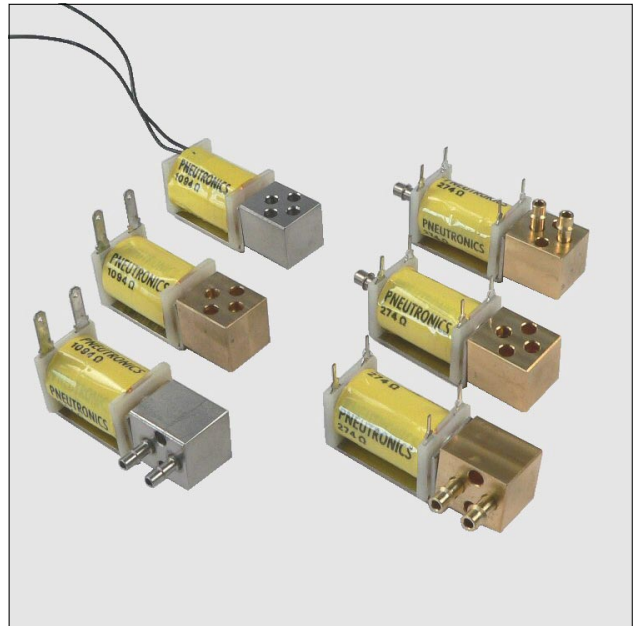


Series 11

PC mount switching solenoid valve

FEATURES

- 2-way or 3-way, 2 position valve (NO, NC & Distributor)
- Offer a discrete valve design with up to 260 million life cycle rating
- Available in manifold mounting
- Provide a range of electrical coil options, including PC mountable, spade lugs, or wire leads
- Powerful enough for a range of uses that require high flow
- RoHS compliant



MEDIA COMPATIBILITY

Air, argon, helium, hydrogen, methane, nitrogen, oxygen & other non-reacting gasses

WETTED MATERIALS

Body:
36000 HO2 brass;
303 series stainless steel (passivated)

Stem base:
36000 HO2 brass;
303 series stainless steel (passivated)

Plunger options:
FKM; EPDM

All others:
430 FR series stainless steel (passivated);
302 series stainless steel

ELECTRICAL

Power 0.5, 1.0 or 2.0 W
Voltage 5, 12, 24 V_{DC} ± 10%

PHYSICAL PROPERTIES

Operating environment	0 to 70 °C
Storage temperature	-40 to 70 °C
Length	43.9 mm (1.73 in)
Width	15.9 mm (0.625 in)
Height	17 mm (0.67 in)
Porting	10-32 tapped ports, 1/16, 5/64 or 1/8 in stem barbs
Weight	60 g (2.1 oz)
Internal volume	0.026 in ³ (without fittings)
Filtration (recommended)	40 µm
Lubrication	None required

