

Introducing the TD1, 2, 3 Series Melt Pressure Transducers.



SERIES: TD1-Rigid Stem



SERIES: TD2-Stem/Flex



SERIES: TD3-Stem/Flex with Thermocouple

FEATURES

- Industry Standard Housing
- Standard 3.33mV/V , 6pin Bendix Connector
- 6" Stem (standard) , 18" Flex (standard) (TD2M)
- 0.5% Accuracy (standard for mercury fill)
- Ranges from 3000-20,000psi
- 750°F (400°C) Rating, Standard 15-5 SS Tip
- 572°F (300°C) Rating, Standard I5-5 SS Tip (Oil Fill)
- Thermocouple Type J (TD3M)
- 80% Output Calibration

TD1, TD2, TD3 OPTIONS

- Connectors : 8pin-Screw
- 12" Stem, 30" Flex
- Outputs : 4-20mA, 0-10VDC

SPECIFICATIONS

Mechanical

Ranges

3000, 5000, 7500

Standard Fill

10,000, 15,000, 20,000 psi

Accuracy

*Mercury (M), optional oil fill (O)

Repeatability

+/- 0.5% (mercury), 1.5% (oil) BFSL @ 25°C (77 °F)

Over Pressure Capability

+/-0.2% Of Full Scale

Mounting Torque

2x Full Scale or 35,000 psi whichever is less

150 Inch-lbs MIN 500 Inch-lbs MAX

Temperature Effects

Maximum Diaphragm Temp

750°F(400° C) Mercury Fill, [572° F (300° C) Oil Fill]

Zero/Span Shift (Diaphragm Temp Change)

Mercury Fill: 28 psi / 100° F (60 psi / 100° C) typical

Oil Fill: 70 psi / 100° F (150 psi / 100° C) typical

Maximum Housing Temp

185° F (85° C)

Zero/Span Shift (Electronics Temp Change)

0.03% F.S / ° C MAX

Electrical

Outputs

3.33 Mv/v (optional 4-20mA and 0-10 vdc)

Supply Voltage

10 vdc for Mv/v and 16-36 vdc for amplified units

Insulation Resistance

1000 megohms @50 vdc

Zero & Span (Trim pots)

± 15% (factory set)

Internal Shunt Calibration

80% ± 0.2% Of Full Scale

Update rate

< 25ms

*Mercury fill transducers must be disposed of properly as hazardous waste.

ORDERING

Series	Output	Pressure	Accuracy	Stem	Flex	Thread	Connector	Diaphragm
TD2M	3	5M	5	6	18	U	6B	T
TD1M= RIGID STEM	3= 3.33mV/V	M= PSI x1000	6= 1.5% (oil fill)	6= 6"	18= 18"	U= 1/2" x 20	6B= 6 PIN Bendix	T= 15-5 stainless steel
TD2M= STEM FLEX	4= 4-20mA	3M	5= 0.5%	12= 12"	30= 30"	M= M18 x 1.5	8T= 8 PIN Threaded	
TD3M= STEM FLEX T/C	1= 0-10VDC	5M						
TD1O= Rigid Stem (Oil Fill)		7.5M						
TD2O= Stem/Flex (Oil Fill)		10M						
TD3O= Stem/Flex w/TC (Oil Fill)		15M						
		20M						

*Contact factory for additional optional/custom modifications.

Specifications may change without notice. The information we supply is believed to be accurate and reliable as of this printing. However, we assume no responsibility for its use. While we provide application assistance personally, through our literature and the Transducers Direct web site, it is up to the customer to determine the suitability of the product in the application.

REV: 9.21

MECHANICAL INSTALLATION

1. MOUNTING HOLE

All holes must be concentric within 0.002"
AVAILABLE DRILL KITS : Page 4

2. PROTECTIVE CAP

Leave cap on until installation - FRAGILE tip

3. LUBRICATE THREADS with EITHER :

1. NEVERSEEZ by BOSTIK
2. C5A by FELRO
3. MOLYKOTE by DOW CORNING

4. CLEAN HOLE OF ALL PLASTIC MATERIALS

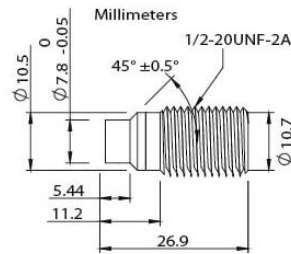
Any residue can damage tip on installation.
AVAILABLE CLEAN KITS : Page 4

5. TRANSDUCER HOUSING (Max Temp - 160°F)

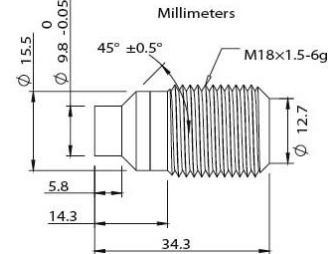
Install in low vibration area.

