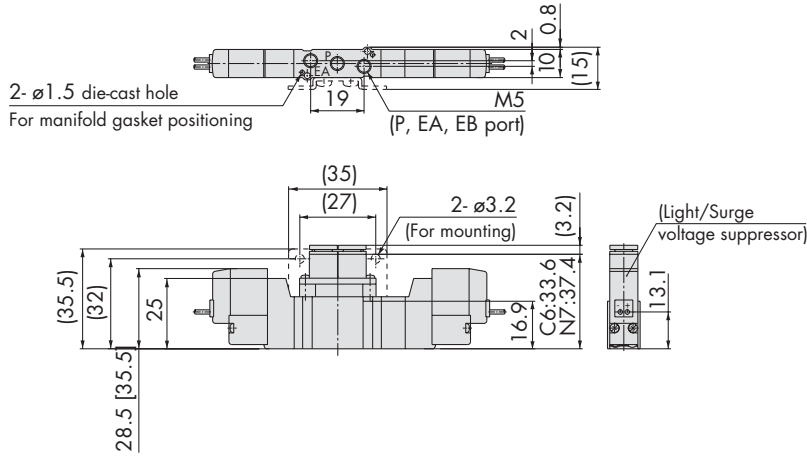
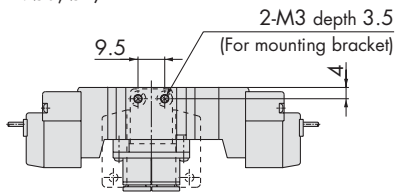
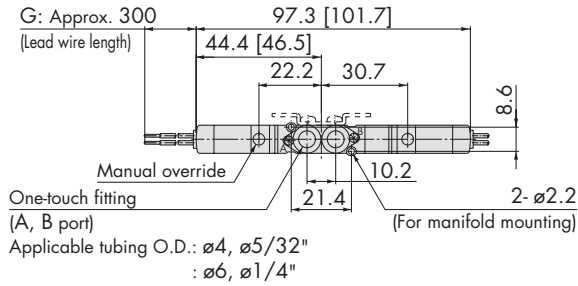
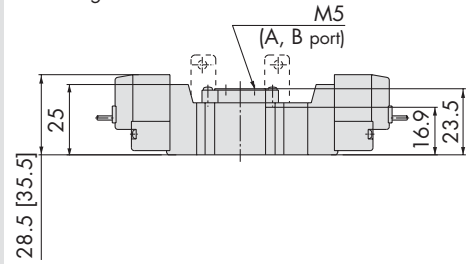


Dimensions: Series SY3000

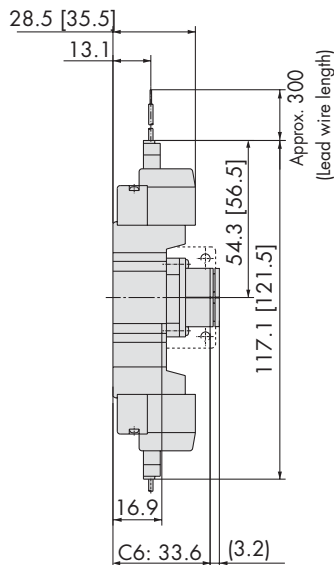
3 position closed centre/exhaust centre/pressure centre  
Grommet (G): SY3 $\frac{3}{5}$ 20-□G□□-C $\frac{4}{6}$ -Q



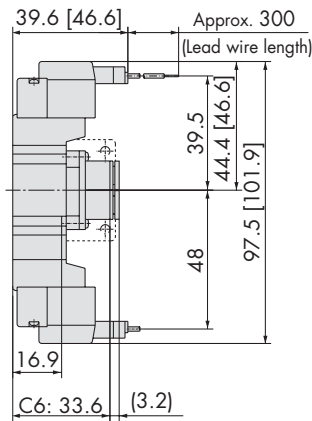
SY3 $\frac{3}{5}$ 20-□G□□-M5-Q



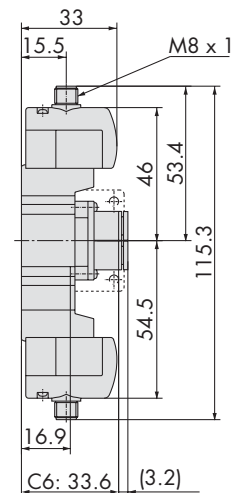
L plug connector (L):  
SY3 $\frac{3}{5}$ 20-□L□□-C $\frac{4}{6}$ -Q



M plug connector (M):  
SY3 $\frac{3}{5}$ 20-□M□□-C $\frac{4}{6}$ -Q



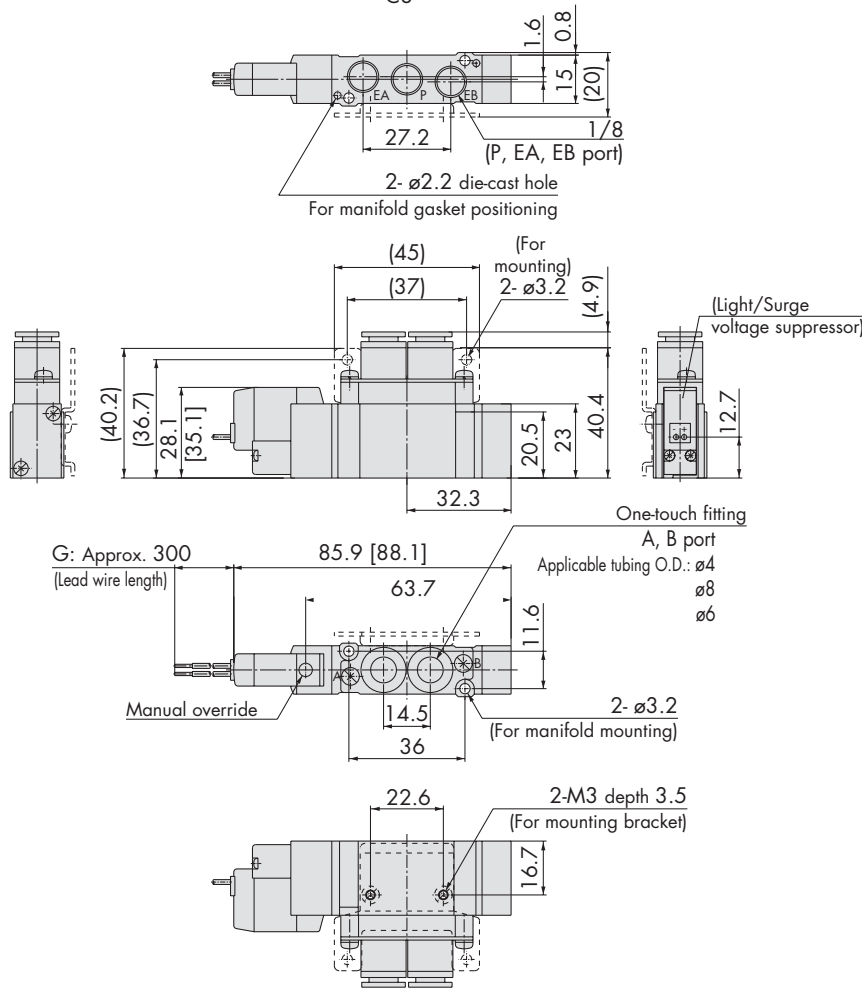
M8 connector (WO):  
SY3 $\frac{3}{5}$ 20-□WO□□-C $\frac{4}{6}$ -Q



Dimensions: Series SY5000

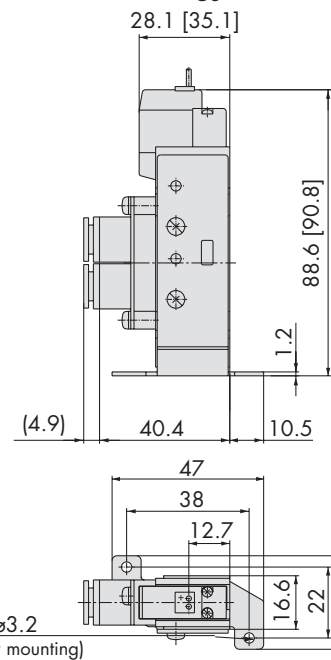
2 position single

Grommet (G): SY5120-□G□□-□<sub>C4</sub><sub>C6</sub><sub>C8</sub>-Q

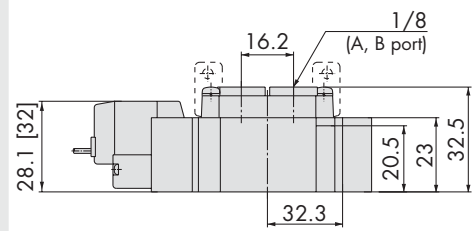


Foot bracket

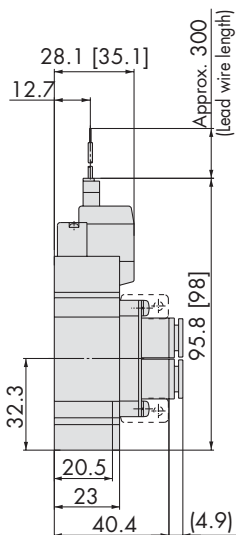
SY5120-□G□□-□<sub>C4</sub><sub>C6</sub><sub>C8</sub>-Q



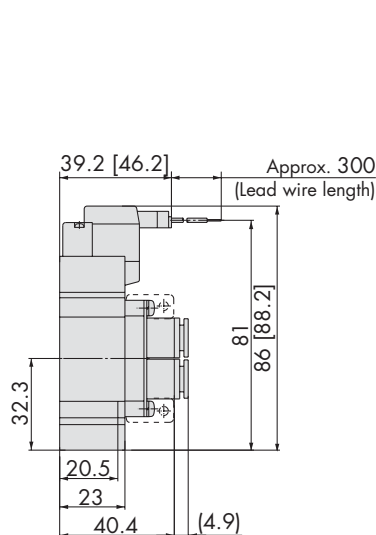
SY5120-□G□□-01□-Q



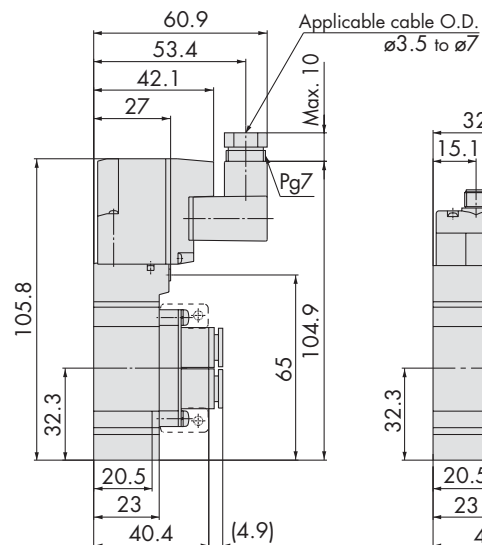
L plug connector: L  
SY5120-□□□-□<sub>C4</sub><sub>C6</sub><sub>C8</sub>-Q



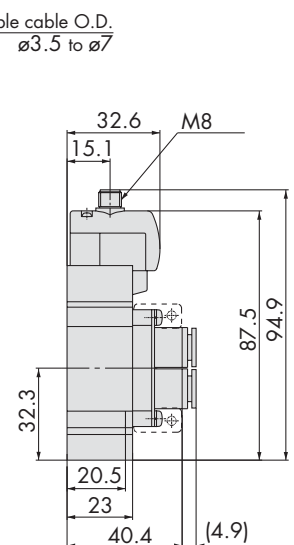
M plug connector: M  
SY5120-□M□□-□<sub>C4</sub><sub>C6</sub><sub>C8</sub>-Q



DIN terminal (D):  
SY5120-□D□□-□<sub>C4</sub><sub>C6</sub><sub>C8</sub>-Q



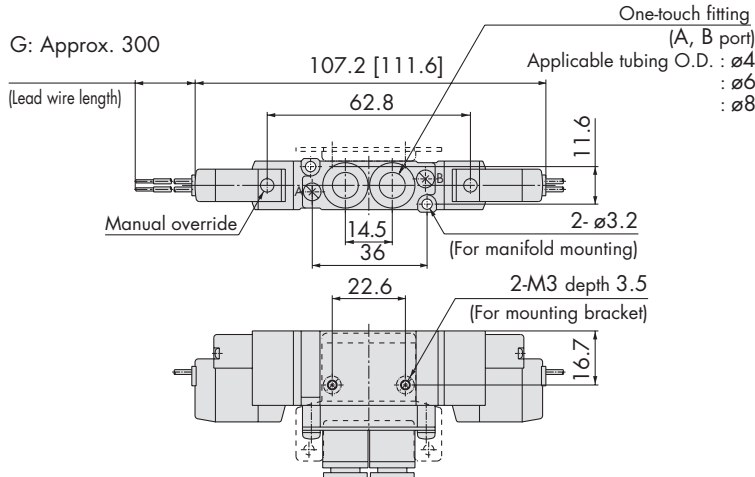
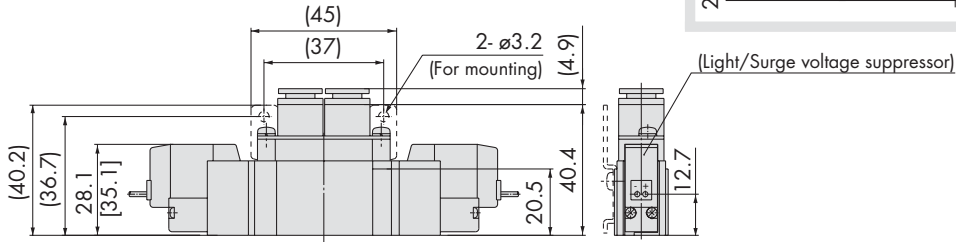
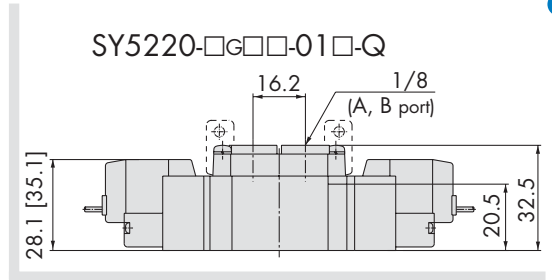
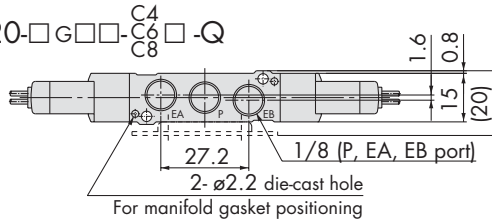
M8 connector (WO):  
SY5120-□WO□□-□<sub>C4</sub><sub>C6</sub><sub>C8</sub>-Q



Dimensions: Series SY5000

2 position double

Grommet (G): SY5220-□G□□- $\frac{C4}{C8}$ □-Q

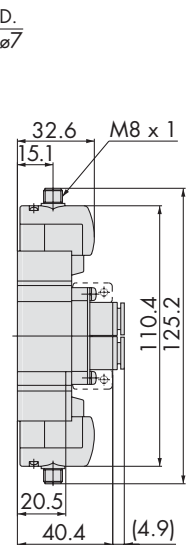
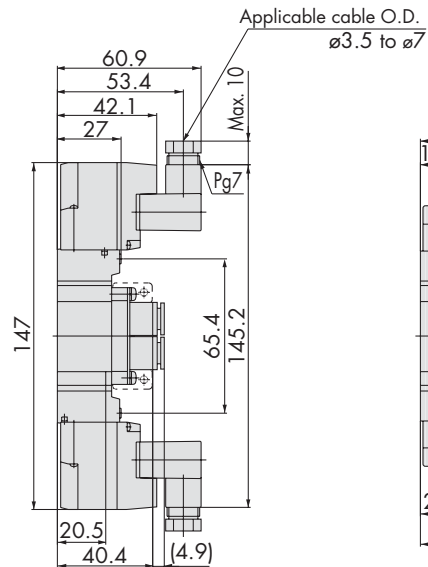
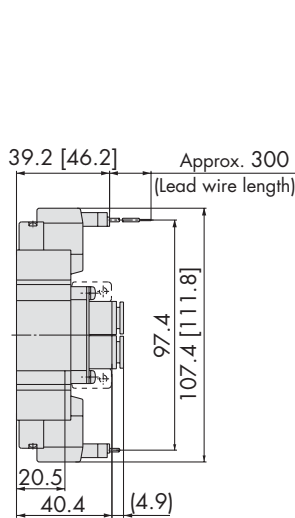
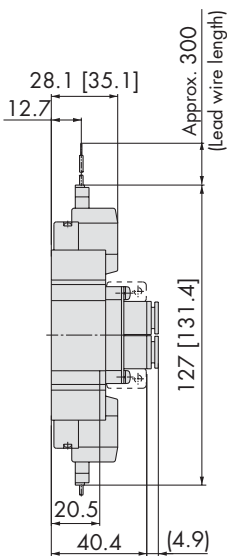


L plug connector: L  
SY5220-□L□□- $\frac{C4}{C8}$ □-Q

M plug connector: M  
SY5220-□M□□- $\frac{C4}{C8}$ □-Q

DIN terminal (D):  
SY5220-□D□□- $\frac{C4}{C8}$ □-Q

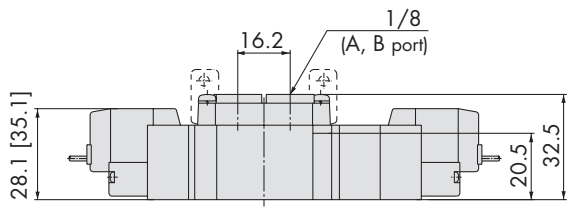
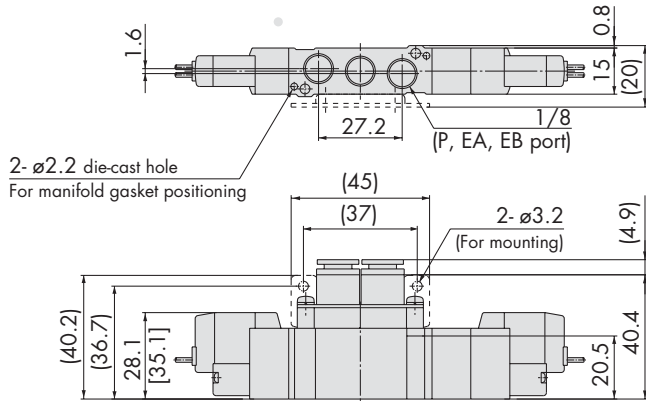
M8 connector (WO):  
SY5220-□WO□□- $\frac{C4}{C8}$ □-Q



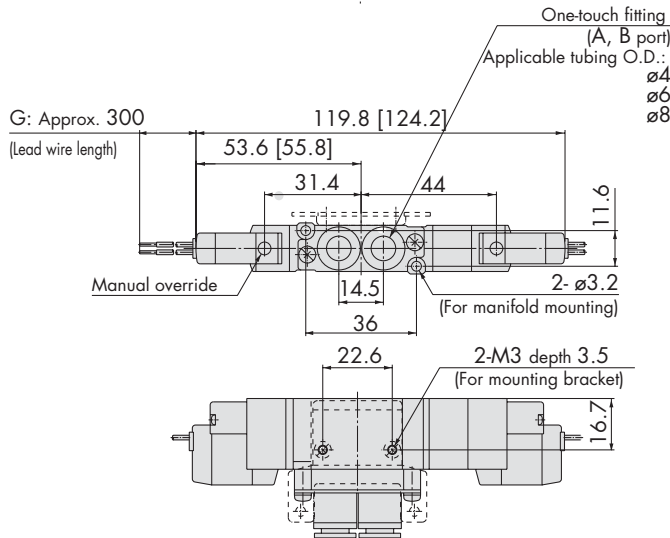
Dimensions: Series SY5000

3 position closed centre/exhaust centre/pressure centre  
 Grommet (G): SY5  $\frac{3}{5}$  420-□G□□- $\frac{C4}{C8}$ □-Q

SY5  $\frac{3}{5}$  420-□ $\frac{3}{5}$ □□-01□-Q



(Light/ Surge voltage suppressor)

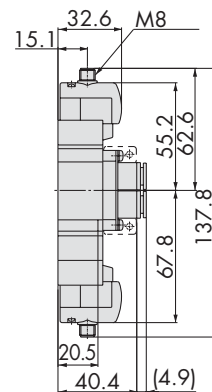
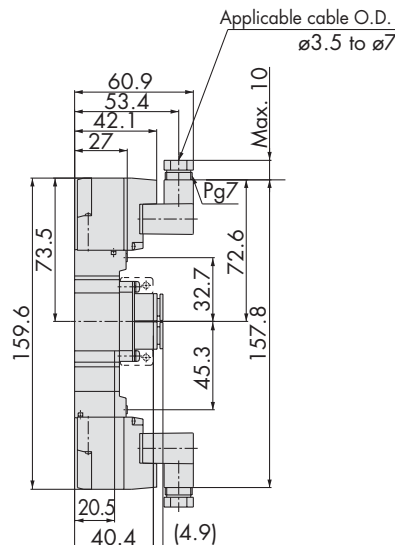
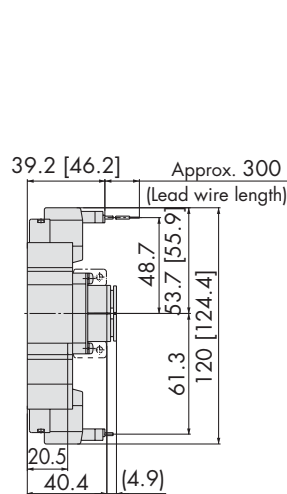
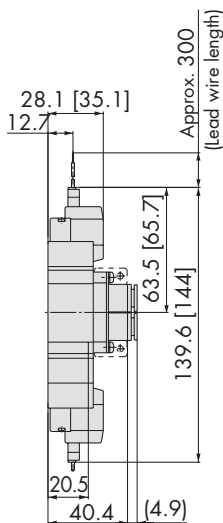


L plug connector: L  
 SY5  $\frac{3}{5}$  420-□L□□- $\frac{C4}{C8}$ □-Q

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

DIN terminal (D):  
 SY5  $\frac{3}{5}$  420-□D□□- $\frac{C4}{C8}$ ,  $\frac{N3}{N7}$ ,  $\frac{N3}{N9}$ □(F2)

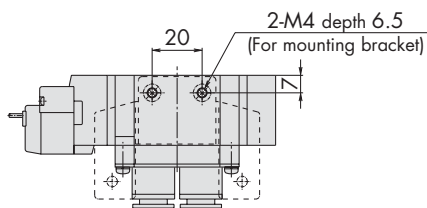
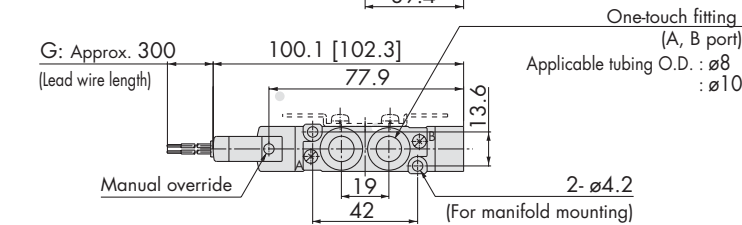
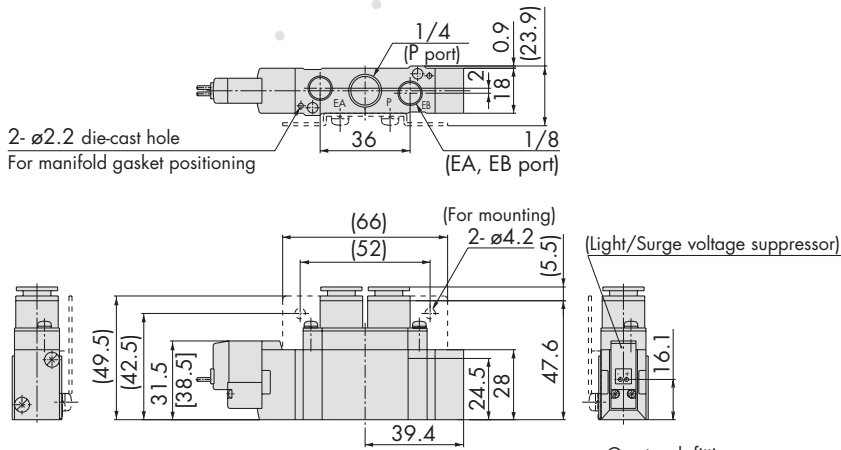
M8 connector (WO):  
 SY5  $\frac{3}{5}$  420-□WO□□- $\frac{C4}{C8}$ □-Q



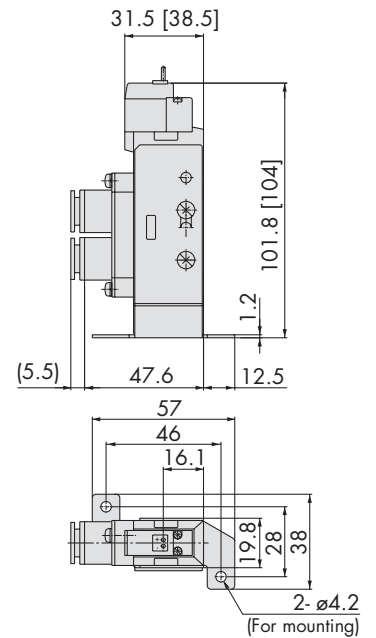
Dimensions: Series SY7000

2 position single

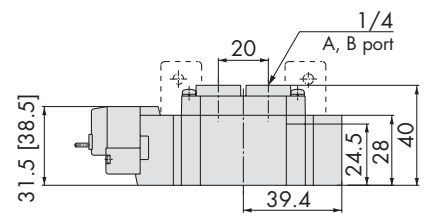
Grommet (G): SY7120-□G□□-C<sub>8</sub>-Q



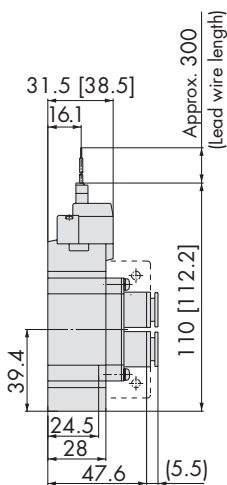
SY7120-□G□□-C<sub>8</sub>-Q



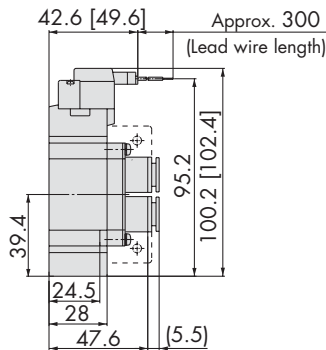
SY7120-□G□□-02□-Q



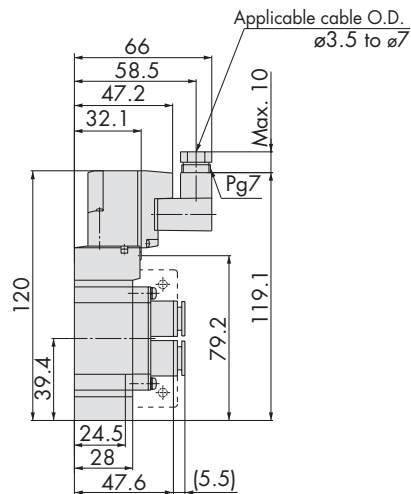
L plug connector (L) : SY7120-□L□□-C<sub>8</sub>-Q



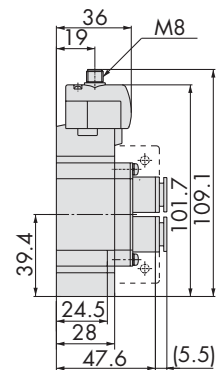
M plug connector (M): SY7120-□M□□-C<sub>8</sub>-Q



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



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

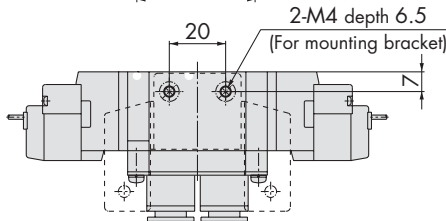
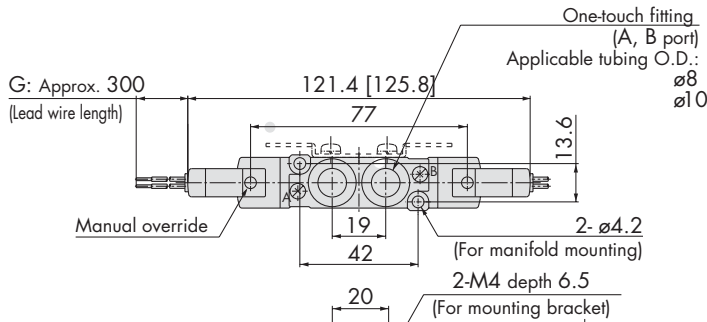
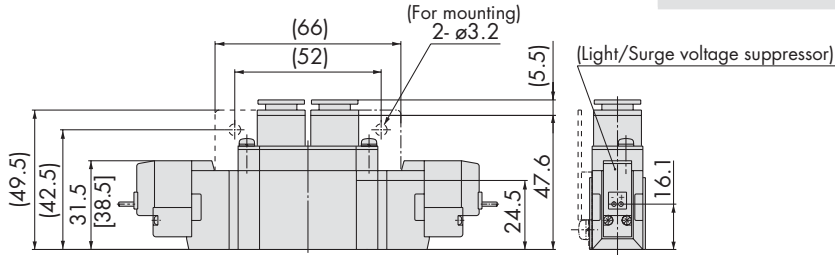
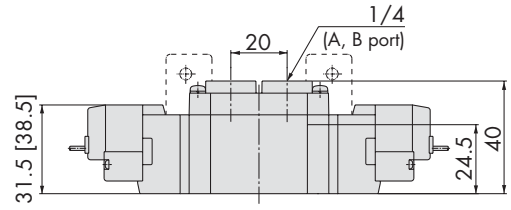
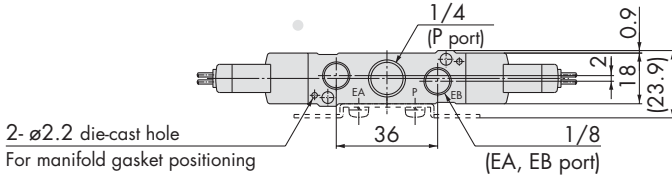


Dimensions: Series SY7000

2 position double

Grommet (G): SY7220-□G□□-C8-C10-Q

SY7220-□G□□-02□-Q

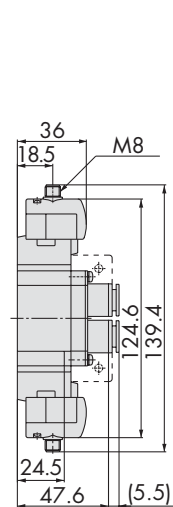
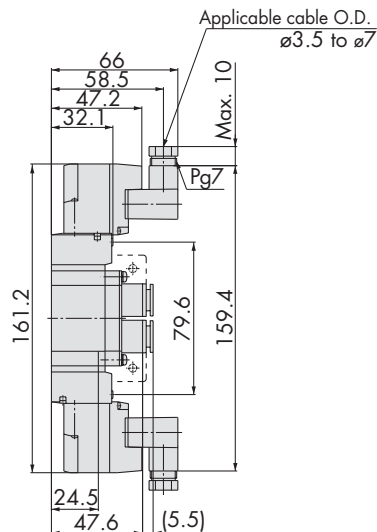
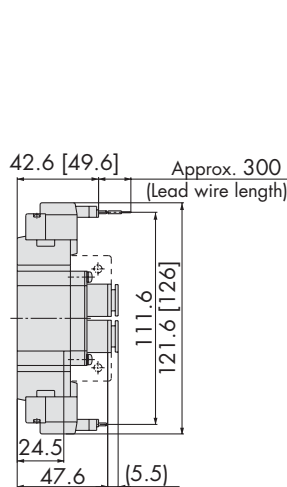
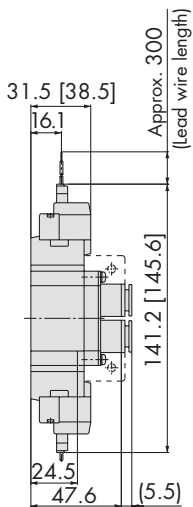


L plug connector (L):  
SY7220-□L□□-C8-C10-Q

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

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

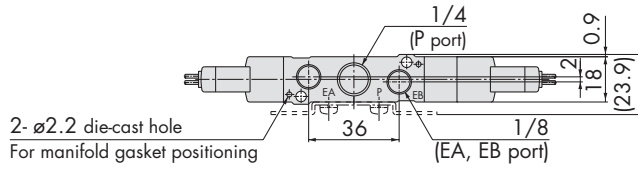
M8 connector (WO):  
SY7220-□WO□□-C8-C10-Q



