

5 Port Solenoid Valve Base Mounted Manifold Stacking Type/Flat Ribbon Cable

Series SY9000



Type **43P**

How to Order Manifold

SS5Y9-43P-05 U - C8 - - -

Manifold series

9	SY9000
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Valve stations

Symbol	Stations
04	4 stations
⋮	⋮
12	12 stations

* This also includes the number of blanking plate assemblies.

P, R port outlets

Symbol	Port outlet	Applicable stations
U	U side	4 to 10 stations
D	D side	
B	Both sides	4 to 12 stations

SUP/EXH block assembly specifications

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

Thread type

Symbol	Thread type
Nil	Rc
F	G
N	NPT
T	NPTF

Option

Symbol	Mounting
Nil	Direct mounting
D	DIN rail mounting (with DIN rail)
DO	DIN rail mounting (without DIN rail)
D*	When a longer DIN rail is desired than the specified stations, specify the station number to be required into * mark.

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
M	Mixed

One-touch fitting (Inch size)

Symbol	Port size
N9	One-touch fitting for ø5/16"
N11	One-touch fitting for ø3/8"
M	Mixed

* In the case of mixed specifications (M), indicate separately on the manifold specification sheet.

CE-compliant

Nil	—
Q	CE-compliant

* For DC only.

How to Order Manifold Assembly (Example)

Example

SS5Y9-43P-05B-C12.. 1 set (Type 43P, 5-station manifold base part no.)

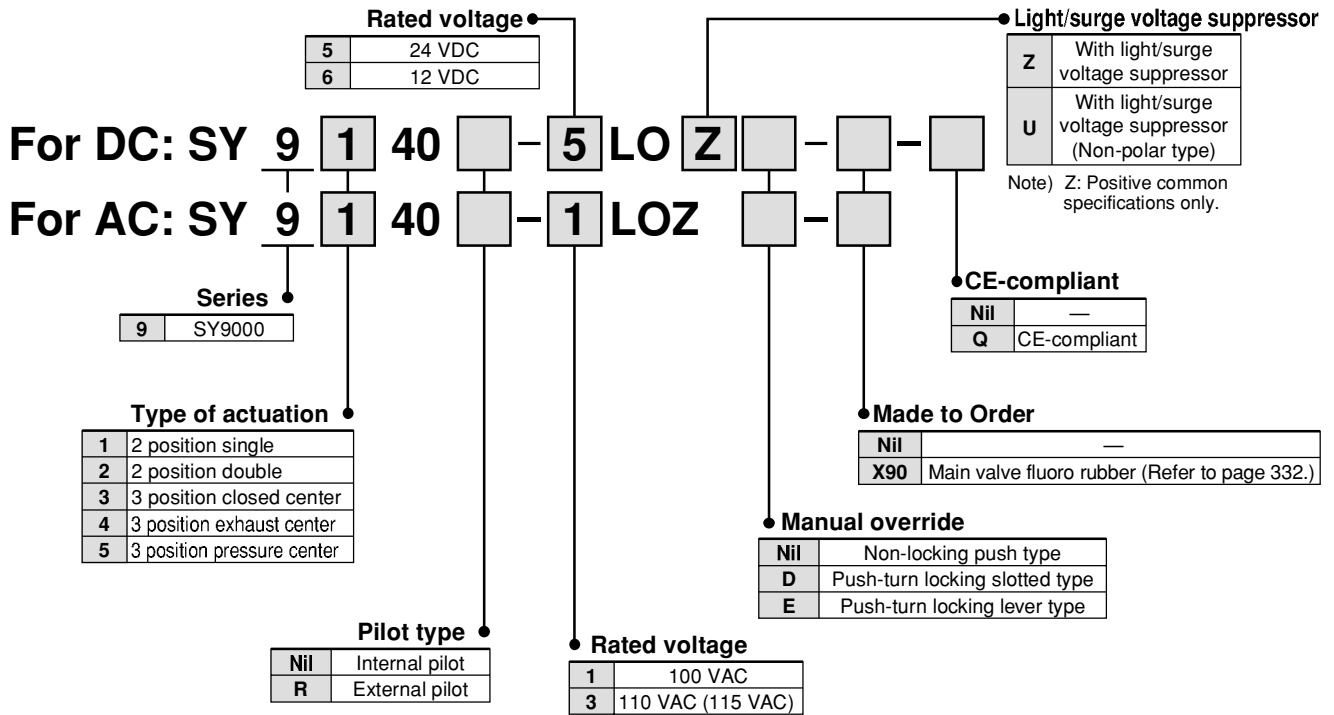
- * SY9000-26-4A 1 set (Blanking plate assembly part no.)
- * SY9140-5LOU 2 sets (Single solenoid part no.)
- * SY9240-5LOU 2 sets (Double solenoid part no.)
- * SY9000-37-1A 2 sets (Connector assembly part no.)
- * SY9000-37-2A 2 sets (Connector assembly part no.)
- * SY9000-41-1 1 set (Lead wire cover)

