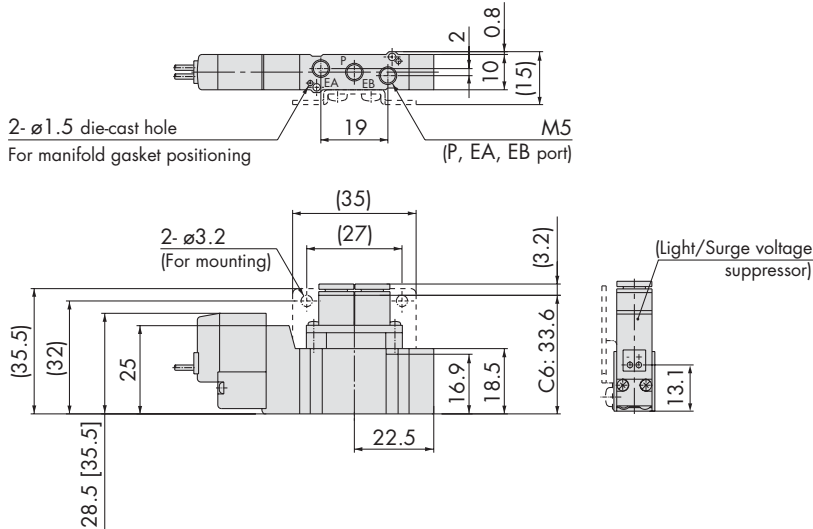


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 PRODUCTS CD'S OR ONLINE INFORMATION

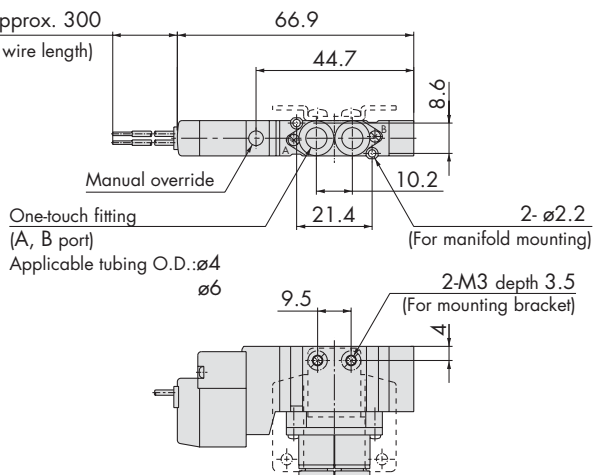
Dimensions: Series SY3000

2 position single

Grommet (G): SY3120-□G□□-C<sub>4</sub>-C<sub>6</sub>-Q

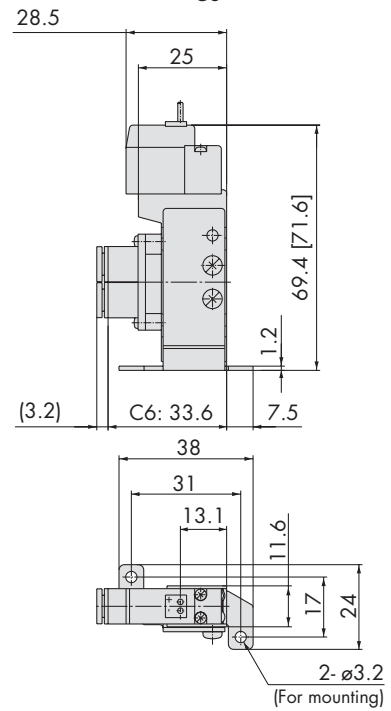


G: Approx. 300  
(Lead wire length)

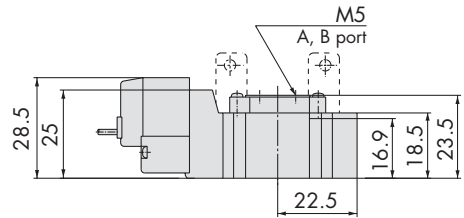


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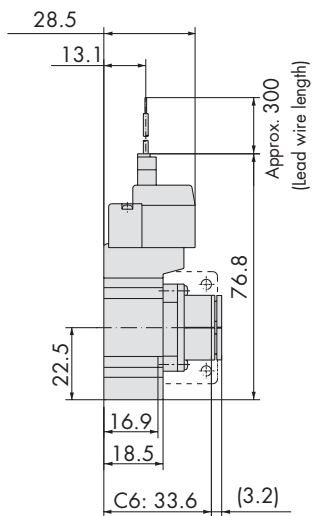
SY3120-□G□□-C<sub>4</sub>-C<sub>6</sub>-Q



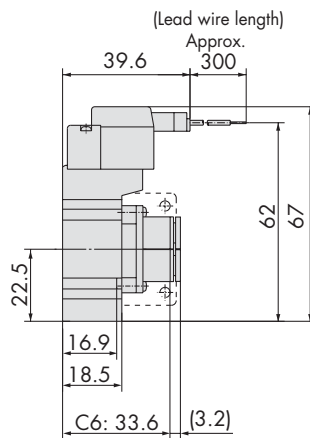
SY3120-□G□□-M5-Q



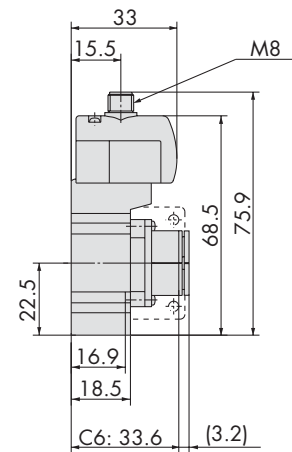
L plug connector (L):  
SY3120-□L□□-C<sub>4</sub>-C<sub>6</sub>-Q



M plug connector (M):  
SY3120-□M□□-C<sub>4</sub>-C<sub>6</sub>-Q

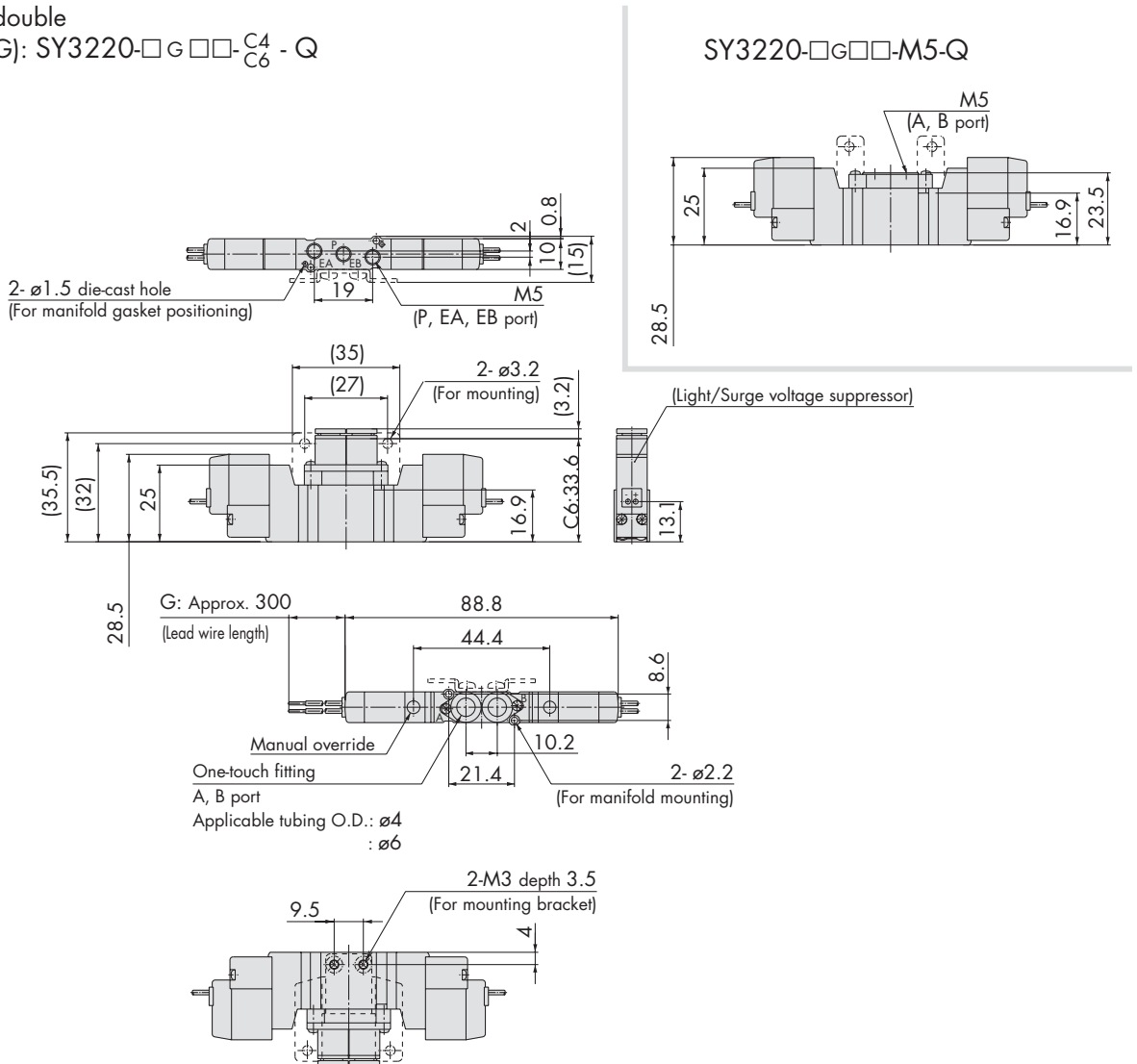


M8 connector (WO):  
SY3120-□WO□□-C<sub>4</sub>-C<sub>6</sub>-Q

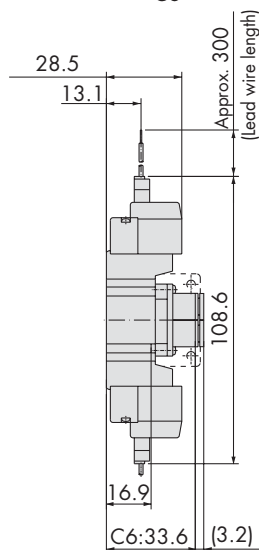


Dimensions: Series SY3000

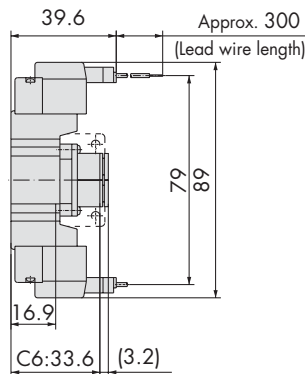
2 position double  
Grommet (G): SY3220-□G□□-C<sub>6</sub><sup>4</sup>-Q



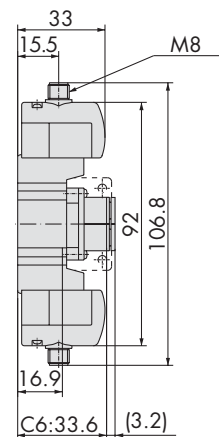
L plug connector (L):  
SY3220-□L□□-C<sub>6</sub><sup>4</sup>-Q



M plug connector (M):  
SY3220-□M□□-C<sub>6</sub><sup>4</sup>-Q

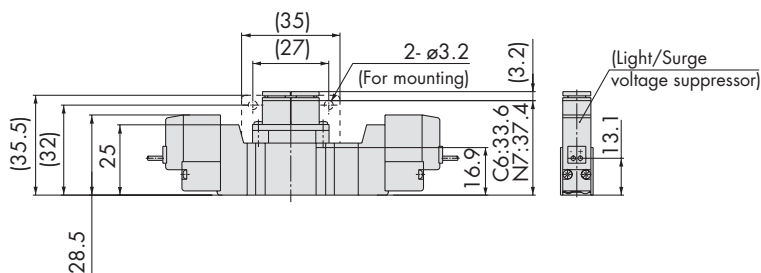
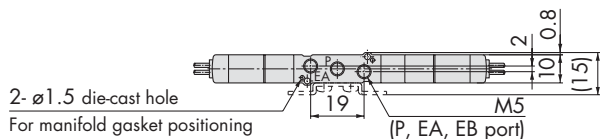


M8 connector (WO):  
SY3220-WO□□-C<sub>6</sub><sup>4</sup>-Q

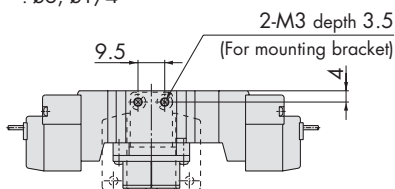
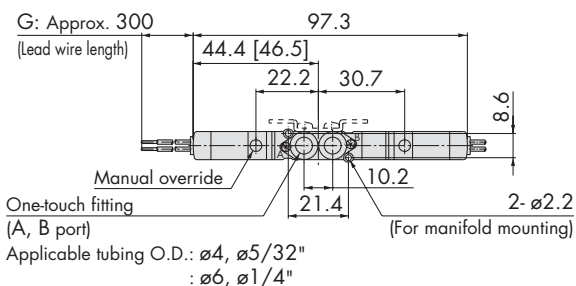
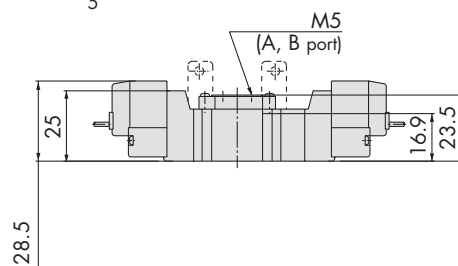


Dimensions: Series SY3000

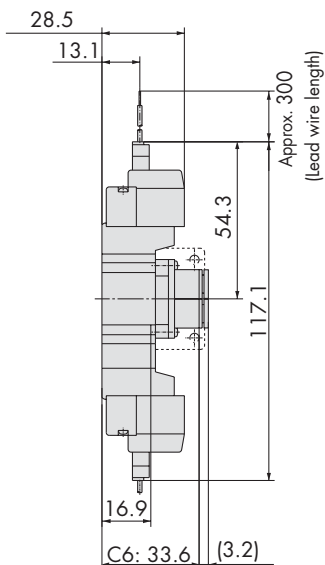
3 position closed centre/exhaust centre/pressure centre  
Grommet (G): SY3<sup>3</sup>/<sub>5</sub>20-□G□□-C<sub>6</sub><sup>4</sup>-Q



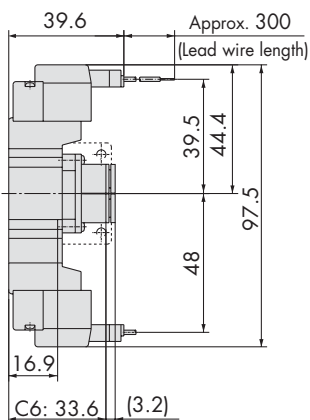
SY3<sup>3</sup>/<sub>5</sub>20-□G□□-M5-Q



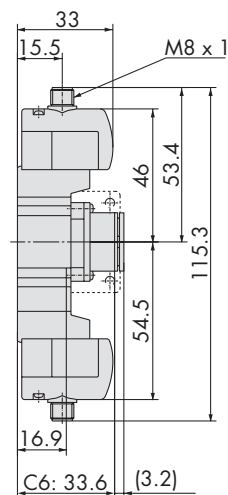
L plug connector (L):  
SY3<sup>3</sup>/<sub>5</sub>20-□L□□-C<sub>6</sub><sup>4</sup>-Q



M plug connector (M):  
SY3<sup>3</sup>/<sub>5</sub>20-□M□□-C<sub>6</sub><sup>4</sup>-Q



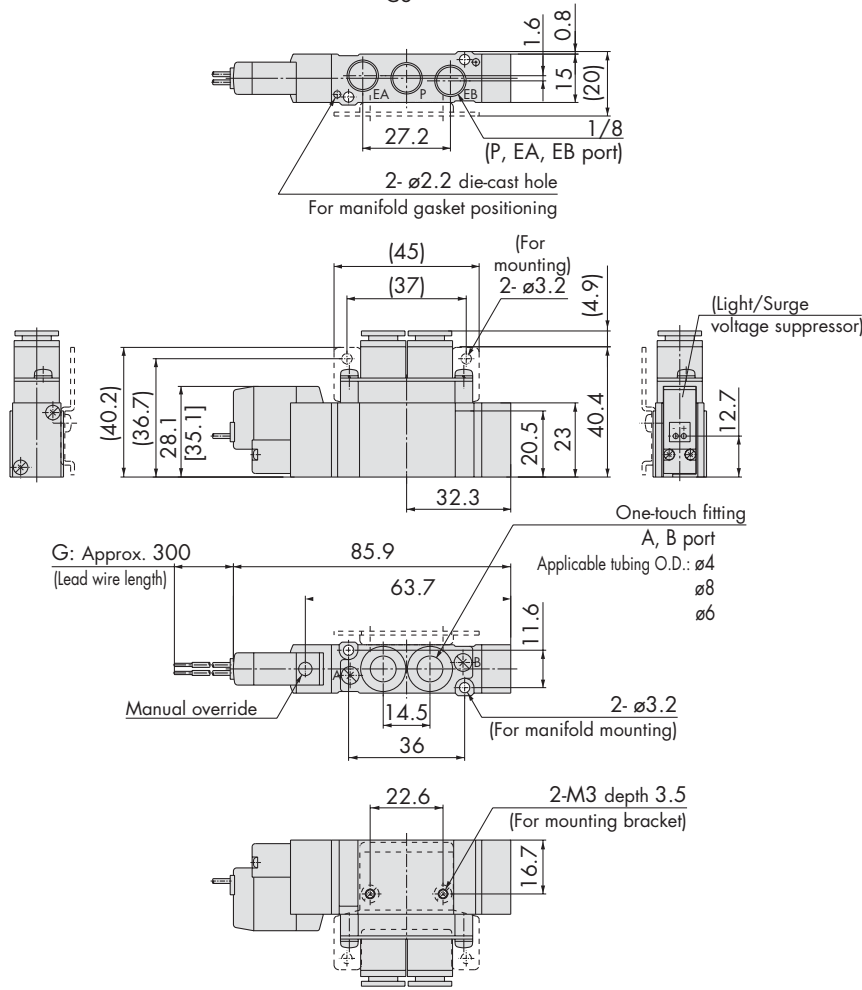
M8 connector (WO):  
SY3<sup>3</sup>/<sub>5</sub>20-□WO□□-C<sub>6</sub><sup>4</sup>-Q



Dimensions: Series SY5000

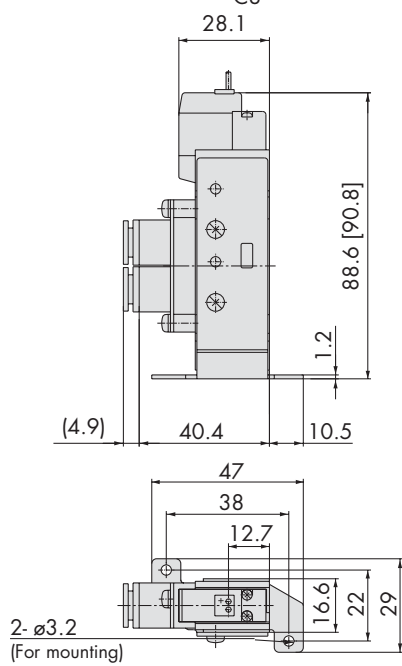
2 position single

Grommet (G): SY5120-□G□□□- $\frac{C4}{C6}$ □-Q

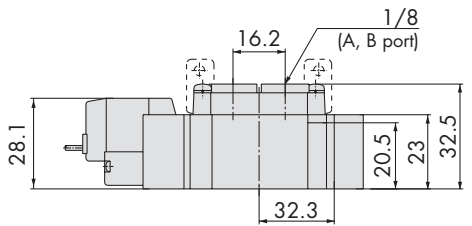


Foot bracket

SY5120-□G□□□- $\frac{C4}{C6}$ □-Q



SY5120-□H□□□-01□-Q

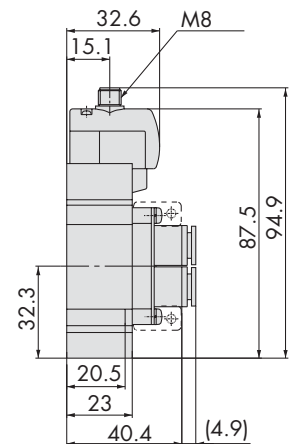
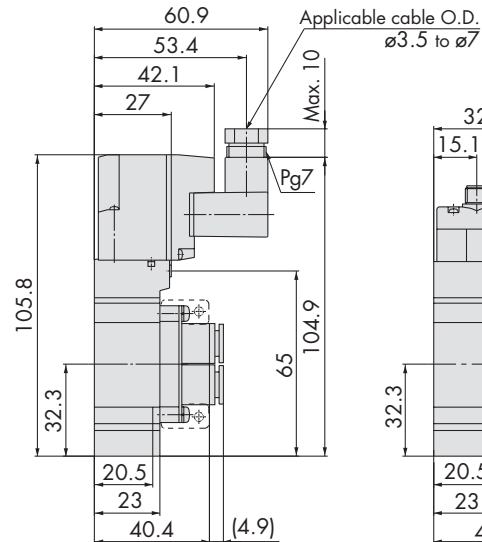
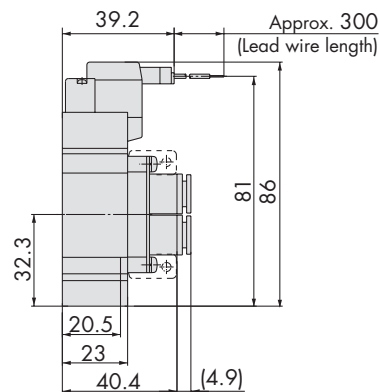
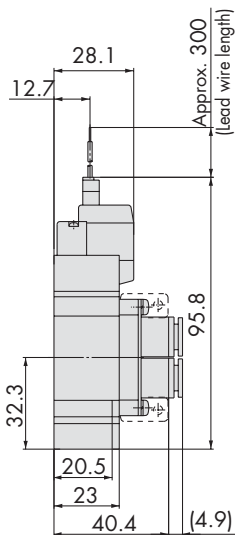


L plug connector: L  
SY5120-□L□□□- $\frac{C4}{C6}$ □-Q

M plug connector: M  
SY5120-□M□□□- $\frac{C4}{C6}$ □-Q

DIN terminal (D/Y):  
SY5120-□D□□□- $\frac{C4}{C6}$ □-Q

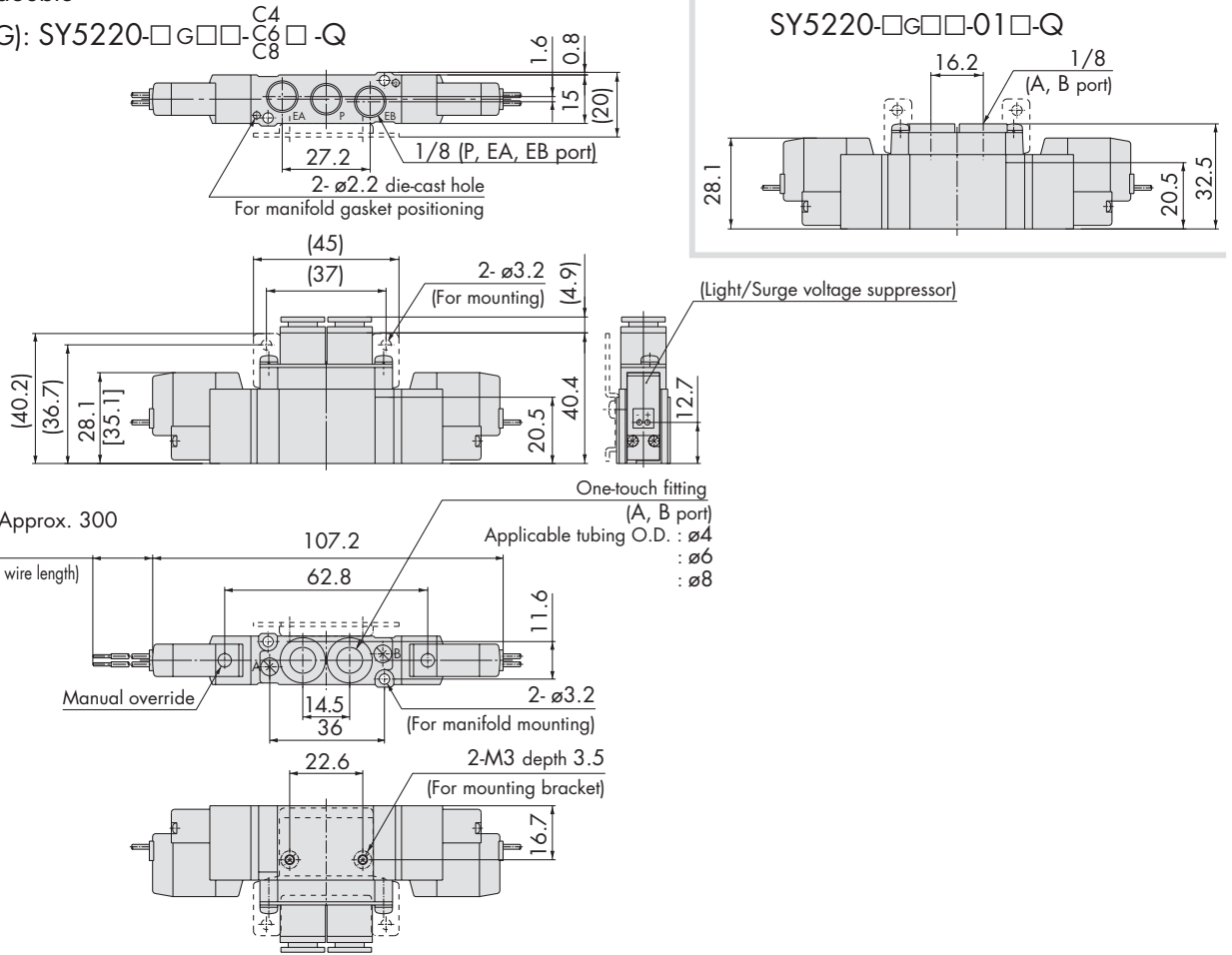
M8 connector (WO):  
SY5120-□WO□□□- $\frac{C4}{C6}$ □-Q



Dimensions: Series SY5000

2 position double

Grommet (G): SY5220-□G□□-C4-C6-C8□-Q



G: Approx. 300

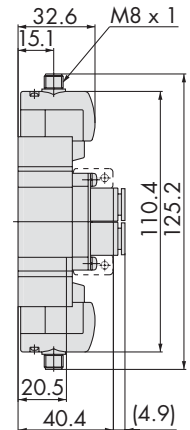
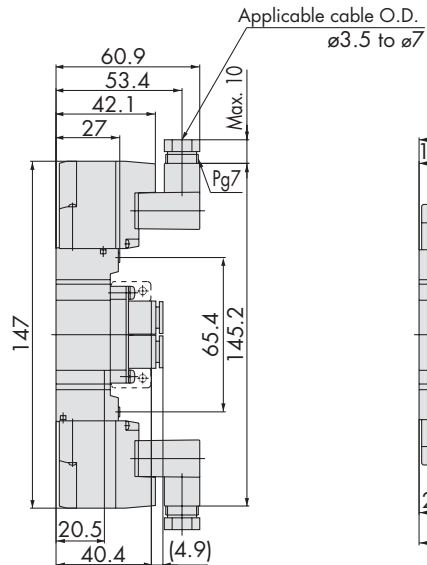
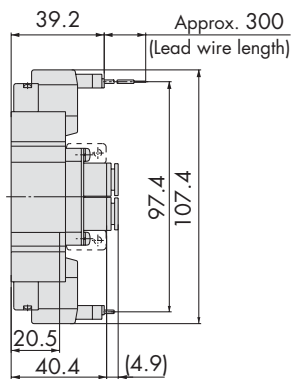
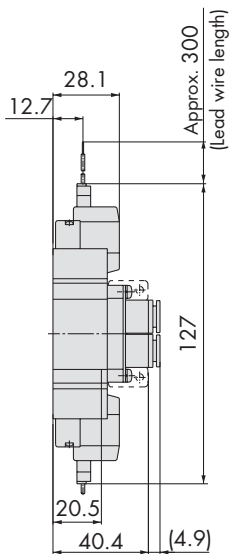
One-touch fitting (A, B port)  
Applicable tubing O.D.: ø4  
: ø6  
: ø8

L plug connector: L  
SY5220-□L□□-C4-C6-C8□-Q

M plug connector: M  
SY5220-□M□□-C4-C6-C8□-Q

DIN terminal (D/Y):  
SY5220-□D□□-C4-C6-C8□-Q

M8 connector (WO):  
SY5220-□WO□□-C4-C6-C8□-Q

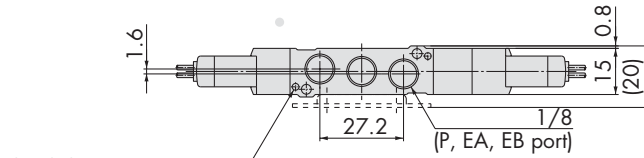


Dimensions: Series SY5000

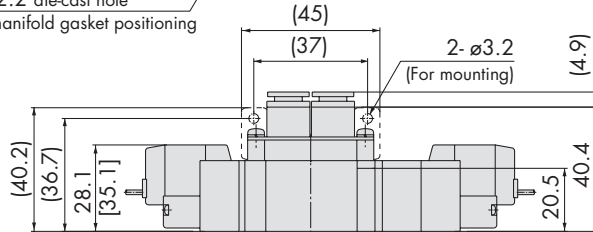
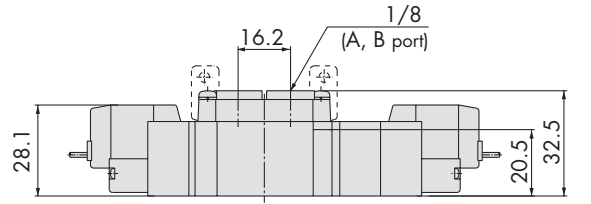
3 position closed centre/exhaust centre/pressure centre

Grommet (G): SY5  $\frac{3}{5}$  420-□□□□- $\frac{C4}{C8}$  □□-Q

SY5  $\frac{3}{5}$  420-□□□□-01□-Q



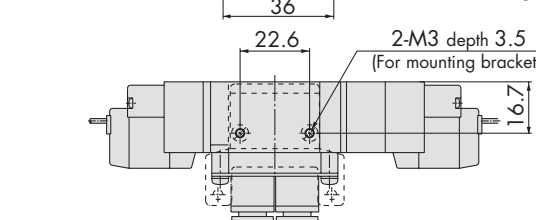
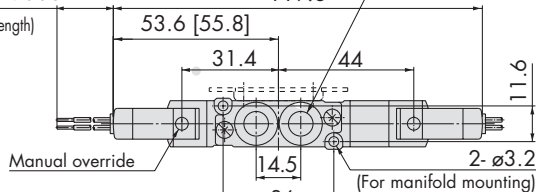
2-  $\phi$ 2.2 die-cast hole  
For manifold gasket positioning



