Barksdale

Installation And Maintenance Instructions

445 SERIES

HAZARDOUS LOCATIONS
INTRINSICALLY SAFE PRESSURE TRANSMITTER

* See Control Drawing TD-B77 for Intrinsically Safe Installation

CAUTION: This device should only be installed by service personnel properly trained on Intrinsically Safe System requirements.

Specifications:

Calibration Reference Conditions

Ambient Temperature:	75°F
Relative Humidity:	40 to 60%
Barometric Pressure:	29.92 in.Hg.

Performance Characteristics

Accuracy (LH&R):	±0.25%, Best Straight Line (BSL)@75°F
Long Term Stability:	Will repeat within ±0.25% FSO of original calibration on curve for 1 year
Proof Pressure:	2 times rated pressure range, or 13,000 psi, whichever is less
Life, Cycling:	Full scale pressure cycles: 10^8 to 300 psi, 10^7 to 1,000 psi, 10^6 to 7,500 psi
Vibration:	15 g's, 10 to 2000 Hz (MIL-STD-202, M204, Cond. B)
Shock:	50 g's, 11 ms (MIL-STD-202, M213, Cond. G)
Wetted Material:	300 series and 17- 4 PH stainless steel.
Electrical Connection:	1 meter jacketed cable, standard See alternate connections on back
Pressure Cavity Volume:	0.075 inches maximum
Enclosure Rating:	NEMA 4X

CALIBRATION

All models are tested to meet or exceed the published specifications. The calibration and testing were done using instrumentation and standards traceable to the National Institute of Standards and Technology (NIST). Also tested in accordance with MIL-STD-45662A.

Excitation:	12 to 28 VDC
Output:	4 to 20 mA
Zero Output:	4 mA, ± 2.0% of FSO @ 75°F
Full Scale Output:	20 mA, ± 1.0% @ 75°F
Protection:	Reverse polarity protected
Loop Resistance:	See loop resistance chart on back page
Temperature Range:	Compensated: -40° to +160°F(-40° to 71°C) Operating: -40° to 185°F (-40° to 85°C)
Agency Temp.Code:	T4
Temperature Error:	±0.01% of FSO/°F over the compensated range.
Weight:	5.9 oz (167.5 grams)

Wiring:

H3,H5 Cable		T4,T5 Pins
Red	(+Excite)	Pin 1
Black	(Common)	Pin 2
Drain	(Case Ground)	Pin 4

H6 - SJO Cord Wire Code:

White	(+Excite)
Black	(Common)
Green	(Case Ground)

Agency Approval

* Intrinsically Safe Pressure Transmitter for use in Hazardous Locations, Class I, Groups A, B, C & D, Class II, Groups E, F & G only when installed in Accordance with Control Drawing TD-B77.

c UL us Telemetering Equipment for Use in Hazardous Locations UL File No. E146589, Guide No. WYMV, WYMV7.

W A R N I N G ! READ BEFORE INSTALLATION

Fluid hammer and surges can destroy any pressure transmitter and must always be avoided. A pressure snubber should be installed to eliminate the damaging hammer effects. Fluid hammer occurs when a liquid flow is suddenly stopped, as with quick closing solenoid valves. Surges occur when flow is suddenly begun, as when a pump is turned on at full power or a valve is quickly opened.

Barksdale pressure transmitters having a pressure range 2,000 psi and higher have a built in pressure surge protection in the input port. The designis such that an orifice is made an integral part of the pressure port. Designed with the upstream side of the orifice as a sharp corner, it acts as a very effective protection. Other orifice devices can be installed upstream of the pressure transmitter in the piping system for extra protection where the system engineer requires it.

Liquid surges are particularly damaging to pressure transmitters if the pipe is originally empty. To avoid damaging surges, fluid lines should remain full (if possible), pumps should be brought up to power slowly, and valves opened slowly. To avoid damage from both fluid hammer and surges, a surge chamber should be installed, and a pressure snubber should be installed on every transmitter.

Symptoms of fluid hammer and surge's damaging effects:

1. Pressure transmitter exhibits an output at zero pressure (large zero offset). If zero offset is less than 10% FS, user can usually re-zero meter, install proper snubber and continue monitoring pressures.
2. Pressure transmitter output remains constant regardless of pressure.
3. In severe cases, there will be no output.

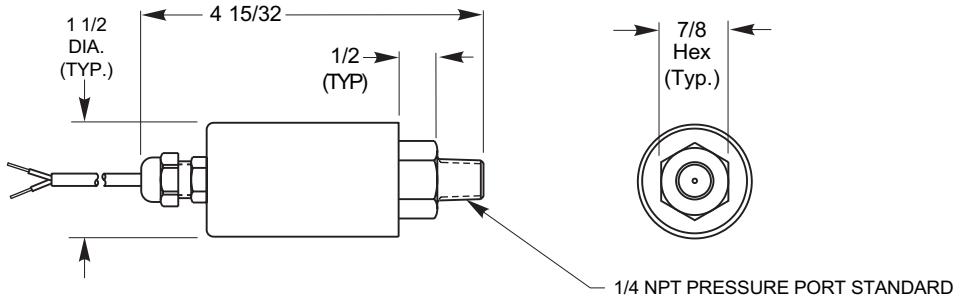
TORQUE REQUIREMENTS:

Apply pipe compound sparingly to male pipe threads only. Avoid pipe strain on Transmitter housing by properly supporting and aligning piping.

