

Series 10-VQD1000

4 Port Direct Operated Poppet Solenoid Valve

How to Order Valve

Clean series

Body type
 2 — Body ported (Single unit)
 3 — Body ported (Manifold)
 5 — Base mounted

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

Rated voltage
 5 — 24 VDC
 6 — 12 VDC

10 - VQD11 5 1 U - 5 L - M5 -

Electrical entry

L: Plug lead type
 L plug connector, With lead wire
 With light/surge voltage suppressor

LO: Plug lead type
 L plug connector, Without connector
 With light/surge voltage suppressor

M: Plug lead type
 M plug connector, With lead wire
 With light/surge voltage suppressor

MO: Plug lead type
 M plug connector, Without connector
 With light/surge voltage suppressor

CE-compliant
 Nil — None
 Q — CE-compliant

Port size
 Body ported — M5 x 0.8 thread
 Base mounted — M5 x 0.8 (with sub-plate)
 (Note) No "Nil" for body ported type (VQD1131).

(Note) When you expect to energize the unit for extended periods of time, refer to the 3/4/5 Port Solenoid Valves Precautions for details.



L plug connector
Base mounted



L plug connector
Body ported



M plug connector
Base mounted



M plug connector
Body ported

Standard Specifications

Items	Type	Standard type (2 W)	Large flow type (3.2 W / Energy saving type)
Valve specifications	Valve construction	4 port direct operated poppet valve	
	Fluid	Air/Inert gas	
	Maximum operating pressure	0.7 MPa	
	Minimum operating pressure / Vacuum	0 MPa—101.2 kPa	
	Response time ^{Note 1)}	ON: 4 ms ±1, OFF: 2 ms ±1	
	Ambient and fluid temperature	-10 to 50°C ^{Note 2)}	
	Lubrication	Not required	
	Manual override	Non-locking push type	
	Impact / Vibration resistance ^{Note 3)}	150/30 m/s ²	
	Mounting orientation	Unrestricted	
	Enclosure	Dust tight	
	Weight	34 g (without sub-plate)	
Electrical specification	Coil rated voltage DC	24 V, 12 V	
	Allowable voltage fluctuation	±10% of rated voltage	
	Coil insulation type	Equivalent to class B	
	Power consumption DC	2 W	3.2 W (Energy saving type) ^{Note 4)} (Inrush 3.2 W, Holding 1.0 W)
	Electrical entry	L plug connector, M plug connector With light/surge voltage suppressor	

Note 1) Based on dynamic performance test, JIS B 8374-1981. (Coil temperature: 20°C, pressure: 0.5 MPa, at rated voltage, with light and surge suppressor, value at operation excluding restart period) The period immediately after a restart may be delayed for about 1 msec depending on operating conditions.

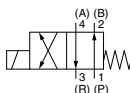
Note 2) Use dry air to prevent condensation when operating at low temperatures.

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

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

Note 4) For the start-up time, refer to the energy saving type's electrical power waveform shown in "Wiring Specifications" of Series VQD1000/Specific Product Precautions.

Symbol



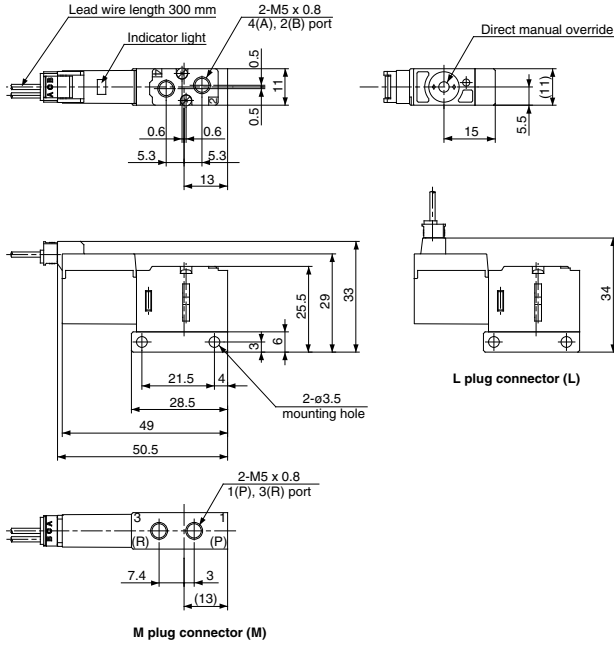
Flow Rate Characteristics

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

Dimensions

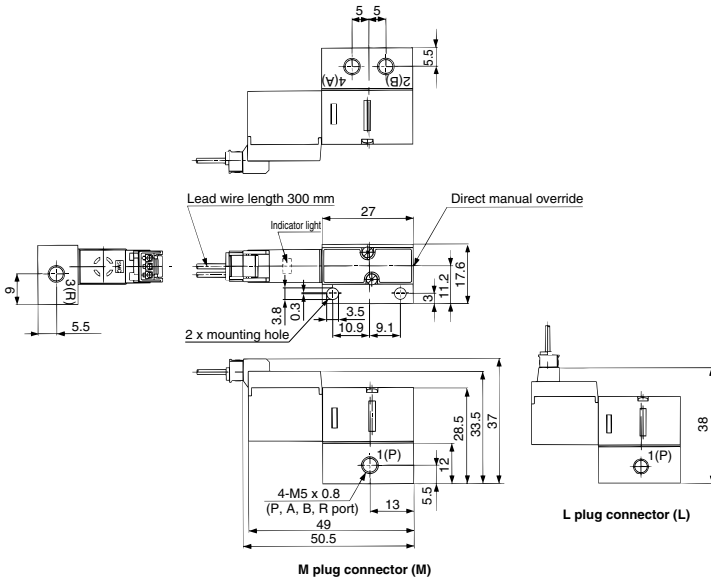
L plug connector: 10-VQD1121□-□-L-M5

M plug connector: 10-VQD1121□-□-M-M5



L plug connector: 10-VQD1151□-□-L-M5

M plug connector: 10-VQD1151□-□-M-M5



Directional Control Valves

Air Cylinders

Rotary Actuators

Air Grippers

Air Preparation Equipment

Modular F. R.

