

# CONOFLOW PRESSURE TO CURRENT TRANSDUCER GPT82 Series



Conoflow's Model GPT82 Pressure to Current Transducer simplifies the monitoring of control loop systems by converting a pneumatic signal to a proportional current output. The compact, lightweight design affords easy line mounting installation into a 2-wire instrument loop. An optional wall mounting bracket is available.

The GPT82 is a high-accuracy unit that will convert a standard 3-15, 3-27 or 6-30 PSIG (21-103, 21-186 or 41-207 kPa) input signal into an output of 4-20 or 10-50 mA. The solid-state design uses no moving parts and consumes no signal air. This unit will accept supply voltage ranging from 10 to 42 VDC, through its 1/2" NPT conduit connection. These features facilitate applications in data acquisition, feed-

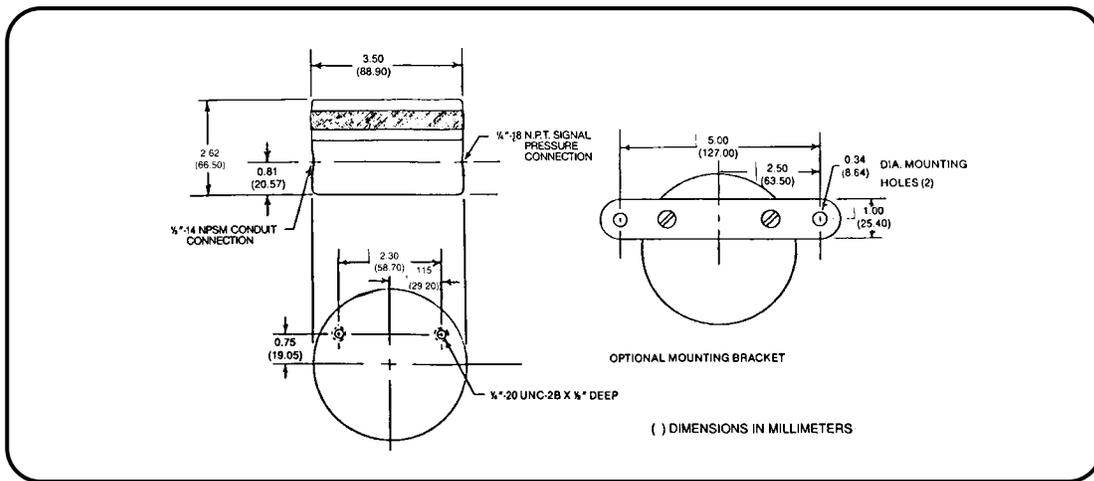
back and remote monitoring. Additional features include multiturn zero and span calibration and switchable field selection of the output range.

The housing requirements of the GPT82 Series Transducer meet the requirements of NEMA 4.

The GPT82 Series Transducer, when purchased with an EMI-RFI Adaptor, conforms to SAMA PMC 33.1-1978 for Class 1 and 2, Bands A, B and C with less than 0.25% error.

## DIMENSIONAL DATA - ADVERTISING DRAWING:

GPT82 Series: A28-21  
2" Pipe Mounting Bracket: A28-33



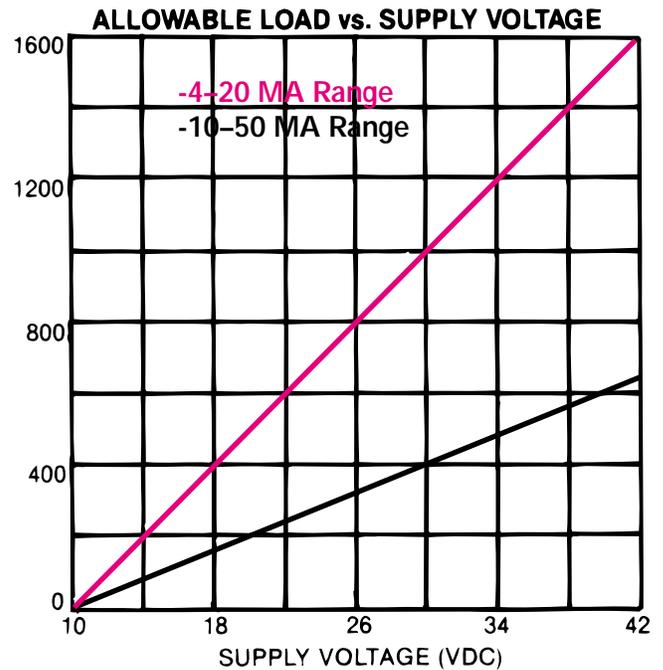
For Certified Dimensional Data, Refer to Drawing A28-21

## PRINCIPLE OF OPERATION

The Conoflow GPT82 is a solid state, two-wire pressure to current transducer which uses a strain gauge pressure sensor in the configuration of a Wheatstone Bridge. The application of pressure induces a strain which unbalances the bridge and results in a voltage proportional to the applied pressure. This voltage is amplified by the GPT82 circuitry to provide the output current.