(Light/ Surge voltage suppressor)



G: Approx. 300  
(Lead wire length)

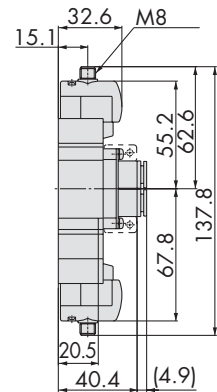
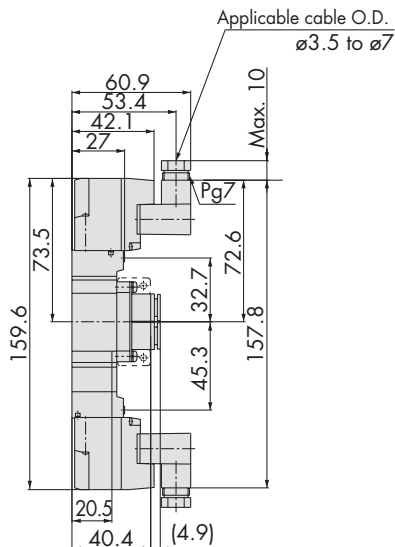
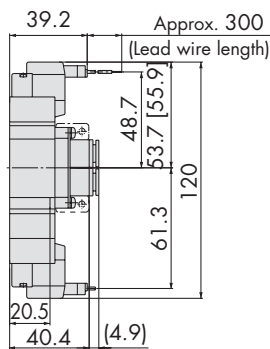
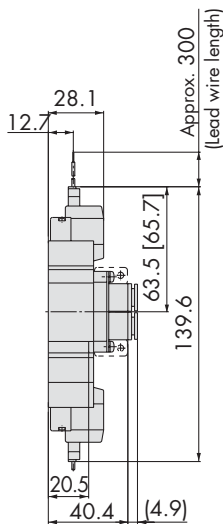


L plug connector: L  
SY5  $\frac{3}{5}$  420-□□□□- $\frac{C4}{C8}$  □□-Q

M plug connector: M  
SY5  $\frac{3}{5}$  420-□□□□- $\frac{C4}{C8}$  □□-Q

DIN terminal (D/Y):  
SY5  $\frac{3}{5}$  420-□□□□- $\frac{C4, N3}{C8, N9}$  □□(-F2)

M8 connector (WO):  
SY5  $\frac{3}{5}$  420-□□□□- $\frac{C4}{C8}$  □□-Q

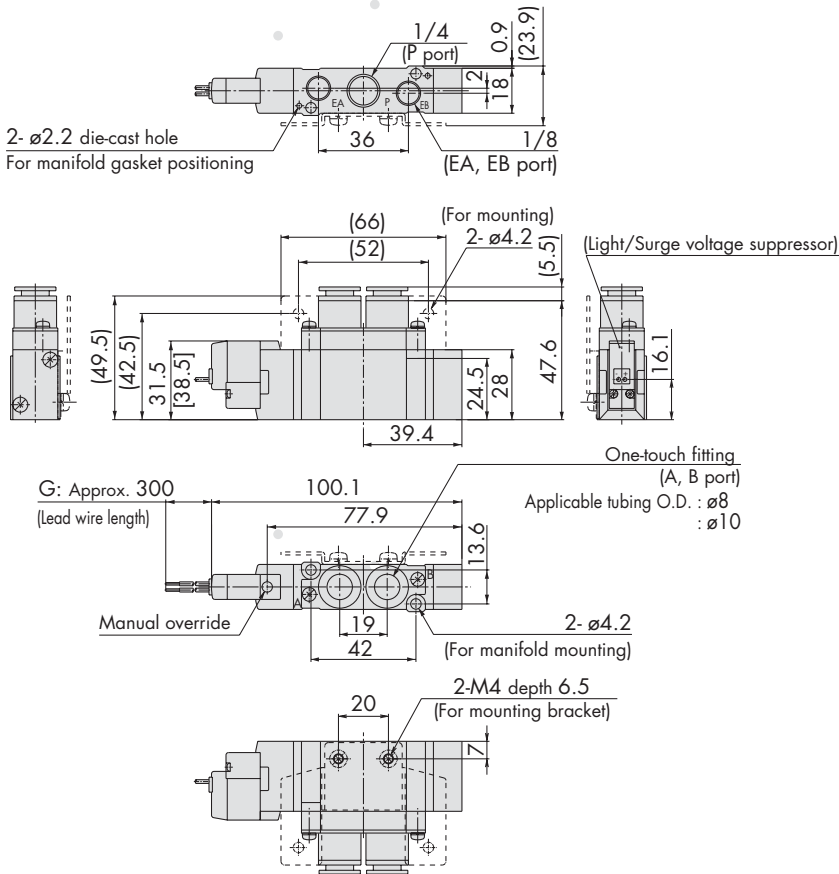


FOR MORE DETAILS  
SEE OUR SPECIFIC CATALOGUES,  
PRODUCTS CD's OR ONLINE INFORMATION

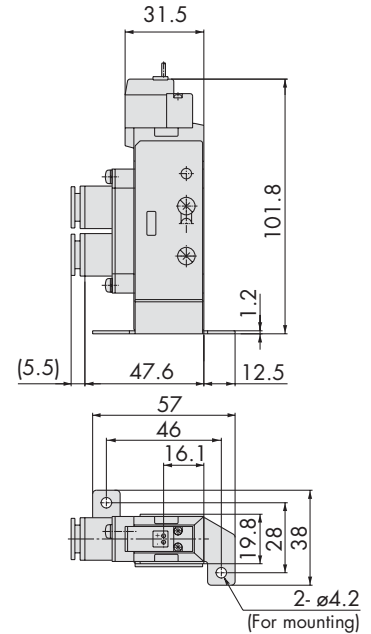
Dimensions: Series SY7000

2 position single

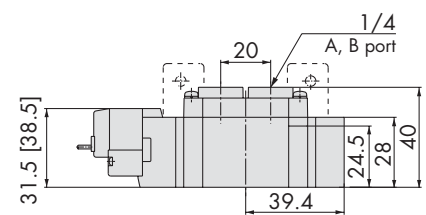
Grommet (G): SY7120-□G□□-C<sub>8</sub>-Q



SY7120-□G□□-C<sub>8</sub>-Q



SY7120-□G□□-02□-Q

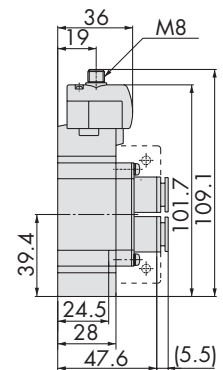
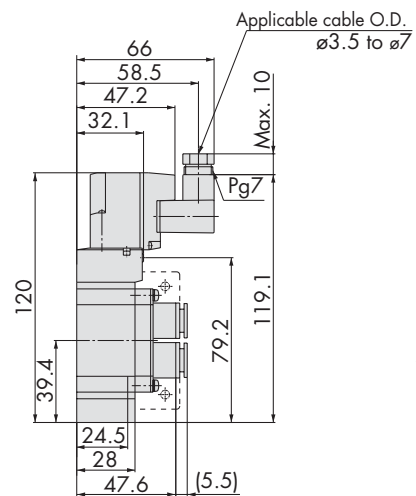
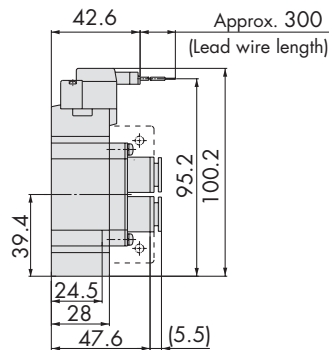
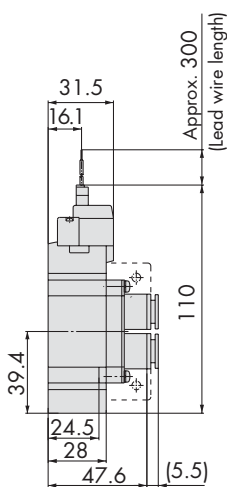


L plug connector (L) : SY7120-□L□□-C<sub>8</sub>-Q

M plug connector (M): SY7120-□M□□-C<sub>8</sub>-Q

DIN terminal (D/Y): SY7120-□D□□-C<sub>8</sub>-Q

M8 connector (WO): SY7120-□WO□□-C<sub>8</sub>-Q

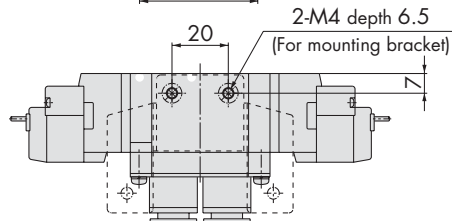
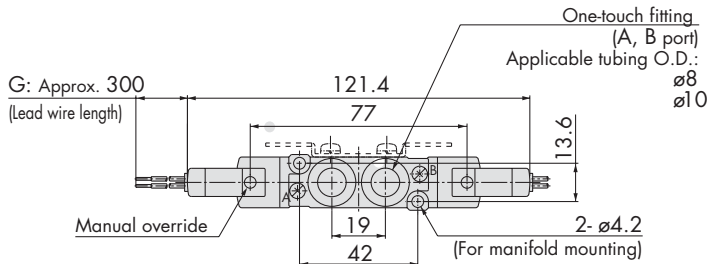
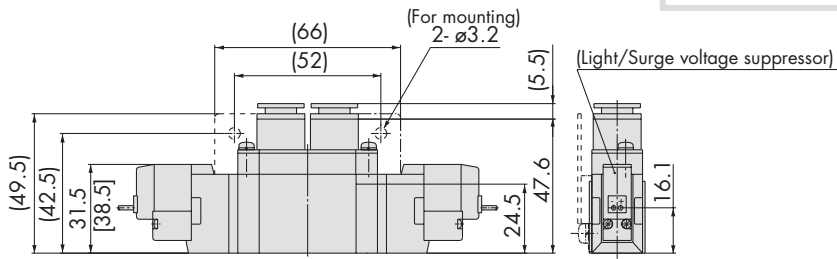
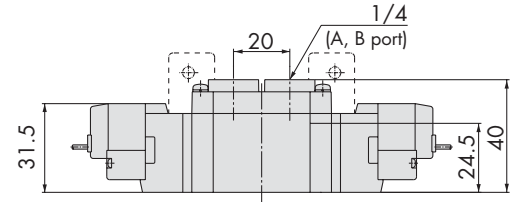
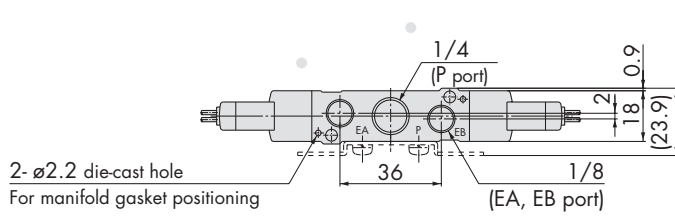


Dimensions: Series SY7000

2 position double

Grommet (G): SY7220-□G□□-C8-C10-Q

SY7220-□G□□-02□-Q

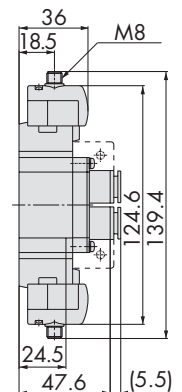
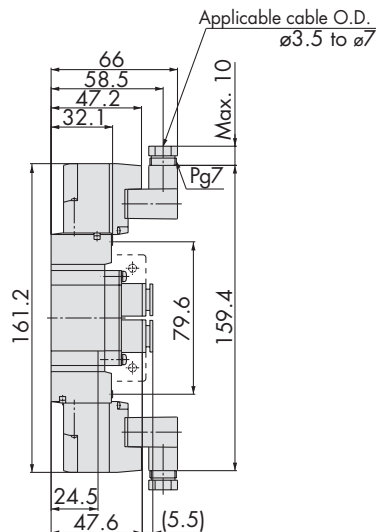
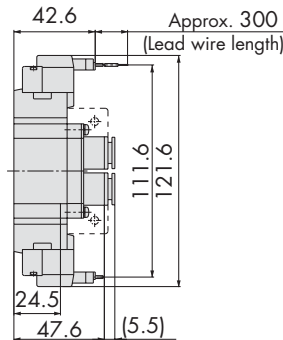
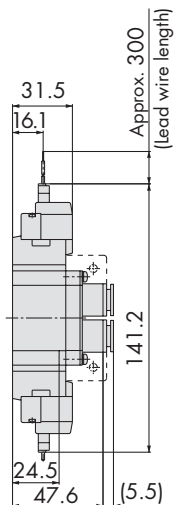


L plug connector (L): SY7220-□L□□-C8-C10-Q

M plug connector (M): SY7220-□M□□-C8-C10-Q

DIN terminal (D/Y): SY7220-□D□□-C8-C10-Q

M8 connector (WO): SY7220-□WO□□-C8-C10-Q

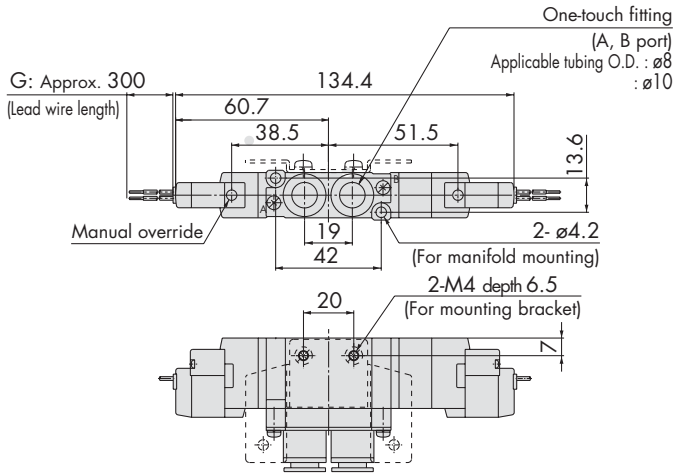
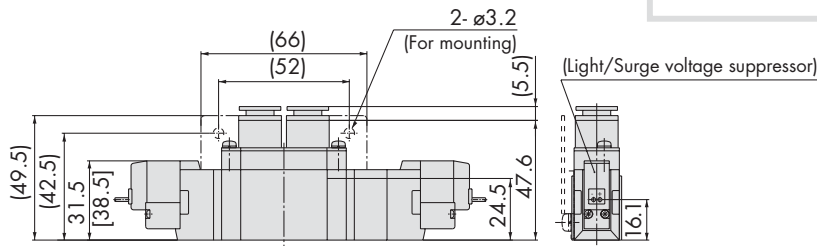
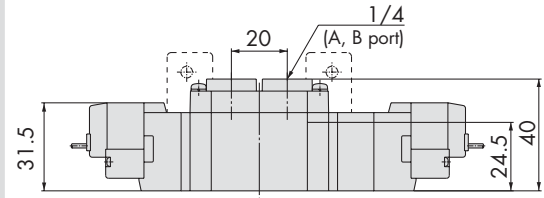
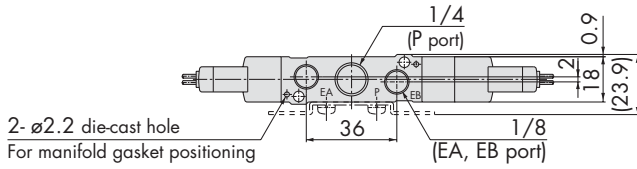


Dimensions: Series SY7000

3 position closed centre/exhaust centre/pressure centre

Grommet (G): SY7<sup>3</sup>/<sub>5</sub>420-□G□□-C<sup>8</sup>/<sub>C10</sub>-Q

SY7<sup>3</sup>/<sub>5</sub>420-□G□□-02□-Q

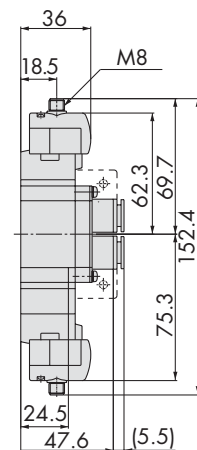
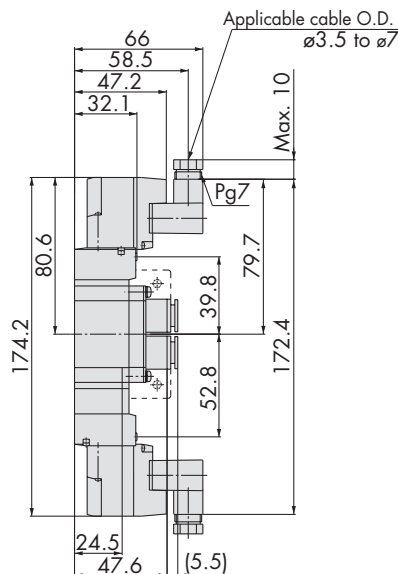
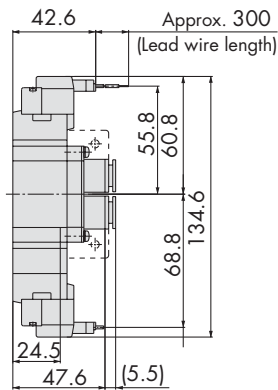
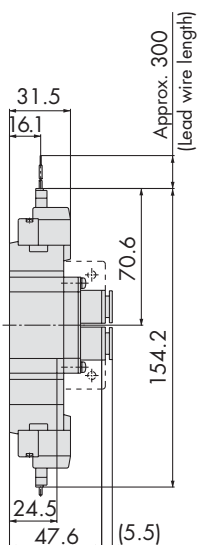


L plug connector (L):  
SY7<sup>3</sup>/<sub>5</sub>420-□L□□-C<sup>8</sup>/<sub>C10</sub>-Q

M plug connector (M):  
SY7<sup>3</sup>/<sub>5</sub>420-□M□□-C<sup>8</sup>/<sub>C10</sub>-Q

DIN terminal (D/Y):  
SY7<sup>3</sup>/<sub>5</sub>420-□D□□-C<sup>8</sup>/<sub>C10</sub>-Q

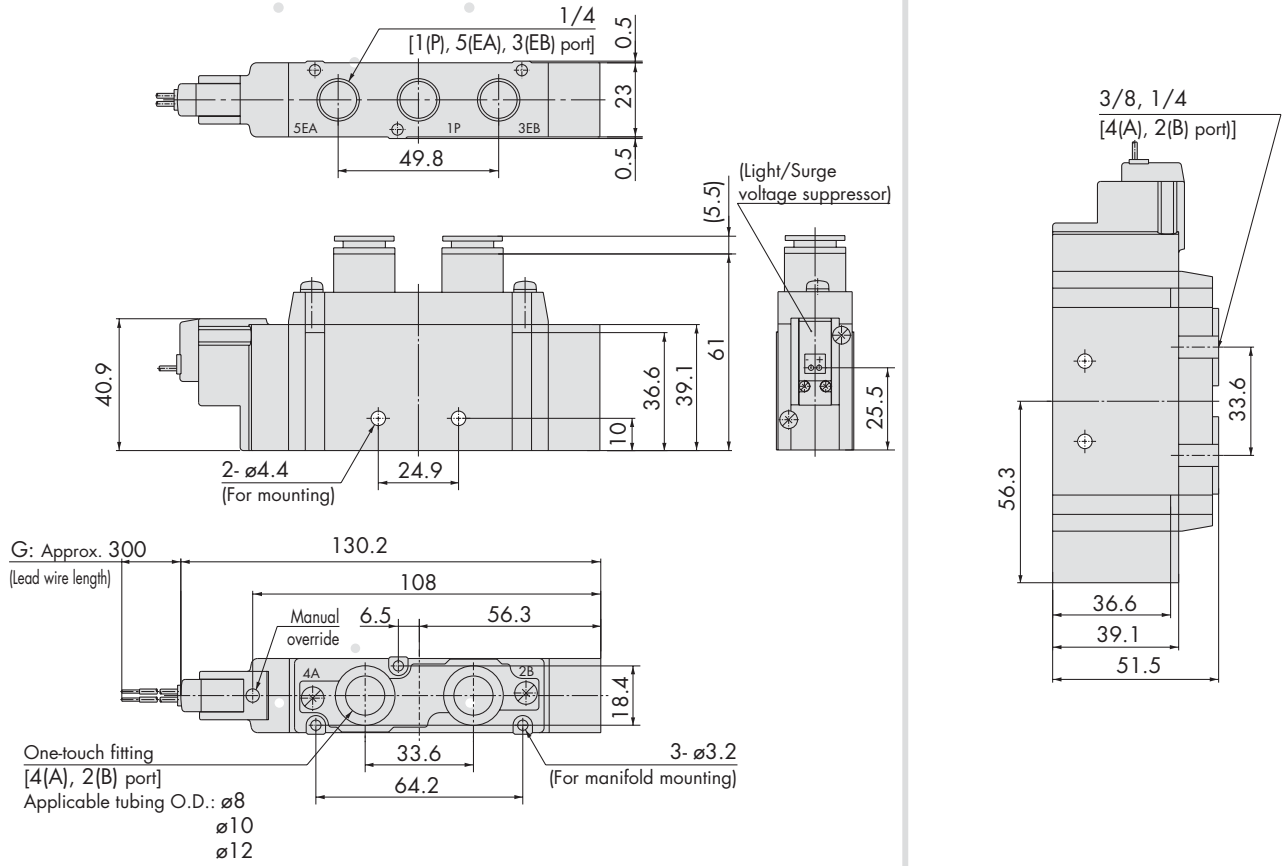
M8 connector (WO):  
SY7<sup>3</sup>/<sub>5</sub>420-□WO□□-C<sup>8</sup>/<sub>C10</sub>-Q



Dimensions: Series SY9000

2 position single  
Grommet (G): SY9120-□G□□-<sup>C8</sup><sub>C12</sub>-Q

SY9120-□G□□-02<sup>03</sup>-Q

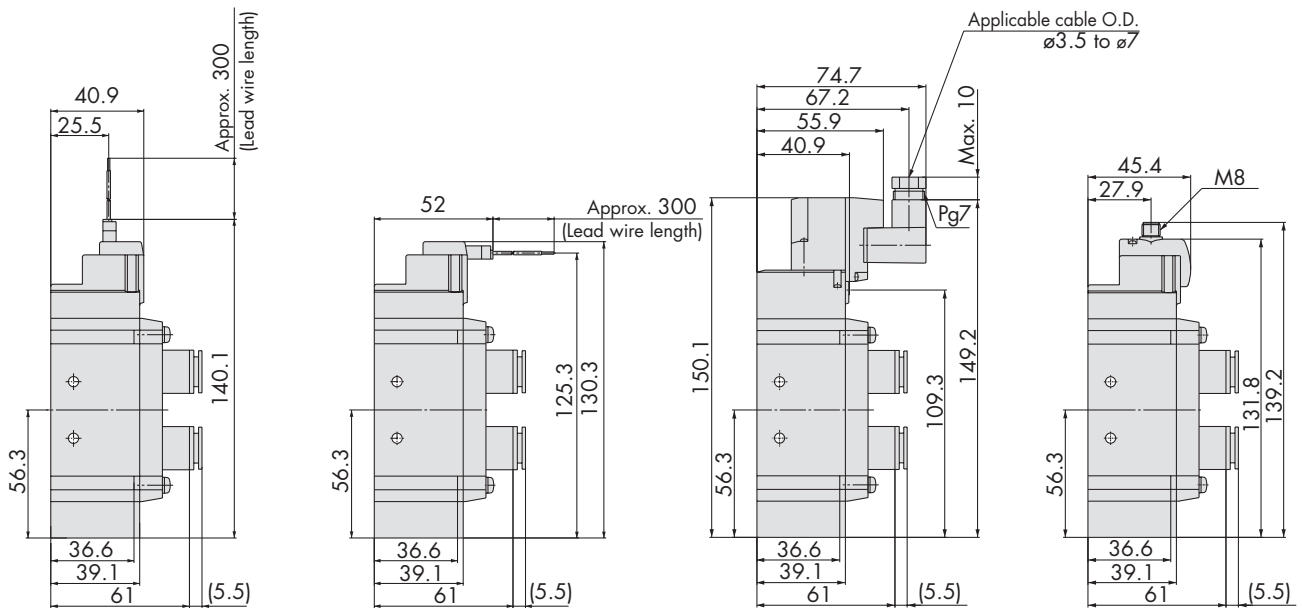


L plug connector (L):  
SY9120-□L□□-<sup>C8</sup><sub>C12</sub>-Q

M plug connector (M):  
SY9120-□M□□-<sup>C8</sup><sub>C12</sub>-Q

DIN terminal (D/Y):  
SY9120-□D□□-<sup>C8</sup><sub>C12</sub>-Q

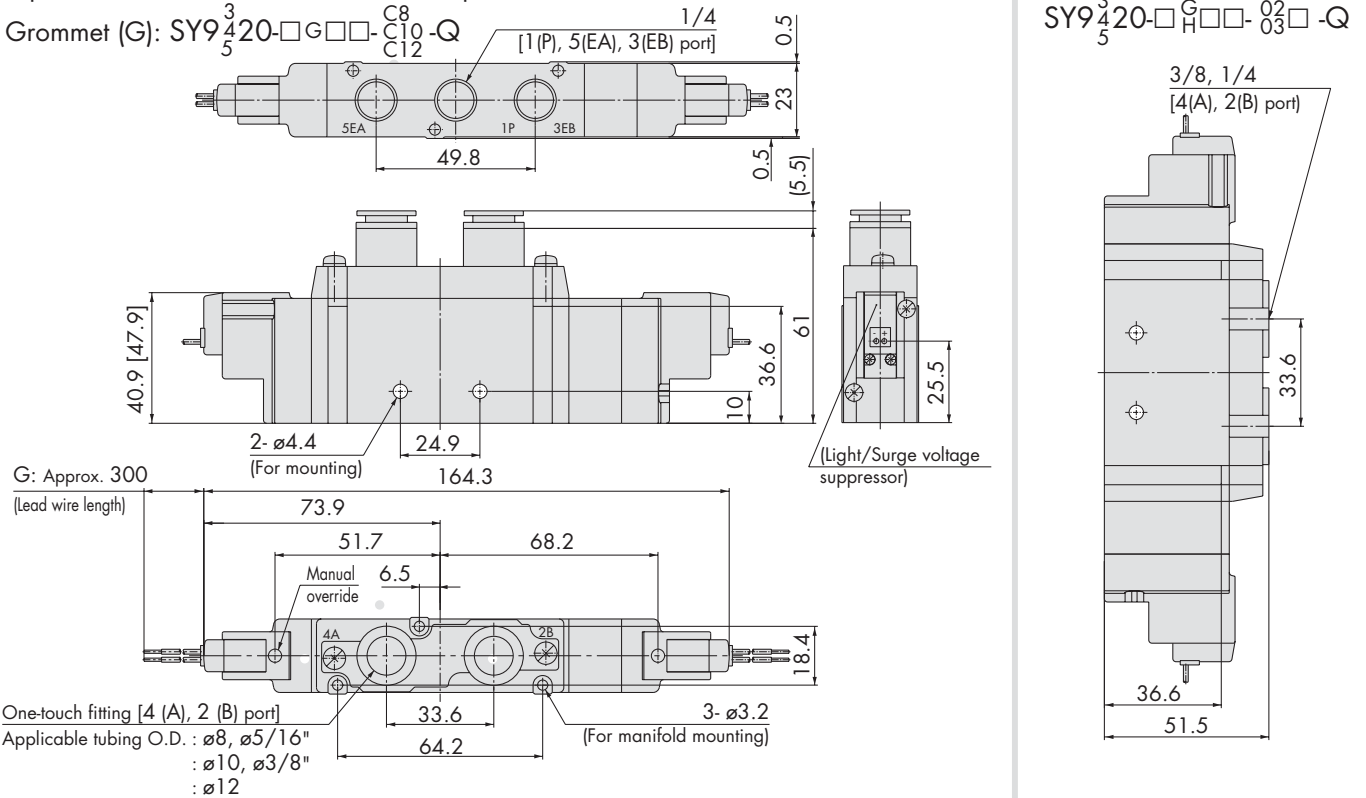
M8 connector (WO):  
SY9120-□WO□□-<sup>C8</sup><sub>C12</sub>-Q





Dimensions: Series SY9000

3 position closed centre/exhaust centre/pressure

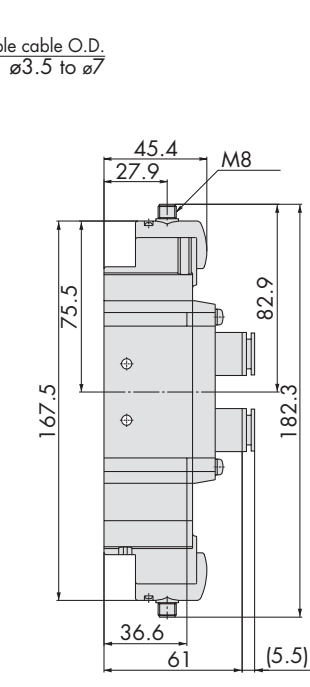
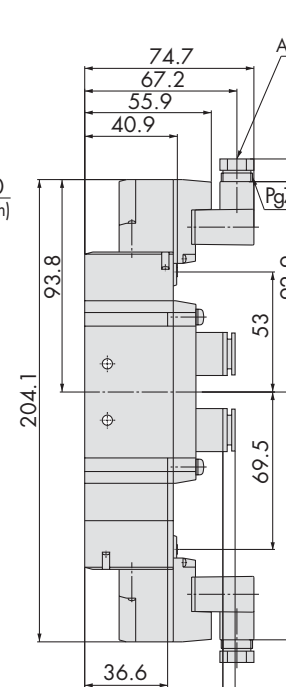
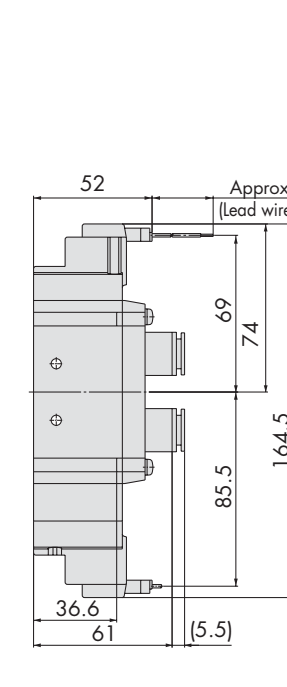
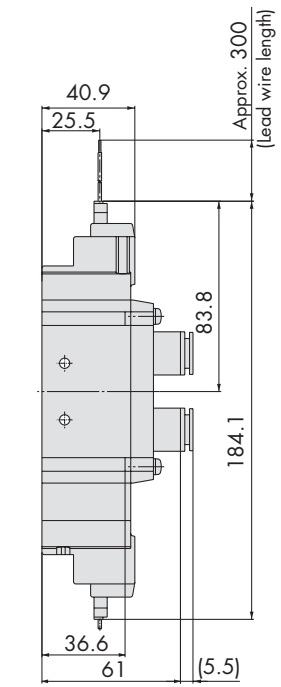


L plug connector (L):  
 SY9<sup>3</sup>/<sub>5</sub>20-□L□□-<sup>C8</sup>/<sub>C12</sub>10-Q

M plug connector (M):  
 SY9<sup>3</sup>/<sub>5</sub>20-□M□□-<sup>C8</sup>/<sub>C12</sub>10-Q

DIN terminal (D/Y):  
 SY9<sup>3</sup>/<sub>5</sub>20-□D□□-<sup>C8</sup>/<sub>C12</sub>10-Q

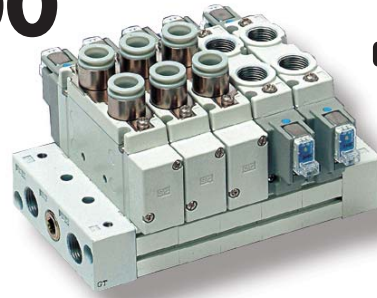
M8 connector (WO):  
 SY9<sup>3</sup>/<sub>5</sub>20-□WO□□-<sup>C8</sup>/<sub>C12</sub>10-Q



Valves

# Body Ported Manifolds Individual Wiring

## Series SY3/5/7/9000



### How to Order Manifold

Manifold series	
3	SY3000
5	SY5000
7	SY7000

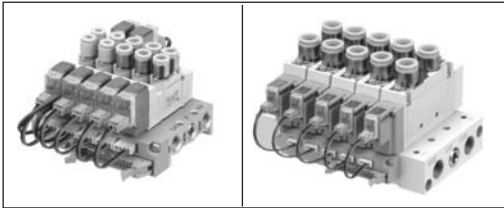
SY3000, SY5000, SY7000 SS5Y 5-20-05-00F-Q  
 SY9000 SS5Y 9-23-05-00F-Q

Stations	
02	2 stations
⋮	⋮
20	20 stations

Suitable valves for these manifolds: SY\*\*20 types

### Also Available

Body ported manifolds with connectors for valve prewiring, types 20P and 23P.



