

## INTRODUCTION

The Dynisco PT449 Injection Molding Pressure Transducers are mounted into mold cavities, runner or nozzles in the injection-molding environment designed to make direct pressure measurements. All units will operate up to 750°F (400°C) and 20,000 psi. These models incorporate a 350-ohm, bonded foil strain gage Wheatstone Bridge. This proven technology provides an output of 1.5 to 1.6 mV/V full scale, proportional to melt pressure (within the specified error band).

Each transducer includes an internal shunt calibration ("R-Cal") function that is used to simulate a signal of 80% full scale. This eliminates the need for cumbersome calibrated pressure source when scaling associated instrumentation.

## MOUNTING HOLE PREPARATION

There are two suggested mounting techniques: a compression mounting with a backing sleeve and a mounting with a free turning captivated nut. The mounting nut method is preferred so that preload forces can be maintained by controlled torquing of the nut (50 lb-in; 50 kg-cm). Convenient transducer withdrawal is completed by backing it out with the insertion/removal tool (P/N 449910, 3" long; or 449911, 12" long). Transducer removal without the use of the mounting nut requires a jacking tool machined to the illustrated dimensions.

Mount sensitive surface in locations of low shear rate. However, if it is not possible, then it is advised that it be recessed below the surface flow. This will help guard the sensitive surface against the abrasive effects of high shear rate across its delicate surface.

The plane of the sensitive must be parallel to the plane of the parting line so that the part is drawn away from it during ejection. Avoid mounting the sensitive surface perpendicular to the plane of the surface, otherwise discontinuities on the surface will be dragged across and possibly damage it.

