

## Installation Instructions for the 24PC SMT Series Pressure Sensor (1 psi, 5 psi, 15 psi)

ISSUE 1

PK 80175

### WARNING

#### PERSONAL INJURY

DO NOT USE these products as safety or emergency stop devices or in any other application where failure of the product could result in personal injury.

**Failure to comply with these instructions could result in death or serious injury.**

#### GENERAL INFORMATION

The 24PC SMT (Surface Mount Technology) pressure sensor contains a four-element piezoresistive bridge. When pressure is applied, the bridge resistance changes and the sensor provides an output signal proportional to the input pressure. The 24PC SMT provides a differential voltage proportional to the pressure differential between Port P2 and Port P1:

- As the difference in  $P = P2 - P1$  increases, differential voltage increases.
- As the difference in  $P = P2 - P1$  decreases, differential voltage decreases.

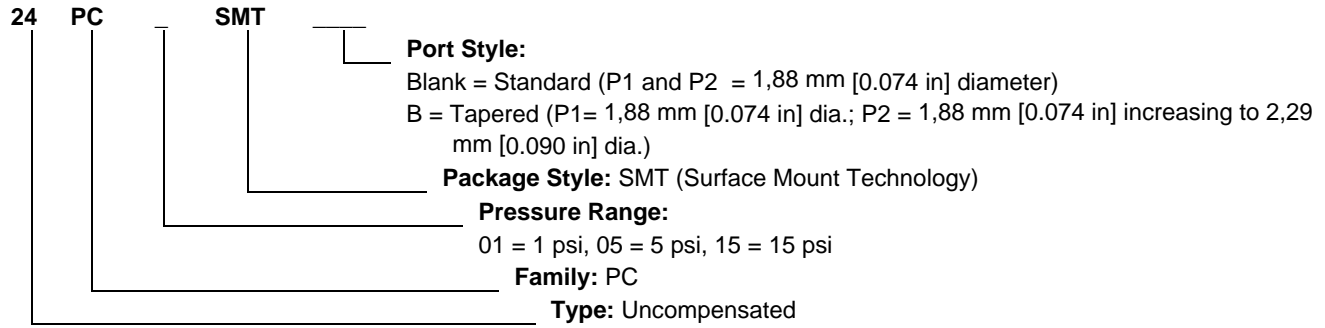
#### PERFORMANCE CHARACTERISTICS AT 10.0 VDC $\pm 0.01$ VDC EXCITATION, 25 °C

	Min.	Typ.	Max.	Units
Excitation	—	10	12	Vdc
Response Time	—	—	1.0	ms
Input Resistance	4.0 k	5.0 k	6.0 k	Ohm
Output Resistance	4.0 k	5.0 k	6.0 k	Ohm

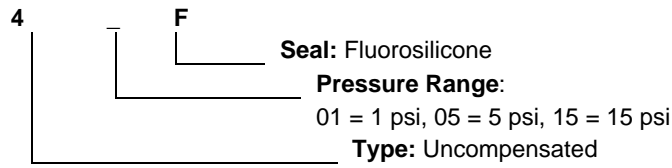
#### SPECIFICATIONS

Characteristic	Description
Operating Temperature	-40 °C to 85 °C [-40 °F to 185 °F]
Storage Temperature	-55 °C to 100 °C [-67 °F to 212 °F]
Alignment Pins	0,86 mm [0.034 in] diameter pins extend through PCB
Standard Port and Tubing Diameters	P1 and P2 = 1,88 mm [0.074 in] diameter; uses standard 0,59 mm [0.0625 in] ID tubing
Tapered Port and Tubing Diameters	P1 = 1,88 mm [0.074 in] P2 = 1,88 mm [0.074 in] diameter increasing to 2,29 mm [.090 in], standard 0,59 mm [0.0625 in] ID tubing can be used with both ports.
Port Orientation	Parallel to PCB (low profile on board)
SMT Solder	Sn 96.5 Ag 3.5 No Clean Flux Sn 63 Pb 37 No Clean Flux
SMT Reflow Profile	Maximum peak temperature of 260 °C [500 °F] for 10 seconds
Media Compatibility	Port P1 is limited to media that is compatible with polyphthalamide, silicone and silicon. Port P2 is limited to media that is compatible with polyphthalamide, fluorosilicone and silicon.
Shock	Qualification tested to 150 g
Vibration	MIL-STD-202. Method 213 (150 g half sine 11 ms)
Weight	0.5 grams [0.0176 oz]