### Manifold Specifications

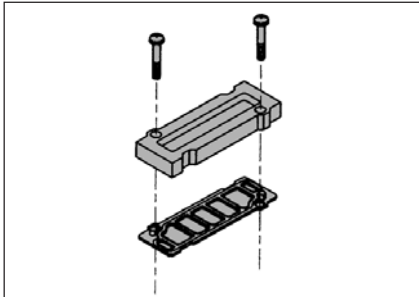
Model	SS5Y3-20	SS5Y5-20	SS5Y7-20	SS5Y9-23
Applicable valve	SY3□20	SY5□20	SY7□20	SY9□20
Manifold type	Single base/B mount			
P (SUP)/R (EXH)	Common SUP, Common EXH			
Valve stations	2 to 20 stations <sup>Note 1)</sup>			
A, B port location	Valve			
Port size	P, EA, EB port	1/8	1/4	1/4
	A, B port	M5 C4 (One-touch fitting for ø4) C6 (One-touch fitting for ø6)	1/8 C4 (One-touch fitting for ø4) C6 (One-touch fitting for ø6) C8 (One-touch fitting for ø8)	1/4 C8 (One-touch fitting for ø8) C10 (One-touch fitting for ø10)
Manifold base weight W (g) n: Stations	W = 13n + 35	W = 36n + 64	W = 43n + 64	W = 66n + 246

### Flow Characteristics

Model	Port size		Flow 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 <sup>3</sup> /[s·bar])	b	Cv	C (dm <sup>3</sup> /[s·bar])	b	Cv
SS5Y3-20	1/8	C6	0.72	0.29	0.18	0.80	0.36	0.21
SS5Y5-20	1/4	C8	1.9	0.28	0.48	2.2	0.20	0.53
SS5Y7-20	1/4	C10	3.6	0.31	0.93	3.6	0.27	0.88
SS5Y9-23	3/8	C12	6.3	0.20	1.5	8.2	0.28	1.9

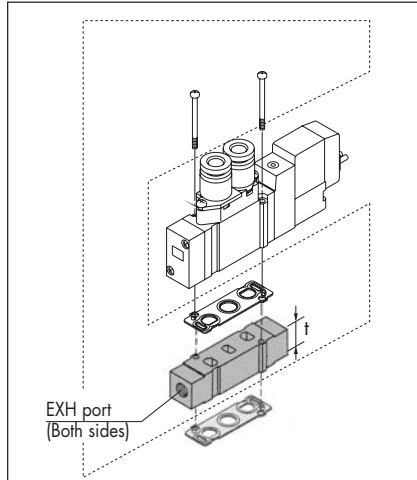
Manifold Accessories

■ Type 20, 23  
Blanking plate assembly



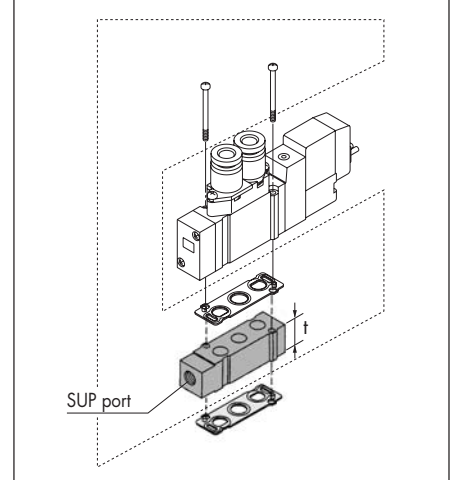
Series	Assembly part no.
SY3000	SY3000-26-19A-Q
SY5000	SY5000-26-1A-Q
SY7000	SY7000-26-1A-Q
SY9000	SY9000-26-1A-Q

■ Individual EXH spacer assembly



Series	Assembly part no.	Port size	t
SY3000	SY3000-39-20A-Q	M5	10.5
SY5000	SY5000-39-1FA-Q	1/8	15
SY7000	SY7000-39-1FA-Q	1/4	18
SY9000	SY9000-39-1FA-Q	1/4	20

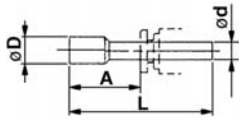
■ Individual SUP spacer assembly



Series	Assembly part no.	Port size	t
SY3000	SY3000-38-20A	M5	10.5
SY5000	SY5000-38-1FA-Q	1/8	15
SY7000	SY7000-38-1FA-Q	1/4	18
SY9000	SY9000-38-1FA-Q	1/4	20

■ Plug (white)

These are inserted in unused cylinder ports and SUP, EXH ports.  
Note) Purchasing order is available in units of 10 pieces.



Dimensions

Applicable fittings size ød	Model	A	L	D
4	KQ2P-04	16	32	6
6	KQ2P-06	18	35	8
8	KQ2P-08	20.5	39	10
10	KQ2P-10	22	43	12
12	KQ2P-12	24	44.5	14

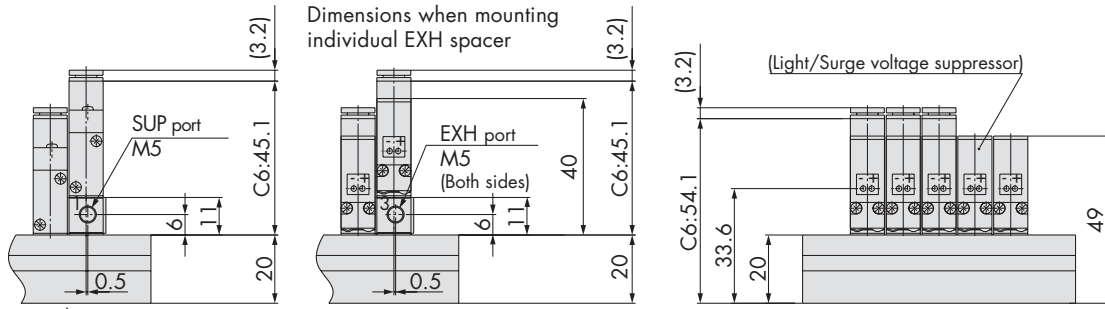
Also Available

■ Supply and Exhaust blocking disks for SY9000 manifold.



Note: Only available on the SY9000 because the manifold is the slice type not a metal bar manifold.

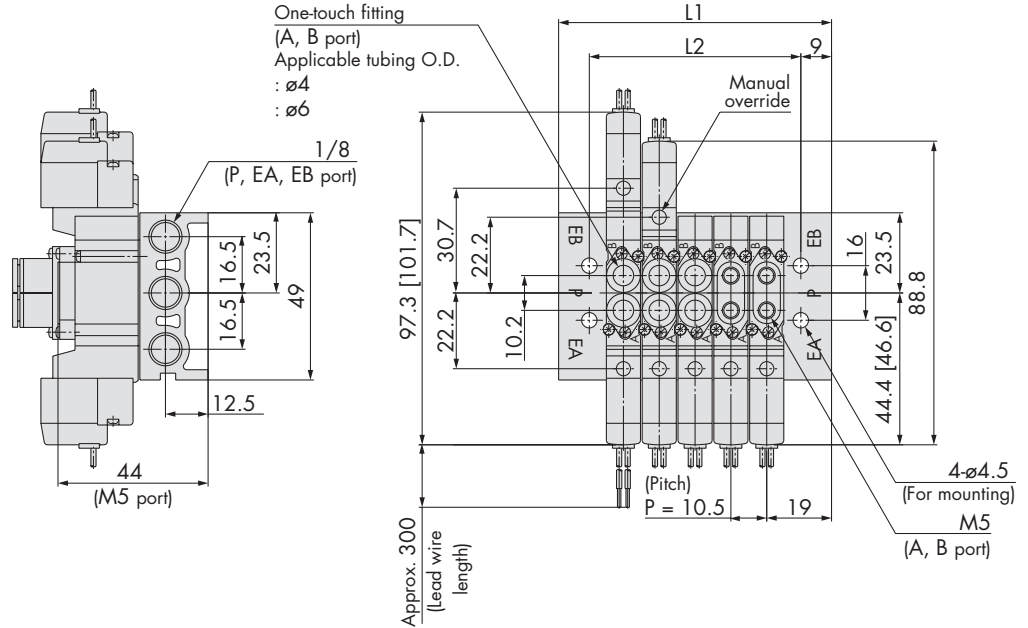
SY3000/SS5Y3-20 Stations - □ -00F-Q



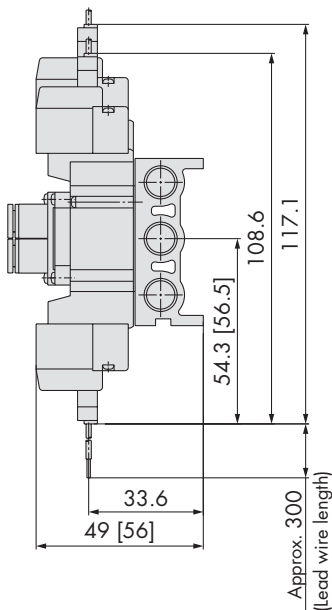
Dimensions when mounting individual SUP spacer  
(SUP port is at the end plate of single solenoid.)

Grommet (G)

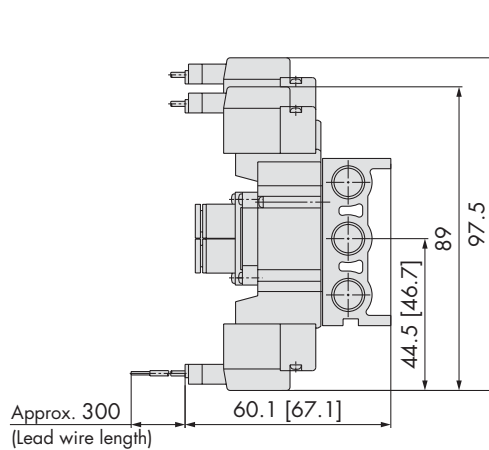
One-touch fitting  
(A, B port)  
Applicable tubing O.D.  
:  $\varnothing 4$   
:  $\varnothing 6$



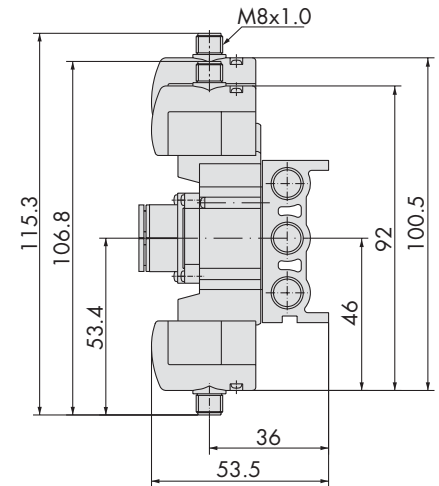
L plug connector (L)



M plug connector (M)



M8 connector (WO)

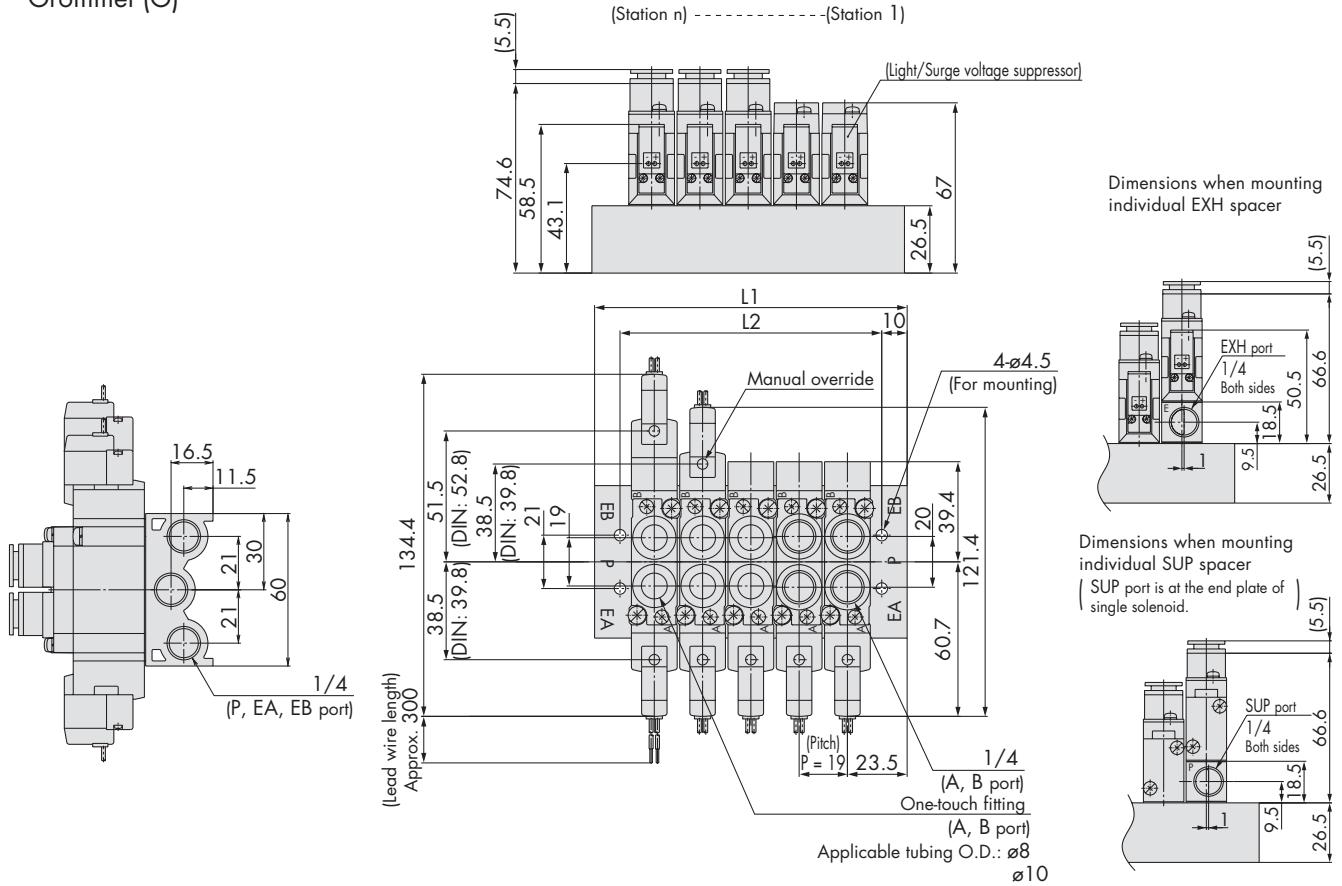


Stations n	2 stations	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 stations
L1	48.5	59	69.5	80	90.5	101	111.5	122	132.5	143	153.5	164	174.5	185	195.5	206	216.5	227	237.5
L2	30.5	41	51.5	62	72.5	83	93.5	104	114.5	125	135.5	146	156.5	167	177.5	188	198.5	209	219.5



SY7000: SS5Y7-20- [Stations] - [ ] -00F-Q

Grommet (G)

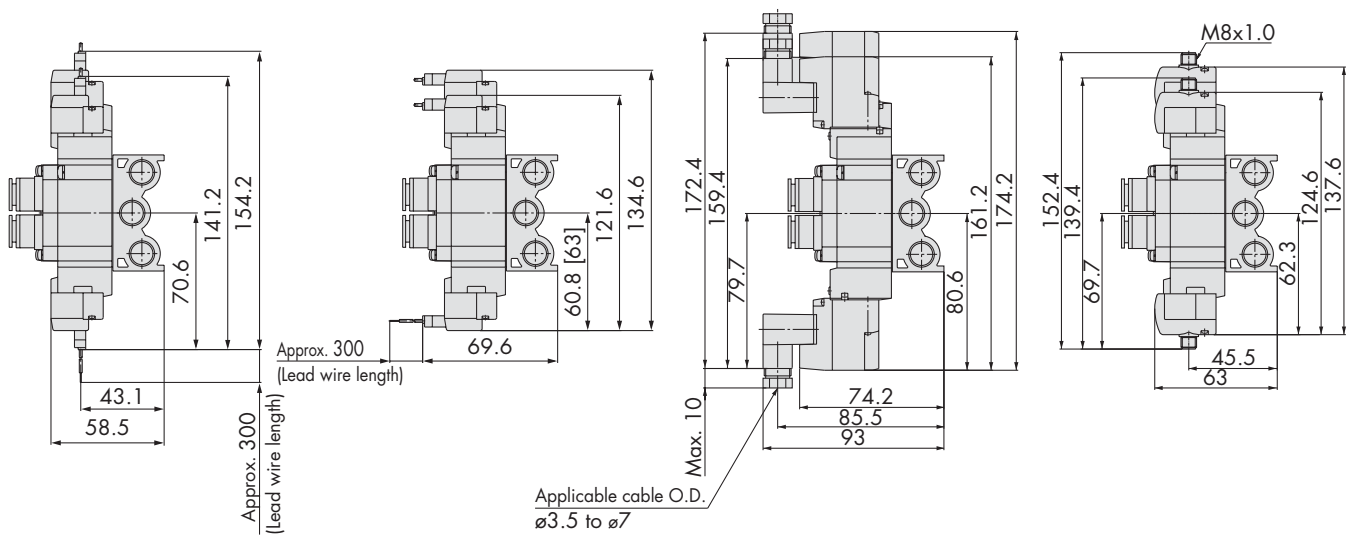


L plug connector (L)

M plug connector (M)

DIN terminal (D/Y)

M8 connector (WO)



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



# Base Mounted Valve Single Unit

## Series SY3/5/7/9000



### Features

- ➔ Four available sizes.
- ➔ Internal pilot designs.
- ➔ Wide range of electrical connector options.
- ➔ Locking manual overrides are possible.
- ➔ Huge range of sub-bases and manifolds can be ordered.



\* Note.  
The photograph shows a valve mounted on a single subbase. The subbase is not supplied with the valve and must be ordered separately. See next page for ordering information.

### How to Order

SY 5 2 40 — 5 L — Q

Series

3	SY3000
5	SY5000
7	SY7000
9	SY9000

Type of actuation

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

Pilot type

Nil	Internal pilot
R	External pilot

Rated voltage

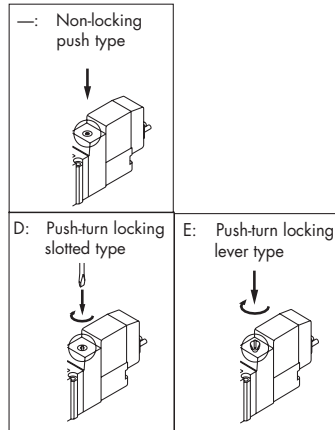
DC	
5	24 VDC
6	12 VDC
V	6 VDC
S	5 VDC
R	3 VDC

AC (50/60 Hz)

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

Note: AC voltages can only be specified in conjunction with a DIN plug (D/Y) entry

### Manual override



### Symbols

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 centre (A)(B) 4 2 5 1 3 (EA)(P)(EB)
4	3 position exhaust centre (A)(B) 4 2 5 1 3 (EA)(P)(EB)
5	3 position pressure centre (A)(B) 4 2 5 1 3 (EA)(P)(EB)

### (Light/Surge voltage suppressor)

Electrical entry for G, L, M, W

—	Without light/surge voltage suppressor
Z	With light/surge voltage suppressor
U	With light/surge voltage suppressor (Non-polar type)

Electrical entry for D, Y

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

### Electrical entry

	24, 12, 6, 5, 3 VDC / 100, 110, 200, 220 VAC		24, 12 VDC / 100, 110, 200, 220 VAC	24, 12, 6, 5, 3 VDC
	Grommet	L plug connector	M plug connector	DIN terminal
	LO: Without connector	MO: Without connector	(Except SY3000) D/Y: With connector	WO: Without connector cable
	G: Lead wire length 300 mm			

Note: For connector cables see Cable appendix.

\* "D" denotes a DIN plug DIN43650 class with industry standard pin spacing. The "Y" plug is externally identical but has DIN 43650C pin spacing of 8 mm.

### Accessories for Base Mounted SY Valves

Valve type	Single Subbase part no.	Subbase port size
SY3*40 valves	SY3000-27-1F-Q	G 1/8
SY5*40 valves	SY5000-27-1F-Q	G 1/4
SY7*40 valves	SY7000-27-1F-Q	G 1/4
SY7*40 valves	SY7000-27-2F-Q	G 3/8
SY9*40 valves	SY9000-27-1F-Q	G 3/8
SY9*40 valves	SY9000-27-2F-Q	G 1/2

Electrical connectors are common to SY body ported valves.

### Specifications

Series		SY3000	SY5000	SY7000	SY9000
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		-100 kPa 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)		-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	Internal pilot	Common exhaust type for main and pilot valve			
	External pilot	Pilot valve individual exhaust			
Lubrication		Not required			
Mounting orientation		Unrestricted			
Enclosure		Dustproof (* DIN terminal, M8 connector conforms to IP65)			

### Response Time

#### 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 Z	Type 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 Z	Type 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 Z	Type 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 Z	Type 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

### Solenoid Specifications

Electrical entry		Grommet (G), (H) L plug connector: L M plug connector: M DIN terminal (D) (Y) M8 connector (W)	
Coil rated voltage (V)	DC	24, 12, 6, 5, 3	
	AC 50/60 Hz	100, 110, 200, 220 *	
Allowable voltage fluctuation (%)		±10% of rated voltage	
Power consumption (W)	DC	Standard	0.35(with indicator light:0.4 DIN terminal with indicator light: 0.45)
		With power saving circuit	0.1 (With indicator light only)
Apparent power	AC	100 V	0.78 (With indicator light: 0.87)
		110 V	0.86 (With indicator light: 0.97)
		200 V	1.15 (With indicator light: 1.30)
		220 V	1.27 (With indicator light: 1.46)
		[230 V]	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 terminal is neon bulb.)	

\* DIN plug only.

Flow Characteristics/Weight

Series SY3000	Type of actuation		Port size	Flow characteristics						Weight (g)		
				1 → 4/2 (P → A/B)			4/2 → 5/3 (A/B → EA/EB)			Grommet	Response times (m/s)	W M8 connector
				C (dm <sup>3</sup> /s-bar)	b	Cv	C (dm <sup>3</sup> /s-bar)	b	Cv			
2 position	Single	Double	1/8	1.0	0.30	0.24	1.1	0.30	0.26	84 (50)	15	89 (57)
				102 (68)	13	115 (81)						
3 position	Closed centre			0.77	0.28	0.18	0.85	0.30	0.19	104 (69)	20	117 (82)
	Exhaust centre			0.73	0.31	0.18	1.1	0.26	0.24			
	Pressure centre			1.2	0.24	0.29	0.89	0.47	0.24			

Series SY5000	Type of actuation		Port size	Flow characteristics						Weight (g)		
				1 → 4/2 (P → A/B)			4/2 → 5/3 (A/B → EA/EB)			Grommet	Response times (m/s)	W M8 connector
				C (dm <sup>3</sup> /s-bar)	b	Cv	C (dm <sup>3</sup> /s-bar)	b	Cv			
2 position	Single	Double	1/4	2.4	0.41	0.64	2.8	0.29	0.66	121 (58)	26	127 (65)
				139 (76)	22	152 (89)						
3 position	Closed centre			1.8	0.47	0.50	1.8	0.40	0.47	144 (82)	38	158 (95)
	Exhaust centre			1.4	0.55	0.44	3.0	0.33	0.72			
	Pressure centre			3.3	0.36	0.85	1.8	0.40	0.48			

Series SY7000	Type of actuation		Port size	Flow characteristics						Weight (g)		
				1 → 4/2 (P → A/B)			4/2 → 5/3 (A/B → EA/EB)			Grommet	Response times (m/s)	W M8 connector
				C (dm <sup>3</sup> /s-bar)	b	Cv	C (dm <sup>3</sup> /s-bar)	b	Cv			
2 position	Single	Double	1/4	4.1	0.41	1.1	4.1	0.29	1.0	218 (89)	38	225 (96)
				237 (108)	30	250 (121)						
3 position	Closed centre			3.0	0.43	0.80	2.6	0.41	0.72	239 (110)	56	253 (124)
	Exhaust centre			2.6	0.42	0.71	4.7	0.35	1.1			
	Pressure centre			5.3	0.39	1.3	2.2	0.49	0.63			
2 position	Single	Double	3/8	4.9	0.29	1.2	4.5	0.27	1.1	218 (89)	38	225 (96)
				237 (108)	30	250 (121)						
3 position	Closed centre			3.0	0.40	0.80	2.6	0.45	0.73	239 (110)	56	253 (124)
	Exhaust centre			2.6	0.42	0.71	4.8	0.35	1.1			
	Pressure centre			5.3	0.31	1.3	2.3	0.45	0.66			

Series SY9000	Type of actuation		Port size	Flow characteristics						Weight (g)		
				1 → 4/2 (P → A/B)			4/2 → 5/3 (A/B → EA/EB)			Grommet	Response times (m/s)	W M8 connector
				C (dm <sup>3</sup> /s-bar)	b	Cv	C (dm <sup>3</sup> /s-bar)	b	Cv			
2 position	Single	Double	3/8	7.9	0.34	2.0	9.6	0.43	2.6	469(172)	41	476(179)
				488(191)	41	502(205)						
3 position	Closed centre			7.5	0.33	1.8	7.3	0.30	1.7	512(215)	64	526(229)
	Exhaust centre			7.2	0.34	1.7	13	0.23	2.8			
	Pressure centre			12	0.26	2.8	6.7	0.40	1.9			
2 position	Single	Double	1/2	8.0	0.48	2.2	10	0.29	2.5	448 (151)	41	457(160)
				467 (170)	41	481(184)						
3 position	Closed centre			7.6	0.32	1.8	7.3	0.32	1.8	491 (194)	64	505(208)
	Exhaust centre			7.3	0.42	2.0	13	0.32	3.6			
	Pressure centre			12	0.33	3.3	7.4	0.33	1.9			

Note: Weights given for grommet and M8 connector. L/M connector and DIN version weights fall between these values. Response time is 0.5 MPa with Z lamp and surge option fitted.

