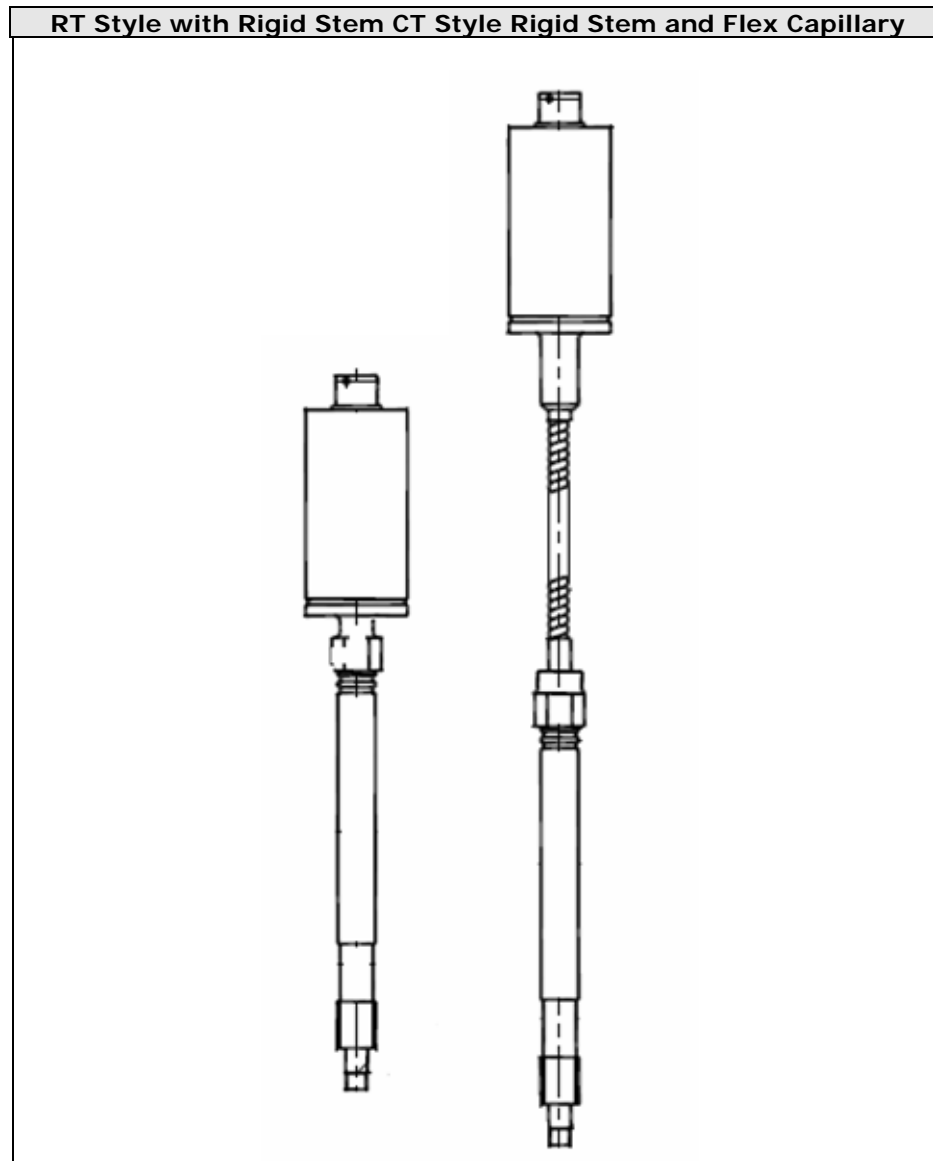


**Melt Pressure Transducer  
Models RT & CT  
with mV/Volt output designation.  
Installation & Operating Manual Version 1.00**





### Before Proceeding

Check to insure that the model number of the ONEhalf20 Melt Pressure Transducer is suitable for your application. ONEhalf20 Melt Pressure Transducers are available in two (2) unique designs. The RT style (first 2 letters of the model number) is a rigid stem only version of the Melt Pressure Transducer, or the CT style which also has a rigid stem but additionally incorporates 18" of flexible capillary for optimum thermal isolation. The next designation is a numeric number indicating the rigid stem length in inches. This is followed by the output designation:

"S" (3.33 mV/Volt), "R" (2.5 mV/Volt), or "Q" (2.0 mV/Volt)

This is then followed by the pressure range designation i.e. (-10M = 0-10,000 psi).