## CATALOG LISTING NOMENCLATURE



## BRANDING SCHEME



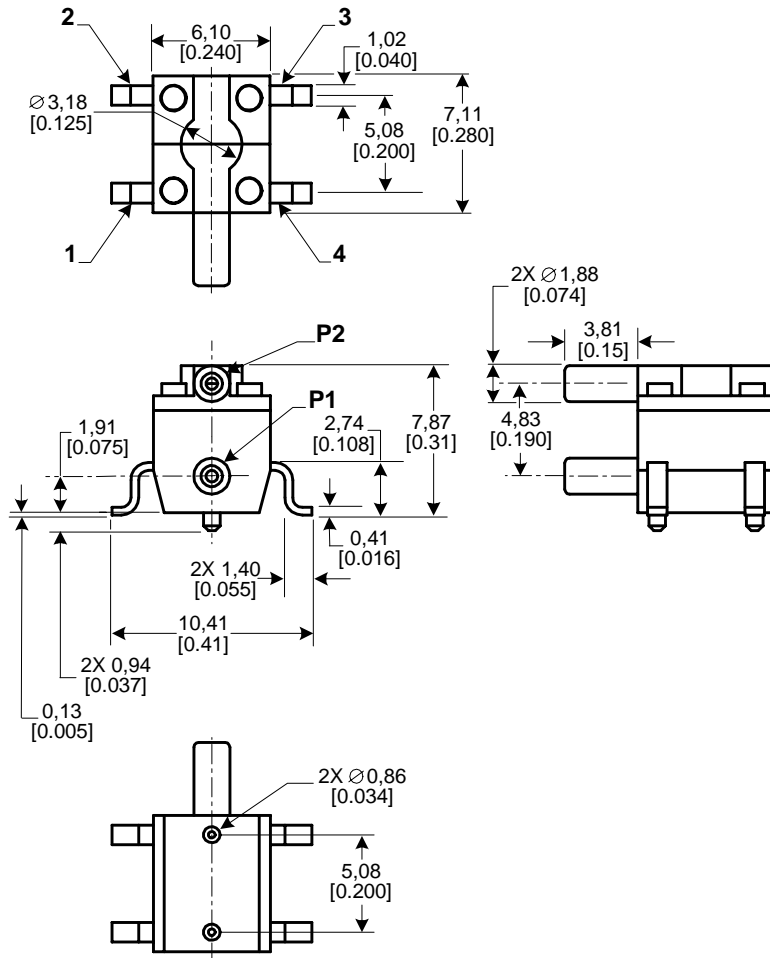
## DATE CODE



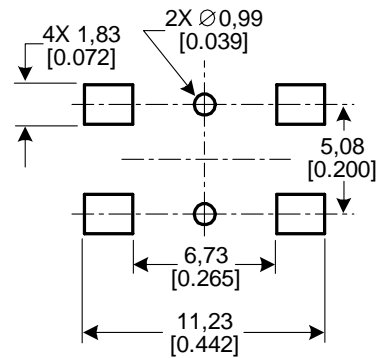
CIRCUIT DIAGRAM	OUTPUT CHARACTERISTICS
	<p>Output A (voltage) increases as P2 pressure increases.</p> <p>Output B (voltage) decreases as P2 pressure increases.</p>

## MOUNTING DIMENSIONS (for reference only) mm[in]

Port Style: Standard (P1 and P2 = 1,88 mm [0.074 in] dia.)



