

Series 10-VQD1000

4 port direct operated poppet solenoid valve

How to Order Valves

Clean series

Body type

- 2 — Body ported (Single unit)
- 5 — Base mounted

Valve option

- Nil — Standard (2W)
- V — Vacuum (2W)
- * U — For large flow (3.2W)
- * W — For large flow, Vacuum (3.2W)
- * Power saving style

Rated voltage

- 5 — 24 VDC
- 6 — 12 VDC
- * Please consult with SMC for other voltages.

10 - VQD11 5 1 U - 5 L - M5

Electrical entry

- L — L plug connector, With lead wire
- LO — L plug connector, Without lead wire
- M — M plug connector, With lead wire
- MO — M plug connector, Without lead wire

Port size

- Body ported — M5 x 0.8 thread
- Base mounted — M5 x 0.8 (with sub-plate)
- Note) No "Nil".



L plug connector
Base mounted



L plug connector
Body ported

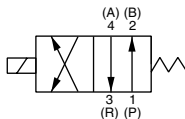


M plug connector
Base mounted



M plug connector
Body ported

Symbol



Standard specifications

Items	Type	Standard type (2W)	Large flow type (3.2 W / Energy saving type)
	Valve construction		
Valve construction		4 port direct operated poppet valve	
Fluid		Air/Inert gas	
Maximum operating pressure		0.7MPa	
Minimum operating pressure / Vacuum		0MPa/10Torr	
Response time <small>Note 1)</small>		ON:4ms,OFF:2ms	
Ambient and fluid temperature		-10 to 50°C <small>Note 2)</small>	
Lubrication		Not required	
Manual override		Non-locking push type	
Impact / Vibration resistance <small>Note 3)</small>		150/30m/s ²	
Mounting orientation		Unrestricted	
Enclosure		Dust tight	
Weight		34g (without sub-plate)	
Coil rated voltage DC		24V, 12V	
Allowable voltage fluctuation		±10% of rated voltage	
Coil insulation type		Equivalent to class B	
Power consumption DC		2W	3.2 W (Energy saving type) (Inrush 3.2 W, Holding 2W)
Electrical entry		L plug connector, M plug connector With light/surge voltage suppressor	

Note 1) Based on JIS B 8375-1981. With light/surge voltage suppressor (Use clean air). Dispersion accuracy: ±1 ms.
Note 2) Use dry air to prevent condensation when operating at low temperatures.

Note 3) Impact resistance: No malfunction occurred when it is tested with a drop tester in the axial direction and at the right angles to the main valve and armature in both energized and de-energized states every once for each condition. (Initial value)

Vibration resistance: No malfunction occurred in one sweep between 8.3 and 2000Hz. Test was performed in the axial direction and at the right angles to the main valve and armature in both energized and de-energized states. (Initial value)

Flow characteristics

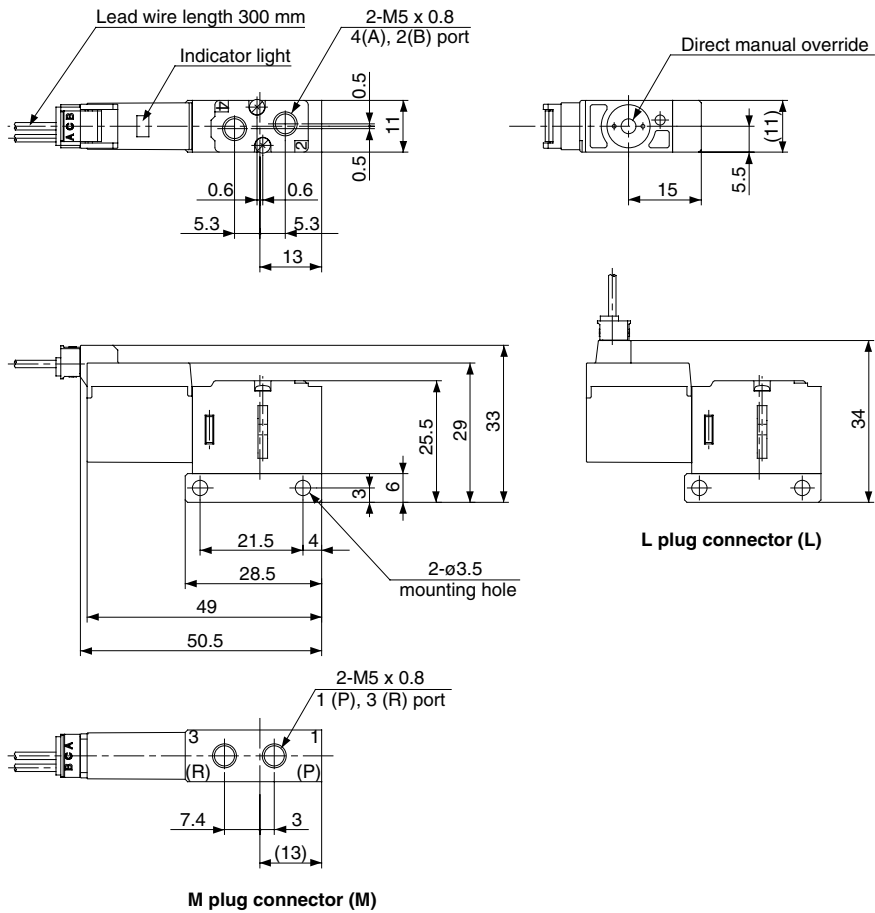
Valve model		Port size	Flow characteristics					
			1→4/2(P→A/B)			4/2→5/3(A/B→EA/EB)		
			C [dm ³ /(s·bar)]	b	Cv	C [dm ³ /(s·bar)]	b	Cv
Body ported	10-VQD1121-□ _M ^L -M5	M5 x 0.8	0.22	0.16	0.05	0.19	0.31	0.05
	10-VQD1121 _W -□ _M ^L -M5		0.27	0.24	0.07	0.28	0.28	0.07
Base mounted (With sub-plate)	10-VQD1151-□ _M ^L -M5		0.22	0.10	0.05	0.22	0.31	0.06
	10-VQD1151 _W -□ _M ^L -M5		0.27	0.25	0.07	0.27	0.28	0.07