If you are unsure please consult [www.onehalf20.com](http://www.onehalf20.com).

### Quality & Conformity

Your ONEhalf20 Melt Pressure Transducer comes complete with a certificate of quality and conformity. This certificate includes detailed information regarding the specific accuracy, non-linearity, hysteresis, and repeatability of your Melt Pressure Transducer. Please refer to this certificate for detailed product information. Your

ONEhalf20 Melt Pressure Transducer is fully compatible with all Melt Pressure Transducers incorporating the Bendix bayonet style 6 pin or screw type 8 pin connector. Also included is a Transducer Care Guide. Please refer to this information to insure that your ONEhalf20 Melt Pressure Transducer provides years of reliable trouble free service.

### Operating Principle

ONEhalf20 Melt Pressure Transducers (output designation "S", R, or Q) are used to make pressure measurements of molten polymers up to 750 degrees F (400C).

These Melt Pressure Transducers incorporate a four-arm, 350-Ohm, bonded foil Wheatstone bridge strain gage. The transducer is designed to provide an output which is proportional to the melt pressure. These models include an internal shunt calibration feature ("R-Cal") that is used to simulate a signal of 80% of full scale output. This eliminates the need for a calibrated pressure source when scaling associated instrumentation.

### Installation

Do not remove protective cap covering transducer threads until ready to install. Prior to initial installation, verify correct machining of the 1/2-20UNF mounting hole.

Detailed mounting hole information is available at [www.onehalf20.com](http://www.onehalf20.com) (under the technical section). When reinstalling make sure that the mounting hole is clear of material. A ONEhalf20 Cleaning Tool Kit, (CLEANKIT-1/2-20), should be used.

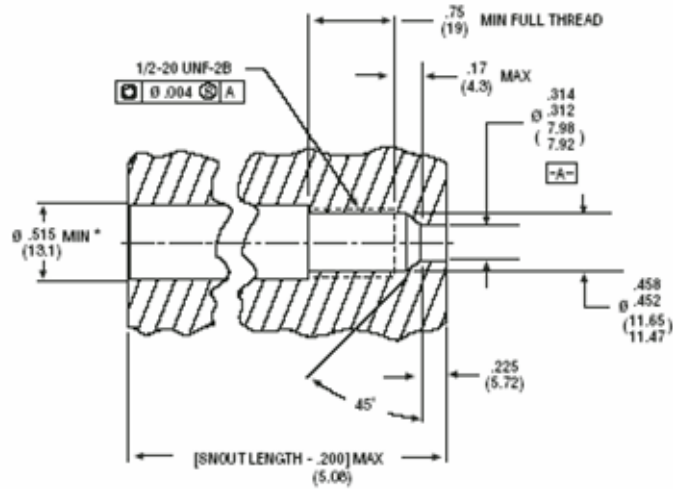
To prevent galling, lightly coat transducer threads with a high temperature anti-seize material. An adequate seal, in a properly machined and maintained mounting well, is obtained with 100 in-lbs (8.3 ft-lbs) mounting torque. Maximum recommended torque is 500 in-lbs (41.6 ft-lbs). The electronics housing should be secured, in an area where the ambient temperature will not exceed 160 F (70C).

