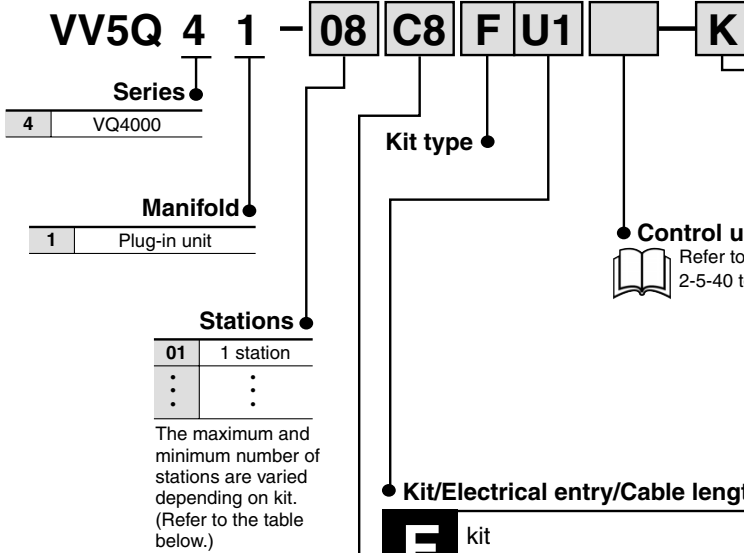
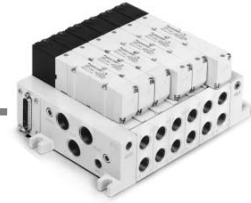


# Series VQ4000

## Base Mounted Plug-in Unit

### How to Order Manifold



**Cylinder port**

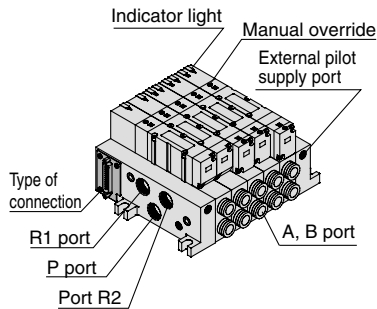
C8	With One-touch fitting for ø8
C10	With One-touch fitting for ø10
C12	With One-touch fitting for ø12
02	Rc 1/4
03	Rc 3/8
B	Bottom ported Rc 1/4
CM	Mixed

**Connector entry direction**

D side		U side		Cable length	Stations
Kit	D1	Kit	U1		
F	D2	F	U2	3 m	1 to 18 stations
	D3		U3	5 m	

**Terminal block mounting position**

D side		U side		Terminal block box	Stations
TD	TO				
				IP65 compatible	3 to 18 stations



Note) Shown VV5Q41-05C12FD0

**Electrical entry**

D side		U side		Cable length	Stations
Kit	D1	Kit	U1		
L	D2	L	U2	3 m	1 to 16 stations
	D1		U1	1.5 m	
	D0		U0	0.6 m	

IP65 compatible

**Unit mounting position**

D side		U side		Serial transmission unit	Stations
SD	S				
				Without SI unit	3 to 18 stations
				With general type SI unit (Series EX300)	
				Mitsubishi Electric Corp.: MELSECNET/MINI-S3 Data Link System	
				Mitsubishi Electric Corp.: MELSECNET/MINI-S3 Data Link System (2 power supply systems)	
				OMRON Corp.: SYSBUS Wire System	
				SHARP Corp.: Satellite I/O Link System	
				NKE Corp.: Uni-wire System (16 output points)	
				SUNX Corp.: S-LINK System (16 output points)	
				SUNX Corp.: S-LINK System (8 output points)	
				Fuji Electric Co.: T-LINK Mini System	
				DeviceNet, CompoBus/D (OMRON Corp.)	
				OMRON Corp.: CompoBus/S System (16 output points)	
				OMRON Corp.: CompoBus/S System (8 output points)	
				JEMANET (JPCN-1)	
				Mitsubishi Electric Corp.: CC-LINK System	
				Rockwell Automation: Allen Bradley Remote I/O (RIO) System	
				NKE Corp.: Uni-wire H System	

IP65 compatible  
\* Applicable to INPUT and OUTPUT type.

Simple specials are available with SMC Simple Special System. For details about applicable models, please contact SMC.