Apply wrench to the hex flats of fittings only, then tighten the connection. Adequate support of piping and proper mounting of the pressure transmitter should be made to avoid excessive shock and vibration.

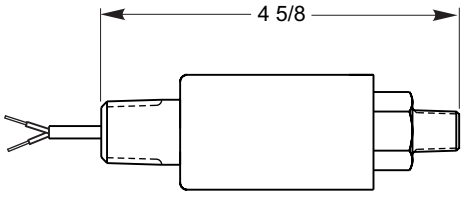
TORQUE TO 125 - 150 pound inches.

Buy: www.ValinOnline.com | Phone 844-385-3099 | Email: CustomerService@valin.com

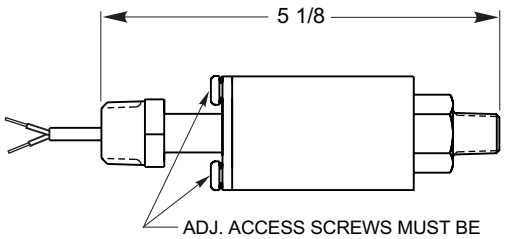


FOR 7/16-20 UNF (FEMALE) ADD -P1 TO P/N.
FOR 7/16-20 UNF (MALE) ADD -P3 TO P/N.
FOR 1/8-27 NPT MALE ADD -P7 TO P/N.
FOR 1/4 NPT FEMALE ADD -P6 TO P/N.

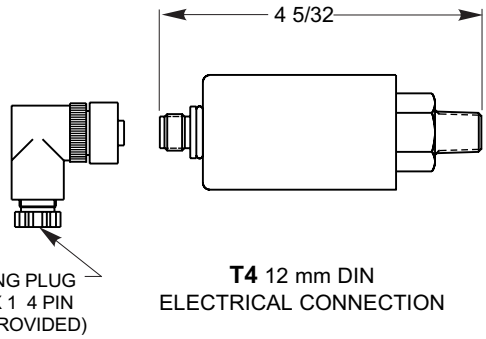
H3 SHIELDED JACKETED CABLE
ELECTRICAL CONNECTION-STANDARD



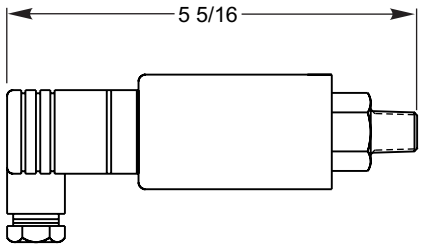
H5 1/2 NPT CONDUIT
ELECTRICAL CONNECTION



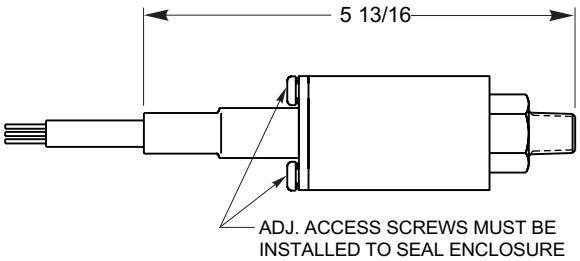
H5-E 1/2 NPT CONDUIT ELECTRICAL CONNECTION
WITH FIELD ZERO/SPAN ADJUSTMENTS



T4 12 mm DIN
ELECTRICAL CONNECTION

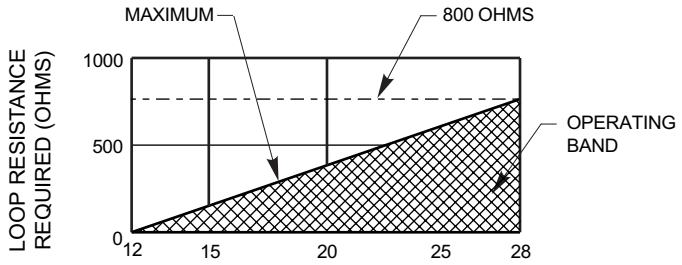


T5 TYPE 43650 DIN
ELECTRICAL CONNECTION



H6-E SJO CORD ELECTRICAL CONNECTION
WITH FIELD ZERO/SPAN ADJUST-
MENTS

LOOP RESISTANCE CHART



EXCITATION VOLTAGE (volts DC)

RETURN REQUESTS / INQUIRIES

Direct all warranty and repair requests/inquiries to Barksdale, Inc. Customer Service
Department. Call 323-589-6181, FAX: 323-589-3463

BEFORE RETURNING ANY PRODUCT(S) TO BARKSDALE, YOU MUST OBTAIN A RETURNED MERCHANDISE AUTHORIZATION FROM OUR CUSTOMER SERVICE DEPARTMENT (IN ORDER TO AVOID PROCESSING DELAYS).

FOR WARRANTY RETURNS, please have the following information available BEFORE contacting Barksdale:
1. P.O. number under which the product was PURCHASED.
2. Model number of the product under warranty.
3. Repair instructions and/or specific problems you are having with the product.
4. Application information.

FOR NON-WARRANTY REPAIRS OR CALIBRATION, consult Barksdale for current repair/calibration charges. Have the following information available BEFORE contacting Barksdale:
1. Your P.O. number to cover the COST of the repair/calibration.
2. Model number of product.
3. Repair instructions and/or specific problems you are having with the product.

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