[www.onehalf20.com](http://www.onehalf20.com)

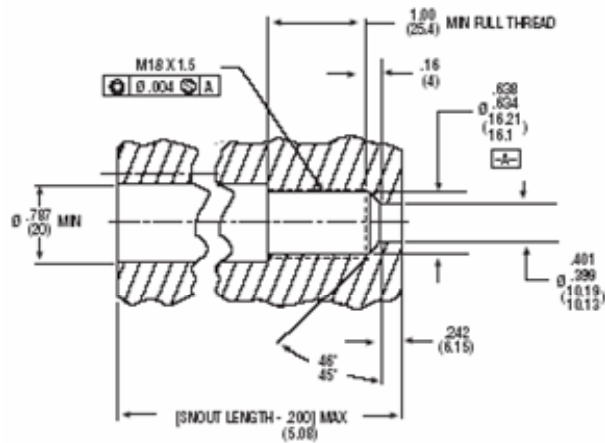
Tel: (416) 781-1881

Fax: (416) 781-0940

**Mounting Hole (1/2-20 UNF 2B)**



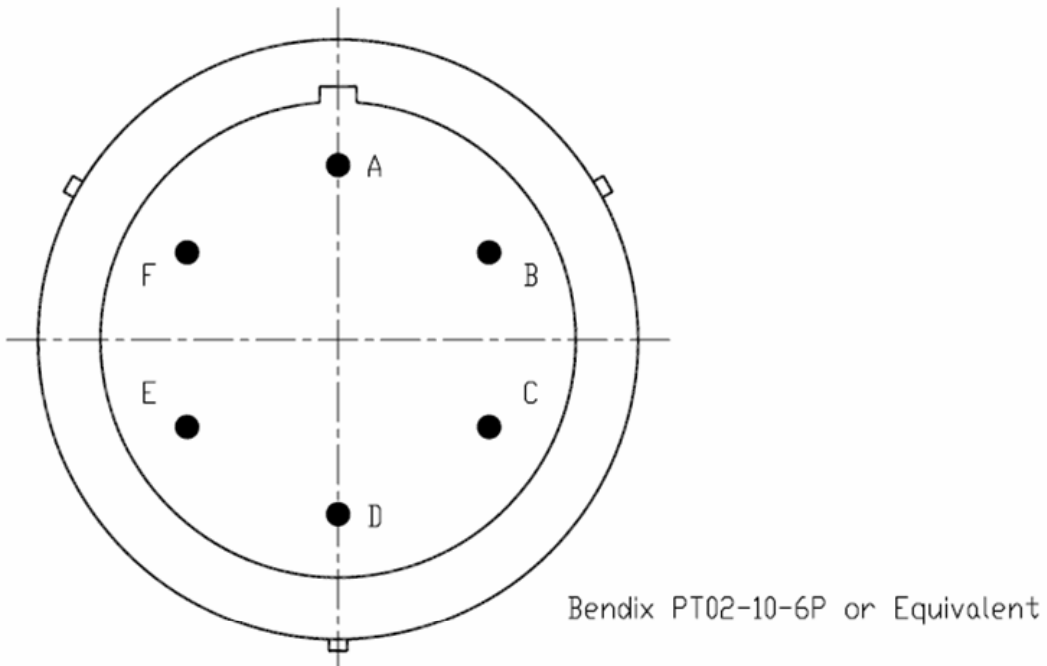
**Mounting Hole (M18 X 1.5)**



**Wiring**

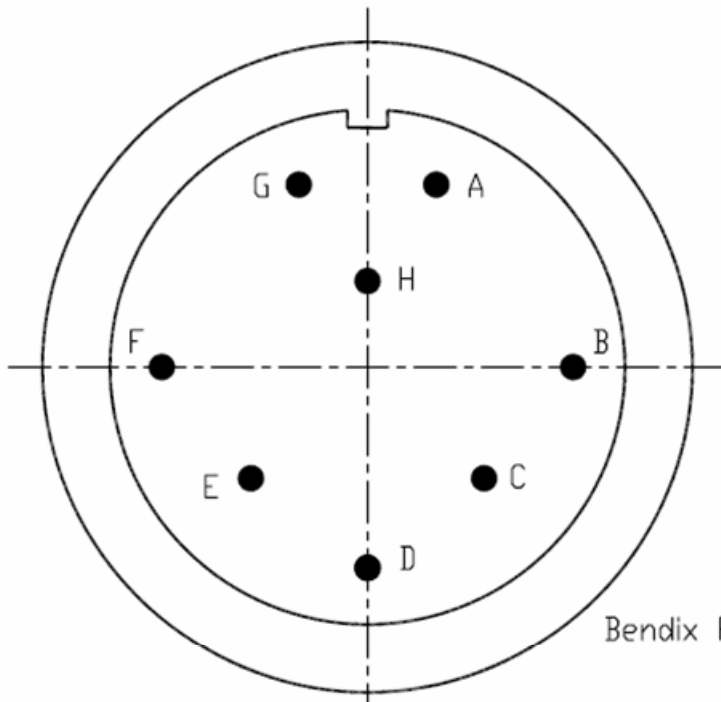
The standard electrical termination on this series is a 6-pin connector, Bendix PT02A-10-6P (or equivalent). A mating plug, Bendix PT06A-10-6S (SR) (or equivalent), is required or can be part of the appropriate ONEhalf20 cable assembly. Some units may incorporate the optional 8 pin screw type connector. Connector wiring details are as below. Models with output designation "S" provide an output of 3.33 mV/Volt, to a maximum of 33.3 mV. The recommended excitation voltage for ONEhalf20 Melt Pressure Transducers is 10Vdc.

**6 Pin Connector Details**



	mV/Volt Output (Excitation-10Vdc)
Pin A/Red	Signal(+)
Pin B/Black	Signal(-)
Pin C/White	Excitation(+)
Pin D/Green	Excitation(-)
Pin E/Blue	Calibration 1
Pin F/Orange	Calibration 2

**8 Pin Connector Details**



Bendix PC02E-12-8P or Equivalent

	mV/Volt Output (Excitation-10Vdc)
Pin A/Red	Signal(+)
Pin B/Black	Signal(-)
Pin C/White	Excitation(+)
Pin D/Green	Excitation(-)
Pin E/Blue	Calibration 1
Pin F/Orange	Calibration 2
Pin G	No Connection
Pin H	No Connection



### Start-Up

Bring system to operating temperature and, with no pressure at the diaphragm of the transducer, follow the instructions on your indicator to adjust the ZERO point. Next, short the leads from the "R-Cal", pins E and F, and adjust the indicator until the output is 80% of full scale. Allow sufficient "soak time" to assure that any material at the transducer tip is molten before extruder drive is started.

