

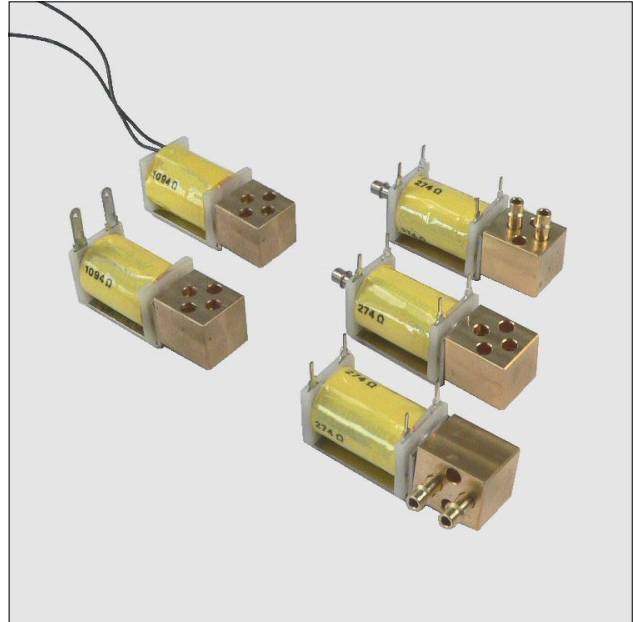


# TE Series

## 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
- PRO services



### MEDIA COMPATIBILITY

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

### WETTED MATERIALS

Body: 36000 HO2 brass;

Stem base: 36000 HO2 brass;

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<sub>DC</sub> ± 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<sup>3</sup> (without fittings)

Filtration (recommended) 40 µm

Lubrication None required

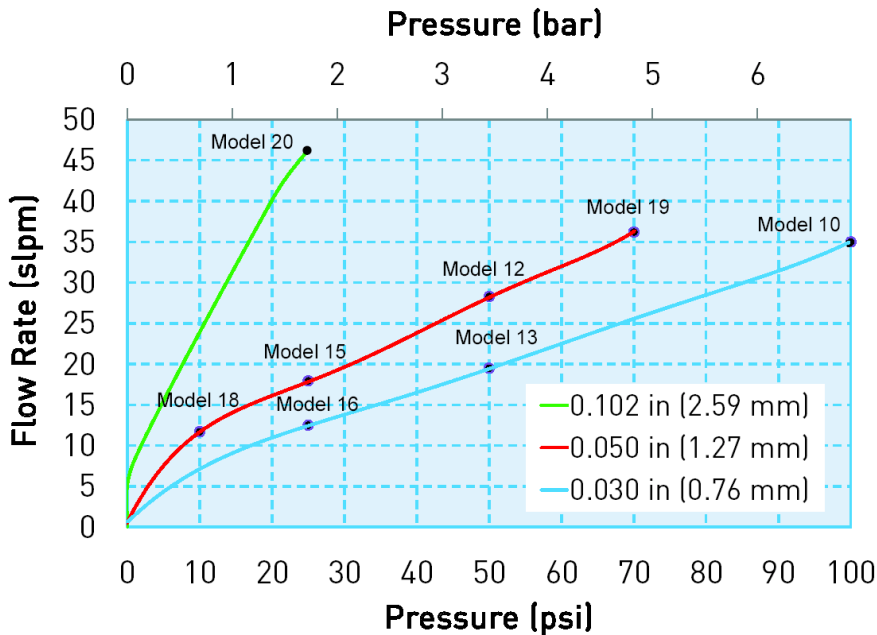


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## PERFORMANCE CHARACTERISTICS

