

Accelerometers with extended temperature range

CMSS 2106

Superior accelerometer, straight exit

The CMSS 2106 accelerometer is a multi-purpose sensor with an elevated temperature resistance to extend life and performance in applications that are known to provide a challenging hot environment. The sensor is most commonly deployed in the following industries:

- Pulp and Paper – dryer sections
- Mineral Processing – ovens and kilns
- Metalworking – hot rolling mills

Features

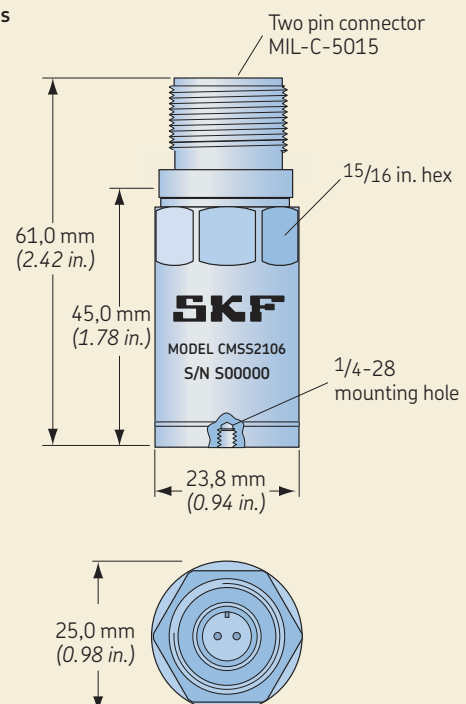
- Optimal for use with SKF on-line system IMx-S and all portable data collection instruments
- Rugged, economical and all around high temperature, general purpose sensor for up to 150 °C (300 °F) operating temperature
- 100 mV/g sensitivity to optimize use in multiple applications
- Exceptional bias voltage (BV) stability at elevated temperatures
- Designed for exceptional low noise level over a wide temperature range
- Meets stringent CE, EMC requirements
- Two mounting studs (1/4-28 and M8 × 1,25) provided
- Corrosion resistant and hermetically sealed for installation in high humidity areas
- Reverse polarity wiring protection

Recommended connector/cable assembly

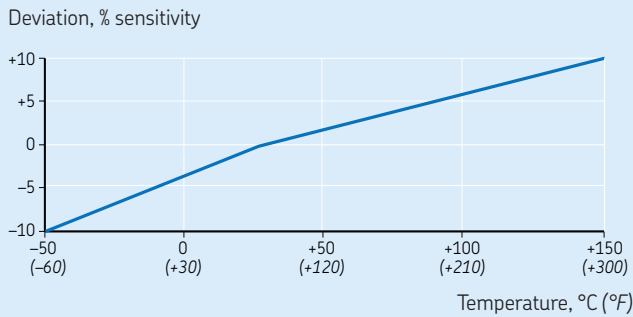
- CMSS 932 series



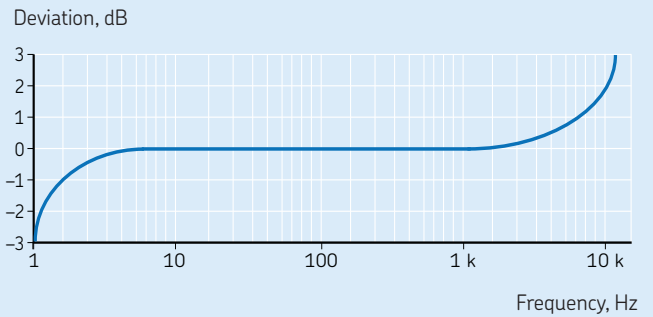
Dimensions



Typical temperature response



Typical frequency response



Specifications

Specifications conform to ISA-RP-37.2 (1-64) and are typical values referenced at 24 °C (75 °F), 24 V DC supply, 4 mA constant current and 100 Hz.

Dynamic

- Sensitivity: 100 mV/g
- Sensitivity precision: $\pm 10\%$ at -50 to $+150$ °C (-60 to $+300$ °F)
- Acceleration range: 50 g peak
- Amplitude linearity: 1%
- Frequency range:
 - $\pm 5\%$: 4,0 to 4 000 Hz
 - $\pm 10\%$: 3,0 to 6 000 Hz
 - ± 3 dB: 1,0 to 10 000 Hz
- Resonance frequency, mounted, nominal: 20 kHz
- Transverse sensitivity: $\leq 5\%$ of axial
- Temperature response: See graph

Electrical

- Power requirements:
 - Voltage source: 24 V DC nominal, 18 to 30 V DC
 - Constant current diode: 2 to 4 mA, recommended 4 mA
- Electrical noise:
 - 2,0 Hz: 30 $\mu\text{g}/\sqrt{\text{Hz}}$
- Output impedance: $< 100 \Omega$
- Bias output voltage:
 - 12 V DC at 25 °C (75 °F)
 - 11 V DC at 150 °C (300 °F)
- Grounding: Case isolated, internally shielded

Environmental

- Temperature range: -50 to $+150$ °C (-60 to $+300$ °F) operating temperature
- Vibration limit: 500 g peak
- Shock limit: 2 500 g peak
- Electromagnetic sensitivity, equivalent g, maximum: 15 $\mu\text{g}/\text{gauss}$
- Sealing: Hermetic
- Base strain sensitivity: 500 $\mu\text{g}/\mu\text{strain}$
- CE: According to the generic immunity standard for Industrial Environment EN 50082-2
 - Acceptance criteria: The generated “false equivalent g level” under the above test conditions should be less than 2 mg measured peak to peak

Physical

- Dimensions: See drawing
- Weight: 135 g (4.8 oz.)
- Case material: 316L stainless steel
- Mounting:
 - Internal 1/4-28 thread
 - M8 $\times$ 1,25 and 1/4-28 to 1/4-28 mounting studs provided
- Mounting torque: 2,9 Nm (24 in. lbs.)
- Connections:
 - Pin A: Signal/Power
 - Pin B: Common
- Mating connector: CMSS 932-68LC or CMSS 932-68TL, two pin, IP 68, locking collar or twist lock
- Recommended cable: CMSS 932-SY-XXM and CMSS 932-DY-XXM, two conductor, twisted pair, single or double shielded, yellow

Ordering information

CMSS 2106 Superior accelerometer, straight exit with MIL-C-5015 two pin connector.

- 1/4-28 and M8 mounting studs provided. Calibration sensitivity is provided for each accelerometer package with nominal sensitivity etched on each unit.