

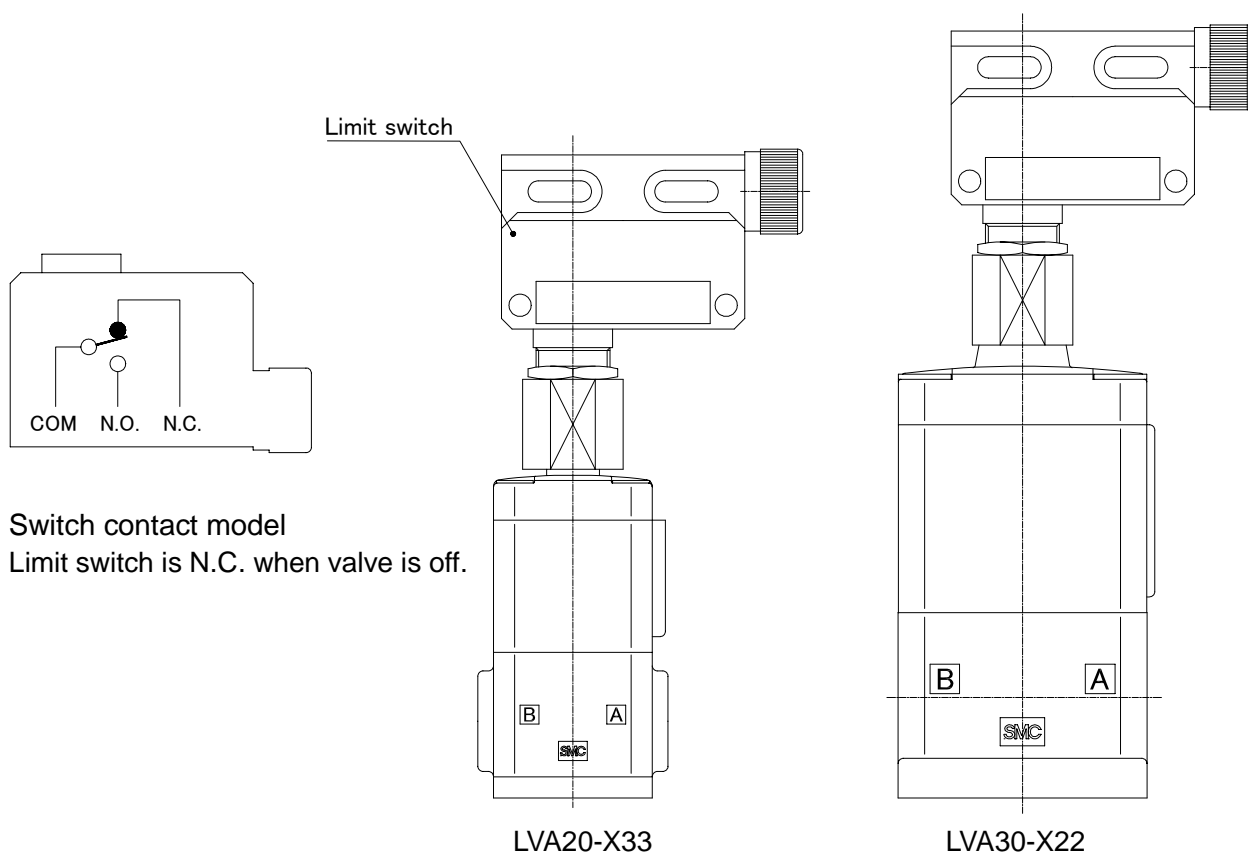
Air Operated Valve with Limit Switch

LVA20-02-C-X33
LVA30-03-C-X22

SMC CORPORATION
1-16-4 Shimbashi, Minato-ku
Tokyo 105-0004, JAPAN
URL: <http://www.smcworld.com>

Feature 1: Air operated valve equipped with limit switch (*1) for the confirmation of opening and closing.