Part no.	Pressure	Vacuum	Orifice sizes/ Equivalent $C_v$ <sup>1</sup>	Leak rate (air) <sup>2</sup>	Response	Life cycles (millions) <sup>4</sup>
TE...P100...030...	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)
TE...P050...030...	0...50 psig					200 (FKM) 40 (EPDM)
TE...P025...030...	0...25 psig					260 (FKM) 60 (EPDM)
TE...P070...050...	0...70 psig					20 (FKM) 16 (EPDM)
TE...P025...050...	0...25 psig		200 (FKM) 40 (EPDM)			
TE...P050...050...	0...50 psig		100 (FKM) 20 (EPDM)			
TE...P010...050...	0...10 psig		260 (FKM) 60 (EPDM)			
TE...P025...102...	0...25 psig		0.102 in (2.59 mm)/ 0.069 $C_v$			<0.1sccm

## FLOW CURVE (typical air flow, 24 °C)<sup>3</sup>



All models reflect typical flow output capability based on rated pressure

### Notes:

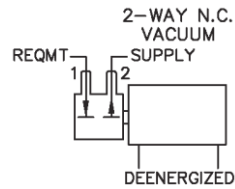
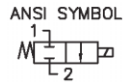
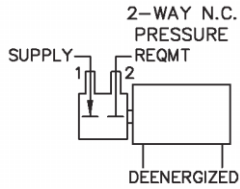
1. The  $C_v$  value is the volume flow in US gallons/min under specific flow conditions and describes the relative flow capacity of a valve. The equivalent european measure is the  $k_v$  value expressed in  $m^3/h$  ( $k_v = 0.86 C_v$ ).
2. sccm denotes Standard Cubic Centimeters per Minute. It is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



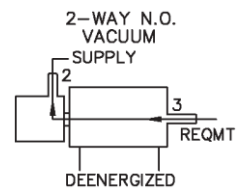
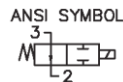
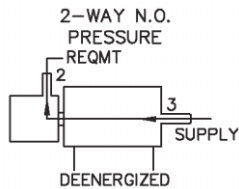
# TE Series PC mount switching solenoid valve

## VALVE TYPE

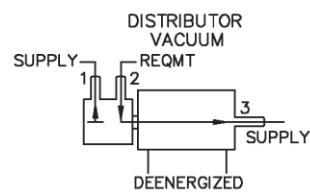
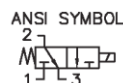
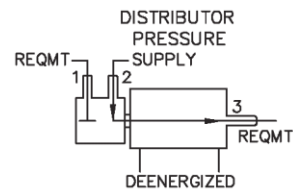
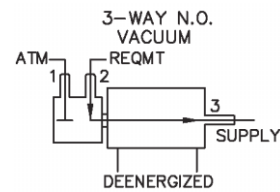
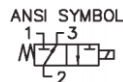
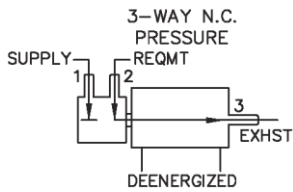
### 2 way NC



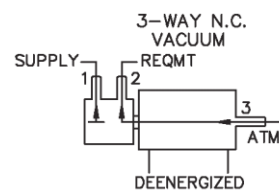
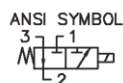
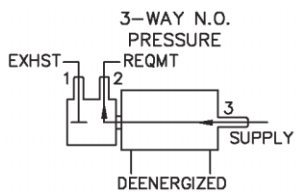
### 2 way NO



