

# CMSS 2100



## General Purpose Industrial Accelerometer

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

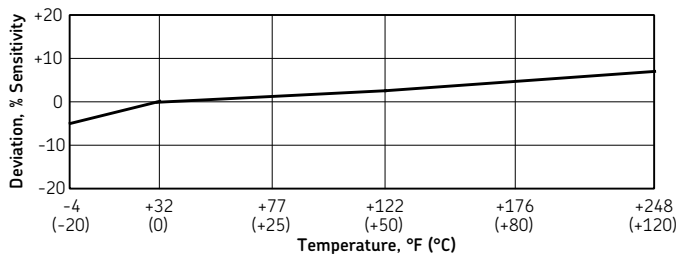
Using detailed knowledge acquired from many years of supplying high quality sensors to a broad spectrum of industry users, SKF Condition Monitoring offers rugged accelerometers designed for the Pulp and Paper, Petrochemical, Steel, Mining and Construction, Metal Working, and Machine Tool Industries.

### Features

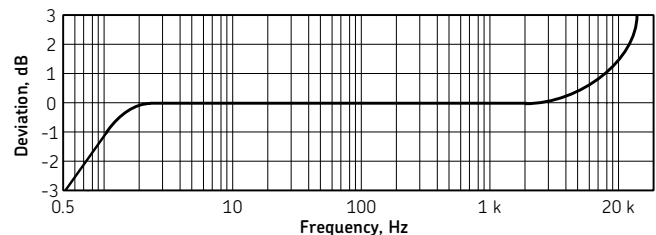
- For use with the SKF Junction Boxes, On-line Systems, Protection Systems and the versatile Portable Data Collection instruments.
- Rugged, economical, and all around general purpose sensor.
- Sensitivity, 100 mV/g to optimize use in multiple applications.
- Exceptional bias voltage (BV) stability at elevated temperatures.
- Designed for exceptional low noise level for low 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 humidity areas.
- Reverse polarity wiring protection.



Typical Temperature Response



Typical Frequency Response



# CMSS 2200/CMSS 2200-M8



## General Purpose Low Profile Industrial Accelerometer

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

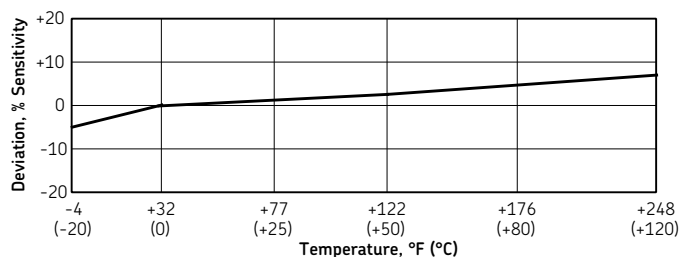
Using detailed knowledge acquired from many years of supplying high quality sensors to a broad spectrum of industry users, SKF Condition Monitoring offers rugged accelerometers designed for the Pulp and Paper, Petrochemical, Steel, Mining and Construction, Metal Working, and Machine Tool Industries.

### Features

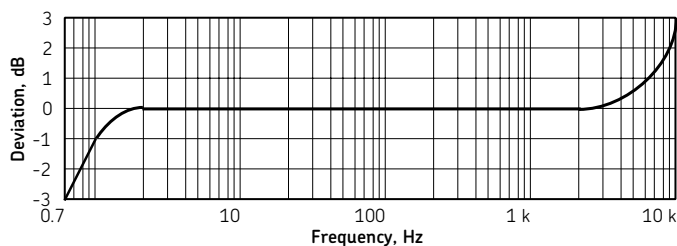
- For use with the SKF Junction Boxes, On-line Systems, Protection Systems and the versatile Portable Data Collection Instruments.
- Rugged, economical, and all around general purpose sensor.
- Sensitivity, 100 mV/g to optimize use in multiple applications.
- Exceptional bias voltage (BV) stability at elevated temperatures.
- Designed for exceptional low noise level for low frequencies at elevated temperatures.
- Meets stringent CE, EMC requirements.
- Low profile for side industrial accelerometer with captive mounting bolts (1/4-28, M6 x 1.00 or M8 x 1.25) provided.
- Corrosion resistant and hermetically sealed.
- Reverse polarity wiring protection.



Typical Temperature Response



Typical Frequency Response



# CMSS 2100 General Purpose Industrial Accelerometer

## Specifications

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

### DYNAMIC

**Sensitivity:** 100 mV/g

**Sensitivity Precision:** ± 5% at +25 °C (+77 °F)

**Acceleration Range:** 80 g Peak

**Amplitude Linearity:** ≤ 1%, up to full scale

**Frequency Range:** ± 5%; 3.0 Hz to 5,000 Hz

± 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:** ≤ 5% of axial

### 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; 20µg/√Hz

**Output Impedance:** < 100 Ohms

**Voltage Bias:** 12 Vdc

**Grounding:** Case isolated, internal shielding

### ENVIRONMENTAL

**Temperature Range:** -50 °C to +120 °C (-58 °F to +248 °F), 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:** 90 gms (= 3.17 oz.)