The asterisk denotes the symbol for assembly. Prefix it to the part nos. of the solenoid valve, etc.

Add the valve and option part number under the manifold base part number. In the case of complex arrangement, specify them on the manifold specification sheet.

Note) Please indicate the connector assembly part no. (page 223) that connects the valve and the manifold.

How to Order Valve



Note) In the case of flat cable type, "U" and "Z" types are for DC specifications and "Z" type is for AC specifications. "Z" type for DC is positive common specification only. For the other combination, please contact SMC.

Connector Assembly

For 12, 24 VDC

Specifications	For SY9000
For single solenoid	SY9000-37-1A
Double solenoid, 3 position type	SY9000-37-2A
Single with spacer assembly	SY9000-37-3A
Double, 3 position with spacer assembly	SY9000-37-4A

For 100 VAC

Specifications	For SY9000
For single solenoid	SY9000-37-1B
Double solenoid, 3 position type	SY9000-37-2B
Single with spacer assembly	SY9000-37-3B
Double, 3 position with spacer assembly	SY9000-37-4B

For 110 VAC (115 VAC)

Specifications	For SY9000
For single solenoid	SY9000-37-1C
Double solenoid, 3 position type	SY9000-37-2C
Single with spacer assembly	SY9000-37-3C
Double, 3 position with spacer assembly	SY9000-37-4C

- Multiple valve wiring is simplified through the use of the flat ribbon cable connector.
- Clean appearance

In the case of a flat ribbon cable type, each valve is wired on the print board of manifold base to allow the external wiring to be piped all together with 26 pins MIL connector.



Flat Ribbon Cable Manifold Specifications

Model	SS5Y9-43P	
Applicable valve	SY9□40	
Manifold type	Stacking type	
P (SUP)/R (EXH)	Common SUP, Common EXH	
Valve stations	4 to 12 stations ^{Note 1)}	
A, B port Porting specifications	Location	Base
	Direction	Side
Port size	P, EA, EB port	C12 (One-touch fitting for ø12)
	A, B port	1/4 3/8 C8 (One-touch fitting for ø8) C10 (One-touch fitting for ø10) C12 (One-touch fitting for ø12)
Manifold base mass W (g) n: Stations	W = 114n + 343	
Applicable flat ribbon cable connector	Flat ribbon cable connection, Socket: 26 pins MIL with strain relief, Conforming to MIL-C-83503	
Internal wiring	In common between +COM and -COM (Z type: +COM only)	
Rated voltage ^{Note 4)}	12, 24 VDC, 100, 110 VAC	

