

## Type 1001 I/P and E/P Transducers

### Description

The Type 1001 is a patented family of electropneumatic instruments that reduce a supply pressure to a regulated output pressure which is directly proportional to a two-wire current or three-wire voltage input. This design incorporates closed loop sensing of the output pressure to achieve excellent accuracy and vibration stability. It also features a unique damping circuit which can be adjusted to prevent overshoot and actuator "hunting." Model selection includes General Purpose, NEMA 4X, Explosion-Proof and Intrinsically-Safe.

### Features

- 0.1% accuracy typical
- Closed loop pressure feedback control minimizes effects of vibration, temperature, supply pressure and mounting angle
- Built-in volume booster provides flows up to 12 SCFM
- External zero and span adjustment (Internal on NEMA 4X model)
- Damping pot prevents overshoot and "hunting"
- Low air consumption
- Mounts at any angle
- Compact and lightweight
- Supply pressures up to 100 psig
- Virtually no sensitivity to supply pressure changes

### Applications

The Type 1001's precisely regulated pneumatic output can be used to operate:

- Valve actuators
- Louver and damper actuators
- Valve positioners
- Relays
- Clutches and brakes
- Controllers
- Air cylinders



### Specifications

**Accuracy (per ISA 51.1):**  $\pm 0.25\%$  span guaranteed,  $\pm 0.10\%$  typical

**Hysteresis:** 0.10% of span max.

**Repeatability:** 0.10% of span

**Position Effect:** Not measurable.

**Vibration Effect:** Less than 0.5% of span/G. 5-2000 Hz, 3G max., 3 axes.

**Operating Temperature Range:** -20 to 160°F

**Storage Temperature Range:** -40 to 180°F

**Temperature Effect:**  $\leq 0.02\%/^{\circ}\text{F}$  zero and span effects combined.

**Supply Pressure Sensitivity:** Not measurable

**Loop Load:** Less than 8VDC drop @ 20mA, less than 11 VDC drop @ 50mA, 2-wire.

**Supply Voltage (3-wire):** 9-40 VDC, less than 10mA.

**Signal Impedance (3-wire):** 6 kohm minimum.

**RFI/EMI Effect (NEMA 4X):** Less than 0.25% of span change in output, 10V/meter, 20-1000 MHz. Reference SAMA PMC 33.1-1978, 2-abc.

**Maximum Air Consumption:** .07 SCFM

**Maximum Supply Pressure:** 100 psig.

**Minimum Supply Pressure:** Maximum output plus 3 psig.

**Flow Rate at Midrange (Minimum):** 4.5 SCFM at 25 psig supply. 12 SCFM at 100 psig supply.

**Frequency Response (NEMA 1):** See Transfer Diagram, 1.8 Hz @ -3dB into 300cc volume.

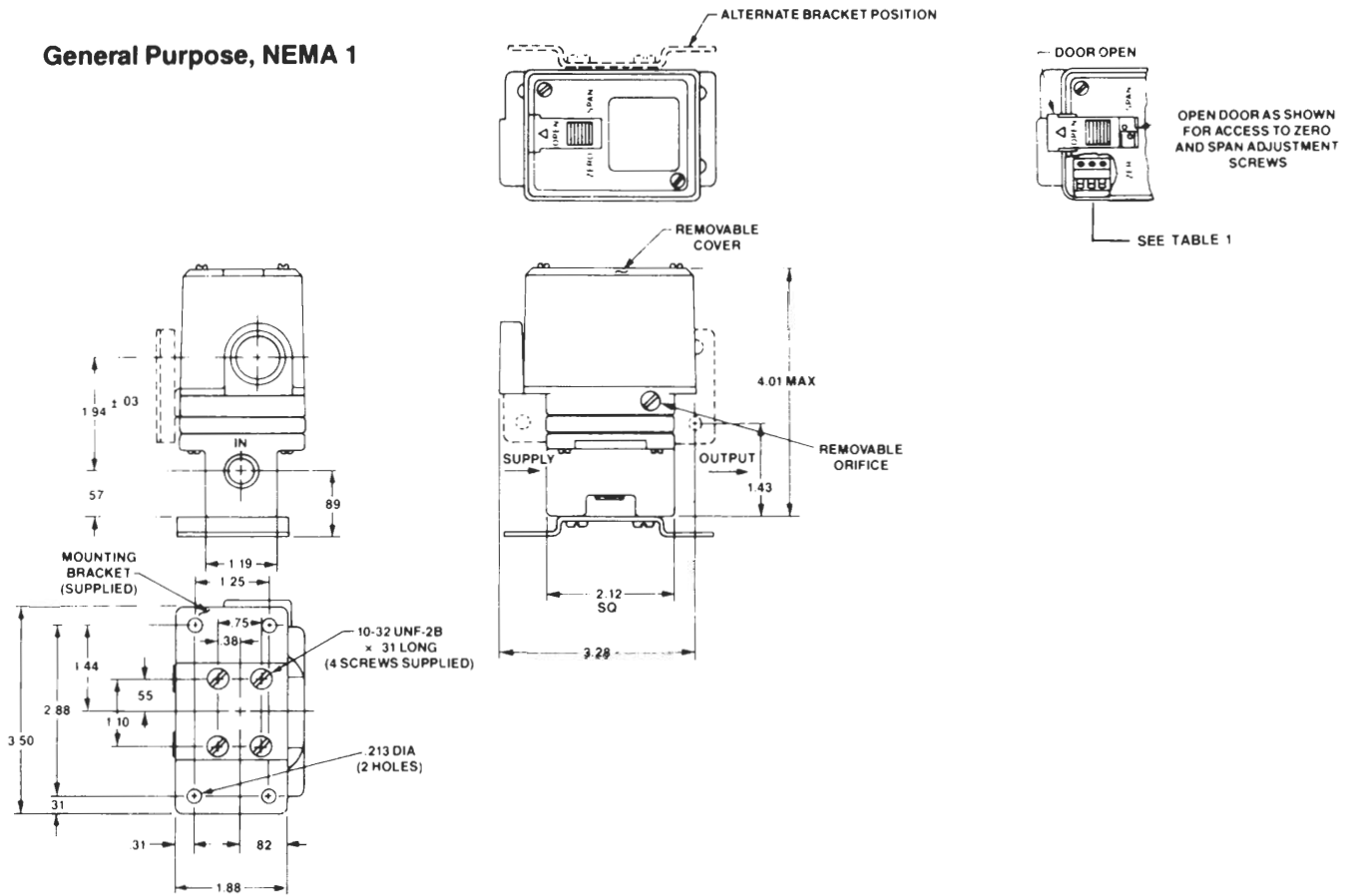
**Port Sizes:** 1/4" NPT (pneumatic), 1/2" NPT (electrical).