### 3 way NC or distributor



### 3 way NO

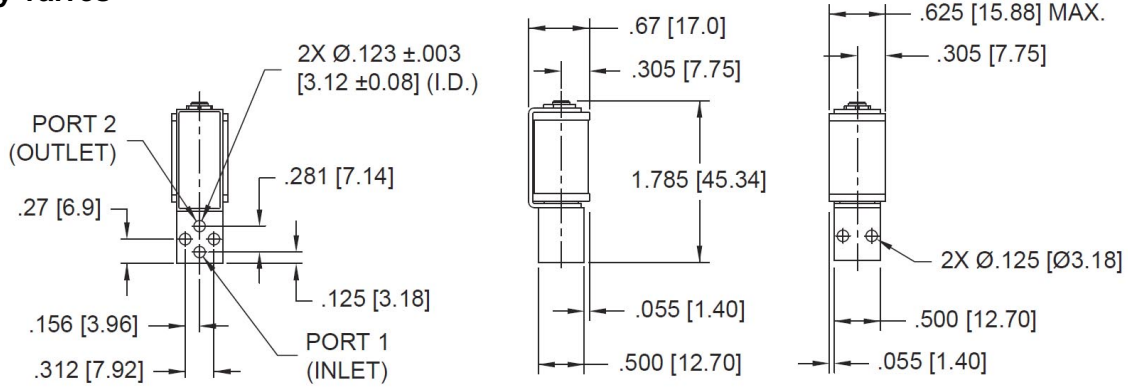




# TE Series PC mount switching solenoid valve

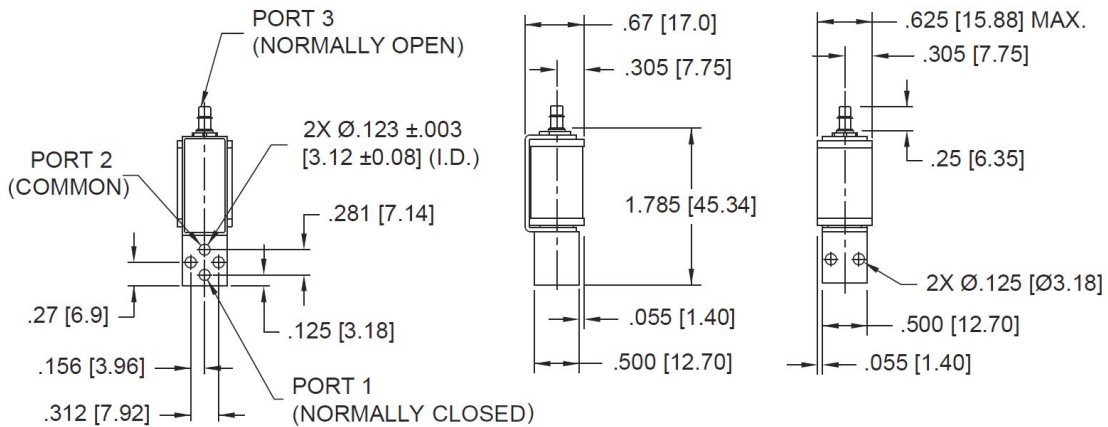
## OUTLINE DRAWING

### 2 way valves



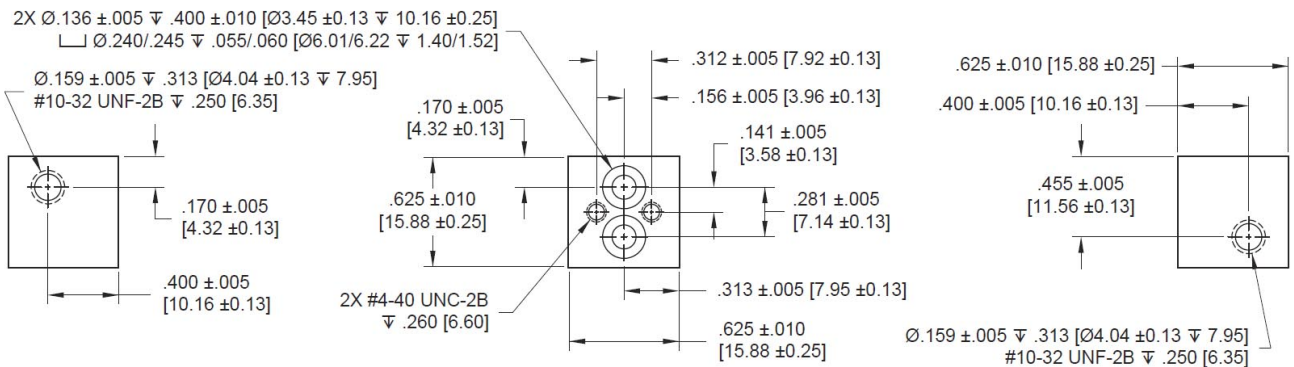
dimensions in inches (mm)