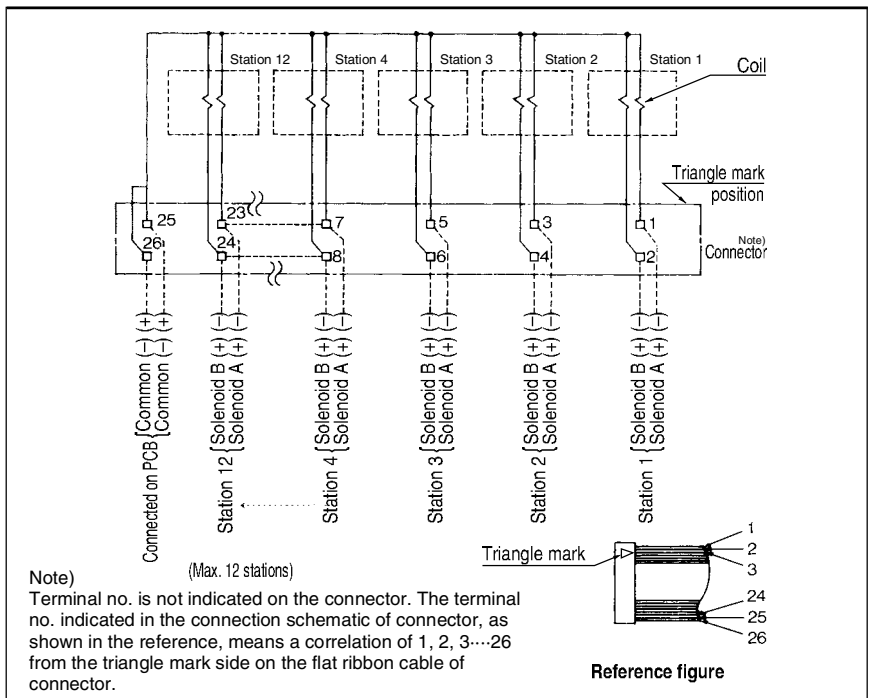
- Note 1) For more than 10 stations, supply pressure to P port on both sides and exhaust from EA/EB port on both sides.
 Note 2) The withstand voltage specification for the wiring unit section is JIS C 0704, Grade 1 or its equivalent.
 Note 3) Refer to "Manifold Option" on page 238.
 Note 4) CE-compliant: For DC only.

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 ³ /(s·bar))	b	Cv	C (dm ³ /(s·bar))	b	Cv
SS5Y9-43P	C12	C12	6.4	0.29	1.6	7.3	0.29	1.8

Note) The value is for manifold base with 5 stations and individually operated 2 position type.

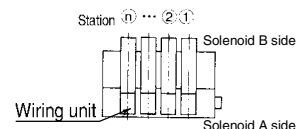
Internal Wiring of Manifold (Non-polar type)



Caution

- For non-polar (U) valves, the electrical DC connections can be used with either positive and negative COM. For type (Z), only use with positive COM as the valve does not operate correctly when used with negative COM.

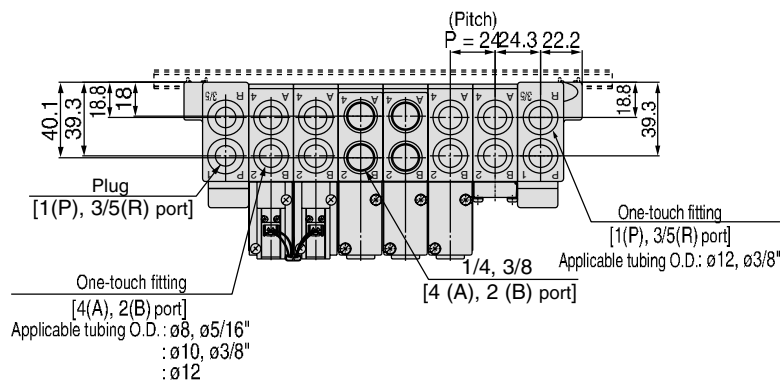
- For more than 10 stations, both poles of the common should be wired.
- For single solenoid, connect to the solenoid A side.
- The maximum number of stations that can be accommodated is 12. For more stations, please contact SMC.



