

Compact Direct Operated 2/3 Port Solenoid Valve for Chemicals Series *LVM15/150*

How to Order



Base Mounted

LVM 15R3 Y - 5 A - [] - []

Symbol

Symbol	Number of ports	Valve type	
15R3	2	N.C.	
15R4		N.O.	
155R	3	Universal	

• **CE compliant**

Nil	None
Q	CE compliant

• **Lead wire length**

Nil	300 mm
6	600 mm
10	1000 mm

• **Wetted part material**

Symbol	Plate	Diaphragm
A	PEEK	EPDM
B	PEEK	FKM
C	PEEK	Kalrez®

• **Coil voltage**

Symbol	Voltage
5	24 VDC
6	12 VDC

• **Function**

Symbol	Specifications
Y	Standard (With power-saving circuit)
HY	High-pressure type (With power-saving circuit)

Specifications

Model	Base mounted		
	LVM15R3	LVM15R4	LVM155R
Valve construction	Diaphragm type direct operated poppet (Rocker type)		
Valve type	N.C.	N.O.	Universal
Number of ports	2		3
Fluid <small>Note 1)</small>	Air, Water, Pure water, Diluent, Cleaning solvent		
Operating pressure range	-75 kPa to 0.25 MPa [0 to 0.6 MPa]		
Orifice diameter	1.6 mm [1 mm]		
Response time	15 ms or less (at pneumatic pressure)		
Leakage	Zero leakage, either external or internal (at water pressure)		
Proof pressure <small>Note 2)</small>	0.38 MPa [0.9 MPa]		
Ambient temperature	0 to 50°C		
Fluid temperature	0 to 50°C (with no condensation)		
Volume of valve chamber <small>Note 3)</small>	50 μl		
Mounting orientation <small>Note 4)</small>	Free		
Enclosure	IP40 or equivalent		
Weight	45 g		
Rated voltage	12, 24 VDC		
Allowable voltage fluctuation <small>Note 5)</small>	±10% of rated voltage		
Type of coil insulation	Class B		
Power consumption (When rated voltage is at 24 V)	Inrush	5.5 W (0.23 A)	
	Holding	1 W	
Coil switching noise <small>Note 6)</small>	60 dB		

[] indicates high-pressure type.

Note 1) Select an appropriate material for the wetted part when fluid such as a cleaning solvent is used. Also, be sure to confirm the fluid compatibility in advance.

Note 2) Indicates the pressure which does not generate breakage, cracks or external leakage after a one-minute airtight test.

Note 3) Indicates the volume of clearance inside the valve chamber after the volume of the diaphragm is subtracted.

Note 4) Since the body (orifice shape) is designed to eliminate residual liquid, mounting in a vertical direction with the coil at the top is recommended. When residual liquid is not considered, any mounting orientation is available.

Note 5) When the response speed is regarded as important, prevent negative fluctuation of the voltage by adequate regulation.

Note 6) The value is based on SMC's measurement conditions. The noise level will vary with conditions.

Note 7) Refer to 10 in "Design and Selection" on the back of page 2, if the valve is to be energized continuously for extended periods of time.

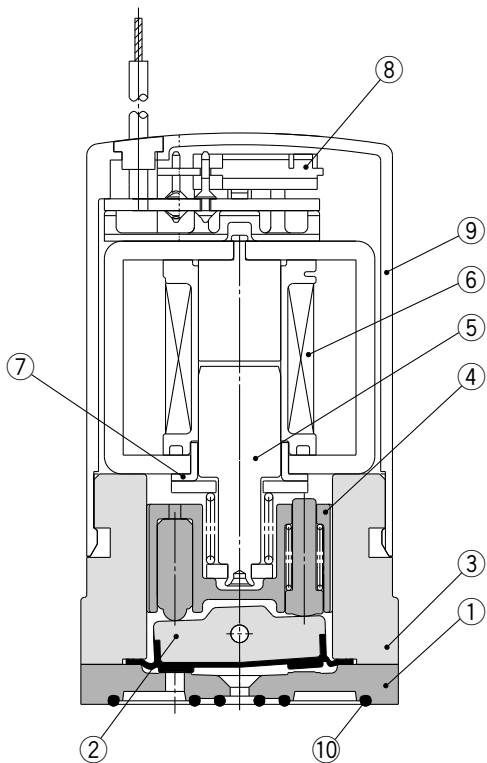
Flow Characteristics

Function	Water		Air	
	Av	Cv	C	b
Standard	0.96 x 10 ⁻⁶ [0.36 x 10 ⁻⁶]	0.04 [0.015]	0.13 [0.05]	0.22 [0.2]