Manifold Specifications

Series	Base model	Type of connection	Porting specifications			Maximum applicable stations	Applicable solenoid valve	5 station weight (kg)
			4(A), 2(B) port location	Port size <small>Note)</small>				
				1(P), 5(R1), 3(R2)	4(A), 2(B)			
VQ4000	VV5Q41-□□□	<ul style="list-style-type: none"> <li>■ F kit-D-sub connector</li> <li>■ T kit-Terminal block box</li> <li>■ L kit-Lead wire</li> <li>■ S kit-Serial transmission</li> </ul>	Side	Rc 1/2 Option (Direct exhaust with silencer box)	C8 (For ø8) C10 (For ø10) C12 (For ø12)	F, T kit 12 stations  L kit 16 stations  S kit 10 stations	VQ4□00 VQ4□01	2.24 • L kit • Except solenoid valve weight
			Bottom		Rc 1/4			



Note) For details about inch-size One-touch fittings and other thread standards, refer to page 2-5-39.

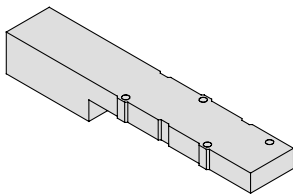
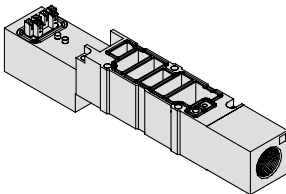
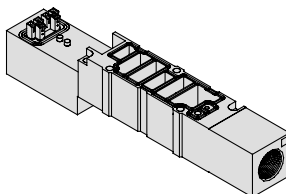
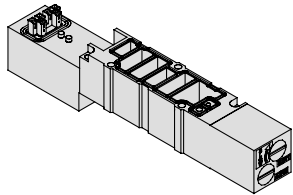
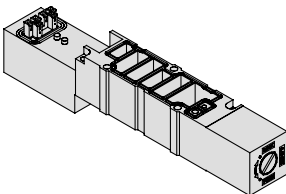
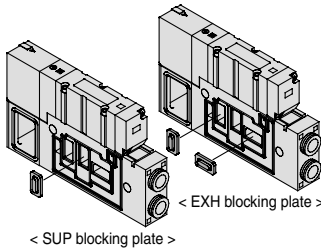
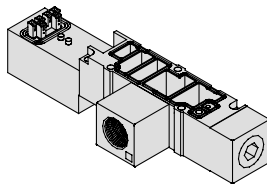
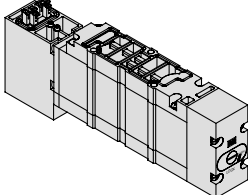
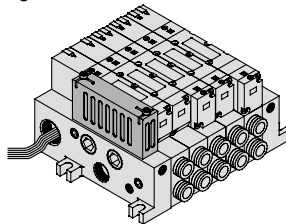
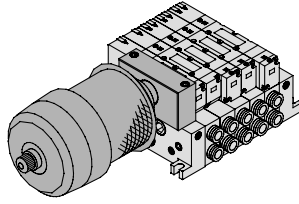
Flow Characteristics at the Number of Manifold Stations (Operated individually)

Model	Passage/Stations	Station 1	Station 5	Station 10	Station 15	
2 position metal seal VQ4 <sub>2</sub> 00	1 → 4/2 (P → A/B)	C [dm <sup>3</sup> /(s·bar)]	5.9	5.9	5.9	5.9
		b	0.23	0.23	0.23	0.23
		Cv	1.5	1.5	1.5	1.5
	4/2 → 5/3 (A/B → EA/EB)	C [dm <sup>3</sup> /(s·bar)]	6.2	6.2	6.2	6.2
		b	0.19	0.19	0.19	0.19
		Cv	1.5	1.5	1.5	1.5
2 position rubber seal VQ4 <sub>2</sub> 01	1 → 4/2 (P → A/B)	C [dm <sup>3</sup> /(s·bar)]	6.8	6.8	6.8	6.8
		b	0.31	0.31	0.31	0.31
		Cv	1.8	1.8	1.8	1.8
	4/2 → 5/3 (A/B → EA/EB)	C [dm <sup>3</sup> /(s·bar)]	7.0	7.0	7.0	7.0
		b	0.38	0.38	0.38	0.38
		Cv	1.9	1.9	1.9	1.9