### 3 way valves



dimensions in inches (mm)

### Manifold mount diagram



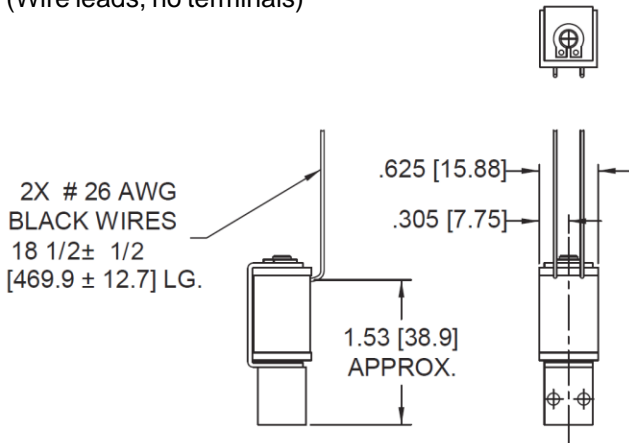
dimensions in inches (mm)



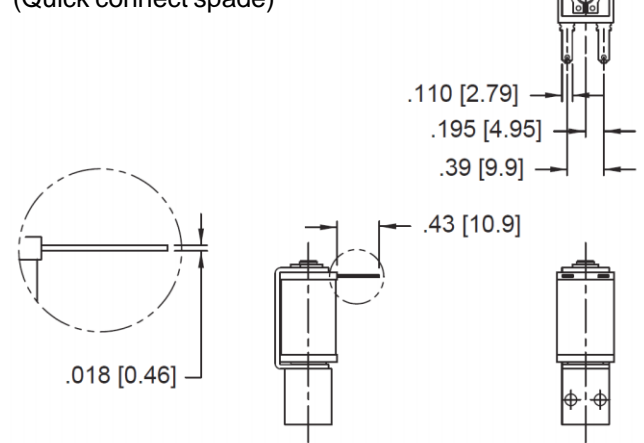
# TE Series PC mount switching solenoid valve

## COIL STYLES - ELECTRICAL CONNECTIONS

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

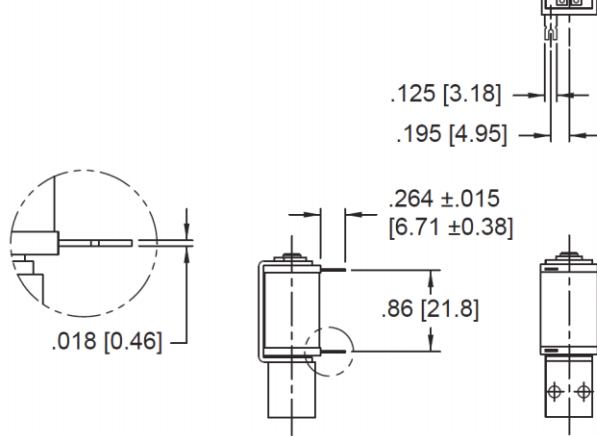


TE...Q...  
(Quick connect spade)

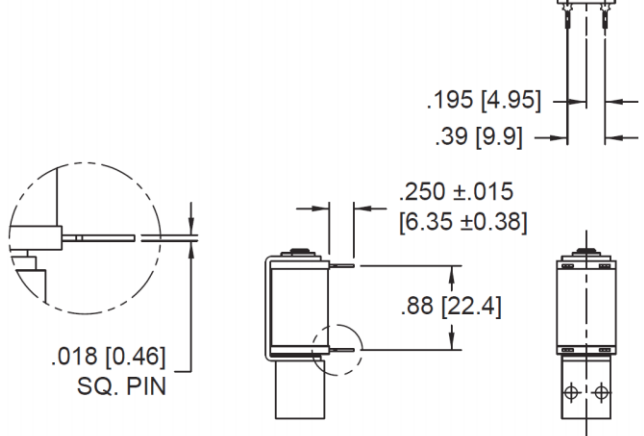


dimensions in inches (mm)