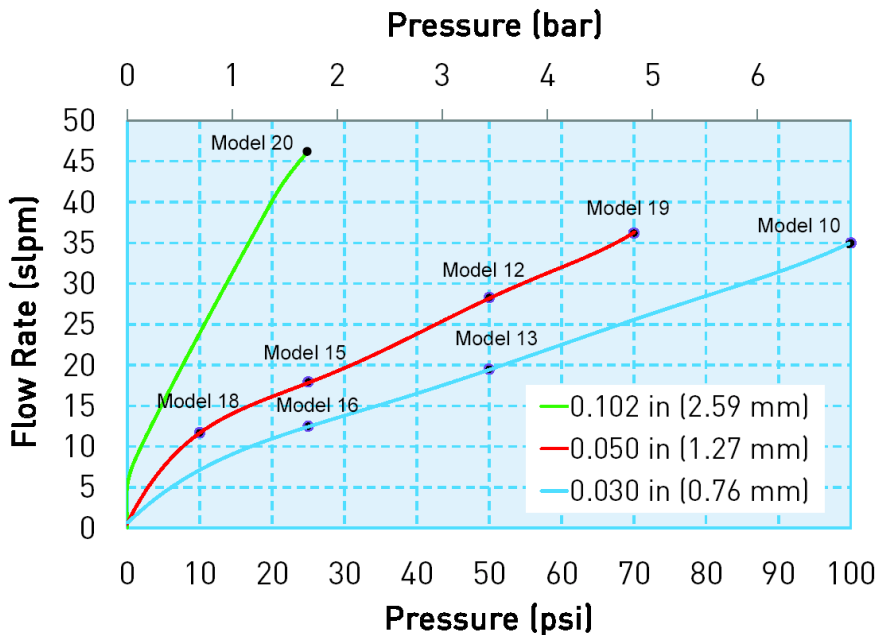
Series 11

PC mount switching solenoid valve

PERFORMANCE CHARACTERISTICS

Part no.	Pressure	Vacuum	Orifice sizes/ Equivalent C_v ¹	Leak rate (air) ²	Response	Life cycles (millions) ⁴
1110...	0...100 psig	0...27 in Hg (0...13 psi)	0.030 in (0.76 mm)/ 0.017 C_v	<0.016 sccm (bubble tight)	<30 msec cycling	100 (FKM) 20 (EPDM)
1113...	0...50 psig					200 (FKM) 40 (EPDM)
1116...	0...25 psig		260 (FKM) 60 (EPDM)			
1119...	0...70 psig		0.050 in (1.27 mm)/ 0.025 C_v			20 (FKM) 16 (EPDM)
1115...	0...25 psig					200 (FKM) 40 (EPDM)
1112...	0...50 psig		0.050 in (1.27 mm)/ 0.031 C_v			100 (FKM) 20 (EPDM)
1118...	0...10 psig		0.050 in (1.27 mm)/ 0.021 C_v			260 (FKM) 60 (EPDM)
1120...	0...25 psig		0.102 in (2.59 mm)/ 0.069 C_v			<0.1sccm

FLOW CURVE (typical air flow, 24 °C)³



All models reflect typical flow output capability based on rated pressure

Notes:

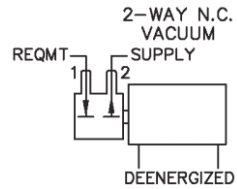
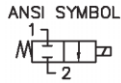
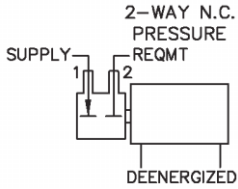
- The C_v value is the volume flow in US gallons/min under specific flow conditions and describes the relative flow capacity of a valve. The equivalent european measure is the k_v value expressed in m^3/h ($k_v = 0.86 C_v$).
- sccm denotes Standard Cubic Centimeters per Minute. It is a unit for the flow rate at standard conditions of temperature and pressure. 1000 sccm = 1 slpm.
- slpm denotes Standard Liters per Minute. It is a unit for the flow rate at standard conditions of temperature and pressure. 1 slpm = 1000 sccm.
- Life is dependent upon elastomeric material, duty cycle and pressure.

Series 11

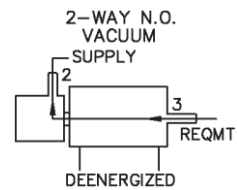
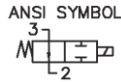
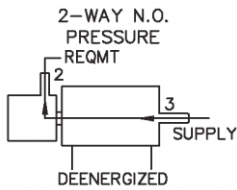
PC mount switching solenoid valve

VALVE TYPE

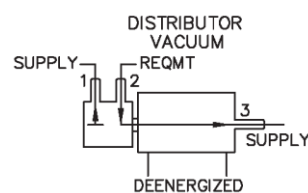
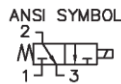
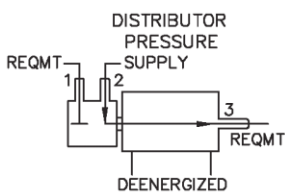
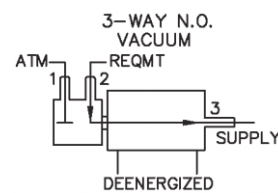
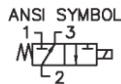
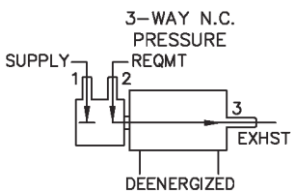
Type 1



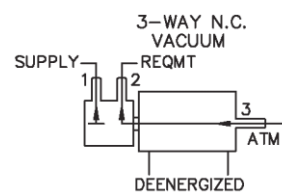
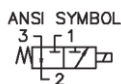
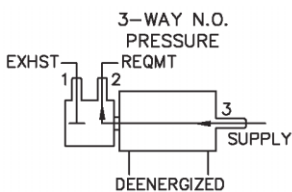
Type 2



