

Compact Proportional Solenoid Valve

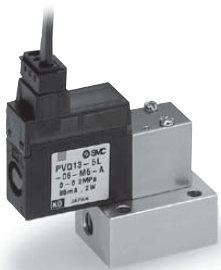
PVQ10 Series



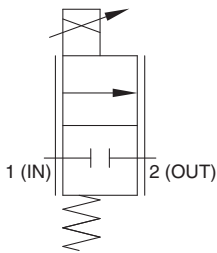
How to Order

Base mounted

PVQ 13 - 5 L - 03 - M5 - A



Symbol



Valve type
13 N.C.

Voltage
5 24 VDC
6 12 VDC

Electrical entry

Electrical entry	Description	Diagram
L	L plug connector With lead wire (Length 300 mm)	
LO	L plug connector Without connector	
M	M plug connector With lead wire (Length 300 mm)	
MO	M plug connector Without connector	

* Refer to page 981 for the different lead wire lengths of L and M plug connectors.

Body/Seal material

Symbol	Body	Seal
A	C36	FKM

Port size

Port size	Description	Diagram
Nil	Without sub-plate (with mounting screw M1.7 x 17L, 2 pcs.)	
M5	With sub-plate M5 x 0.8	

Orifice size

Symbol	Orifice dia.	Max. operating pressure differential
03	0.3 mm \varnothing	0.7 MPa
04	0.4 mm \varnothing	0.45 MPa
06	0.6 mm \varnothing	0.2 MPa
08	0.8 mm \varnothing	0.1 MPa

Note) For selection, refer to Model Selection on pages 978 and 979.

Specifications

Standard specifications	Valve construction	Direct operated poppet	
	Fluid	Air	
	Seal material	FKM	
	Body material	C36	
	Fluid temperature	0 to +50°C	
	Ambient temperature ^{Note 1)}	0 to +50°C	
	Action	N.C. (Normally closed)	
	Mounting orientation	Unrestricted	
	Port size	M5	
	Coil specifications	Power supply	24 VDC
Coil current		0 to 85 mA	0 to 170 mA
Power consumption		0 to 2 W	
Coil insulation		Class B	

Note 1) Indicates the ambient temperature when the valve is not energized.

When the valve is continuously energized (when applying maximum current) and the ambient temperature is kept at 50°C due to the convection of the air around the valve, the coil outer surface reaches approximately 90°C, and the coil proximal section (1 mm) reaches approximately 60°C. Use the product at a temperature of not more than 50°C.

* Refer to the Specific Product Precautions "Continuous Energization."

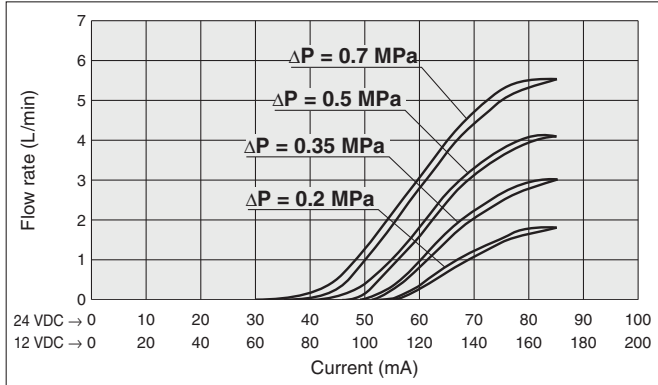
Note 2) Maximum operating pressure differential indicates pressure differential (difference between inlet and outlet pressure) which can be allowed for operation with the valve closed or open. If the pressure differential exceeds the max. operating pressure differential of orifice, the valve may leak.

Note 3) For vacuum application, max. operating pressure range is 0.1 Pa-abs to max. operating pressure differential. A(2) port is applicable for vacuum pressure.