Note) Port size: Rc 3/8

Manifold Option

<p><b>Blanking plate assembly</b> VVQ4000-10A-1</p> 	<p><b>Individual SUP spacer</b> VVQ4000-P-1-<sub>02</sub>/<sub>03</sub></p> 	<p><b>Individual EXH spacer</b> VVQ4000-R-1-<sub>02</sub>/<sub>03</sub></p> 	<ul style="list-style-type: none"> <li>• Refer to pages 2-5-34 to 2-5-38 for detailed dimensions of each option. For replacement parts, refer to page 2-5-47.</li> <li>• Refer to pages 2-5-40 to 2-5-43 for control unit.</li> </ul>
<p><b>Throttle valve spacer</b> VVQ4000-20A-1</p> 	<p><b>SUP stop valve spacer</b> VVQ4000-37A-1</p> 	<p><b>SUP/EXH block plate</b> VVQ4000-16A</p>  <p>&lt; SUP blocking plate &gt; &lt; EXH blocking plate &gt;</p>	
<p><b>Release valve spacer</b> VVQ4000-24A-1D <sup>(1, 2)</sup></p> 	<p><b>Double check spacer with residual pressure exhaust</b> VVQ4000-25A-1 <sup>(1)</sup></p> 	<p><b>Direct exhaust with silencer box</b> [-S<sub>D</sub><sup>□</sup>]<sup>(1)</sup></p> 	<p><b>For exhaust cleaner mounting</b> [-C<sub>D</sub><sup>□</sup>]<sup>(1)</sup></p> 



Note 1) Release valve spacer, built-in silencer (direct exhaust), exhaust cleaner mounting and double check spacer for residual pressure exhaust cannot be combined with external pilot.

Note 2) Can be mounted on L kit only. For other kits, order E type control unit.

(Refer to pages 2-5-40 to 2-5-43.)



VQC

SQ

VQ0

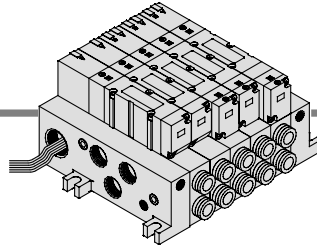
VQ4

VQ5

VQZ

VQD

**L** Kit (Lead wire cable)



**IP65 compliant**

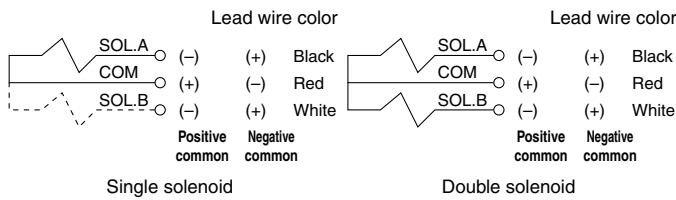
- Enclosure IP65 compliant
- Direct electrical entry. Models with two or more stations are available.
- Electrical entry can be selected on either the U side or the D side according to the mounting orientation.
- Maximum stations are 16.

**Manifold Specifications**

Series	Porting specifications			Applicable stations
	4(A), 2(B) port location	Port size		
		1(P), 5(R1), 3(R2)	4(A), 2(B)	
VQ4000	Side	Rc 1/2	C 8, 10, 12 Rc 1/4, 3/8	Max. 16 stations
	Bottom		Rc 1/4	

**Wiring Specifications**

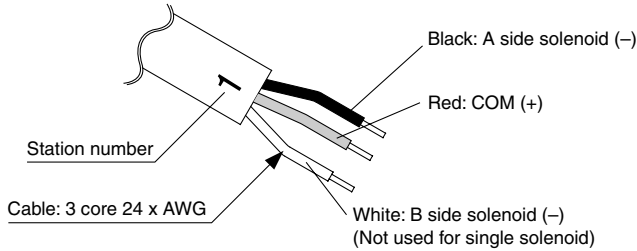
Three lead wires are attached to each station regardless of the type of valve which is mounted. The red wire is for COM connection.



**Lead Wire Assembly with Connector**

Lead wire length	Part no.
0.6 m	VVQ4000-44A-8-□
1.5 m	VVQ4000-44A-15-□
3 m	VVQ4000-44A-30-□

□: Number of stations 1 to 16.



For different lead wire lengths, order a lead wire assembly with connector shown in the table on the right.  
 Note 1) There is no polarity. It can also be used as a negative common.  
 Note 2) Connect the release valve and the pressure switch to SOL. A side on the manifold with control unit.