Type 3



Type 4

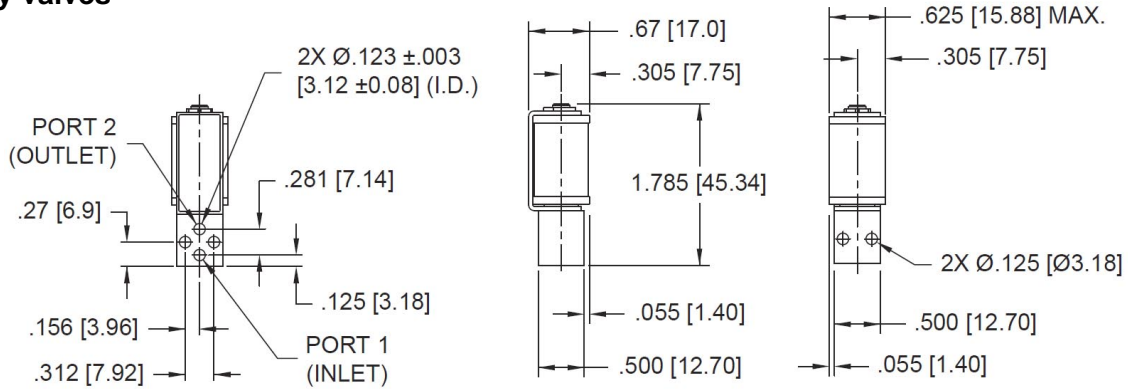


Series 11

PC mount switching solenoid valve

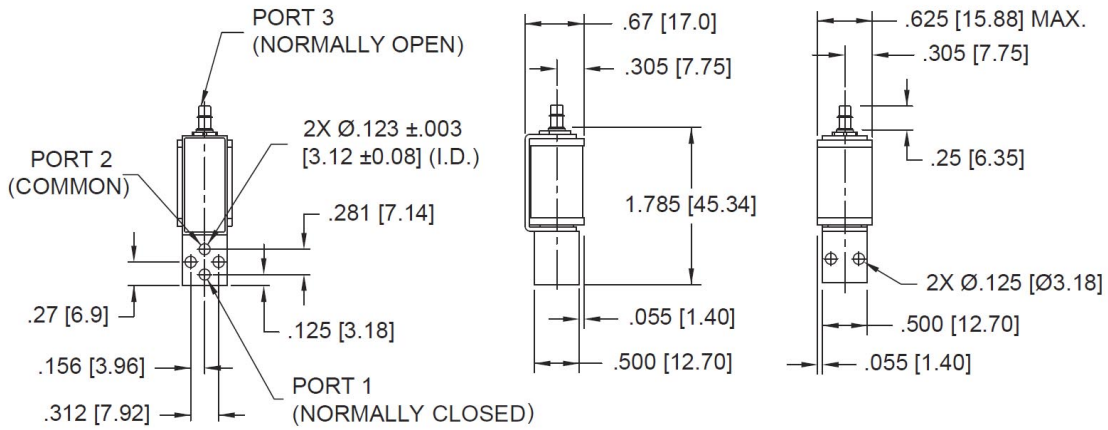
OUTLINE DRAWING

2 way valves



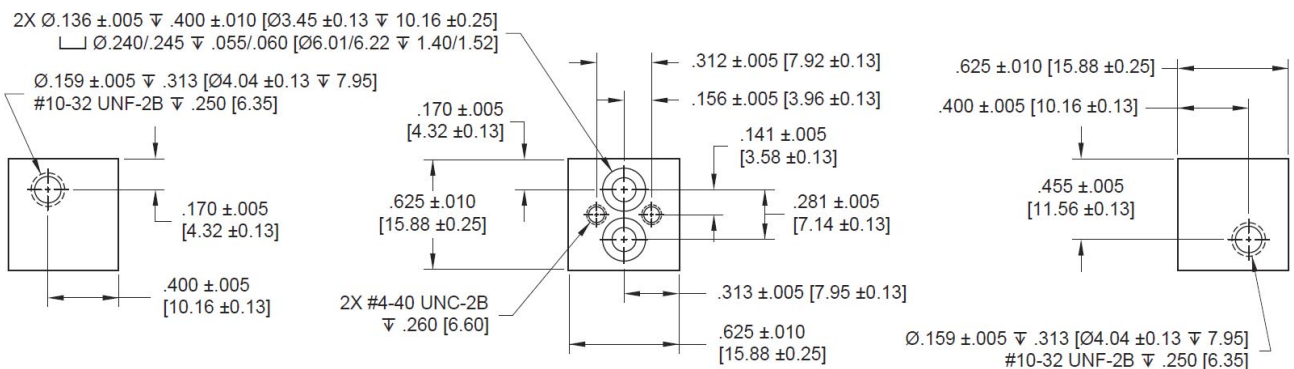
dimensions in inches (mm)

