

CMSS 2100T

Industrial sensor, straight exit, acceleration and temperature

The CMSS 2100T is a cost-effective, dual output sensor ideal for light to medium-duty applications, where both vibration and surface temperature measurements are required. The CMSS 2100T is typically used in the following industries:

- Pulp and Paper
- Food and Beverage

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Common applications include general purpose machines such as pumps, motors and fans.

Features

- For use with all SKF on-line systems, protection systems and the portable data collection instruments
- Rugged, corrosion resistant and hermetically sealed
- Case isolation
- Meets stringent CE, EMC requirements
- ESD protection
- Miswiring protection

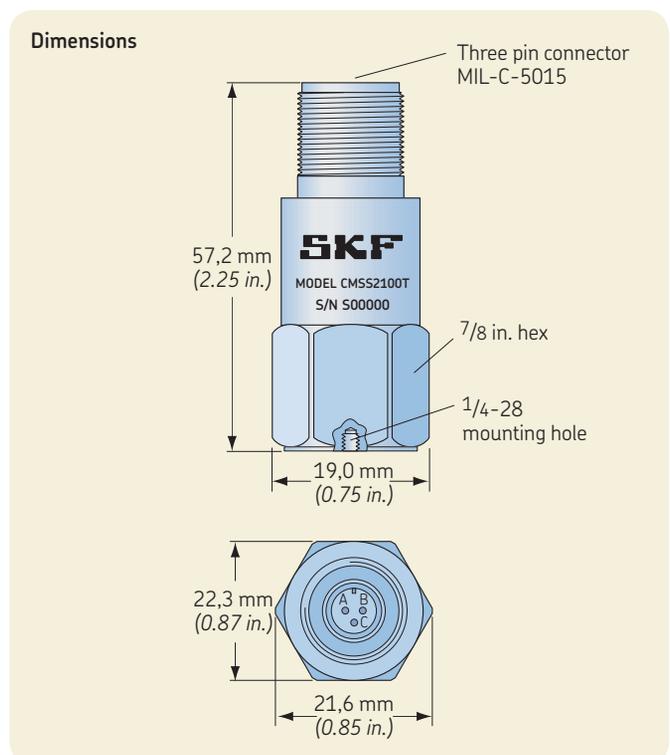
Recommended connector/cable assembly

- CMSS 933 series

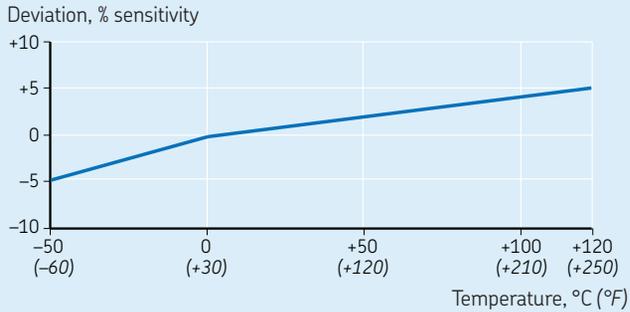
Specifications

Dynamic

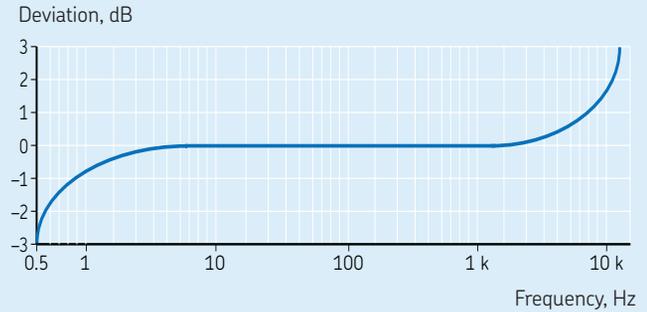
- Sensitivity: 100 mV/g
- Sensitivity precision: $\pm 5\%$ at 25 °C (75 °F)
- Acceleration range: 60 g peak
- Amplitude linearity: 1%
- Frequency range:
 - $\pm 5\%$: 3,0 to 5 000 Hz
 - $\pm 10\%$: 1,0 to 7 000 Hz
 - ± 3 dB: 0,5 to 12 000 Hz
- Resonance frequency, mounted, nominal: 30 kHz
- Transverse sensitivity: $\leq 5\%$ of axial
- Temperature response: See graph
- Temperature output sensitivity:
 - $\pm 1,5$ °C ($\pm 2,7$ °F): 10 mV/°C (18 mV/°F)
 - 120 °C (250 °F): +6%
- Temperature measurement range: 2 to 120 °C (36 to 250 °F)



Typical temperature response



Typical frequency response



Electrical

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

Environmental

- Temperature range: -50 to +120 °C (-60 to +250 °F) operating temperature
- Vibration limit: 500 g peak
- Shock limit: 5 000 g peak
- Electromagnetic sensitivity, equivalent g, maximum: 70 $\mu\text{g}/\text{gauss}$
- Sealing: Hermetic
- Base strain sensitivity: 0,0002 g/ μstrain
- 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: 90 g (3.2 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: Accelerometer signal/power
 - Pin B: Accelerometer common
 - Pin C: Temperature sensor signal
- Mating connector: CMSS 933-68LC or CMSS 933-68TL, three pin, IP 68, locking collar or twist lock or three pin MIL-C-5015 style
- Recommended cable: CMSS 933-SY-XXM, three conductor, triad cable, single shielded, yellow

Ordering information

CMSS 2100T Industrial sensor, straight exit, acceleration and temperature, with MIL-C-5015 three 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.