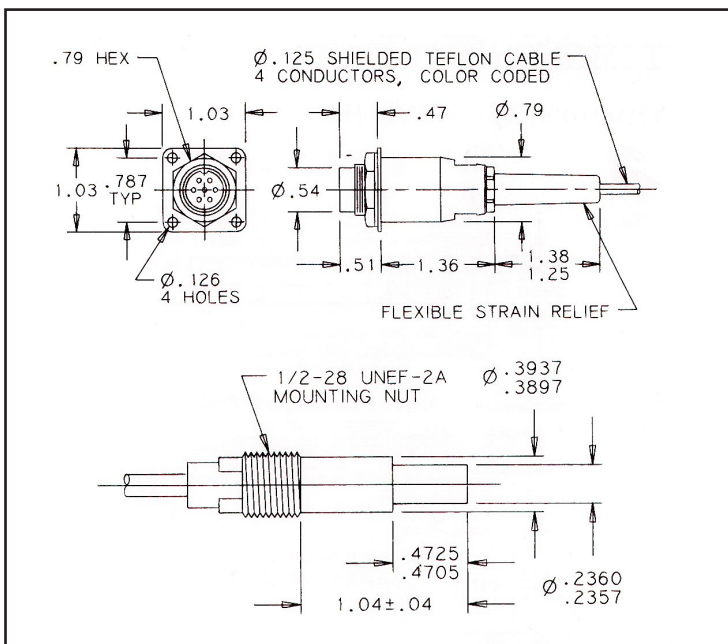


FIGURE 1: PT449 Dimensional Drawing

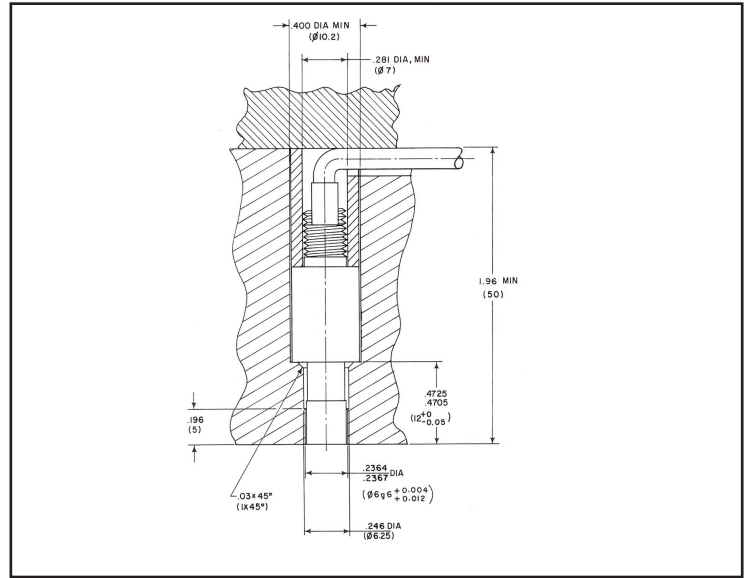


FIGURE 2: Compression Sleeve Mounting Diagram

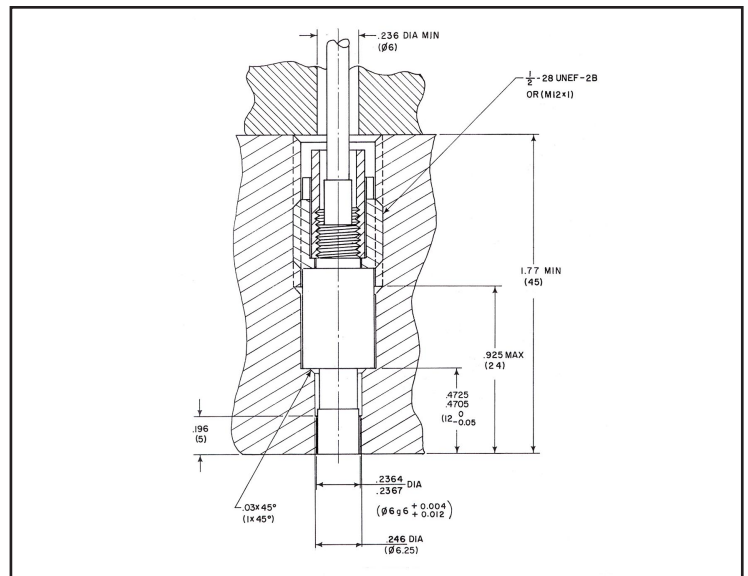


FIGURE 3: Free Turning Captive Nut Mounting Diagram

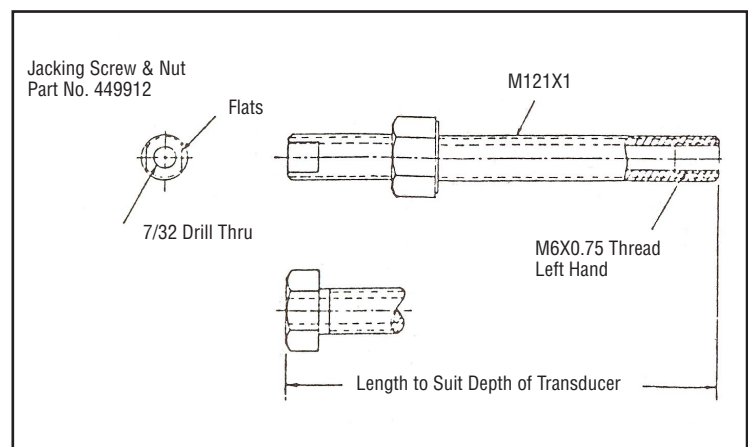


FIGURE 4: Jacking Screw & Nut Drawing

## WIRING

The PT449 transducers are provided with an 80% internal resistance calibration. After nulling the zero, short terminals E and F to provide a signal equivalent to 80% full scale. Mating DIN connector (P/N 712000) is supplied with the PT449.