3 way valves



dimensions in inches (mm)

Manifold mount diagram



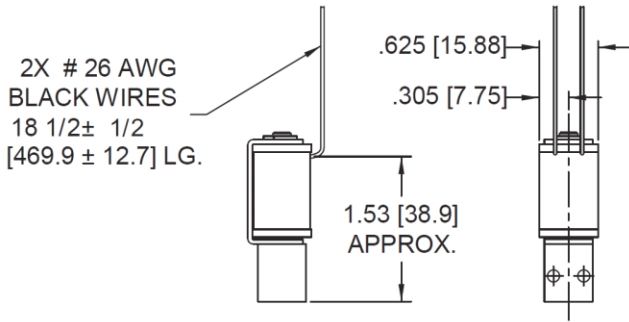
dimensions in inches (mm)

Series 11

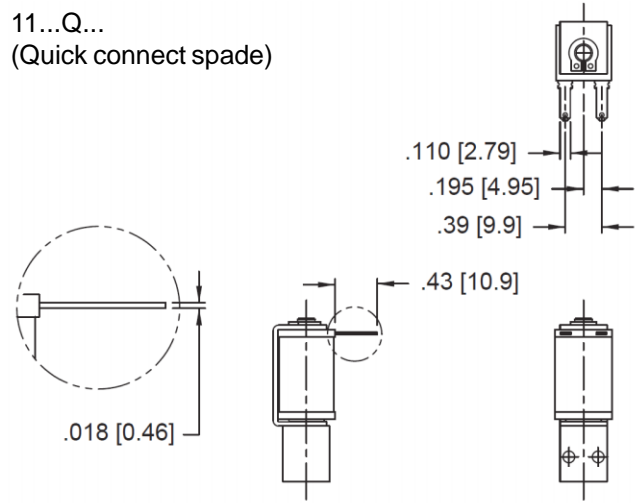
PC mount switching solenoid valve

COIL STYLES - ELECTRICAL CONNECTIONS

11...F...
(Wire leads, no terminals)

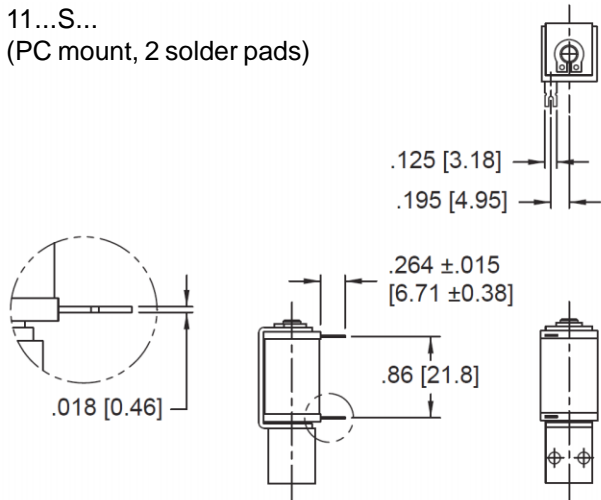


11...Q...
(Quick connect spade)

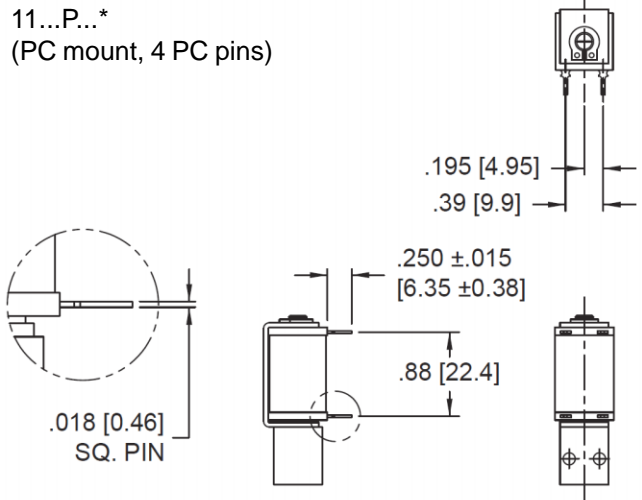


dimensions in inches (mm)

11...S...
(PC mount, 2 solder pads)