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

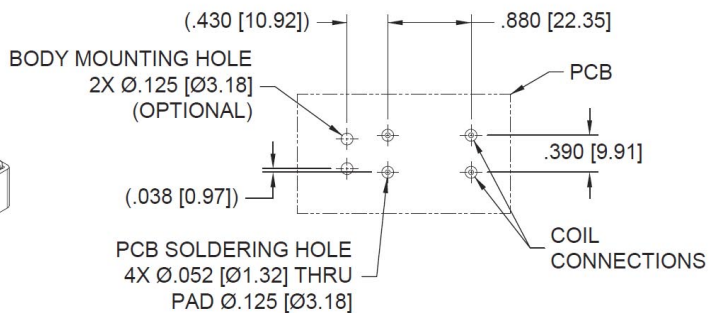
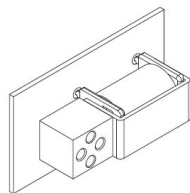
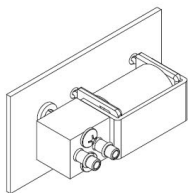


TE...P...\*  
(PC mount, 4 PC pins)



dimensions in inches (mm)

\* 4 PC pin PCB interface



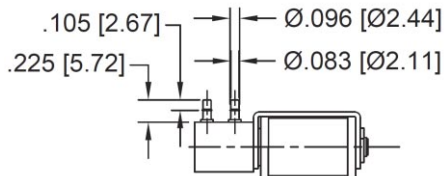
dimensions in inches (mm)



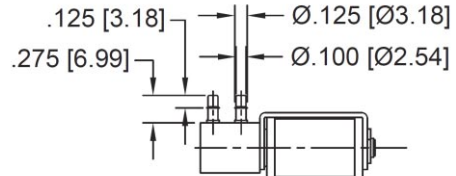
# TE Series PC mount switching solenoid valve

## BODY STYLES - PNEUMATIC CONNECTIONS

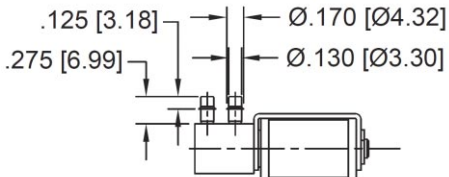
TE...6...  
(1/16" I.D. tubing)



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



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



## STEM STYLES - PNEUMATIC CONNECTIONS



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



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



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



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



# TE Series PC mount switching solenoid valve

## ORDERING INFORMATION

Series	Ways		Pressure		Function		Orifice		Elastomer		Voltage		Electrical		Pneumatic connection			
															Body	Stem		
TE	2	2 way	P010*	10 psi	C*	NC	030	0.030"	V	FKM	05	5 V <sub>DC</sub>	F	Wire leads	0	Manifold mount	0*	None
			3	3 way											P025	25 psi	P	NO
	P050**	50 psi			7	5/64" barbs	7	5/64" barbs										
	P070*	70 psi							8	1/8" barbs	8	1/8" barbs						
	P100***	100 psi	Q	Quick connect	7	5/64" barbs	7	5/64" barbs										
S	Solder taps	8	1/8" barbs	8	1/8" barbs													

\* only with 0.050" orifice  
 \*\* only with 0.030" and 0.050" orifice  
 \*\*\* only with 0.030" orifice

\* 3 way NC version can also be used as distributor

\* only available as 2-way NC, FKM, manifold mount body

\*\* 1/16" barbs not available for 0.050" orifice

\* 2 way NC only

**Example**

TE	2	P050	C	030	V	05	P	8	8
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**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)

### PRO services:

- Extended warranty period of 2 years
- Advanced logistics models for supply inventory and short delivery times
- Technical support through application engineers on the phone or at your site
- Fastest possible technical response for design and QA engineers
- ... plus other services on request

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