**How to Order Manifold**



**Series**

4	VQ4000
---	--------

**Manifold**

1	Plug-in unit
---	--------------

**Stations**

01	1 station
⋮	⋮
16	16 stations

**Connector locations**

D	D side entry
U	U side entry

**Cable (Length)**

0	Cable length 0.6 m
1	Cable length 1.5 m
2	Cable length 3 m

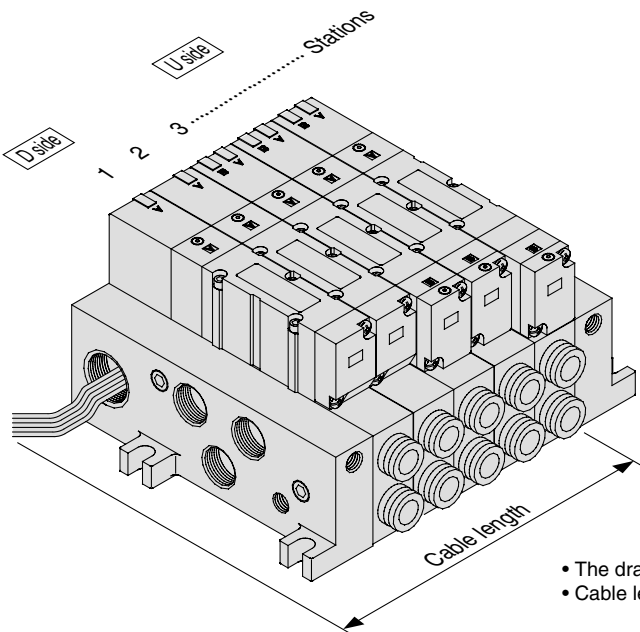
**Cylinder port**

C8	With One-touch fitting for ø8
C10	With One-touch fitting for ø10
C12	With One-touch fitting for ø12
02	Rc 1/4
03	Rc 3/8
B	Bottom ported Rc 1/4
CM	Mixed

**Option**

Symbol	Option
Nil	None
CD	Exhaust cleaner: For D side mounting
CU	Exhaust cleaner: For U side mounting
SB	Direct exhaust with silencer box: Exhaust from both sides
SD	Direct exhaust with silencer box: D side exhaust
SU	Direct exhaust with silencer box: U side exhaust
W	IP65 enclosure

Note) When two or more symbols are specified, indicate them alphabetically.  
 Example) -CDW



- The drawing shows the electrical entry on the D side.
- Cable length is measured from the solenoid valve body.

- VQC
- SQ
- VQ0
- VQ4**
- VQ5
- VQZ
- VQD

**How to Order Valves**

**VQ 4 1 0 0 0 5**

**Series**

4	VQ4000
---	--------

**Type of actuation**

1	2 position single
2	2 position double
3	3 position closed center
4	3 position exhaust center
5	3 position pressure center
6	3 position double check

**Seal**

0	Metal seal
1	Rubber seal

**Enclosure**

Nil	Dust tight
W	Dust tight/Low jetproof type (IP65)

**Manual override**

Nil	Non-locking push type (Tool required)
B	Locking type (Tool required)

**Light/Surge voltage suppressor**

Nil	Yes
E	Without light, with surge voltage suppressor

**Coil voltage**

1	100 VAC (50/60 Hz)
2	200 VAC (50/60 Hz)
3	110 VAC (50/60 Hz)
4	220 VAC (50/60 Hz)
5	24 VDC
6	12 VDC

**How to Order Manifold Assembly**

Specify the part numbers for valves and options together beneath the manifold base part number.

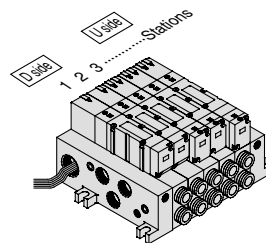
**<Example>**

**Lead wire kit with cable (3 m)**

VV5Q41-05C8LD2... 1 set —Manifold base part no.  
 \*VQ4100-5.....2 sets —Valve part no. (Stations 1 and 2)  
 \*VQ4200-5.....2 sets —Valve part no. (Stations 3 and 4)  
 \*VQ4300-5 .....1 set —Valve part no. (Station 5)