How to Order Interface Regulators

Series SY3000  
**ARBY3000—05—P—2**

Pressure gauge connection port

05	Pressure gauge (G15-10-01)
M1	Plug (M-5P)

P	P port
A1	A port (P controlled type, A port regulation)
B1	B port (P controlled type, B port regulation)

Regulating port

ARBY3000-05-□-2      ARBY3000-M1-□-2

Series SY5000  
**ARBY5000—00—P—2**

Pressure gauge connection port

00	Pressure gauge (G15-10-01)
M1	Plug (M-5P)

P	P port
A1	A port (P controlled type, A port regulation)
B1	B port (P controlled type, B port regulation)

Regulating port

ARBY5000-00-□-2      ARBY5000-M1-□-2

Series SY7000  
**ARBY7000—00—P—2**

Pressure gauge connection port

00	Pressure gauge (G15-10-01)
M1	Plug (M-5P)

P	P port
A1	A port (P controlled type, A port regulation)
B1	B port (P controlled type, B port regulation)

Regulating port

ARBY7000-00-□-2      ARBY7000-M1-□-2



ARBY3000



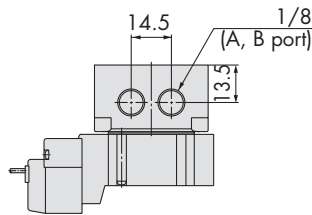
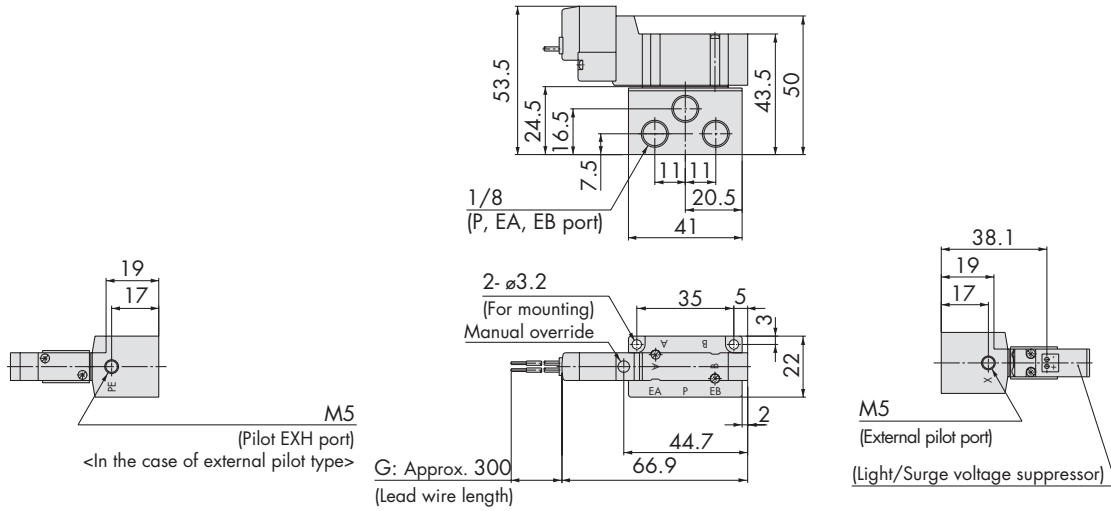
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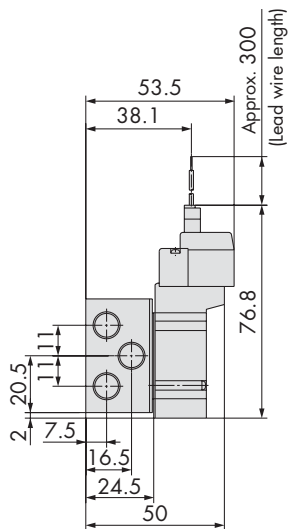
ARBY7000

Dimensions: Series SY3000

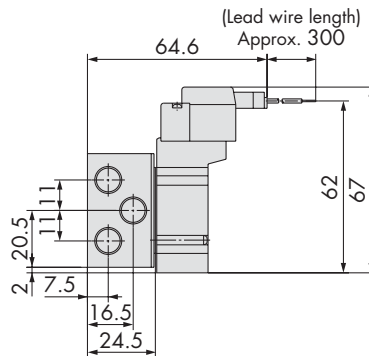
2 position single  
Grommet (G): SY3140(R)-□G□□□-01□-Q



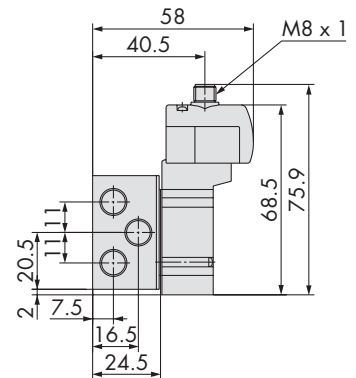
L plug connector (L):  
SY3140(R)-□L□□□-01□-Q



M plug connector (M):  
SY3140(R)-□M□□□-01□-Q



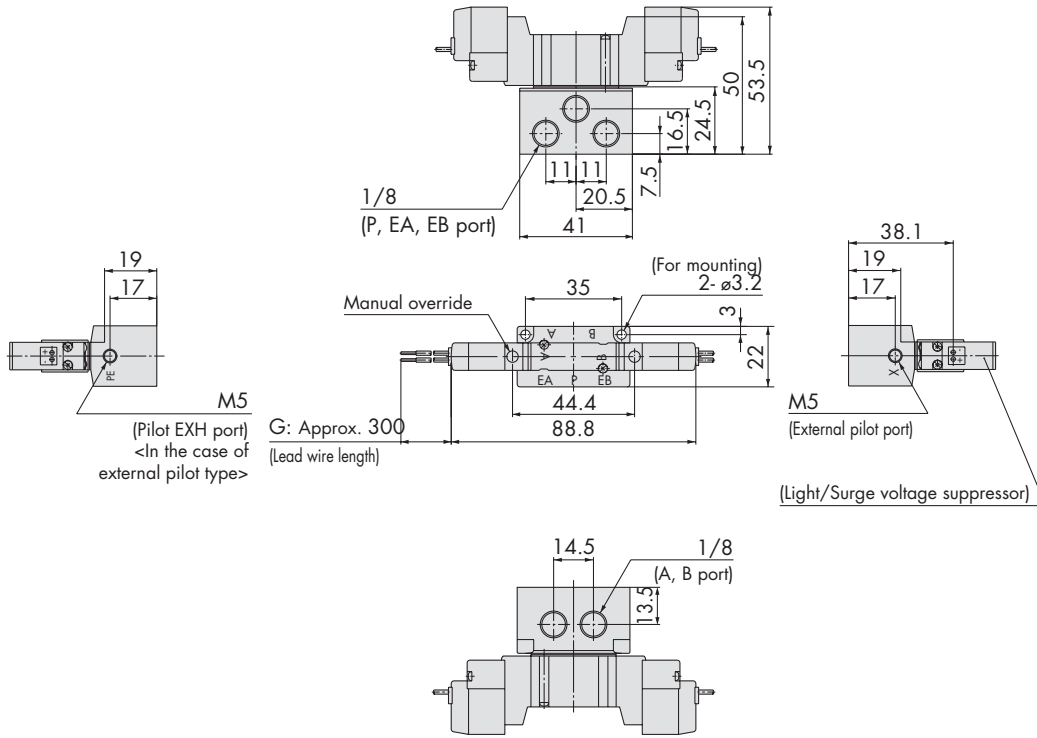
M8 connector (WO):  
SY3140(R)-□WO□□□-01□-Q



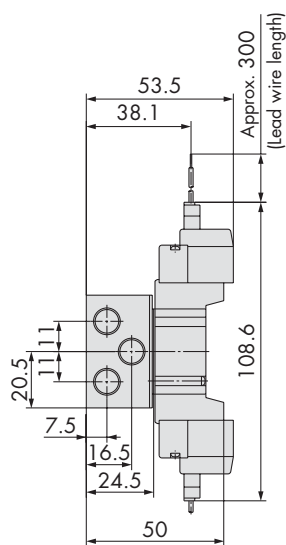
Dimensions: Series SY3000

2 position double

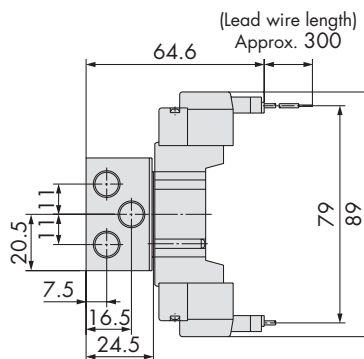
Grommet (G): SY3240(R)-□G□□-01□-Q



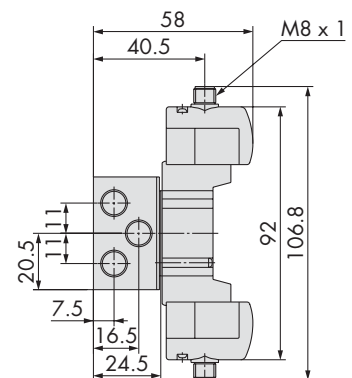
L plug connector (L):  
SY3240(R)-□L□□-01□-Q



M plug connector (M):  
SY3240(R)-□M□□-01□-Q

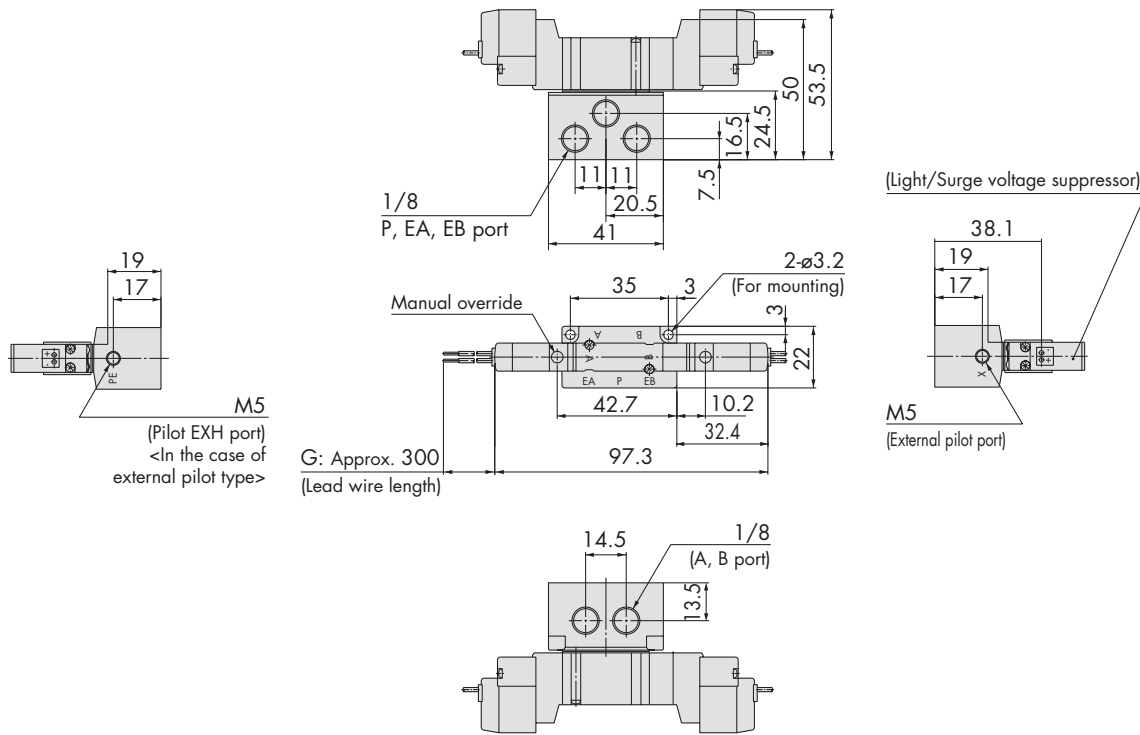


M8 connector (WO):  
SY3240(R)-□WO□□-01□-Q

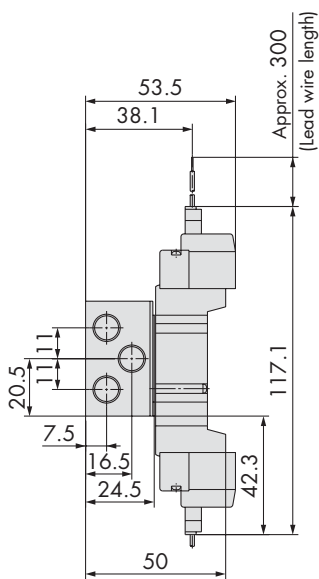


Dimensions: Series SY3000

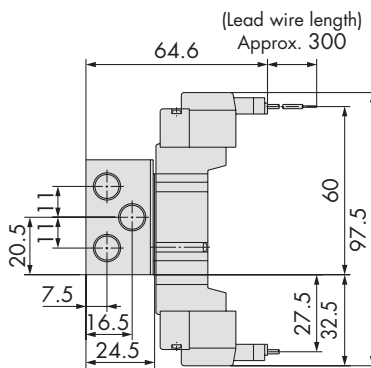
3 position closed centre/exhaust centre/pressure centre  
Grommet (G): SY3<sup>3</sup>/<sub>5</sub>40(R)-□G□□-01□-Q



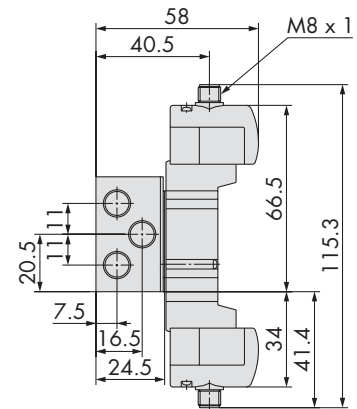
L plug connector (L):  
SY3<sup>3</sup>/<sub>5</sub>40(R)-□L□□-01□-Q



M plug connector (M):  
SY3<sup>3</sup>/<sub>5</sub>40(R)-□M□□-01□-Q



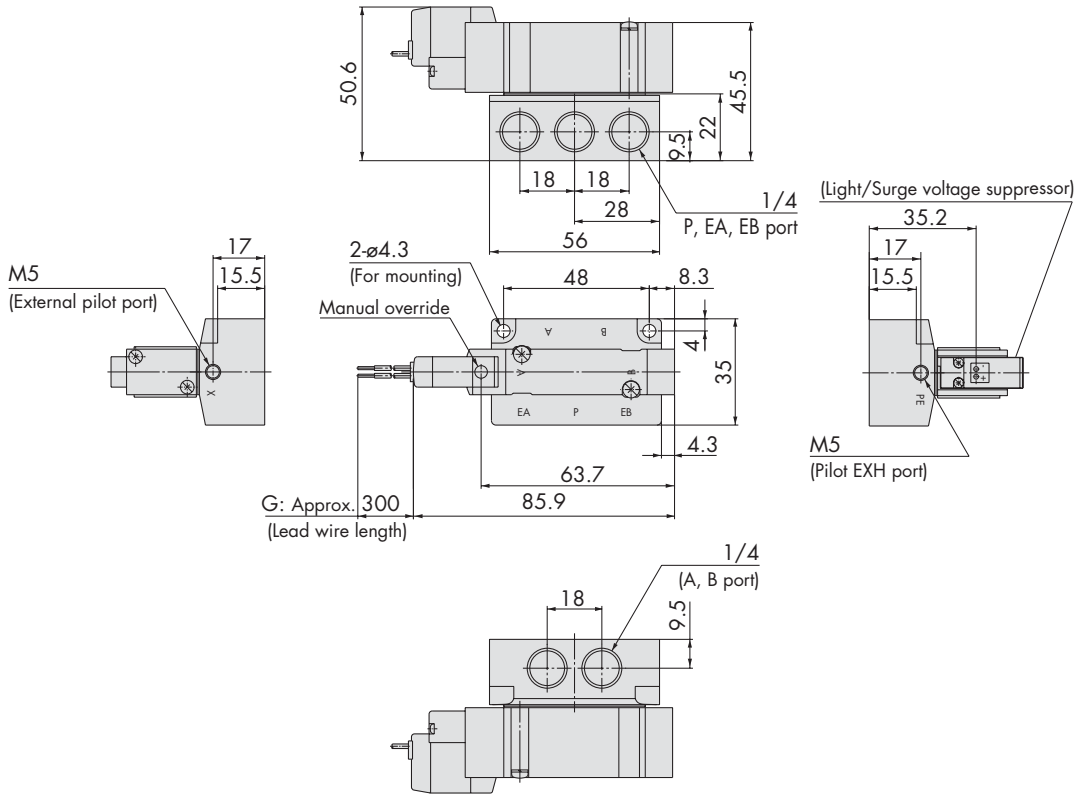
M8 connector (WO):  
SY3<sup>3</sup>/<sub>5</sub>40(R)-□WO□□-01□-Q



Dimensions: Series SY5000

2 position single

Grommet (G): SY5140(R)-□G□□-02□-Q



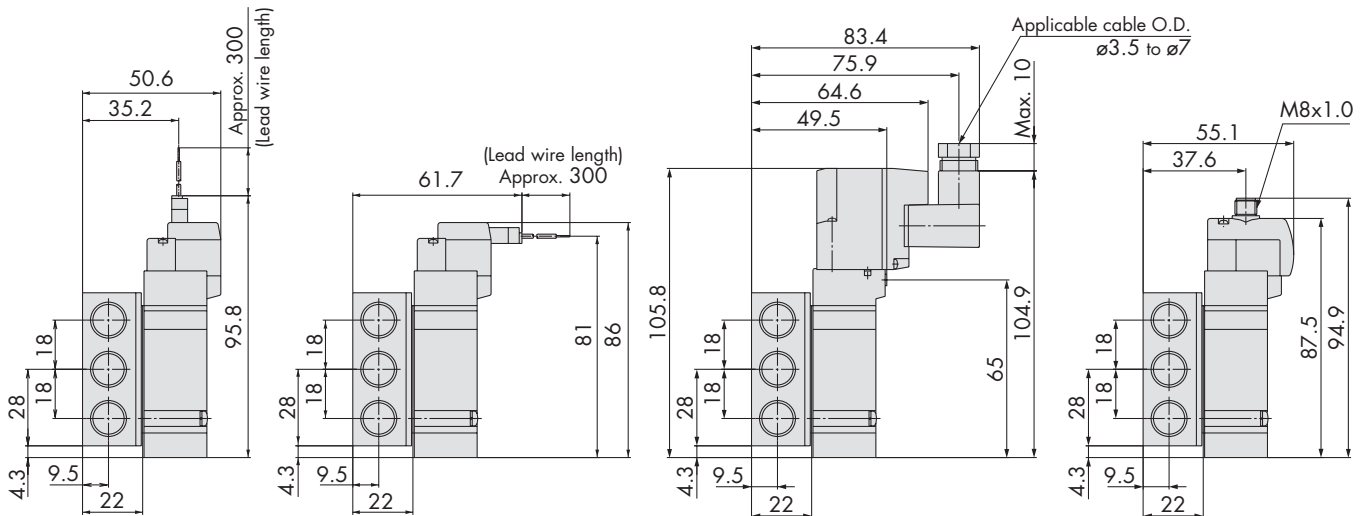
Valves

L plug connector (L):  
SY5140(R)-□L□□-02□-Q

M plug connector (M):  
SY5140(R)-□M□□-02□-Q

DIN terminal (D/Y):  
SY5140(R)-□D□□-02□-Q

M8 connector (WO):  
SY5140(R)-□WO□□-02□-Q

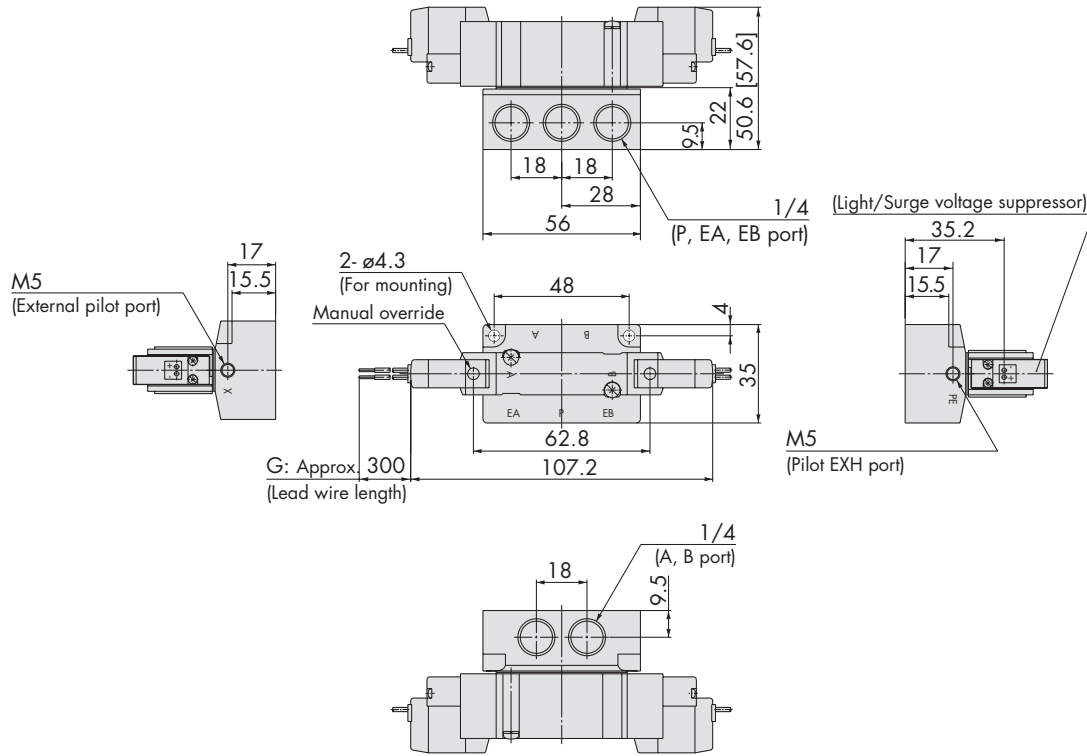


Dimensions: Series SY5000

2 position double

Grommet (G): SY5240(R)-□G□□-02□-Q

Valves

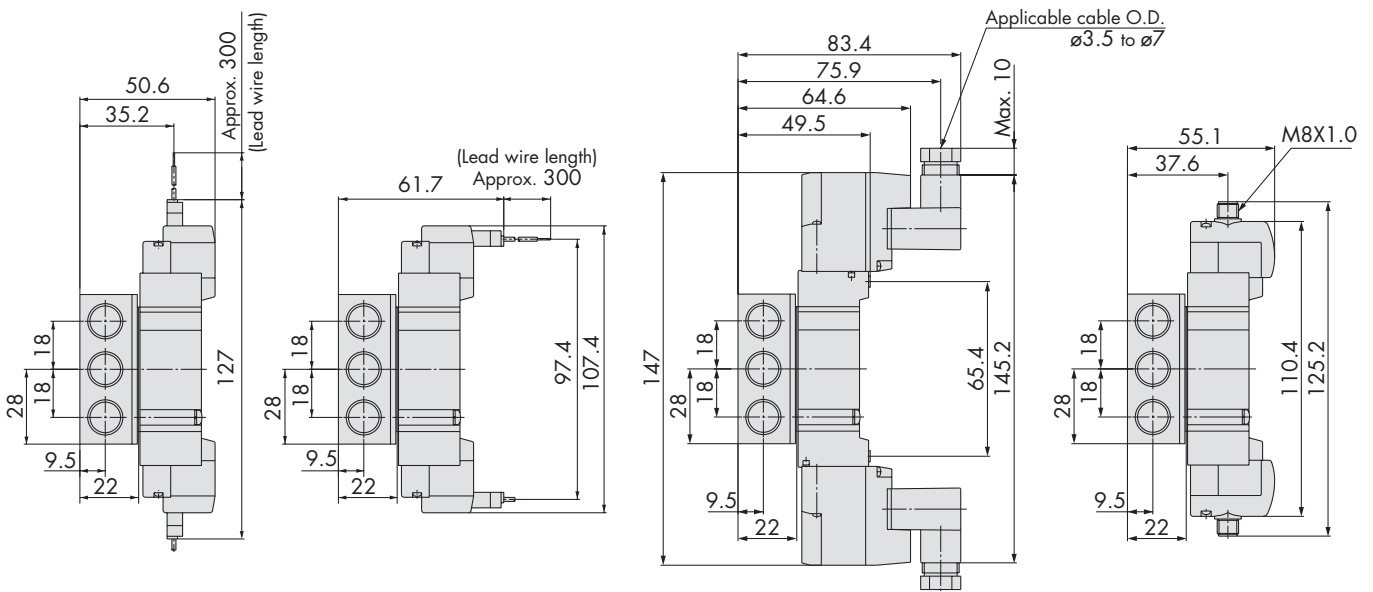


L plug connector (L): SY5240(R)-□L□□-02□-Q

M plug connector (M): SY5240(R)-□M□□-02□-Q

DIN terminal (D/Y): SY5240(R)-□D□□-02□-Q

M8 connector (WO): SY5240(R)-□WO□□-02□-Q

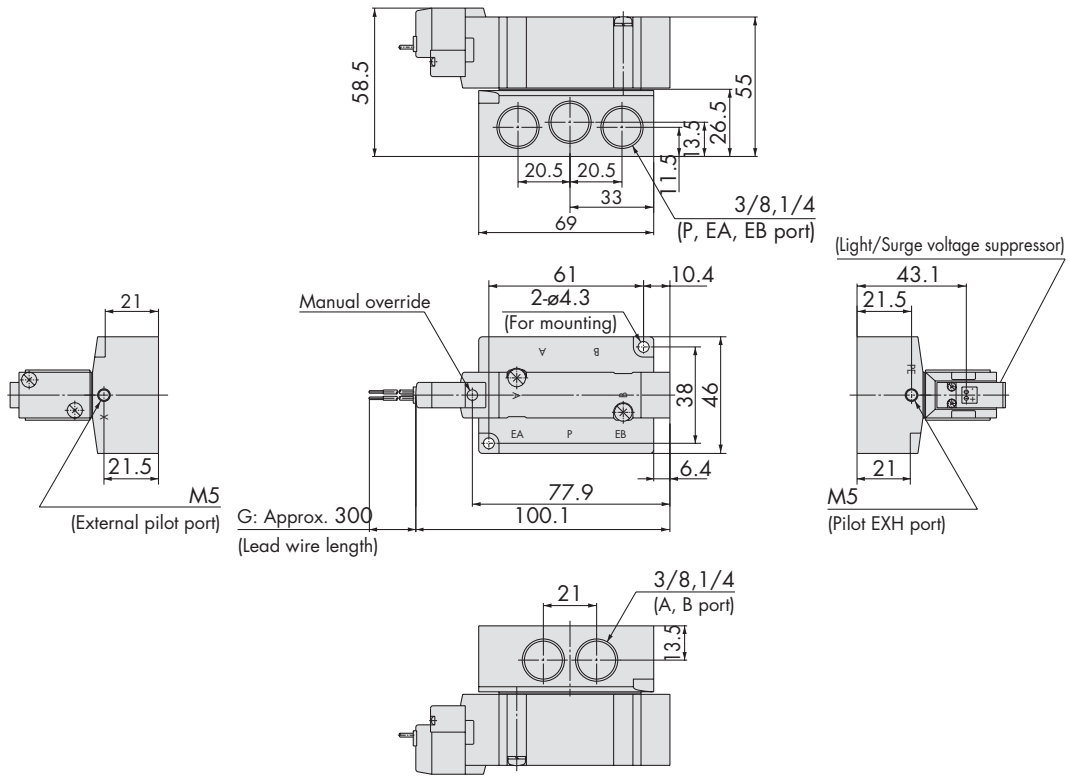




Dimensions: Series SY7000

2 position single

Grommet (G): SY7140(R)-□G□□- $\frac{02}{03}$ □-Q

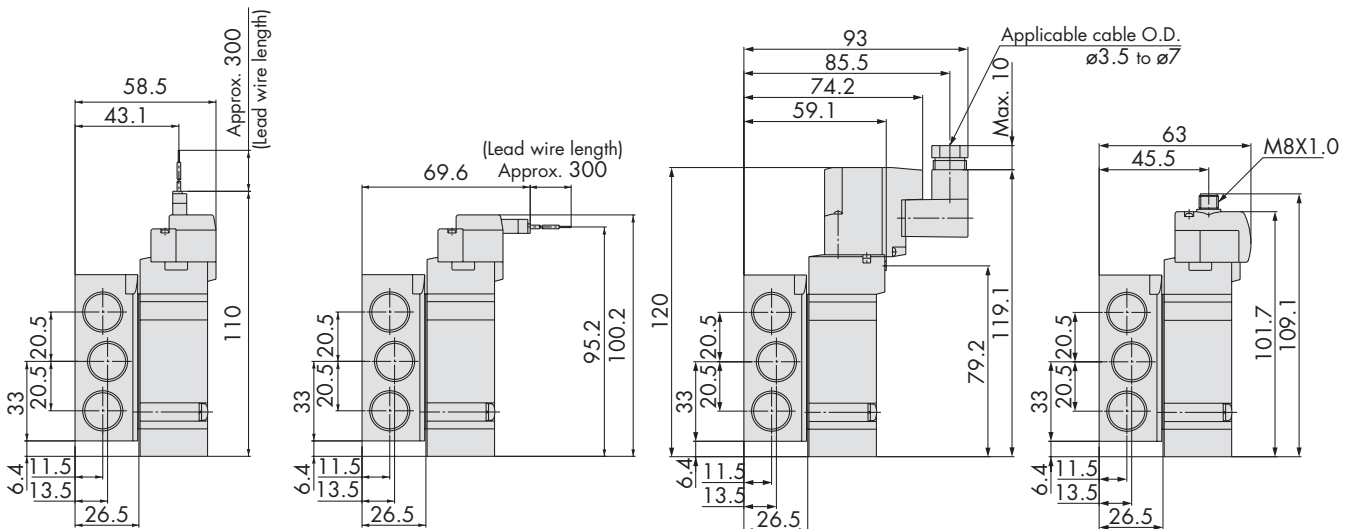


L plug connector (L): SY7140(R)-□L□□- $\frac{02}{03}$ □-Q

M plug connector (M): SY7140(R)-□M□□- $\frac{02}{03}$ □-Q

DIN terminal (D/Y): SY7140(R)-□D□□- $\frac{02}{03}$ □-Q

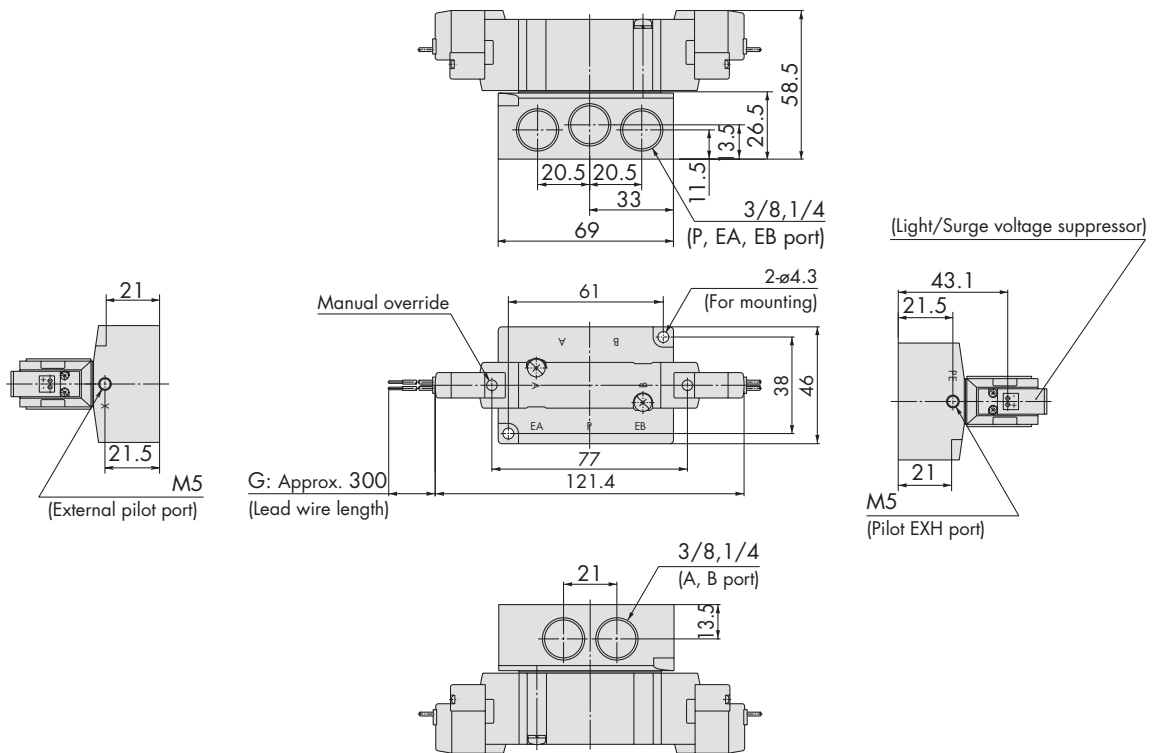
M8 connector (WO): SY7140(R)-□WO□□- $\frac{02}{03}$ □-Q



