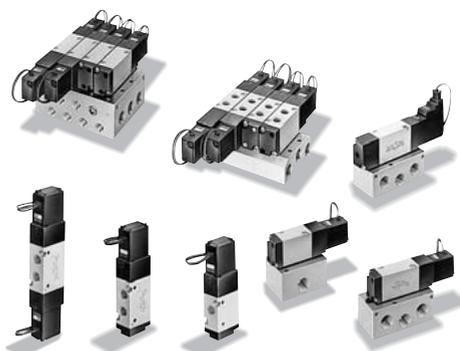


Small-size lubrication-free solenoid valves having a valve width of 18 mm and effective sectional area of 10.2 mm² (2-position type)

- Suitable for driving cylinders with bores of up to 50 mm
- As standard devices for protection from power surge, the valves for AC are provided with varistors, and those for DC are provided with flywheel diodes.
- The valves for AC power supply are applicable to 100 V AC to 120 V AC or 200 V AC to 240 V AC.
- The valves can be wired by various methods, e.g. Q socket, P socket, DIN socket and lead wire methods, and the Q socket, P socket and DIN socket type valves are provided with indicating lamps for easy confirmation as standard devices.
- Valves with one touch fittings for 4- and 6-mm dia. tubes are standardized.
- Compact tandem valves of double solenoid type are available (sub-plate type/Mono-manifold type/24 V DC).



Valve Specifications

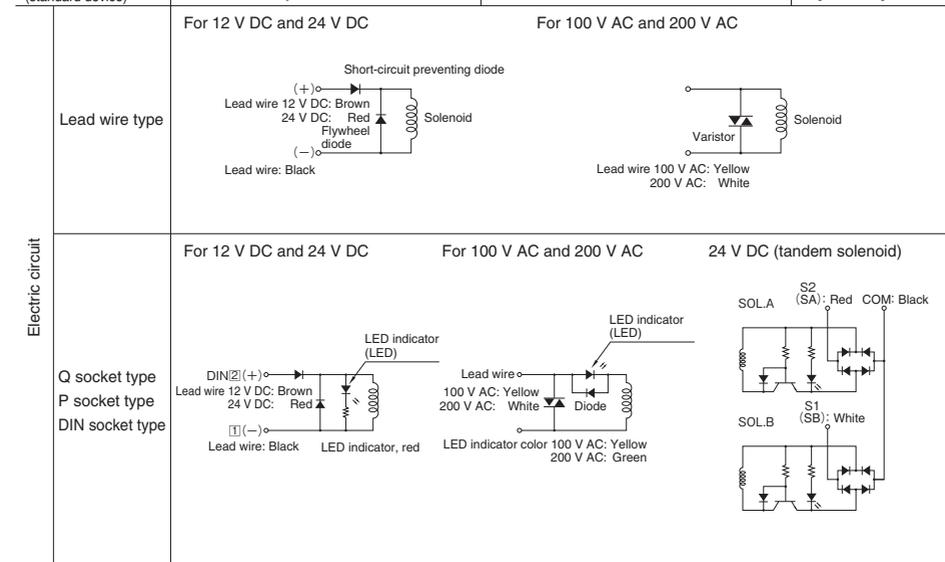
Item	Model	3-port				5-port		
		2-position		2-position		3-position		
		Normally closed	Normally open	Return	Detent	3-position closed center	3-position exhaust center	3-position pressure center
Model number	Direct type Easy-manifold Sub-plate type Mono-manifold	SR342-NN1	SR342-ON1	SR542-RN1	SR542-DN1	SR542-CN1	SR542-EN1	SR542-PN1
JIS symbol		(A) 2 31 (R)(P)	(A) 2 31 (R)(P)	(B)(A) 2 4 315 (R)(P)(R)	(B)(A) 2 4 315 (R)(P)(R)	(B)(A) 2 4 315 (R)(P)(R)	(B)(A) 2 4 315 (R)(P)(R)	(B)(A) 2 4 315 (R)(P)(R)
Port size	Direct type	P-A·B R1·R2 Direct screw piping type: Rc1/8 With one touch fittings: φ 4 and φ 6 (tube outer dia.)						
	Sub-plate type	P-A·B R1·R2 Direct screw piping type: Rc1/4						
Effective sectional area	Direct	10.2 mm ²			9.0 mm ²			
	Sub-plate Sub-plate/tandem type	8.2 mm ²			8.2 mm ²			
Working fluid	Air							
Lubrication	Unnecessary							
Working pressure range	0.15 to 0.7 MPa							
Proof test pressure	1.05 MPa							
Response time	Note 1) 24 V DC, 12 V DC	15/20 ms or less	15/20 ms or less	15 ms or less	15/35 ms or less			
	In ON/OFF state 100 V AC, 200 V AC	15/15 ms or less	15/15 ms or less	15 ms or less	15/20 ms or less			
Working temperature range	+5 to +50°C (ambient temperature and fluid temperature)							
Manual Override	Pushing							
Installing direction	Free							
Vibration resistance/impact resistance	1373.0 m/s ² (294.2 m/s ² in axial direction)				294.2 m/s ²			
Recommended lubricant	JIS K2213 Class 1 (additive-free turbine oil ISO VG32) or its equivalent							
Weight g	Note 2) Direct type Easy-manifold	95	105	155	190			
	Sub-plate type Mono-manifold	105 (250)	115 (275)	165 (325) Tandem type 135 (295)	200 (360): Tandem type 150 (310)			

Note 1) Values at an air pressure of 0.5 MPa. The values were obtained at the opposite positions in the case of 2-position valves or in the valve neutral state in the case of 3-position valves.

Note 2) The parenthesized weight includes the weight of the sub-plate.

Electrical Specifications

Rated voltage	12 V DC	24 V DC	100 V AC	200 V AC	24 V DC (tandem solenoid)			
Type	Flywheel diode against surge		Shading type		Built-in surge absorbing transistor			
Working voltage range	10.8 to 13.2 (12±10%)	21.6 to 26.4 (24±10%)	90 to 132 (100±32/10%)	180 to 264 (200±32/10%)	21.6 to 26.4 (24±10%)			
Current value (when rated voltage is applied)	Frequency Hz	—	50	60	50	60	—	
	Starting mA(m.s)	—	36	32	18	16	—	
	Exciting mA(m.s)	140 (1.7W)	75 (1.8W)	24	20	12	10	50 (1.2W)
Allowable circuit leakage current value	8		4		2		2	
Insulation resistance	100 or more							
Wiring method and lead wire length	Lead wire type: 300 mm, P/Q socket type: 300 mm (standard)					P/Q socket type: 300 mm (standard)		
Note) Lead wire color	Brown: + Black: -	Red: + Black: -	Yellow	White	Red (SA) Black (COM) White (SB)			
Color of LED indicator	Red		Yellow	Green	Red			
Measures against surge (standard device)	Flywheel diode		Varistor		Surge absorbing transistor			



Note) The 1 and 3m lead wires (1L and 3L, optional) of the P socket and Q socket type valves are in red and black.