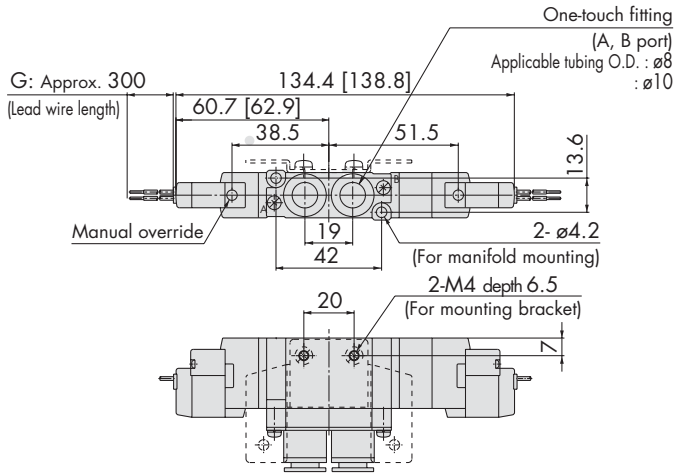
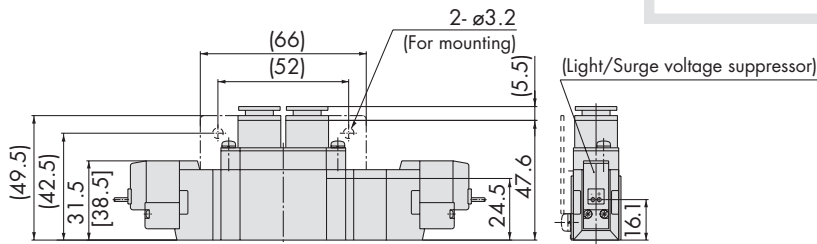
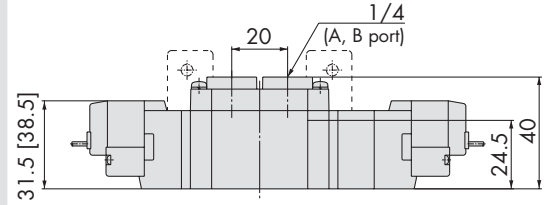
Dimensions: Series SY7000

3 position closed centre/exhaust centre/pressure centre

Grommet (G): SY7<sup>3</sup>/<sub>5</sub>20-□G□□-C<sup>8</sup>/<sub>C10</sub>-Q



SY7<sup>3</sup>/<sub>5</sub>20-□G□□-02□-Q

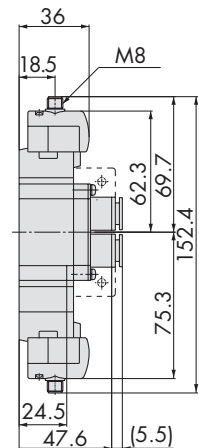
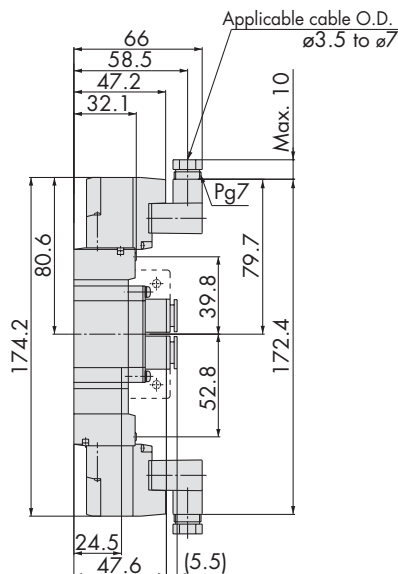
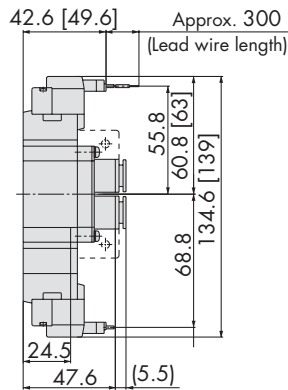
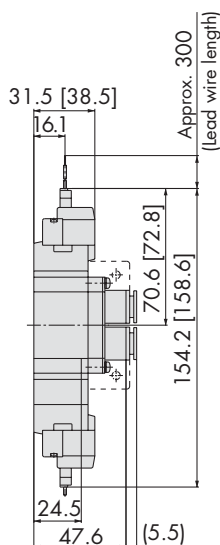


L plug connector (L):  
SY7<sup>3</sup>/<sub>5</sub>20-□L□□-C<sup>8</sup>/<sub>C10</sub>-Q

M plug connector (M):  
SY7<sup>3</sup>/<sub>5</sub>20-□M□□-C<sup>8</sup>/<sub>C10</sub>-Q

DIN terminal (D):  
SY7<sup>3</sup>/<sub>5</sub>20-□D□□-C<sup>8</sup>/<sub>C10</sub>-Q

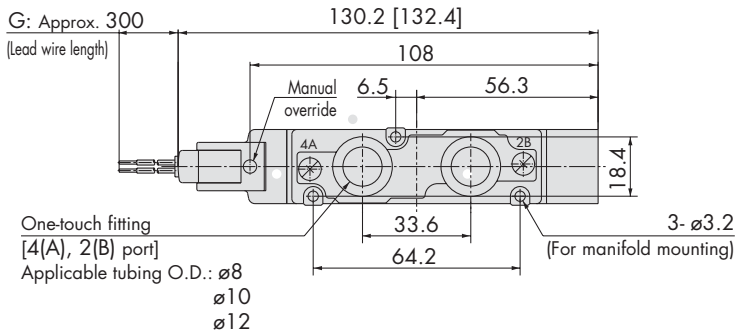
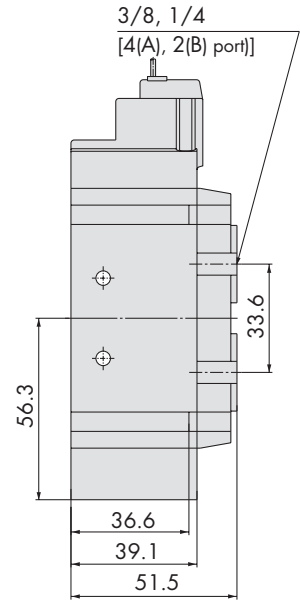
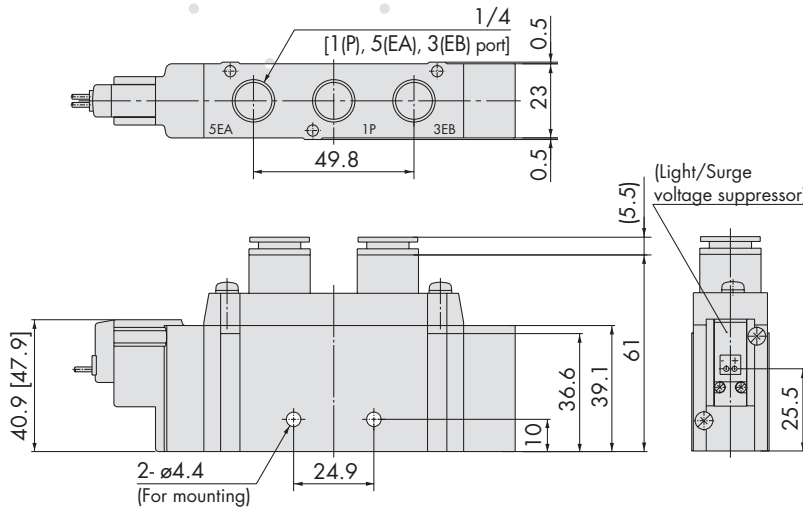
M8 connector (WO):  
SY7<sup>3</sup>/<sub>5</sub>20-□WO□□-C<sup>8</sup>/<sub>C10</sub>-Q



Dimensions: Series SY9000

2 position single  
Grommet (G): SY9120-□G□□- $\frac{C8}{C12}$ -Q

SY9120-□G□□- $\frac{02}{03}$ -Q

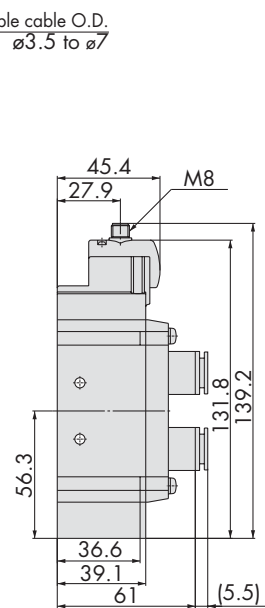
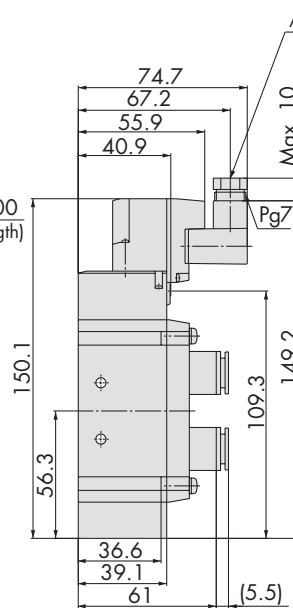
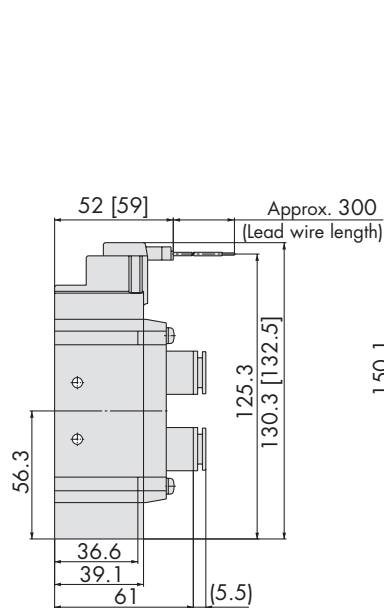
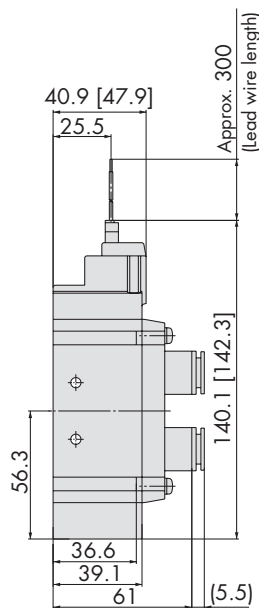


L plug connector (L):  
SY9120-□L□□- $\frac{C8}{C12}$ -Q

M plug connector (M):  
SY9120-□M□□- $\frac{C8}{C12}$ -Q

DIN terminal (D):  
SY9120-□D□□- $\frac{C8}{C12}$ -Q

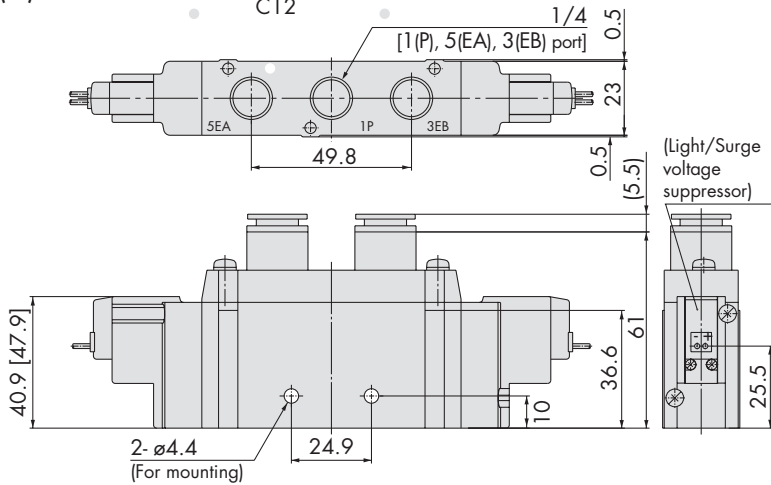
M8 connector (WO):  
SY9120-□WO□□- $\frac{C8}{C12}$ -Q



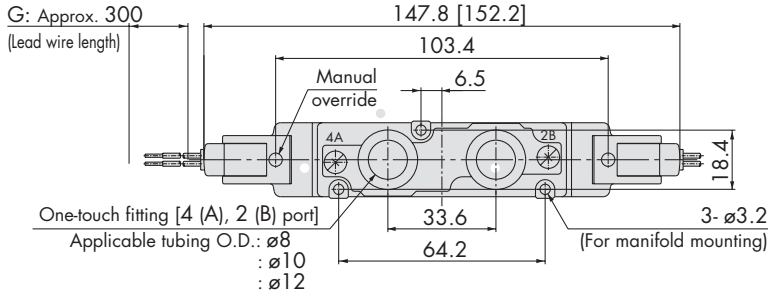
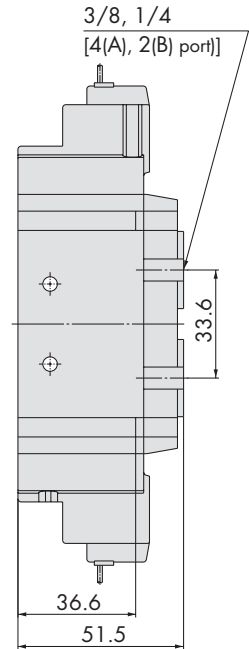


Dimensions: Series SY9000

2 position double  
Grommet (G): SY9220-□G□□- $\frac{C8}{C10}$ -Q



SY9220-□G□□- $\frac{02}{03}$ -Q

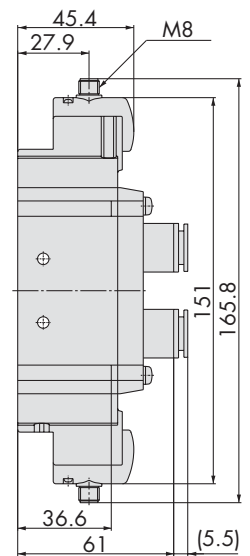
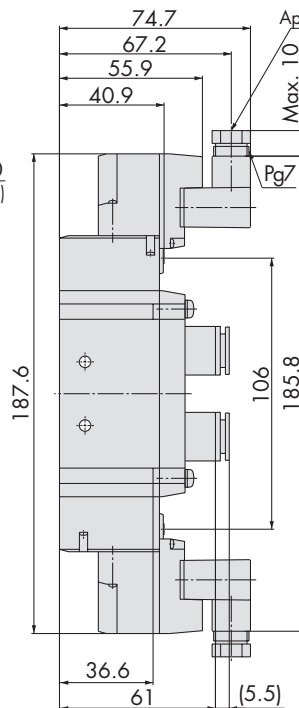
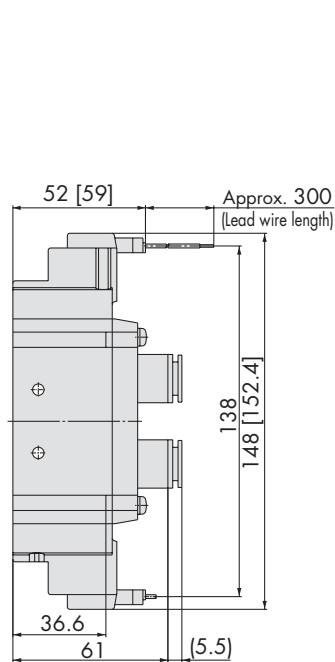
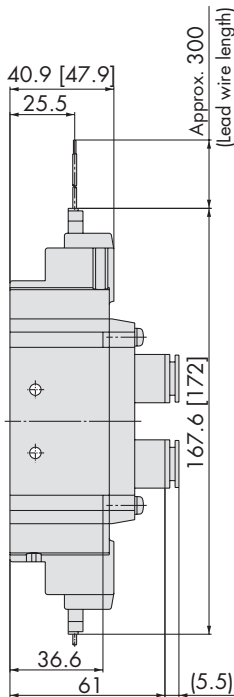


L plug connector (L):  
SY9220-□L□□- $\frac{C8}{C10}$ -Q

M plug connector (M):  
SY9220-□M□□- $\frac{C8}{C10}$ -Q

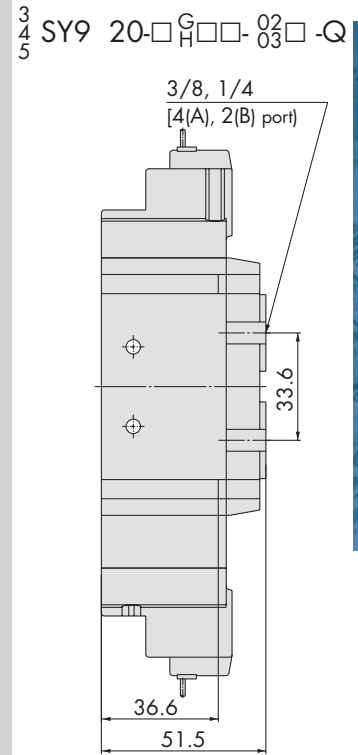
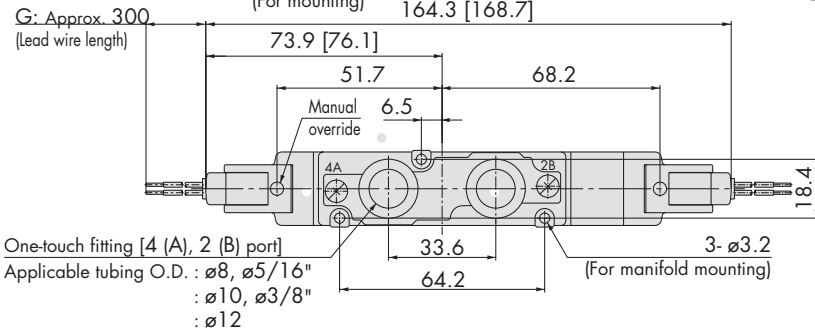
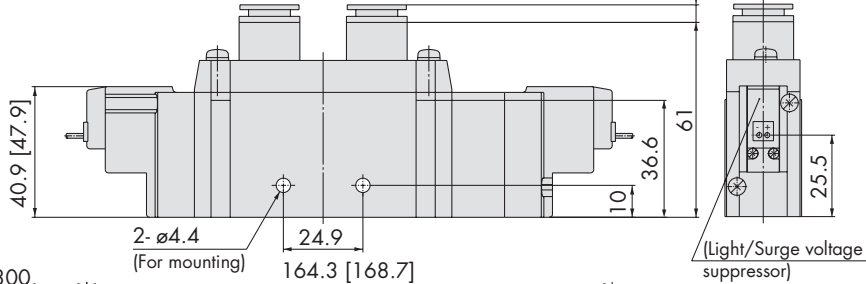
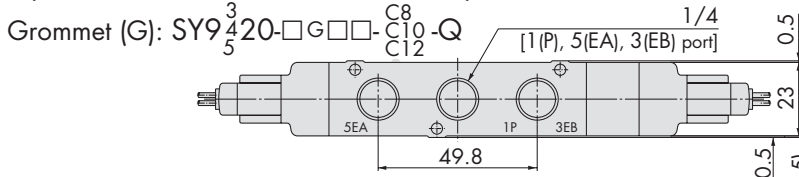
DIN terminal (D):  
SY9220-□D□□- $\frac{C8}{C10}$ -Q

M8 connector (WO):  
SY9220-□WO□□- $\frac{C8}{C10}$ -Q



Dimensions: Series SY9000

3 position closed centre/exhaust centre/pressure

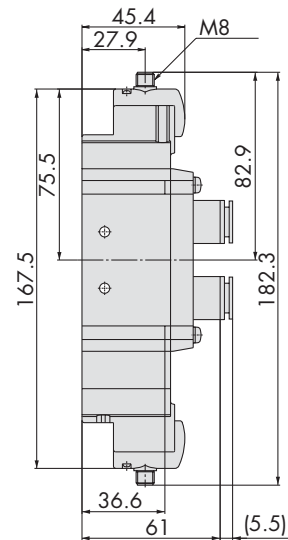
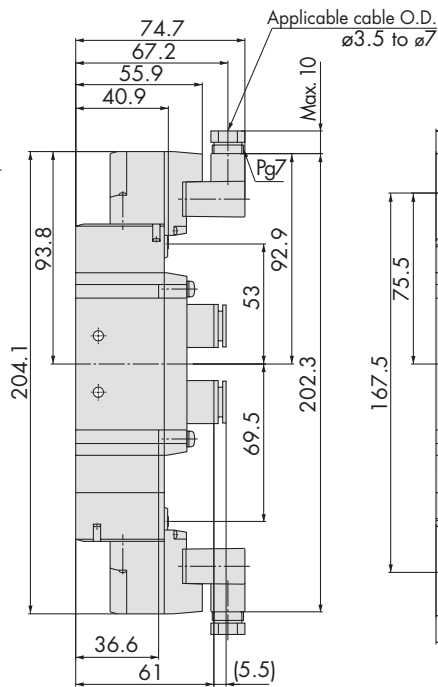
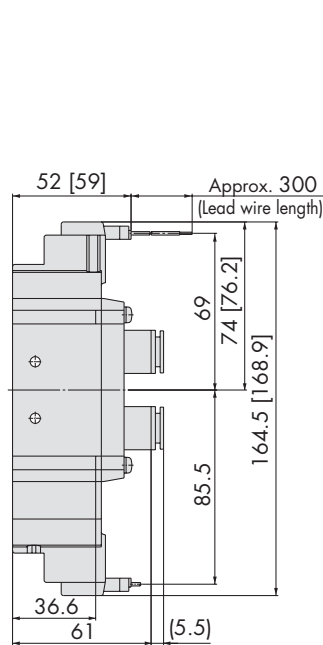
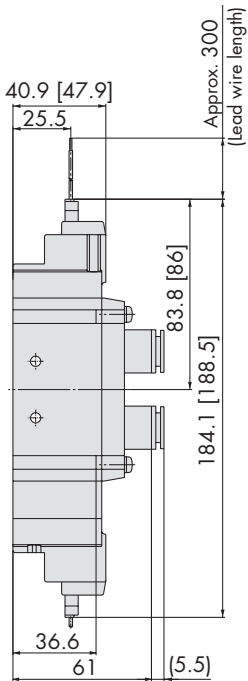


L plug connector (L):  
SY9<sup>3</sup>/<sub>5</sub>20-□L□□-<sup>C8</sup>C10-Q  
C12

M plug connector (M):  
SY9<sup>3</sup>/<sub>5</sub>20-□M□□-<sup>C8</sup>C10-Q  
C12

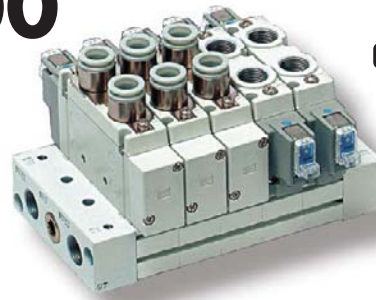
DIN terminal (D):  
SY9<sup>3</sup>/<sub>5</sub>20-□D□□-<sup>C8</sup>C10-Q  
C12

M8 connector (WO):  
SY9<sup>3</sup>/<sub>5</sub>20-□WO□□-<sup>C8</sup>C10-Q  
C12



# 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

SY9000

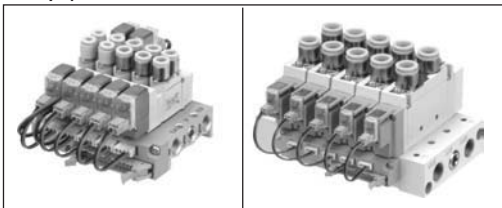
Stations

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

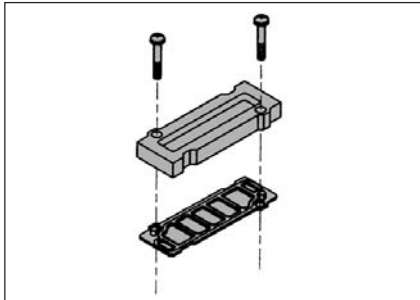
Model	SS5Y3-20	SS5Y5-20	SS5Y7-20	SS5Y9-23
Applicable valve	SY3□20	SY5□20	SY7□20	SY9□20
Manifold type	Single base/B mount			
P (SUP)/R (EXH)	Common SUP, Common EXH			
Valve stations	2 to 20 stations <sup>Note 1)</sup>			
A, B port location	Valve			
Port size	P, EA, EB port	1/8	1/4	1/4
	A, B port	M5 C4 (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

EXH port (Both sides)

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

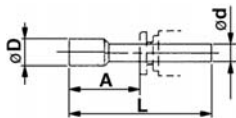
■ Individual SUP spacer assembly

SUP port

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

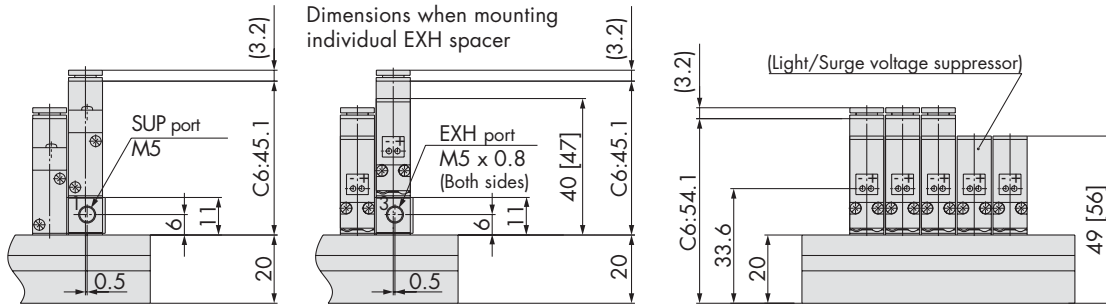
Also Available

- 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.

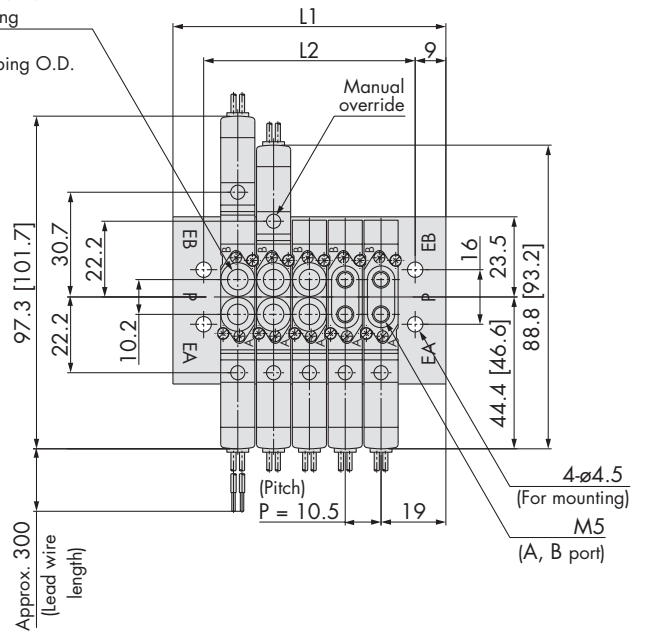
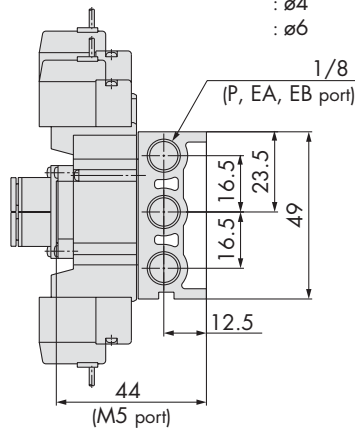
SY3000/SS5Y3-20 Stations - □ -00F-Q



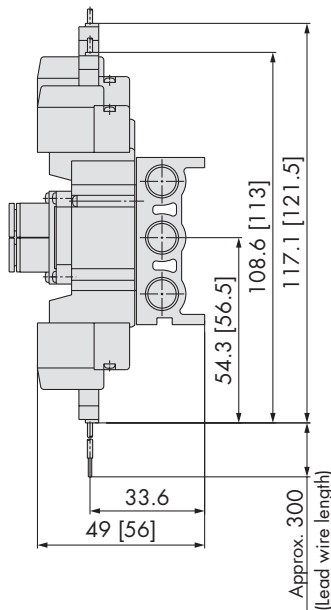
Dimensions when mounting individual SUP spacer (SUP port is at the end plate of single solenoid.)

Dimensions when mounting individual EXH spacer

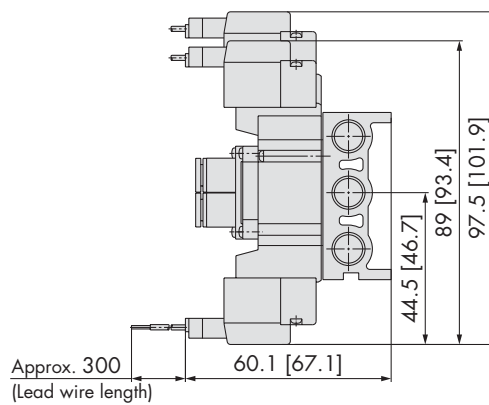
Grommet (G)  
One-touch fitting (A, B port)  
Applicable tubing O.D.: ø4  
ø6



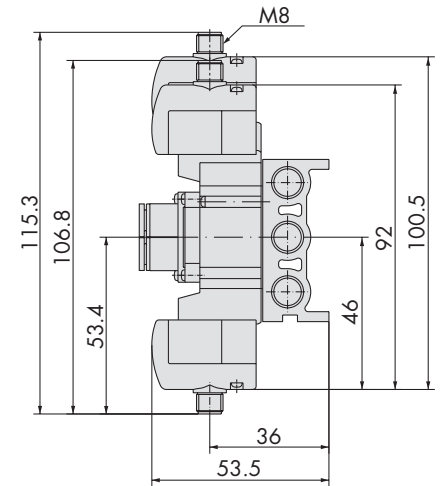
L plug connector (L)



M plug connector (M)

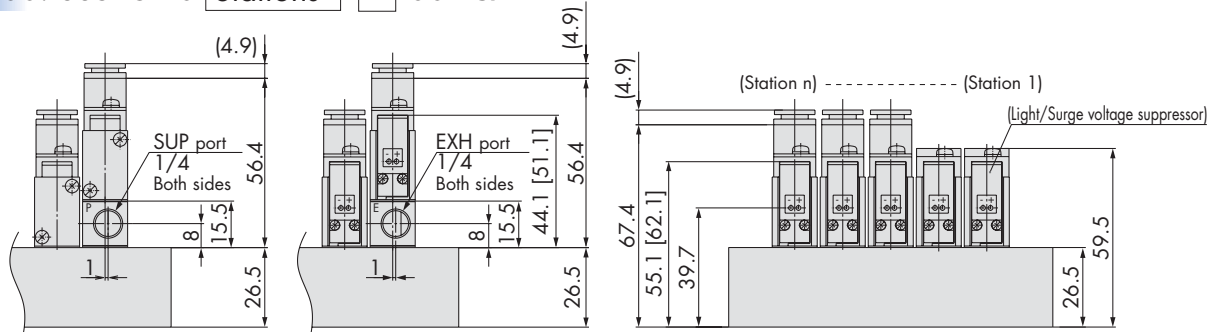


M8 connector (WO)



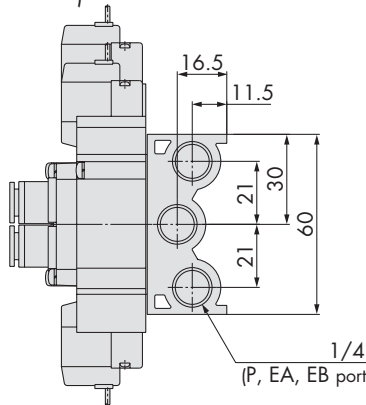
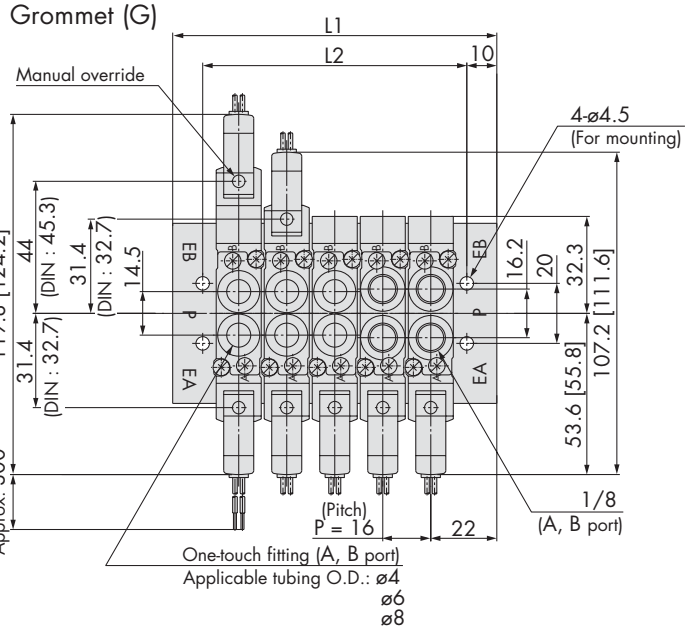
Stations n	2 stations	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 stations
L1	48.5	59	69.5	80	90.5	101	111.5	122	132.5	143	153.5	164	174.5	185	195.5	206	216.5	227	237.5
L2	30.5	41	51.5	62	72.5	83	93.5	104	114.5	125	135.5	146	156.5	167	177.5	188	198.5	209	219.5