Dimensions: Series SY7000

2 position double

Grommet (G): SY7240(R)-□G□□- $\frac{02}{03}$ □-Q

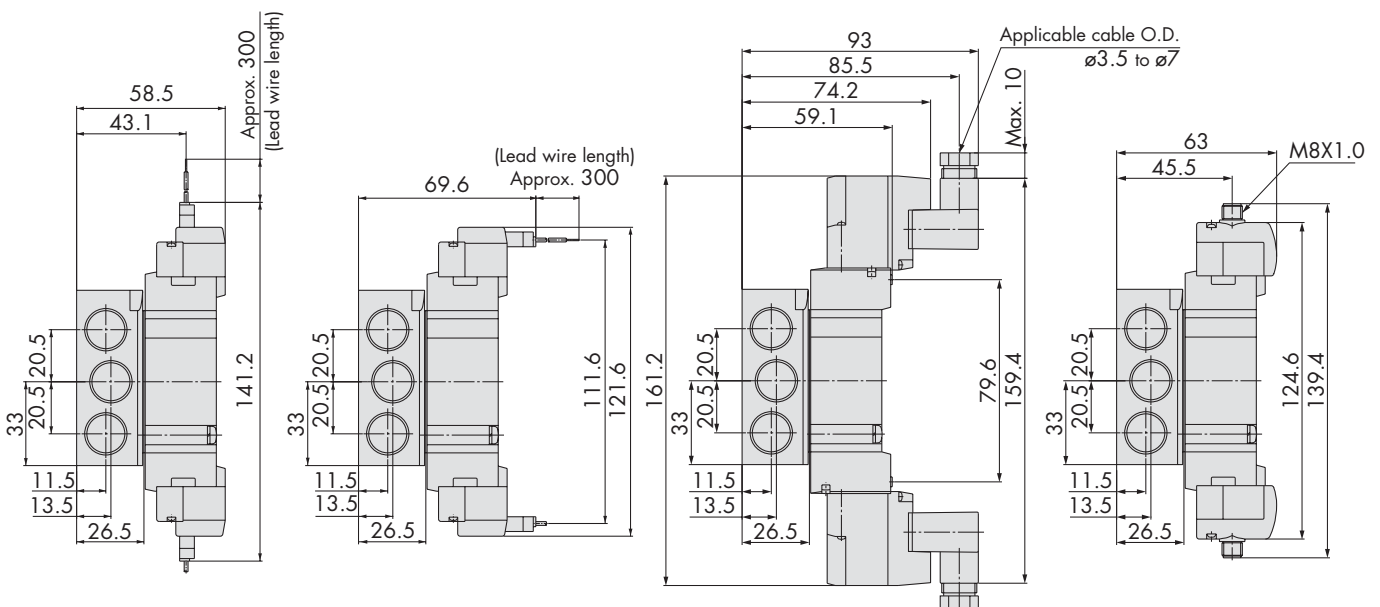


L plug connector: L  
SY7240(R)-□L□□- $\frac{02}{03}$ □-Q

M plug connector: M  
SY7240(R)-□M□□- $\frac{02}{03}$ □-Q

DIN terminal (D/Y):  
SY7240(R)-□D□□- $\frac{02}{03}$ □-Q

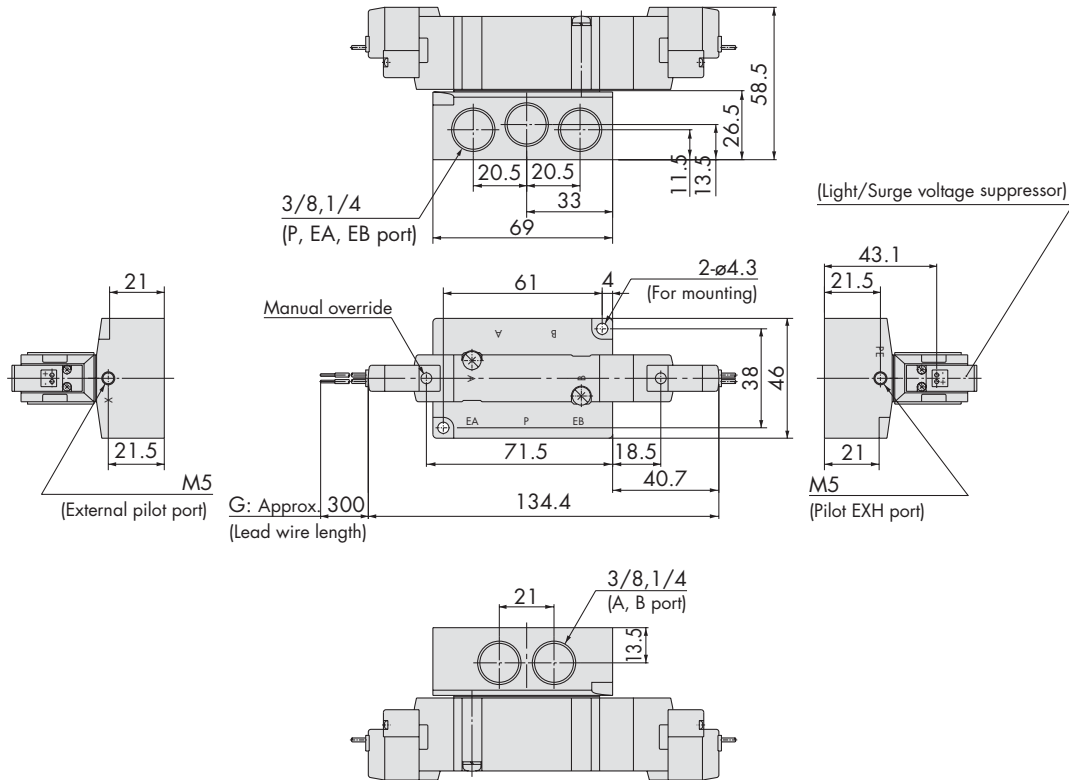
M8 connector (WO):  
SY7240(R)-□WO□□- $\frac{02}{03}$ □-Q



Dimensions: Series SY7000

3 position closed centre/exhaust centre/pressure centre

Grommet (G): SY7<sup>3</sup>/<sub>5</sub>40(R)-□G□□-02□-Q

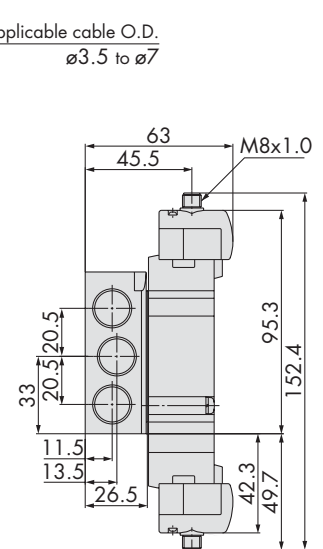
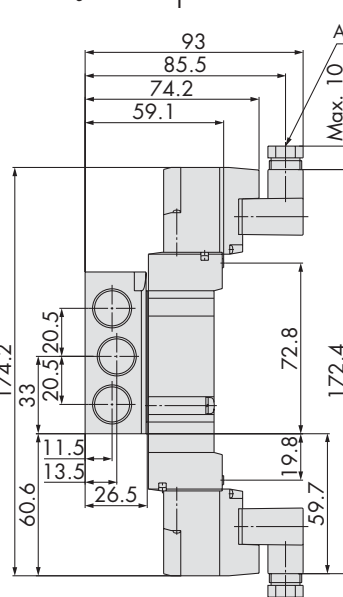
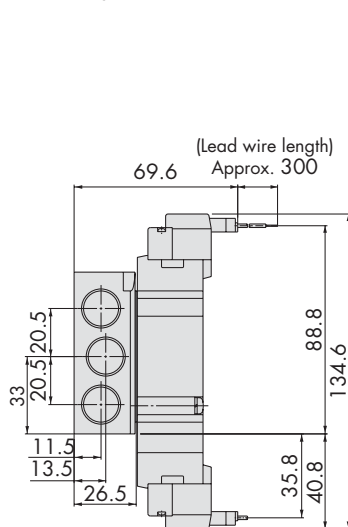
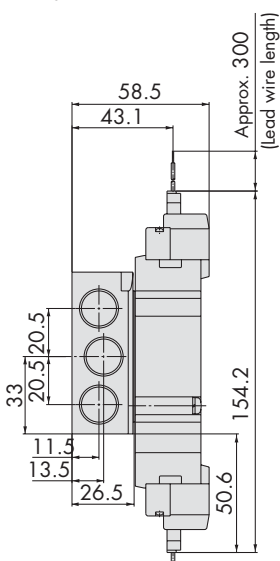


L plug connector: L  
SY7<sup>3</sup>/<sub>5</sub>40(R)-□L□□-02□-Q

M plug connector: M  
SY7<sup>3</sup>/<sub>5</sub>40(R)-□M□□-02□-Q

DIN terminal (D/Y):  
SY7<sup>3</sup>/<sub>5</sub>40(R)-□D□□-02□-Q

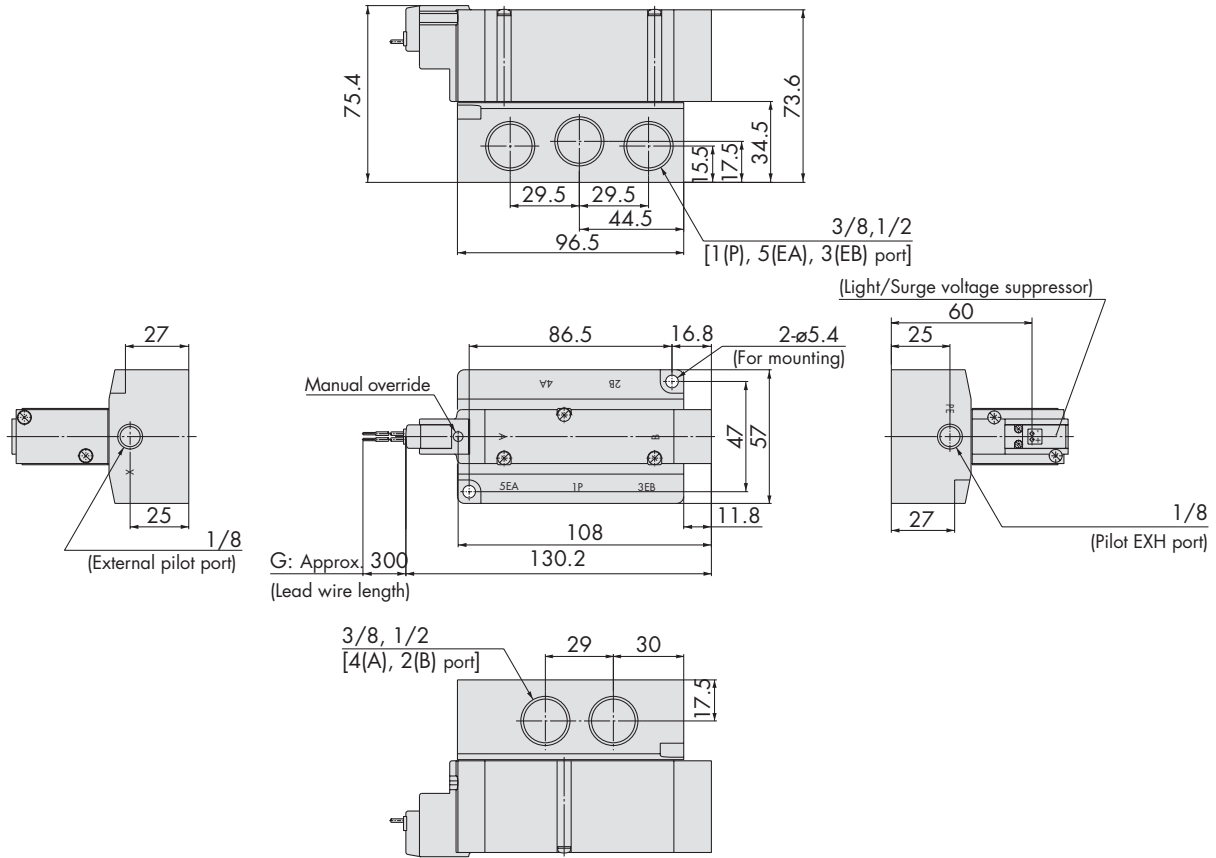
M8 connector (WO):  
SY7<sup>3</sup>/<sub>5</sub>40(R)-□WO□□-02□-Q



Dimensions: Series SY9000

2 position single

Grommet (G): SY9140-□G□□- $\frac{03}{04}$ □-Q

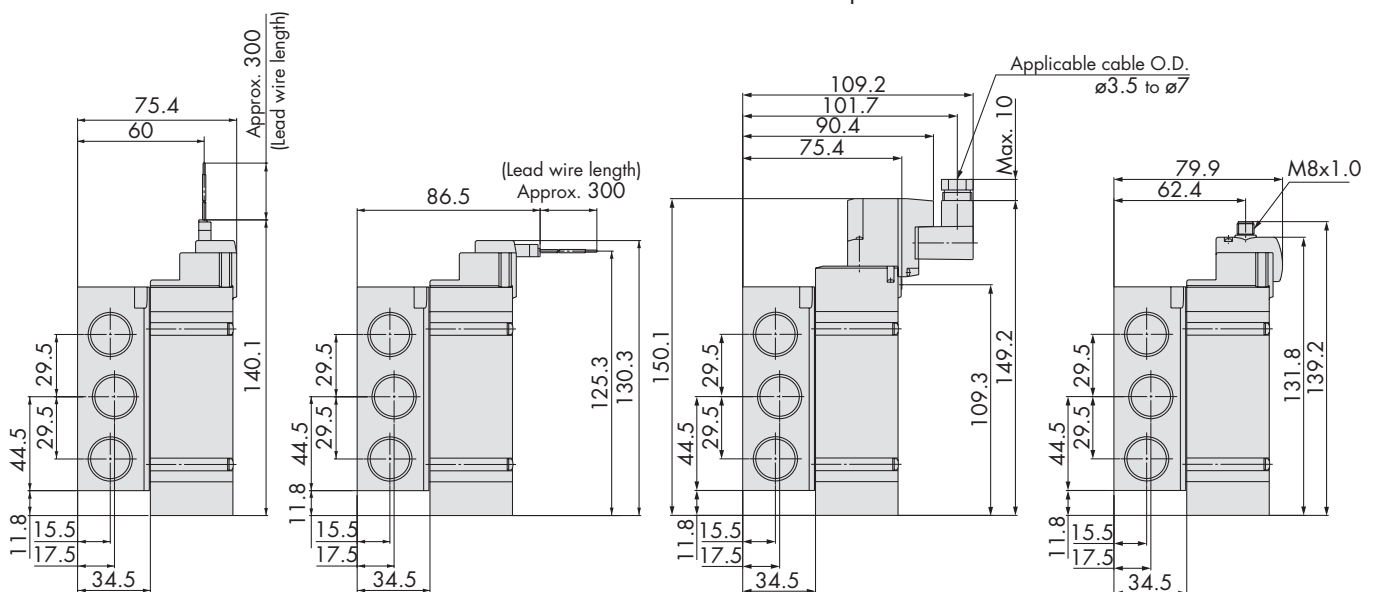


L plug connector (L):  
SY9140(R)-□L□□- $\frac{03}{04}$ □-Q

M plug connector (M):  
SY9140(R)-□M□□- $\frac{03}{04}$ □-Q

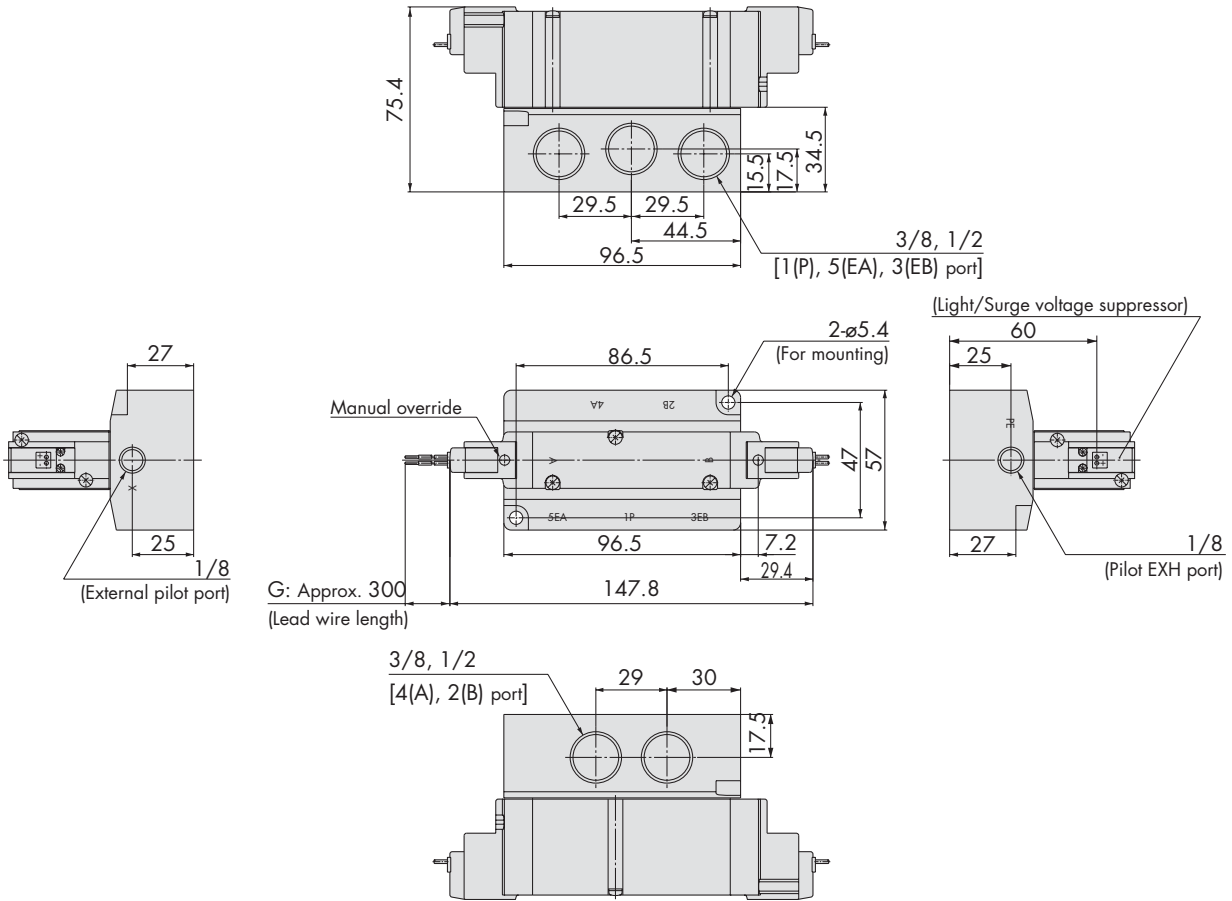
DIN terminal (D/Y):  
SY9140(R)-□D□□- $\frac{03}{04}$ □-Q

M8 connector (WO):  
SY9140(R)-□WO□□- $\frac{03}{04}$ □-Q

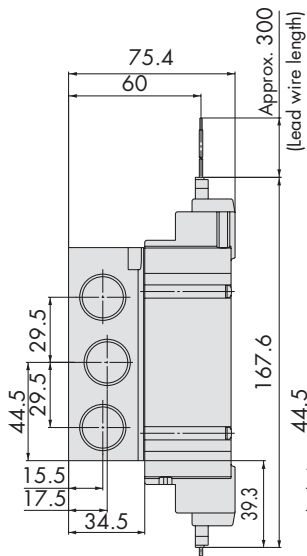


Dimensions: Series SY9000

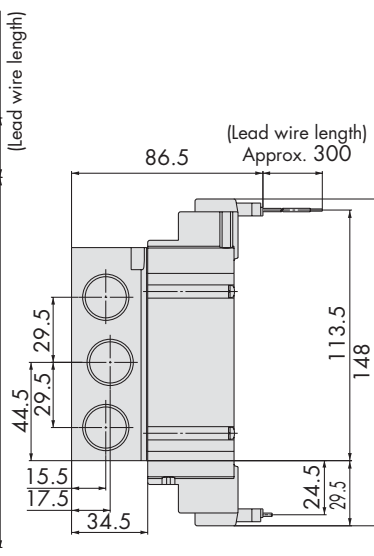
2 position double  
Grommet (G): SY9240(R)-□G□□-03□-Q



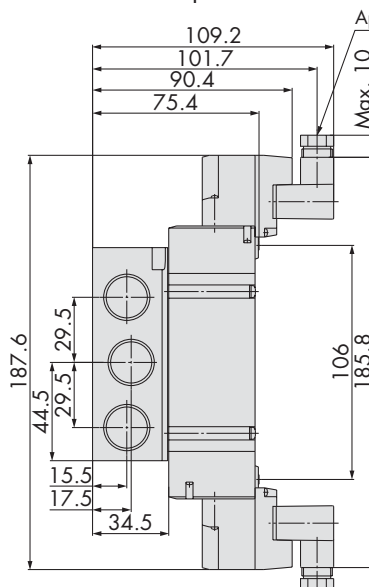
L plug connector (L):  
SY9240(R)-□L□□-03□-Q



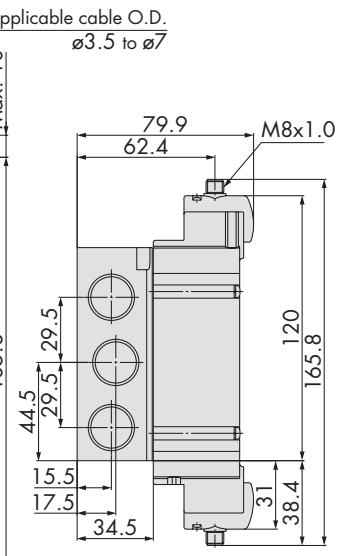
M plug connector (M):  
SY9240(R)-□M□□-03□-Q



DIN terminal (D/Y):  
SY9240(R)-□D□□-03□-Q



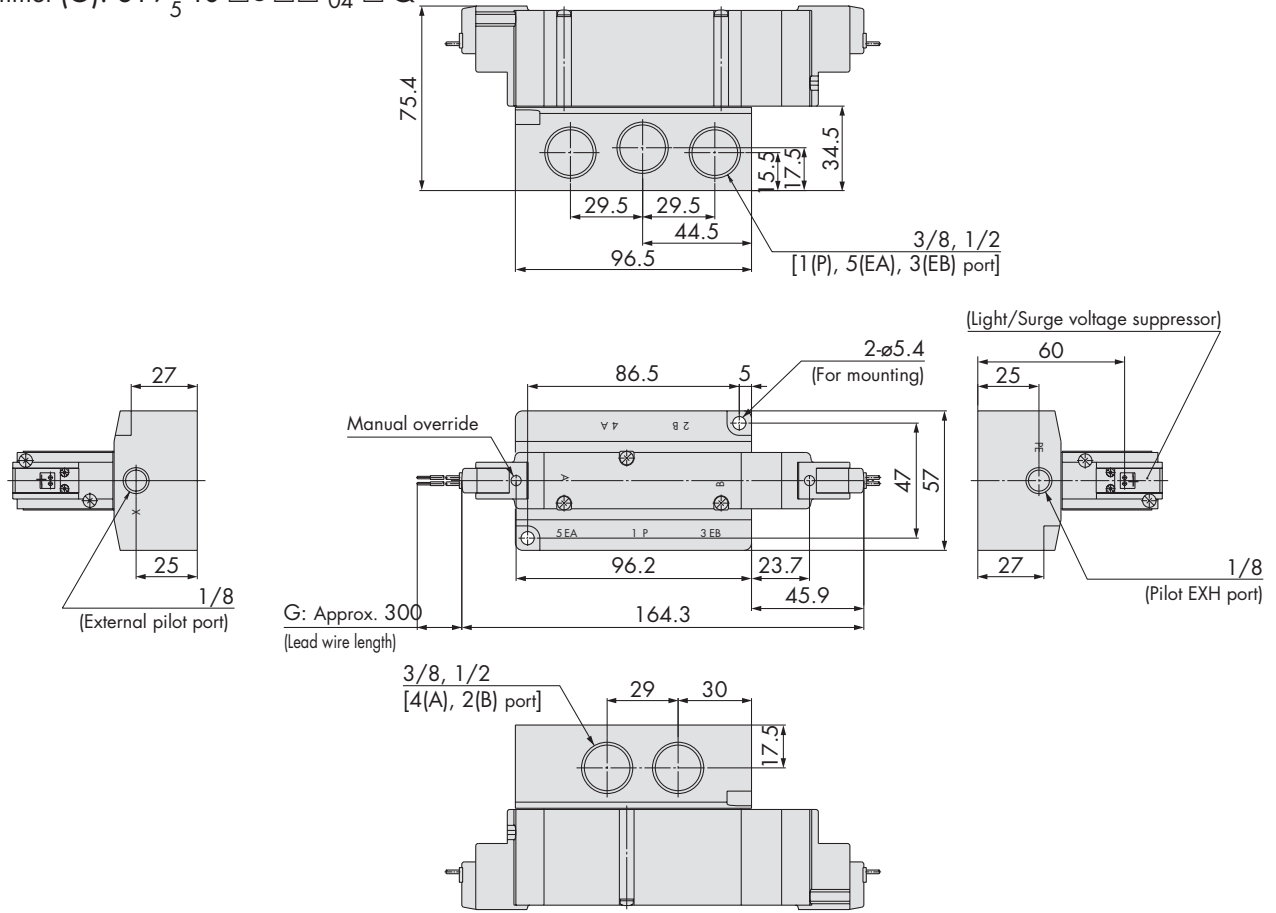
M8 connector (WO):  
SY9240(R)-□WO□□-03□-Q



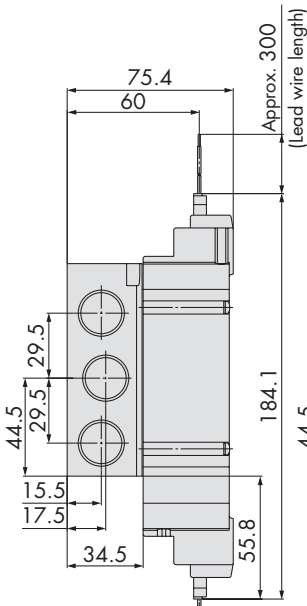
Dimensions: Series SY9000

3 position closed centre/exhaust centre/pressure centre

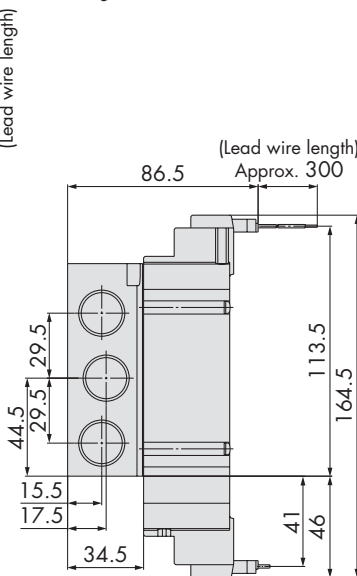
Grommet (G): SY9<sup>3</sup>/<sub>5</sub>40-□G□□-<sup>03</sup>/<sub>04</sub>□-Q



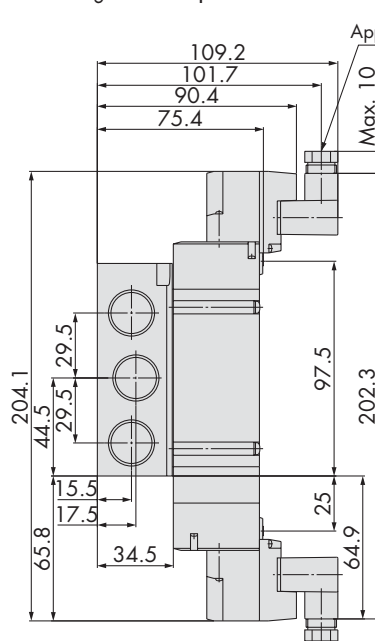
L plug connector (L):  
SY9<sup>3</sup>/<sub>5</sub>40(R)-□L□□-<sup>03</sup>/<sub>04</sub>□-Q



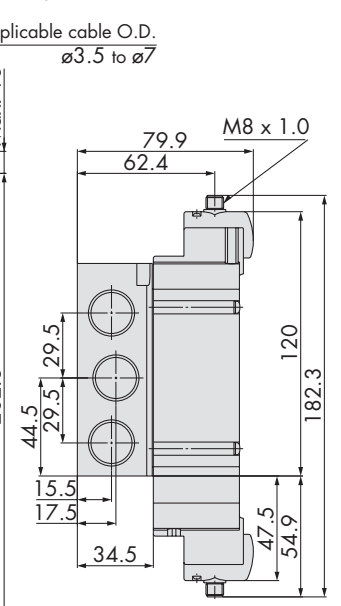
M plug connector (M):  
SY9<sup>3</sup>/<sub>5</sub>40(R)-□M□□-<sup>03</sup>/<sub>04</sub>□-Q



DIN terminal (D/Y):  
SY9<sup>3</sup>/<sub>5</sub>40(R)-□<sup>D</sup>/<sub>Y</sub>□□-<sup>03</sup>/<sub>04</sub>□-Q



M8 connector (WO):  
SY9<sup>3</sup>/<sub>5</sub>40(R)-□WO□□-<sup>03</sup>/<sub>04</sub>□-Q



# Base Mounted Manifold Individual Wiring

## Series SY3/5/7/9000



### How to Order Manifold

#### Type 41 (Compact type)

SS5Y 5 — 41 — 05 — C8 F — Q

Manifold series

3	SY3000
5	SY5000

Stations

02	2 stations
⋮	⋮
20	20 stations

A, B port size  
Thread piping

Symbol	Port size	Applicable series
M5	M5	SY3000
01	1/8	SY5000

One-touch fitting (Metric size)

Symbol	Port size	Applicable series
C4	One-touch fitting for ø4	SY3000
C6	One-touch fitting for ø6	SY5000
C6	One-touch fitting for ø6	
C8	One-touch fitting for ø8	

#### Type 43 (Slice type internal or external pilot)

SS5Y 9 — 43 — 05 U — C8 F — Q

Manifold series

9	SY9000
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Valve stations

Symbol	Stations
02	2 stations
⋮	⋮
20	20 stations

P, R port outlets

Symbol	Port outlet	Applicable stations
U	U side	2 to 10 stations
D	D side	
B	Both sides	2 to 20 stations

SUP/EXH block assembly specifications

Symbol	Specifications
—	Standard/Internal pilot
R	External pilot
S	Internal pilot/Built-in silencer
RS	External pilot/Built-in silencer

A, B port size  
Thread piping

Symbol	Port size
02	1/4
03	3/8

One-touch fitting (Metric size)

Symbol	Port size
C8	One-touch fitting for ø8
C10	One-touch fitting for ø10
C12	One-touch fitting for ø12

#### Type 42 (External pilot capable type)

SS5Y 5 — 42 — 05 — C8 F — Q

Manifold series

3	SY3000
5	SY5000
7	SY7000

Stations

02	2 stations
⋮	⋮
20	20 stations

A, B port size  
Thread piping

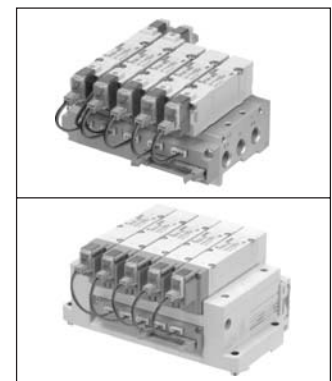
Symbol	Port size	Applicable series
01	1/8	SY3000
02	1/4	SY5000
02	1/4	SY7000

One-touch fitting (Metric size)

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

### Also Available

Base mounted manifolds, bar types with connectors for common wiring



### Manifold Specifications

Model	SS5Y3-41	SS5Y3-42	SS5Y5-41	SS5Y5-42	SS5Y7-42	SS5Y9-43
Applicable valve	SY3□40		SY5□40		SY7□40	SY9□40
Manifold type	Single base/B mount				Stacking type	
P(SUP)/R(EXH)	Common SUP, Common EXH					
Valve stations	2 to 20 stations					
A, B port	Base					
Porting specifications	Side					
Port size	P, EA, EB port	1/8		1/4		1/4
	A, B port	M5	1/8	1/8	1/4	C12 (One-touch fitting for ø12)
Manifold base weight W (g) n: Stations		C4 (One-touch fitting for ø4) C6 (One-touch fitting for ø6)	C4 (One-touch fitting for ø4) C6 (One-touch fitting for ø6)	C6 (One-touch fitting for ø6) C8 (One-touch fitting for ø8)	C6 (One-touch fitting for ø6) C8 (One-touch fitting for ø8)	C10 (One-touch fitting for ø10)
		W = 30n + 50	W = 37n + 63	W = 61n + 101	W = 79n + 127	W = 100n + 151

### Flow Characteristics

Model	Port size		Flow 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 <sup>3</sup> /[s·bar])	b	Cv	C (dm <sup>3</sup> /[s·bar])	b	Cv
SS5Y3-41	1/8	C6	0.75	0.19	0.18	0.81	0.23	0.20
SS5Y3-42	1/8	C6	0.75	0.20	0.18	0.82	0.20	0.20
SS5Y5-41	1/4	C8	1.8	0.23	0.44	1.9	0.16	0.45
SS5Y5-42	1/4	C8	1.9	0.20	0.46	1.9	0.12	0.43
SS5Y7-42	1/4	C10	3.0	0.25	0.75	3.0	0.12	0.66
SS5Y9-43	C12	C12	6.4	0.29	1.6	7.3	0.29	1.8

### Manifold Accessories

#### Manifold Option

- Type 41, 42, 43  
Blanking plate assembly

Series	Assembly part no.
SY3000	SY3000-26-9A-Q
SY5000	SY5000-26-2A-Q
SY7000	SY7000-26-2A-Q
SY9000	SY9000-26-2A-Q

- Individual EXH spacer assembly

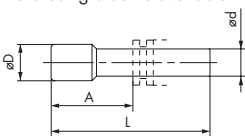
Series	Assembly part no.	Port size	t
SY3000	SY3000-39-2A-Q	M5	11
SY5000	SY5000-39-16FA-Q	1/8	15
SY7000	SY7000-39-16FA-Q	1/4	18
SY9000	SY9000-39-2FA-Q	1/4	20

- Individual SUP spacer assembly

Series	Assembly part no.	Port size	t
SY3000	SY3000-38-2A-Q	M5	11
SY5000	SY5000-38-16FA-Q	1/8	15
SY7000	SY7000-38-16FA-Q	1/4	18
SY9000	SY9000-38-2FA-Q	1/4	20

- Plug (white)

These are inserted in unused cylinder ports and SUP, EXH ports. Purchasing order is available in units of 10 pieces.

