

DATA SHEET

High Temperature Gas Turbine Accelerometer

Model 6240M4/5/6X



01 Description

The MEGGITT Model 6240MXX Accelerometer is designed to operate with long mean time between failure (MTBF) in harsh gas turbine environments. The various model numbers are shown in the table. The model numbers have unique cable lengths and connectors. The accelerometers are rated to 900°F and have an output sensitivity of 50 pC/g.

This series of accelerometers have model numbers of 6240M4X, 6240M5X and 6240M6X.

The device is hermetically sealed against environmental contamination and is constructed of welded stainless steel. It is electrically case isolated with the crystal element isolated from the case and produces a differential output through a mil-std connector.

02 Key features and benefits

- Rugged hermetic design
- Balanced differential output
- Ground Isolated
- Various cable lengths and connectors

03 Applications

- Gas-turbine monitoring

04 Contact

1-833-HITEMP1
TMCSR.MSSOC@meggitt.com

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HIGH TEMPERATURE GAS TURBINE ACCELEROMETER, Model 6240M4/5/6 X

05 Specifications

The following performance specifications are typical values, referenced at +75°F (+24°C) unless otherwise noted.

| Dynamic Characteristics | | Units | |
|--------------------------------------|--|--------------|---|
| Charge sensitivity | | pC/g | 50 ±5% |
| Resonance frequency | | kHz | 15 |
| Frequency Response | | % | ±5% from 20 Hz -350 Hz |
| Charge Temperature Response | | % | ±10% from 80°F (27°C) to 900°F (482°C) |
| Transverse sensitivity (maximum) | | % | 5 |
| Amplitude linearity to 100 g | | % | 1 |
| Electrical characteristics | | | |
| Output polarity | | | Acceleration directed into base of unit produces positive output |
| Resistance (between pins) | | GΩ | >1 |
| At 900°F (482°C) | | KΩ | 10 |
| Isolation (between pins) | | | |
| Over temperature range | | MΩ | 100 |
| Capacitance (maximum) | | pF | 3000 |
| Environmental characteristics | | | |
| Temperature Range | | | |
| Accelerometer | | °F(°C) | -65 to 900 (-54 to 482), extreme to 930 (499) |
| Connector | | °F(°C) | -65 to 500 (-54 to 260) |
| Humidity | | | Hermetically sealed |
| Sinusoidal vibration limit | | gpk | 200 |
| Shock limit | | gpk | 1000 |
| Physical characteristics | | | |
| Dimensions | | | See outline detail |
| Case Material | | | Inconel 600 |
| Hardline cable | | | Twisted pair, mineral oxide insulation, metal sheath with SST overbraid (.250 ø). See Model number table for length |
| Connector | | | See Model number table for connector type and keyway |
| Calibrations Supplied | | | |
| Charge sensitivity | | pC/g | |
| Frequency response | | % | |
| Resistance | | Ω | |
| Capacitance | | pF | |
| Cable Pull | | | Tested at 50 pounds |