MOUNTING BRACKET: TDMP-MTG-BRACKET

1/2-20 UNF-2A (STANDARD)



M18 x 1.5



6. MOUNTING TORQUE

MIN 150inch-lbs MAX 500inch-lbs

Install finger tight then turn 1/4 TURN with wrench

ELECTRICAL INSTALLATION

1. WIRING DIAGRAM

Depending on connector below :

2. CABLE+GROUND (26AWG, 6WIRE, SHIELD)

Shield may have to be connected to ground in a high noise environment. Do not connect to meter.

3. ZERO ADJUSTMENT

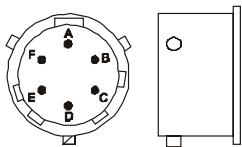
To compensate for pressure drift caused by temp changes.
At operating temperature with no pressure on transducer, adjust the pressure indicating device to read "0"

4. SPAN ADJUSTMENT

To calibrate readout device to transducer.
Press "CALIBRATE" and adjust reading to read 80% SPAN.

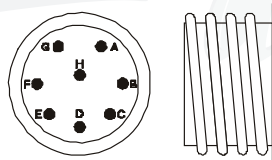
TRANSDUCER - 3.33 mV/V

6 PIN BAYONET



LEAD	COLOR	6 PIN
SIGNAL+	RED	A
SIGNAL-	BLACK	B
EXCITATION+	WHITE	C
EXCITATION-	GREEN	D
CALIBRATION	BLUE	E
CALIBRATION	ORANGE	F

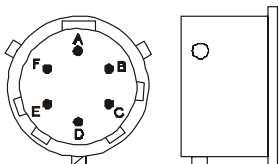
8 PIN SCREW



LEAD	COLOR	8 PIN
EXCITATION+	WHITE	A
SIGNAL+	RED	B
EXCITATION-	GREEN	C
SIGNAL-	BLACK	D
CALIBRATION	BLUE	E
CALIBRATION	ORANGE	F
NOT USED		G
NOT USED		H

TRANSDUCER - 3.33 mV/V

6 PIN BAYONET



4-20mA OUTPUT

LEAD	COLOR	6 PIN
SUPPLY/SIGNAL+	RED	A
SUPPLY/SIGNAL-	BLACK	B
N/A	WHITE	C
N/A	GREEN	D
CALIBRATION	BLUE	E
CALIBRATION	ORANGE	F

VOLTAGE OUTPUT 0-10VDC

LEAD	COLOR	6 PIN
SIGNAL+	RED	A
SIGNAL-	BLACK	B
EXCITATION+	WHITE	C
EXCITATION-	GREEN	D
CALIBRATION	BLUE	E
CALIBRATION	ORANGE	F

GENERAL OPERATIONAL GUIDES

1. START UP

Before starting the extruder drive, ensure that the extruder is at operational temperature and plastic at tip is molten. A cold start can literally rip off the fragile diaphragm.

2. REMOVAL

Only remove transducer when barrel is at operational temperature and zero pressure.

Always clean hole of all solids before re-installing.

Check hole dimensions with thread gauge of cleaning kit to ensure proper hole. Hole size at tip can reduce over time.

Always remove transducer before cleaning inside barrel with abrasive cleaner or wire brush.

3. CLEANING TIP

Clean tip lightly with a dry cloth while tip is still hot.

Do not use any sharp tools (screwdriver, chisel, knife, wire brush etc.)

TROUBLESHOOTING

1. Indicator Full Scale
2. Indicator Unstable Reading
3. Indicator Reads Only "0"

- #### 4. Indicates Wrong Pressure

Check Continuity Of Cables

Check Continuity Of Cables

Perform Calibration.

If Doesn't Change - Send Transducer In For Analysis

Perform Calibration

If Still Incorrect - Send Transducer In For Analysis

HOLE CLEANING KIT

TDMP-1-CLEANKIT

Kit is used to clean transducer hole before insertion to prevent diaphragm damage.



HOLE CUTTING KIT

TDMP-1-CUTTINGKIT

All the Drills, Reamers and Taps required to drill a proper hole for standard transducers (1/2-20UNF).

