



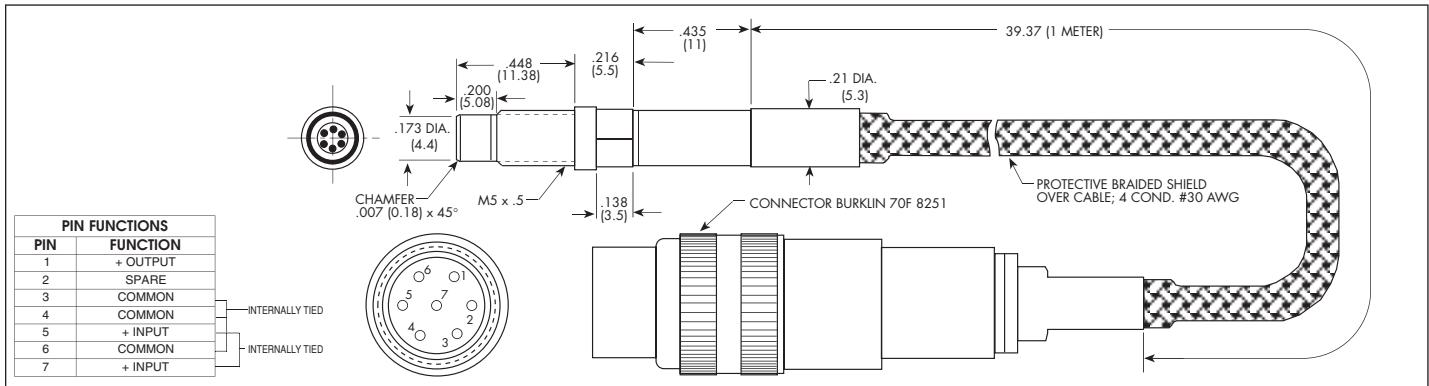
# MINIATURE RUGGEDIZED AUTOMOTIVE 5VDC OUTPUT IS® PRESSURE TRANSDUCER

## ETL-CS-190 (M) SERIES

- Robust Construction
- High Temperature
- Acceleration & Vibration Insensitive
- High Bandwidth Amplifier (150 KHz)
- Patented Leadless Technology
- In Cylinder Pressure Measurement
- Dynamic and Static Capability
- Excellent Long Term Stability
- Coupled with High Accuracy



The ETL-CS-190 is a high temperature extremely rugged transducer ideal for combustion measurement in engine environments. It uses a patented acceleration insensitive leadless sensing element that is more than 100 times less sensitive to vibration than other Kulite transducers. The front of the transducer can withstand temperatures of 900°F (482°C) while the in-line amplifier can be placed in a cooler area. The amplifier is a special high frequency amplifier that allows the transducer to be used up to 150KHz.



<b>INPUT</b>	
Pressure Range	150 250 BAR 2175 3625 PSI
Operational Mode	Absolute, Sealed Gage
Over Pressure	2 Times Rated Pressure
Burst Pressure	3 Times Rated Pressure
Pressure Media	Any Media Compatible With 15-5 PH Stainless Steel and SiO <sub>2</sub>
Rated Electrical Excitation	12 ± 4 VDC or 28 ± 4 VDC
Maximum Electrical Current	25 mA
<b>OUTPUT</b>	
Output Impedance	200 Ohms (Typ.)
Full Scale Output (FSO)	5V ± 3%
Bandwidth (-3dB)	DC to 150 KHz
Combined Non-Linearity, Hysteresis and Repeatability	± 0.1% FSO BFSL (Typ.) ± 0.5% FSO (Max.)
Residual Unbalance	± 500mV ± 1%
Resolution	Infinitesimal
Natural Frequency (KHz) (Typ.)	Greater than 1000 KHz
Insulation Resistance	100 Megohm Min. at 50 VDC
Response Time	<1 millisecc
<b>ENVIRONMENTAL</b>	
Operating Temperature Range	-4° F to +900° F (- 20° C to 482° C) (Front End) -4° F to +185° F (- 20° C to 85° C) (Connector + Compensation Module)
Compensated Temperature Range	+68° F to +840° F (+20° C to 450° C)
Thermal Zero Shift	± 1.5% FS/100° C (Typ.)
Thermal Sensitivity Shift	± 1.5% FS/100° C (Typ.)
Linear Vibration	50g Peak, Sine 10 to 2000 Hz
Humidity	100% Relative Humidity
Mechanical Shock	100g half Sine Wave 1 msec. Duration
<b>PHYSICAL</b>	
Electrical Connection	Burklin 70F 8251 Connector (Mating Connector Supplied)
Weight	10 Grams (Nom.) Excluding Cable and Connector
Sensing Principle	Fully Active Four Arm Wheatstone Bridge Dielectrically Isolated Silicon on Silicon Patented Leadless Technology
Mounting Torque	15 Inch-Pounds (Max.) 1.7 N-m

Note: Custom pressure ranges, accuracies and mechanical configurations available. Dimensions are in inches. Dimensions in parenthesis are in millimeters. Continuous development and refinement of our products may result in specification changes without notice - all dimensions nominal. (B)

Yorkinstrument <http://www.yorkinstrument.com> Beijing,0086-10-51668884 fax:0086-10-68454556 Shanghai, 0086-21-62809809 fax:0086-21-62806262