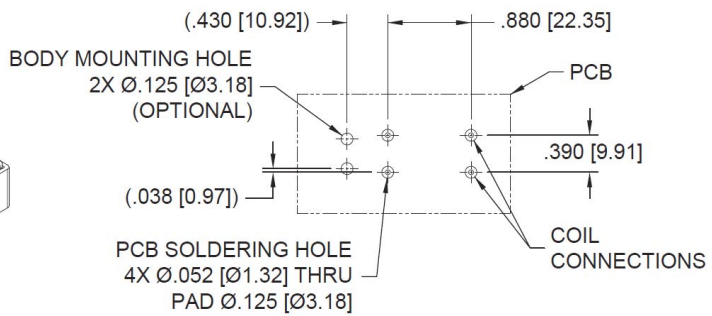
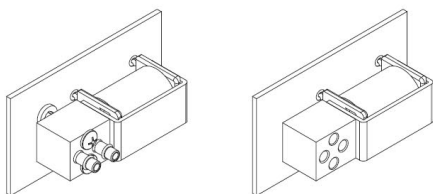


11...P...*
(PC mount, 4 PC pins)



dimensions in inches (mm)

* 4 PC pin PCB interface



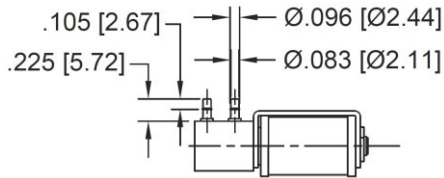
dimensions in inches (mm)

Series 11

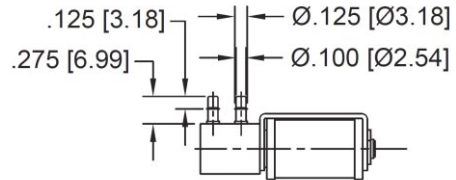
PC mount switching solenoid valve

BODY STYLES - PNEUMATIC CONNECTIONS

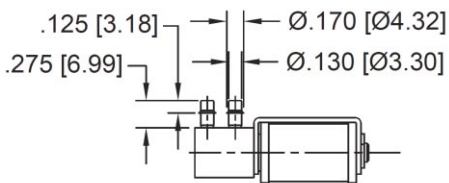
11...6...
(1/16" I.D. tubing)



11...7...
(5/64" I.D. tubing)



11...8...
(1/8" I.D. tubing, 1/4" O.D. max.)



STEM STYLES - PNEUMATIC CONNECTIONS



11...0
(Type 1 top seat,
plugged)



11...6
(0.062" top seat,
1/16" I.D. tubing)



11...7
(0.078" top seat,
5/64" I.D. tubing)



11...8
(0.125" top seat,
1/8" I.D. tubing,
1/4" O.D. max.)

Series 11

PC mount switching solenoid valve

ORDERING INFORMATION

Series	Model no.			Type	Material		Voltage		Coil type	Pneumatic connection body	Pneumatic connection stem						
	Max. pressure	Orifice size	Coil wattage		Body	Plunger & seal											
11	10	0...100 psi	0.030" (0.762 mm)	2 W	1	2-way NC	BV	Brass	FKM	5	5 V _{DC}	P	4 PC pins	0	Manifold mount	0*	None
	12	0...50 psi	0.050" (1.27 mm)	2 W	2	2-way NO	SV	Stainless steel	FKM	12	12 V _{DC}	S	2 solder taps	6**	1/16" barbs	6**	1/16" barbs
	13	0...50 psi	0.030" (0.762 mm)	1 W	3	3-way NC or distributor	BE	Brass	EPDM	24	24 V _{DC}	Q	Quick connect	7	5/64" barbs	7	5/64" barbs
	15	0...25 psi	0.050" (1.27 mm)	1 W	4	3-way NO						F	Wire leads, 18", no terminals	8	1/8" barbs	8	1/8" barbs
	16	0...25 psi	0.030" (0.762 mm)	0.5 W	6	2-way NC universal											
	18	0...10 psi	0.050" (1.27 mm)	0.5 W													
	19	0...70 psi	0.050" (1.27 mm)	2 W													
	20*	0...25 psi	0.102" (2.59 mm)	1 W													

* Model 20 only available as 2-way NC universal (Type: 6) in brass/FKM (Material: BV) and manifold mount body

* Type 1 & 6 only
** 1/16" barbs not available for 0.050" orifice

Example

11	10			3		BV			12		P		8		8
----	----	--	--	---	--	----	--	--	----	--	---	--	---	--	---

Note: Not all combinations might be available. Please contact First Sensor.

Accessories (please order separately using the following order numbers)

Order No.	Description
190-007024-002	O-ring, FKM (used as a seal between the manifold and valve body)

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