



# Non-Incendive Pressure Transmitter Type N-10

## Tronic

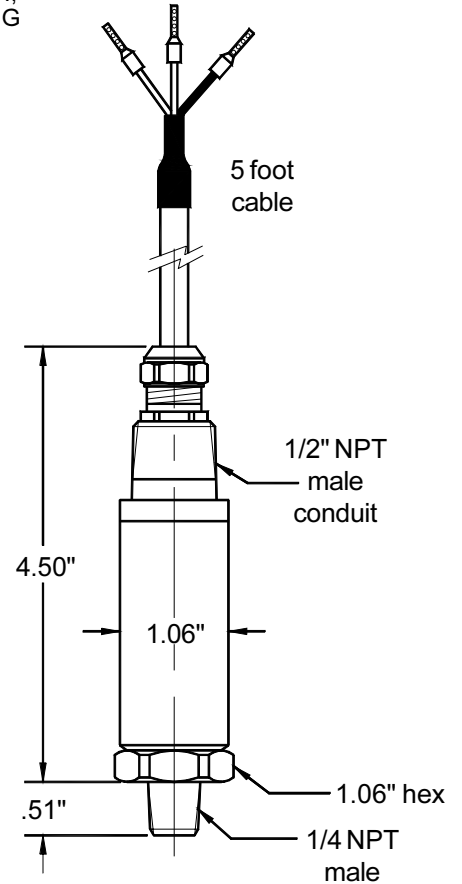
- FM approved non-incendive for Class 1 Division 2 hazardous locations
- Engineered to meet the harsh demands of gas compressor applications
- NACE approved wetted parts
- Retrofits existing compressor applications

Type N-10 pressure transmitters are specifically designed to meet the durability and performance requirements of gas compressor systems. These pressure transmitters feature an industry standard 4-20 mA 2 wire signal output, NEMA 4 (IP 67) weather protection, and are extremely resistant to pressure spikes, vibration, and moisture intrusion. The NACE approved wetted parts materials provide extra resistance against sulfide stress cracking when exposed to gases containing sulphur.

The transmitters are engineered to meet Class 1 Division 2 Non-incendive protection in hazardous environments. Each unit undergoes extensive quality control testing and calibration to achieve an accuracy  $\leq 0.25\%$  full scale. Each pressure transmitter is temperature compensated to assure accuracy and long term stability when exposed to severe ambient temperature variations.



Non-incendive for Class I, Division II, Groups A, B, C, and D  
Class II, Division I, Groups E, F, and G



### STANDARD RANGES

| RANGE         | MAXIMUM* | BURST**  | RANGE        | MAXIMUM*   | BURST**    |
|---------------|----------|----------|--------------|------------|------------|
| 30"-0 HgVac   | 70 PSI   | 70 PSI   | 0-500 PSI    | 1100 PSI   | 5800 PSI   |
| 30"-0-30 PSI  | 250 PSI  | 250 PSI  | 0-1000 PSI   | 1750 PSI   | 8000 PSI   |
| 30"-0-100 PSI | 500 PSI  | 500 PSI  | 0-1500 PSI   | 2900 PSI   | 11,600 PSI |
| 0-15 PSI(A)   | 70 PSI   | 70 PSI   | 0-2000 PSI   | 4600 PSI   | 14,500 PSI |
| 0-30 PSI      | 145 PSI  | 145 PSI  | 0-3000 PSI   | 4600 PSI   | 14,500 PSI |
| 0-60 PSI      | 250 PSI  | 250 PSI  | 0-5000 PSI   | 11,600 PSI | 25,000 PSI |
| 0-100 PSI(A)  | 500 PSI  | 500 PSI  | 0-8000 PSI   | 17,400 PSI | 35,000 PSI |
| 0-200 PSI     | 500 PSI  | 500 PSI  | 0-10,000 PSI | 17,400 PSI | 35,000 PSI |
| 0-300 PSI     | 1100 PSI | 1100 PSI | 0-15,000 PSI | 21,750 PSI | 43,500 PSI |

\* Maximum pressure, causing no permanent change in specifications.

\*\* Burst pressure, resulting in destruction of the transmitter and possible loss of media.

Other pressure ranges are available.

## Specifications

### Input

10-30 VDC

### Output & load limitations

4-20mA 2-wire  $R_{(max)} = (V_s - 10V) / 0.02 A$

### Accuracy $\leq 0.25\%$ of span

Hysteresis:  $\leq 0.1\%$  of span  
 Repeatability:  $\leq 0.05\%$  of span  
 1 yr. stability:  $\leq 0.2\%$  of span  
 Response time:  $\leq 1$  ms  
 ( 10-90% full scale )

### Zero and span offset

+/- 0.5% F.S.

### Temperature

Effective temperature compensation  $+32$  °F to  $176$  °F (0 to  $80$  °C)  
 Media  $-40$  °F to  $221$  °F  
 Ambient  $-40$  °F to  $221$  °F  
 Storage  $-76$  °F to  $221$  °F

### Temperature error (reference temperature $70$ °F)

On zero (% of span/ $18$  °F)  $\leq 0.2$   
 On span (% of span/ $18$  °F)  $\leq 0.2$

### Total temperature compensation error

$\leq 1.6\%$  typical within compensated range  
 $\leq 2.0\%$  typical between  $-4$  °F to  $+176$  °F

### Process connection

$1/4$ " NPT male

### Electrical connection

$1/2$ " male conduit ( IP 67 / NEMA 4 )  
 and 5 foot (1.5 meter) cable

### Material

Wetted parts 316Ti stainless steel  
 Elgiloy sensor for ranges  $> 300$  PSI  
 Body material 316Ti stainless steel

### Transmitting liquid

Synthetic oil to 300 PSI, none in ranges  $> 300$  PSI

### Electrical protection

Protected against reverse polarity

### Vibration resistance

Shock: 1000g per IEC 770  
 Vibration: 20g per IEC 770 (under resonant conditions)

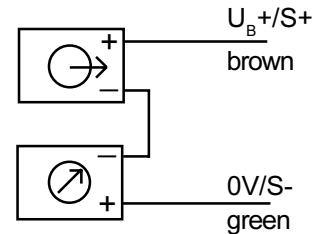
### RFI protection

Meets CE conformity requirements per IEC 61326 for interference emission and interference immunity

### Wiring

#### 2-wire system

| Signal   | Coding       | Wire color |
|----------|--------------|------------|
| Supply + | $U_B + / S+$ | brown      |
| Signal - | $0V / S-$    | green      |



NOTE: a barrier is not required when installed using rigid conduit in hazardous locations rated non-incendive for Class I, Div 2, Groups A, B, C, and D, and Class II, Division I, Groups E, F, and G.

### Approval authority

**FACTORY MUTUAL (FM)** non-incendive with entity approval for:

Class I, Division 2, Groups A, B, C, and D  
 Class II, Division I, Groups E, F, and G  
 when installed using rigid conduit.

Electrical ratings 30 V, 20 mA.

FM Standards according to FM3010540

### Ordering Information:

State computer part number (if available) / type number / range / output / process connection / electrical connection / other required options.

Specifications provided in this data sheet represent the state of engineering at the time of printing. Modifications may take place and the specified materials may change without prior notice

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