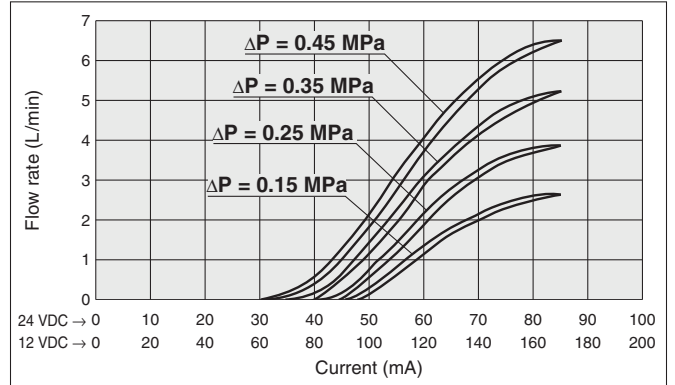
Characteristic specifications	Orifice diameter (mm \varnothing)	0.3	0.4	0.6	0.8
	Max. operating pressure differential (MPa) ^{Note 2)}	0.7	0.45	0.2	0.1
	Max. operating pressure (MPa)	1 MPa			
	Min. operating pressure (MPa) (Vacuum) ^{Note 3)}	0 (0.1 Pa.abs)			
	Flow rate (L/min) (at max. operating pressure differential)	0 to 5	0 to 6	0 to 5	
	Hysteresis (at max. operating pressure differential)	10% or less			
	Repeatability (at max. operating pressure differential)	3% or less			
	Start-up current (at max. operating pressure differential)	50% or less			

Flow Rate Characteristics

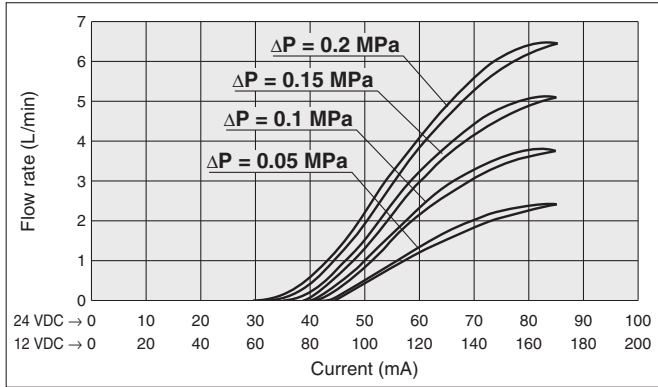
PVQ10 (ø0.3)



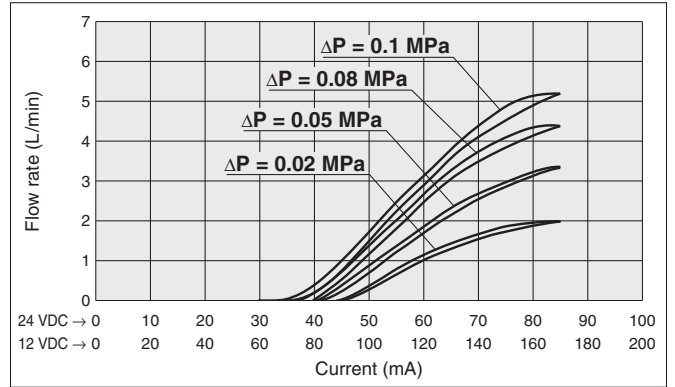
PVQ10 (ø0.4)



PVQ10 (ø0.6)