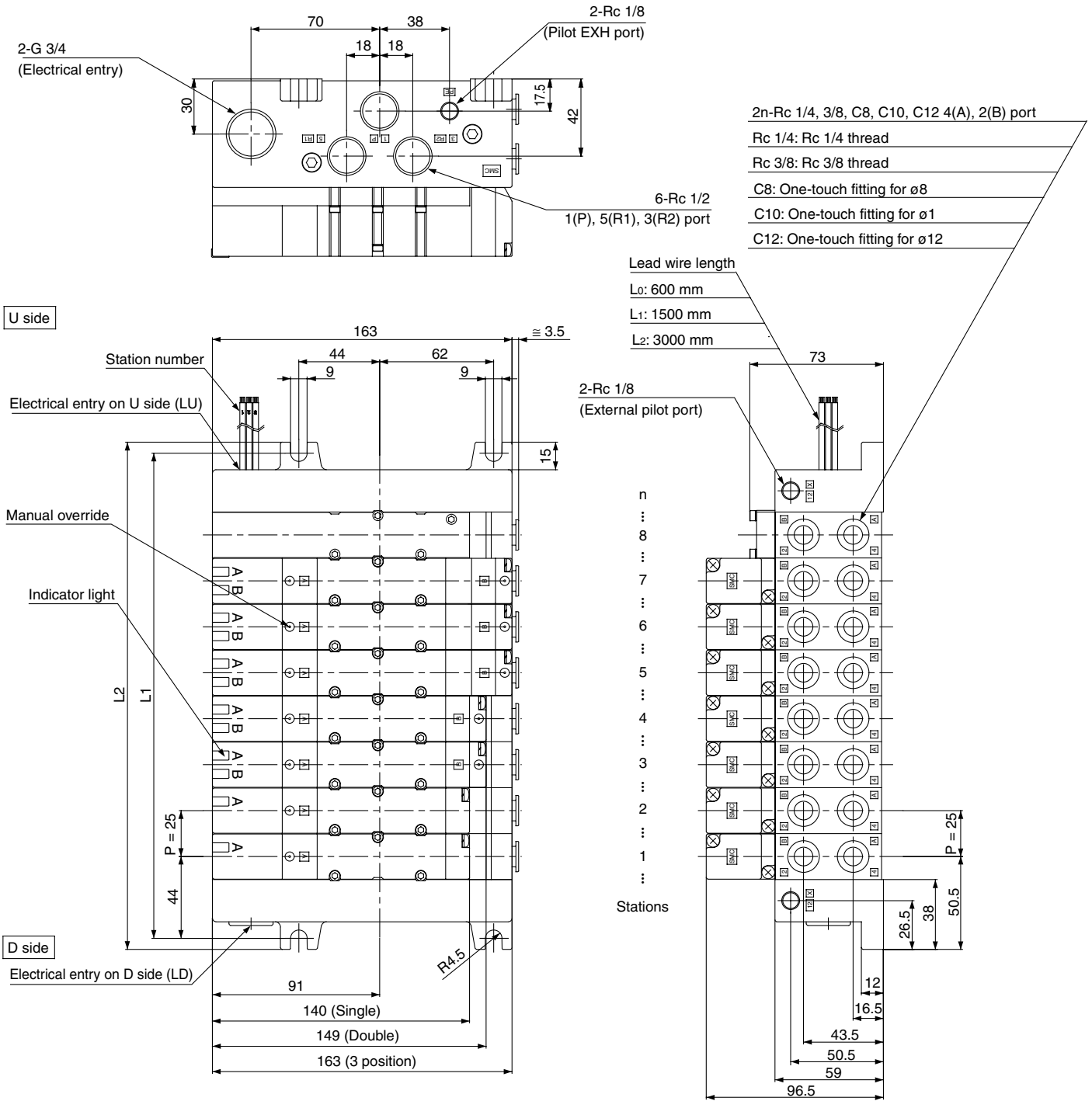
Prefix the asterisk to the part nos. of the solenoid valve, etc.

Enter in order starting from the first station on the D side. When entry of part numbers becomes complicated, indicate in the manifold specification sheet.

