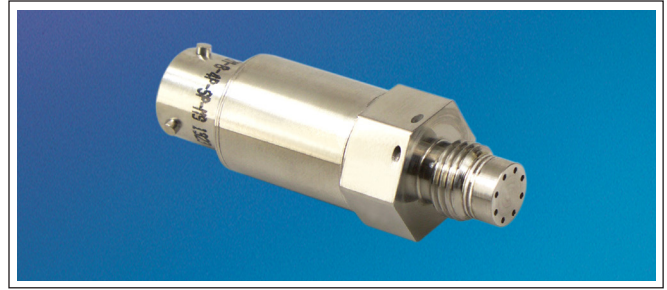




## 5 VDC OUTPUT PRESSURE TRANSDUCER

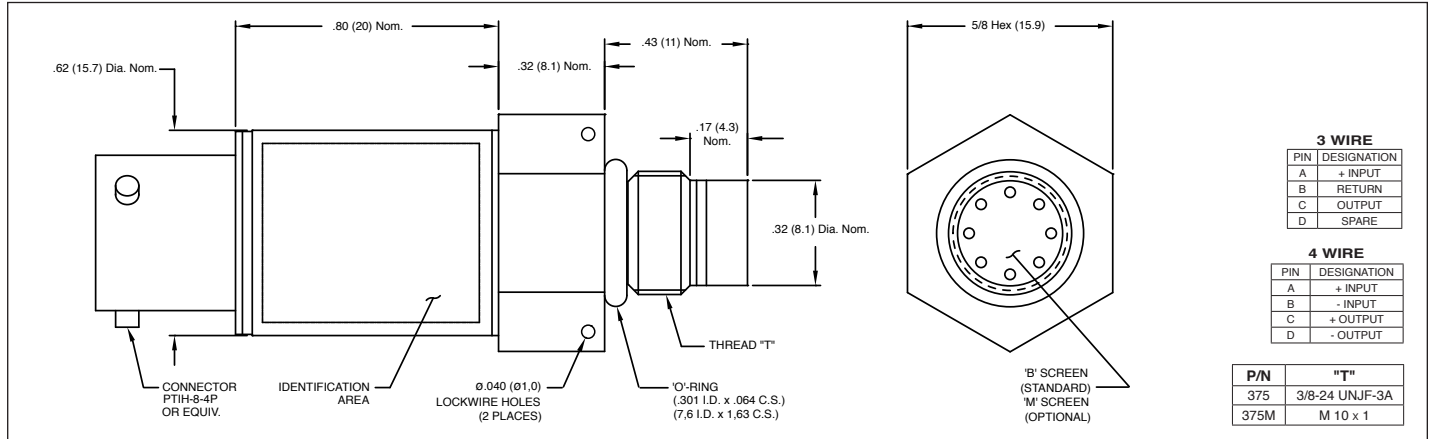
### ETL-375 (M) CO SERIES

- 5 VDC Output
- Hybrid Microelectronic Regulator-Amplifier
- Patented Leadless Technology **VIS**<sup>®</sup>
- All Welded Construction
- Secondary Containment On Absolute And Sealed Gage Units
- Aerospace Quality Components
- 3/8-24 UNJF or M10 X 1 Thread
- 4 Wire (ETL-375) 3 Wire (ETL-300-375)



ETL-375(M) CO Series transducers are miniature, threaded instruments. The sensing sub-assembly is protected from mechanical damage by a solid screen which has been shown to have minimal influence on the frequency response of the sensor. The ETL Series uses Kulite's Patented Leadless Technology.

Incorporation of a Kulite proprietary electronics module within the main body of this product allows for operation from an unregulated power supply ranging from 12 ± 4VDC or 28 ± 4VDC with reverse polarity protection available upon request.