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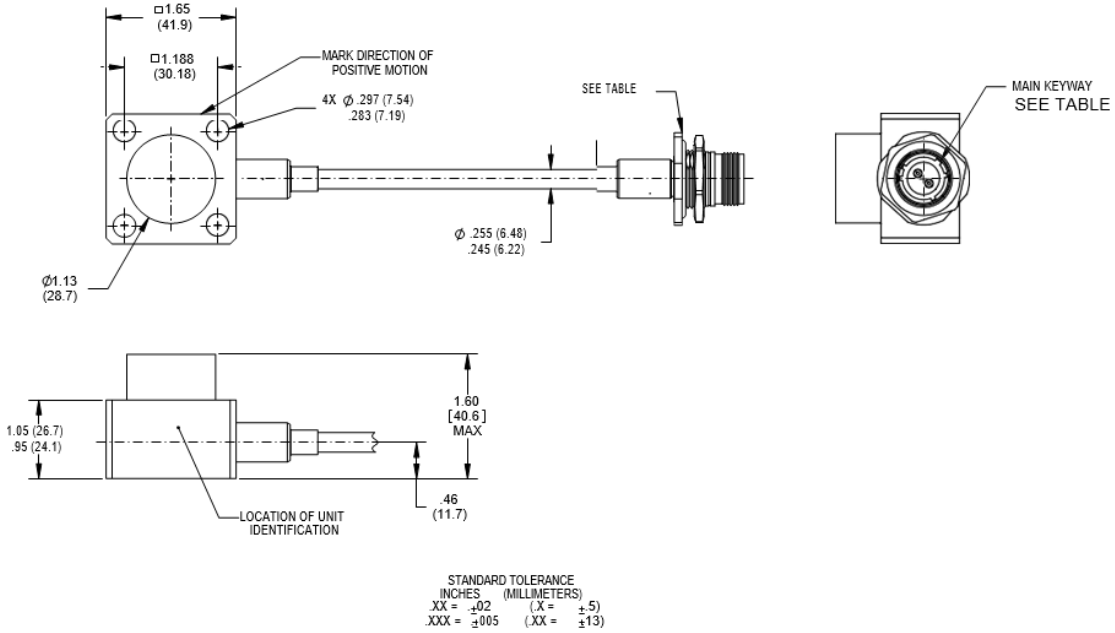
Various Options (Model Number Table)

| MODEL | TEMP | SENSITIVITY | FREQ RESP (+5%) | CABLE LENGTH (in) | WEIGHT (lbs) | CONNECTOR (mates to) |
|---------|-------|-------------|-----------------|-------------------|--------------|----------------------|
| 6240M4 | 900°F | 50pC/g | 20Hz to 350Hz | 84.5/83.5 | 1.404 | MS3106R-10SL-4P |
| 6240M43 | 900°F | 50pC/g | 20Hz to 350Hz | 82/80 | 1.39 | M83723/89Y 1020-6 |
| 6240M45 | 900°F | 50pC/g | 20Hz to 350Hz | 54/52 | 1.199 | M83723/89Y 1020-6 |
| 6240M46 | 900°F | 50pC/g | 20Hz to 350Hz | 28/24 | 1.025 | M83723/89Y 1020-N |
| 6240M49 | 900°F | 50pC/g | 20Hz to 350Hz | 40/39 | 1.11 | M83723/89Y 1020-6 |
| 6240M50 | 900°F | 50pC/g | 20hz to 350Hz | 62/60 | 1.25 | M83723/89Y 1020-N |
| 6240M51 | 900°F | 50pC/g | 20Hz to 350Hz | 84.5/83.5 | 1.404 | MS3106R-10SL-4P |
| 6240M52 | 900°F | 50pC/g | 20Hz to 350Hz | NA | 0.85 | MS3106R-10SL-4P |
| 6240M56 | 900°F | 50pC/g | 20Hz to 350Hz | 49/47 | 1.17 | M83723/89Y 1020-N |
| 6240M57 | 900°F | 50pC/g | 20Hz to 350Hz | 62/60 | 1.25 | M83723/89Y 1020-6 |
| 6240M58 | 900°F | 50pC/g | 20Hz to 350Hz | 50/48 | 1.18 | M83723/89Y 1020-6 |
| 6240M60 | 900°F | 50pC/g | 20Hz to 350Hz | 56/54 | 1.21 | M83723/89Y 1020-N |

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06 Outline details



Note:



Continued product improvement necessitates that MEGGITT reserve the right to modify these specifications without notice. MEGGITT maintains a program of constant surveillance over all products to ensure a high level of reliability. This program includes attention to reliability factors during product design, support of stringent Quality Control requirements, and compulsory corrective action procedures. 032624

Note: Due to continuous process improvement, specifications are subject to change without notice. TCO Review #333