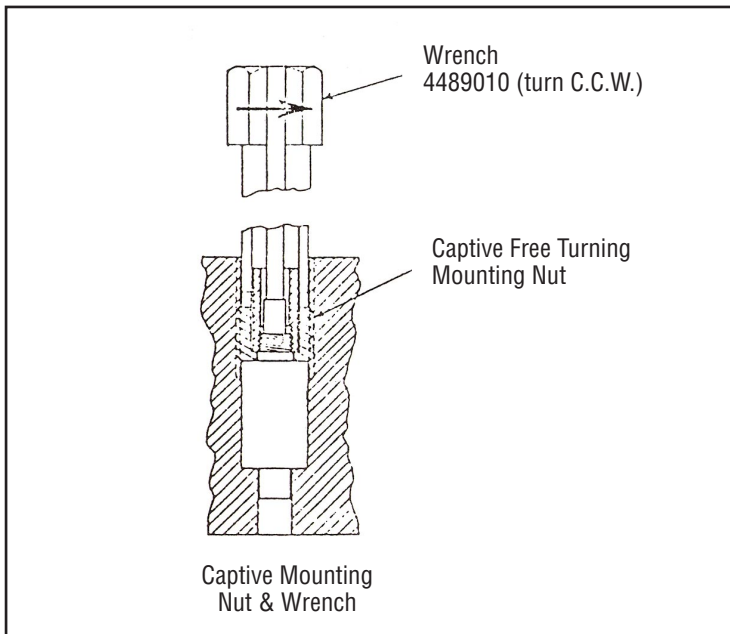
Mount the connector in a temperature stable area away from heated surfaces above 125°F.

FUNCTION	PT449
Excitation +	1 (White, C)
Excitation -	2 (Green, D)
Signal +	3 (Red, A)
Signal -	4 (Black, B)
Internal Cal Resistor	5 (Orange, F)
	6 (Blue, E)

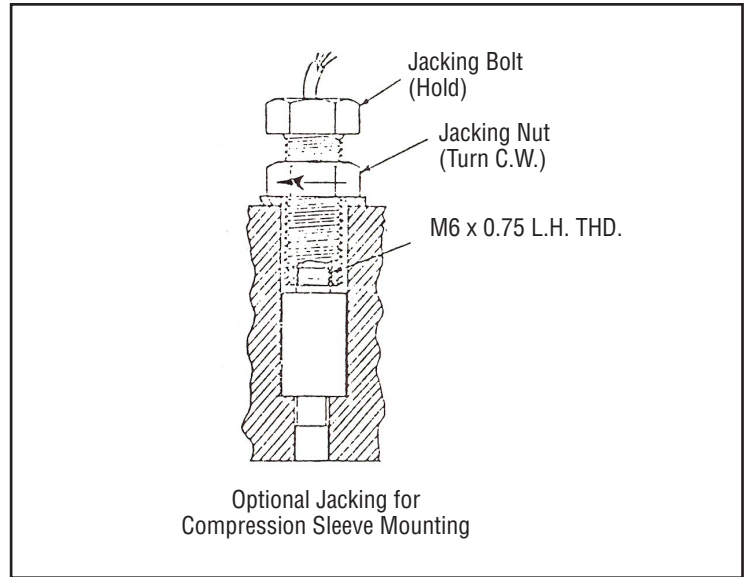
## TRANSDUCER REMOVAL

Convenient transducer withdrawal is completed by backing it out with the insertion/removal tool (P/N 449910, 3" long; or 449911, 12" long). Transducer removal without the use of the mounting nut requires a jacking tool machined to the illustrated dimensions.

Note: DO NOT ATTEMPT TO REMOVE THE TRANSDUCER BY PULLING ON THE CABLE, DRIVING, OR HAMMERING THE SENSITIVE SURFACE. CERTAIN DESTRUCTION OF THE TRANSDUCER WILL RESULT. USE THE TOOLS DESCRIBED AND ILLUSTRATED ABOVE.



**FIGURE 5:** Transducer Removal Using the Captive Mounting Nut & Wrench



**FIGURE 5:** Transducer Removal Using the Optional Jacking for Compression Sleeve Mounting

## TRANSDUCER REPAIR

Questions concerning warranty, repair cost, delivery, and requests for a RA# should be directed to the Dynisco Repair Department, 508-541-9400 or email: [repair@dynisco.com](mailto:repair@dynisco.com). Please call for a return authorization number (RA#) before returning any product. Damaged transducers should be returned to:

Dynisco, LLC  
Repair Department RA#  
38 Forge Parkway, Franklin, MA 02038

## TECHNICAL ASSISTANCE

Please call 800-221-2201 or 508-541-9400 or fax 508-541-9436.

## WARRANTY

Go to [www.dynisco.com](http://www.dynisco.com) and click on "Warranty" at the bottom of any page for complete details.



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