Pressure Control Equipment

Fittings & Tubing

Flow Control Equipment

Pressure Switches/ Pressure Sensors

Manifold Specifications



How to Order

10 - **VV4QD1** **5** - - -

Clean series

Manifold type
 2 — Body ported
 5 — Base mounted

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

CE-compliant
 Nil — None
 Q — CE-compliant

Port size
 Nil — Body ported — M5 thread
 M5 — Base mounted — M5 thread
 C4 — Base mounted — ø4 One-touch fitting



How to Order Valve

10 - **VQD11** **5** **1** - **5** **L** - **M5** -

Clean series

Body type
 3 — Body ported
 5 — Base mounted

Valve option
 Nil — Standard (2 W)
 V — Vacuum (2 W)
 U — 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

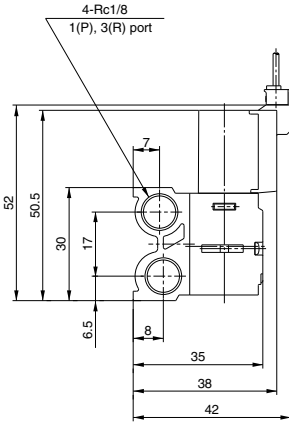
Electrical entry	
L: Plug lead type L plug connector, With lead wire With light/surge voltage suppresser	
LO: Plug lead type L plug connector, Without connector With light/surge voltage suppresser	
M: Plug lead type M plug connector, With lead wire With light/surge voltage suppresser	
MO: Plug lead type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

Port size
 Nil — Base mounted
 M5 — Body ported — M5 thread

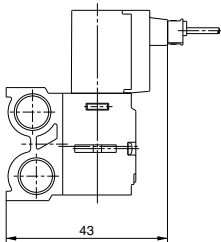
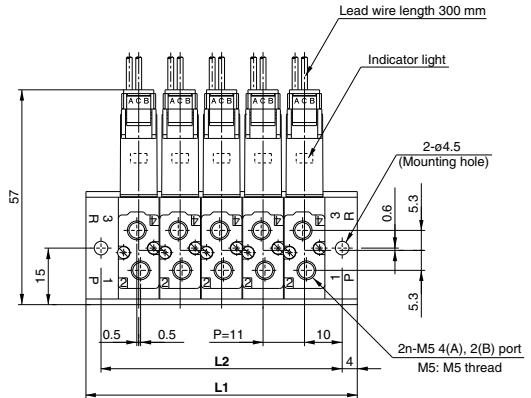
CE-compliant
 Nil — None
 Q — CE-compliant

Dimensions

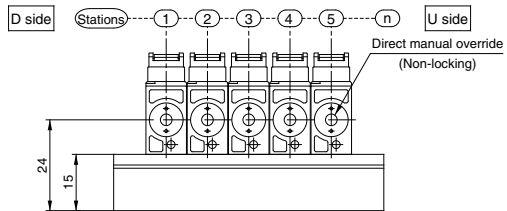
Plug lead unit manifold: 10-VV4QD12-□



M plug connector (M)



L plug connector (L)



Dimensions

	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

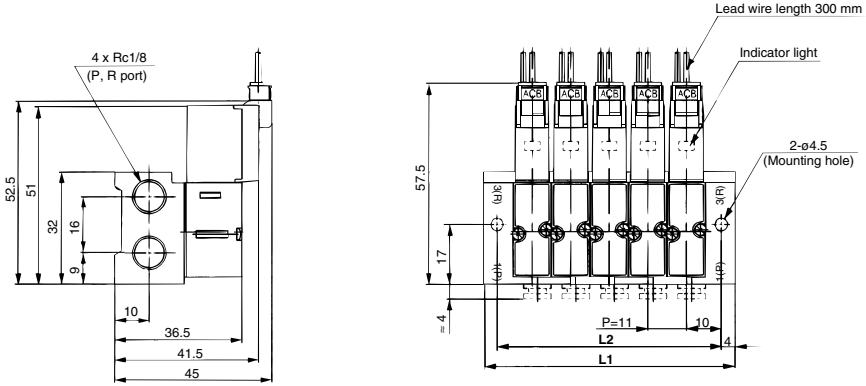
n: Stations

- Directional Control Valves
- Air Cylinders
- Rotary Actuators
- Air Grippers
- Air Preparation Equipment
- Modular F. R.
- Pressure Control Equipment
- Fittings & Tubing
- Flow Control Equipment
- Pressure Switches/ Pressure Sensors

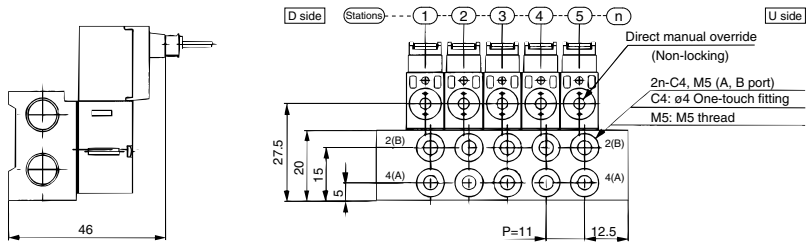
4 Port Direct Operated Poppet Solenoid Valve 10-VQD1000

Dimensions

Plug lead unit manifold: 10-VV4QD15-□□



M plug connector (M)



L plug connector (L)

Dimensions

n: Stations

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