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

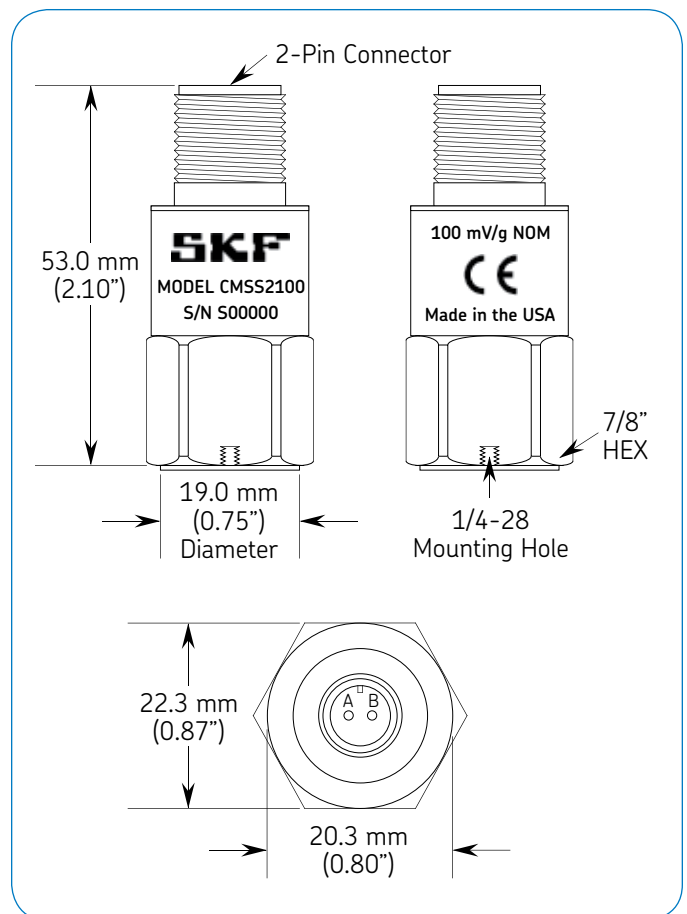
**Connector:** *Pin A:* Signal/Power (White Wire)

*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 Accelerometer with top exit MIL-C-5015 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.

# CMSS 2200/CMSS 2200-M8 General Purpose Low Profile Industrial Accelerometer

## Specifications

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

### DYNAMIC

**Sensitivity:** 100 mV/g

**Sensitivity Precision:** ± 10% at +25 °C (+77 °F)

**Acceleration Range:** 80 g peak

**Amplitude Linearity:** 1%

**Frequency Range:** ± 10%; 1.0 Hz to 5,000 Hz  
± 3 dB; 0.7 Hz to 10,000 Hz

**Resonance Frequency:** Mounted, minimum 22 kHz

**Transverse Sensitivity:** ≤ 5% of axial

### ELECTRICAL

#### Power Requirements:

*Voltage Source:* +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:** -50 °C to +120 °C (-58 °F to +248 °F) 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:** 145 gms (≈ 5.10 oz.)

**Case Material:** 316L stainless steel

**Mounting:** Captive mounting bolts provided. One (1) 1/4-28 English thread and one (1) M6 x 1.00 Metric thread.

**Mounting Torque:** 30 in-lbs, 3,4 N-m

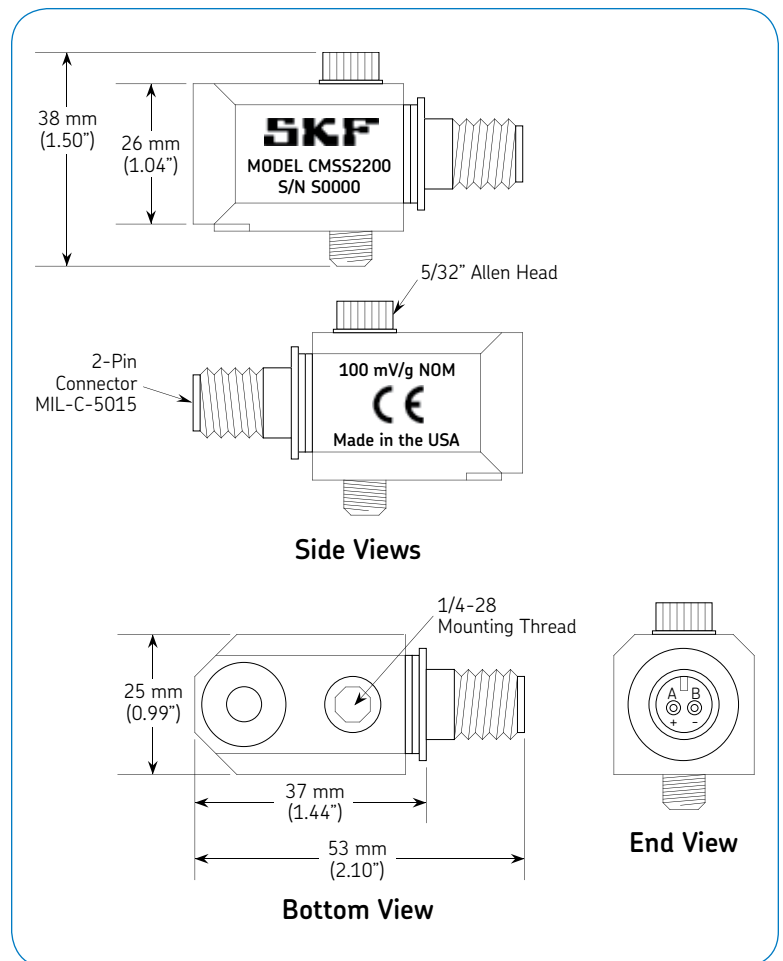
**Connector:** *Pin A:* Signal/Power (White Wire)

*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 2200** General Purpose Low Profile Industrial Accelerometer with side exit MIL-C-5015 two (2) pin connector.

1/4-28 and M6 mounting studs provided. Calibration sensitivity is provided on each accelerometer package with nominal sensitivity etched on each unit.

**CMSS 2200-M8** General purpose low profile industrial accelerometer with side exit MIL-C-5015 two (2) pin connector.

M8 mounting stud provided. Calibration sensitivity is provided on each accelerometer package with nominal sensitivity etched on each unit.