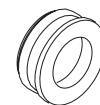


#### Dimensions

Applicable fittings size ød	Model	A	L	D
4	KQ2P-04	16	32	6
6	KQ2P-06	18	35	8
8	KQ2P-08	20.5	39	10
10	KQ2P-10	22	43	12
12	KQ2P-12	24	44.5	14

- Supply and Exhaust Block Disc

Inserted between manifold station to isolate pressure or exhaust zones within the manifold.



Series SY9000

Part Number: SY9000-57-1A

Manifold Accessories (2)

Interface Regulator

Series SY3000

ARBY3000-05-P-2

Pressure gauge connection port

05	Pressure gauge (G15-10-01)
M1	Plug (M-5P)

Note) In the case of Series ARBY3000 with a pressure gauge when mounting on manifolds, use alternate 05 and 06 types. These have different length gauge stems to avoid gauges clashing on adjacent stations.

Regulating port

P	P port
A1	A port (P controlled type, A port regulation)
B1	B port (P controlled type, B port regulation)

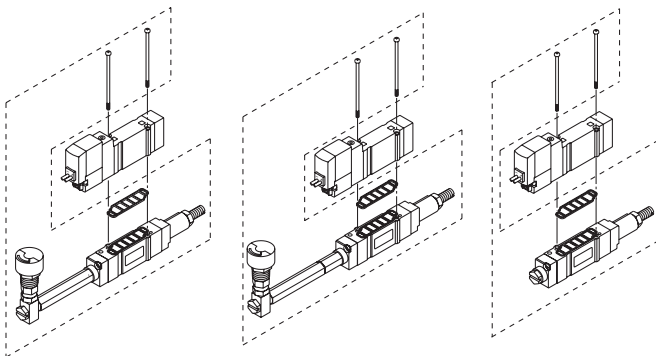
ARBY3000-05-□-2

(For odd number stations)

ARBY3000-06-□-2

(For even number stations)

ARBY3000-M1-□-2



Series SY5000

ARBY5000-00-P-2

Pressure gauge connection port

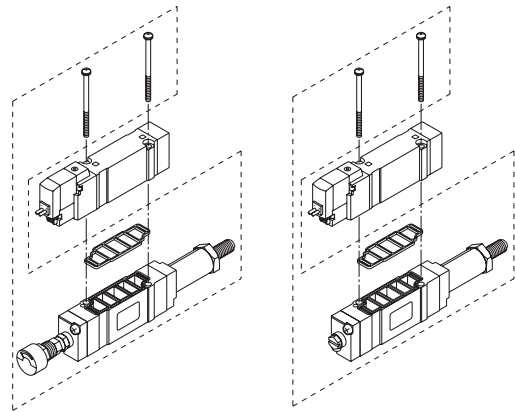
00	Pressure gauge (G15-10-01)
M1	Plug (M-5P)

Regulating port

P	P port
A1	A port (P controlled type, A port regulation)
B1	B port (P controlled type, B port regulation)

ARBY5000-00-□-2

ARBY5000-M1-□-2



Series SY7000

ARBY7000-00-P-2

Pressure gauge connection port

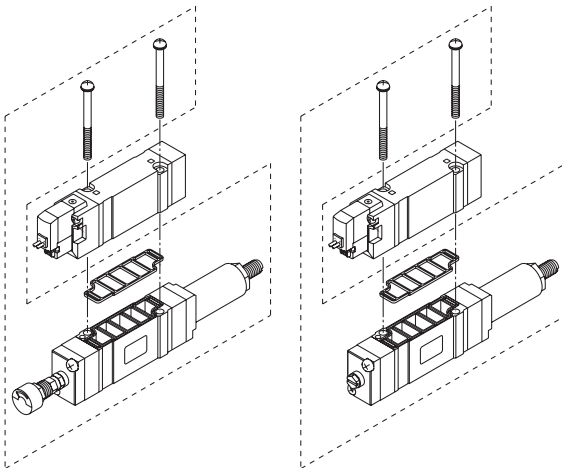
00	Pressure gauge (G15-10-01)
M1	Plug (M-5P)

Regulating port

P	P port
A1	A port (P controlled type, A port regulation)
B1	B port (P controlled type, B port regulation)

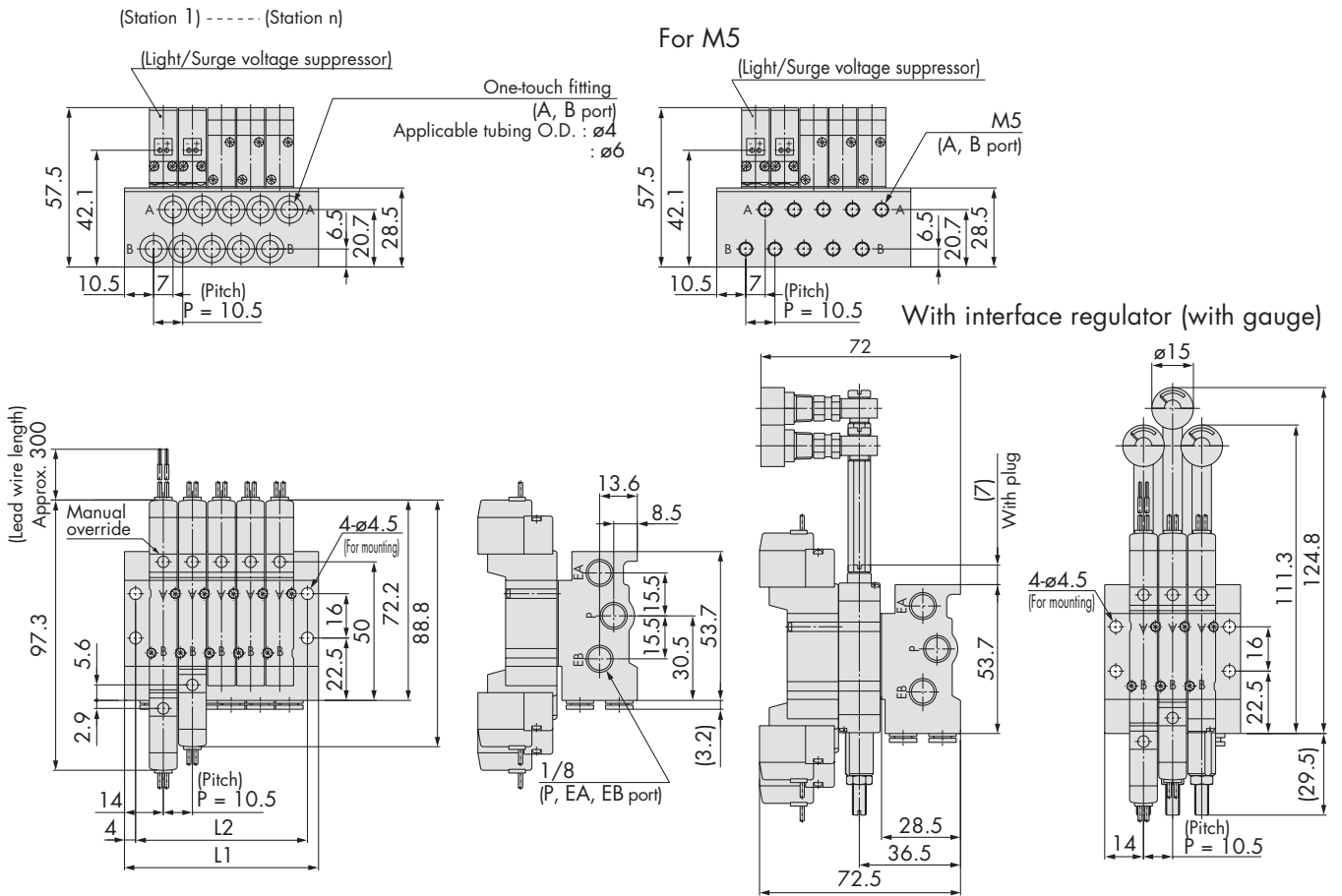
ARBY7000-00-□-2

ARBY7000-M1-□-2

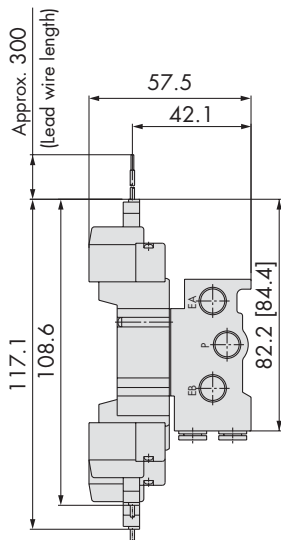


SY3000: SS5Y3-41-Stations-M5, C<sup>4</sup>, C<sub>6</sub>-00F-Q

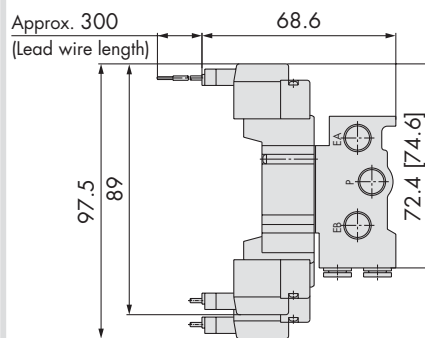
Grommet (G)



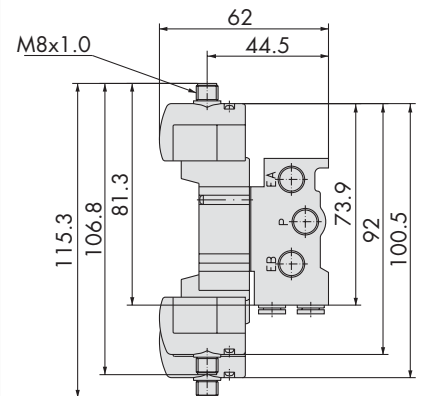
L plug connector (L)



M plug connector (M)



M8 connector (WO)

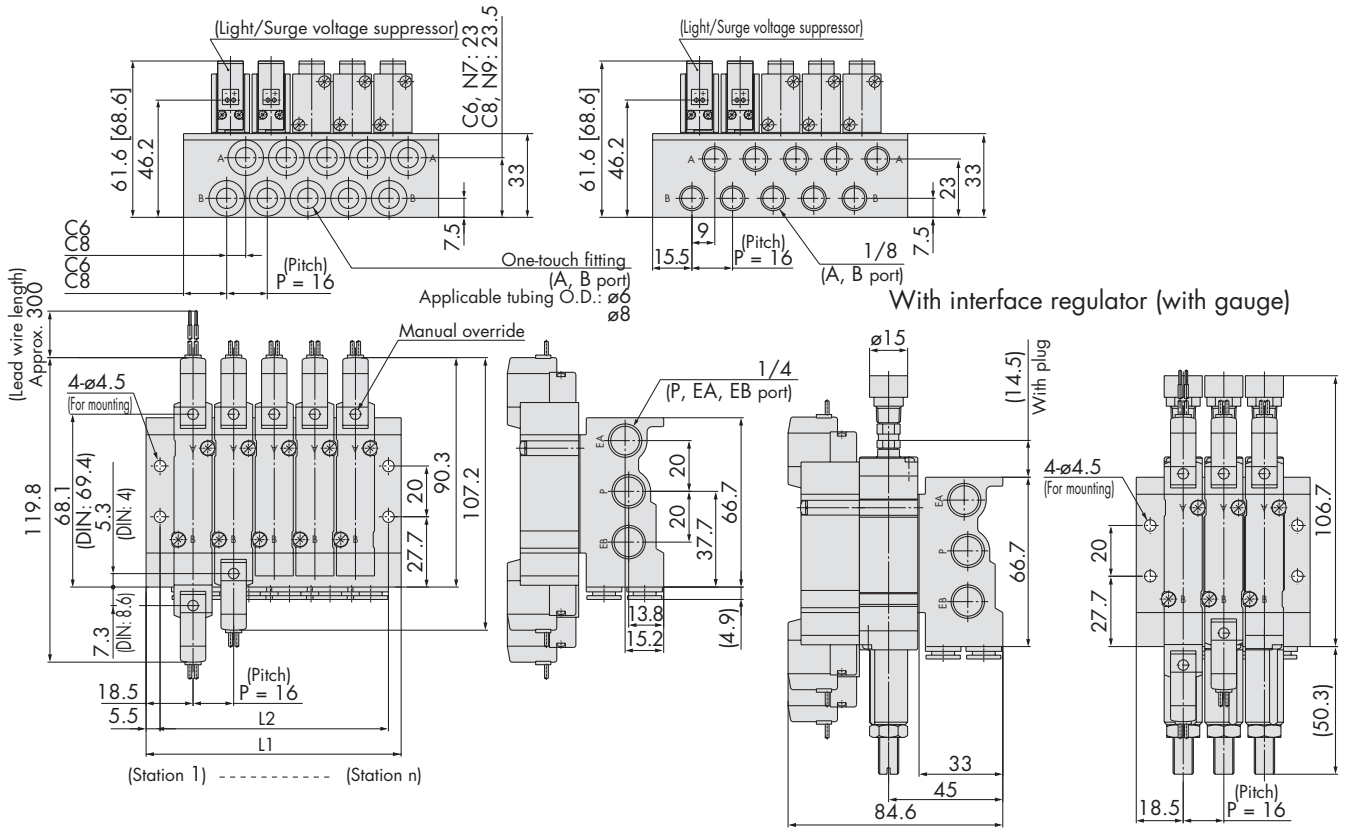


Stations n	2 stations	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 stations
L1	38.5	49	59.5	70	80.5	91	101.5	112	122.5	133	143.5	154	164.5	175	185.5	196	206.5	217	227.5
L2	30.5	41	51.5	62	72.5	83	93.5	104	114.5	125	135.5	146	156.5	167	177.5	188	198.5	209	219.5

SY5000: SS5Y5-41-Stations-01, C<sub>6</sub>, C<sub>8</sub>-00F-Q

Grommet (G)

For 1/8

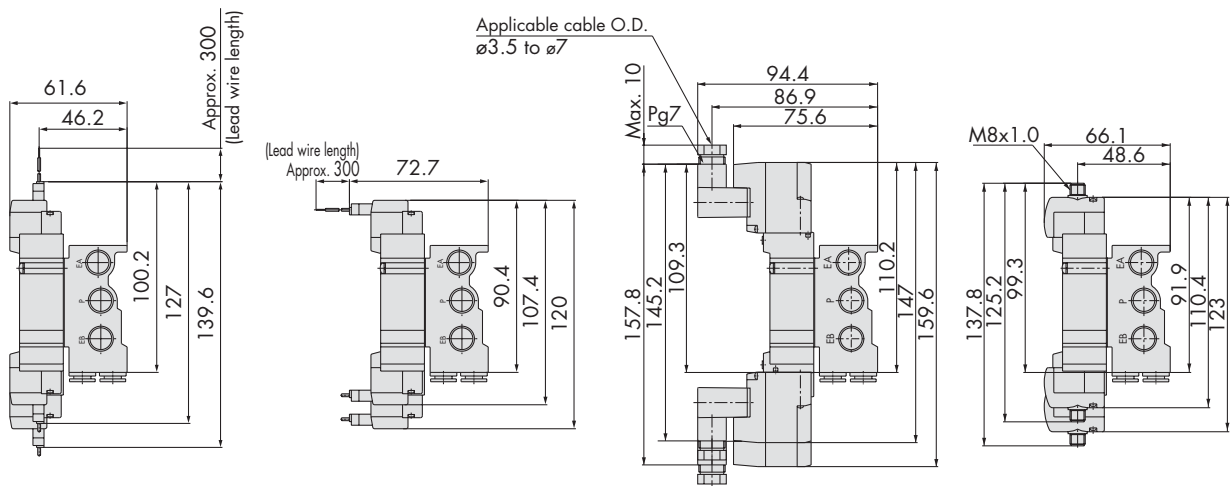


L plug connector: L

M plug connector: M

DIN terminal (D/Y)

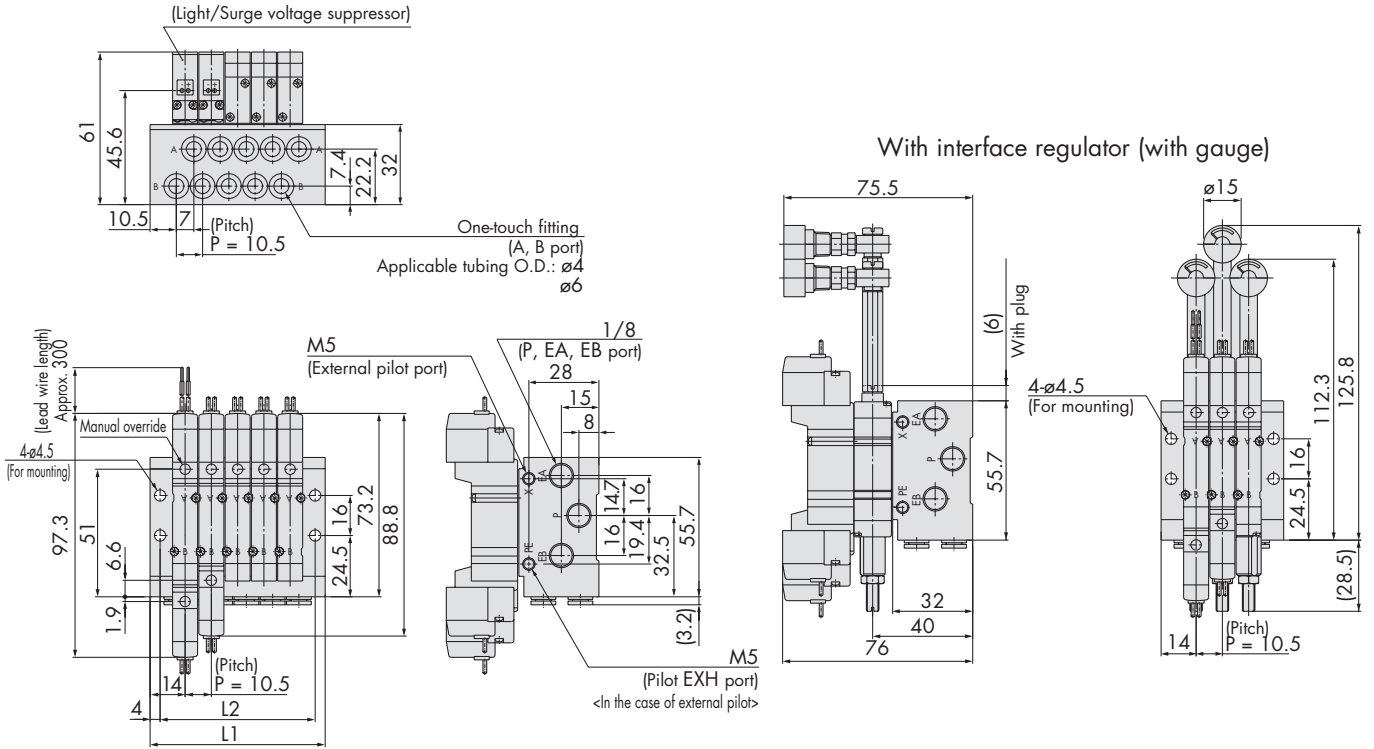
M8 connector (WO)



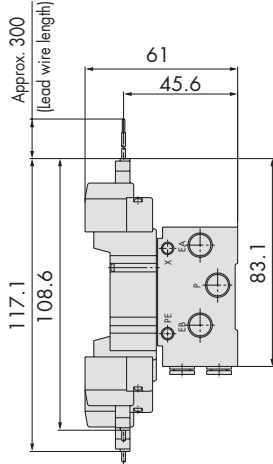
Stations n	2 stations	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 stations
L1	52.5	68.5	84.5	100.5	116.5	132.5	148.5	164.5	180.5	196.5	212.5	228.5	244.5	260.5	276.5	292.5	308.5	324.5	340.5
L2	42	58	74	90	106	122	138	154	170	186	202	218	234	250	266	282	298	314	330

SY3000: SS5Y3-42- Stations -C4-C6-Q

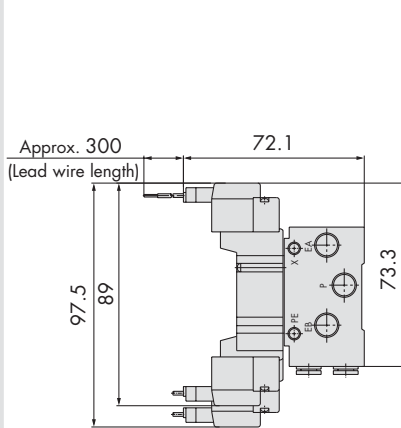
Grommet (G)



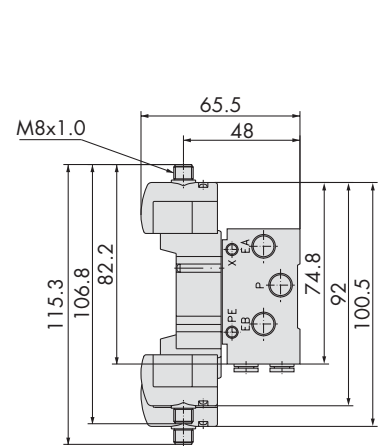
L plug connector (L)



M plug connector (M)



M8 connector (WO)

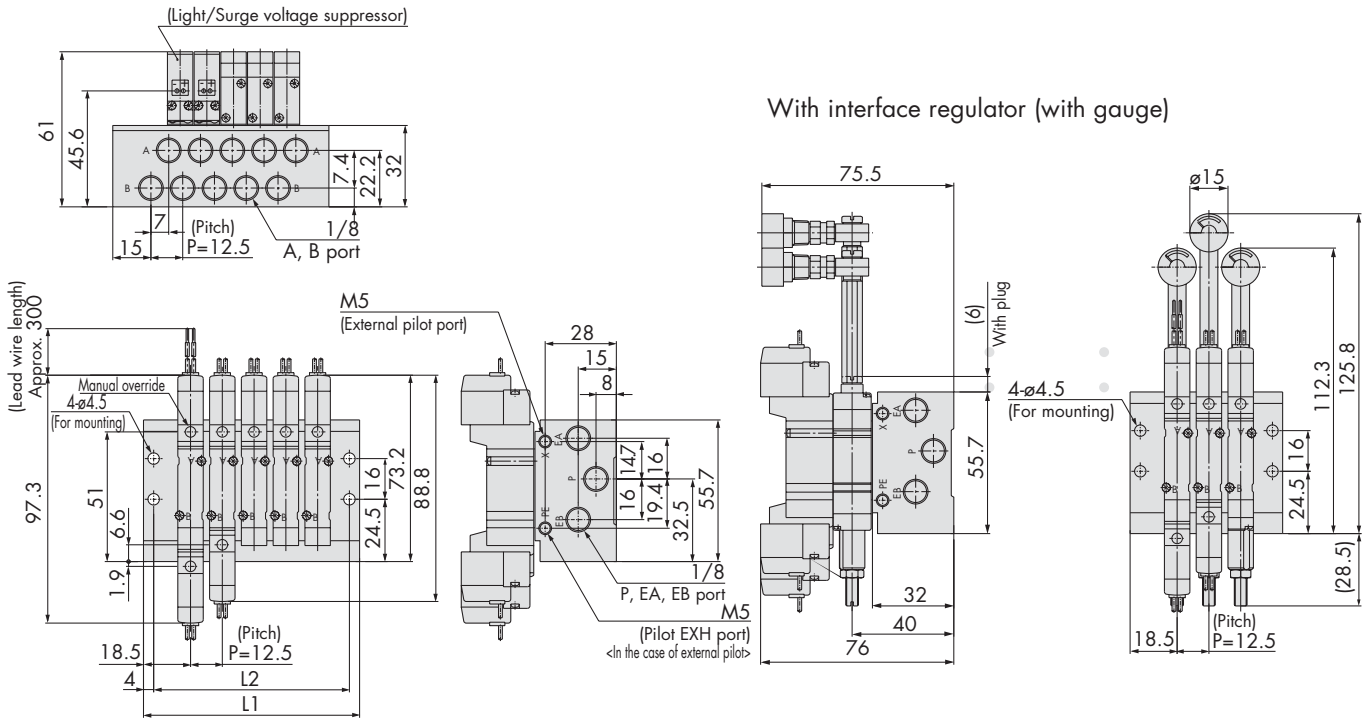


Stations n	2 stations	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 stations
L1	38.5	49	59.5	70	80.5	91	101.5	112	122.5	133	143.5	154	164.5	175	185.5	196	206.5	217	227.5
L2	30.5	41	51.5	62	72.5	83	93.5	104	114.5	125	135.5	146	156.5	167	177.5	188	198.5	209	219.5

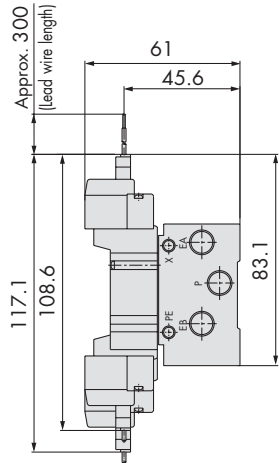
SY3000: SS5Y3-42- Stations -01  -00F-Q

Grommet (G)

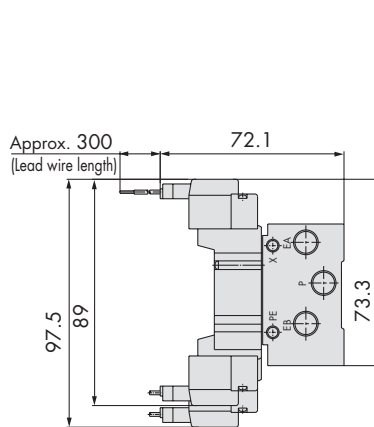
(Station 1) - - - - (Station n)



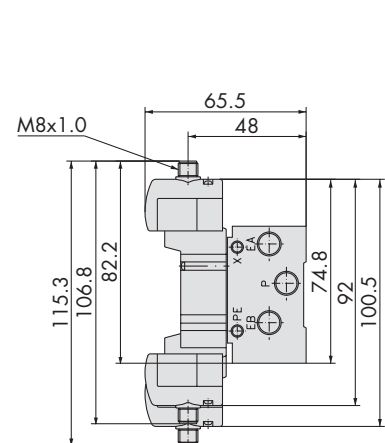
L plug connector (L)



M plug connector (M)