## SPECIFICATIONS

**Input:** 3-15, 3-27 or 6-30 PSIG (21-103, 21-186 or 41-207 kPa)  
**Maximum Input:** 2 times rated range  
**Outputs:** 2 wires, 4-20 and 10-50 mA with overcurrent limit, direct acting  
**Accuracy:**  $\pm 0.25\%$  of output span  
**Repeatability:** Within 0.10% of output span  
**Temperature Stability:**  $\pm 0.25\%$  of output span per °F over compensated temperature range  
**Power Supply Stability:** Less than 0.005% of span change in output per volt change at the input terminals  
**Power Supply:** 10 VDC minimum to 42 VDC maximum at the input terminals  
**Operating Temperature Range:** -40°F to +180°F (-40°C to +82°C) (3)  
**Compensated Temperature Range:** 30°F to 130°F (-1°C to 54°C)  
**Calibration Adjustment:** Multiturn span and zero  
**Approximate Shipping Weight:** 1-3/4 lbs. (0.79 kg)



### NOTES:

(1) Intrinsically Safe Approval.

(A) Conoflow's Model GPT82 Transducer is Factory Mutual approved intrinsically safe when interfaced with appropriate barriers. Consult the factory if approval with other barriers is required. In a Division 2 location, the hazardous gas or dust is present only under accident conditions and a barrier may not be required depending on the application. Division 2 approval can be offered for the GPT82 Series Transducer when interfaced with an approved barrier as shown below. When no barrier is used, the maximum voltage must be less than 50 VDC.

#### FACTORY MUTUAL (FM)

BARRIER	CLASS	DIVISION	GROUP
<b>Foxboro</b>			
2A1-12V-FGB	I, II & III	1 & 2 (See note A)	A, B, C, D, E, F, G
2A1-13V-FGB	I, II & III	1 & 2 (See note A)	A, B, C, D, E, F, G
2A1-13I-FGB	I, II & III	1 & 2 (See note A)	A, B, C, D, E, F, G
<b>Honeywell</b>			
38545-0000-0110-111-F5D5 Red	I, II & III	1 & 2 (See note A)	C, D, E, F, G
38545-0000-0110-112-F5D5 Yellow	I, II & III	1 & 2 (See note A)	C, D, E, F, G
38545-0000-0110-113-F5D5 Green	I, II & III	1 & 2 (See note A)	A, B, C, D, E, F & G
<b>Taylor</b>			
1130 FF 21000	I, II & III	1 & 2 (See note A)	C, D, E, F, G
2135 FF21000	I, II & III	1 & 2 (See note A)	C, D, E, F, G
1130 FF22000	I, II & III	1 & 2 (See note A)	C, D, E, F, G
1135 FF22000	I, II & III	1 & 2 (See note A)	C, D, E, F, G
<b>Leeds &amp; Northrup</b>			
316569, 316747	I, II & III	1 & 2 (See note A)	B, C, D, E, F & G
<b>Westinghouse</b>			
75S B02	I, II & III	1 & 2 (See note A)	A, B, C, D, E, F & G
<b>Stahl</b>			
8901/30-280/070/7	I, II & III	1 & 2 (See note A)	A, B, C, D
8901/31-280/070/7	I, II & III	1 & 2 (See note A)	A, B, C, D
8901/33-293/000/7	I, II & III	1 & 2 (See note A)	A, B, C, D
8901/34-293/000/7	I, II & III	1 & 2 (See note A)	A, B, C, D
8901/30-280/165/8	I, II & III	1 & 2 (See note A)	C, D
8901/31-280/165/8	I, II & III	1 & 2 (See note A)	C, D
<b>Bailey Controls</b>			
76610AAAV1	I, II & III	1 & 2 (See note A)	C, D

(B) Conoflow's Model GPT82 Transducer is CENELEC approved intrinsically safe as follows:  
 EExia IIC-INIEX 84.101.037U

(2) Explosionproof Approval

Conoflow's Model GPT82 Transducer is Factory Mutual approved explosionproof for Class I, Division 1, Groups A, B, C and D and Dust Ignition Proof for Class II, III, Division 1, Groups E, F and G Indoor and Outdoor Hazardous Locations

(3) Factory Mutual approved intrinsically safe and explosion-proof units have an operating temperature range of 0°F to 140°F (0°C to +60°C)

## CONTROL ENGINEERING DATA

Control Engineering Data is intended to provide a single source from which one can determine, in detail, the full scope of the product line. Operating principles and dimensional data are found in the instruction manual. Control Engineering Data also provides a means of communicating, by way of a code number, which is fully descriptive of the product selection.

**NOTE: 1. Catalog numbers as received must contain ten (10) characters.**

1-5 Model	GPT82 - Transducer - Pressure to Current <b>NOTE: 1. For dimensional data, refer to drawing A28-21</b>
6 Input Ranges	A = 3-15 PSIG (21-103 kPa) B = 3-27 PSIG (21-186 kPa) C = 6-30 PSIG (41-207 kPa) Y = Special Input ( <b>Consult factory</b> )
7 Output Ranges	A = 4-20 mA DC B = 10-50 mA DC
8 Optional Mounting Features	A = Mounting Bracket (Optional) B = 2" "U"-Bolt (Pipe Mounting) (Optional) X = Absence of Specification <b>NOTE: 1. For list price adder, refer to price list CP-5000.</b>
9 Explosion- Proof Approval	E = Factory Mutual Approved - Explosion-Proof Housing X = Absence of Specification <b>NOTES: 1. Refer to approval listing for applicable Barriers, Class, Divisions and Groups</b> <b>2. For list price adder, refer to price list CP-5000.</b>
10 Intrinsically Safe Approvals	A = Factory Mutual Approved - Intrinsically Safe B = CENELEC Approved - Intrinsically Safe X = Absence of Specification <b>NOTES: 1. Refer to approval listing for applicable Barriers, Class, Divisions and Groups</b> <b>2. For list price adder, refer to price list CP-5000.</b>