Manifold Specifications

Name		Easy-manifold		Easy-manifold	
Type		Direct screw piping type With one touch fittings		Direct screw piping type With one touch fittings	
Model number		MF342M · MF542M		MF342E · MF542E	
Max. number of stations		20 stations		20 stations	
Standard number of stations		2 · 4 · 6 · 8 · 10		2 · 4 · 6 · 8 · 10	
Exhaust type		Common exhaust type			
Port size	P·R1·R2	Rc1/4			
	A·B	Rc1/8	φ 4 · φ 6	Rc1/8(piping on valve side)	φ 4 · φ 6
Piping specification		Side piping		Front piping (piping on valve side)	

Valve Weight

Unit: g

Model		3-port		5-port				
		2-position		2-position		3-position		
		Normally closed	Normally open	Return	Detent	3-position closed center	3-position exhaust center	3-position pressure center
Model number	Direct type Easy-manifold	SR342-NN1	SR342-ON1	SR542-RN1	SR542-DN1	SR542-CN1	SR542-EN1	SR542-PN1
	Sub-plate type Mono-manifold	SR342-NMM	SR342-OMM	SR542-RMM	SR542-DMM	SR542-CMM	SR542-EMM	SR532-PMM
Weight g	Direct type Easy-manifold	95		105	155	190		
	Sub-plate type Mono-manifold	105(250)		115(275)	165(325) Tandem type 135(295)	200(360): Tandem type150(310)		

●The parenthesized weight includes the weight of the sub-plate.

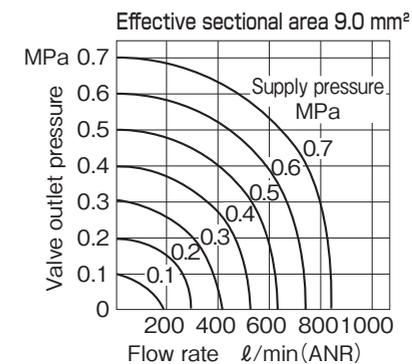
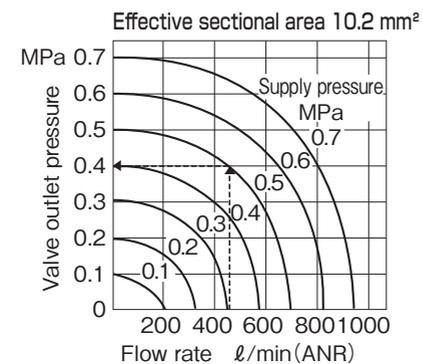
Manifold Weight

Unit: g

Name		No. of stations				
		2	4	6	8	10
Mono-manifold	MF342M-***A	216	360	504	646	792
	MF342M-***C	232	392	552	712	872
	MF342M-***E	228	384	540	696	852
Easy-manifold	MF342E-***S	94	158	222	286	350
Mono-manifold	MF542M-***A	360	600	840	1080	1320
	MF542M-***C	390	660	930	1200	1470
	MF542M-***E	396	672	948	1224	1500
Easy-manifold	MF542E-***S	124	208	292	376	460

●Add the valve weight to the manifold weight.

Flow Characteristic Curves



How to read the chart

When the flow rate is 460 l/min (ANR) at a supply pressure of 0.5 MPa, the valve outlet pressure is 0.4 MPa.

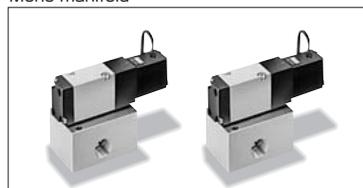
How to order (3-port)

- Model number of valve only

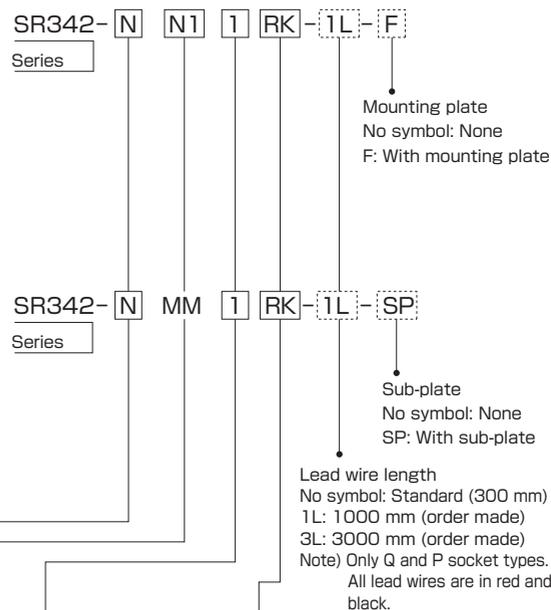
Direct type (port size Rc $\frac{1}{8}$)
Easy-manifold



Sub-plate type (port size Rc $\frac{1}{4}$)
Mono-manifold



Note) The valve will be delivered without the sub-plate mounted.



Switching method

Symbol	Switching method
N	Normally closed
O	Normally open

Port size (standard)

Symbol	Port size
N1	Direct screw piping type Rc $\frac{1}{8}$
MM	For sub-plate/ mono-manifold
Port size (option)	
VA	OD of tube with joint on secondary side $\phi 4$
VB	OD of tube with joint on secondary side $\phi 6$
WA	OD of tube with joints on both sides $\phi 4$
WB	OD of tube with joints on both sides $\phi 6$

Voltage (standard)

Symbol	Voltage
1	100 V AC $\pm 3\%$ -10% (Lead wire color: yellow)
2	200 V AC $\pm 3\%$ -10% (Lead wire color: white)
8	24 V DC $\pm 10\%$ (Lead wire color: \odot red, \ominus black)
Voltage (option)	
6	12 V DC $\pm 10\%$ (Lead wire color: \odot brown, \ominus black)
9	Other voltages

Wiring method

Symbol	Wiring method
RK	Lead wire type With protective circuit
QW	Q socket type With indicating lamp/protective circuit
PW	P socket type With indicating lamp/protective circuit
DW	DIN socket type With indicating lamp/protective circuit

How to order manifold

- Model number of Mono-manifold

MF342M- 04 A

Series

No. of manifold stations

Symbol	No. of stations
02	2 stations
04	4 stations
06	6 stations
08	8 stations
10	10 stations

Piping method

Symbol	Piping method
A	Side piping (direct screw piping type)
C	Side piping (with one touch fittings: $\phi 4$)
E	Side piping (with one touch fittings: $\phi 6$)

- Model number of Easy-manifold

MF342E- 04 S

Series

No. of manifold stations

Symbol	No. of stations
02	2 stations
04	4 stations
06	6 stations
08	8 stations
10	10 stations

How to order valve for manifold

- Mono-manifold

SR342- N MM 1 QW - 1L

Series

For Mono-manifold

Note) For details, see "How to order valve only".