4 port direct operated poppet solenoid valve 10-VQD1000

Dimensions

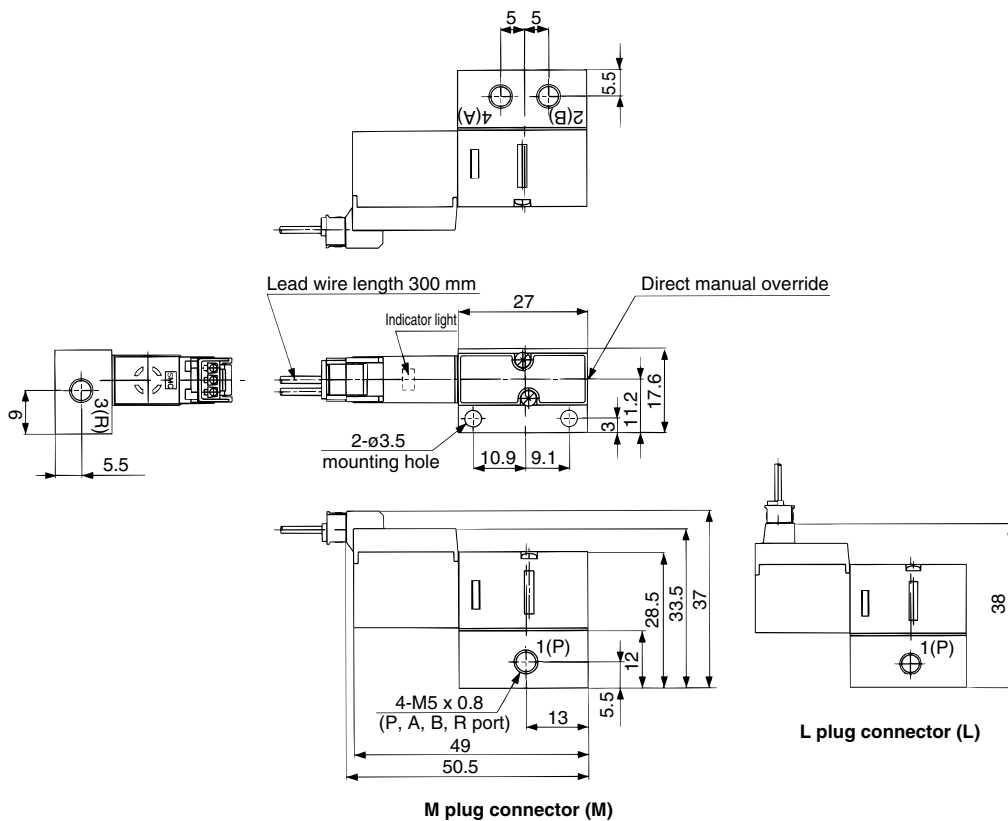
L plug connector: 10-VQD1121□-□L-M5

M plug connector: 10-VQD1121□-□M-M5



L plug connector: 10-VQD1151□-□L-M5

M plug connector: 10-VQD1151□-□M-M5



Manifold specifications

How to Order

10 - V V 4 Q D 1 5 - [] []

Clean series

Manifold type
 2 — Body ported
 5 — Base mounted

Valve stations
 02 — 2 stations
 ⋮
 20 — 20 stations (Maximum)

Port size
 M5 — M5 x 0.8
 C4 — ø4 cassette
 Note) 1(P), 3(R) ports: Rc1/8.

