

Introducing the TD11, 21, 31 Series Melt Pressure Transducers.



SERIES:TD21-Stem/Flex



SERIES:TD11-Rigid Stem



SERIES:TD31-Stem/Flex with Thermocouple

FEATURES

- Industry Standard Housing
- Standard 3.33mV/V , 6pin Connector
- 6"Stem (standard) , 18"Flex (standard) (TD21M)
- 0.5% combined error (standard for mercury fill)
- Ranges from 500-20,000psi
- 750°F (400°C) Rating, Standard 15-5 SS Tip
- 660°F (350°C) Rating, Standard I5-5 SS Tip (Oil Fill)
- Thermocouple Type J (TD31M)
- 80% Output Cal

TD11,TD21,TD31 OPTIONS

- Connectors : 8pin, 6pin-SCREW
- 12"Stem, 30"Flex (TD21M)
- Outputs : 4-20mA, 0-10VDC

SPECIFICATIONS

Mechanical Ranges

0-500, 750, 1000, 1500, 3000, 5000,
7500, 10,000, 15,000, 20,000 psi

Standard Fill Max Error

Mercury (M), optional oil fill (O)
+/- 0.5%

Repeatability

+/-0.2% Of Full Scale

Overload Capability

2x Full Scale

Mounting Torque

150 Inch-lbs MIN 500 Inch-lbs MAX

Temperature Effects

Maximum Diaphragm Temp

750°F(400° C), [660° F (350° C) Oil Fill]

Zero Shift Of Diaphragm

15 psi/100° F (38° C), [30 psi/100° F (38° C) Oil Fill]

Maximum Housing Temp

250° F (400° C)

Zero Shift Of Electronics

1% / 100° F

Electrical

Measuring Sensor

Output 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

Element Resistance

± 1% Of Full Scale

Zero & Span (Transmitter)

± 15%

Internal Shunt Calibration

80% ± 0.2% Of Full Scale

Zero Balance (Transducer)

± 5% Full Scale

Oil Fill Temperature Drift (thermal expansion)

Up to 125 psi @ 250° F (121° C), Up to 250 psi @ 500° F (260° C)

ORDERING

Series	Output	Pressure	Accuracy	Stem	Flex	Thread	Connector	Diaphragm
TD21M	3	5M	5	6	18	U	6B	T
TD11M=RIGID STEM	3= 3.33mV/V	M= PSI x1000	2= 0.25%	6= 6"	18= 18"	U= 1/2" x 20	6B= 6 PIN Bendix	T= 15-5 stainless steel
TD21M=STEM FLEX	4= 4-20mA	C= PSI x100	5= 0.5%	12= 12"	30= 30"	M= M18 x 1.5	6T= 6 PIN Threaded	
TD31M=STEM FLEX T/C	1= 0-10VDC	5C					8T= 8 PIN Threaded	
TD11O= Rigid Stem (Oil Fill)		7.5C					8C=8 PIN Threaded (Barber Colman)	
TD21O= Stem/Flex (Oil Fill)		1M						
TD31O= Stem/Flex w/TC (Oil Fill)		1.5M						
		3M						
		5M						
		7.5M						
		10M						
		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: 8.10

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

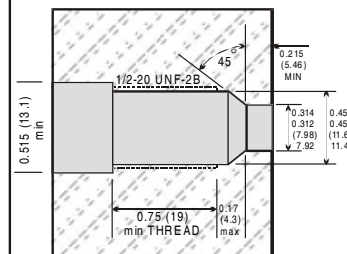
Any residue can damage tip on installation.
AVAILABLE CLEAN KITS : Page 4

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

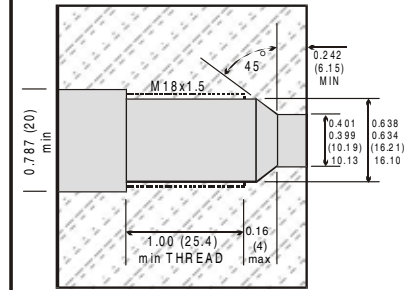
Install in low vibration area.

MOUNTING BRACKET: TDMP-MTG-BRACKET

1/2-20 UNF-2B (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"

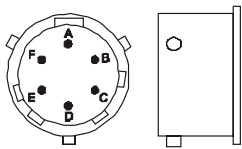
4. SPAN ADJUSTMENT

To calibrate readout device to transducer.

Press "CALIBRATE" and adjust reading to read 80% SPAN.

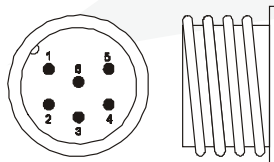
TRANSDUCER - 3.33 mV/V

6 PIN BAYONET



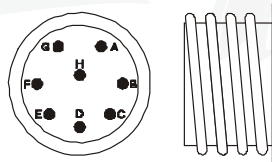
LEAD	COLOR	6 PIN
SIGNAL+	RED	A
SIGNAL-	BLACK	B
EXCITATION+	WHITE	C
EXCITATION-	GREEN	D
CALIBRATION	BLUE	E
CALIBRATION	ORANGE	F

6 PIN SCREW



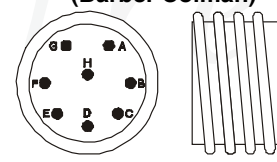
LEAD	COLOR	6 PIN
SIGNAL +	RED	1
SIGNAL -	BLACK	2
EXCITATION -	GREEN	3
EXCITATION +	WHITE	4
CALIBRATION	BLUE	5
CALIBRATION	ORANGE	6

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

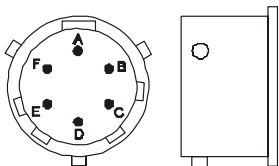
8 PIN SCREW (Barber Colman)



LEAD	COLOR	8 PIN
EXCITATION+	WHITE	A
SIGNAL+	RED	B
SIGNAL-	BLACK	C
EXCITATION-	GREEN	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

Check Continuity Of Cables

2. Indicator Unstable Reading

Check Continuity Of Cables

3. Indicator Reads Only "0"

Perform Calibration.

If Doesn't Change - Send Instrument In For Analysis

4. Indicates Wrong Pressure

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).