- Easy-manifold

SR342- N N1 1 QW - 1L

Series

Port size

N1 : Direct screw piping type (Rc $\frac{1}{8}$)
VA : With one touch fittings ($\phi 4$)
VB : With one touch fittings ($\phi 6$)

Note) For details, see "How to order valve only".

How to order seal plate SZZ

MF342-MS (For Mono-manifold)

MF342-ES (For Easy-manifold)

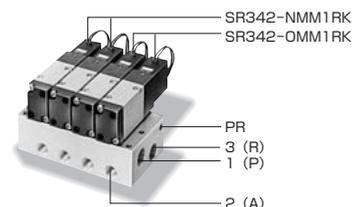
How to order gasket and bolt set SZZ

MF342-MGBS (For Mono-manifold)

MF342-EGBS (For Easy-manifold)

How to order manifold

- Mono-manifold

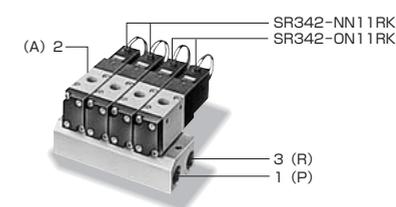


- A 4-station Mono-manifold type is shown as follows.

Manifold body	Qty.
MF342M-04A	1
Valve block	
SR342-NMM1RK	2
SR342-OMM1RK	2

Note) Easy-manifold valves will not come with manifold mounting gaskets and bolts. When adding a valve to a manifold, place an order for a gasket and bolt set at the same time.

- Easy-manifold

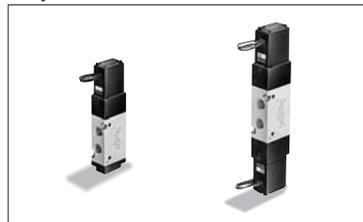


- A 4-station Easy-manifold type is shown as follows.

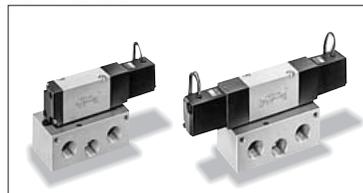
Manifold body	Qty.
MF342E-04S	1
Valve block	
SR342-NN11RK	2
SR342-ON11RK	2

How to order valve only (5-port)

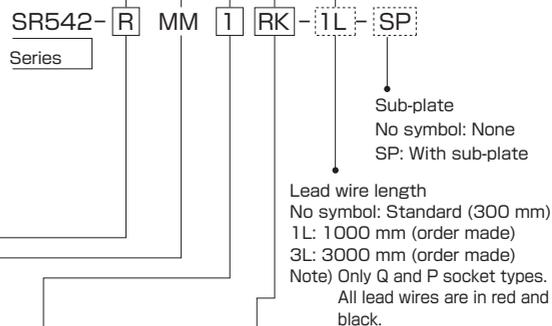
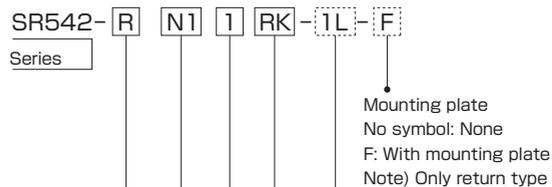
- Model number of valve only
- Direct type (port size Rc1/8)
- Easy-manifold



Sub-plate type (port size Rc1/4)
Mono-manifold



Note) The valve will be delivered without the sub-plate mounted.



Switching method

Symbol	Switching method
R	Return (B)(A) 2 4 3 1 5 (R ₂)(P)(R ₁)
D	Detent (B)(A) 2 4 3 1 5 (S ₁)(R ₂)(P)(R ₁)(S ₂)
C	Closed center (B)(A) 2 4 3 1 5 (S ₁)(R ₂)(P)(R ₁)(S ₂)
E	Exhaust center (B)(A) 2 4 3 1 5 (R ₂)(P)(R ₁)(S ₂)
P	Pressure center (B)(A) 2 4 3 1 5 (R ₂)(P)(R ₁)(S ₂)

Port size (standard)

Symbol	Port size
N1	Direct screw piping type Rc1/8
MM	For sub-plate/ mono-manifold
Port size (option)	
VA	OD of tube with joint on secondary side φ4
VB	OD of tube with joint on secondary side φ6
WA	OD of tube with joints on both sides φ4
WB	OD of tube with joints on both sides φ6

Voltage (standard)

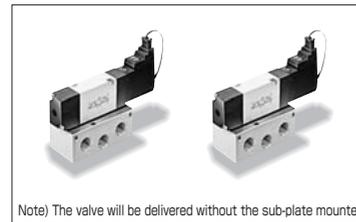
Symbol	Voltage
1	100 V AC $\pm 3\%$ -10% (Lead wire color: yellow)
2	200 V AC $\pm 3\%$ -10% (Lead wire color: white)
8	24 V DC $\pm 10\%$ (Lead wire color: ⊕ red, ⊖ black)
Voltage (option)	
6	12 V DC $\pm 10\%$ (Lead wire color: ⊕ brown, ⊖ black)
9	Other voltages

Wiring method

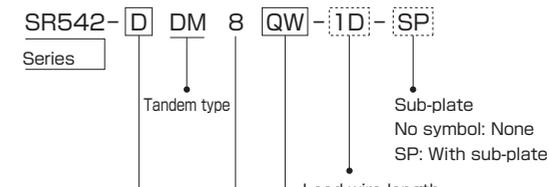
Symbol	Wiring method
RK	Lead wire type With protective circuit
QW	Q socket type With indicating lamp/protective circuit
PW	P socket type With indicating lamp/protective circuit
DW	DIN socket type With indicating lamp/protective circuit

How to order valve only (5-port)

- Model number of valve only
- Tandem solenoid (port size Rc1/4)
- Mono-manifold



Note) The valve will be delivered without the sub-plate mounted.



Lead wire length
No symbol: Standard (300 mm)
1D: 1000 mm (order made)
3D: 3000 mm (order made)
Note) The lead wires are in red,
white and black.

Switching method

Symbol	Switching method
D	Detent (B)(A) 2 4 3 1 5 (S ₁)(R ₂)(P)(R ₁)(S ₂)
C	Closed center (B)(A) 2 4 3 1 5 (S ₁)(R ₂)(P)(R ₁)(S ₂)
E	Exhaust center (B)(A) 2 4 3 1 5 (S ₁)(R ₂)(P)(R ₁)(S ₂)
P	Pressure center (B)(A) 2 4 3 1 5 (S ₁)(R ₂)(P)(R ₁)(S ₂)

Voltage

Symbol	Voltage
8	24 V DC $\pm 10\%$ (Lead wire color: SA: red, SB: white, COM: black)

Wiring method

Symbol	Wiring method
QW	Q socket type With indicating lamp/protective circuit
PW	P socket type With indicating lamp/protective circuit

How to order manifold

- Model number of Mono-manifold

MF542M-04 A

- Series
- No. of manifold stations
- Piping method

Symbol	No. of stations
02	2 stations
04	4 stations
06	6 stations
08	8 stations
10	10 stations

Symbol	Piping method
A	Side piping (direct screw piping type)
C	Side piping (with one touch fittings: φ4)
E	Side piping (with one touch fittings: φ6)

How to order valve for Mono-manifold

- Single/double solenoid

SR542-R MM 1 QW-1L

Series For Mono-manifold

- Tandem solenoid

SR542-D DM 8 QW-1D

Series Tandem type

Note) For details, see "How to order valve only".