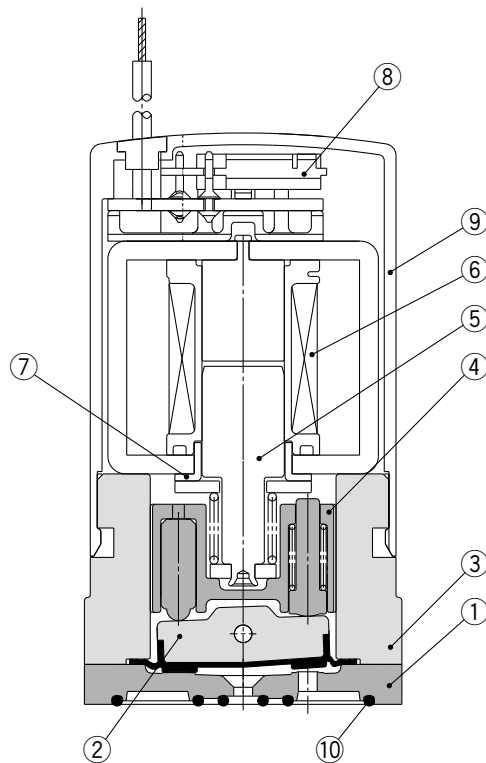
* The values of Av and Cv are based on JIS B 2005:1995, C and b are based on JIB B 8390:2000.

Construction: Base Mounted

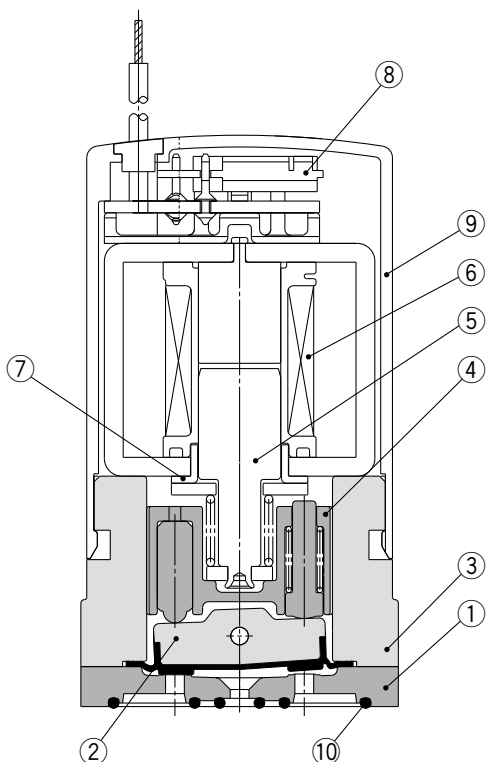
LVM15R3



LVM15R4



LVM155R



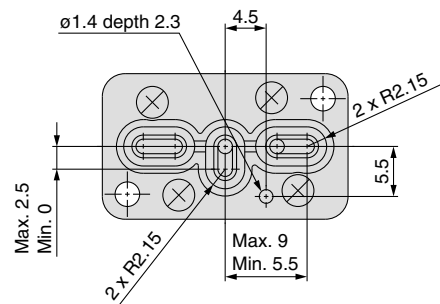
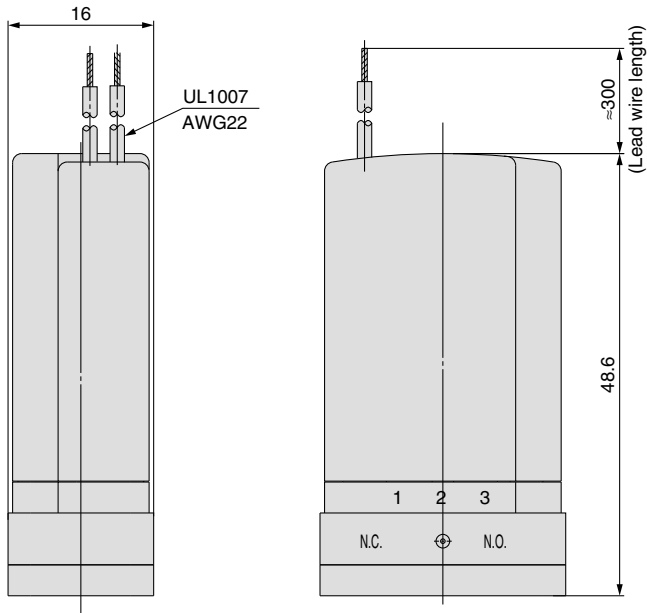
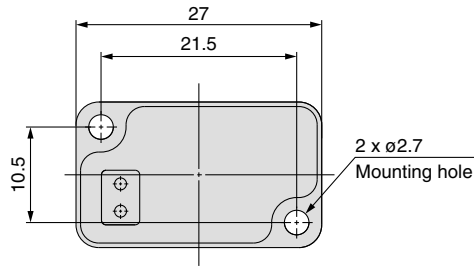
Component Parts: LVM15R3, 15R4, 155R