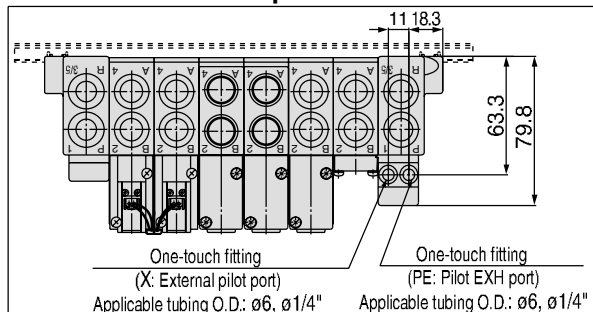
SY9000: SS5Y9-43P- Stations D - ^{C8, N9} ^{C10, N11} ^{C12} (-D)

[]: AC

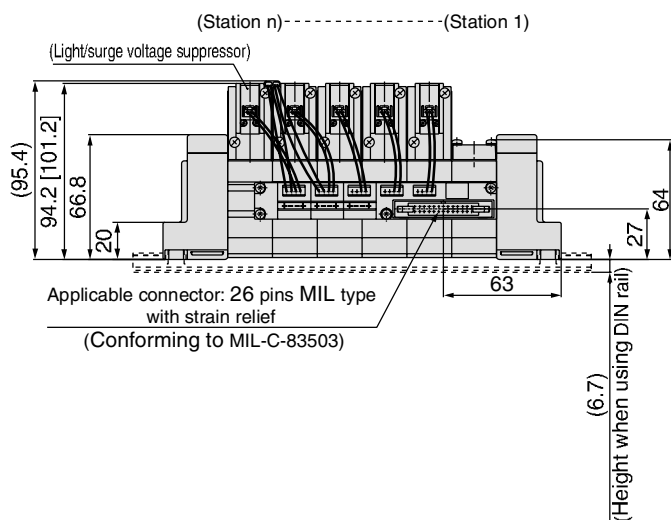
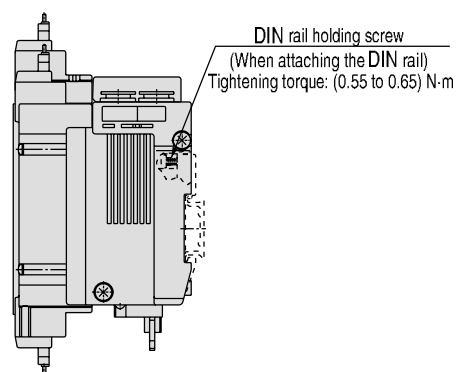
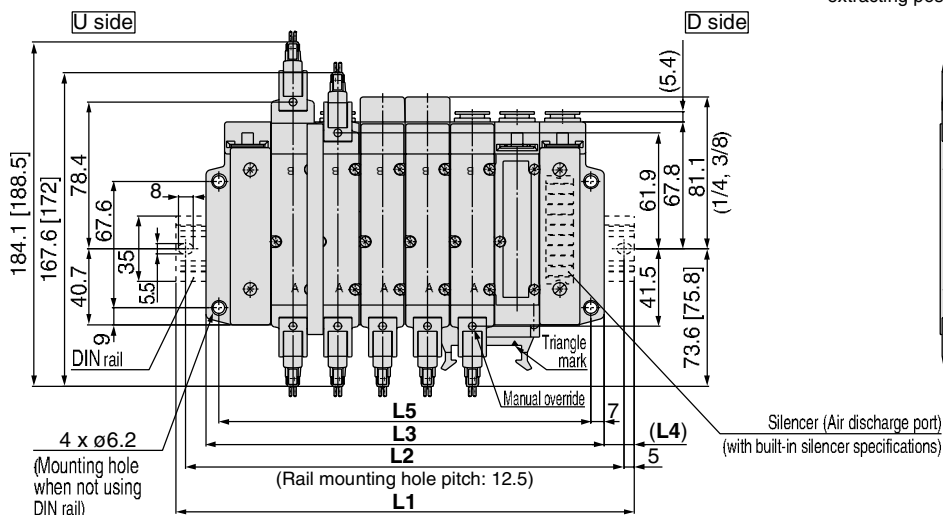
* When P, R port outlets are indicated on the D side, the P, R ports on the opposite side are plugged.