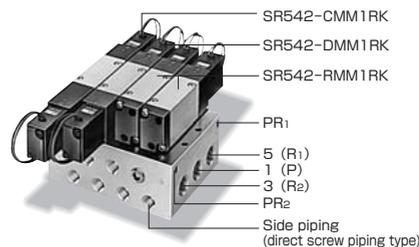
How to order seal plate SZZ

MF542-MS

How to order gasket and bolt set SZZ

MF542-MGBS

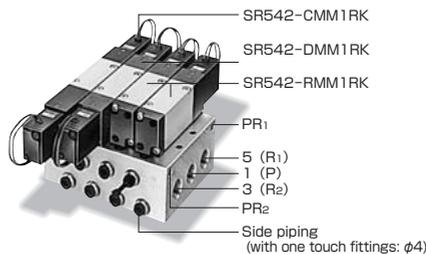
How to order Mono-manifold (5-port)



- A 4-station Mono-manifold is shown as follows.

- Manifold body Qty.
MF542M-04A 1

- Valve block
SR542-CMM1RK 1
SR542-DMM1RK 1
SR542-RMM1RK 2



- A 4-station Mono-manifold is shown as follows.

- Manifold body Qty.
MF542M-04C 1

- Valve block
SR542-CMM1RK 1
SR542-DMM1RK 1
SR542-RMM1RK 2

How to order manifold

- Model number of Easy-manifold

MF542E-04 S

- Series
- No. of manifold stations

Symbol	No. of stations
02	2 stations
04	4 stations
06	6 stations
08	8 stations
10	10 stations

How to order valve for Easy-manifold

- Single/double solenoid

SR542-R N1 1 QW-1L

- Series
- Port size
N1 : Direct screw piping type (Rc1/8)
VA : With one touch fittings (φ4)
VB : With one touch fittings (φ6)

Note) The above three port sizes are available.

Note) For details, see "How to order valve only".

How to order seal plate SZZ

MF542-ES

How to order gasket and bolt set SZZ

MF542-EGBS

Related products/Joints and silencers

More compact piping is enabled.

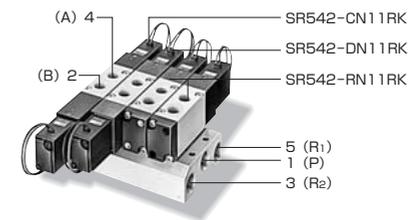
- One touch fittings

For Rc1/8	
Tube OD	Model number
φ4	M4-O1M
φ6	M6-O1M
φ8	F8-O1MS

- Silencer

For M5	For Rc1/8	For Rc1/4
Model number	Model number	Model number
SA2-M5	SA2-06 (G1/8)	SA2-08 (G1/4)

How to order Easy-manifold (5-port)



- A 4-station Easy-manifold is shown as follows.

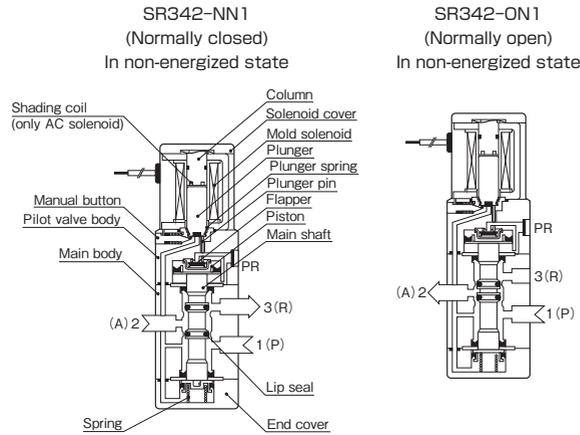
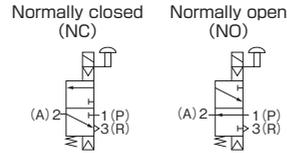
- Manifold body Qty.
MF542M-04A 1

- Valve block
SR542-CMM1RK 1
SR542-DMM1RK 1
SR542-RMM1RK 2

Note) Easy-manifold valves will not come with manifold mounting gaskets and bolts. When adding a valve to a manifold, place an order for a gasket and bolt set at the same time.

Sectional Drawings

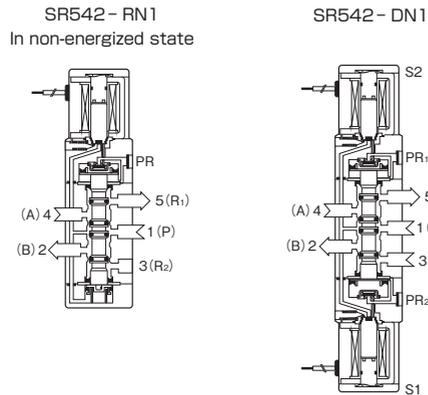
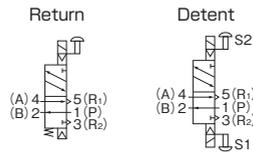
3-port



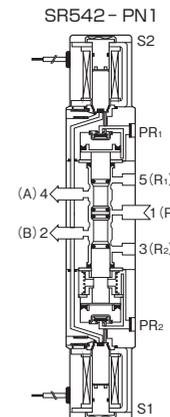
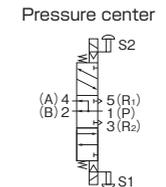
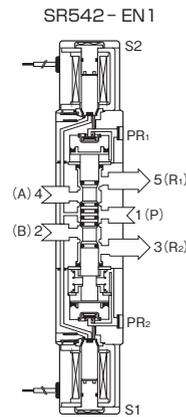
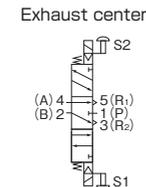
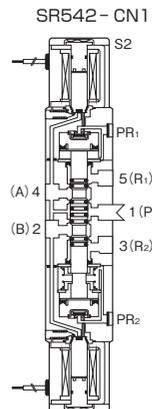
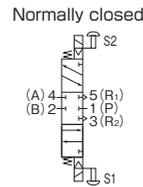
Materials of Major Parts