SY5000: SS5Y5-20- Stations - -00F-Q



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

Dimensions when mounting individual EXH spacer

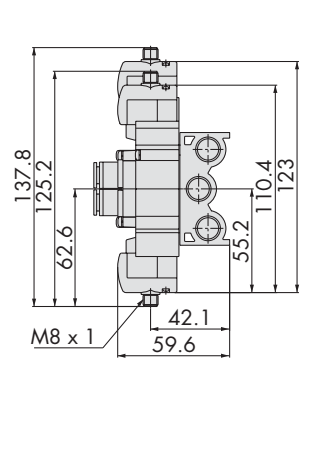
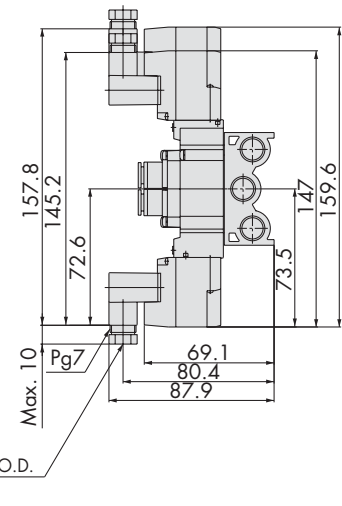
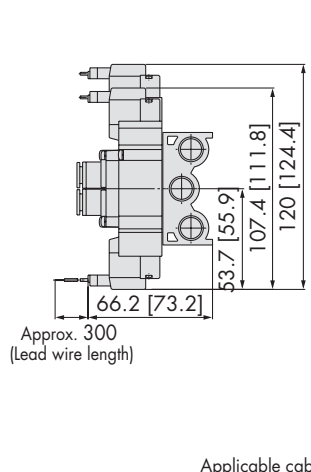
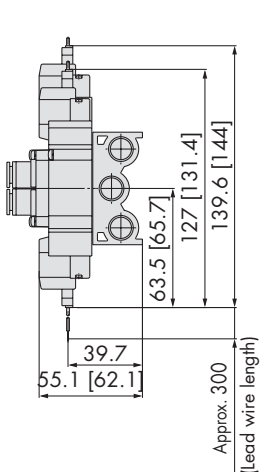


L plug connector (L)

M plug connector (M)

DIN terminal (D)

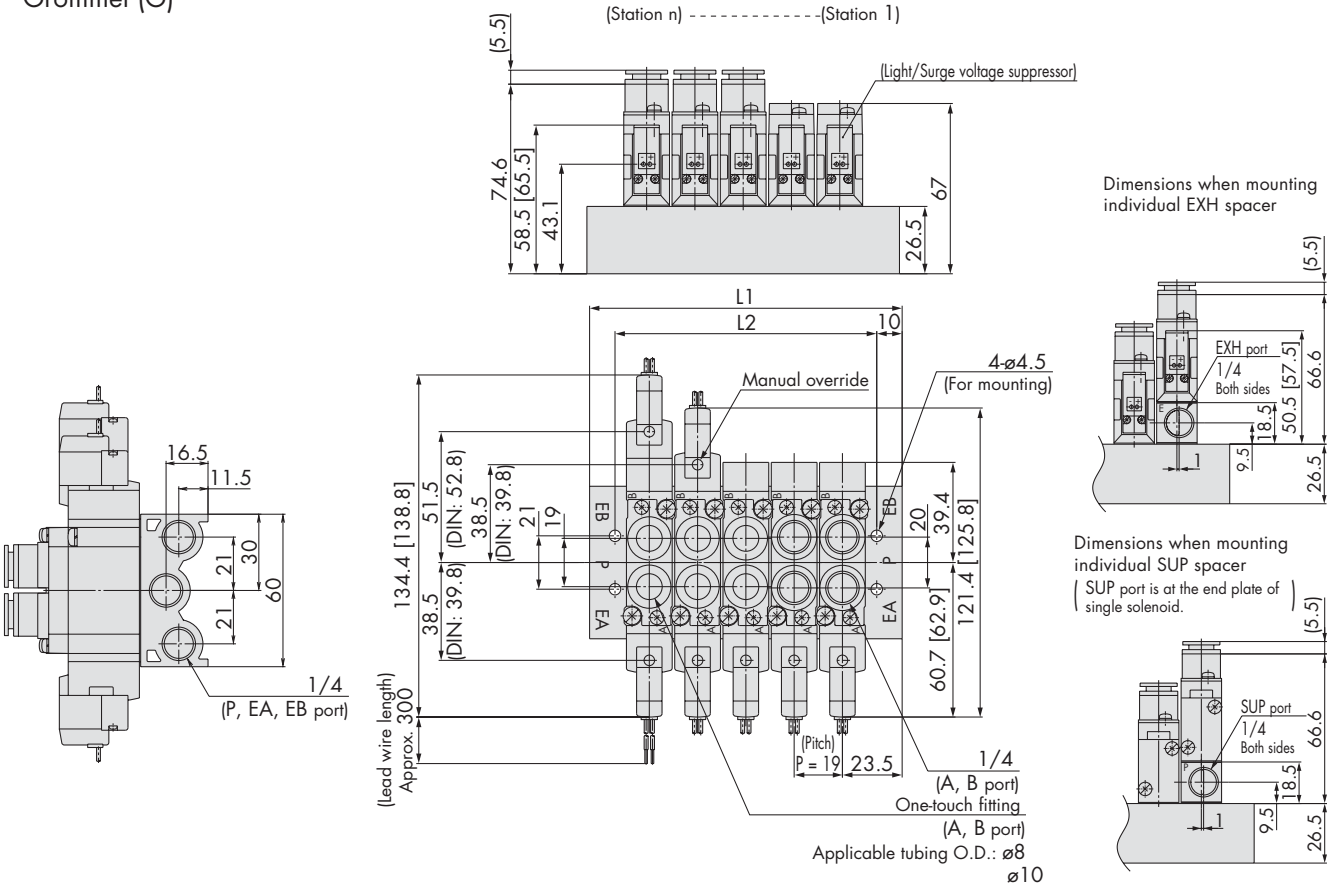
M8 connector (WO)



Stations n	2 stations	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 stations
L1	60	76	92	108	124	140	156	172	188	204	220	236	252	268	284	300	316	332	348
L2	40	56	72	88	104	120	136	152	168	184	200	216	232	248	264	280	296	312	328

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

Grommet (G)

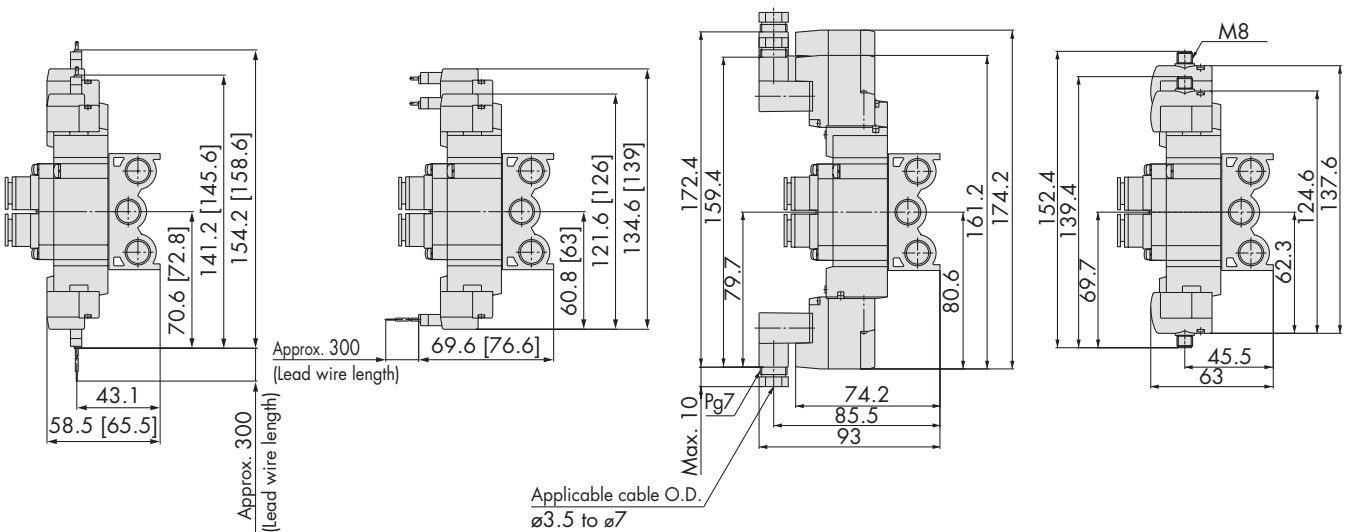


L plug connector (L)

M plug connector (M)

DIN terminal (D)

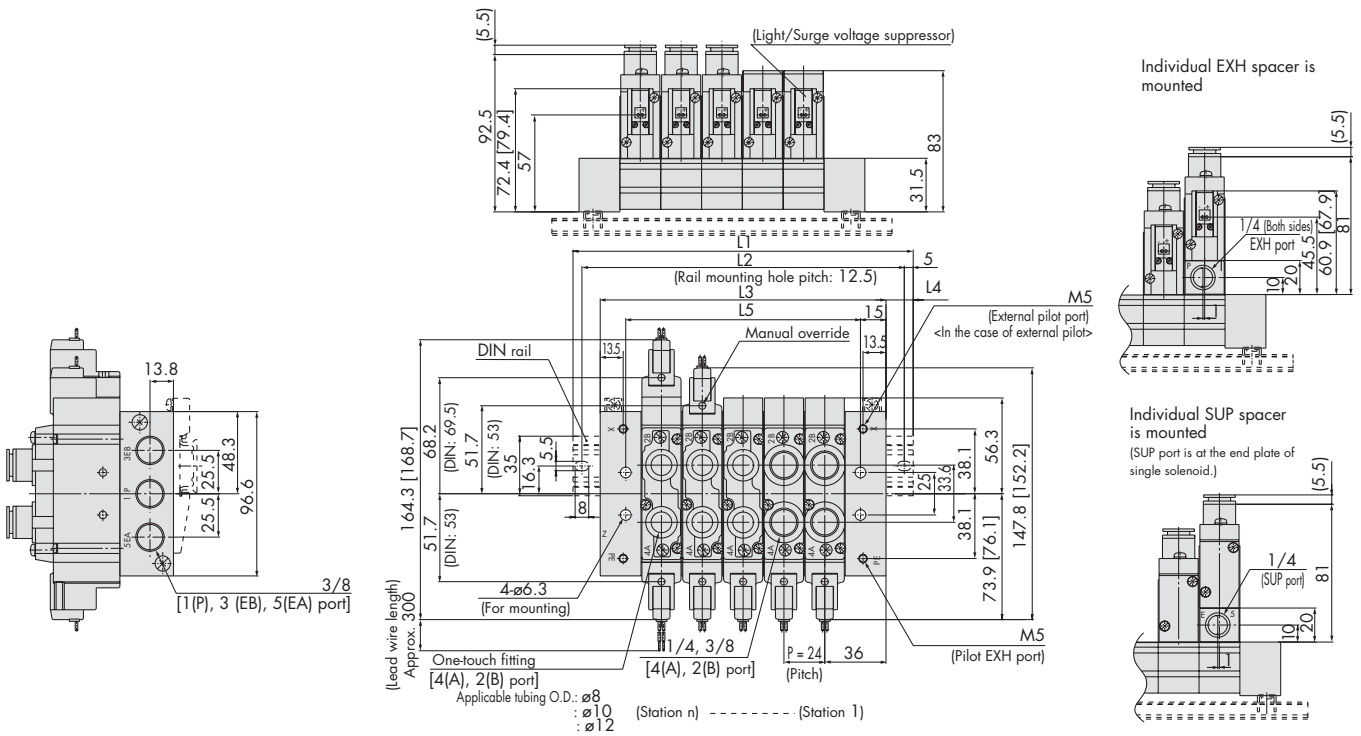
M8 connector (WO)



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

## SY9000: SS5Y9-23-Stations-(D)-00F-Q

Grommet (G)

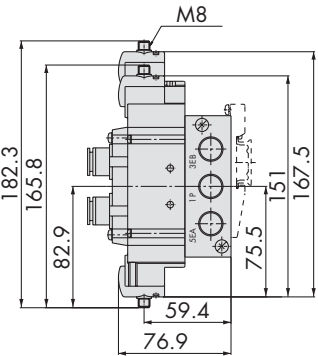
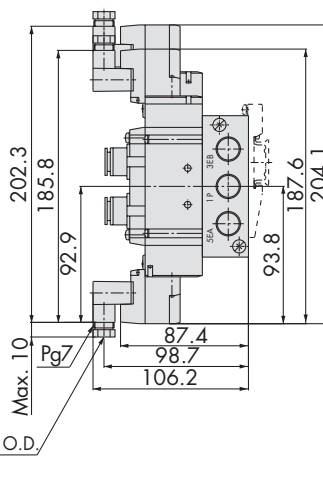
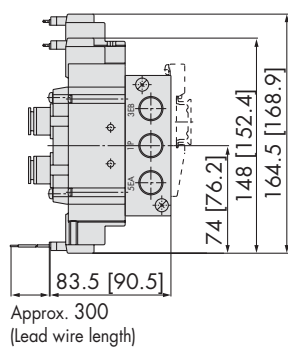
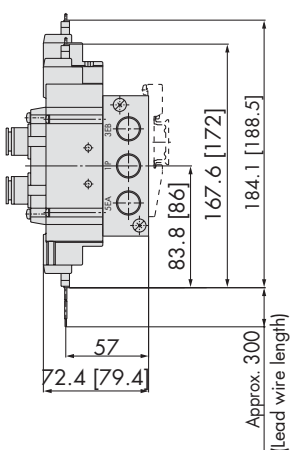


L plug connector (L)

M plug connector (M)

DIN terminal (D)

M8 connector (WO)



Note) Refer to page 1-4-210 for dimensions of connector types.

Stations n	2 stations	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 stations
L1	123	148	173	198	223	248	273	298	323	335.5	360.5	385.5	410.5	435.5	460.5	485.5	510.5	535.5	560.5
L2	112.5	137.5	162.5	187.5	212.5	237.5	262.5	287.5	312.5	325	350	375	400	425	450	475	500	525	550
L3	96	120	144	168	192	216	240	264	288	312	336	360	384	408	432	456	480	504	528
L4	13.5	14	14.5	15	15.5	16	16.5	17	17.5	12	12.5	13	13.5	14	14.5	15	15.5	16	16.5
L5	66	90	114	138	162	186	210	234	258	282	306	330	354	378	402	426	450	474	498

Note) In the case of direct mounting without DIN rail, total width of manifold is L3.



# 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



### 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

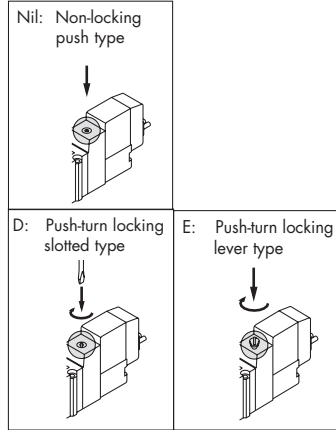
DC	
5	24 VDC
6	12 VDC
V	6 VDC
S	5 VDC
R	3 VDC

AC (50/60Hz)

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 (Y) entry

### Manual override



### (Light/ Surge voltage suppressor)

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

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

Electrical entry for D

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

### 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)

### 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
G: Lead wire length 300 mm	LO: Without connector	MO: Without connector
		DIN terminal
		M8 connector
		(Except SY3000) D: With connector
		WO: Without connector cable

### Accessories for Base Mounted SY Valves

Valve type	Single Subbase part no.	Subbase part 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	Type Z	Type U
2 position single	12 or less	15 or less	12 or less	15 or less
2 position double	10 or less	13 or less	10 or less	13 or less
3 position	15 or less	20 or less	16 or less	20 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	Type Z	Type U
2 position single	19 or less	26 or less	19 or less	26 or less
2 position double	18 or less	22 or less	18 or less	22 or less
3 position	32 or less	38 or less	32 or less	38 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	Type Z	Type U
2 position single	31 or less	38 or less	33 or less	41 or less
2 position double	27 or less	30 or less	28 or less	35 or less
3 position	50 or less	56 or less	50 or less	56 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	Type Z	Type U
2 position single	35 or less	41 or less	35 or less	41 or less
2 position double	35 or less	41 or less	35 or less	41 or less
3 position	62 or less	64 or less	62 or less	64 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	1.4 (With indicator light: 1.5)
		110 V	1.6 (With indicator light: 1.7)
		200 V	2.3 (With indicator light: 2.4)
		220 V	2.5 (With indicator light: 2.6)
		[230 V]	2.7 (With indicator light: 2.8)
Surge voltage suppressor		Diode (Varistor is for DIN terminal and Non-polar type.)	
Indicator light		LED (AC of DIN terminal is neon bulb.)	

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	1/8	1.0	0.30	0.24	1.1	0.30	0.26	84 (50)	15	89 (57)	
	Double		0.77	0.28	0.18	0.85	0.30	0.19	102 (68)	13	115 (81)	
3 position	Closed centre	1/8	0.73	0.31	0.18	1.1	0.26	0.24	104 (69)	20	117 (82)	
	Exhaust centre		1.2	0.24	0.29	0.89	0.47	0.24				
	Pressure centre											

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	1/4	2.4	0.41	0.64	2.8	0.29	0.66	121 (58)	26	127 (65)	
	Double		1.8	0.47	0.50	1.8	0.40	0.47	139 (76)	22	152 (89)	
3 position	Closed centre	1/4	1.4	0.55	0.44	3.0	0.33	0.72	144 (82)	38	158 (95)	
	Exhaust centre		3.3	0.36	0.85	1.8	0.40	0.48				
	Pressure centre											

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	1/4	4.1	0.41	1.1	4.1	0.29	1.0	218 (89)	38	225 (96)	
	Double		3.0	0.43	0.80	2.6	0.41	0.72	237 (108)	30	250 (121)	
3 position	Closed centre	1/4	2.6	0.42	0.71	4.7	0.35	1.1	239 (110)	56	253 (124)	
	Exhaust centre		5.3	0.39	1.3	2.2	0.49	0.63				
2 position	Single	3/8	4.9	0.29	1.2	4.5	0.27	1.1	218 (89)	38	225 (96)	
	Double		3.0	0.40	0.80	2.6	0.45	0.73	237 (108)	30	250 (121)	
3 position	Closed centre	3/8	2.6	0.42	0.71	4.8	0.35	1.1	239 (110)	56	253 (124)	
	Exhaust centre		5.3	0.31	1.3	2.3	0.45	0.66				
	Pressure centre											

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	3/8	7.9	0.34	2.0	9.6	0.43	2.6	469(172)	41	476(179)	
	Double		7.5	0.33	1.8	7.3	0.30	1.7	488(191)	41	502(205)	
3 position	Closed centre	3/8	7.2	0.34	1.7	13	0.23	2.8	512(215)	64	526(229)	
	Exhaust centre		12	0.26	2.8	6.7	0.40	1.9				
2 position	Single	1/2	8.0	0.48	2.2	10	0.29	2.5	448 (151)	41	457(160)	
	Double		7.6	0.32	1.8	7.3	0.32	1.8	467 (170)	41	481(184)	
3 position	Closed centre	1/2	7.3	0.42	2.0	13	0.32	3.6	491 (194)	64	505(208)	
	Exhaust centre		12	0.33	3.3	7.4	0.33	1.9				
	Pressure centre											

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.

Valves

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)

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      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



ARBY3000



ARBY5000

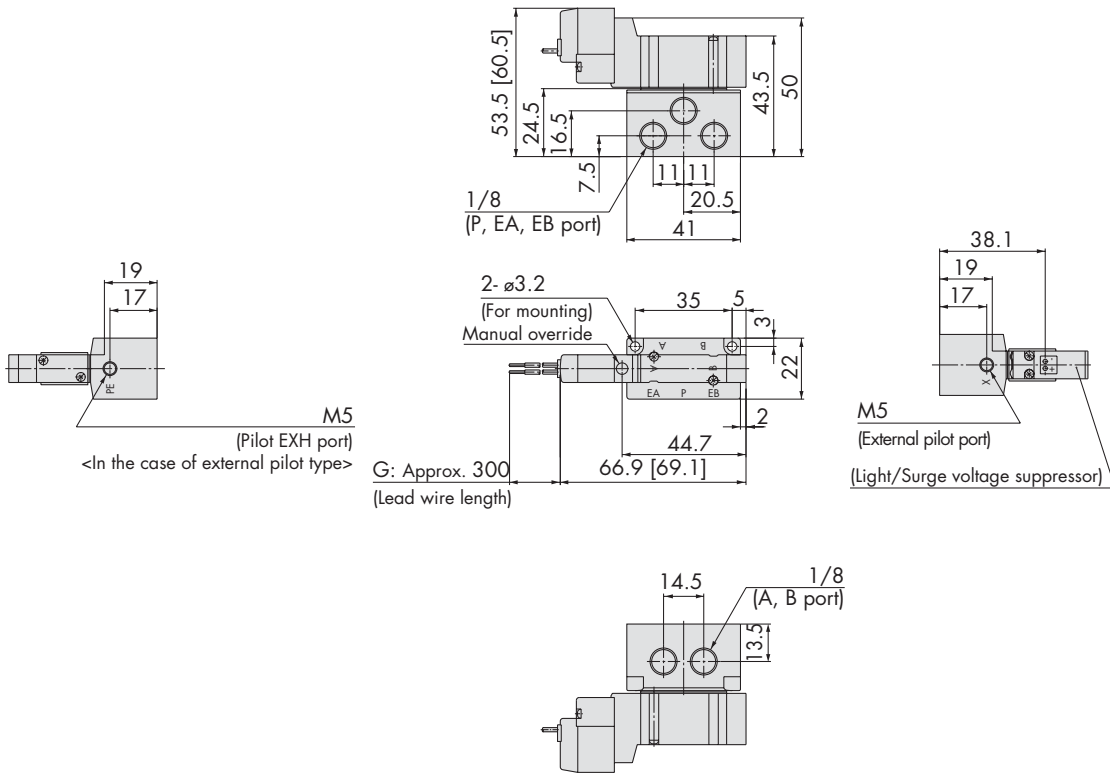


ARBY7000

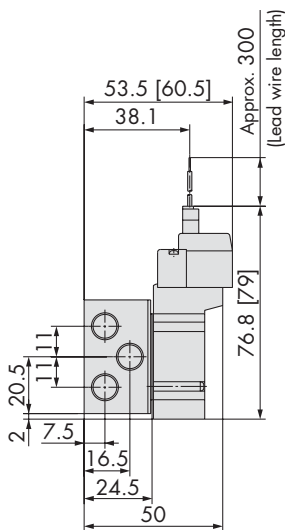
Dimensions: Series SY3000

2 position single

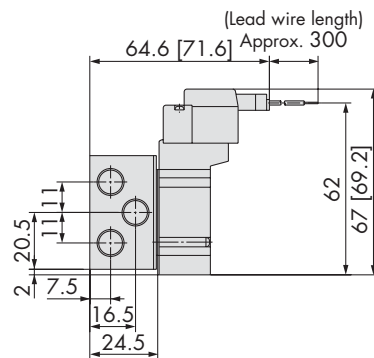
Grommet (G): SY3140(R)-□G□□-01□-Q



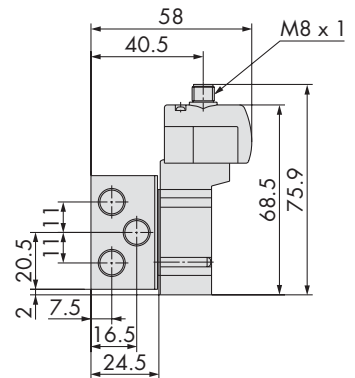
L plug connector (L):  
SY3140(R)-□L□□-01□-Q



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



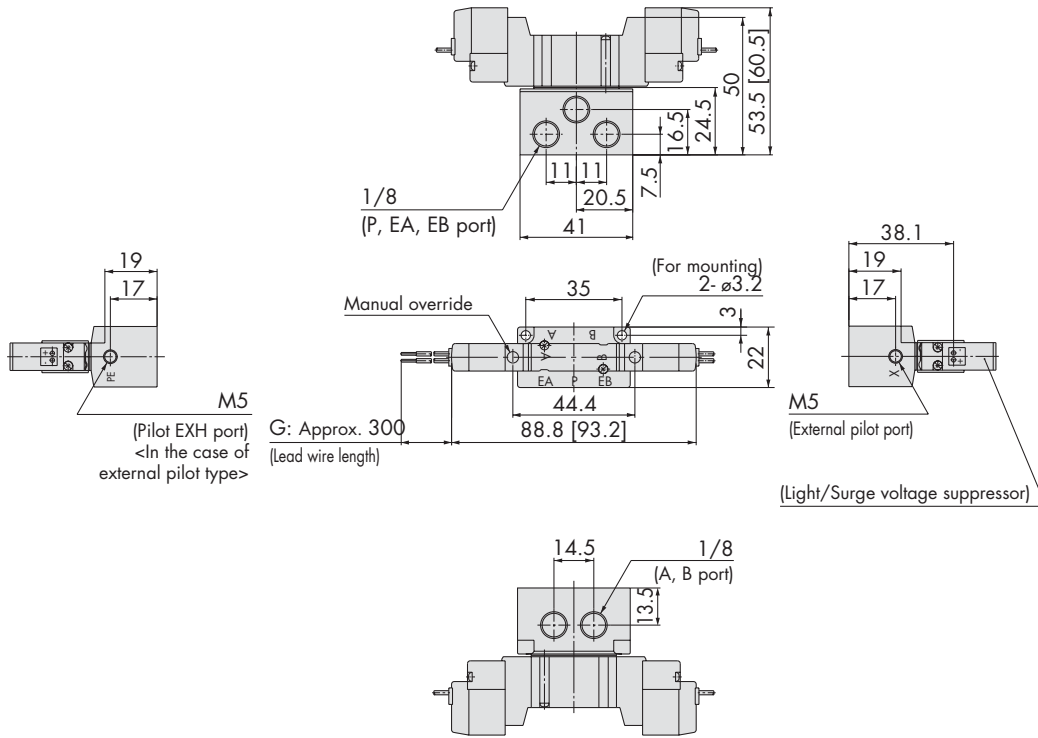
M8 connector (WO):  
SY3140(R)-□WO□□-01□-Q



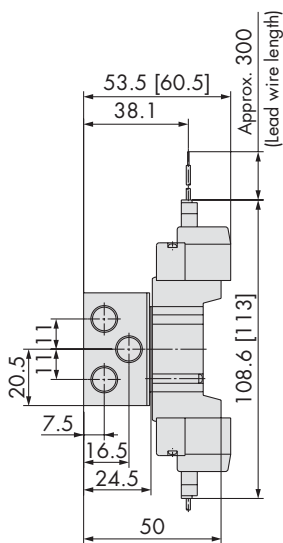
Dimensions: Series SY3000

2 position double

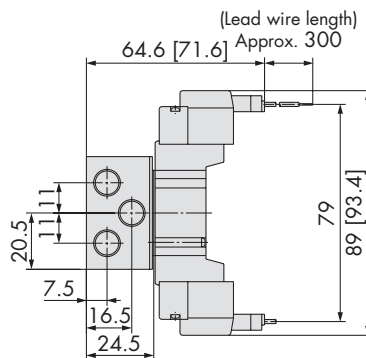
Grommet (G): SY3240(R)-□G□□-01□-Q



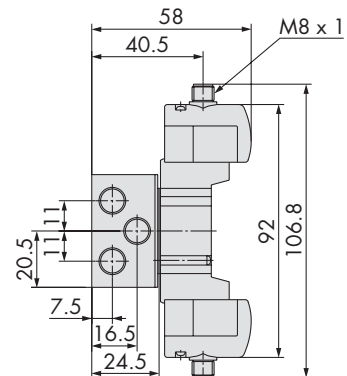
L plug connector (L):  
SY3240(R)-□L□□-01□-Q



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

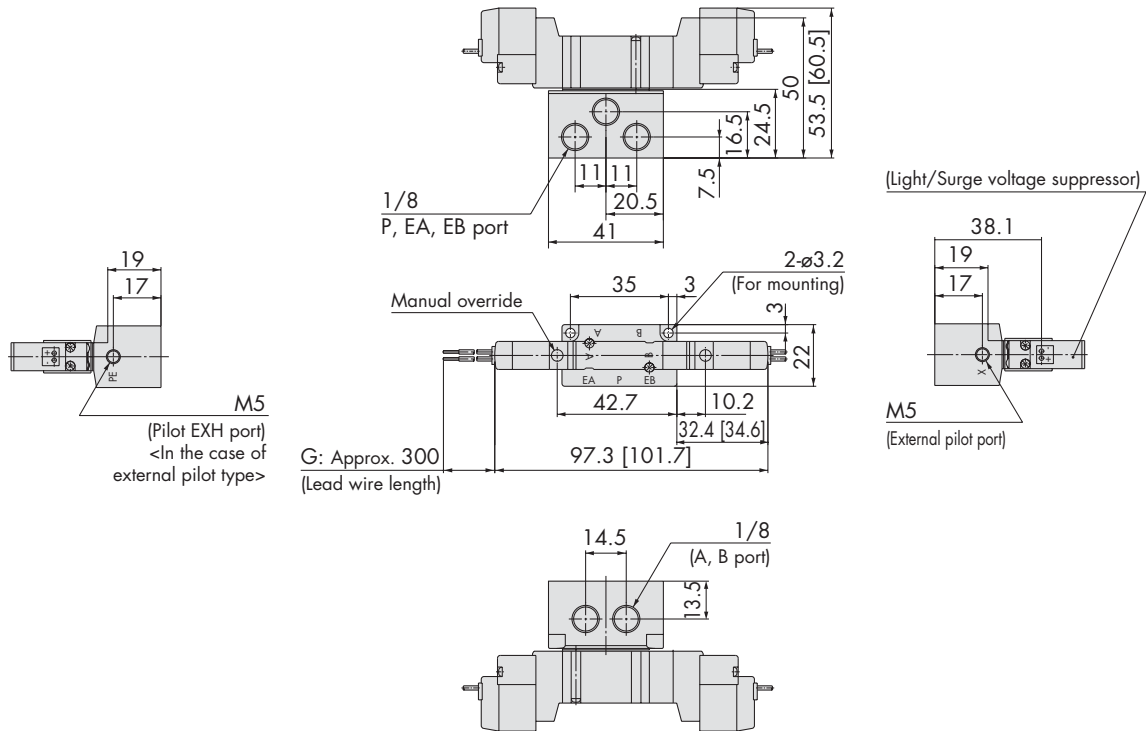


M8 connector (WO):  
SY3240(R)-□WO□□-01□-Q

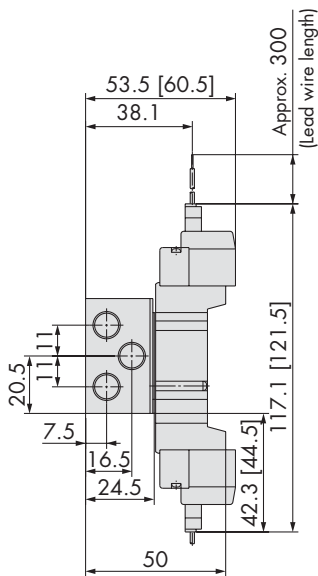


Dimensions: Series SY3000

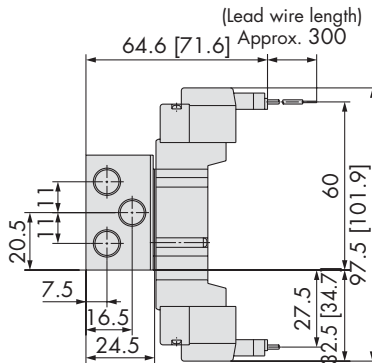
3 position closed centre/exhaust centre/pressure centre  
 Grommet (G): SY3 $\frac{3}{5}$ 40(R)-□G□□□-01□□-Q



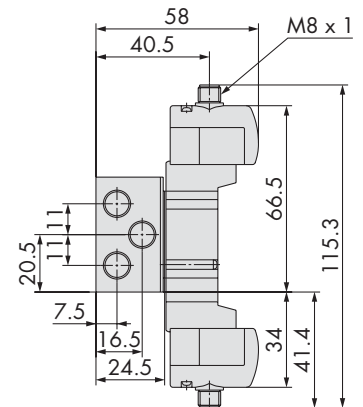
L plug connector (L):  
 SY3 $\frac{3}{5}$ 40(R)-□L□□□-01□□-Q



