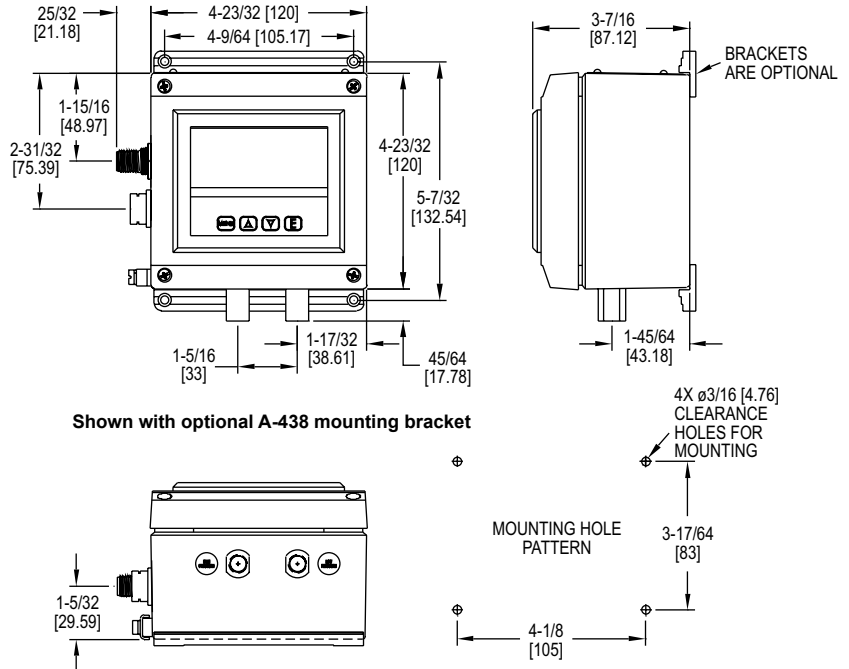


# INTRINSICALLY SAFE DIFFERENTIAL PRESSURE TRANSMITTER

## For Hazardous Zone Pressure and Flow Applications

**CALIBRATION SERVICES AVAILABLE**



The **Series ISDP Intrinsic Safe Differential Pressure Transmitter** provides a 4-20 mA process output, a robust NEMA 4X enclosure, plus a large LCD display that can be programmed to read in pressure, velocity or flow. The ISDP offers simplified programming via a Menu key that enables the user to select: security level; English or Metric engineering units; pressure, velocity or flow operation, K-factor for use with various Pitot tubes and flow sensors, circular or rectangular duct size for volumetric flow operation plus many more. The Series ISDP Differential Pressure Transmitter is powered on its 2-wire loop with 10-35 VDC via its integral M-12 four pin male connector. The ISDP provides a 0.5% full-scale accuracy on ranges from 0.25 in w.c. to 100 in w.c. as well as bi-directional models up to 10 in w.c. These features make the Series ISDP Differential Pressure Transmitter the ideal instrument for monitoring pressures or air flows in hazardous zones having a Class I Div. I Groups A, B, C, D; Class II Div. I Groups E, F, G; Class III Div. I ratings.

**BENEFITS/FEATURES**

- NEMA 4X rated enclosure provides protection in harsh environments permitting outdoor monitoring or in areas where dust and particulate matter exists
- Easy to read LCD display provides immediate local alerts allowing corrective action to be taken quicker to eliminate the problem from becoming widespread
- Intrinsically safe for use in the specified hazardous locations meets specifications where pressure transmission and safety cannot be compromised
- Password protected set up menu helps to insure no errors by untrained personnel when accessing the powerful measurement capabilities of this device

**APPLICATIONS**

- Hazardous zone pressure control applications
- Hazardous flow and control applications

| MODEL CHART |                 |          |                 |
|-------------|-----------------|----------|-----------------|
| Model       | Range (in w.c.) | Model    | Range (in w.c.) |
| ISDP-002    | 0 to 0.25       | ISDP-012 | 0 to ±0.25      |
| ISDP-004    | 0 to 1          | ISDP-014 | 0 to ±1.0       |
| ISDP-006    | 0 to 5          | ISDP-015 | 0 to ±2.5       |
| ISDP-007    | 0 to 10         | ISDP-016 | 0 to ±5.0       |
| ISDP-008    | 0 to 25         | ISDP-017 | 0 to ±10        |
| ISDP-009    | 0 to 50         |          |                 |
| ISDP-010    | 0 to 100        |          |                 |

| OPTIONS                |  |
|------------------------|--|
| To order add suffix:   | Description                            |
| -FC                    | Factory calibration certificate        |
| -NIST                  | NIST traceable calibration certificate |
| Example: ISDP-004-NIST |  |

**SPECIFICATIONS**

**Service:** Air and non-combustible gases.  
**Wetted Materials:** Ranges 5 in w.c. and greater: glass, PVC, silicon, alumina ceramic, epoxy, RTV, gold, aluminum, SS and nickel; Ranges 1 in w.c. and lower: SS, silicone, gold and ceramic.  
**Housing Materials:** Aluminum, glass.  
**Accuracy:** ±0.5% at 77°F (25°C) including hysteresis and repeatability (after 1 hour warm-up).  
**Stability:** < ±1% per year.  
**Pressure Limits:** Ranges ≤ 2.5 in w.c. = 2 psi; 5 in w.c.: 5 psi; 10 in w.c.: 5 psi; 25 in w.c.: 5 psi; 50 in w.c.: 5 psi; 100 in w.c.: 9 psi.  
**Temperature Limits:** 32 to 140°F (0 to 60°C).  
**Compensated Temperature Limits:** 32 to 140°F (0 to 60°C).  
**Thermal Effects:** 0.020%/°F (0.036/°C) from 77°F (25°C).  
**Power Requirements:** 10-35 VDC.  
**Output Signal:** 4-20 mA DC.  
**Zero and Span Adjustments:** Accessible via menus.  
**Response Time:** 250 ms (damping set to 1).  
**Display:** 4 digit LCD 0.6" H.  
**Electrical Connections:** M-12 4 PIN Connector.  
**Process Connections:** 1/8" female NPT.  
**Enclosure Rating:** Designed to meet NEMA 4X (IP66).  
**Mounting Orientation:** Mount unit in vertical plane.  
**Weight:** 2 lb 10 oz (1.19 kg).  
**Compliance:** CE: CENELEC EN 61326/55024: 2003; IEC 61000-4-2/3/4/6: 2001/2006/2004/2005; CENELEC EN 55011: 2006; 2004/108/EC EMC Directive. FM Intrinsically Safe CLI Div I GR: A, B, C, D; CLII Div I GR: E, F, G; CLIII Div I.

| ACCESSORIES |   |
|-------------|---|
| Model       | Description   |
| A-231       | 16' (5 m) shielded cable with 4 pin female M-12 connection  |
| A-295       | Female 4 pin M-12 to cable gland connector                  |
| A-438       | Surface mounting brackets                                   |
| A-486       | 4.9' (1 m) shielded cable with 4 pin female M-12 connection |
| A-487       | 9.8' (3 m) shielded cable with 4 pin female M-12 connection |
| A-488       | 33' (10 m) shielded cable with 4 pin female M-12 connection |
| MTL5541     | Intrinsically safe galvanic isolator                        |
| MTL7706     | Intrinsically safe zener barrier                            |

Process Tubing Options: See page 453 (Gage Tubing Accessories)