Name	Material
Main body	Aluminum alloy (alumite)
Main shaft	Aluminum alloy (alumite)
Lip seal	Synthetic rubber (NBR)
Flapper	Synthetic rubber (NBR)
Mounting base	Mild steel (galvanized)
Sub-base	Aluminum alloy (alumite)
Plunger	Electromagnetic stainless steel
Column	Electromagnetic stainless steel
Main body	Aluminum alloy (alumite)
Manifold	Block plate Mild steel (nickel-plated)
Seal	Synthetic rubber (NBR)

5-port 2-position



5-port 3-position



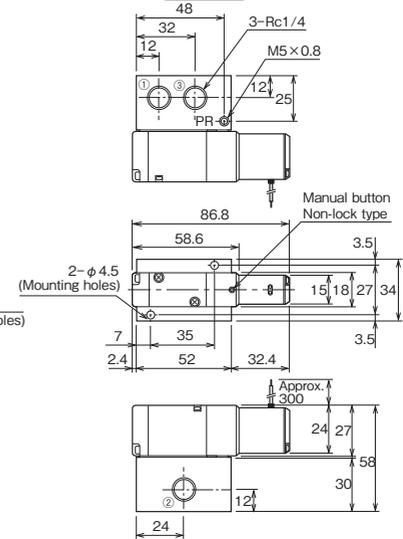
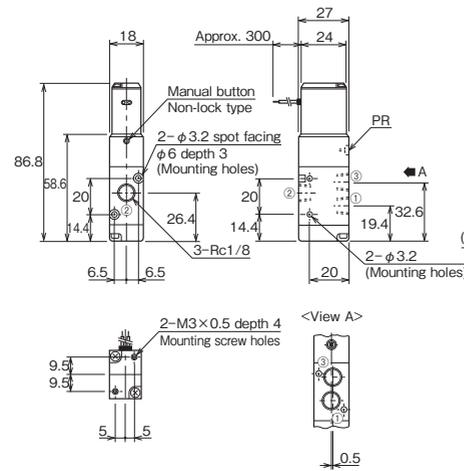
3-port/normally closed and normally open

Direct type

- SR342-NN1 [Voltage] RK (Normally closed)
- SR342-ON1 [Voltage] RK (Normally open)

Sub-plate type

- SR342-NMM [Voltage] RK-SP (Normally closed)
- SR342-OMM [Voltage] RK-SP (Normally open)



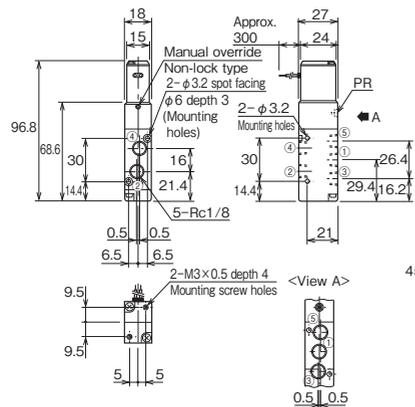
Note) The valve will be delivered without the sub-plate mounted.

CAD/DATA is available.

5-port/2-position and 3-position

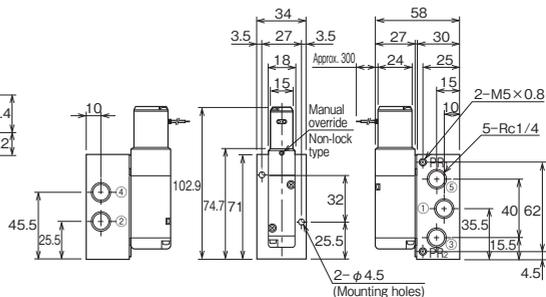
Direct type

- SR542-RN1 [Voltage] RK (return)

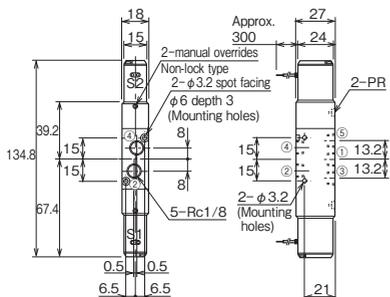


Sub-plate type

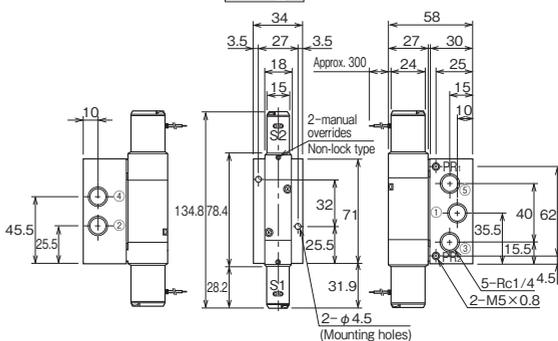
- SR542-RN1 [Voltage] RK-SP (return)



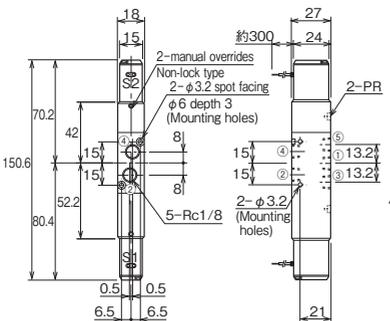
- SR542-DN1 [Voltage] RK (detent)



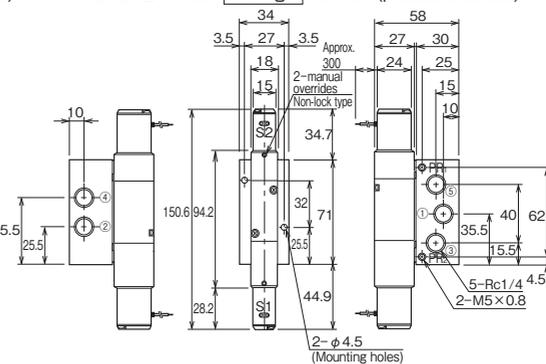
- SR542-DMM [Voltage] RK-SP (detent)



- SR542-CN1 [Voltage] RK (closed center)
- SR542-EN1 [Voltage] RK (exhaust center)
- SR542-PN1 [Voltage] RK (pressure center)



- SR542-CMM [Voltage] RK-SP (closed center)
- SR542-EMM [Voltage] RK-SP (exhaust center)
- SR542-PMM [Voltage] RK-SP (pressure center)



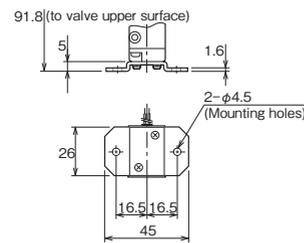
Note) The valve will be delivered without the sub-plate mounted.

CAD/DATA is available.