**Dimensions:** See reverse.

**Weight:** NEMA 1 0.9 lbs.  
NEMA 4X 2.8 lbs.

# Dimensions

## General Purpose, NEMA 1



## Explosion-Proof, NEMA 4X

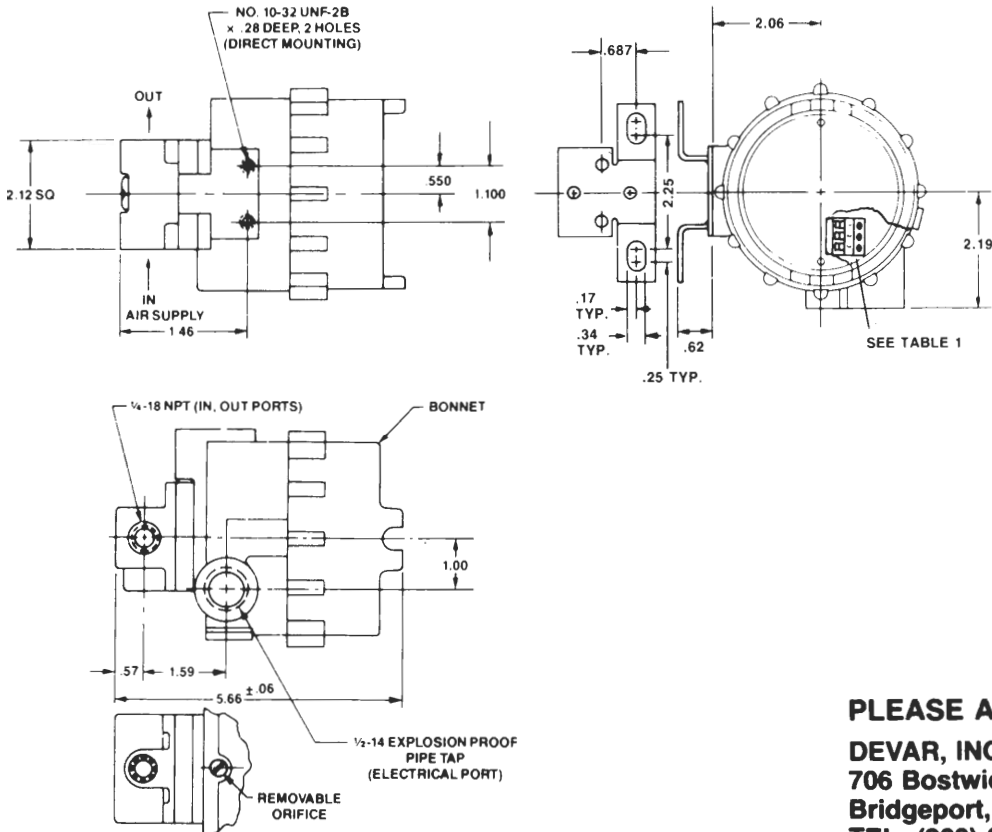


TABLE 1

PWB TERMINAL BLOCK	I/P TRANSDUCER	E/P TRANSDUCER
POSITION 3	Positive (+)	Supply (+)
POSITION 2	No Connection	Common (-)
POSITION 1	Negative (-)	Signal (+)

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