### Removal

Transducer should only be removed when polymer is hot and liquid. Wipe tip with a soft cloth immediately. The melt pressure transducer must be removed before using an abrasive material or wire brush to clean the extruder barrel. Clean mounting hole completely before reinstalling transducer by using the ONEhalf20 Cleaning Tool Kit, (CLEANKIT-1/2-20).

### Thermocouple Option

ONEhalf20 Melt Pressure Transducers might also incorporate a thermocouple in the rigid stem (designation -TCJ or -TCK). The standard (-TCJ), Type J (iron-constantan) T/C junction is located just behind the flush diaphragm at the tip of the transducer.

This senses the temperature at that point.

For thermocouple replacement please contact ONEhalf20.

### Transducer Repair

Questions concerning warranty, repair cost, delivery, and requests for an RMA# should be directed to the ONEhalf20 Service Department, (416)-781-1881 or by email: [service@onehalf20.com](mailto:service@onehalf20.com). Please call for a return authorization number (RMA#) before returning any product. Damaged transducers should be returned to:

**ONEhalf20 Inc.**  
**Attn: Service Department**  
**RMA# \_\_\_\_\_**  
**352 Bedford Park Avenue**  
**Toronto, Ontario M5M 1J8**  
**Canada**

[www.onehalf20.com](http://www.onehalf20.com)

Tel: (416) 781-1881

Fax: (416) 781-0940