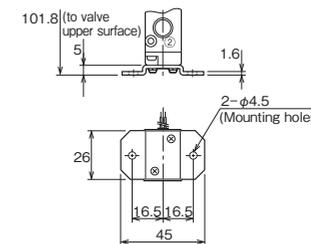
Option

- Mounting plate [SZZ] SR542-F

- 3-port valve mounting dimensions



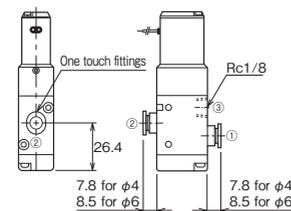
- 5-port valve mounting dimensions (only return type)



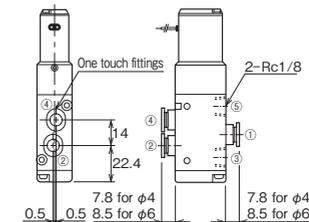
Note) The valve will be delivered without the mounting plate mounted.

- With one touch fittings

- 3-port valve dimensions

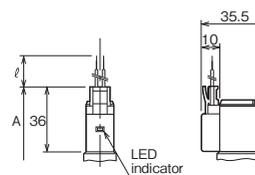


- 5-port valve dimensions

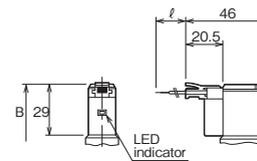


- Wiring method

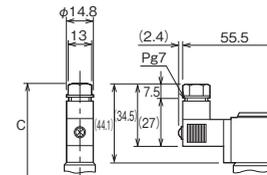
- Q socket type



- P socket type



- DIN socket type

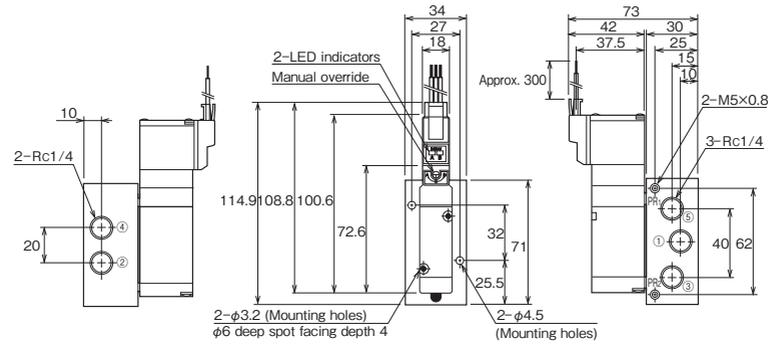


Dimensional Table

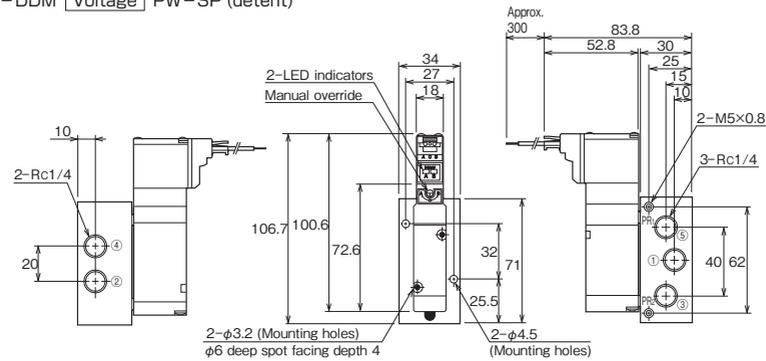
Model number	Symbol	A	B	C	ℓ (lead wire length)	Remarks
SR342-*N0**		94.6	87.6	102.7	Standard type: 300 mm	Overall length to valve or sub-base end face
SR542-RN1**		104.6	97.6	112.7	Order made:	
SR542-RMM**-*SP		110.7	103.7	118.8	1L: 1000 3L: 3000	Overall length to solenoid end face on opposite side
SR542-DN1**, SR542-DMM**-*SP		150.4	136.4	166.6	1D: 1000 3D: 3000	
SR542-(C, E, P) N1**SR542-(C, E, P) *M**-*SP		166.2	152.2	182.4	(For tandem solenoid)	

5-port/tandem solenoid (2-position)

- SR542- DDM Voltage QW-SP (detent)



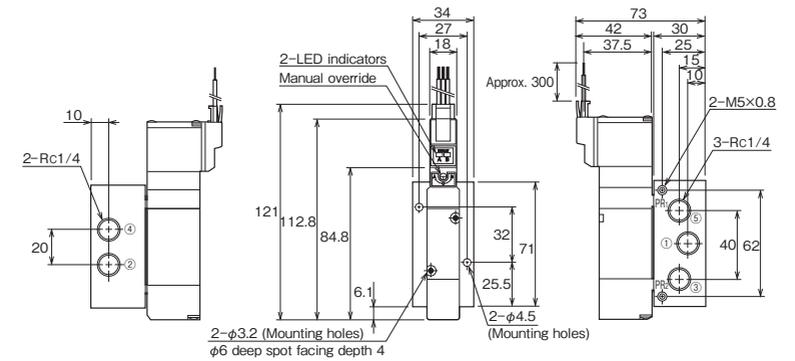
- SR542- DDM Voltage PW-SP (detent)



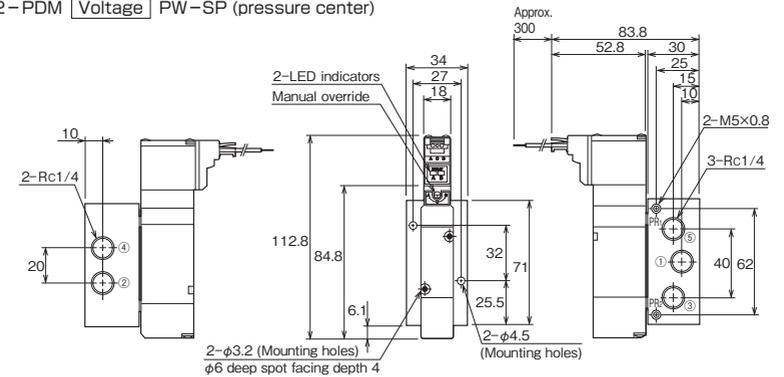
Note) The valve will be delivered without the sub-plate mounted.

5-port/tandem solenoid (3-position)

- SR542- CDM Voltage QW-SP (closed center)
- SR542- EDM Voltage QW-SP (exhaust center)
- SR542- PDM Voltage QW-SP (pressure center)



- SR542- CDM Voltage PW-SP (closed center)
- SR542- EDM Voltage PW-SP (exhaust center)
- SR542- PDM Voltage PW-SP (pressure center)

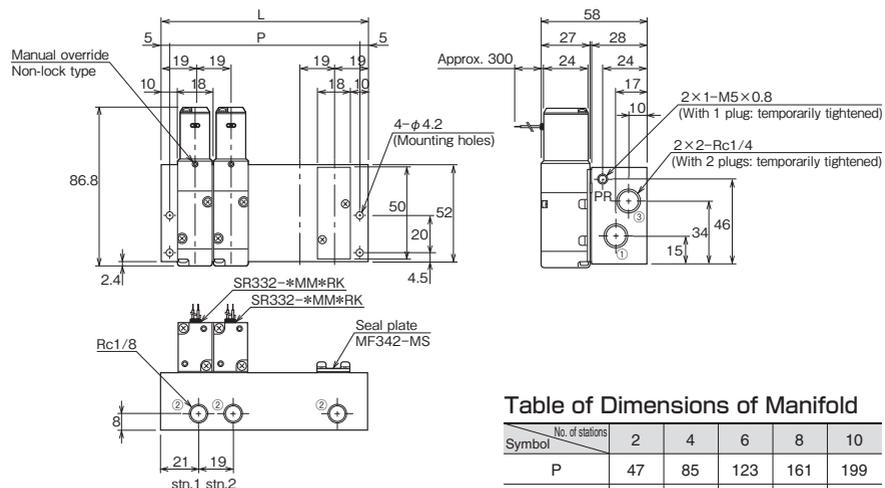


Note) The valve will be delivered without the sub-plate mounted.