*1) Limit switch made by Omron Corporation
(Product name: Compact enclosed switch, Model: D4E-1C20N)



Warning: Since the products specified here are used in various operating conditions, their compatibility for the specific system must be based on specifications or after analysis and/or tests to meet your specific requirements. The expected performance and safety assurance will be the responsibility of the person who has determined the compatibility of the system.

Specifications

Air operated valve

Type	LVA20-02-C-X33	LVA30-03-C-X22
Operation pressure	0 to 0.5MPa	
Proof pressure	1MPa	
Pilot pressure	0.3 to 0.5MPa	
Back pressure	0.3MPa or less	
Valve type	N.C. type	
Valve leakage	0cm ³ /min (With water pressure)	
Fluid	Deionized water, Chemical fluid, Inert gas (Limit fluids to those that are non-corrosive to wetted parts materials)	
Orifice diameter	Ø4mm	Ø8mm
Flow characteristics $Av \times 10^{-6}m^2$ (Cv)	8.4 (0.35)	40.8(1.7)
Fluid temperature range	0 to 100°C	
Ambient temperature range	0 to 60°C	
Materials used for wetted parts	Diaphragm	PTFE
	Body	New PFA
Port size	Rc1/4	Rc3/8
Pilot port size	M5	Rc1/8

*2) Chemical resistance of materials used for wetted parts

For compatibility of body/diaphragm materials with fluid, refer to "Applicable Fluids" in our "Series LV (high purity chemical valve)" catalog (CAT.ES70-16B).

Limit switch (Type of Omron Corporation: D4E-1C20N) (*3)

Model	D4E-1C20N							
Type	Actuator type: Plunger Terminal type by clamping screw (General type without cord) (*4)							
Rated voltage: V	Non-inductive load [A]				Inductive load [A]			
	Resistance load		Lamp load		Inductive load		Electric motor load	
	N.C.	N.O.	N.C.	N.O.	N.C.	N.O.	N.C.	N.O.
Alternating current	125VAC	5	1.5	3	2	1		
	250VAC	5	1.5	3	1	0.5		
Direct current	8VDC	5	—	1.5	—	—		
	14VDC	5	—	1.5	—	—		
	30VDC	5	—	1.5	—	—		
	125VDC	0.5	—	0.05	—	—		
	250VDC	0.25	—	0.03	—	—		
Rated frequency	50/60Hz							
Life	Mechanical	10 million cycles or more						
	Electrical	0.5 million cycles or more (250VAC, 5A, resistance load) 5 million cycles or more (24VDC, 10mA, resistance load)						
Insulation resistance	100M Ω or more (500VDC by mega meter)							
Contact resistance	15m Ω or less (Initial value)							
Applicable operation speed	0.1mm to 0.5m/sec							
Ambient temperature (*5)	-10 to +80°C (No freezing)							
Ambient humidity	95%R.H. or less							

*3) Please refer to Omron sensor catalogue for detailed technical data.

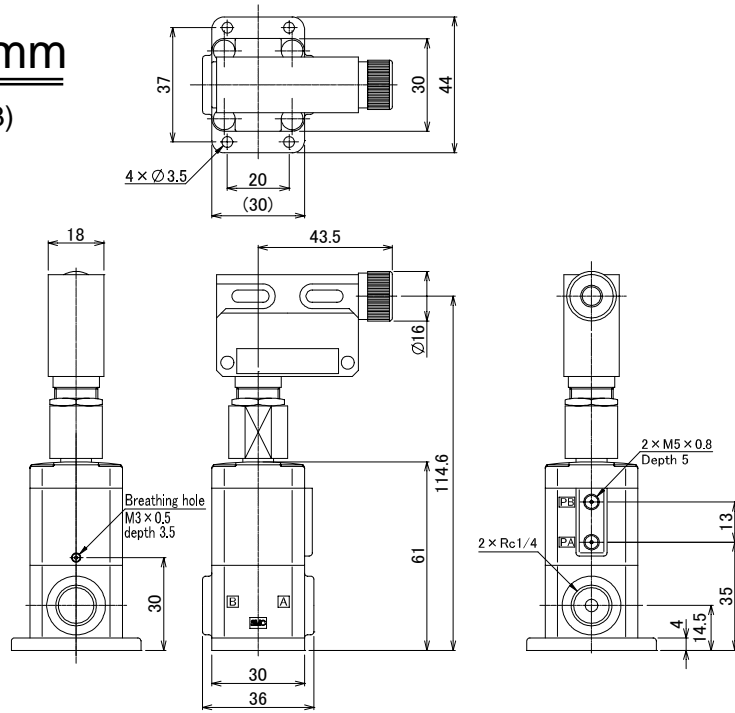
*4) This product is to be shipped without cord. (Please prepare cord by yourself.)