M plug connector (M):  
 SY3 $\frac{3}{5}$ 40(R)-□M□□□-01□□-Q



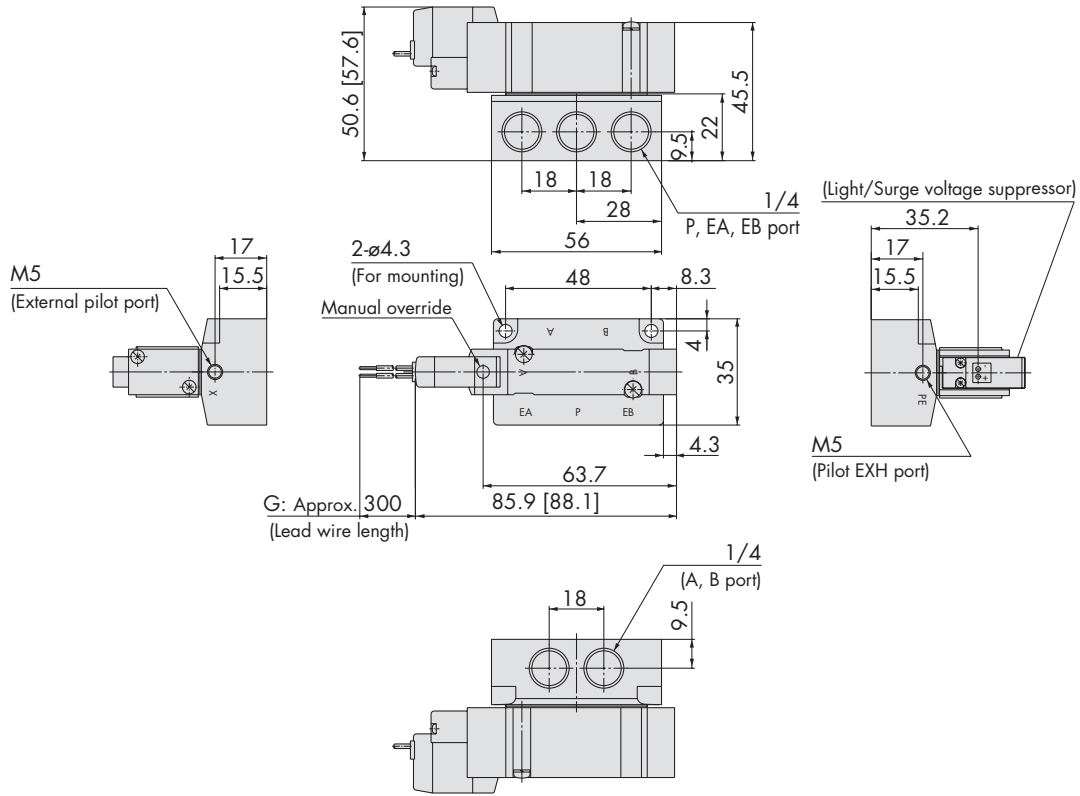
M8 connector (WO):  
 SY3 $\frac{3}{5}$ 40(R)-□WO□□□-01□□-Q



Dimensions: Series SY5000

2 position single

Grommet (G): SY5140(R)-□G□□-02□-Q

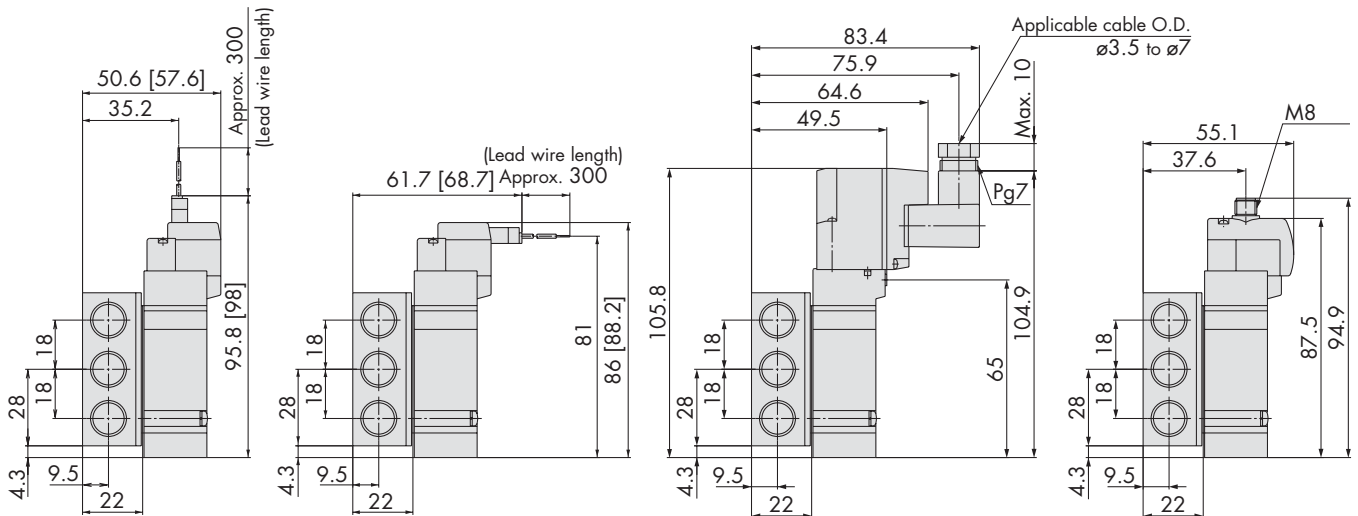


L plug connector (L):  
SY5140(R)-□L□□-02□-Q

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

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

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

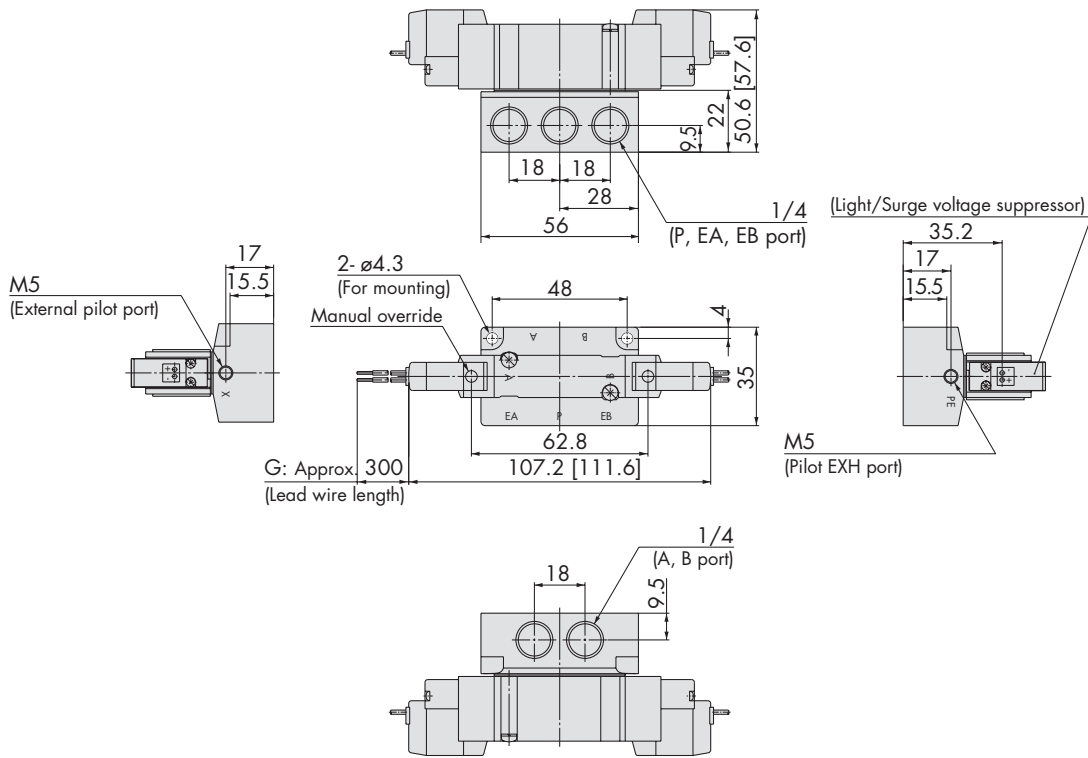




Dimensions: Series SY5000

2 position double

Grommet (G): SY5240(R)-□G□□-02□-Q

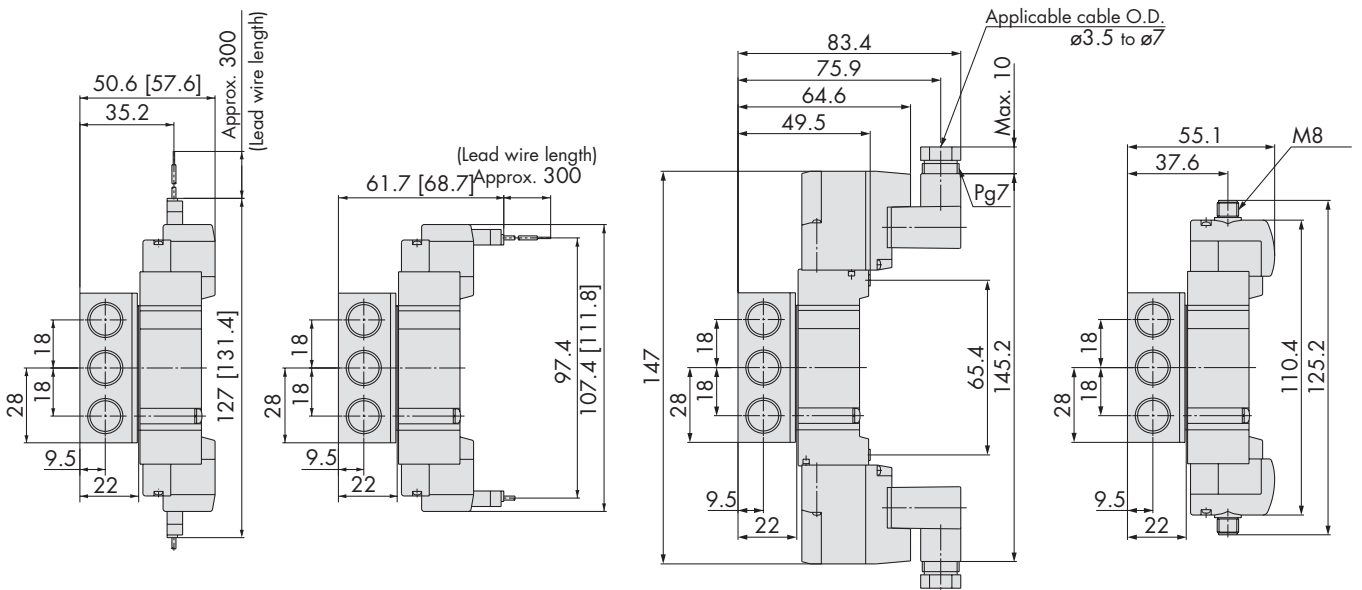


L plug connector (L): SY5240(R)-□L□□-02□-Q

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

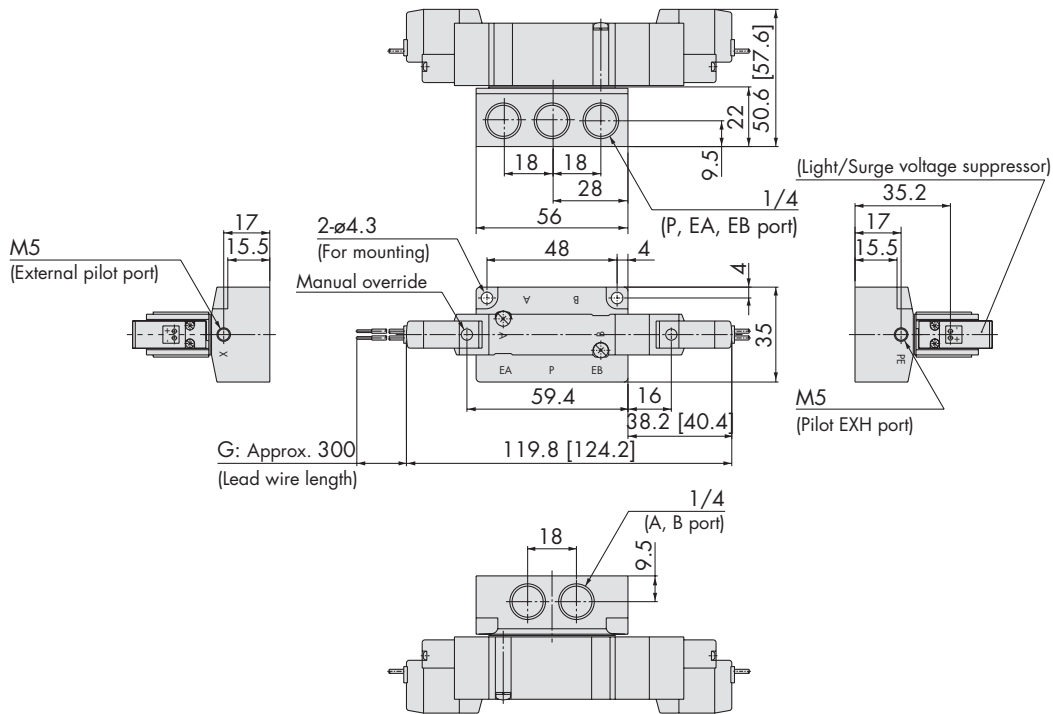
DIN terminal (D): SY5240(R)-□D□□-02□-Q

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



Dimensions: Series SY5000

3 position closed centre/exhaust centre/pressure centre  
Grommet (G): SY5 $\frac{3}{5}$ 40(R)-□G□□-02□-Q

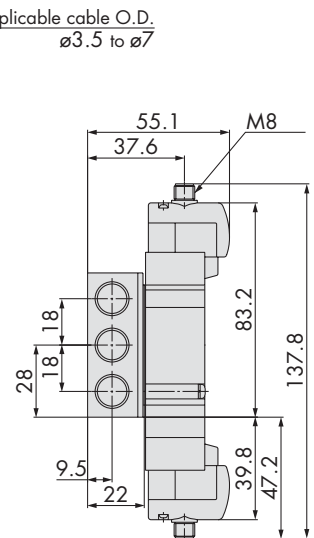
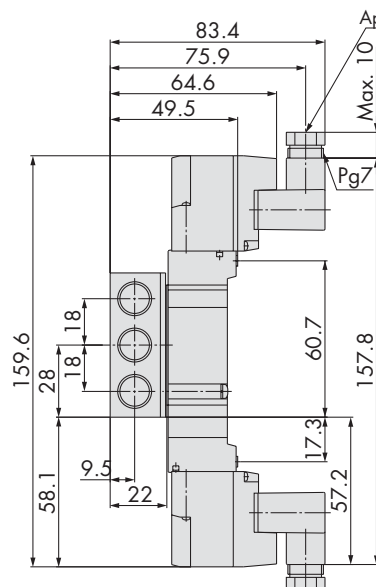
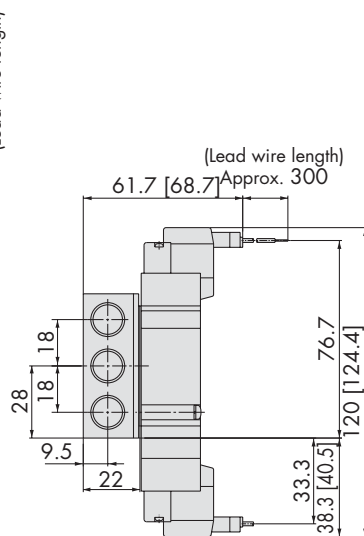
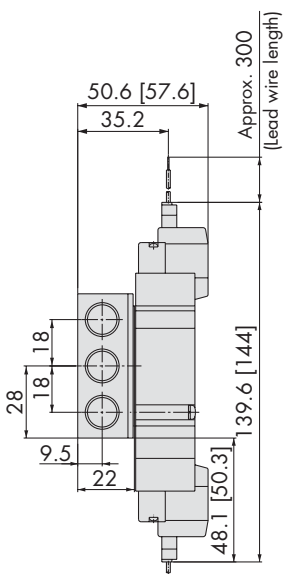


L plug connector (L):  
SY5 $\frac{3}{5}$ 40(R)-□L□□-02□-Q

M plug connector (M):  
SY5 $\frac{3}{5}$ 40(R)-□M□□-02□-Q

DIN terminal (D):  
SY5 $\frac{3}{5}$ 40(R)-□D□□-02□-Q

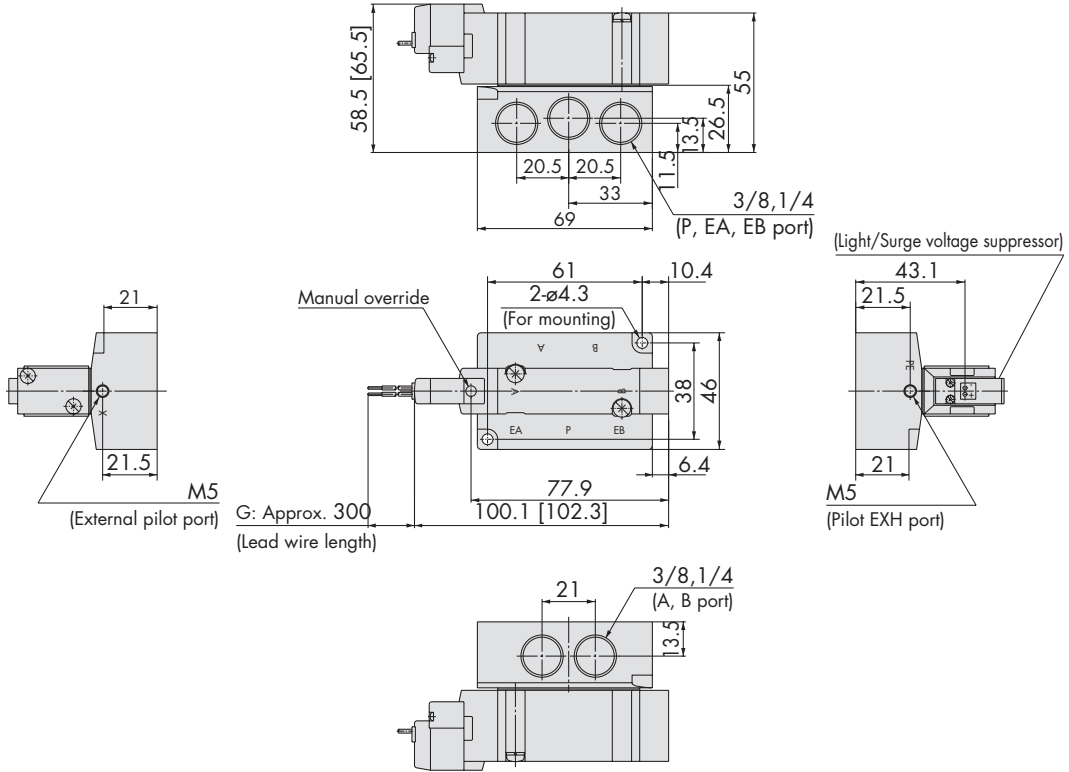
M8 connector (WO):  
SY5 $\frac{3}{5}$ 40(R)-□WO□□-02□-Q



Dimensions: Series SY7000

2 position single

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

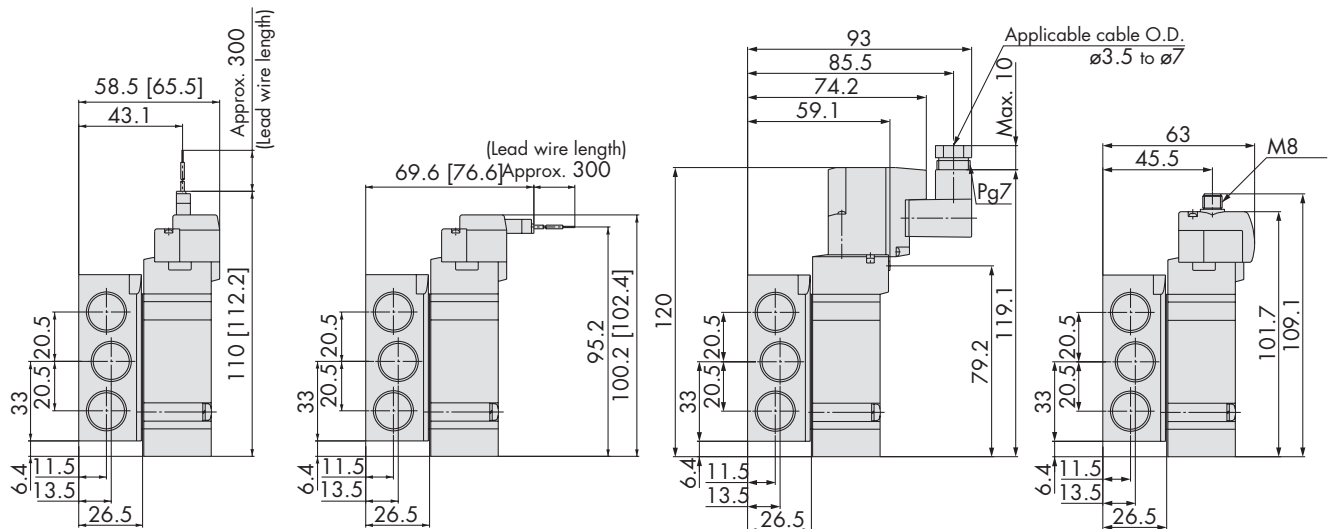


L plug connector (L):  
SY7140(R)-□L□□- $\frac{02}{03}$ □-Q

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

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

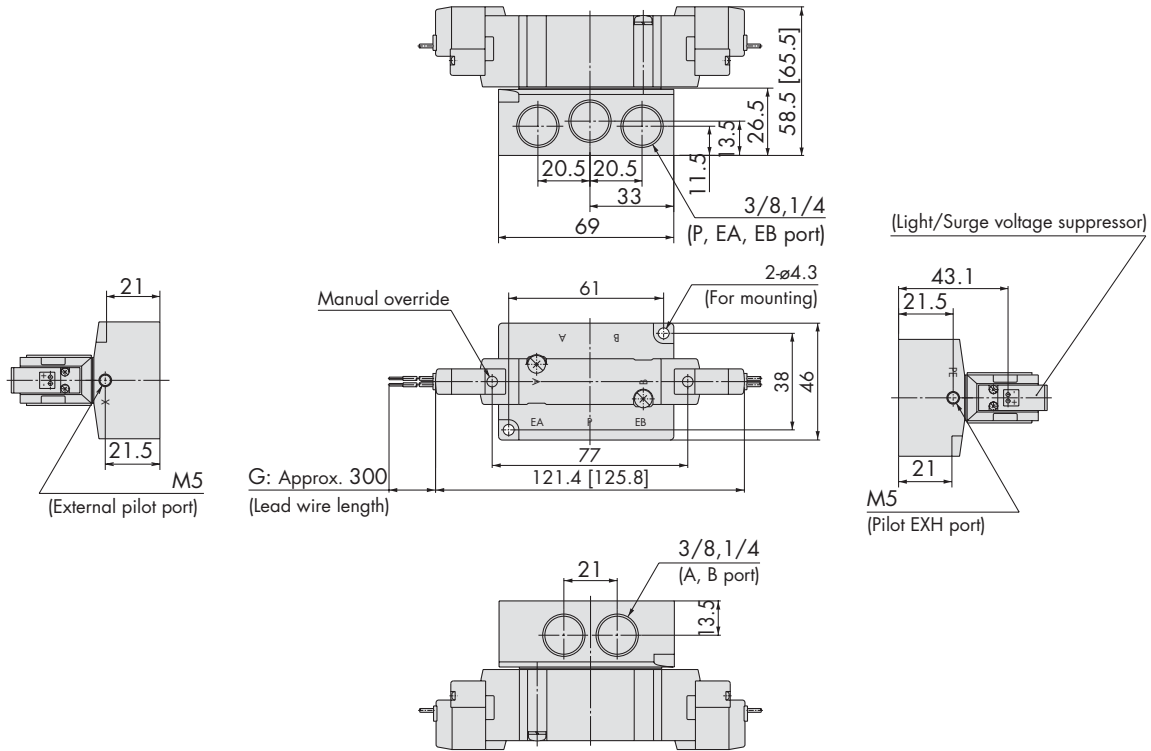
M8 connector (WO):  
SY7140(R)-□WO□□- $\frac{02}{03}$ □-Q



Dimensions: Series SY7000

2 position double

Grommet (G): SY7240(R)-□G□□-0<sub>2</sub>□□-Q

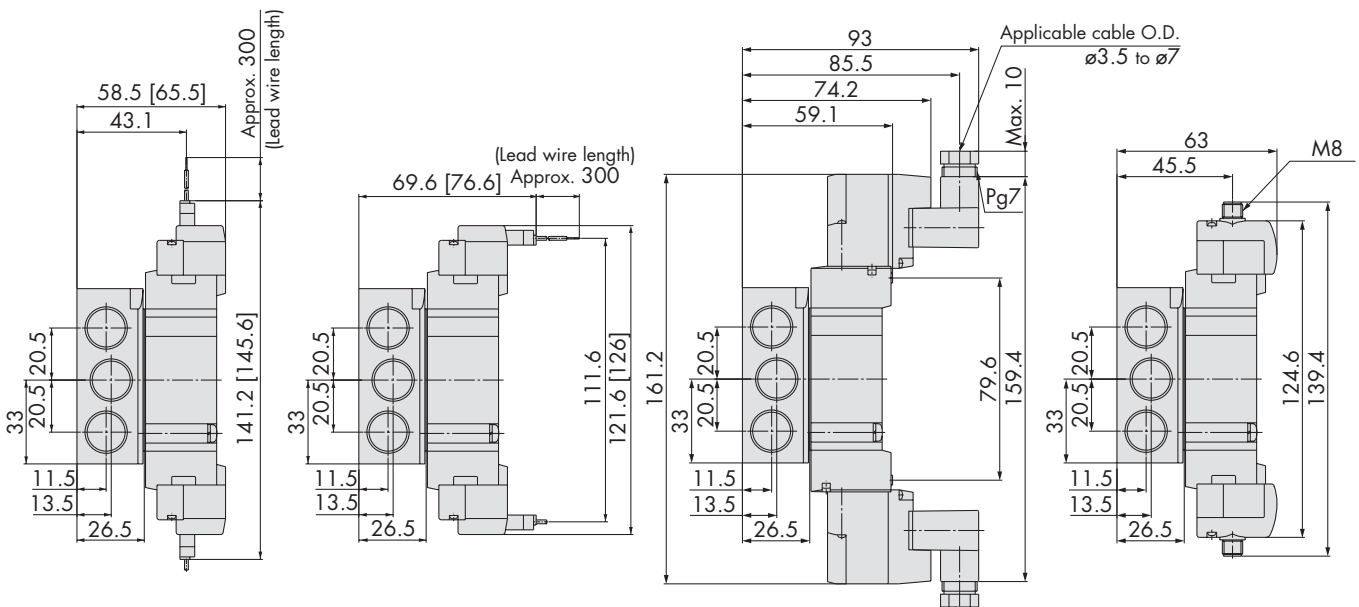


L plug connector: L  
SY7240(R)-□L□□-0<sub>2</sub>□□-Q

M plug connector: M  
SY7240(R)-□M□□-0<sub>2</sub>□□-Q

DIN terminal (D):  
SY7240(R)-□D□□-0<sub>2</sub>□□-Q

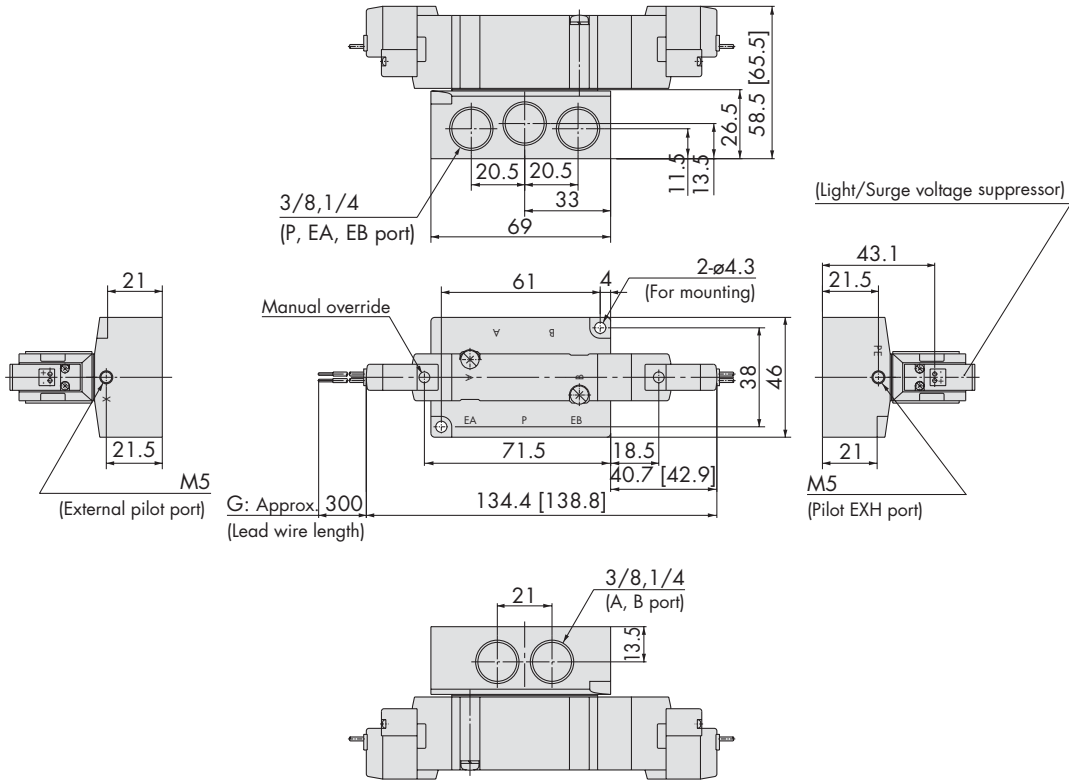
M8 connector (WO):  
SY7240(R)-□WO□□-0<sub>2</sub>□□-Q



Dimensions: Series SY7000

3 position closed centre/exhaust centre/pressure centre

Grommet (G): SY7<sup>3</sup>/<sub>5</sub>40(R)-□G□□-0<sup>2</sup>/<sub>3</sub>□-Q

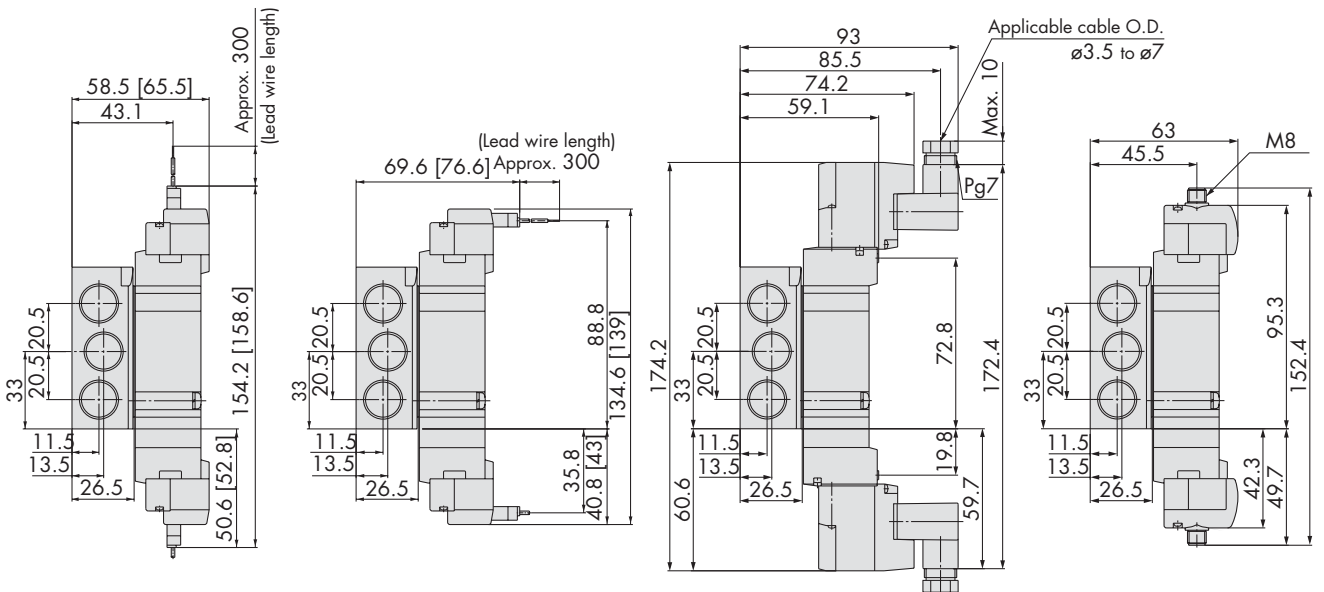


L plug connector: L  
SY7<sup>3</sup>/<sub>5</sub>40(R)-□L□□-0<sup>2</sup>/<sub>3</sub>□-Q

M plug connector: M  
SY7<sup>3</sup>/<sub>5</sub>40(R)-□M□□-0<sup>2</sup>/<sub>3</sub>□-Q