CAD/DATA
SR342/TSR342K is available.

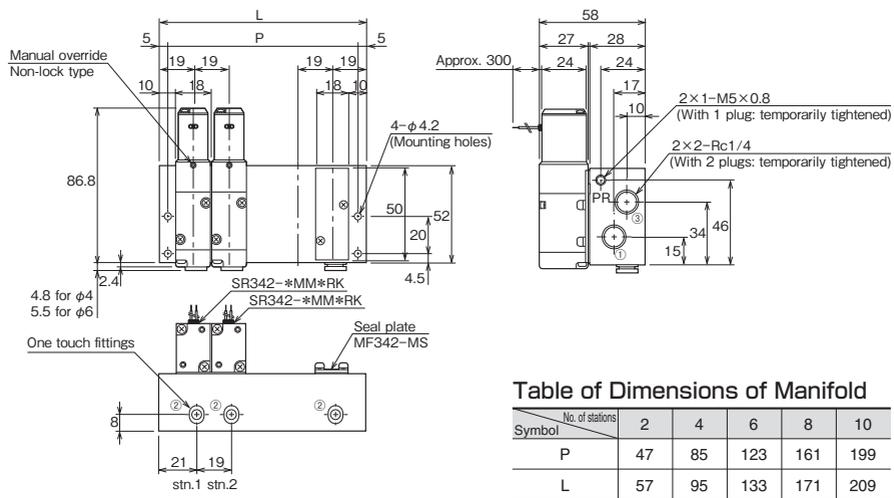
Mono-manifold/MF342M(3-port)

■ Direct screw piping type



Note) The above drawings show dimensions of the lead wire type valve. For the Q/P socket type and DIN socket type valves, see dimensions of each valve.

■ With one touch fittings

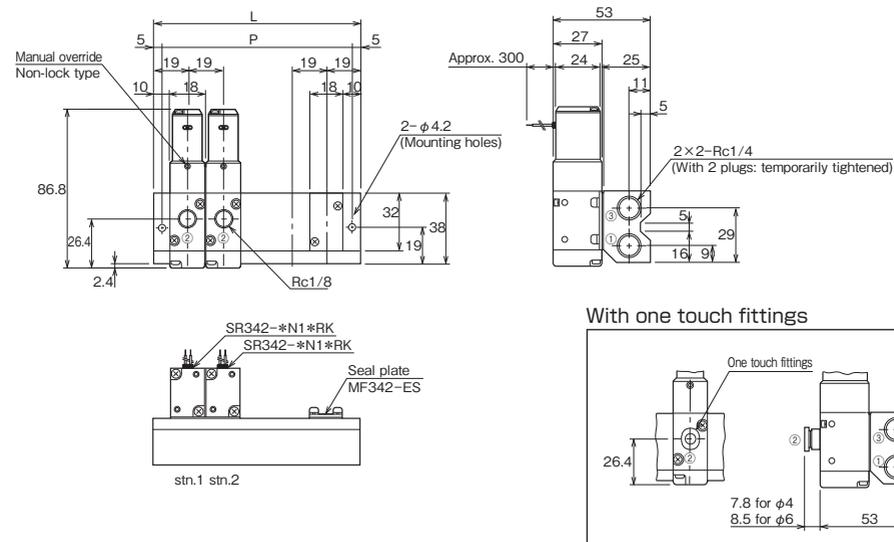


Note) The above drawings show dimensions of the lead wire type valve. For the Q/P socket type and DIN socket type valves, see dimensions of each valve.

CAD/DATA
SR342/TSR342K is available.

Easy-manifold/MF342E(3-port)

■ Direct screw piping type



Note) The above drawings show dimensions of the lead wire type valve. For the Q/P socket type and DIN socket type valves, see dimensions of each valve.

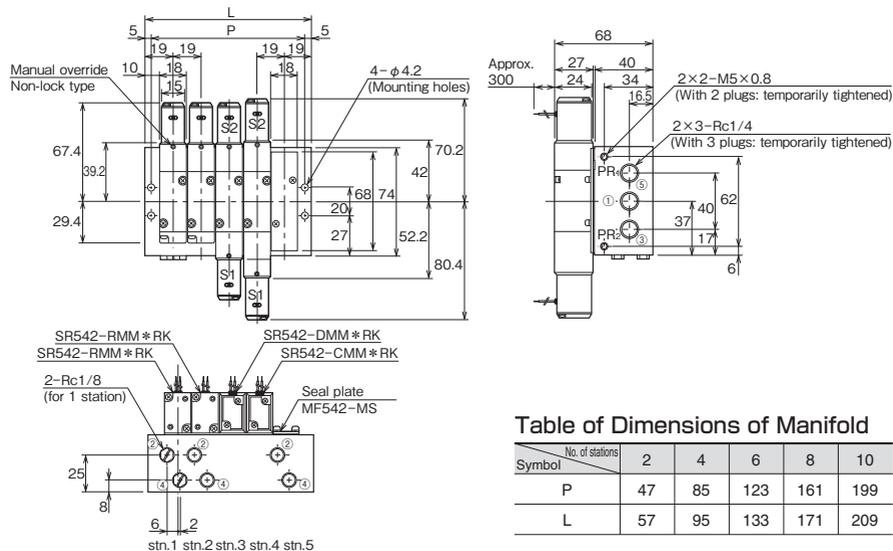
Table of Dimensions of Manifold

Symbol	No. of stations	2	4	6	8	10
P		47	85	123	161	199
L		57	95	133	171	209

CAD/DATA
SR542/TSR542K is available.