How to Order Valves

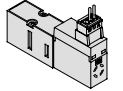
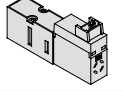
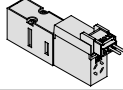
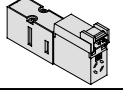
10 - V Q D 1 1 5 1 [] - 5 [] L - M5

Clean series

Body type
 3 — Body ported
 5 — Base mounted

Valve option
 Nil — Standard (2 W)
 V^{Note)} — Vacuum (2 W)
 U^{Note)} — For large flow (3.2 W)
 W — For large flow, Vacuum (3.2 W)
 Note) Energy saving type

Rated voltage
 5 — 24 VDC
 6 — 12 VDC

Electrical entry	
L: Plug lead type L plug connector, With lead wire With light/surge voltage suppresser	
LO: Plug lead type L plug connector, Without connector With light/surge voltage suppresser	
M: Plug lead type M plug connector, With lead wire With light/surge voltage suppresser	
MO: Plug lead type M plug connector, Without connector With light/surge voltage suppresser	

Port size (Body ported only)
 M5 — M5 thread

Air cylinder

Rotary actuator

Air gripper

Directional control valve

Flow control equipment

Filter, Pressure control equipment

Fittings & Tubing

Air preparation equipment

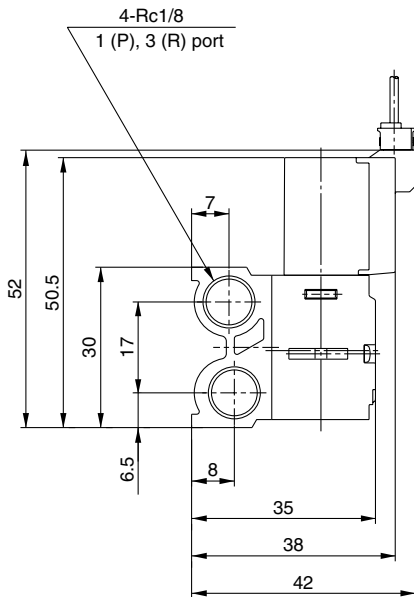
Pressure switch

Clean gas filter

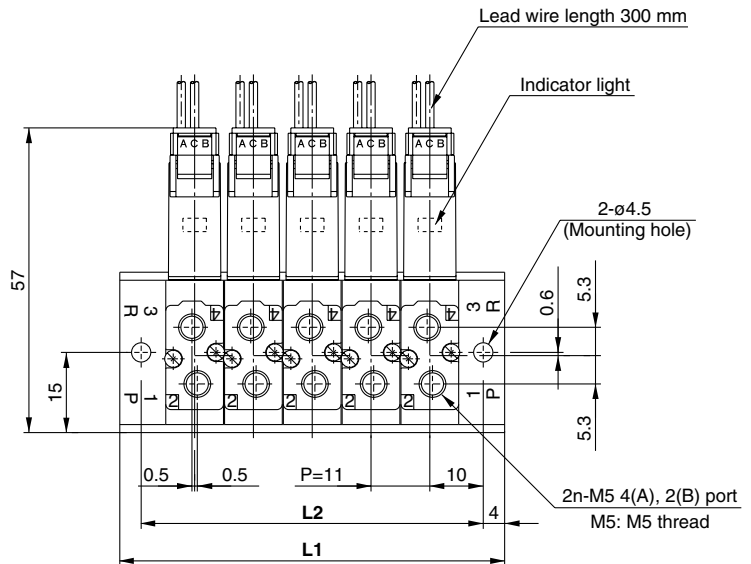
4 port direct operated poppet solenoid valve 10-VQD1000

