

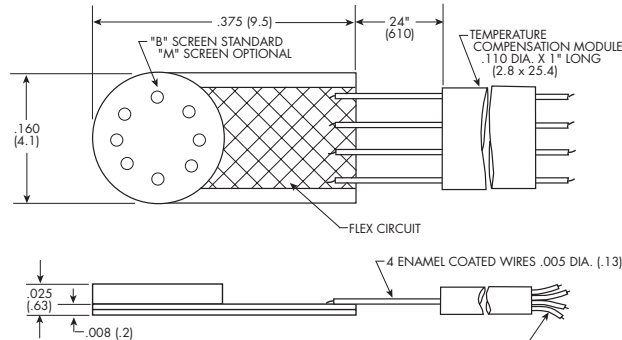
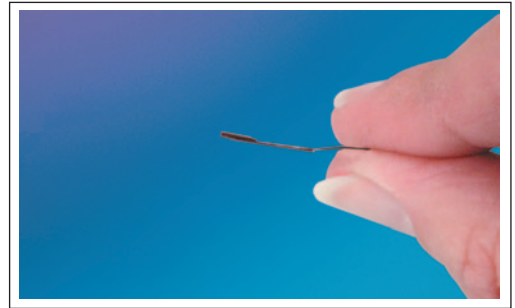


MICROLINE STRESS ISOLATED SURFACE MOUNT IS[®] PRESSURE TRANSDUCER

LQ-47 SERIES LE-47 SERIES

- Designed For Direct Blade Surface Mounting
- Small Size To Maintain Blade Profile
- High G Loading
- Low Base Strain Sensitivity
- High Natural Frequency
- High Temperature Operation Up To 450°F (LE Series)

The LQ/LE-47 Series microline pressure transducer represents the latest build standard in a long line of sensors designed and developed for direct mounting onto engine blades. Using a unique isolation technique to reduce base strain sensitivity effects, the LQ/LE-47 Series are the smallest, lightest units yet developed. With a maximum height of less than 0.025 inch, these units may be mounted in locations on the blade previously inaccessible with a packing density previously impossible.



| WIRING | |
|--------|-------------|
| COLOR | DESIGNATION |
| RED | + INPUT |
| BLACK | - INPUT |
| GREEN | + OUTPUT |
| WHITE | - OUTPUT |

CONSULT FACTORY FOR SPECS. ON SEALED GAGE

| INPUT Pressure Range | 0.35 5 | 0.7 10 | 1.7 25 | 3.5 50 | 7 100 | 17 250 | 35 BAR 500 PSI |
|--|--|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| Operational Mode | Absolute, Sealed Gage | | | | | | |
| Over Pressure | 2 Times Rated Pressure With No Change in Calibration | | | | | | |
| Burst Pressure | 3 Times Rated Pressure | | | | | | |
| Pressure Media | All Nonconductive, Noncorrosive Liquids or Gases | | | | | | |
| Rated Electrical Excitation | 10 VDC/AC | | | | | | |
| Maximum Electrical Excitation | 15 VDC/AC | | | | | | |
| Input Impedance | 1000 Ohms (Min.) | | | | | | |
| OUTPUT Output Impedance | 1000 Ohms (Nom.) | | | | | | |
| Full Scale Output (FSO) | 100 mV (Nom.) | | | | | | |
| Residual Unbalance | ± 5 mV (Typ.) | | | | | | |
| Combined Non-Linearity, Hysteresis and Repeatability | ± 0.1% FSO BFSL (Typ.), ± 0.5% FSO (Max.) | | | | | | |
| Resolution | Infinitesimal | | | | | | |
| Natural Frequency (KHz) (Typ.) | 150 | 175 | 240 | 300 | 380 | 550 | 700 |
| Acceleration Sensitivity % FS/g Perpendicular | 1.5x10 ⁻³ | 1.0x10 ⁻³ | 5.0x10 ⁻⁴ | 3.0x10 ⁻⁴ | 1.5x10 ⁻⁴ | 1.0x10 ⁻⁴ | 6.0x10 ⁻⁵ |
| Transverse | 2.2x10 ⁻⁴ | 1.4x10 ⁻⁴ | 6.0x10 ⁻⁵ | 4.0x10 ⁻⁵ | 2.0x10 ⁻⁵ | 9.0x10 ⁻⁶ | 6.0x10 ⁻⁶ |
| Base Strain Sensitivity | Less Than 5% FSO for 1000 Microstrain | | | | | | |
| Insulation Resistance | 100 Megohm Min. @ 50 VDC | | | | | | |
| ENVIRONMENTAL Operating Temperature Range | LQ SERIES -65°F to +250°F (-55°C to +120°C) LE SERIES -65°F to +450°F (-55°C to +235°C) | | | | | | |
| Compensated Temperature Range | LQ SERIES +80°F to +180°F (+25°C to +80°C) LE SERIES +80°F to +450°F (+25°C to +235°C) | | | | | | |
| Thermal Zero Shift | ± 2.0% FS/100°F (Typ.) | | | | | | |
| Thermal Sensitivity Shift | ± 2.0% /100°F (Typ.) | | | | | | |
| Steady Acceleration | 80,000g. (Max.) | | | | | | |
| Linear Vibration | 10-20,000 Hz Sine, 100g. (Max.) | | | | | | |
| PHYSICAL Electrical Connection | (Before Module) 4 x .005 Enamel Coated Wires 24" Long / 36 AWG 12" Long (After Module) | | | | | | |
| Weight | .1 Gram (Nom.) Excluding Module and Leads | | | | | | |
| Pressure Sensing Principle | Fully Active Four Arm Wheatstone Bridge Dielectrically Isolated Silicon on Silicon | | | | | | |

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. (G)

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