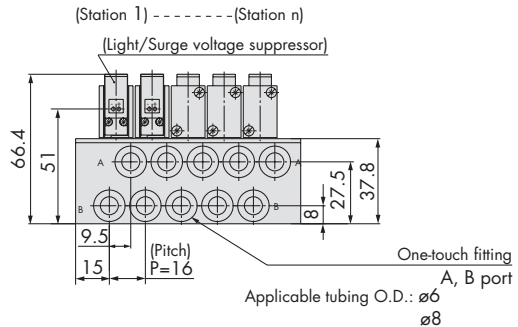
M8 connector (WO)



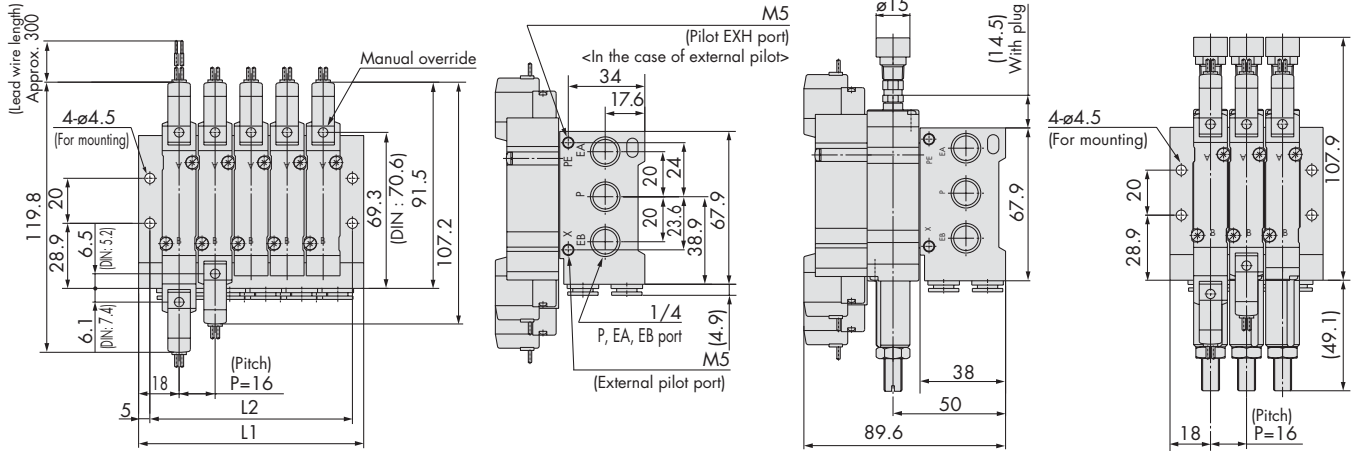
Stations n	2 stations	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 stations
L1	47.5	60	72.5	85	97.5	110	122.5	135	147.5	160	172.5	185	197.5	210	222.5	235	247.5	260	272.5
L2	39.5	52	64.5	77	89.5	102	114.5	127	139.5	152	164.5	177	189.5	202	214.5	227	239.5	252	264.5

SY5000: SS5Y5-42- Stations -C4 C6 □ -00F-Q

Grommet (G)



With interface regulator (with gauge)

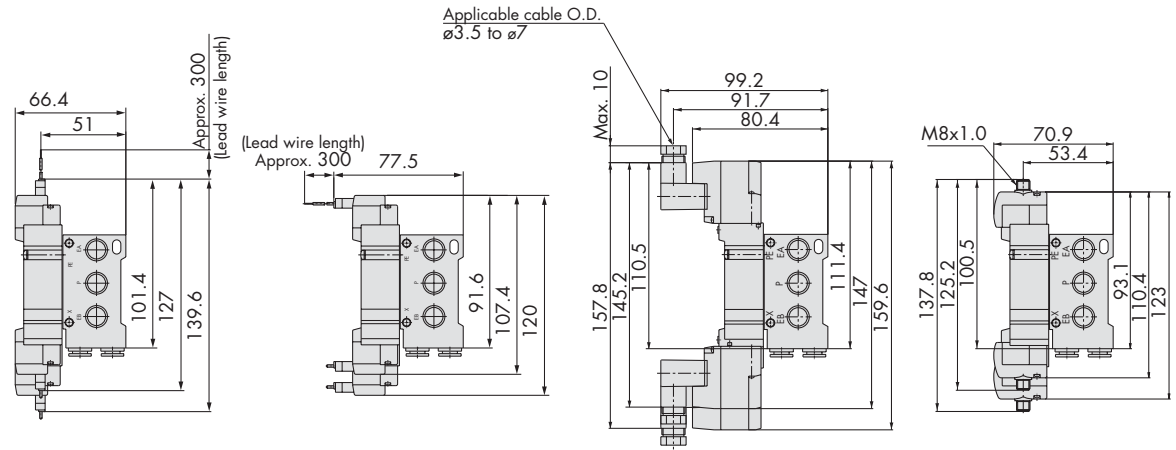


L plug connector (L)

M plug connector (M)

DIN terminal (D/Y)

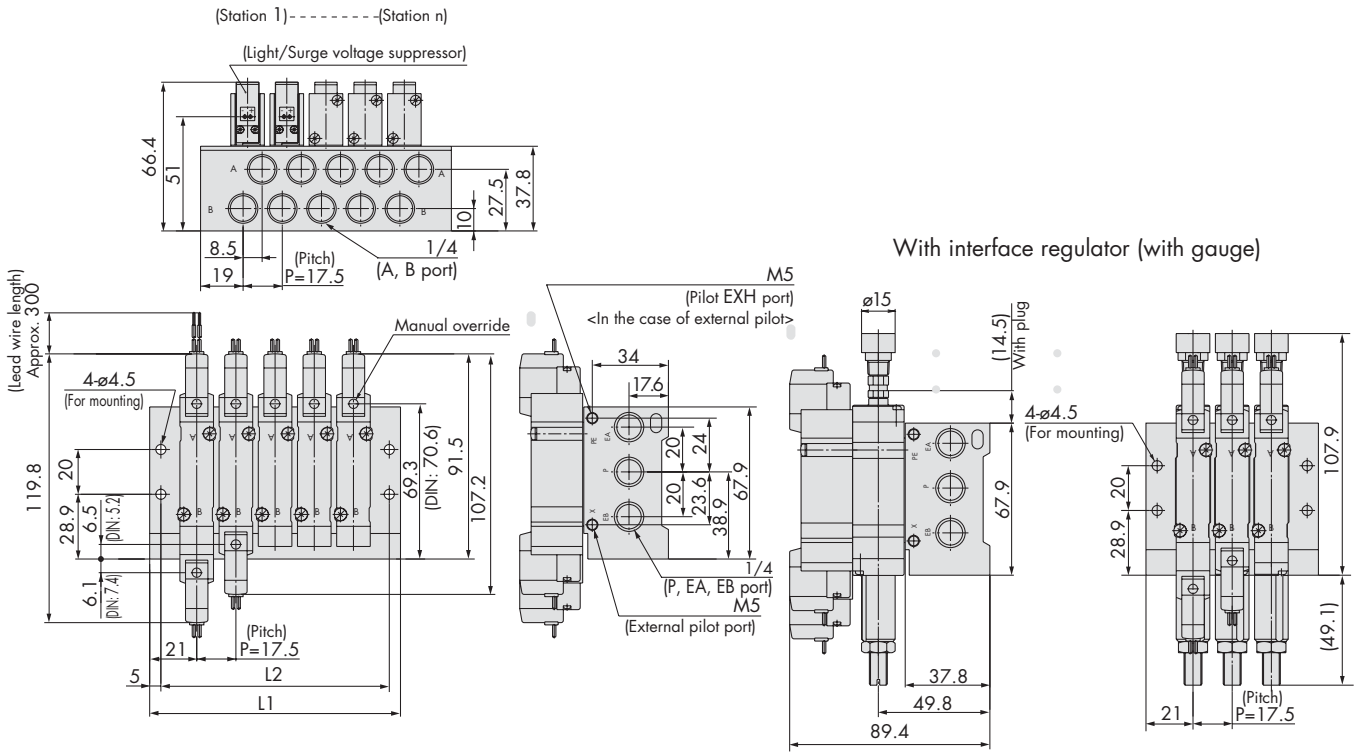
M8 connector (WO)



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

SY5000: SS5Y5-42- Stations -02 -00F-Q

Grommet (G)

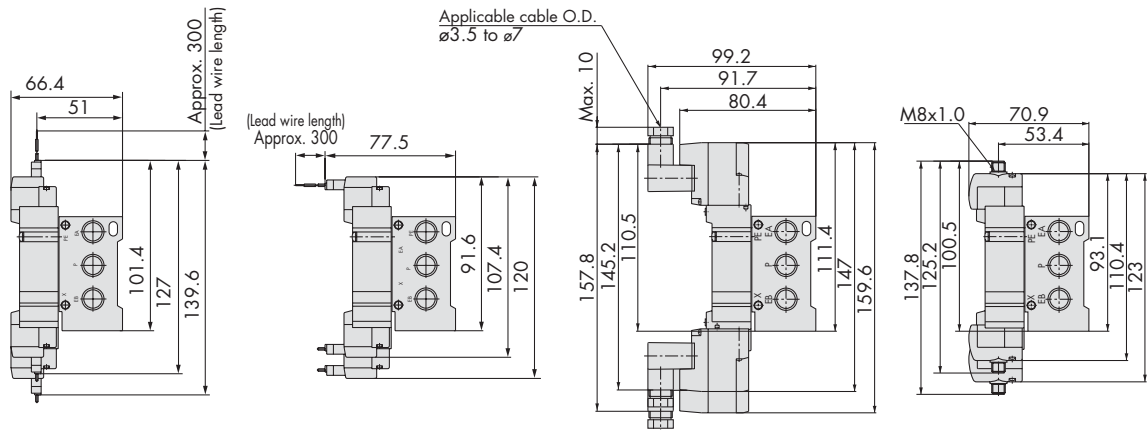


L plug connector (L)

M plug connector (M)

DIN terminal (D/Y)

M8 connector (WO)

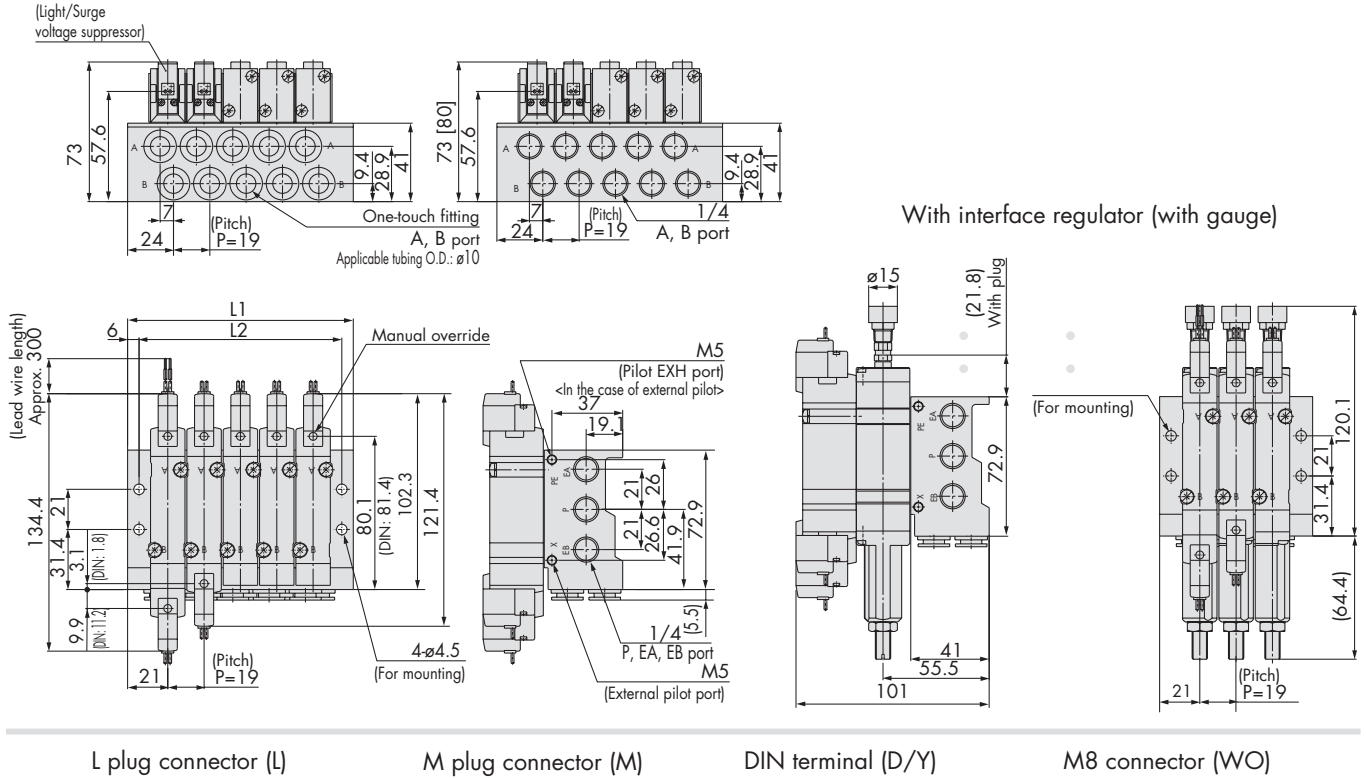


Stations n	2 stations	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 stations
L1	59.5	77	94.5	112	129.5	147	164.5	182	199.5	217	234.5	252	269.5	287	304.5	322	339.5	357	374.5
L2	49.5	67	84.5	102	119.5	137	154.5	172	189.5	207	224.5	242	259.5	277	294.5	312	329.5	347	364.5

SY7000: SS5Y7-42- Stations -02, C10-00F-Q

Grommet (G)

(Station 1) ----- (Station n)

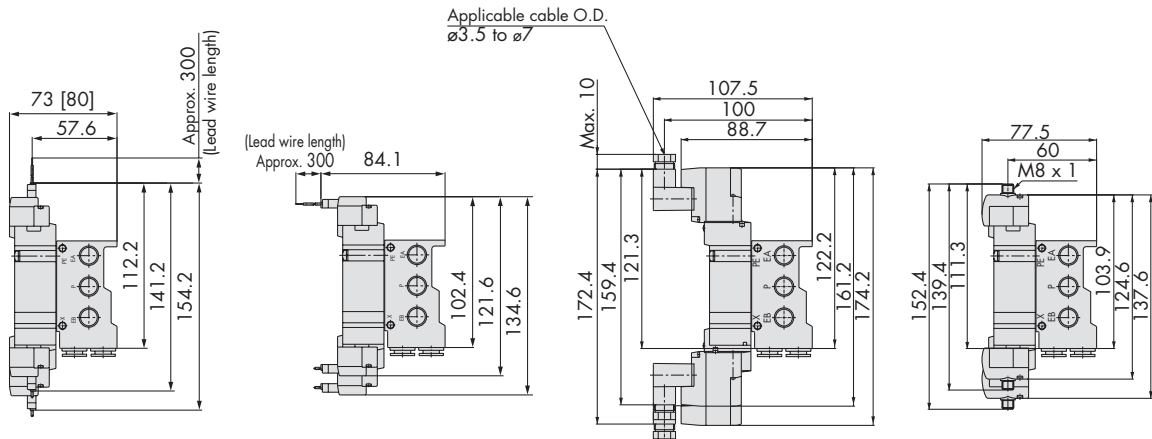


L plug connector (L)

M plug connector (M)

DIN terminal (D/Y)

M8 connector (WO)

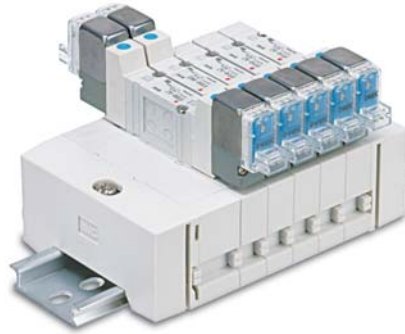


Stations n	2 stations	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 stations
L1	61	80	99	118	137	156	175	194	213	232	251	270	289	308	327	346	365	384	403
L2	49	68	87	106	125	144	163	182	201	220	239	258	277	296	315	334	353	372	391



# Base Mounted Manifold Slice Type/DIN Rail Mounted Individual Wiring

## Series **SY3/5000**



### How to Order Manifold

SS5Y **3** - 45 - **05** **U** - **C6** - **Q**

Series	Valve stations
3 SY3000	02 2 stations
5 SY5000	⋮ ⋮
	20 20 stations

SUP/EXH block assembly  
mounting position

Symbol	Mounting position	Applicable no. of stations
U	U side	2 to 10 stations
D	D side	
B	(Both sides)	2 to 20 stations

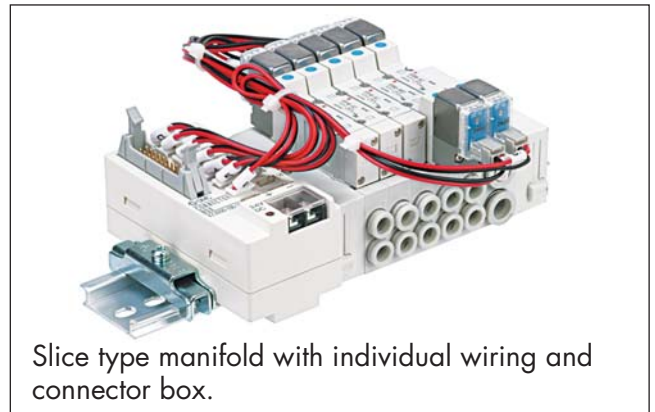
\* Note.  
Suitable valves are SY□□40 base mounted types.  
See page 60 to order valves.

A, B port size

One-touch fitting (Metric size)

Symbol	Port size	Applicable series
C4	One-touch fitting for ø4	SY3000
C6	One-touch fitting for ø6	
C4	One-touch fitting for ø4	SY5000
C6	One-touch fitting for ø6	
C8	One-touch fitting for ø8	

### Also Available



### Manifold Specifications

Model	SS5Y3-45	SS5Y5-45
Applicable valve	SY3□40	SY5□40
Manifold type	Stacking type/DIN rail mounted	
P (SUP)/R (EXH)	Common SUP, Common EXH	
Valve stations	2 to 20 stations <sup>Note 1)</sup>	
A, B port Porting specifications	Location	Base
	Direction	Side
Port size	P, R port	C8 (One-touch fitting for ø8) / C10 (One-touch fitting for ø10)
	A, B port	C4 (One-touch fitting for ø4) / C6 (One-touch fitting for ø6) / C4 (One-touch fitting for ø4) / C6 (One-touch fitting for ø6) / C8 (One-touch fitting for ø8)

### Flow Characteristics

Model	Port size		Flow 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 <sup>3</sup> /s·bar)	b	Cv	C (dm <sup>3</sup> /s·bar)	b	Cv
SS5Y3-45	C8	C6	0.88	0.21	0.22	0.95	0.18	0.22
SS5Y5-45	C10	C8	2.2	0.24	0.53	2.5	0.18	0.58

### Type 45 Manifold Accessories (non-plug-in type)

■ Individual SUP spacer assembly

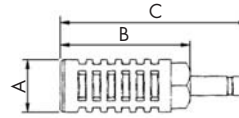
Series	Assembly part no.	Port size	t
SY3000	SY3000-38-2A-Q	M5	11
SY5000	SY5000-38-16FA-Q	1/8	15

■ Individual EXH spacer assembly

Series	Assembly part no.	Port size	t
SY3000	SY3000-39-2A-Q	M5	11
SY5000	SY5000-39-16FA-Q	1/8	15

■ Silencer with One-touch fitting

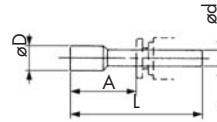
The silencer plugs directly into the One-touch fittings of the manifold.



Series	Model	Effective area	A	B	C
For SY3000 (ø8)	AN203-KM8	14 mm <sup>2</sup>	ø16	26	51
For SY5000 (ø10)	AN200-KM10	26 mm <sup>2</sup>	ø22	53.8	80.8
	AN300-KM10	30 mm <sup>2</sup>	ø25	70	97

■ L Plug (white)

These are inserted in unused cylinder ports and SUP, EXH ports. Purchasing order is available in units of 10 pieces.



Dimensions

Applicable fittings size øD	Model	A	L	D
4	KQ2P-04	16	32	6
6	KQ2P-06	18	35	8
8	KQ2P-08	20.5	39	10
10	KQ2P-10	22	43	12

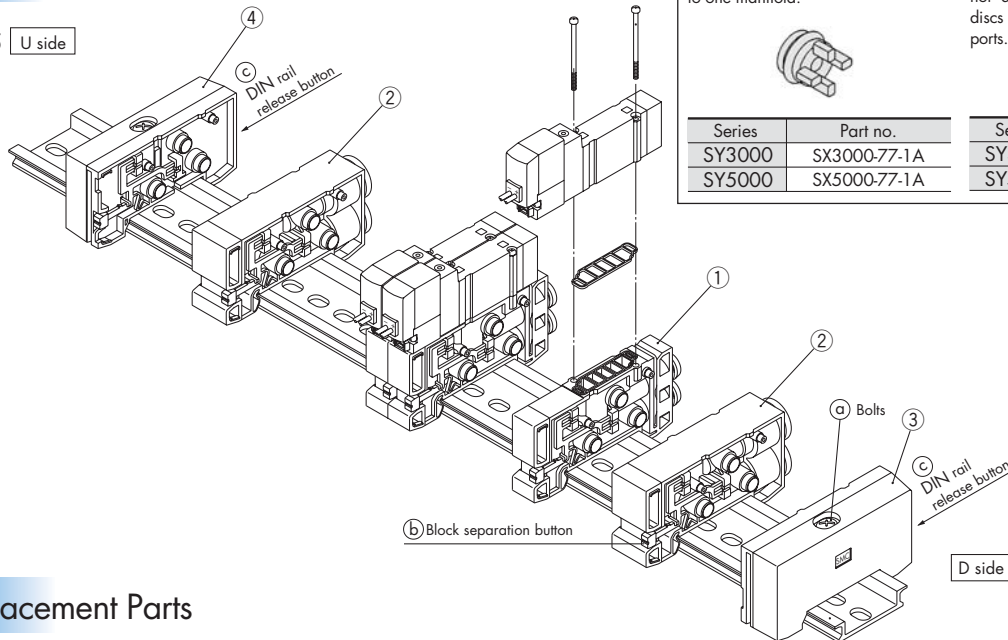
Note: Interface regulators are common to type 41 and 42 manifolds.

■ Blanking plate assembly

Series	Assembly part no.
SY3000	SX3000-75-1A-Q
SY5000	SX5000-76-5A-Q

### DIN Rail Manifold Exploded View

Type 45 U side



■ SUP block disc

By installing a SUP block disc in the pressure supply passage of the manifold base, two or more different pressures, high or low, can be supplied to one manifold.



Series	Part no.
SY3000	SX3000-77-1A
SY5000	SX5000-77-1A

■ EXH block disc

By installing an EXH block disc in the exhaust passage of the manifold base, the passage can be divided so that the exhaust from one valve will not affect other valves. (Two block discs are required to block both EXH ports.)



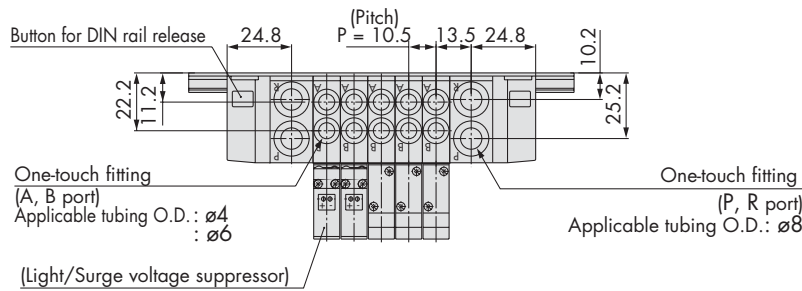
Series	Part no.
SY3000	SX3000-77-1A
SY5000	SX5000-77-1A

### Replacement Parts

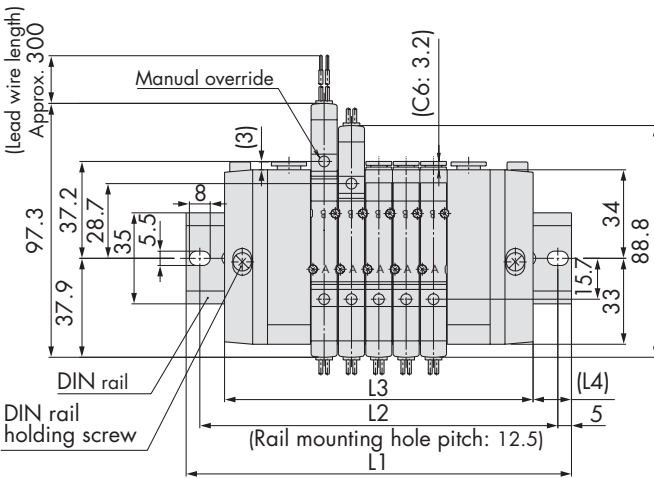
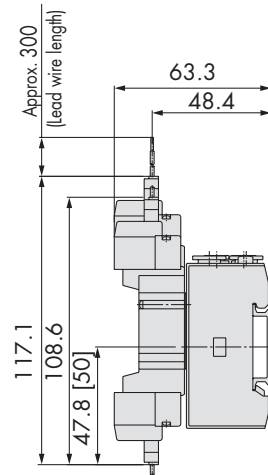
No.	Description	Part no.		Note
		SY3000	SY5000	
①	Manifold block assembly	SX3000-50-1A-□□-Q	SX5000-50-1A-□□-Q	SY3000 (Metric size) C4: With One-touch fitting for ø4 C6: With One-touch fitting for ø6 SY5000 (Metric size) C4: With One-touch fitting for ø4 C6: With One-touch fitting for ø6 C8: With One-touch fitting for ø8
②	SUP/EXH block assembly	SX3000-51-1A	SX5000-51-1A	P, R port SY3000 (Metric size) With One-touch fitting for ø8 P, R port SY5000 (Metric size) With One-touch fitting for ø10
③	End block assembly R	SX3000-52-1A-Q	SX5000-52-1A-Q	For D side
④	End block assembly R	SX3000-53-1A-Q	SX5000-53-1A-Q	For U side

Dimensions: Series SY3000

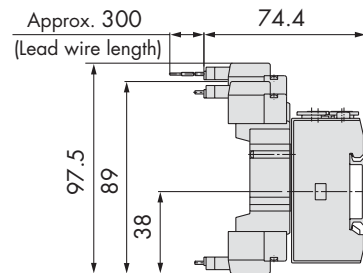
SS5Y3-45- Stations B - C<sub>6</sub>-Q (Both end supplies)



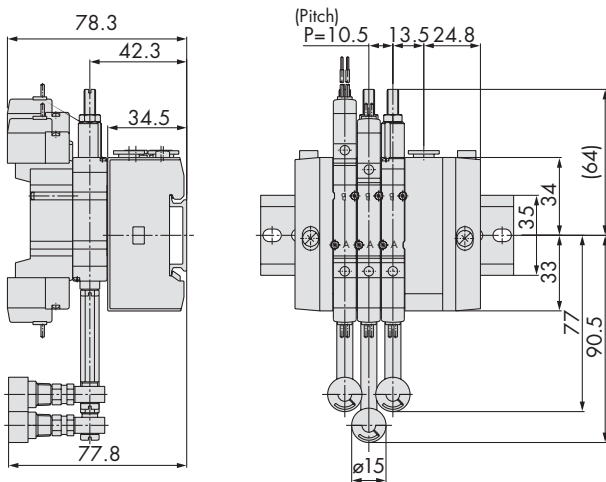
L plug connector



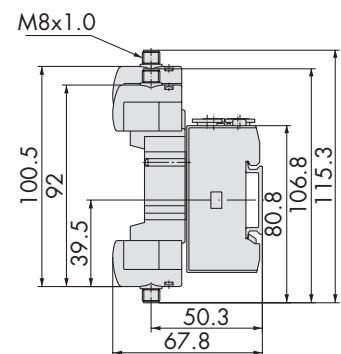
M plug connector



With interface regulator (with gauge)



M8 connector (WO)



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

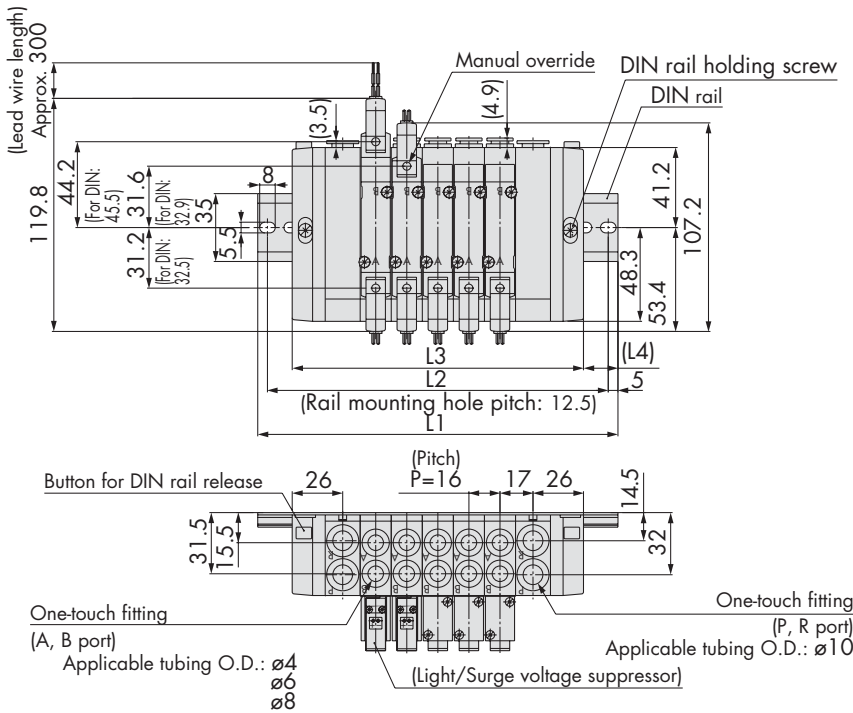
Stations n	11 stations	12	13	14	15	16	17	18	19	20 stations
L1	210.5	223	235.5	248	248	260.5	273	285.5	298	310.5
L2	200	212.5	225	237.5	237.5	250	262.5	275	287.5	300
L3	181.5	192	202.5	213	223.5	234	244.5	255	265.5	276
L4	14.5	15.5	16.5	17.5	12	13	14	15	16	17

L1	-12.5mm
L2	-12.5mm
L3	-16.5mm
L4	+2mm

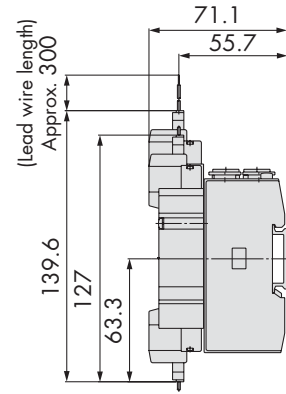
Note: This page shows the double supply type manifold. The U and D supply type is shorter. Apply the following corrections to the L1 and L4 dimensions.