With External Pilot Specifications



* Air discharge port on the built-in silencer type and the external pilot's extracting position are in the D side.



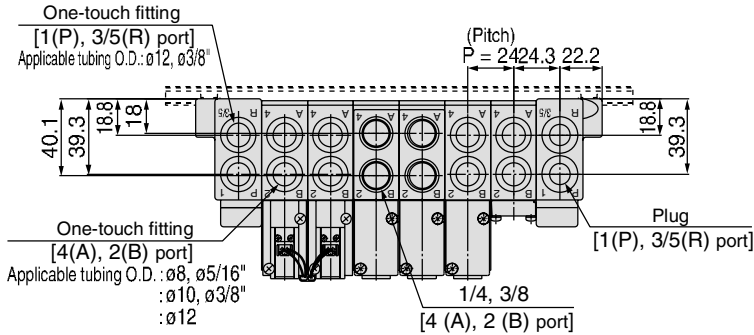
Stations n	4 stations	5	6	7	8	9	10 stations
L1	198	223	248	260.5	285.5	310.5	335.5
L2	187.5	212.5	237.5	250	275	300	325
L3	165	189	213	237	261	285	309
L4	16.5	17	17.5	12	12.5	13	13.5
L5	151	175	199	223	247	271	295

Type 43P Series SY9000

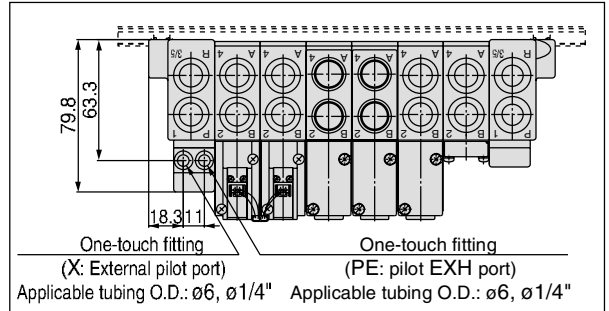
SY9000: SS5Y9-43P- Stations U -03 C8, N9 C10, N11 C12 (-D)



