

CMSS 2100T

General purpose industrial accelerometer with temperature sensor

The CMSS 2100T is a dual output sensor ideal for applications where both vibration and surface temperature measurements are required. It is suitable for use on industrial rotating machinery such as pumps, fans, motors, gearboxes, paper machines, etc. It is compatible with SKF Microlog, SKF Multilog devices (WMx, DMx, IMx) and SKF Machine Condition Transmitters (MCT). The CMSS 2100T is not compatible with SKF Local Monitoring Unit (LMU) or SKF Condition Monitoring Unit (CMU).

Features

- Economical, top exit design
- Rugged, corrosion resistant, and hermetically-sealed
- Case isolation
- ESD protection
- Reverse wiring protection
- Temperature output

Specifications

Dynamic

- Sensitivity: 100 mV/g
- Sensitivity precision: $\pm 5\%$ at 25 °C (77 °F)
- Acceleration range: 60 g peak
- Amplitude linearity: 1%
- Frequency range:
 - $\pm 5\%$; 3.0 to 5 000 Hz
 - $\pm 10\%$; 1.0 to 7 000 Hz
 - ± 3 dB; 0.5 to 12 000 Hz
- Resonance frequency: Mounted, nominal 30 kHz
- Transverse sensitivity: $\leq 5\%$ of axial
- Temperature response:
 - -50 °C (-58 °F); -10%
 - +120 °C (+248 °F); +6%



- Temperature output sensitivity:
 - ± 1.5 °C; 10 mV/°C
 - +120 °C (+248 °F); +6%
- Temperature measurement range: 2 °C to 120 °C (36 °F to 248 °F)

Electrical

- Power requirements:
 - Voltage source: 18 to 30 V DC
 - Constant current diode: 2 to 10 mA dc
- Electrical noise:
 - Broadband: 2.5 Hz to 25 kHz; 700 μ g
 - Spectral: 10 Hz; 10 μ g/ $\sqrt{\text{Hz}}$
100 Hz; 5 μ g/ $\sqrt{\text{Hz}}$
1 000 Hz; 5 μ g/ $\sqrt{\text{Hz}}$
- Output impedance: < 100 Ω
- Bias output voltage: 10 V DC
- Grounding: Case isolated, internally shielded



Specifications (continued)

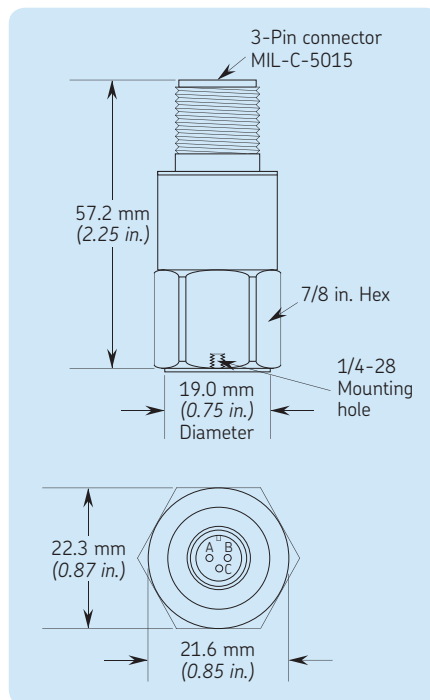
Environmental

- Temperature range: -50 to $+120$ °C (-58 to $+248$ °F), operating temperature
- Vibration limits: 500 g peak
- Shock limit, minimum: 5 000 g peak
- Electromagnetic sensitivity, equivalent g, maximum: 70 μ g/gauss
- Sealing: Hermetic
- Base strain sensitivity: 0.0002 g/ μ strain
- Certification: CE

Physical

- Dimensions: See drawing
- Weight: 90 gms
- Case material: 316L stainless steel
- Mounting: Internal 1/4-28 thread
Mounting studs provided:
 - One (1) 1/4-28 to 1/4-28 english thread
 - One (1) M8 x 1.25 metric thread
- Mounting torque: 2,9 N-m (24 in-lbs)
- Connectors:
 - Shell: Ground
 - Pin A: Accelerometer signal/power
 - Pin B: Accelerometer and temperature signal common
 - Pin C: Temperature sensor signal
- Mating connector: 3-pin, Mil-C-5015 style or equivalent
- Recommended cable: Three conductor shielded twisted pair, teflon jacket, 30 pF/m (100 pF/ft)

Diagram



Ordering information

- **CMSS 2100T** General purpose industrial accelerometer with internal temperature sensor, top exit MIL-C-5015 three (3) pin connector.
 - 1/4-28 and M8 mounting studs provided. Calibration sensitivity is provided on each accelerometer package with nominal sensitivity etched on each unit.

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