No.	Description	Material
1	Plate	PEEK
2	Diaphragm assembly	EPDM/FKM/Kalrez®
3	Body	PBT
4	Slide bushing assembly	PPS/Stainless steel
5	Armature assembly	—
6	Coil assembly	—
7	Sleeve	SUY
8	Board assembly	—
9	Casing	PBT
10	Interface gasket	EPDM/FKM/Kalrez®

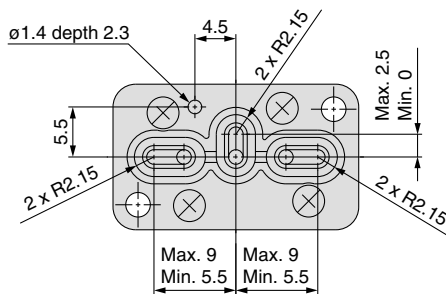
Series LVM15/150

Dimensions: Base Mounted

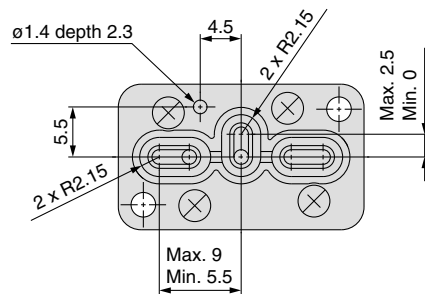
LVM15R3
LVM15R4
LVM155R



LVM15R4



LVM155R

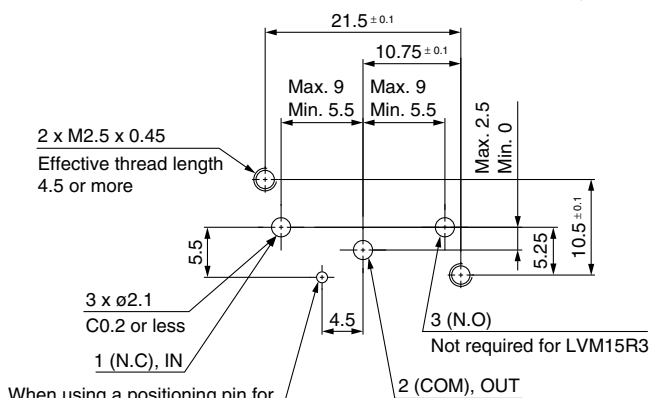


LVM15R3

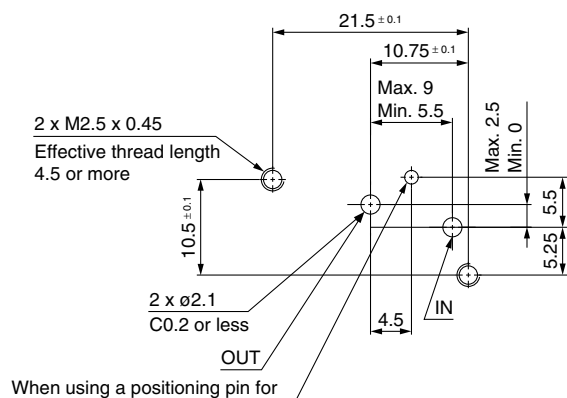
Recommended interface dimensions

* Surface roughness = Rz3.2 or less

* Surface roughness = Rz3.2 or less



LVM155R, LVM15R3



LVM15R4

When using a positioning pin for mounting, please use ø1.2 and height 2 or less.

When using a positioning pin for mounting, please use ø1.2 and height 2 or less.