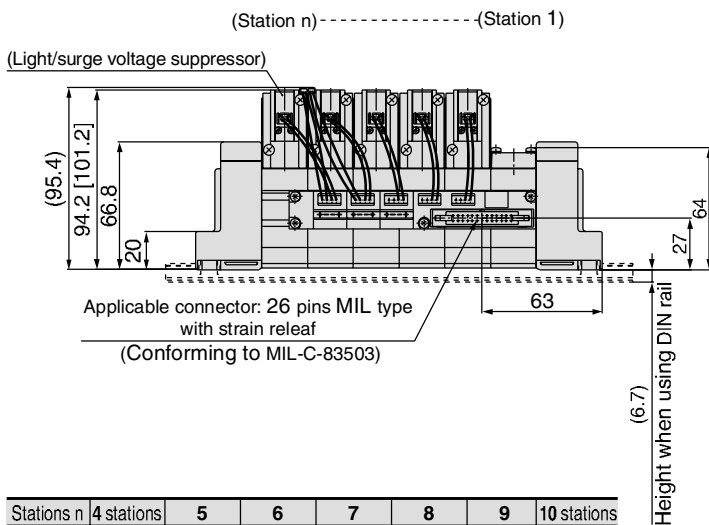
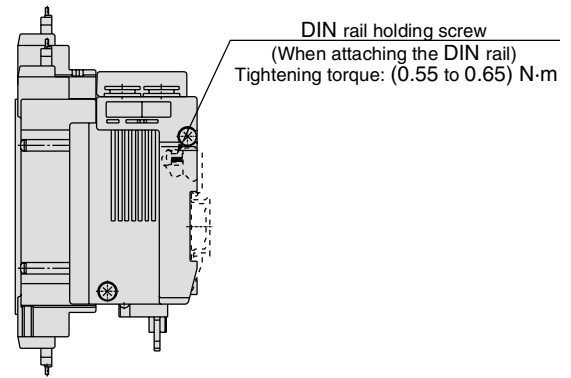
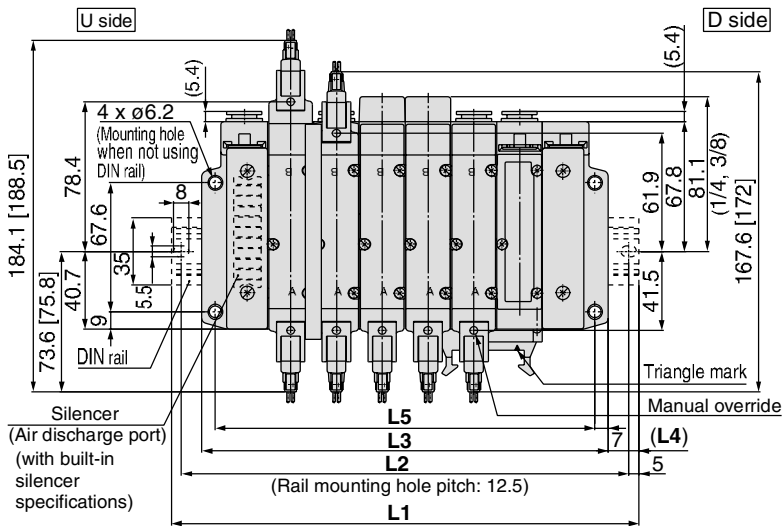
* When P, R port outlets are indicated on the U side, the P, R ports on the opposite side are plugged.



With External Pilot Specifications



* Air discharge port on the built-in silencer type and the external pilot's extracting position are in the U side.

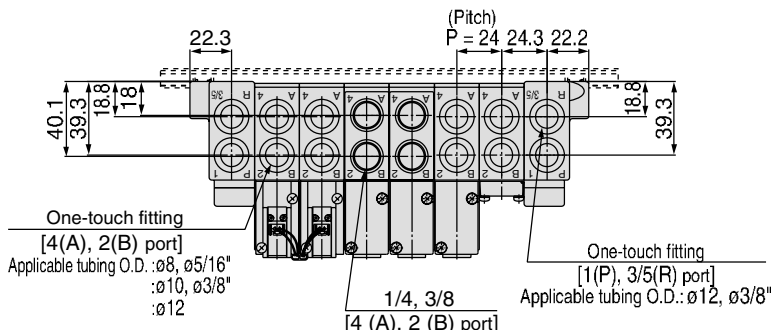


Stations n	4 stations	5	6	7	8	9	10 stations
L1	198	223	248	260.5	285.5	310.5	335.5
L2	187.5	212.5	237.5	250	275	300	325
L3	165	189	213	237	261	285	309
L4	16.5	17	17.5	12	12.5	13	13.5
L5	151	175	199	223	247	271	295

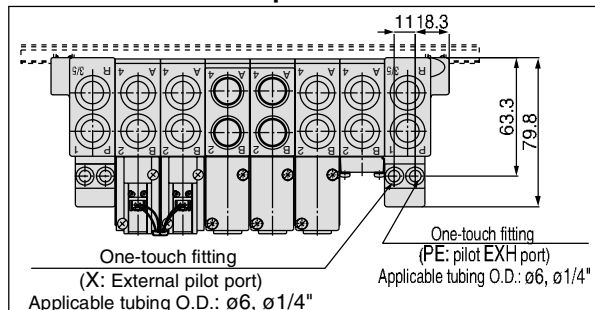
SY9000: SS5Y9-43P- Stations B 02 C8, N9 -03 C10, N11 C12 (-D)