Dimensions: Series SY5000

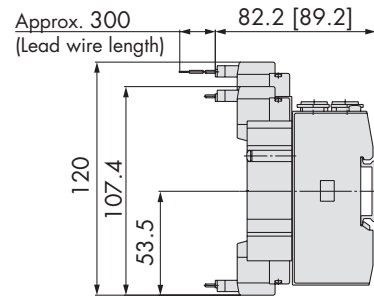
SS5Y3-45- Stations B - C<sub>C4</sub> - Q (Both end supplies)  
C<sub>C8</sub>



L plug connector



M plug connector



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

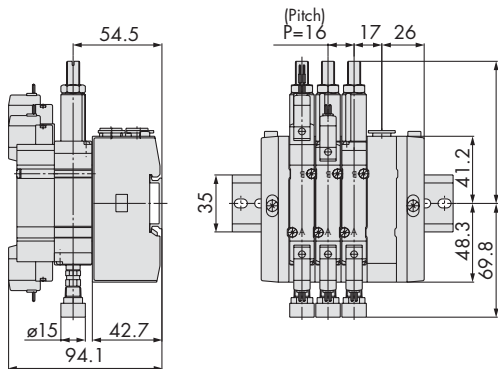
  

Stations n	11 stations	12	13	14	15	16	17	18	19	20 stations
L1	273	285.5	310.5	323	335.5	360.5	373	385.5	398	423
L2	262.5	275	300	312.5	325	350	362.5	375	387.5	412.5
L3	246	262	278	294	310	326	342	358	374	390
L4	13.5	11.5	16	14.5	12.5	17	15.5	13.5	12	16.5

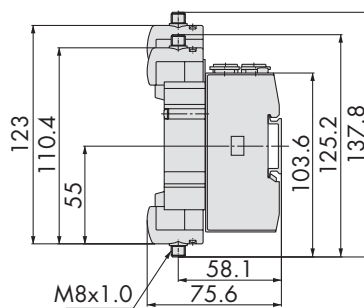
L1	-25mm
L2	-25mm
L3	-18mm
L4	-3.5mm

Note: This page shows the B type (double air supply manifold).  
The single (U and D supply type) is shorter.  
Apply the following corrections to the L1 and L4 dimensions.

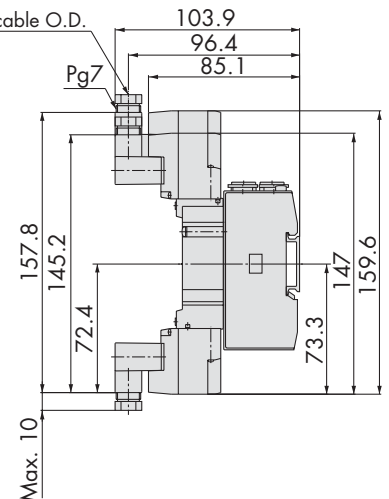
With interface regulator (with gauge)



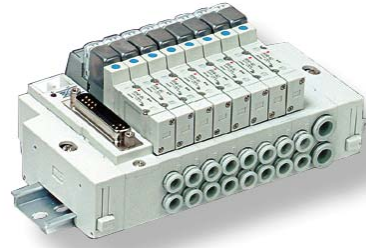
M8 connector (WO)



DIN terminal (D/Y)



# Base Mounted Manifold Slice Type/DIN Rail Mounted Plug-in Series **SY3/5000**



Valves

## How to Order Manifold

25 pin D-Sub and Serial transmission types

**SSY 3-45 NFD-05 U- C4-Q**

Series

3	SY3000
5	SY5000

Valve stations

Symbol	Stations	Note
02	2 stations	Single wiring spec. (Applicable up to 20 solenoid valves.)
⋮	⋮	
20	20 stations	

\* This also includes the number of blanking plate assemblies.  
\* Two stations are necessary for the double, 3 position (Dual body type).

SUP/EXH block assembly mounting position

Symbol	Mounting position	Stations
U	U side	2 to 10 stations
D	D side	2 to 10 stations
B	(Both sides)	2 to 20 stations

SUP/EXH block assembly specifications

Symbol	Specifications
—	Internal Pilot standard
S	Internal Pilot/Built in silencer
R	External pilot
RS	External pilot/Built in silencer

A, B port size

One-touch fitting (Metric size)

Symbol	Port size	Applicable series
C4	One-touch fitting for ø4	SY3000
C6	One-touch fitting for ø6	
C4	One-touch fitting for ø4	SY5000
C6	One-touch fitting for ø6	
C8	One-touch fitting for ø8	

Connection type

Symbol	Detail of connector type	Note
FD	25 pin D-Sub connector	D-side mounted
FU	25 pin D-Sub connector	U-side mounted
NFD	25 pin D-Sub connector	Negative common, D-side mounted
NFU	25 pin D-Sub connector	Negative common, U-side mounted
SC	Omron Sysbus	EX122-STA1
SN	Profibus DP	EX122-SPR1
SP	Interbus-S	EX122-S1B1
SQ	Devicenet	EX122-SDN1
ST2	ASi 8 station	EX122-SA52
ST4	ASi 4 station	EX122-SA54
ST5	ASi 4 station bus powered	EX122-SA55
SY	Can-open	EX122-SCA1

## How to Order Valves

2 position single **SY 3 1 4 0-5 FU -Q**

Double, 3 position **SY 3 2 4 5-5 FU -Q**

Series

3	SY3000
5	SY5000

Type of actuation

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

Dual body type (Double, 3 position)

Rated voltage

5	24 VDC
6	12 VDC

Manual override

—	Non-locking push type
D	Push-turn locking slotted type
E	Push-turn locking lever type

Note: Suitable valves for this manifold are SY\*140 or SY\*\*45 types. See the valves how-to-order on this page. Specifications of the valves are common to the standard base mounted SY valves.

## Manifold Specifications type 45F/45NF

Manifold		Plug-in
P (SUP)/R (EXH)		Common SUP, Common EXH
Valve stations		2 to 20 stations
A, B port		Base
Porting specifications		Direction Side
Port size	P, R port	SY3000 C8 (One-touch fitting for ø8) SY5000 C10 (One-touch fitting for ø10)
	A, B port	SY3000 C4 (One-touch fitting for ø4)/C6 (One-touch fitting for ø6) SY5000 C4 (One-touch fitting for ø4)/C6 (One-touch fitting for ø6)/C8 (One-touch fitting for ø8)
Internal wiring		+COM (Type 45□), -COM (Type 45N□)
Manifold base weight w (g) n: Stations (D-sub connector)	SY3000	2 to 10 stations: W = 26n + 172 11 to 20 stations: W = 26n + 199
	SY5000	2 to 10 stations: W = 54n + 227 11 to 20 stations: W = 52n + 264

Note: SI types similar except to max. number of stations.



FOR MORE DETAILS  
SEE OUR SPECIFIC CATALOGUES,  
PRODUCTS CD's OR ONLINE INFORMATION

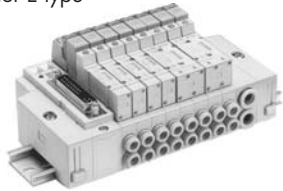
### Flow Characteristics

Model	Port size		Flow 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 <sup>3</sup> /[s·bar])	b	Cv	C (dm <sup>3</sup> /[s·bar])	b	Cv
SS5Y3-45□	C8	C6	0.88	0.21	0.22	0.95	0.18	0.22
SS5Y5-45□	C10	C8	2.2	0.24	0.53	2.5	0.18	0.58

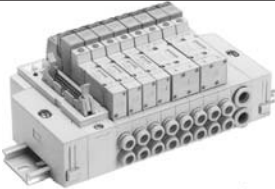
### Also Available

Note: Several other plug-in connector and terminal versions of pre wired type 45 manifolds are available. Please request further details from SMC if required.

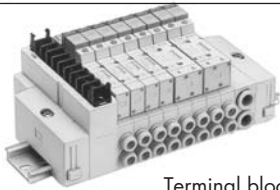
PC connector E type



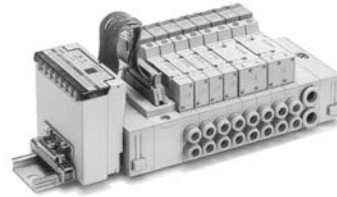
Flat ribbon cable P type (26 pin, 20 pin and 10 pin versions)



Terminal block T type

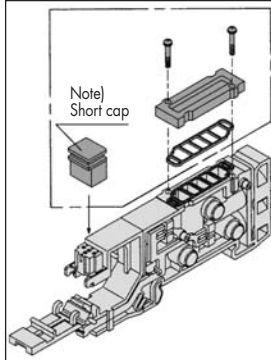


Serial transmission type with separate interface Type 45S1



### Manifold Accessories

- Blanking plate assembly (including short cap)

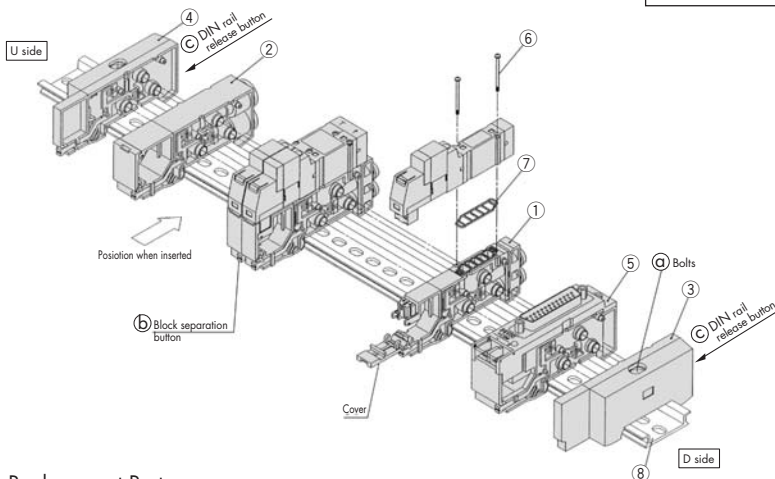


Series	Assembly part no.
SY3000	SX3000-75-2A-Q
SY5000	SX5000-76-6A-Q

- Note)
- When mounting blanking plate, be sure to mount a short cap.
  - Two stations are necessary for the double, 3 position (Dual body type).

### DIN Rail Manifold Exploded View

Type 45F (D-sub Connector) Manifold



#### SUP block disc

By installing a SUP block disc in the pressure supply passage of the manifold base, two or more different pressures, high or low, can be supplied to one manifold.



#### EXH block disc

By installing an EXH block disc in the exhaust passage of the manifold base, the passage can be divided so that the exhaust from one valve will not affect other valves. (Two block discs are required to block both EXH ports.)



Series	Part no.
SY3000	SX3000-77-1A
SY5000	SX5000-77-1A

Series	Part no.
SY3000	SX3000-77-1A
SY5000	SX5000-77-1A

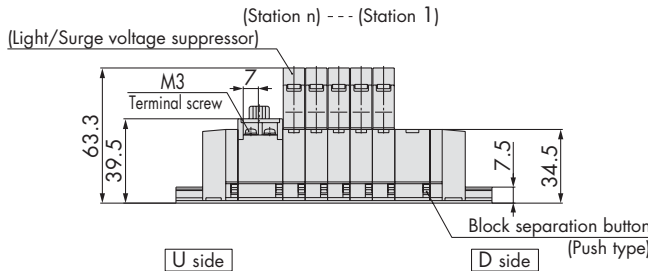
### Replacement Parts

No.	Description	Part no.		Note
		SY3000	SY5000	
①	Manifold block assembly Note 1	SX3000-50-3-□□-Q	SX5000-50-3-□□-Q	SY3000 A,B port C4: One-touch fitting for ø4 C6: One-touch fitting for ø6 SY5000 A,B port C4: One-touch fitting for ø4 C4: One-touch fitting for ø6 C8: One-touch fitting for ø8
②	SUP/EXH block assembly	SX3000-51-2A	SX5000-51-2A	SY3000: P, R port with One-touch fitting for ø8 SY5000: P, R port with One-touch fitting for ø10
③	End block assembly	SX3000-52-2A-Q	SX5000-52-2A-Q	For D side
④	End block assembly	SX3000-53-2A-Q	SX5000-53-2A-Q	For U side

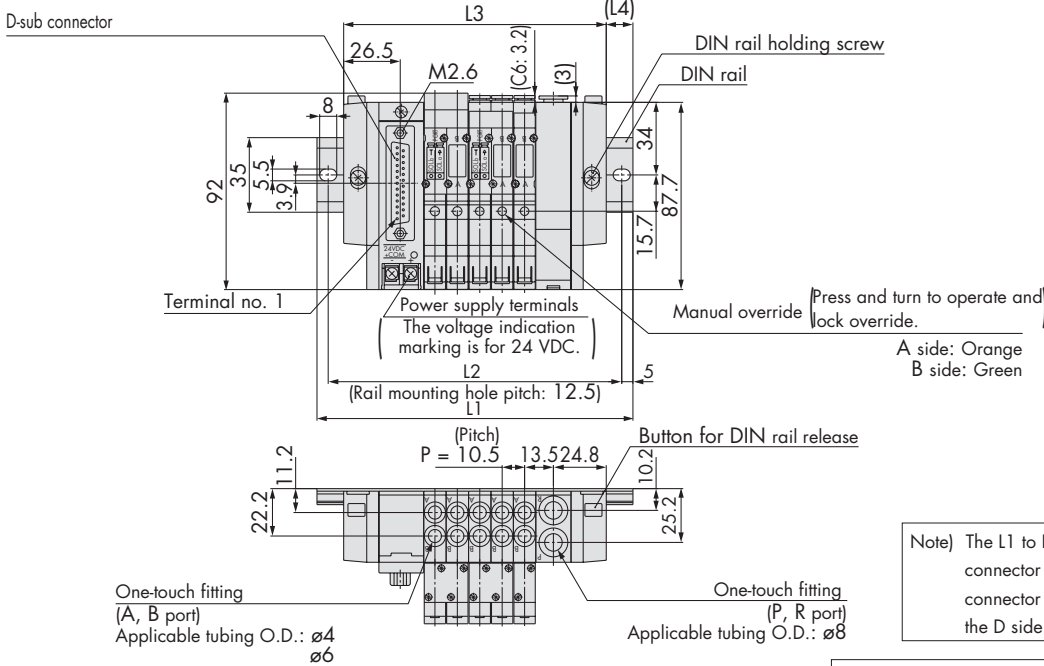
Note 1: For suitable parts for SI manifold, please contact SMC.

SY3000: D-sub Connector/Plug-in

SS5Y3-45FU- Stations D- $C_6^4$ -Q (One side supply)

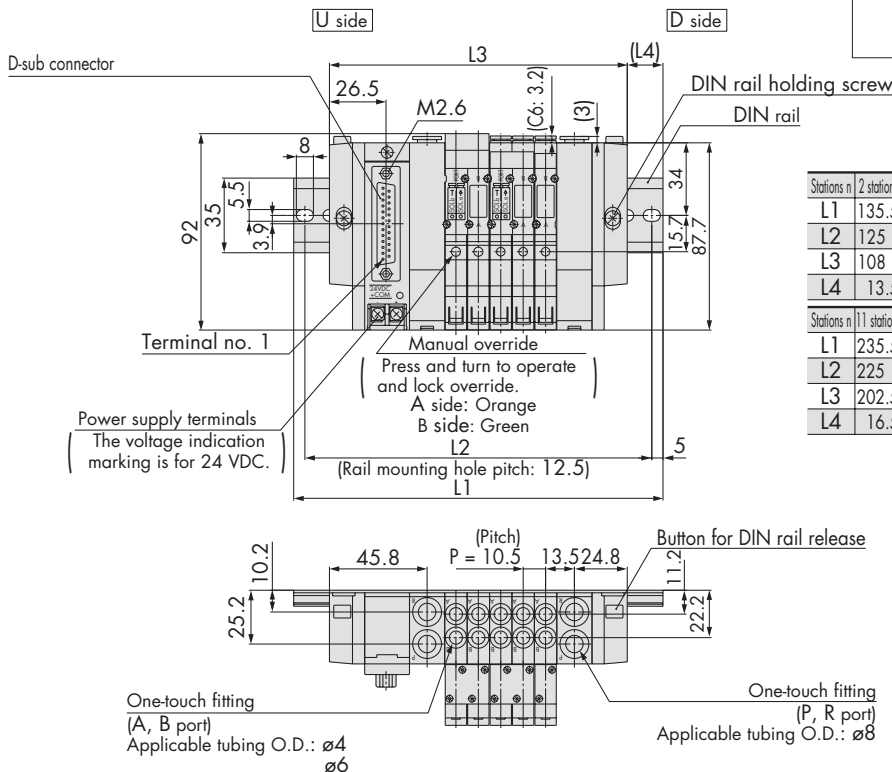


Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	123	135.5	148	148	160.5	173	185.5	198	210.5
L2	112.5	125	137.5	137.5	150	162.5	175	187.5	200
L3	91.5	102	112.5	123	133.5	144	154.5	165	175.5
L4	15.5	16.5	17.5	12.5	13.5	14.5	15.5	16.5	17.5



Note) The L1 to L4 dimensions of the D side connector are identical. The D-sub connector moves to the right of the valves in the D side connector version.

SS5Y3-45FU- Stations B- $C_6^4$ -Q (Both sides supply)



Note) The L1 to L4 dimensions of SS5Y3-45FU- Stations U- $C_6^4$ , N $_3^3$  are identical to those of SS5Y3-45FU- Stations D- $C_6^4$ -Q

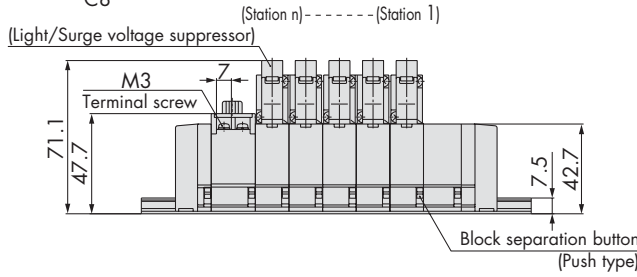
Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	135.5	148	160.5	173	185.5	185.5	198	210.5	223
L2	125	137.5	150	162.5	175	175	187.5	200	212.5
L3	108	118.5	129	139.5	150	160.5	171	181.5	192
L4	13.5	14.5	15.5	16.5	17.5	12.5	13.5	14.5	15.5

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

Note: Manifold drawings including serial transmission units are not included in the catalogue.

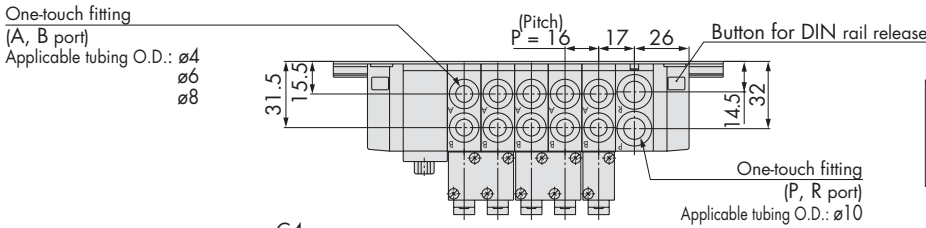
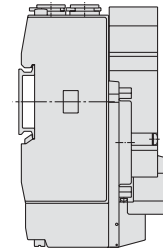
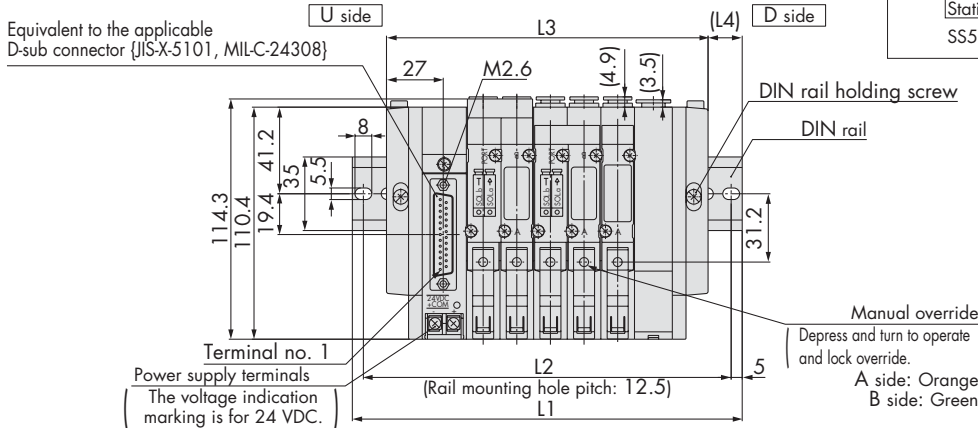
SY5000: D-sub Connector/Plug-in

SS5Y5-45FU- Stations D<sub>C4</sub><sub>C6-Q</sub> (One side supply)



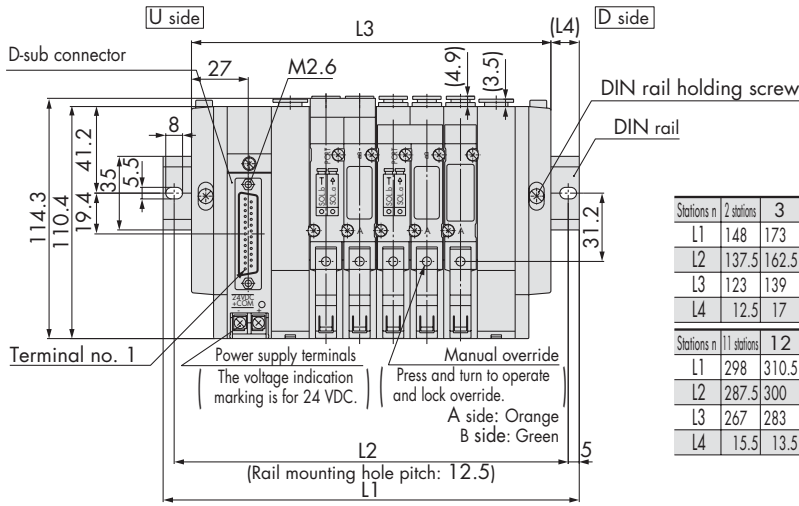
Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	135.5	148	160.5	185.5	198	210.5	235.5	248	260.5
L2	125	137.5	150	175	187.5	200	225	237.5	250
L3	105	121	137	153	169	185	201	217	233
L4	15	13.5	11.5	16	14.5	12.5	17	15.5	13.5

Note) The L1 to L4 dimensions of SS5Y5-45FU- Stations U<sub>C4</sub><sub>C6-N3</sub><sub>C8-N9</sub> are identical to those of SS5Y5-45FU- Stations D<sub>C4</sub><sub>C6-Q</sub>



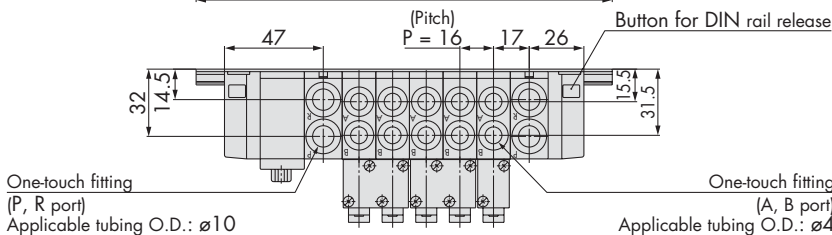
Note) The L1 to L4 dimensions of the D side connector are identical. The D-sub connector moves to the right of the valves in the D side connector version.

SS5Y5-45FU- Stations B<sub>C4</sub><sub>C6-Q</sub> (Both sides supply)



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

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



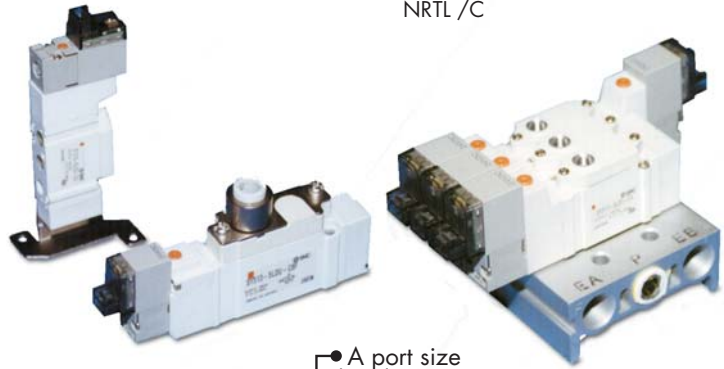
Note: Manifold drawings including serial transmission units are not included in the catalogue.

# 3 Port Valves Series SY3/500



## Features

- ➔ 3 port solenoid valves.
- ➔ Totally compatible with 5 port SY valves.
- ➔ Single or double solenoid types.
- ➔ Wide range of electrical connections.



## How to order SY300 and SY500 valves

A port size  
Thread piping

Symbol	Port size	Applicable series
M5	M5	SY300
01F	G 1/8	SY500

Body Ported SY **5** **1** **3** **5** **LO** **01F** — Q

Base Mounted SY **5** **1** **5** **5** **LO** — Q

Series

3	SY300
5	SY500

Type of actuation

1	Normally closed (N.C.)
2	Normally open

Solenoid type

—	Single solenoid
D	Double solenoid

Pilot type

—	Internal pilot
R	External pilot

Rated voltage

DC		AC	
5	24 VDC	1	100 VAC
6	12 VDC	2	200 VAC
V	6 VDC	3	110 VAC [115 VAC]
S	5 VDC	4	220 VAC [230 VAC]
R	3 VDC		

Note: AC voltages can only be ordered in conjunction with DIN plugs (Y type entry)

Manual override

—	Non-locking push type
D	Push-turn locking slotted type
E	Push-turn locking lever type

Light/Surge voltage suppressor

Electrical entry for G, L, M, W		Electrical entry for D, Y (SY500 only)	
—	Without light/surge voltage suppressor	—	Without light/surge voltage suppressor
Z	With light/surge voltage suppressor	—	Without light/surge voltage suppressor
U	With light/surge voltage suppressor (Non-polar type)	Z	With light/surge voltage suppressor

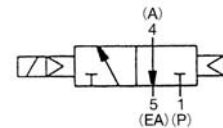
Electrical entry

24, 12, 6, 5, 3 VDC			24, 12 VDC/ 100, 110, 200, 220 VAC	24, 12, 6, 5, 3 VDC
Grommet	L plug connector	M plug connector	DIN terminal	M8 connector
G: Lead wire length 300 mm	LO: Without connector	MO: Without connector	Y: With connector (SY500 only)	WO: Without connector cable

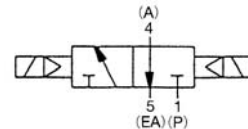
Note: The above valves can be used alone, or with all SY manifolds except plug-in types

## Symbol

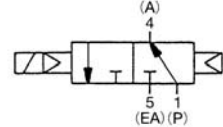
Single solenoid, normally closed (N.C.)



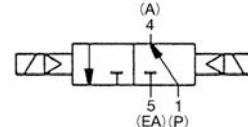
Double solenoid, normally closed (N.C.)



Single solenoid, normally open (N.O.)

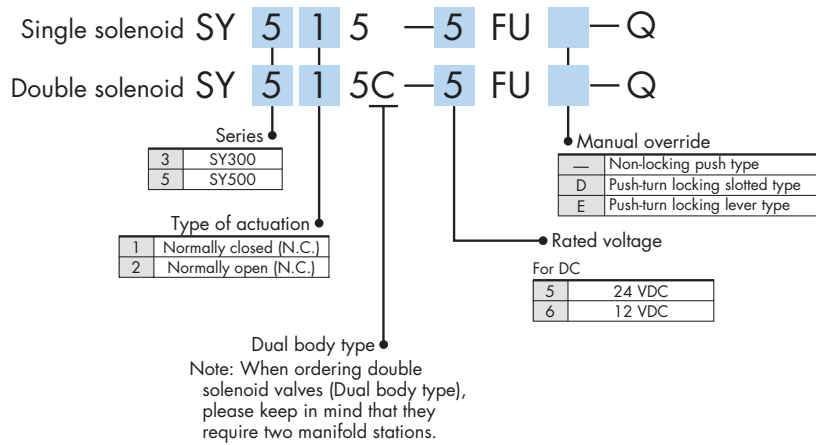


Double solenoid, normally open (N.O.)



FOR MORE DETAILS  
SEE OUR SPECIFIC CATALOGUES,  
PRODUCTS CD's OR ONLINE INFORMATION

### How to order Plug-in Valves



### SY300/500 Accessories

The following accessories are common to 5 port SY valves. Please refer to the following pages:

- Mounting Brackets
- Connector Assemblies
- Single Subbase

Connector cables can be found in the cables appendix.

### Manifolds for SY300/500 Valves

SY\*\*3 valves can be used on SS5Y\*-20 manifolds.

SY\*\*5 individually wired valves can be used with types 41, 42 and 45 manifolds.

SY\*\*5-\*F plug in valves must be used with type 45 plug in manifolds.

### Specifications SY300/500

Dimensions, specifications, solenoid specifications, response time and effective area are the same as 5 port valve.

### Weight

#### Series SY300

Valve model	Type of actuation	Weight (g)	
		Grommet	L, M plug connector
SY3□3-□□-M5	Single	51	53
	Double	68	74
SY3□3-□□-C4 N3	Single	56	59
	Double	74	79
SY3□3-□□-C6 N7	Single	54	57
	Double	72	77
SY3□5-□□	Single	47	50
	Double	65	70

#### Series SY500

Valve model	Type of actuation	Weight (g)		
		Grommet	L, M plug connector	DIN terminal
SY5□3-□□-O1□	Single	69	72	93
	Double	87	93	135
SY5□3-□□-C4 N3	Single	82	82	103
	Double	100	102	144
SY5□3-□□-C6 N7	Single	79	77	98
	Double	97	98	140
SY5□3-□□-C8 N9	Single	75	84	105
	Double	93	105	147
SY5□5-□□	Single	55	58	79
	Double	73	78	120

### SY300/500 Dimensions

Body and rounded dimensions are identical to the corresponding 5 port valve. Please refer to the relevant pages using the table below.

3 port Valve	Refer to for dimensions
SY3*3	SY3*20
SY3*5	SY3*40
SY5*3	SY5*20
SY5*5	SY5*40