Dimensions

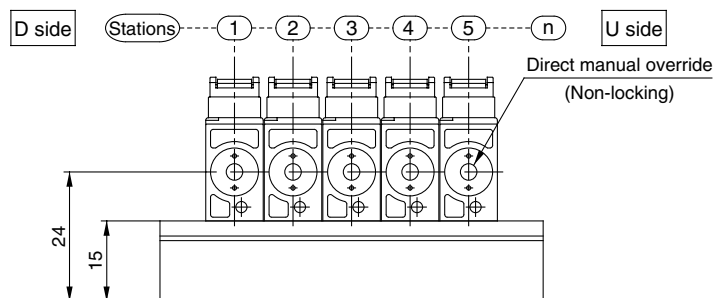
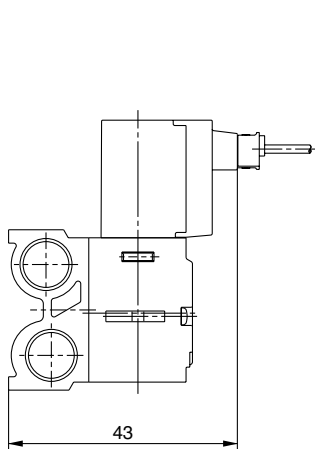
Plug lead unit manifold: 10-VV4QD12-□



M plug connector (M)



L plug connector (L)



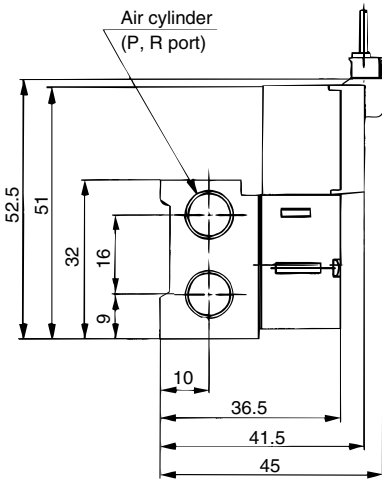
Dimensions

n: Stations

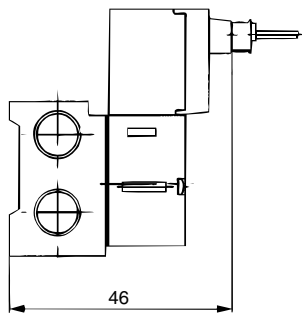
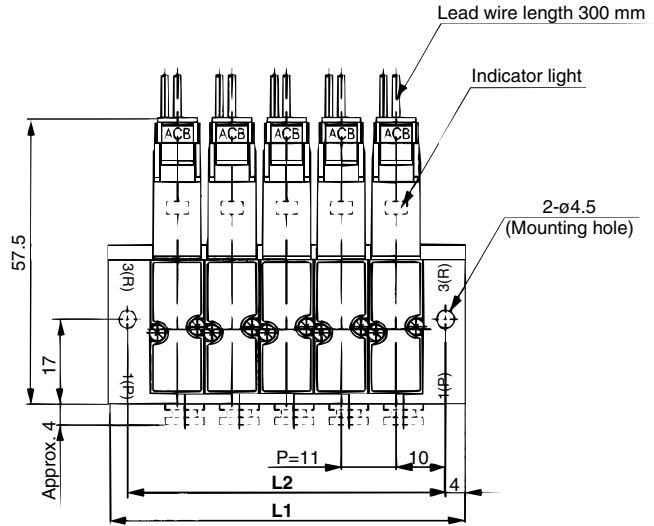
L \ n	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L1	28	39	50	61	72	83	94	105	116	127	138	149	160	171	182	193	204	215	226	237
L2	20	31	42	53	64	75	86	97	108	119	130	141	152	163	174	185	196	207	218	229

Dimensions

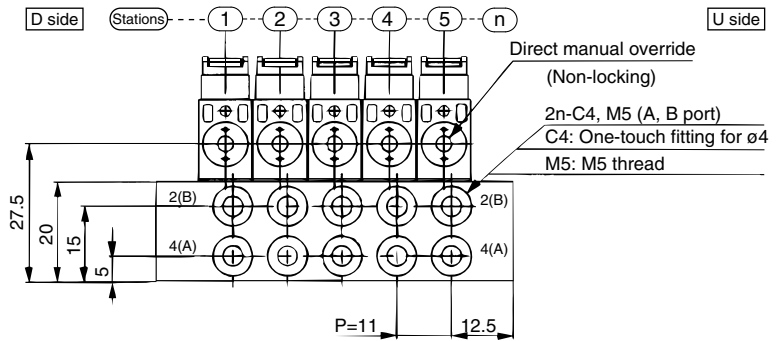
Plug lead unit manifold: 10-VV4QD15-□□



M plug connector (M)



L plug connector (L)



Dimensions

n: Stations

L \ n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L1	39	50	61	72	83	94	105	116	127	138	149	160	171	182	193	204	215	226	237
L2	31	42	53	64	75	86	97	108	119	130	141	152	163	174	185	196	207	218	229

Air cylinder

Rotary actuator

Air gripper

Directional control valve

Flow control equipment

Filter, Pressure control equipment

Fittings & Tubing

Air preparation equipment

Pressure switch

Clean gas filter