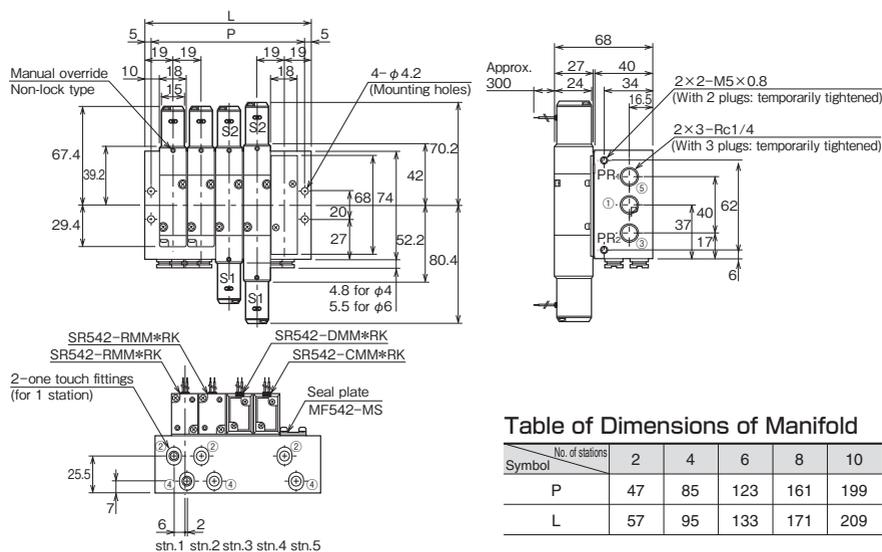
Mono-manifold/MF542M(5-port)

Direct screw piping type



Note) The above drawings show dimensions of the lead wire type valve. For the Q/P socket type and DIN socket type valves, see dimensions of each valve.

With one touch fittings

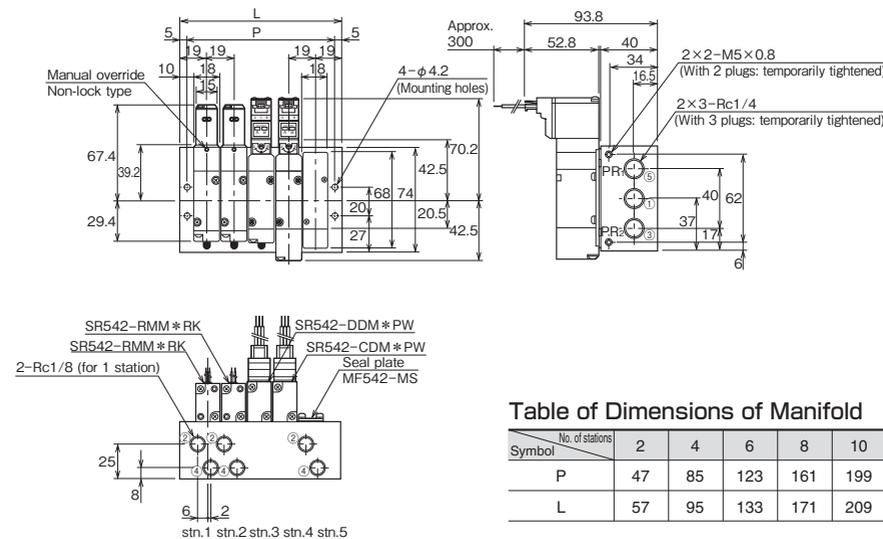


Note) The above drawings show dimensions of the lead wire type valve. For the Q/P socket type and DIN socket type valves, see dimensions of each valve.

CAD/DATA
SR542/TSR542K is available.

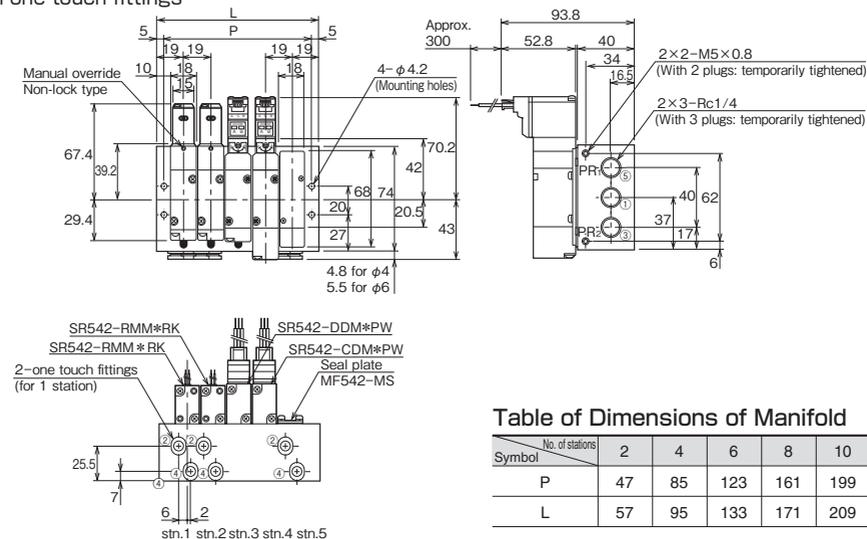
Mono-manifold/MF542M(5-port)

Direct screw piping type



Note) The above drawings show dimensions of the lead wire type valve. For the Q/P socket type and DIN socket type valves, see dimensions of each valve.

With one touch fittings

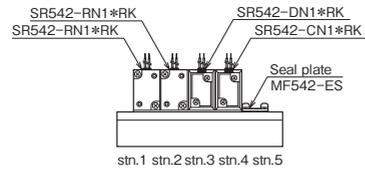
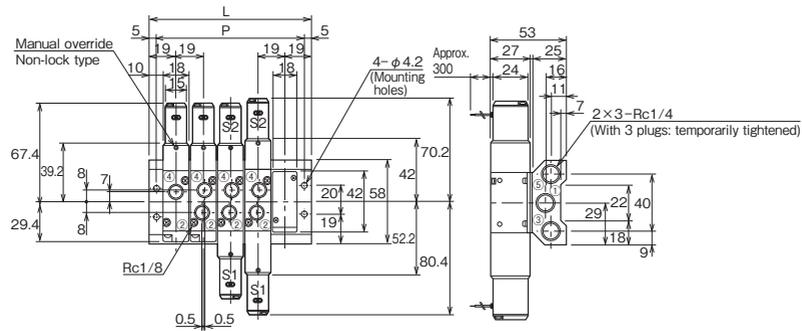


Note) The above drawings show dimensions of the lead wire type valve. For the Q/P socket type and DIN socket type valves, see dimensions of each valve.

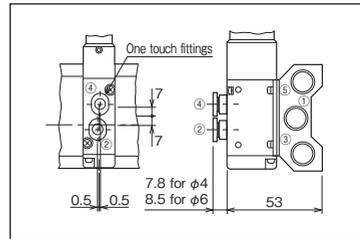
CAD/DATA
SR542/TSR542K is available. 

Easy manifold/MF542E(5-port)

Direct screw piping type



With one touch fittings



Note) The above drawings show dimensions of the lead wire type valve. For the Q/P socket type and DIN socket type valves, see dimensions of each valve.

Table of Dimensions of Manifold

Symbol	No. of stations	2	4	6	8	10
P		47	85	123	161	199
L		57	95	133	171	209