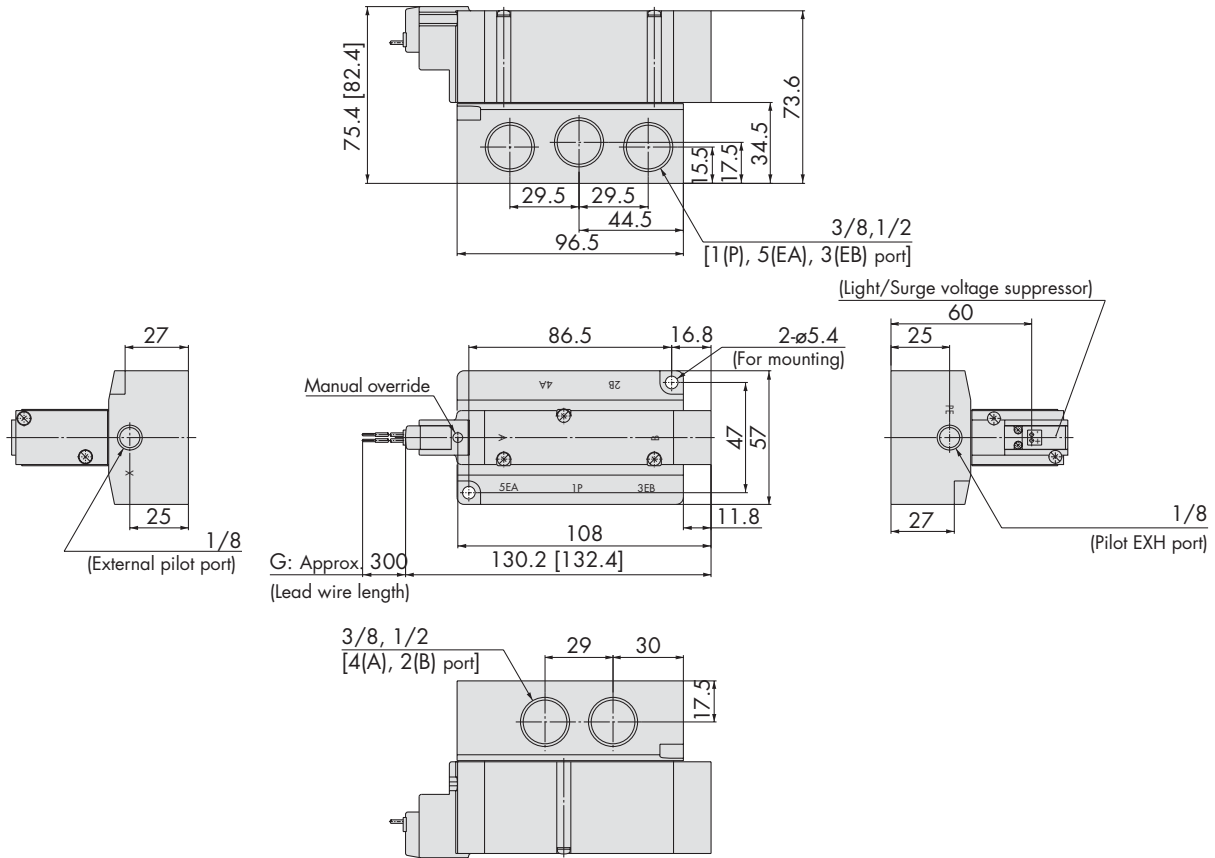
DIN terminal (D):  
SY7<sup>3</sup>/<sub>5</sub>40(R)-□D□□-0<sup>2</sup>/<sub>3</sub>□-Q

M8 connector (WO):  
SY7<sup>3</sup>/<sub>5</sub>40(R)-□WO□□-0<sup>2</sup>/<sub>3</sub>□-Q



Dimensions: Series SY9000

2 position single  
Grommet (G): SY9140-□G□□-<sup>03</sup>/<sub>04</sub>□-Q

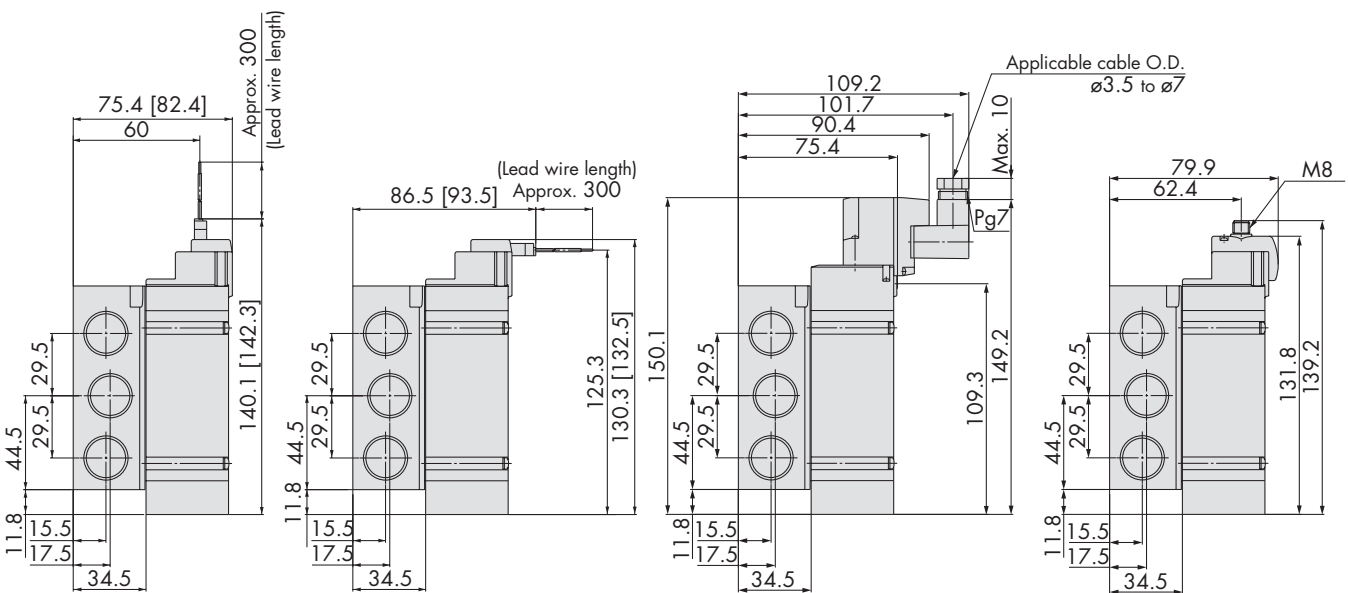


L plug connector (L):  
SY9140(R)-□L□□-<sup>03</sup>/<sub>04</sub>□-Q

M plug connector (M):  
SY9140(R)-□M□□-<sup>03</sup>/<sub>04</sub>□-Q

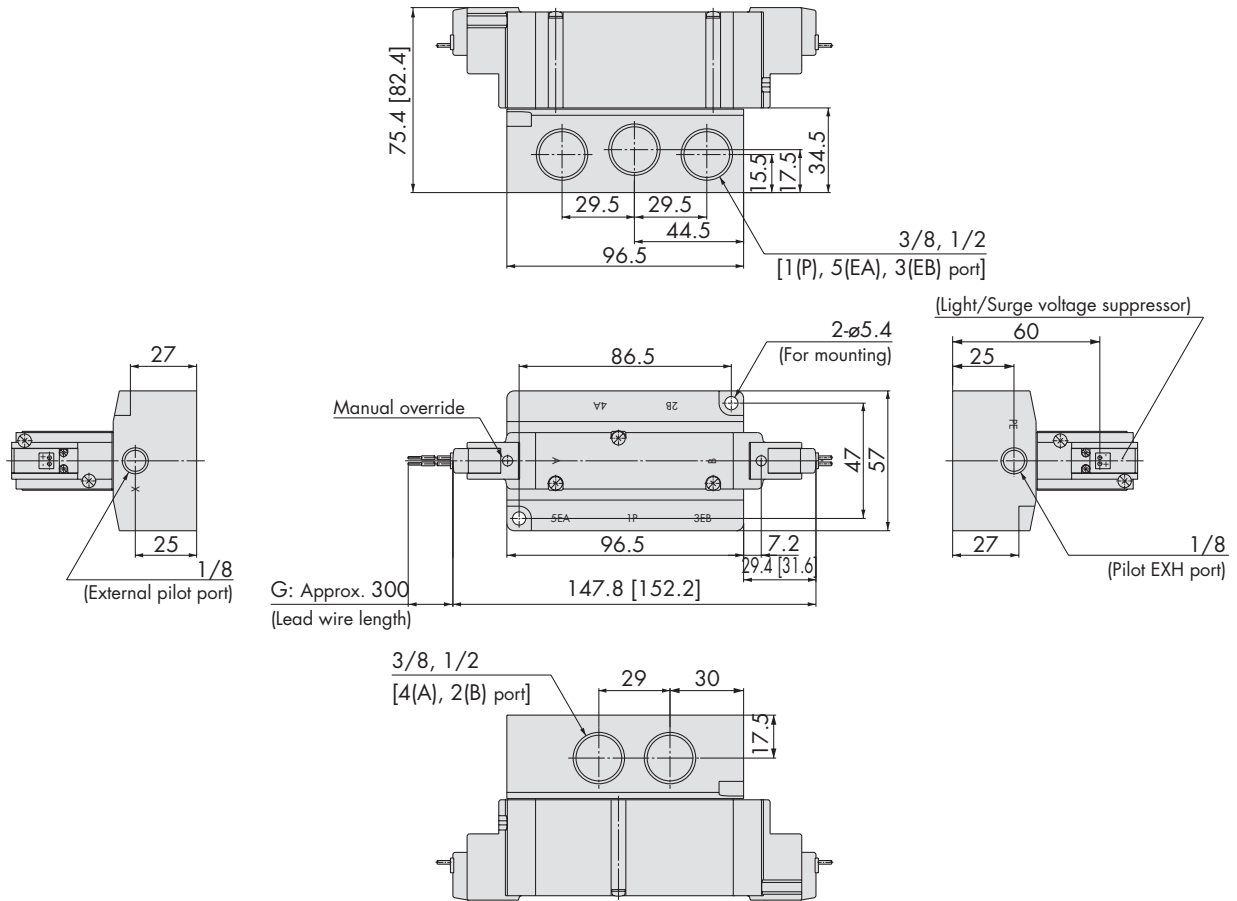
DIN terminal (D):  
SY9140(R)-□D□□-<sup>03</sup>/<sub>04</sub>□-Q

M8 connector (WO):  
SY9140(R)-□WO□□-<sup>03</sup>/<sub>04</sub>□-Q



Dimensions: Series SY9000

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

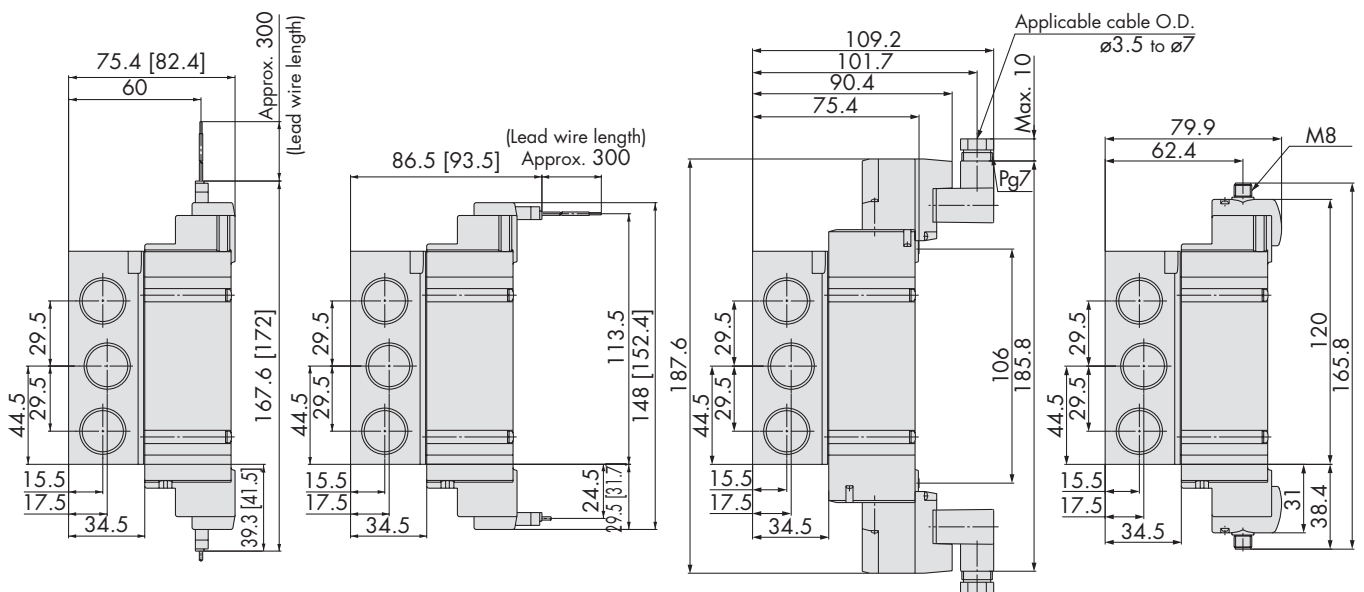


L plug connector (L):  
SY9240(R)-□L□□-03□-Q

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

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

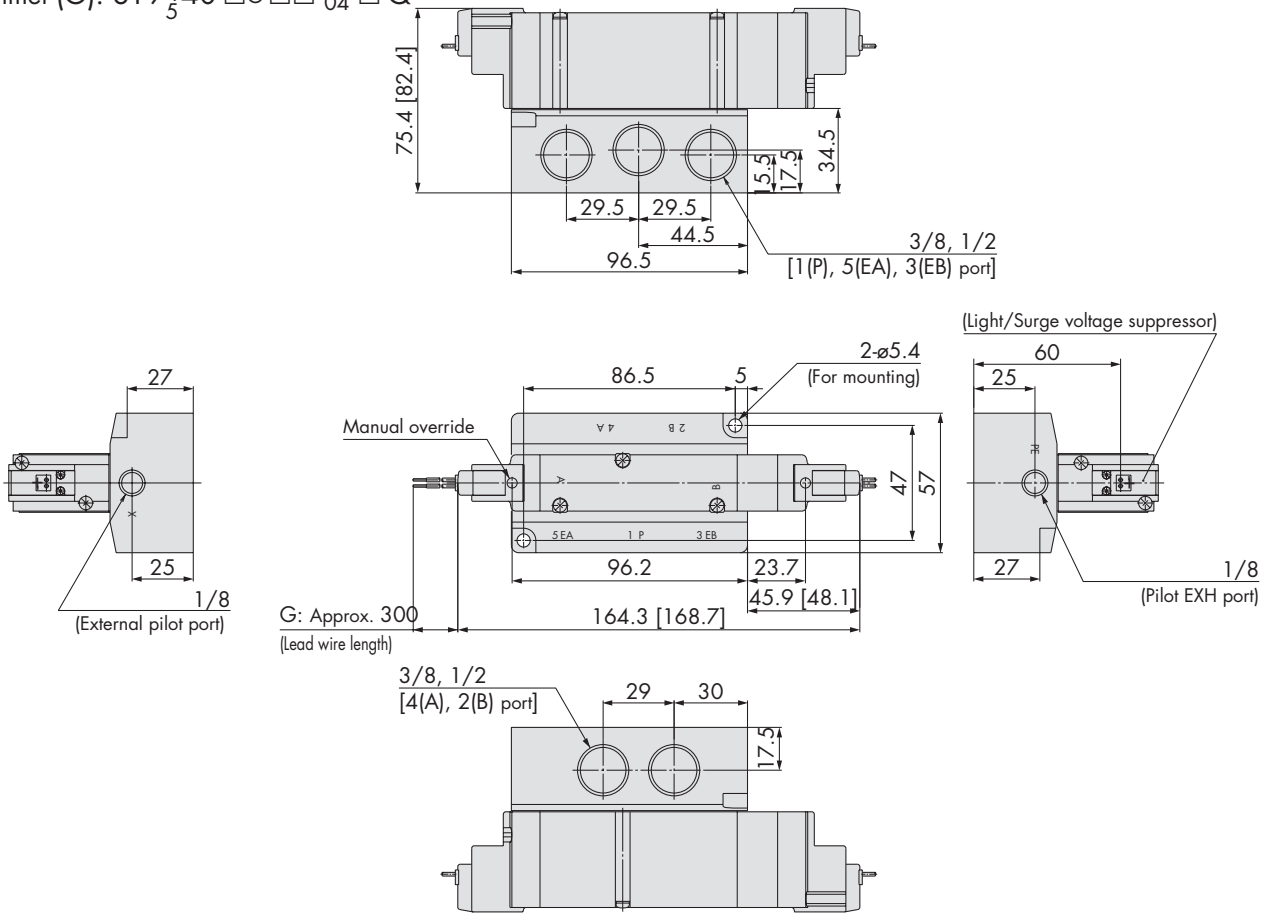
M8 connector (WO):  
SY9240(R)-□WO□□-03□-Q



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

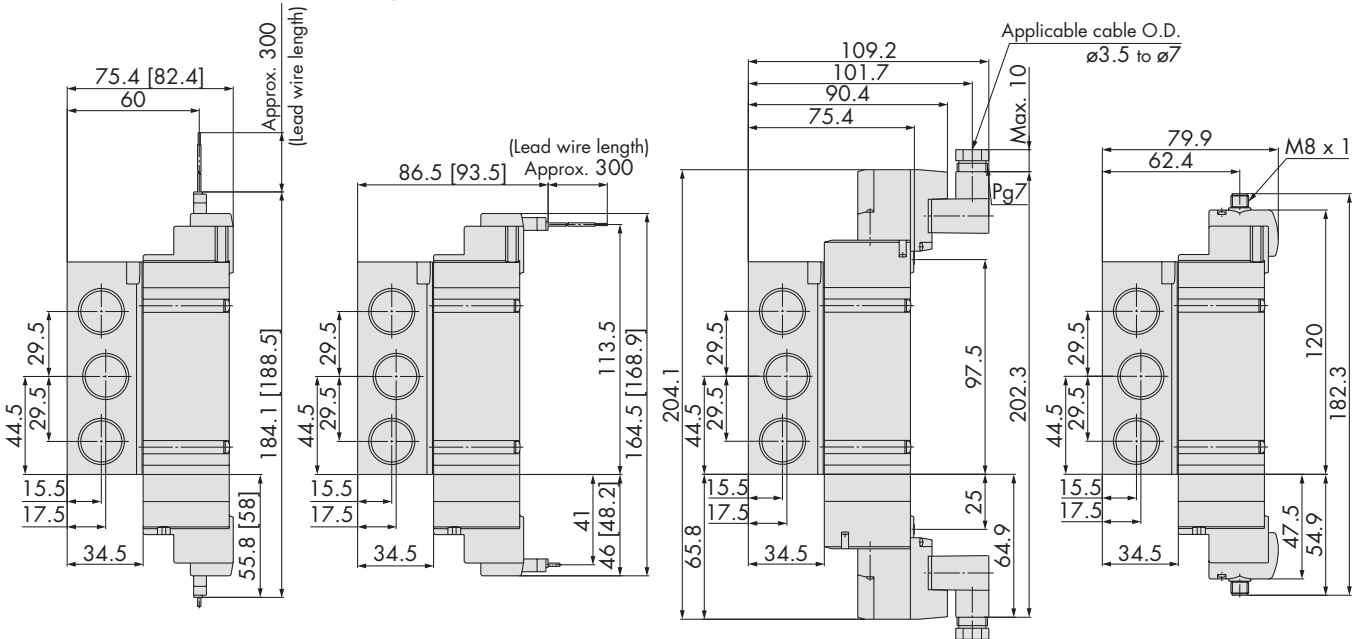


L plug connector (L):  
SY9<sup>3</sup>/<sub>5</sub>40(R)-□□□□-<sup>03</sup>/<sub>04</sub>□-Q

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

DIN terminal (D):  
SY9<sup>3</sup>/<sub>5</sub>40(R)-□D□□-<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
O1	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	SY3000
C6	One-touch fitting for ø6	SY5000
C8	One-touch fitting for ø8	SY5000

#### 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	2 to 10 stations
B	Both sides	2 to 20 stations

SUP/EXH block assembly specifications

Symbol	Specifications
Nil	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

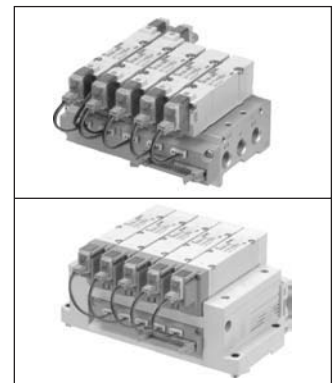
Symbol	Port size	Applicable series
O1	1/8	SY3000
O2	1/4	SY5000
O2	1/4	SY7000

One-touch fitting (Metric size)

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

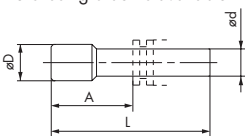
Series	Assembly part no.	Port size	t
SY3000	SY3000-39-2A-Q	M5	11
SY5000	SY5000-39-16FA-Q	1/8	15
SY7000	SY7000-39-16FA-Q	1/4	18
SY9000	SY9000-39-2FA-Q	1/4	20

- 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.

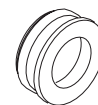


#### Dimensions

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)

Regulating port

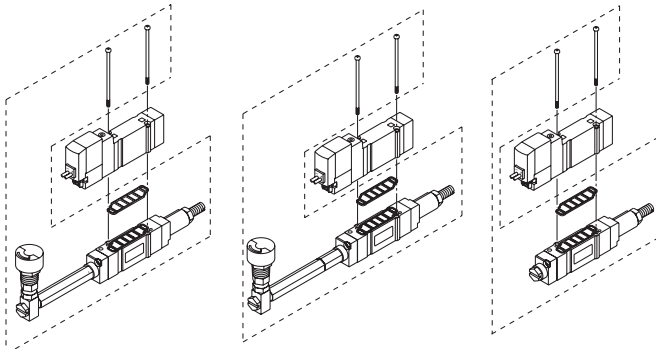
P	P port
A1	A port (P controlled type, A port regulation)
B1	B port (P controlled type, B port regulation)

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.

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

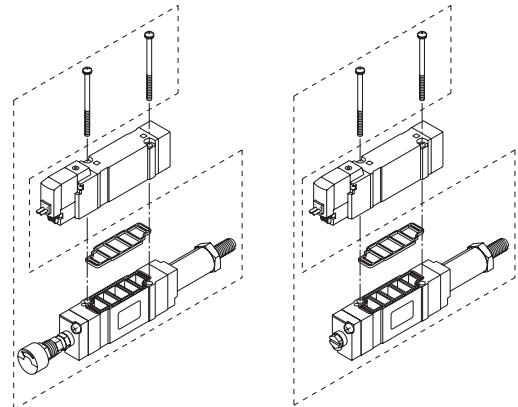
00	Pressure gauge (G15-10-01)
M1	Plug (M-5P)

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

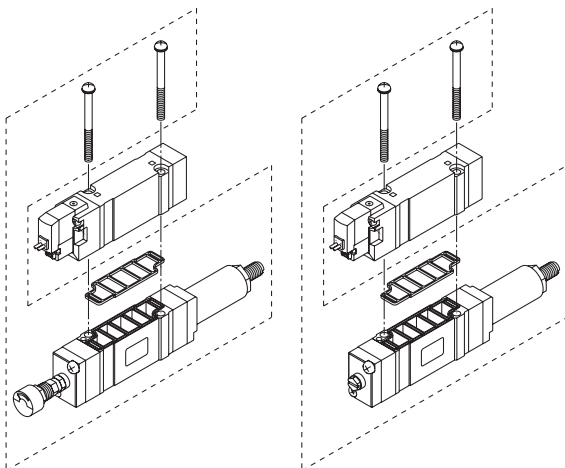
00	Pressure gauge (G15-10-01)
M1	Plug (M-5P)

Regulating port

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

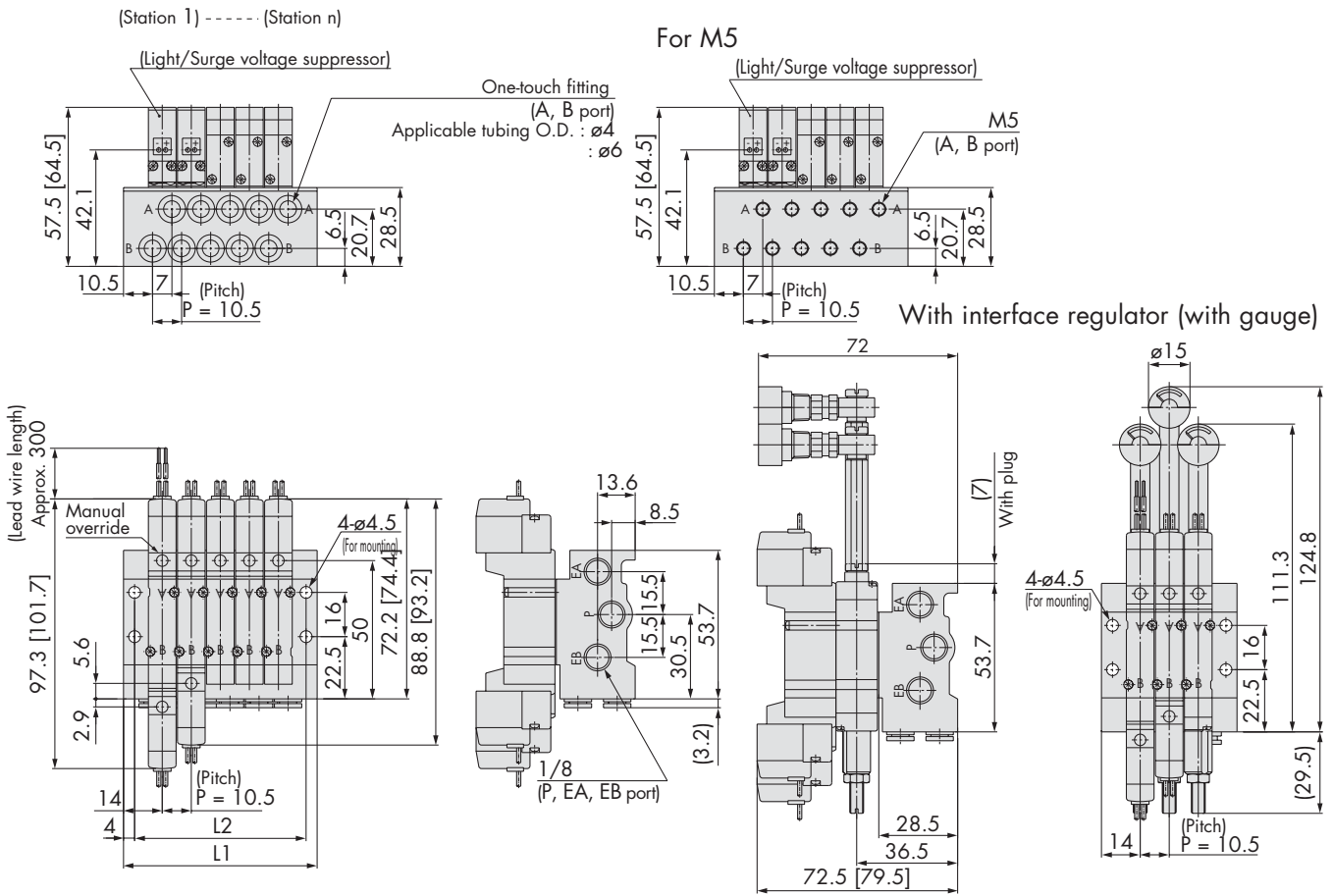
ARBY7000-00-□-2

ARBY7000-M1-□-2

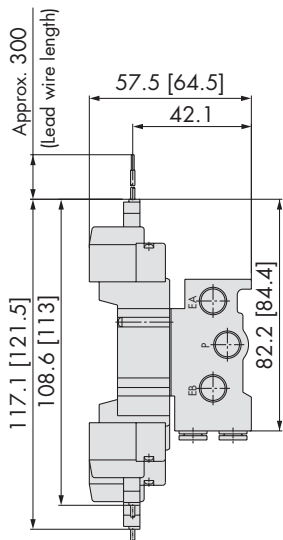


SY3000: SS5Y3-41 - Stations - M5, C4, C6 - 00F-Q

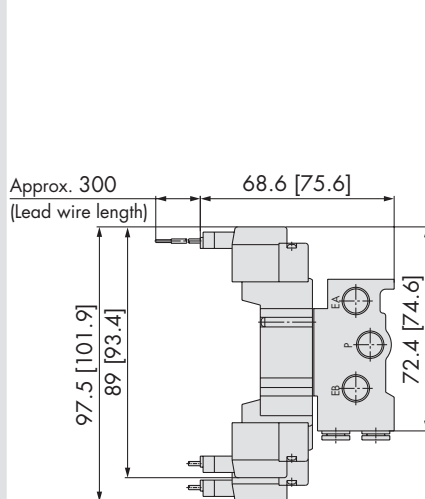
Grommet (G)



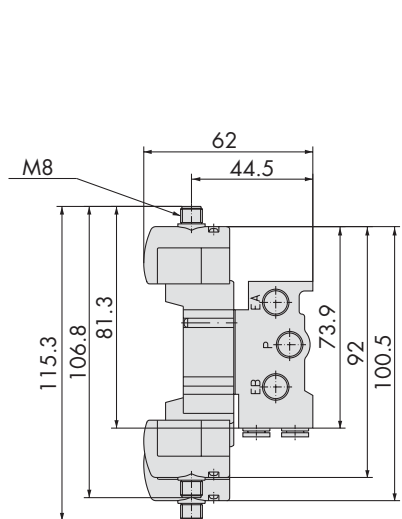
L plug connector (L)



M plug connector (M)



M8 connector (WO)

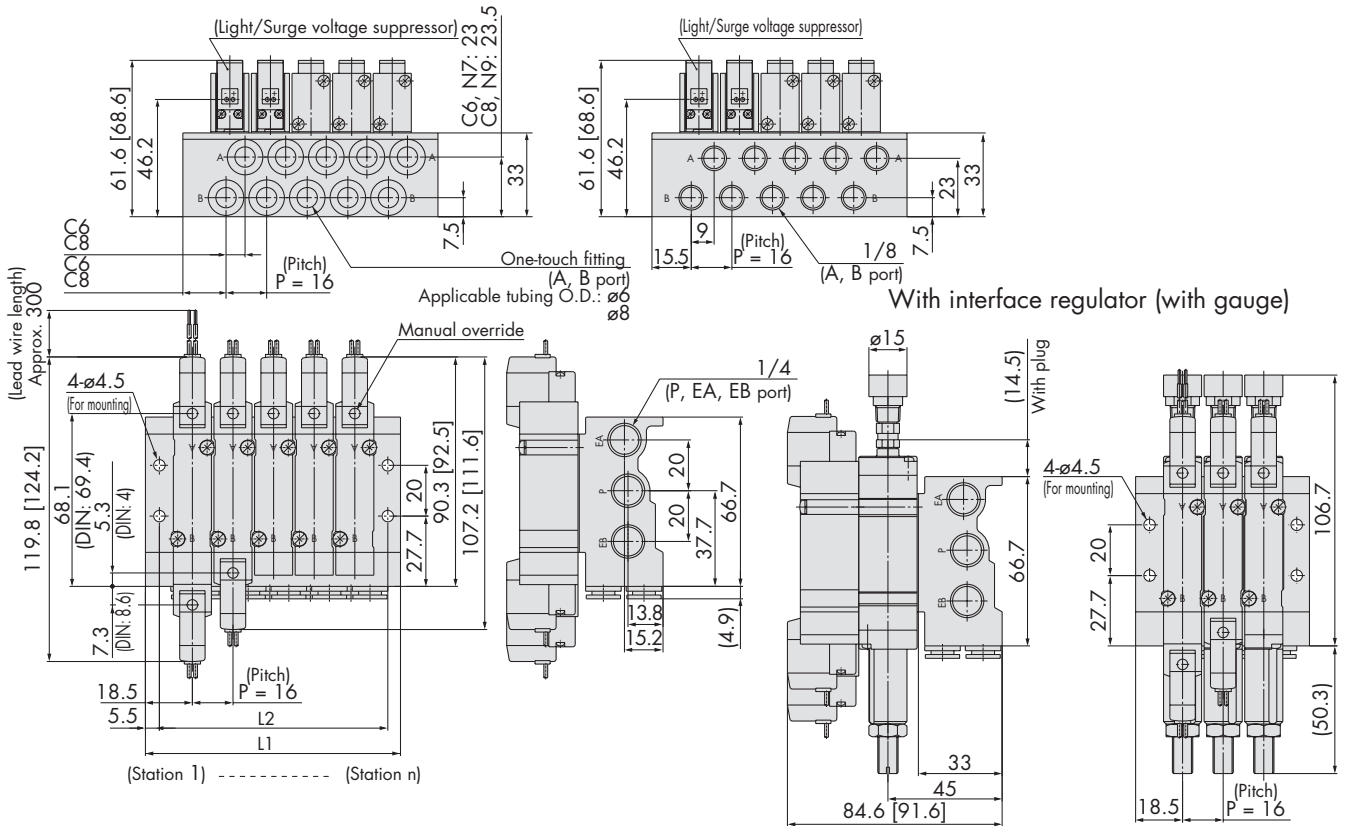


Stations n	2 stations	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 stations
L1	38.5	49	59.5	70	80.5	91	101.5	112	122.5	133	143.5	154	164.5	175	185.5	196	206.5	217	227.5
L2	30.5	41	51.5	62	72.5	83	93.5	104	114.5	125	135.5	146	156.5	167	177.5	188	198.5	209	219.5