|                               |   |   |                                   |                      |                      |                                   |                      |                      |                      |  |
|-------------------------------|---|---|-----------------------------------|----------------------|----------------------|-----------------------------------|----------------------|----------------------|----------------------|--|
| <b>INPUT</b>                  | Pressure Range  | 1.7<br>25   | 3.5<br>50                         | 7<br>100             | 17<br>250            | 35<br>500                         | 70<br>1000           | 170<br>2500          | 350 BAR<br>5000 PSI  |  |
|                               | Operational Mode  | Absolute, Sealed Gage   |                                   |                      |                      |                                   |                      |                      |                      |  |
|                               | Over Pressure   | 2 Times Rated Pressure to 1000 PSI (70 BAR) 1.5 Times Rated Pressure Above 1000 PSI to a Max. of 6000 PSI (420 BAR) |                                   |                      |                      |                                   |                      |                      |                      |  |
|                               | Burst Pressure  | 3 Times Rated Pressure to a Max. of 10000 PSI (700 BAR)   |                                   |                      |                      |                                   |                      |                      |                      |  |
|                               | Pressure Media  | All Nonconductive, Noncorrosive Liquids or Gases (Most Conductive Liquids and Gases - Please Consult Factory)       |                                   |                      |                      |                                   |                      |                      |                      |  |
|                               | Maximum Electrical Current                              | 25 mA   |                                   |                      |                      |                                   |                      |                      |                      |  |
|                               | Rated Electrical Excitation                             | 8 - 16 VDC  |                                   |                      |                      |                                   | 13 - 32 VDC          |                      |                      |  |
| <b>OUTPUT</b>                 | Full Scale Reading                                      | 5 VDC ± 150 mV  |                                   |                      |                      | 5 VDC ± 150 mV or 10 VDC ± 300 mV |                      |                      |                      |  |
|                               | Output Impedance  | 200 Ohms (Max.)   |                                   |                      |                      |                                   |                      |                      |                      |  |
|                               | Bandwidth (-3dB)  | DC to 5 KHz   |                                   |                      |                      |                                   |                      |                      |                      |  |
|                               | Residual Unbalance                                      | 0 to 100 mV (ETL-375)   |                                   |                      |                      | 200 mV ± 50 mV (ETL-300-375)      |                      |                      |                      |  |
|                               | Combined Non-Linearity, Hysteresis and Repeatability    | ± 0.1% FSO BFSL (Typ.), ± 0.5% FSO (Max.)   |                                   |                      |                      |                                   |                      |                      |                      |  |
|                               | Resolution  | Infinitesimal   |                                   |                      |                      |                                   |                      |                      |                      |  |
|                               | Natural Frequency of Sensor Without Screen (KHz) (Typ.) | Greater Than 400 KHz  |                                   |                      |                      |                                   |                      |                      |                      |  |
|                               | Acceleration Sensitivity % FS/g Perpendicular           | 1.9x10 <sup>-3</sup>  | 1.0x10 <sup>-3</sup>              | 5.2x10 <sup>-4</sup> | 2.2x10 <sup>-4</sup> | 1.1x10 <sup>-4</sup>              | 6.2x10 <sup>-5</sup> | 2.6x10 <sup>-5</sup> | 1.5x10 <sup>-5</sup> |  |
|                               | Insulation Resistance                                   | 100 Megohm Min. @ 50 VDC  |                                   |                      |                      |                                   |                      |                      |                      |  |
|                               | <b>ENVIRONMENTAL</b>                                    | Operating Temperature Range   | -65°F to +250°F (-55°C to +120°C) |                      |                      |                                   |                      |                      |                      |  |
| Compensated Temperature Range |   | 0°F to +212°F (-18°C to +100°C) Other Ranges Quoted on Request  |                                   |                      |                      |                                   |                      |                      |                      |  |
| Thermal Zero Shift            |   | ± 1% FS/100° F (Typ.)   |                                   |                      |                      |                                   |                      |                      |                      |  |
| Thermal Sensitivity Shift     |   | ± 1% /100° F (Typ.)   |                                   |                      |                      |                                   |                      |                      |                      |  |
| Linear Vibration              |   | 100g Peak, Sine up to 5000 Hz   |                                   |                      |                      |                                   |                      |                      |                      |  |
| Mechanical Shock              | 100g half Sine Wave 11 msec. Duration                   |   |                                   |                      |                      |                                   |                      |                      |                      |  |
| <b>PHYSICAL</b>               | Electrical Connection                                   | PTIH-8-4P or Equivalent (Mating Connector Available Upon Request)   |                                   |                      |                      |                                   |                      |                      |                      |  |
|                               | Weight  | 24.5 Grams (Max.) Excluding Cable   |                                   |                      |                      |                                   |                      |                      |                      |  |
|                               | Pressure Sensing Principle                              | Fully Active Four Arm Wheatstone Bridge Dielectrically Isolated Silicon on Silicon Patented Leadless Technology     |                                   |                      |                      |                                   |                      |                      |                      |  |
| Mounting Torque               | 80 Inch-Pounds (Max.)                                   |   |                                   |                      |                      |                                   |                      |                      |                      |  |

Note: Custom pressure ranges, accuracies and mechanical configurations available. Dimensions are in inches. Dimensions in parenthesis are in millimeters. All dimensions nominal. Continuous development and refinement of our products may result in specification changes without notice. Copyright © 2020 Kulite Semiconductor Products, Inc. All Rights Reserved. Kulite miniature pressure transducers are intended for use in test and research and development programs and are not necessarily designed to be used in production applications. For products designed to be used in production programs, please consult the factory.