

CMSS 2100

Standard Industrial Acceleration Sensor ...



... Incorporating the latest in technology to meet demanding CE, EMC, and low noise level requirements.

Using detailed knowledge acquired from many years of supplying high quality sensors to a broad spectrum of industry users, SKF Condition Monitoring offers rugged accelerometers designed for the Pulp and Paper, Petrochemical, Steel, Mining and Construction, Metal Working, and Machine Tool Industries.

FEATURES

- **For use with the SKF Local Monitoring Unit (LMU's) On-Line Systems, Protection Systems and the ever versatile Portable Data Collection Instruments.**
- **Rugged, economical, and all around general purpose sensor.**
- **Sensitivity, 100 mV/g to optimize use in multiple applications.**
- **Exceptional bias voltage (BV) stability at elevated temperatures.**
- **Designed for exceptional low noise level for low frequencies at elevated temperatures.**
- **Meets stringent CE, EMC requirements.**
- **Smaller profile industrial accelerometers.**
- **Two (2) mounting studs (1/4-28 and M8 x 1.25) provided.**
- **Corrosion resistant and hermetically sealed for installation in high humidity areas.**
- **Reverse polarity wiring protection.**

SPECIFICATIONS

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

DYNAMIC

Sensitivity: 100 mV/g

Sensitivity Precision: $\pm 5\%$ at +77°F (+25°C)

Acceleration Range: 80 g Peak

Amplitude Linearity: $\leq 1\%$, up to full scale

Frequency Range: $\pm 5\%$; 3.0 Hz to 5,000 Hz

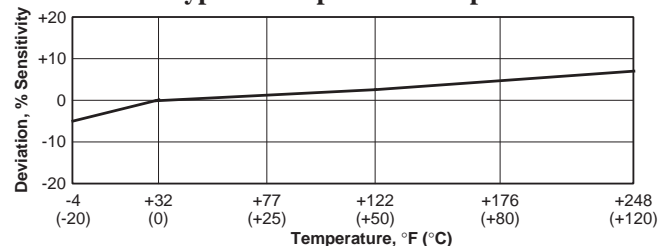
$\pm 10\%$; 1.0 Hz to 9,000 Hz

± 3 dB; 0.5 Hz to 14,000 Hz

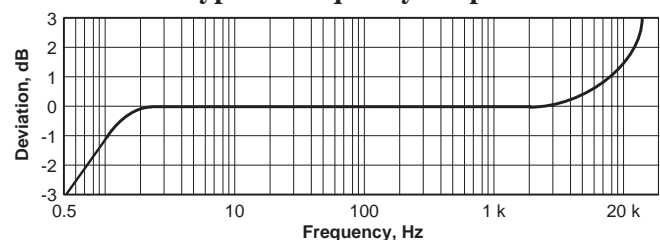
Resonance Frequency: Mounted, nominal 30 kHz

Transverse Sensitivity: $\leq 5\%$ of axial

Typical Temperature Response



Typical Frequency Response



CMSS 2100 Standard Industrial Acceleration Sensor

SPECIFICATIONS (continued)

ELECTRICAL

Power Requirements:

Voltage Source: +24 Vdc Nominal, +18 Vdc to +30 Vdc

Constant Current Diode: 2 to 10 mA dc, recommended 4 mA

Electrical Noise: 2.0 Hz; 20 µg/√Hz

Output Impedance: < 100 Ohms

Voltage Bias: 12 Vdc

Grounding: Case isolated, internal shielding

ENVIRONMENTAL

Temperature Range: -58°F to +248°F (-50°C to +120°C), operating temperature

Vibration Limits: 500 g peak

Shock Limit: 5,000 g peak

Electromagnetic Sensitivity, Equivalent g: 70 µg/Gauss

Sealing: Hermetic

Base Strain Sensitivity: 200 µg/microstrain

CE: According to the Generic immunity standard for Industrial Environment EN50082-2.

Acceptance Criteria: The generated "false equivalent g level" under the above test conditions should be less than 2 milli g peak to peak.

PHYSICAL

Dimensions: See drawing

Weight: ≈ 3.17 oz. (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 and one (1) M8 x 1.25 Metric thread.

Mounting Torque: 24 in-lbs (2,9 N-m)

Connector:

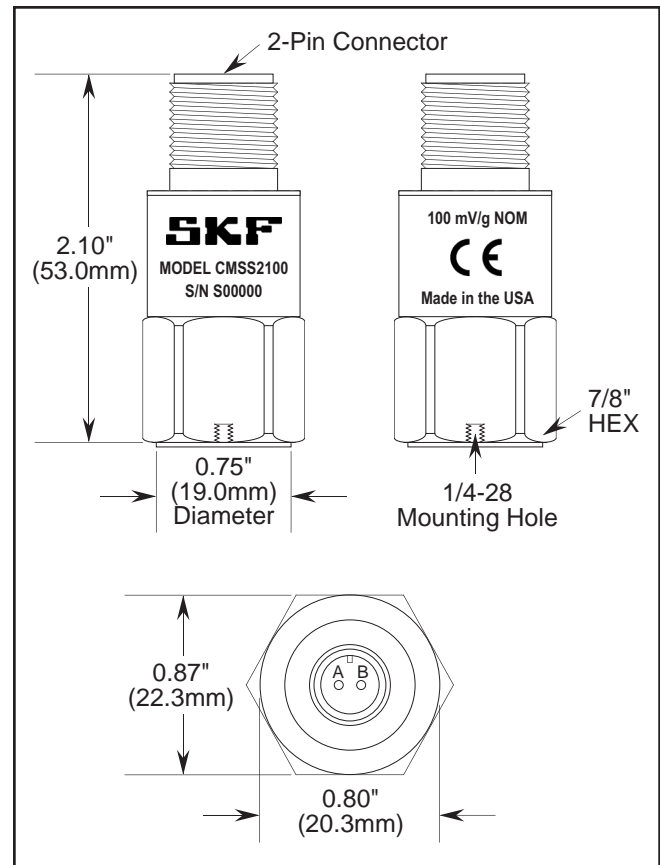
Pin A: Signal/Power (White Wire)

Pin B: Common (Black Wire)

Mating Connector: CMSS 3106F-10SL-4S or equivalent

Recommended Cable: Two conductor shielded, teflon jacket, 30 pF/ft (100 pF/m)

DIAGRAMS



ORDERING INFORMATION

CMSS 2100 General Purpose Industrial Standard Acceleration Sensor with top exit C5015 two (2) 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.

SKF Reliability Systems

4141 Ruffin Road

San Diego, California 92123 USA

Telephone: (+1) 858-496-3400

FAX: (+1) 858-496-3531

Web Site: www.skfreliability.com



SKF Reliability
Systems –
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ISO 14001 Certified

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