SY5000: SS5Y5-41- Stations -01, C<sub>6</sub>, C<sub>8</sub>, N<sub>9</sub>: 23.5-00F-Q

Grommet (G)

For 1/8

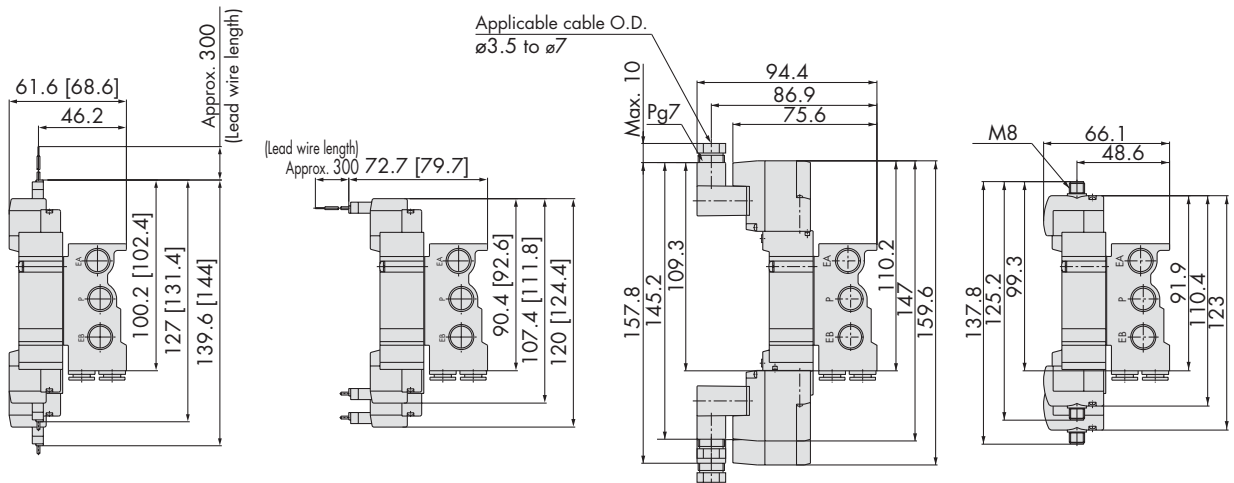


L plug connector: L

M plug connector: M

DIN terminal (D)

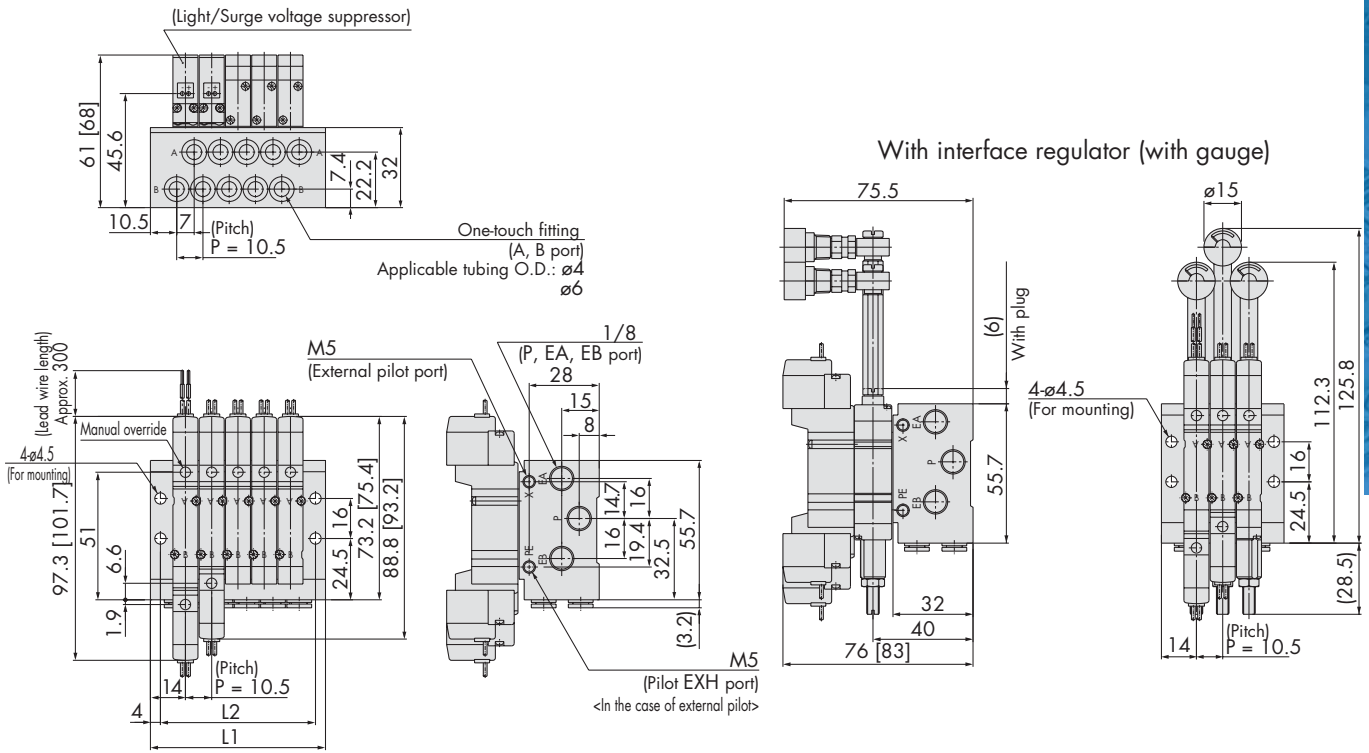
M8 connector (WO)



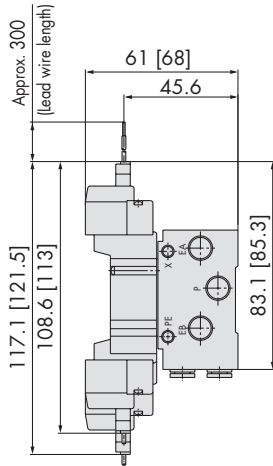
Stations n	2 stations	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 stations
L1	52.5	68.5	84.5	100.5	116.5	132.5	148.5	164.5	180.5	196.5	212.5	228.5	244.5	260.5	276.5	292.5	308.5	324.5	340.5
L2	42	58	74	90	106	122	138	154	170	186	202	218	234	250	266	282	298	314	330

SY3000: SS5Y3-42- Stations - C<sub>4</sub> C<sub>6</sub>-Q

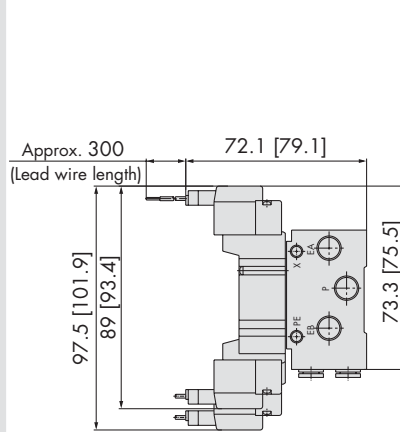
Grommet (G)



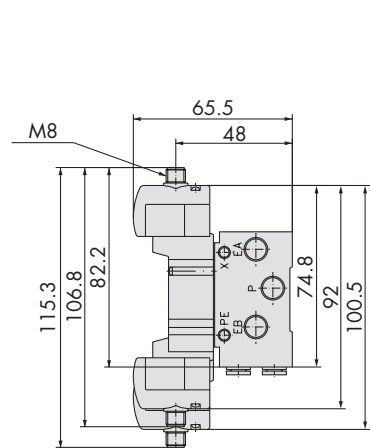
L plug connector (L)



M plug connector (M)



M8 connector (WO)



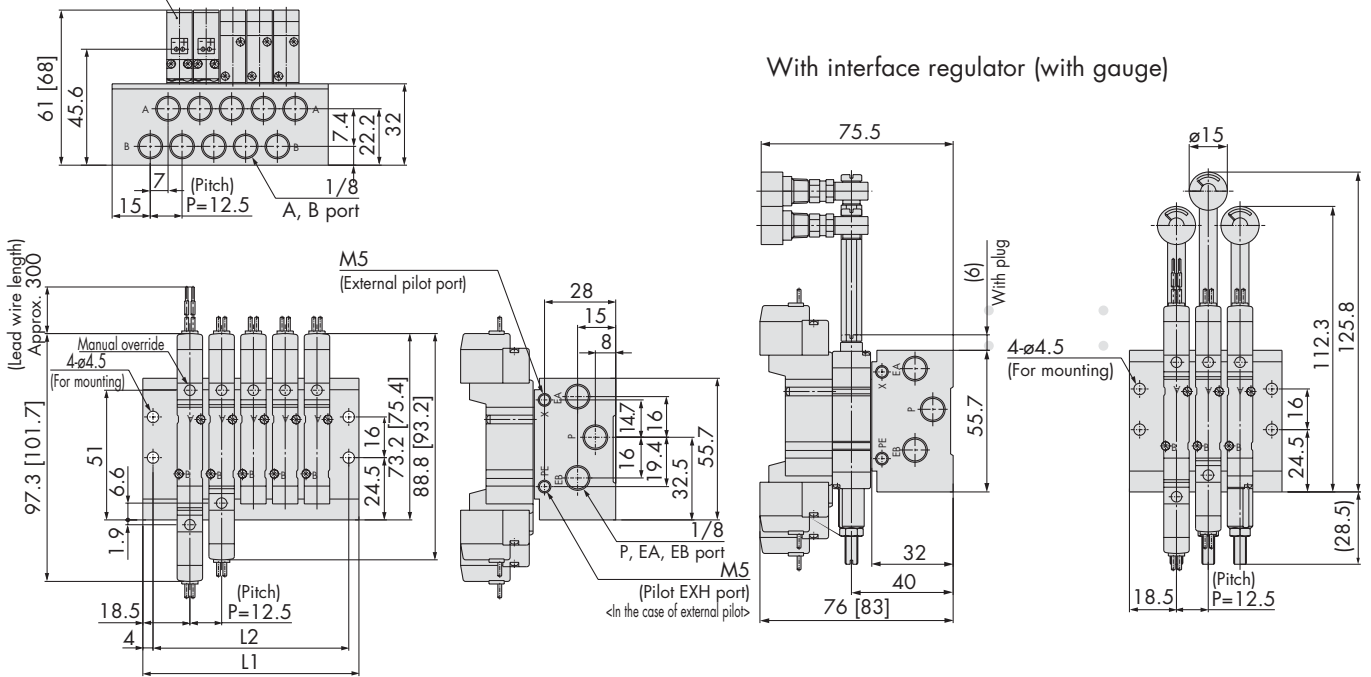
Stations n	2 stations	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 stations
L1	38.5	49	59.5	70	80.5	91	101.5	112	122.5	133	143.5	154	164.5	175	185.5	196	206.5	217	227.5
L2	30.5	41	51.5	62	72.5	83	93.5	104	114.5	125	135.5	146	156.5	167	177.5	188	198.5	209	219.5

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

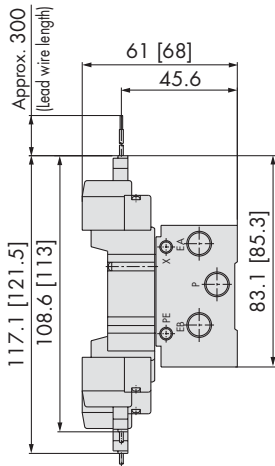
Grommet (G)

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

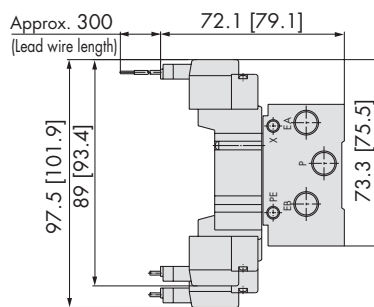
(Light/Surge voltage suppressor)



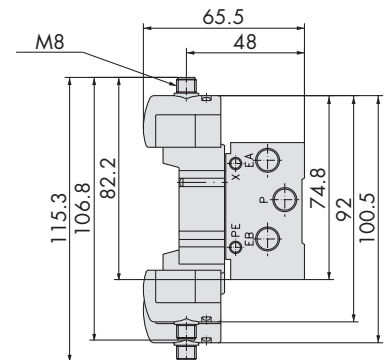
L plug connector (L)



M plug connector (M)



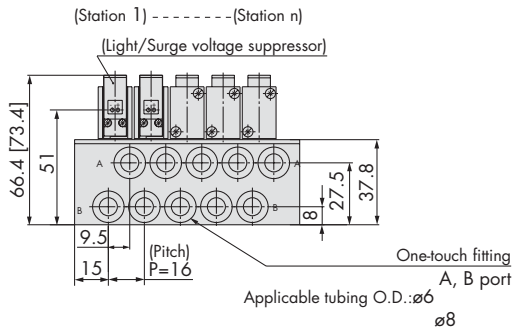
M8 connector (WO)



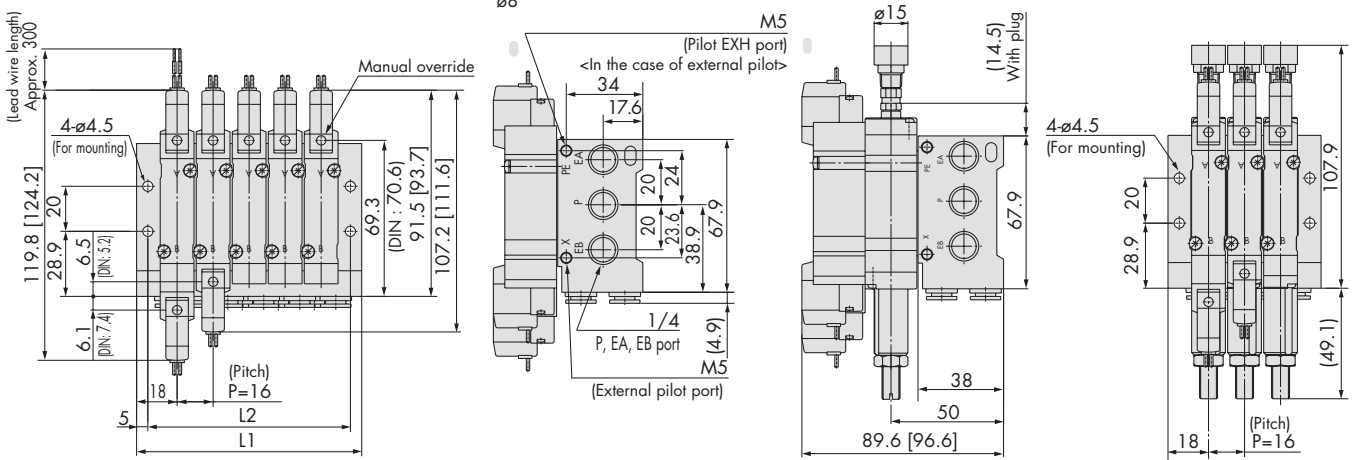
Stations n	2 stations	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 stations
L1	47.5	60	72.5	85	97.5	110	122.5	135	147.5	160	172.5	185	197.5	210	222.5	235	247.5	260	272.5
L2	39.5	52	64.5	77	89.5	102	114.5	127	139.5	152	164.5	177	189.5	202	214.5	227	239.5	252	264.5

SY5000: SS5Y5-42- Stations -  $\frac{C4}{C6}$   -00F-Q

Grommet (G)



With interface regulator (with gauge)

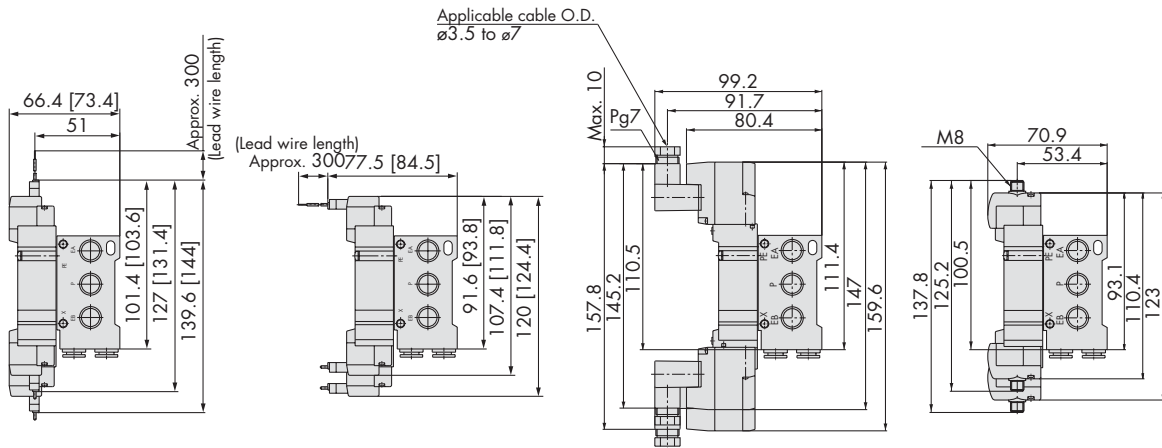


L plug connector (L)

M plug connector (M)

DIN terminal (D)

M8 connector (WO)

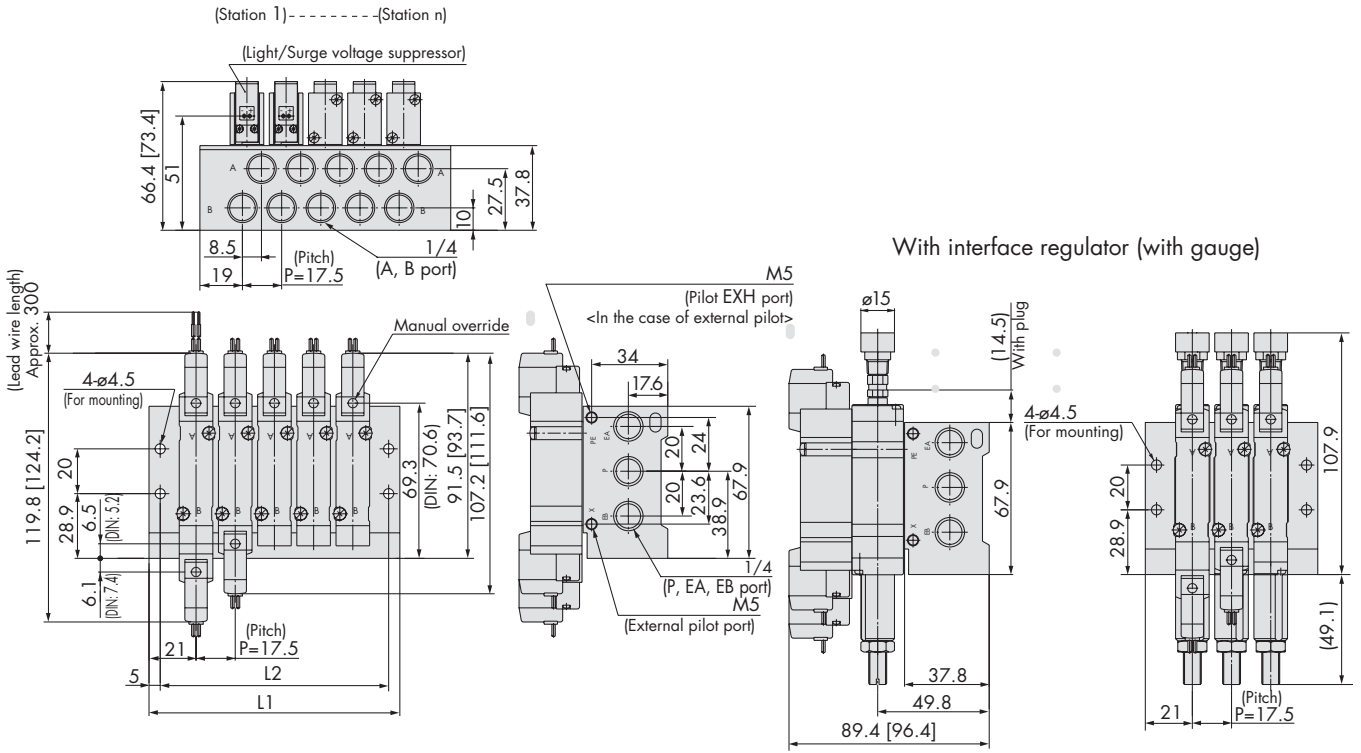


Stations n	2 stations	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 stations
L1	52	68	84	100	116	132	148	164	180	196	212	228	244	260	276	292	308	324	340
L2	42	58	74	90	106	122	138	154	170	186	202	218	234	250	266	282	298	314	330



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

Grommet (G)

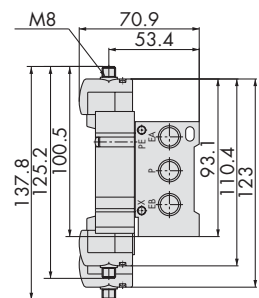
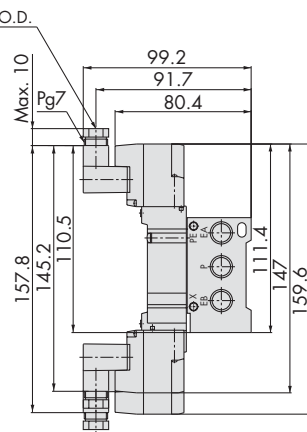
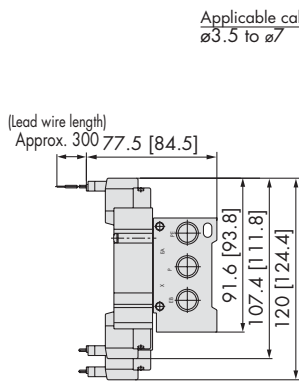
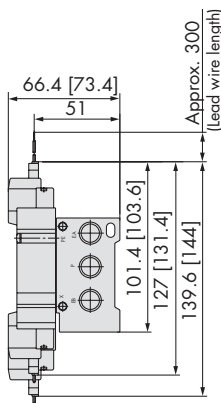


L plug connector (L)

M plug connector (M)

DIN terminal (D)

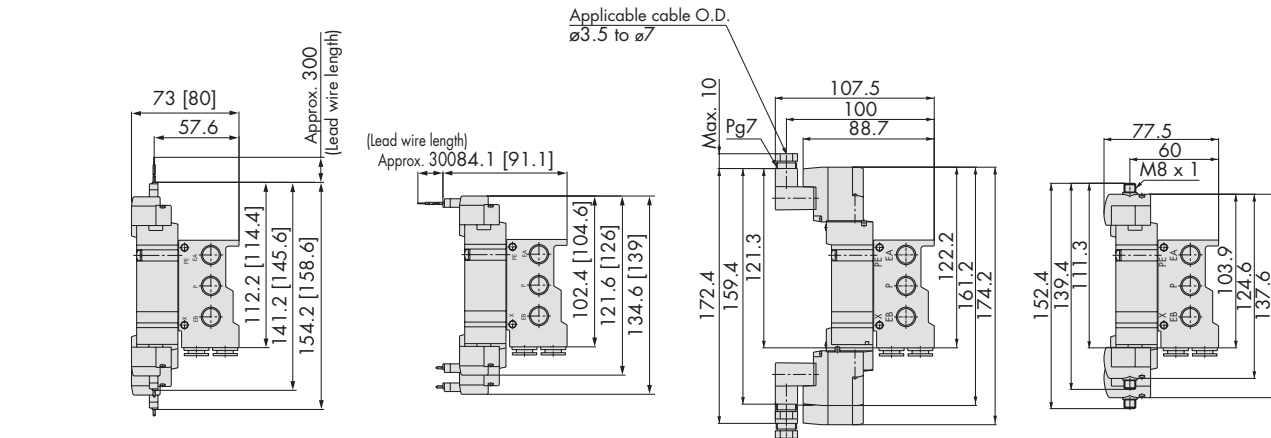
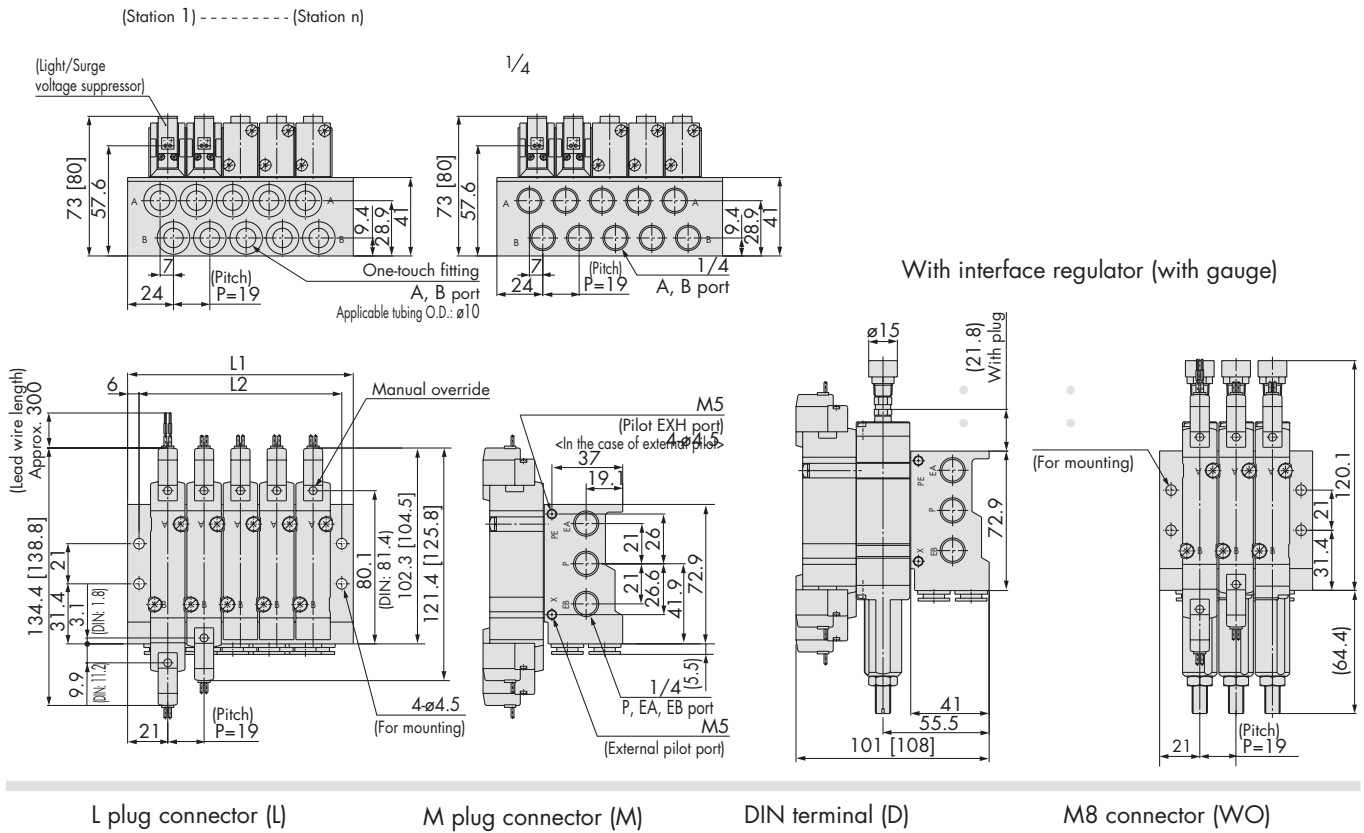
M8 connector (WO)



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)



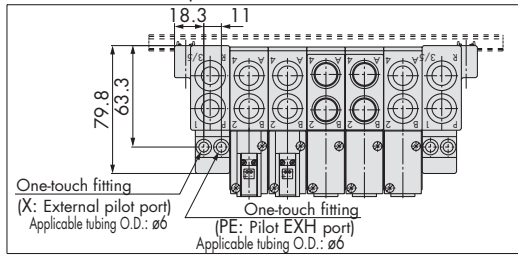
Stations n	2 stations	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 stations
L1	61	80	99	118	137	156	175	194	213	232	251	270	289	308	327	346	365	384	403
L2	49	68	87	106	125	144	163	182	201	220	239	258	277	296	315	334	353	372	391



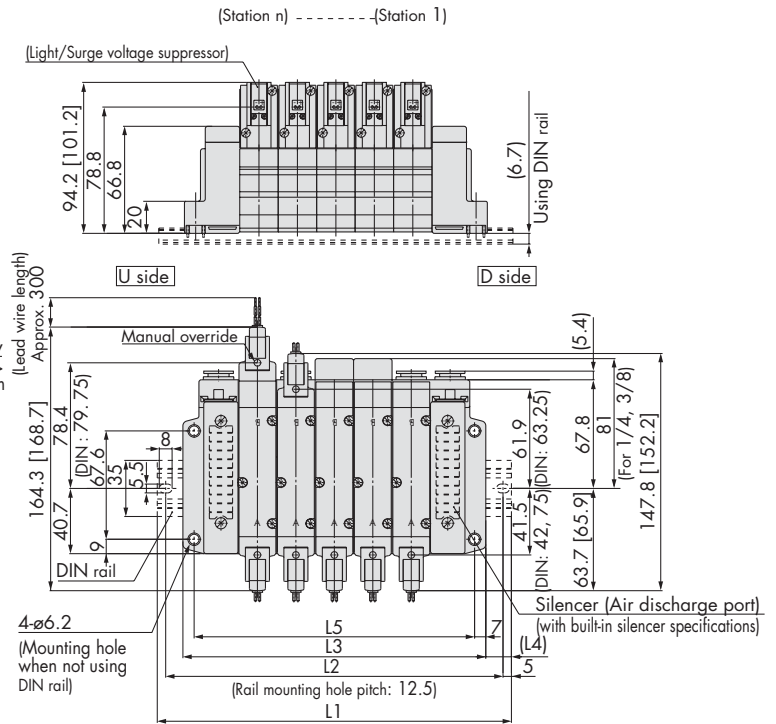
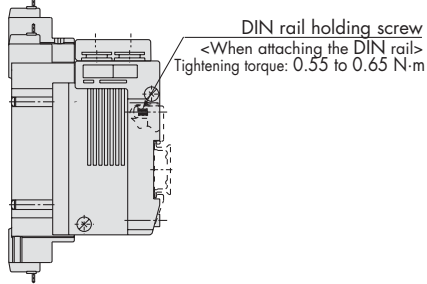
SY9000: SS5Y9-43- Stations  - <sup>02, C8</sup><sub>03, C10</sub>  (-D)-Q

Grommet (G)

With External Pilot Specifications

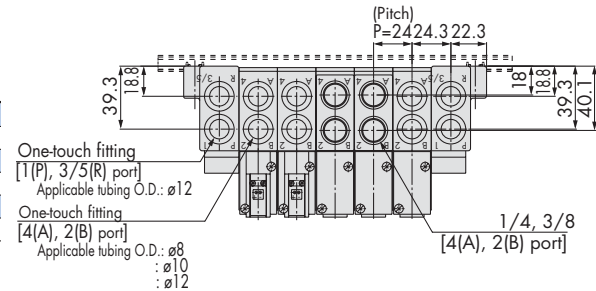


\* Air discharge port on the built-in silencer type and the external pilot's extracting position are in the B side (both sides).



Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	148	173	198	223	248	260.5	285.5	310.5	335.5
L2	137.5	162.5	187.5	212.5	237.5	250	275	300	325
L3	117	141	165	189	213	237	261	285	309
L4	15.5	16	16.5	17	17.5	12	12.5	13	13.5
L5	103	127	151	175	199	223	247	271	295

Stations n	11 stations	12	13	14	15	16	17	18	19	20 stations
L1	360.5	385.5	410.5	435.5	460.5	485.5	510.5	535.5	560.5	573
L2	350	375	400	425	450	475	500	525	550	562.5
L3	333	357	381	405	429	453	477	501	525	549
L4	14	14.5	15	15.5	16	16.5	17	17.5	18	12
L5	319	343	367	391	415	439	463	487	511	535

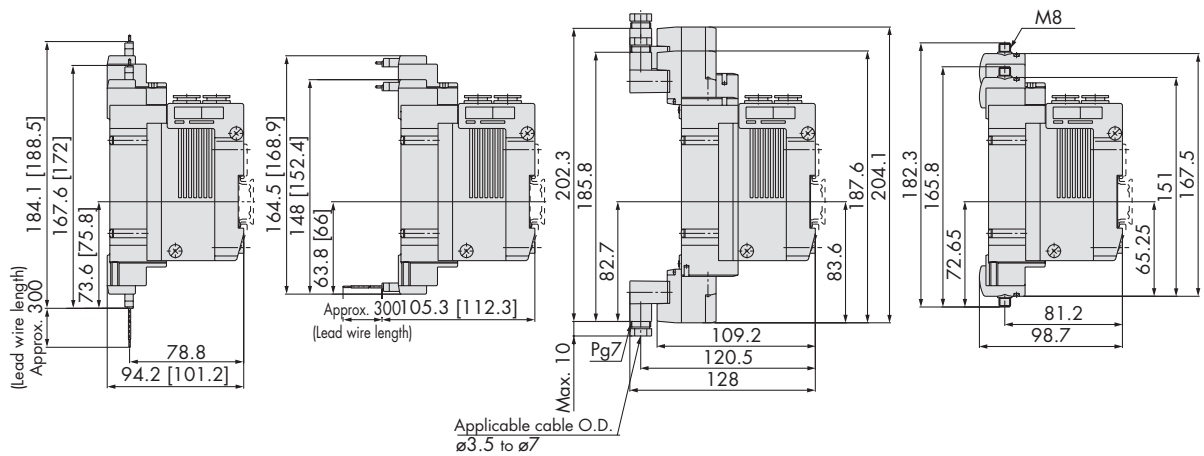


L plug connector (L)

M plug connector (M)

DIN terminal (D)

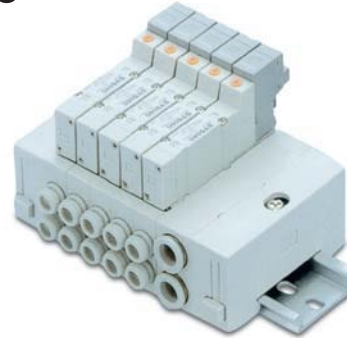
M8 connector (WO)



Valves

# 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

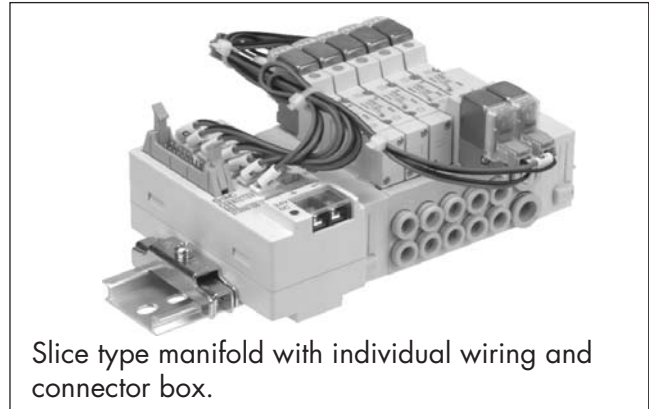
SUP/EXH block assembly  
mounting position

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

A, B port size  
One-touch fitting (Metric size)

Symbol	Port size	Applicable series
C4	One-touch fitting for $\varnothing 4$	SY3000
C6	One-touch fitting for $\varnothing 6$	
C4	One-touch fitting for $\varnothing 4$	SY5000
C6	One-touch fitting for $\varnothing 6$	
C8	One-touch fitting for $\varnothing 8$	

### 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 $\varnothing 8$ )    C10 (One-touch fitting for $\varnothing 10$ )
	A, B port	C4 (One-touch fitting for $\varnothing 4$ ) C6 (One-touch fitting for $\varnothing 6$ )    C4 (One-touch fitting for $\varnothing 4$ ) C6 (One-touch fitting for $\varnothing 6$ ) C8 (One-touch fitting for $\varnothing 8$ )

### 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

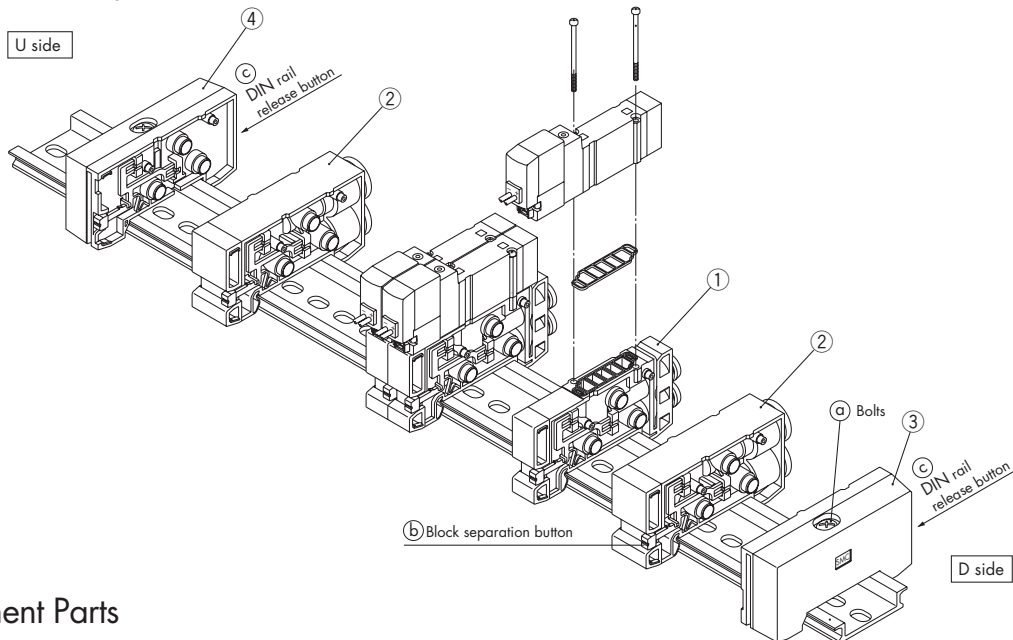
■ Blanking plate assembly

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

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

### DIN Rail Manifold Exploded View

Type 45

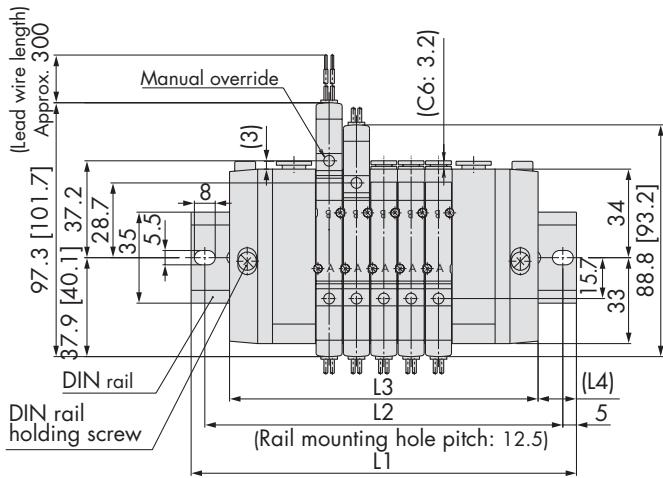
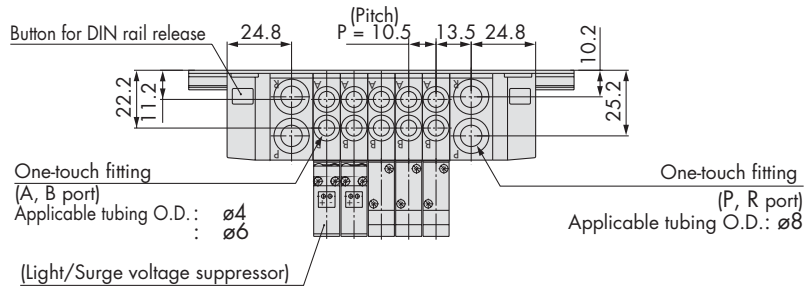


### Replacement Parts

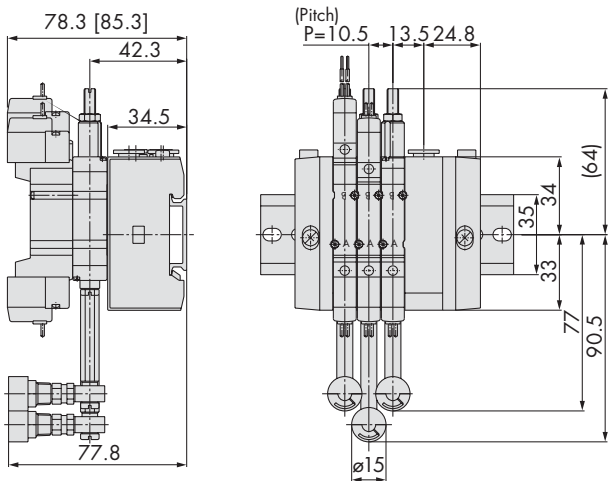
No.	Description	Part no.		Note
		SY3000	SY5000	
①	Manifold block assembly	SX3000-50-1A-□□-Q	SX5000-50-1A-□□-Q	SY3000 (Metric size) C4: With One-touch fitting for ø4 C6: With One-touch fitting for ø6 SY5000 (Metric size) C4: With One-touch fitting for ø4 C6: With One-touch fitting for ø6 C8: With One-touch fitting for ø8
②	SUP/EXH block assembly	SX3000-51-1A	SX3000-51-1A	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

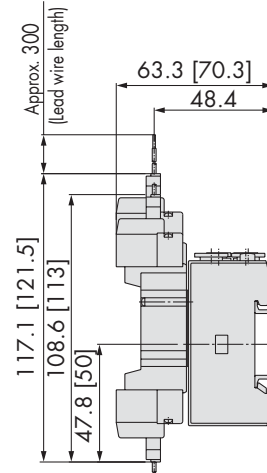
SS5Y3-45- Stations B-C<sub>6</sub>-Q (Both end supplies)



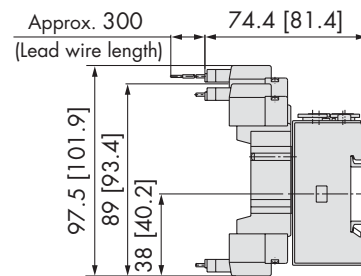
With interface regulator (with gauge)



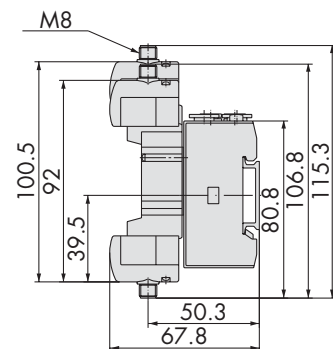
L plug connector



M plug connector



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

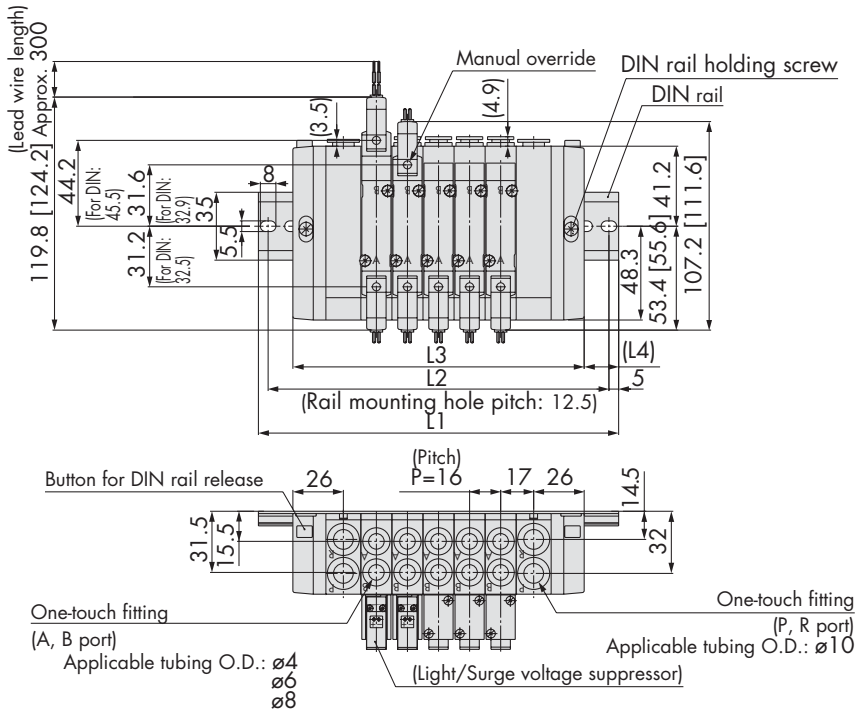
Stations n	11 stations	12	13	14	15	16	17	18	19	20 stations
L1	210.5	223	235.5	248	248	260.5	273	285.5	298	310.5
L2	200	212.5	225	237.5	237.5	250	262.5	275	287.5	300
L3	181.5	192	202.5	213	223.5	234	244.5	255	265.5	276
L4	14.5	15.5	16.5	17.5	12	13	14	15	16	17

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

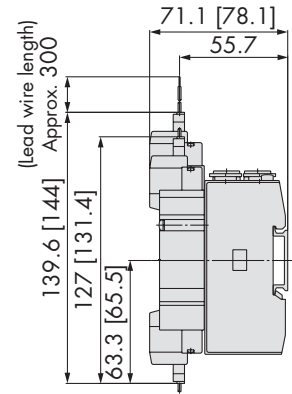
Note: This page shows the double supply type manifold. The U and D supply type is shorter. Apply the following corrections to the L1 and L4 dimensions.

Dimensions: Series SY5000

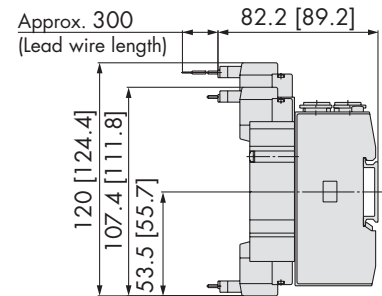
SS5Y3-45- Stations B- C4  
C8 Q (Both end supplies)



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

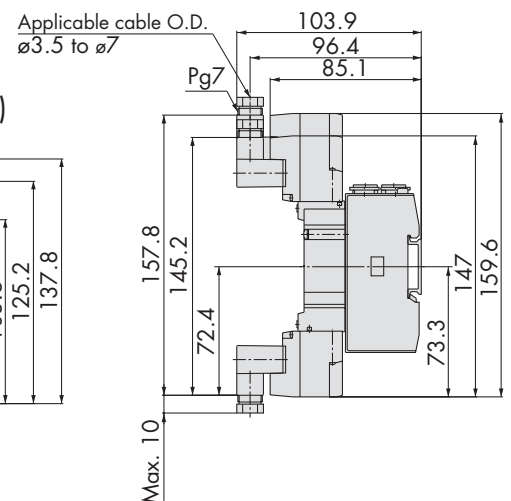
  

Stations n	11 stations	12	13	14	15	16	17	18	19	20 stations
L1	273	285.5	310.5	323	335.5	360.5	373	385.5	398	423
L2	262.5	275	300	312.5	325	350	362.5	375	387.5	412.5
L3	246	262	278	294	310	326	342	358	374	390
L4	13.5	11.5	16	14.5	12.5	17	15.5	13.5	12	16.5

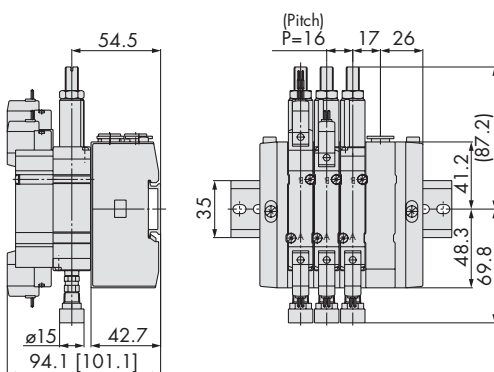
L1	-25mm
L2	-25mm
L3	-18mm
L4	-3.5mm

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.

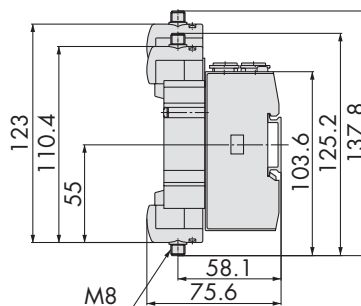
DIN terminal (D)



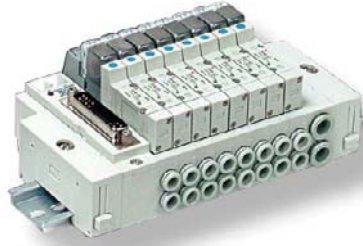
With interface regulator (with gauge)



M8 connector (WO)



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



## How to Order Manifold

25 pin D-Sub and Serial transmission types

**SS5Y 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
Nil	Internal Pilot standard
S	Internal 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	
C6	One-touch fitting for ø6	SY5000
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
SB	Mitsubishi Melsec M3	EX122-SMB1
SC	Omron Sysbus	EX122-SYA1
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

Nil	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	Side	
Port size	P, R port	C8 (One-touch fitting for ø8)
	A, B port	C10 (One-touch fitting for ø10)
Internal wiring	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)
Manifold base weight w (g)	SY3000	+COM (Type 45□), -COM (Type 45N□)
n: Stations	SY3000	2 to 10 stations: W = 26n + 172
[D-sub connector]	SY5000	11 to 20 stations: W = 26n + 199
		2 to 10 stations: W = 54n + 227
		11 to 20 stations: W = 52n + 264

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





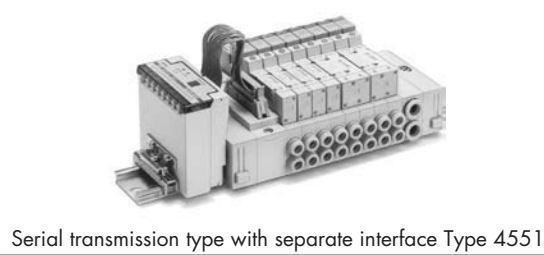
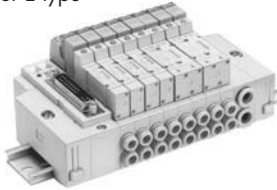
### Flow Characteristics

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

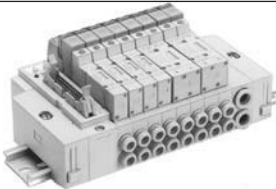
Note: Several other plug-in connector and terminal versions of pre wired type 45 manifolds are available. Please request further details from SMC if required.

PC connector E type



Serial transmission type with separate interface Type 4551

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

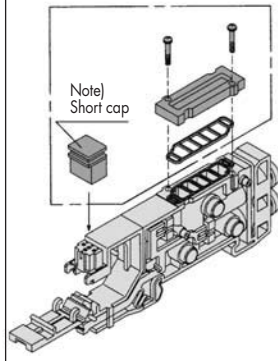


### Manifold Accessories

- Blanking plate assembly (including short cap)

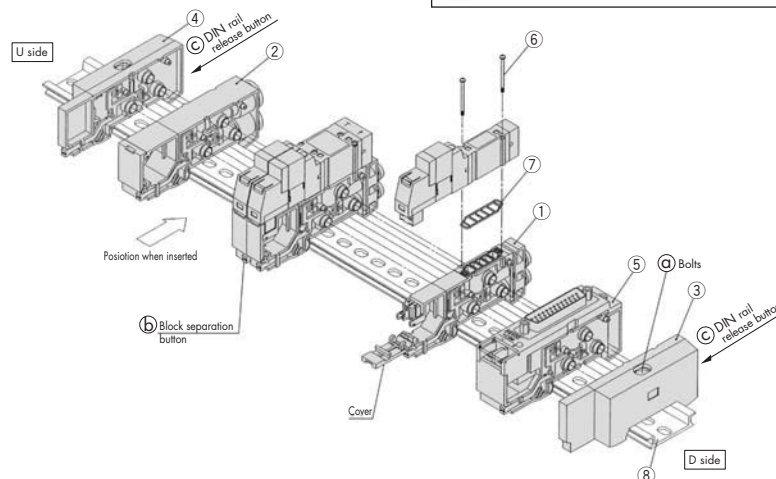
Series	Assembly part no.
SY3000	SX3000-75-2A-Q
SY5000	SX5000-76-2A-Q

- 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



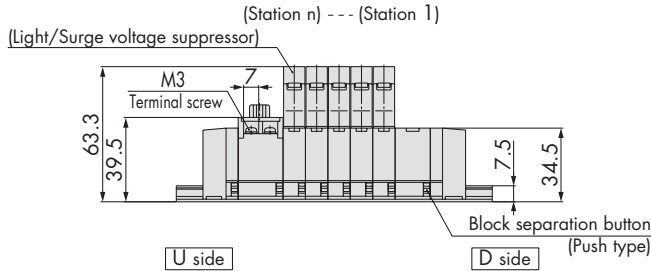
### Replacement Parts

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	SX3000-51-2A	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

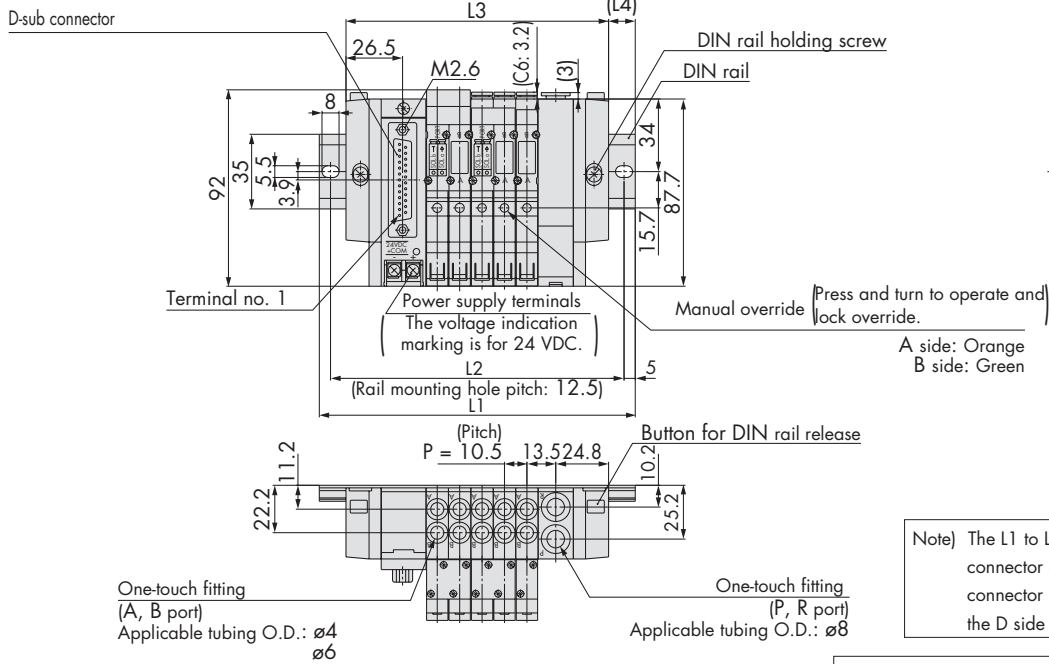
Note 1: For suitable parts for SI manifold, please contact SMC.

**SY3000: D-sub Connector/Plug-in**

**SS5Y3-45FU- Stations D-C<sub>6</sub><sup>4</sup>-Q (One side supply)**



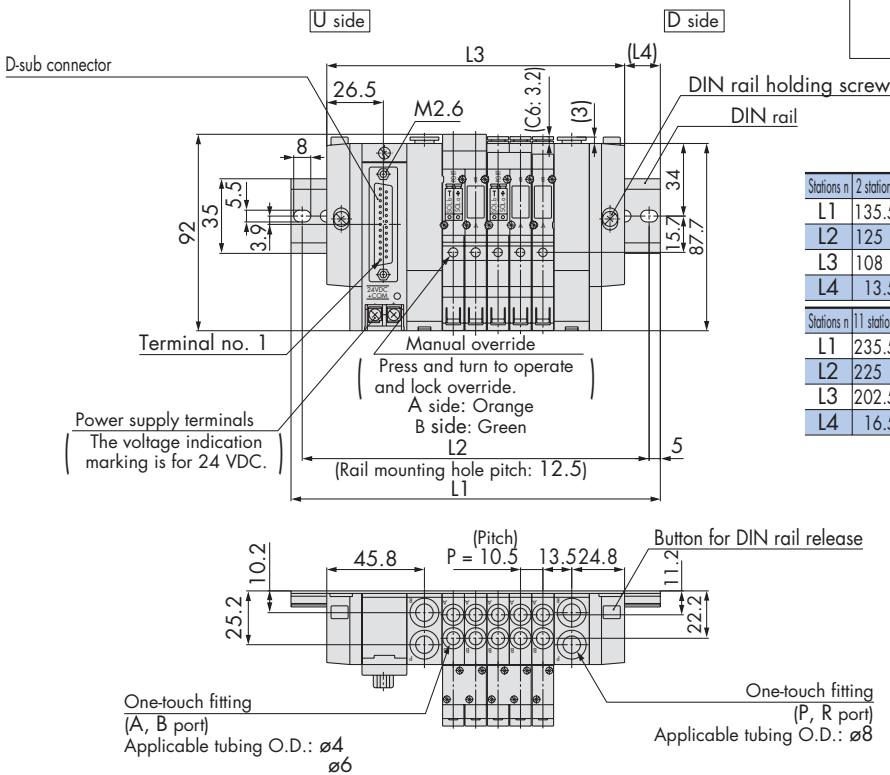
Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	123	135.5	148	148	160.5	173	185.5	198	210.5
L2	112.5	125	137.5	137.5	150	162.5	175	187.5	200
L3	91.5	102	112.5	123	133.5	144	154.5	165	175.5
L4	15.5	16.5	17.5	12.5	13.5	14.5	15.5	16.5	17.5



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<sub>6</sub><sup>4</sup>-Q (Both sides supply)**

Note) The L1 to L4 dimensions of SS5Y3-45FU- Stations B-C<sub>6</sub><sup>4</sup>-Q are identical to those of SS5Y3-45FU- Stations D-C<sub>6</sub><sup>4</sup>-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

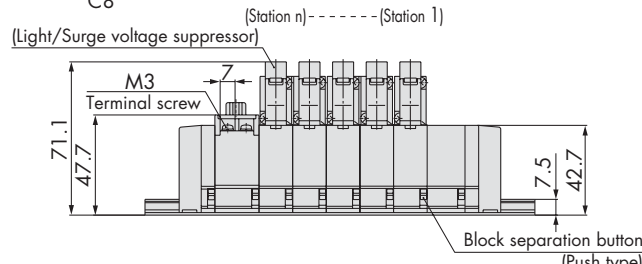
Stations n	11 stations	12	13	14	15	16	17	18	19	20 stations
L1	235.5	248	248	260.5	273	285.5	298	310.5	310.5	323
L2	225	237.5	237.5	250	262.5	275	287.5	300	300	312.5
L3	202.5	213	223.5	234	244.5	255	265.5	276	286.5	297
L4	16.5	17.5	12	13	14	15	16	17	12	13

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



SY5000: D-sub Connector/Plug-in

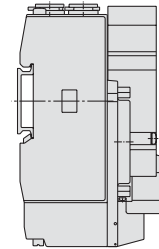
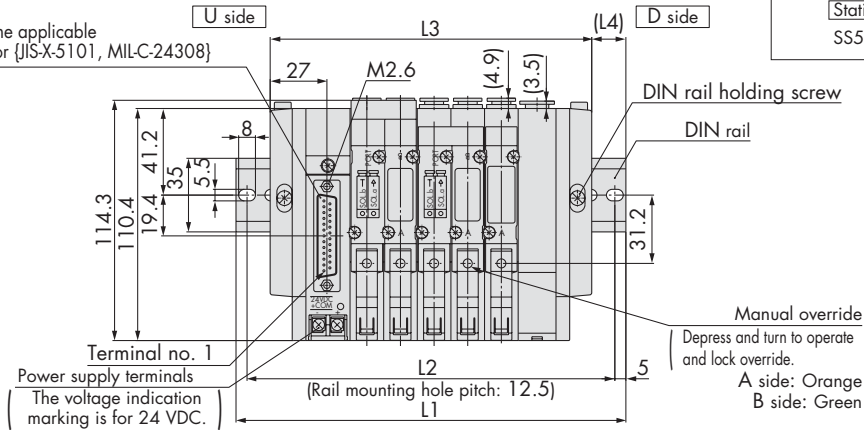
SS5Y5-45FU- Stations D-C<sub>4</sub>-C<sub>6</sub>-Q (One side supply)



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-C<sub>4</sub>-C<sub>6</sub>-Q are identical to those of SS5Y5-45FU- Stations D-C<sub>4</sub>-C<sub>6</sub>-Q

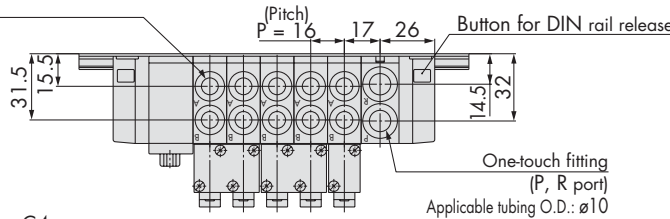
Equivalent to the applicable D-sub connector (JIS-X-5101, MIL-C-24308)



One-touch fitting

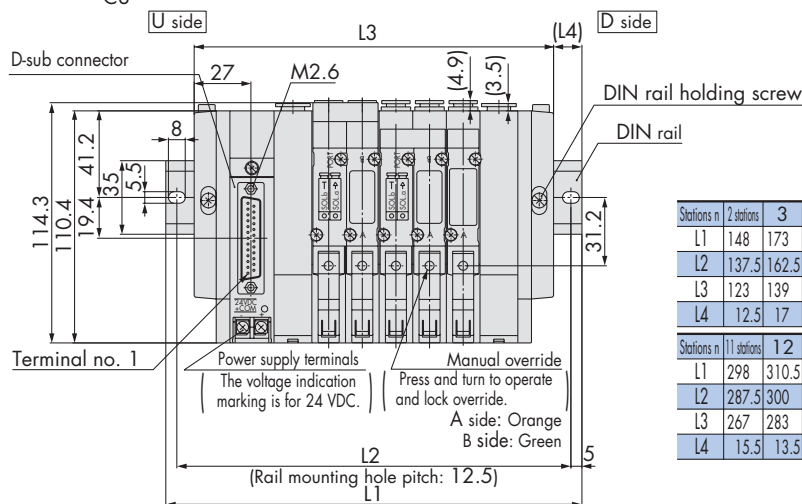
(A, B port)

Applicable tubing O.D.:  $\varnothing 4$   
 $\varnothing 6$   
 $\varnothing 8$



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-C<sub>4</sub>-C<sub>6</sub>-Q (Both sides supply)



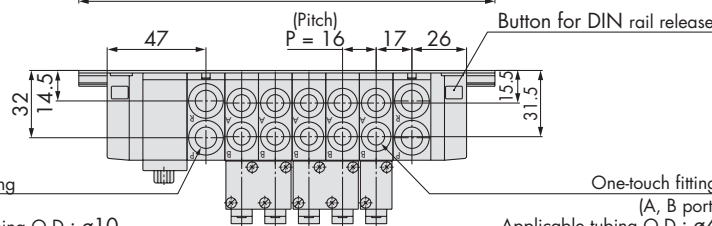
Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	148	173	185.5	198	210.5	235.5	248	260.5	285.5
L2	137.5	162.5	175	187.5	200	225	237.5	250	275
L3	123	139	155	171	187	203	219	235	251
L4	12.5	17	15	13.5	11.5	16	14.5	12.5	17

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

One-touch fitting

(P, R port)

Applicable tubing O.D.:  $\varnothing 10$



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

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

Nil	Single solenoid
D	Double solenoid

Pilot type

Nil	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)

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 values can be used alone, or with all SY manifolds except plug-in types

A port size Thread piping

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

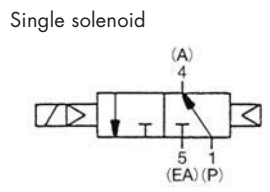
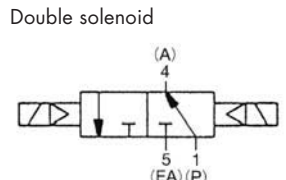
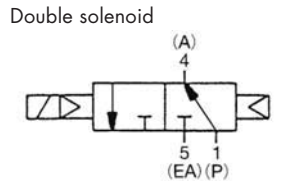
Manual override

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

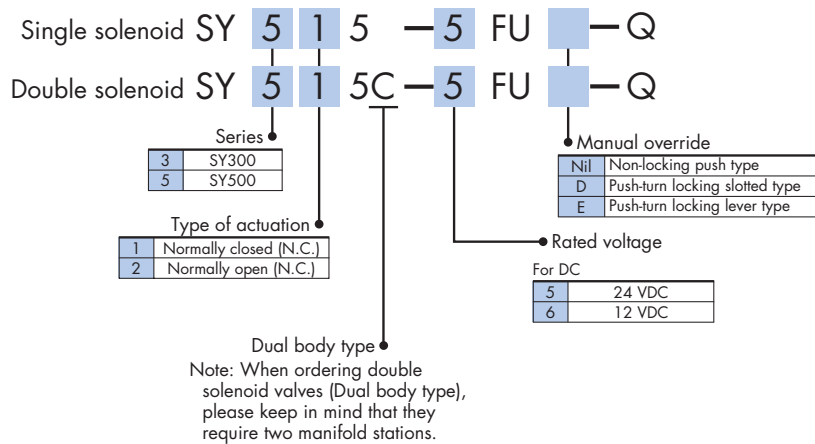
Light/Surge voltage suppressor

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

### Symbol



### 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 (P.40)
- Connector Assemblies (P.18)
- Single Subbase (P.61)

Connector cables can be found in the cables appendix.