When wiring to screw terminals of limit switch, use lead wire whose cord diameter is 7mm and conductor size 0.75mm², and wire through a circular crimped terminal with insulation coating. Please refer to the catalogue made by Omron Corporation or technical data for other detailed information.

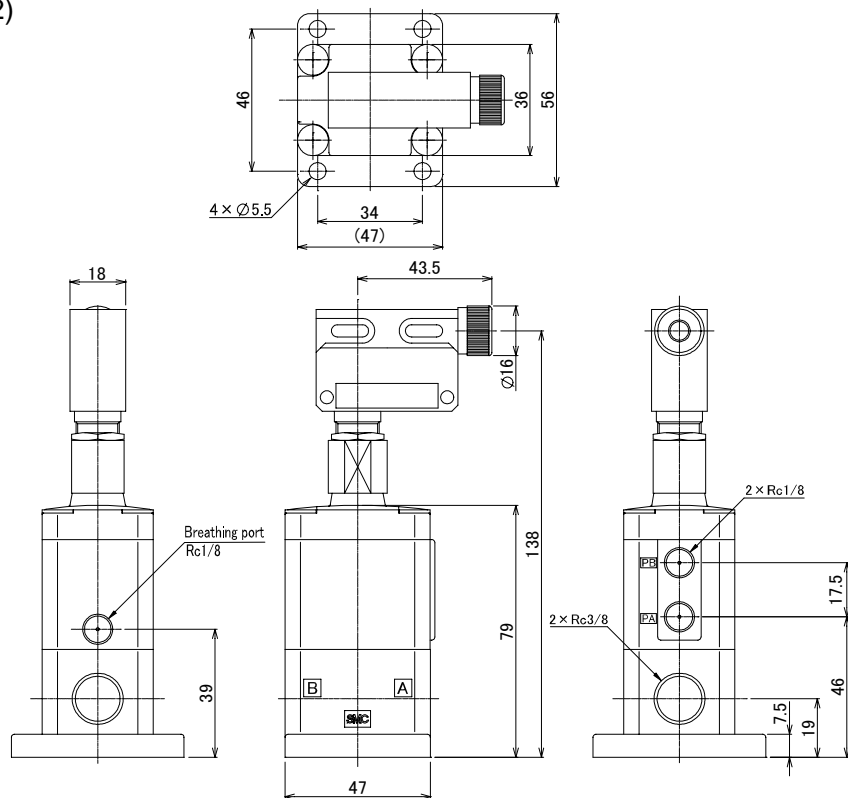
*5) Ambient temperature for the switch must be adjusted within the range of ambient temperature for valves (0 to 60°C).

Dimensions: mm

(Type: LVA20-02-C-X33)



(Type: LVA30-03-C-X22)



Note: This product is assembled and packaged in a clean room in the same way as standard product of Series LV, threaded type.
Refer to "Series LV" "Quality Process Diagram" in "high purity chemical valve" catalog (CAT.ES70-16B) for details.



Caution To ensure the safest possible operation of this product, please be sure to read thoroughly the "Safety Instructions" in our "Series LV (high purity chemical valve)" catalog before use.