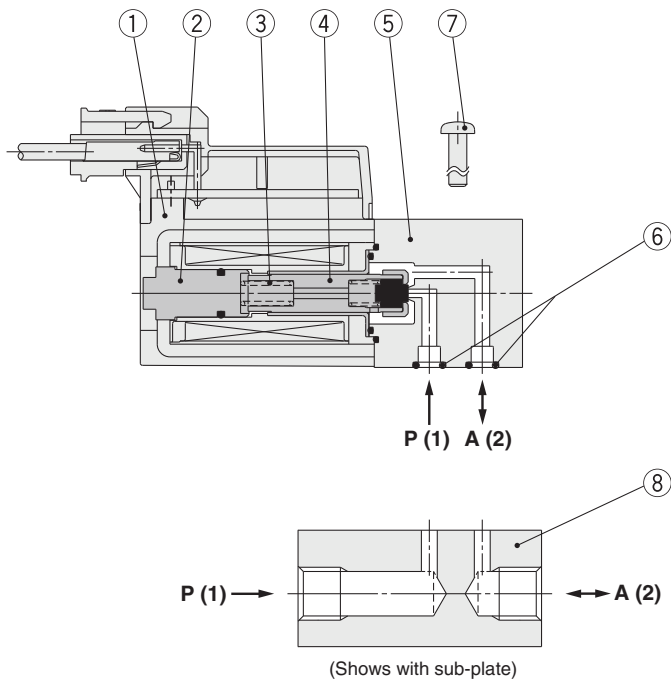


PVQ10 (ø0.8)



Note) Flow rate varies depending on model differences and piping conditions. Select the model that fully satisfies the necessary flow rate based on the flow rate characteristics graphs.

Construction



Component Parts

No.	Description	Material	Note
1	Solenoid coil assembly	—	
2	Core	Stainless steel	
3	Return spring	Stainless steel	
4	Armature assembly	Stainless steel, Aluminum, FKM	
5	Body	Brass (C36)	
6	O-ring	FKM	
7	Round head combination screw	Steel	M1.7 x 0.35 x 17L, 2 pcs.
8	Sub-plate	C36	Part no: PVQ10-15-M5

* Connector assembly

AXT661 - 14A -

Lead wire length

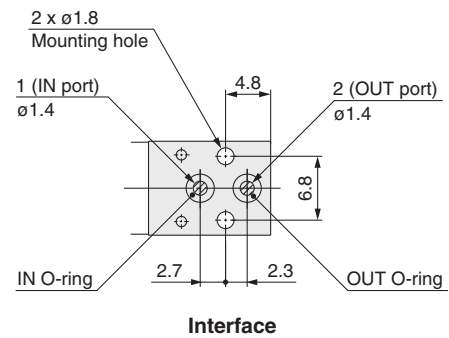
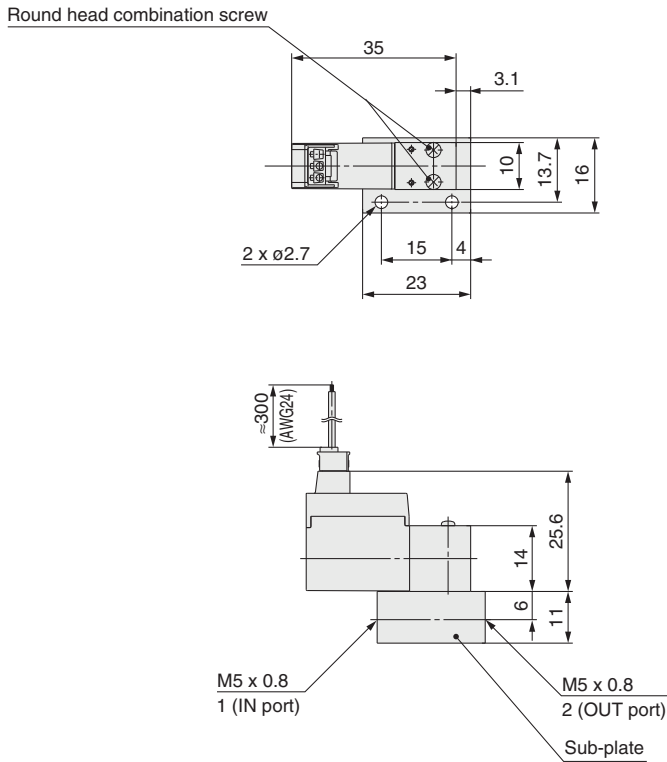
Nil	300 mm
6	600 mm
10	1000 mm
20	2000 mm
30	3000 mm

For the product with the lead wire, the lead wire length is 300 mm. To extend the lead wire length to 600 mm or more, select the valve without connector and order the connector assembly separately.

PVQ10 Series

Dimensions

L plug connector PVQ13-□L-□-M5



M plug connector PVQ13-□M-□-M5