[] : AC

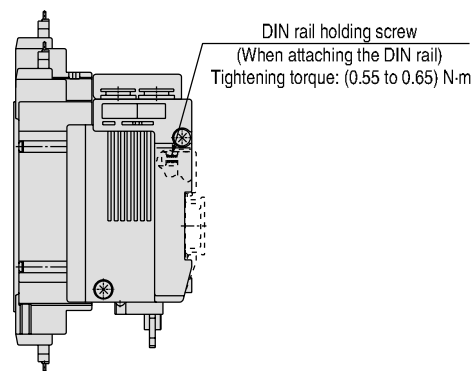
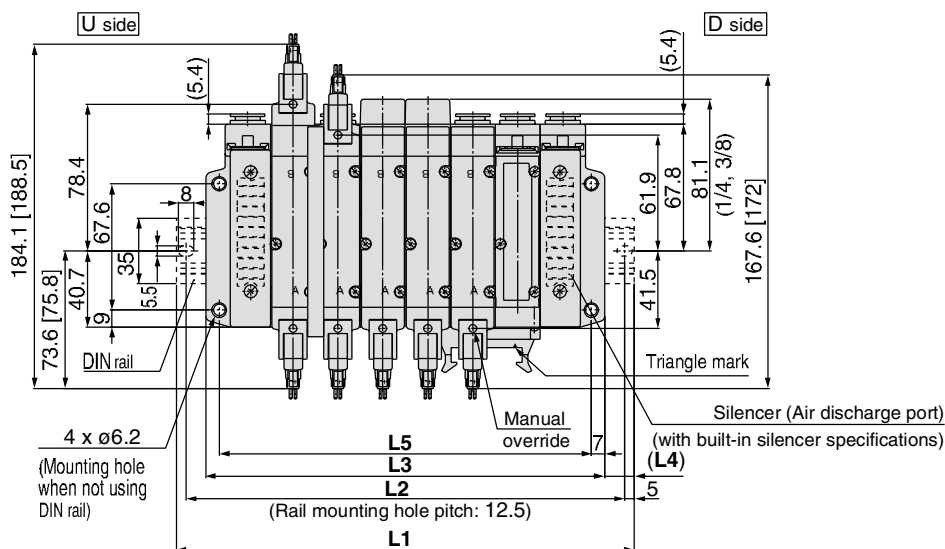
* When P, R port outlets are indicated on the B side, the P, R ports on the both sides are in the open state.



With External Pilot Specifications

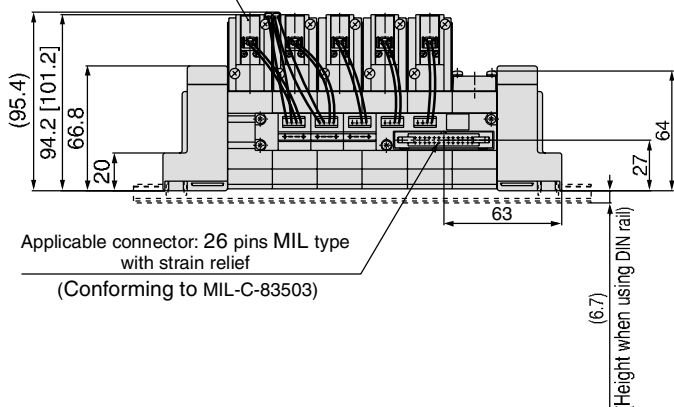


* Air discharge port on the built-in silencer type and the external pilot's extracting position are in the B side (both sides).



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

(Light/surge voltage suppressor)



Stations n	4 stations	5	6	7	8	9	10	11	12 stations
L1	198	223	248	260.5	285.5	310.5	335.5	360.5	385.5
L2	187.5	212.5	237.5	250	275	300	325	350	375
L3	165	189	213	237	261	285	309	333	357
L4	16.5	17	17.5	12	12.5	13	13.5	14	14.5
L5	151	175	199	223	247	271	295	319	343