### Manifolds for SY300/500 Valves

SY\*\*3 valves can be used on SS5Y\*-20 manifolds. Please refer to page (P.54).

SY\*\*5 individually wired valves can be used with types 41, 42 and 45 manifolds. Please refer to pages (P.76) and (P.91) for details.

SY\*\*5-\*F plug in valves must be used with type 45 plug in manifolds. See page (P.91).

### 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-□□-01□	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

# Body Ported Manifold Cassette Type Series SY3/5/7000



## Features

- ➔ Modular cassette slice system
- ➔ Integrated one-touch fittings
- ➔ Ultra low profile compact design
- ➔ Flexibility with air supply positions
- ➔ Valves can be easily added or removed

## How to Order Manifold

SS5Y 3 — 60 — 05 D — Q

Series

3	SY3000
5	SY5000
7	SY7000

Valve stations

02	2 stations
⋮	⋮
20	20 stations

• SUP/EXH block assembly mounting position

Symbol	Mounting position	Applicable stations
U	U side	2 to 10 stations
D	D side	
B	Both sides	2 to 20 stations

## Manifold Specifications

Model	SS5Y3-60	SS5Y5-60	SS5Y7-60	
Applicable valve	SY3□60	SY5□60	SY7□60	
Manifold type	Stacking type/DIN rail mounted			
P (SUP)/R (EXH)	Common SUP/Common EXH			
Valve stations	2 to 20 stations			
A, B port location	Valve			
Port size	P, R port	C8 (One-touch fitting for ø8) M5	C10 (One-touch fitting for ø10) 1/8	C12 (One-touch fitting for ø12) 1/4
	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)	C8 (One-touch fitting for ø8) C10 (One-touch fitting for ø10)

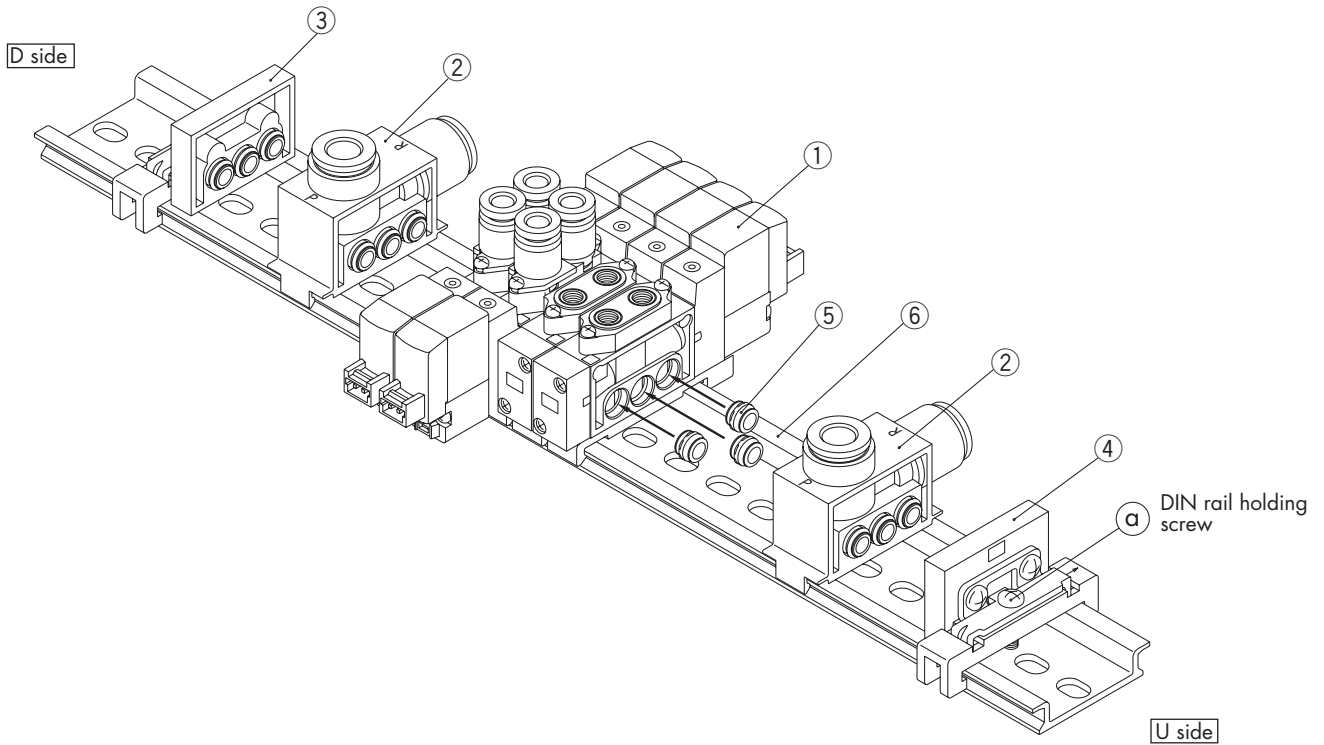
## Flow Characteristics

Model	Port size		Flow characteristics					
	1, 5/3 (P, R)	4, 2 (A, B)	1 → 4/2(P → A/B)			4/2 → 5/3(A/B → R)		
			C (dm <sup>3</sup> /(s·bar))	b	Cv	C (dm <sup>3</sup> /(s·bar))	b	Cv
SS5Y3-60	C8	M5	0.55	0.29	0.14	0.72	0.24	0.18
		C4	0.57	0.24	0.14	0.71	0.20	0.17
		C6	0.68	0.28	0.17	0.77	0.24	0.19
SS5Y5-60	C10	1/8	1.8	0.24	0.44	2.1	0.17	0.47
		C6	1.5	0.30	0.37	2.0	0.16	0.46
		C8	1.8	0.20	0.45	2.2	0.17	0.50
SS5Y7-60	C12	1/4	3.7	0.25	0.96	3.8	0.19	0.94
		C8	3.2	0.26	0.81	4.0	0.18	0.96
		C10	3.7	0.28	0.98	4.1	0.19	1.0



DIN Rail Manifold Exploded View

Note: Drawing shows the SY3000 size



Replacement Parts

No.	Description	SY3000 size	SY5000 size	SY7000 size	Note
①	Valve	SY3□60-□□-□-Q	SY5□60-□□-□-Q	SY7□60-□□-□-Q	See valve How-to-order detail
②	SUP/EXH block assembly	SY3000-55-1A-Q	SY5000-55-1A-Q	SY7000-55-1A-Q	
③	End block assembly	SY3000-56-1A-Q	SY5000-56-1A-Q	SY7000-56-1A-Q	For D side
④	End block assembly	SY3000-56-1B-Q	SY5000-56-1B-Q	SY7000-56-1B-Q	For U side
⑤	Bushing assembly	SY3000-52-1A	SY5000-52-1A	SY7000-52-1A	3 pcs per station

### How to Order Valve bodies

SY 3 1 60-5 LO [ ] C6F-Q

Series

3	SY3000
5	SY5000
7	SY7000

Type of actuation

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

Rated voltage

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

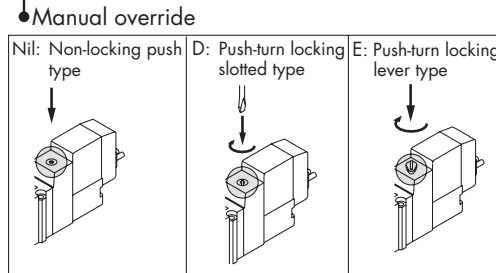
AC (50/60Hz)

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

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

A, B port size  
Thread piping

Symbol	Description	SY3000	SY5000	SY7000
M5	M5 thread	○		
O1F	1/8 thread		○	
O2F	1/4 thread			○
O3F	3/8 thread			
C4F	4mm tube	○	○	
C6F	6mm tube	○	○	
C8F	8mm tube		○	○
C10	10mm tube			○



#### Light/Surge voltage suppressor

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

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

Electrical entry for D (SY5000/7000 only)

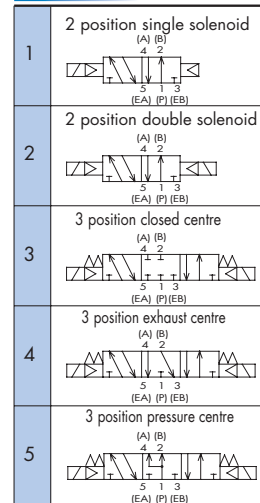
Nil	Without light/surge voltage suppressor
Z	With light/surge voltage suppressor (Non-polar type)

#### 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	(SY5000, 7000) Y: With connector D: With connector	WO: Without connector cable	

Note: A manifold assembly is required to use SY cassette valves. See separate how-to-order section.

### Symbols



### Specifications

Series		SY3000	SY5000	SY7000
Fluid		Air		
Internal pilot	2 position single	0.15 to 0.7		
Operating pressure range (MPa)	2 position double	0.1 to 0.7		
	3 position	0.2 to 0.7		
Ambient and fluid temperature (°C)		Max. 50		
Max. operating frequency (Hz)	2 position double	10	5	5
	3 position	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 position		Unrestricted		
Enclosure		Dustproof (+ DIN terminal, M8 connector conforms to IP65)		

### Solenoid Specifications

Electrical entry		Grommet (G) 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 50/60Hz	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)]
	Apparent power* VA	AC	100V
110V			1.6 (With indicator light: 1.7)
200V			2.3 (With indicator light: 2.4)
220V [230V]			2.5 (With indicator light: 2.6) [2.7 (With indicator light: 2.8)]
Surge voltage suppressor		Diode (Varistor is for DIN terminal and non-polar)	
Indicator light		LED (AC of DIN connector is neon bulb.)	





## Response Time

### SY3000

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

Note: response times as per SY base mounted valves.

## SY Cassette Valve Accessories

### Individual SUP block assembly

One-touch fitting (Metric size)

Port size	Assembly part no.	Applicable series
One-touch fitting for $\phi 6$	SY3000-54-2C	SY3000
One-touch fitting for $\phi 8$	SY3000-54-1C	SY3000
One-touch fitting for $\phi 10$	SY5000-54-1C	SY5000
One-touch fitting for $\phi 12$	SY7000-54-1C	SY7000

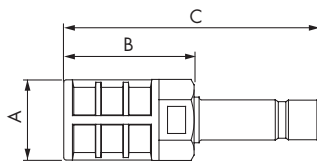
### Individual EXH block assembly

One-touch fitting (Metric size)

Port size	Assembly part no.	Applicable series
One-touch fitting for $\phi 8$	SY3000-55-1B	SY3000
One-touch fitting for $\phi 10$	SY5000-55-1B	SY5000
One-touch fitting for $\phi 12$	SY7000-55-1B	SY7000

### Silencer with One-touch fitting

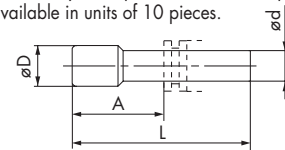
The silencer plugs directly into the One-touch fittings of the manifold.



Series	Model	Effective area	A	B	C
SY3000 (for $\phi 8$ )	AN203-KM8	14 mm <sup>2</sup>	$\phi 16$	26	51
SY5000 (for $\phi 10$ )	AN200-KM10	26 mm <sup>2</sup>	$\phi 22$	54	80.8
	AN300-KM10	30 mm <sup>2</sup>	$\phi 25$	70	97
SY7000 (for $\phi 12$ )	AN300-KM12	41 mm <sup>2</sup>	$\phi 25$	70	98

### 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 $\phi d$	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	45.5	14

### EXH block disk

By inserting a block disk between adjacent valves, the pressure or exhaust gallery between the valves can be split into separate zones.



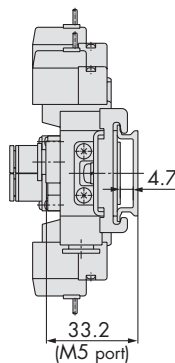
Series	Part no.
SY3000	SY3000-52-2A
SY5000	SY5000-52-4A
SY7000	SY7000-70-2A

## Dimensions

SS5Y3-60- Stations B-Q (Both ends supplies)

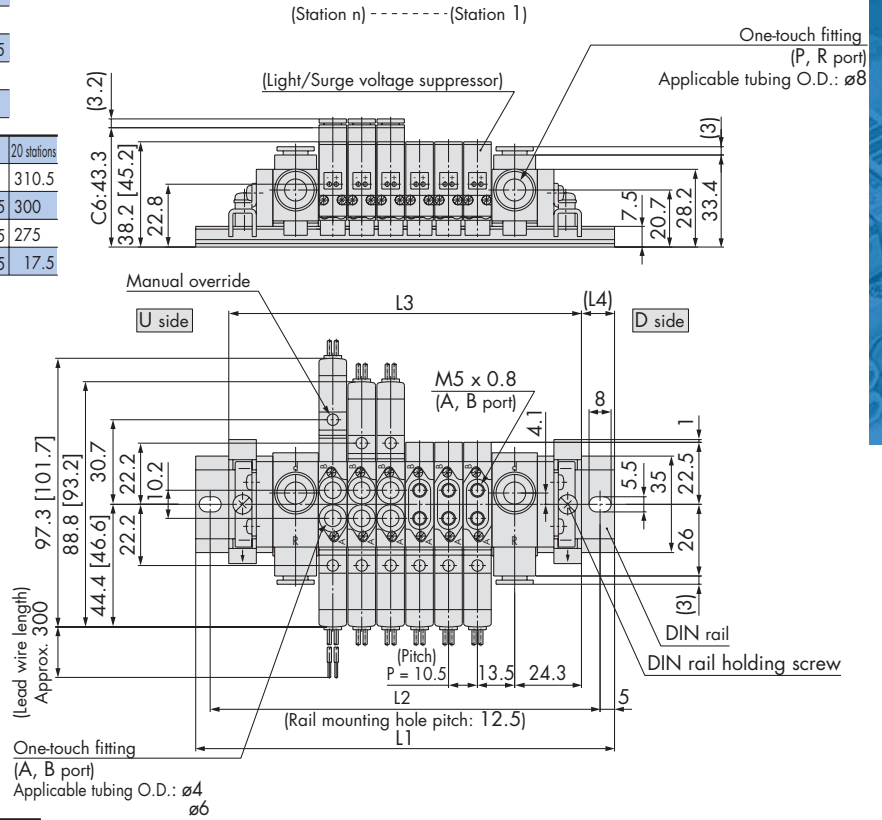
Stations	2 stations	3	4	5	6	7	8	9	10 stations
L1	110.5	123	135.5	148	160.5	173	173	185.5	198
L2	100	112.5	125	137.5	150	162.5	162.5	175	187.5
L3	86	96.5	107	117.5	128	138.5	149	159.5	170
L4	12	13	14	15	16	17	12	13	14

Stations	11 stations	12	13	14	15	16	17	18	19	20 stations
L1	210.5	223	235.5	235.5	248	260.5	273	285.5	298	310.5
L2	200	212.5	225	225	237.5	250	262.5	275	287.5	300
L3	180.5	191	201.5	212	222.5	233	243.5	254	264.5	275
L4	15	16	17	11.5	12.5	13.5	14.5	15.5	16.5	17.5

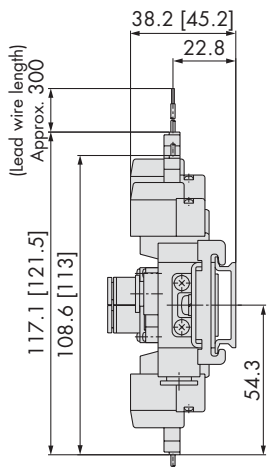


The above dimensions apply to the 'B' supply type (both ends). If the U or D type (one end) is used, please use the table below.

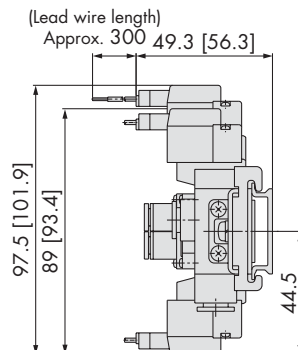
Stations	2 stations	3	4	5	6	7	8	9	10 stations
L1	98	110.5	123	135.5	135.5	148	160.5	173	185.5
L2	87.5	100	112.5	125	125	137.5	150	162.5	175
L3	69.5	80	90.5	101	111.5	122	132.5	143	153.5
L4	14	15	16	17	12	13	14	15	16



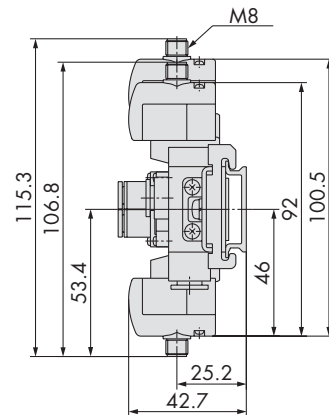
L plug connector (L)



M plug connector (M)



M8 connector (WO)



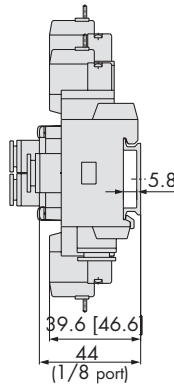
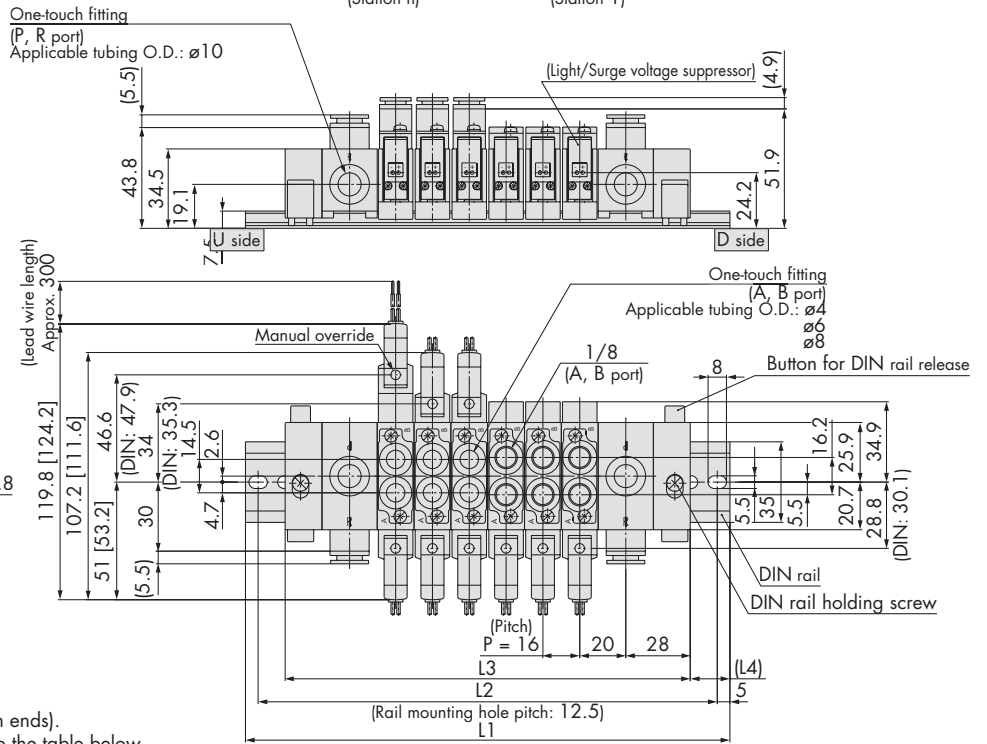
Dimensions

SS5Y5-60- Stations B-Q (Both ends supplies)

Stations	2 stations	3	4	5	6	7	8 stations
L1	135.5	160.5	173	185.5	210.5	223	235.5
L2	125	150	162.5	175	200	212.5	225
L3	112	128	144	160	176	192	208
L4	11.5	16	14.5	12.5	17.5	15.5	13.5

Stations	9 stations	10	11	12	13	14	15 stations
L1	248	273	285.5	298	323	335.5	348
L2	237.5	262.5	275	287.5	312.5	325	337.5
L3	224	240	256	272	288	304	320
L4	12	16.5	14.5	13	17.5	15.5	14

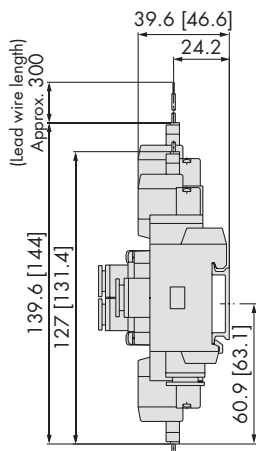
Stations	16 stations	17	18	19	20 stations
L1	360.5	385.5	398	410.5	435.5
L2	350	375	387.5	400	425
L3	336	352	368	384	400
L4	12	16.5	15	13	17.5



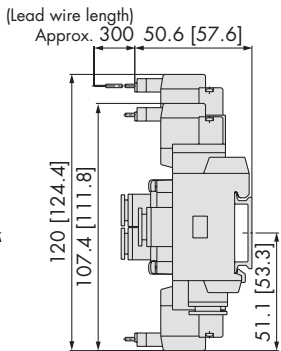
The above table is for the 'B' supply type (both ends).  
If the U or D type (one end) is used, please use the table below.

Stations	2 stations	3	4	5	6	7	8	9	10 stations
L1	123	135.5	148	160.5	185.5	198	210.5	235.5	248
L2	112.5	125	137.5	150	175	187.5	200	225	237.5
L3	88	104	120	136	152	168	184	200	216
L4	17.5	15.5	14	12	16.5	15	13	17.5	16

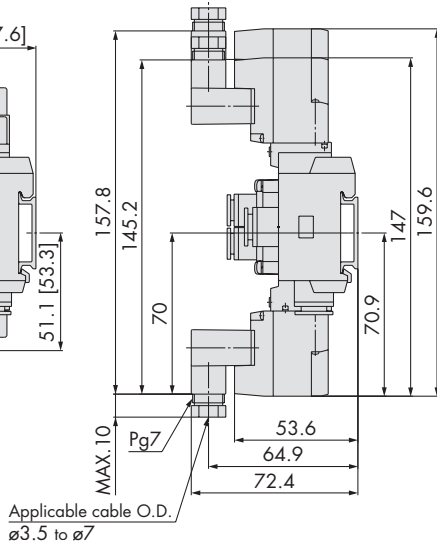
L plug connector (L)



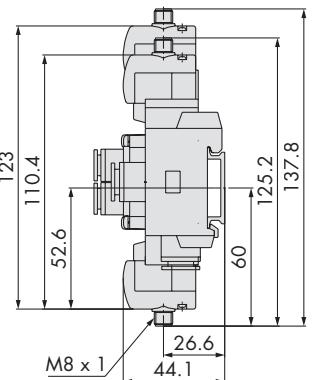
M plug connector (M)



DIN terminal (D)



M8 connector (WO)





# 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

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

Rated voltage

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]

Electrical entry

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				○

## Symbols

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

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

## Manual override

Nil: 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

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

Electrical entry for Y

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

### 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) 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	100 V	1.4 (With indicator light: 1.5)
110 V		1.6 (With indicator light: 1.7)	
200 V		2.3 (With indicator light: 2.4)	
220 V		2.5 (With indicator light: 2.6)	
[230 V]		[2.7 (With indicator light: 2.8)]	
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

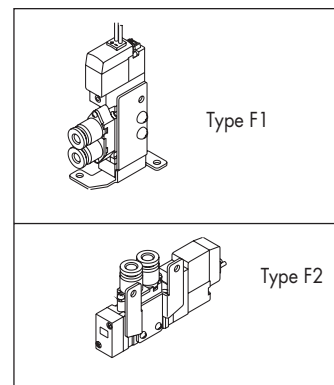
#### SY9000

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)

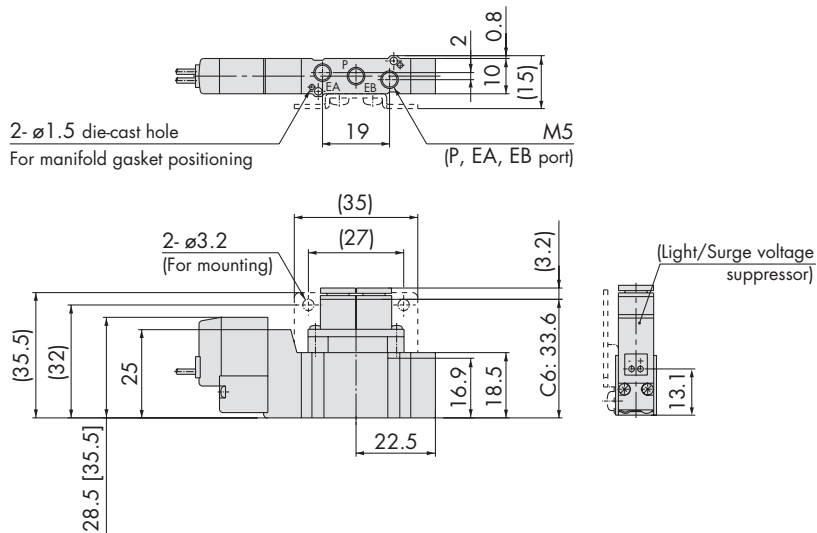




Dimensions: Series SY3000

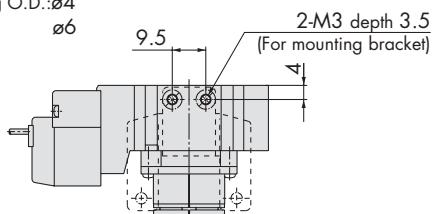
2 position single

Grommet (G): SY3120-□G□□-C<sub>6</sub><sup>C4</sup>-Q



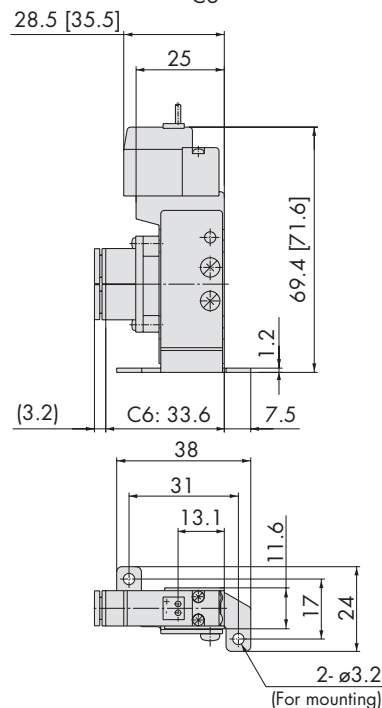
G: Approx. 300  
(Lead wire length)

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

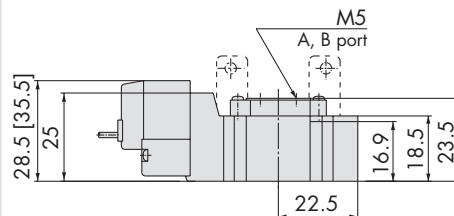


Foot bracket

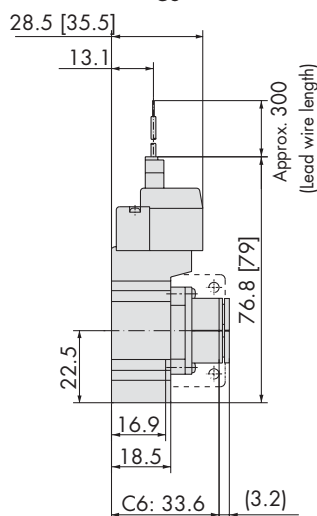
SY3120-□G□□-C<sub>6</sub><sup>C4</sup>-Q



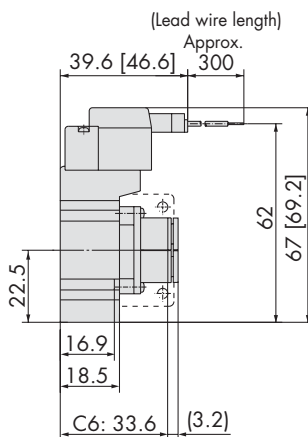
SY3120-□G□□-M5-Q



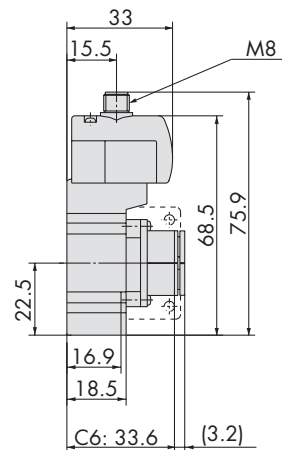
L plug connector (L):  
SY3120-□L□□-C<sub>6</sub><sup>C4</sup>-Q



M plug connector (M):  
SY3120-□M□□-C<sub>6</sub><sup>C4</sup>-Q



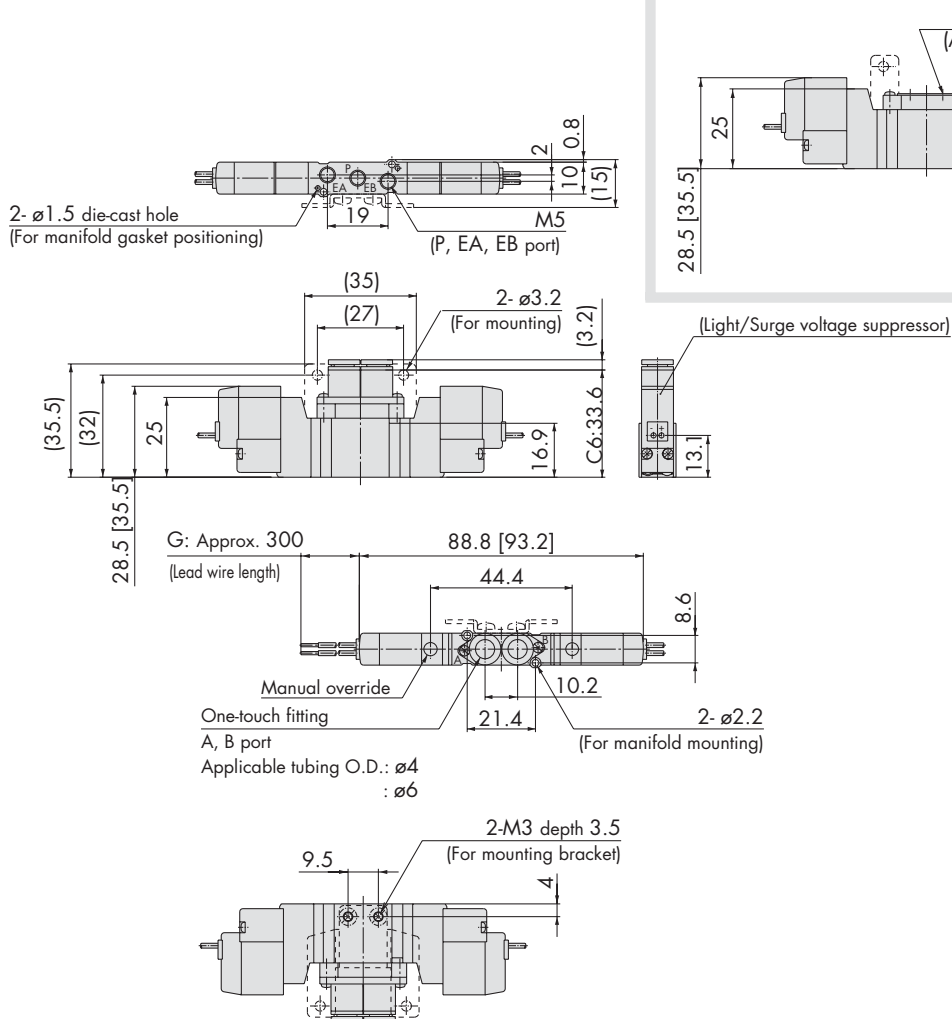
M8 connector (WO):  
SY3120-□WO□□-C<sub>6</sub><sup>C4</sup>-Q



Valves

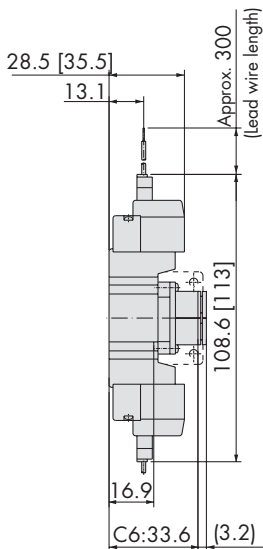
Dimensions: Series SY3000

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

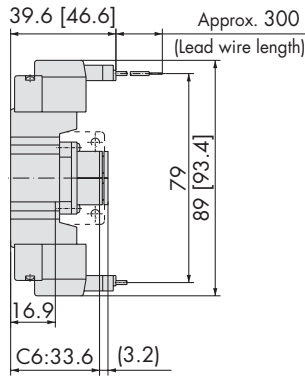


SY3220-□G□□-M5-Q

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



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



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