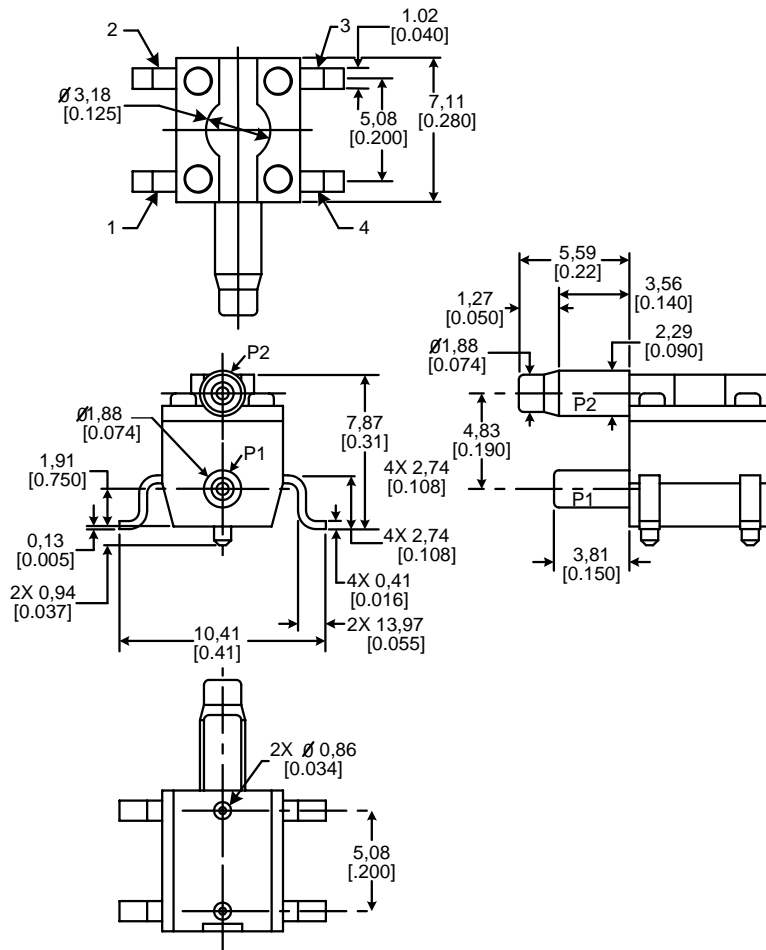
## SUGGESTED SMT SERIES LAND PATTERN LAYOUT



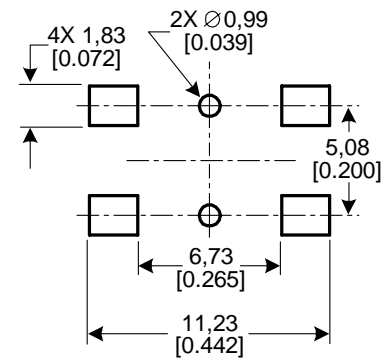
## MOUNTING DIMENSIONS (for reference only) mm[in]

### Port Style:

Tapered (P1 = 1,88 mm [0.074 in] dia. P2 = 1,88 mm [0.074 in] increasing to 2,29 mm [0.090 in])



## SUGGESTED SMT SERIES LAND PATTERN LAYOUT



## WARRANTY/REMEDY

Honeywell warrants goods of its manufacture as being free of defective materials and faulty workmanship. Contact your local sales office for warranty information. If warranted goods are returned to Honeywell during the period of coverage, Honeywell will repair or replace without charge those items it finds defective. The foregoing is Buyer's sole remedy and is **in lieu of all other warranties, expressed or implied, including those of merchantability and fitness for a particular purpose.**

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While we provide application assistance personally, through our literature and the Honeywell web site, it is up to the customer to determine the suitability of the product in the application.

For application assistance, current specifications, or name of the nearest Authorized Distributor, contact a nearby sales office. Or call:

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