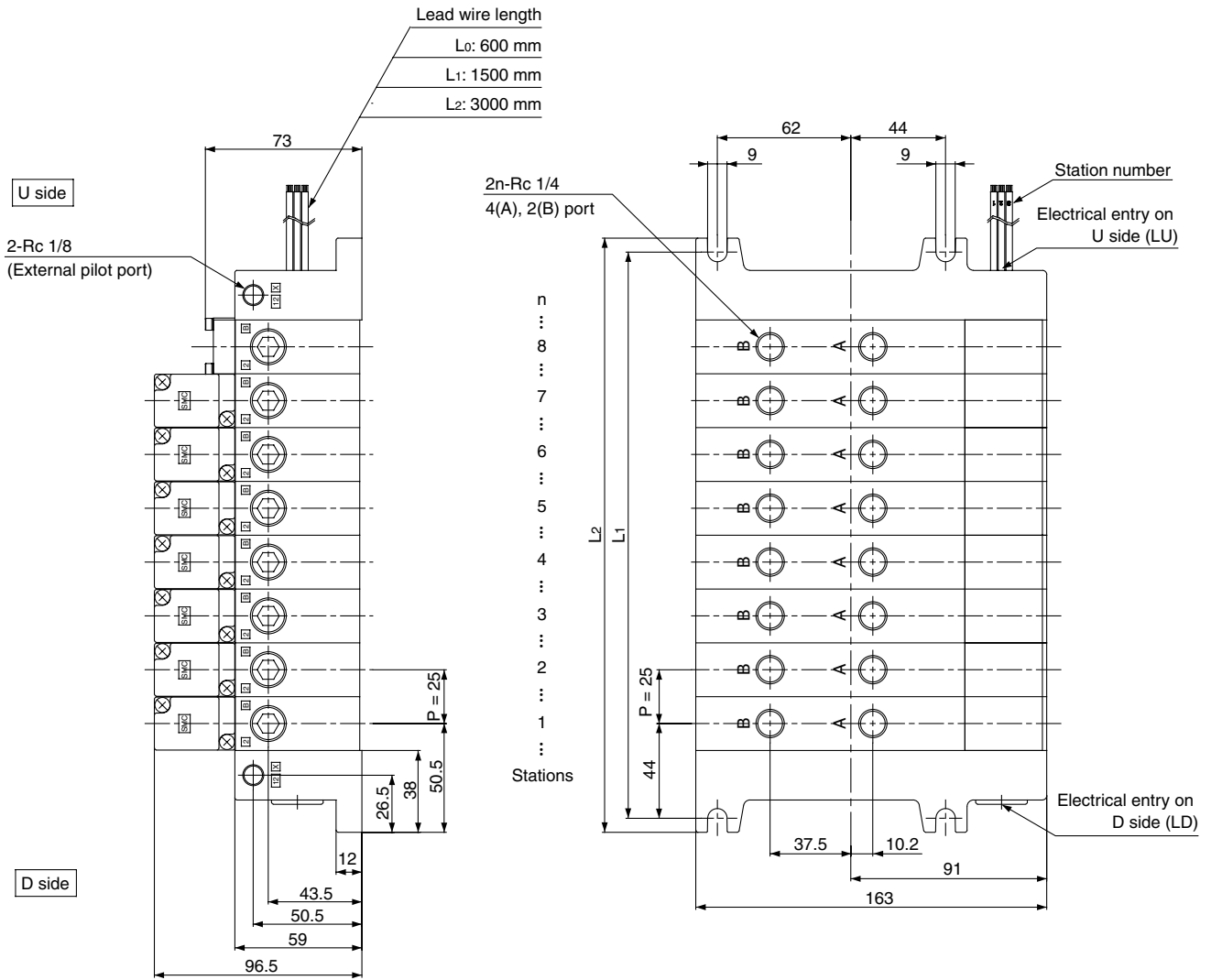


- Function**
- |                  |                          |
|------------------|--------------------------|
| Nil              | Standard type (1 W)      |
| Y <sup>(1)</sup> | Low wattage type (0.5 W) |
| R <sup>(2)</sup> | External pilot           |
- Note 1) Applicable to DC specification.
- Note 2) Refer to page 2-5-39 for external pilot specification. Combination of external pilot and perfect interface is not possible.
- Note 3) When two or more symbols are specified, indicate them alphabetically.

**L** Kit (Lead wire cable)



Bottom ported drawing



- VQC
- SQ
- VQ0
- VQ4
- VQ5
- VQZ
- VQD

Dimensions

Formula  $L1 = 25n + 63$ ,  $L2 = 25n + 76$  n: Station (Maximum 16 stations)

n	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L1	88	113	138	163	188	213	238	263	288	313	338	363	388	413	438	463
L2	101	126	151	176	201	226	251	276	301	326	351	376	401	426	451	476