# 0ACS100A.x0-1

## 1 Order data

| Order number | Short description |
|---|---|
| | **Sensors** |
| 0ACS100A.00-1 | Accelerometer, nominal sensitivity 100 mV/g, top exit |
| 0ACS100A.90-1 | Accelerometer, nominal sensitivity 100 mV/g, side exit |
| | **Required accessories** |
| | **Sensor cable** |
| 0ACC0020.01-1 | Cable for accelerometer, length 2 m, 2x 0.34 mm², female M12 connector on the sensor side, can be used in cable drag chains, UL listed |
| 0ACC0050.01-1 | Cable for accelerometer, length 5 m, 2x 0.34 mm², female M12 connector on the sensor side, can be used in cable drag chains, UL listed |
| 0ACC0100.01-1 | Cable for accelerometer, length 10 m, 2x 0.34 mm², female M12 connector on the sensor side, can be used in cable drag chains, UL listed |
| 0ACC0150.01-1 | Cable for accelerometer, length 15 m, 2x 0.34 mm², female M12 connector on the sensor side, can be used in cable drag chains, UL listed |
| 0ACC0200.01-1 | Cable for accelerometer, length 20 m, 2x 0.34 mm², female M12 connector on the sensor side, can be used in cable drag chains, UL listed |
| 0ACC0500.01-1 | Cable for accelerometer, length 50 m, 2x 0.34 mm², female M12 connector on the sensor side, can be used in cable drag chains, UL listed |
| 0ACC1000.01-1 | Cable for accelerometer, length 100 m, 2x 0.34 mm², female M12 connector on the sensor side, can be used in cable drag chains, UL listed |

Table 1: 0ACS100A.00-1, 0ACS100A.90-1 - Order data

## 2 Technical data

| Order number | 0ACS100A.00-1 | 0ACS100A.90-1 |
|---|---|---|
| **Sensor properties** [1)] | | |
| Natural resonance (installed) | 22 kHz (rated) | |
| Sensitivity | 100 mV/g ±10% nominal 80 Hz at 22°C | |
| Frequency response | 2 Hz to 10 kHz ±5%<br>0.8 Hz to 15 kHz ±3 dB | |
| Isolation | Isolated base | |
| Measurement range | ±50 g | |
| Cross-sensitivity | <5% | |
| **Electrical properties** | | |
| Electrical disturbances | Max. 0.1 mg | |
| Broadband resolution | 0.2 mg (200 µg) over 1 Hz to 15 kHz | |
| Spectral noise | 10 Hz to 10 µg/Hz<br>100 Hz to 4 µg/Hz<br>1 kHz to 3 µg/Hz | |
| Current range | 0.5 to 8 mA | |
| Bias voltage | 10 to 12 VDC | |
| Settling time | 2 s | |
| Output impedance | Max. 200 Ω | |
| Housing isolation | $>10^8$ Ω at 500 V | |
| **Operating conditions** | | |
| Degree of protection per EN 60529 | IP67 | |
| **Ambient conditions** | | |
| Temperature | | |
| Operation | -55 to 140°C | |
| Max. shock resistance | 5000 g | |
| Emitted interferences | EN 61000-6-4:2001 | |
| Immunity to interference | EN 61000-6-2:1999 | |

Table 2: 0ACS100A.00-1, 0ACS100A.90-1 - Technical data

| Order number | 0ACS100A.00-1 | 0ACS100A.90-1 |
|---|---|---|
| **Mechanical properties** | | |
| Housing | | |
| Material | Stainless steel | |
| Installation | M8 x 1.25 x 6 mm bolt, pre-assembled on the sensor | M8 x 1.25 x 33 mm screw, included in delivery |
| Weight | 110 g | 170 g |
| Measurement element | PZT piezoelectric crystal (lead zirconate titanate) | |
| Measurement execution | Compressed | |
| Tightening torque | 8 Nm | |
| Connectors | M12 | |

Table 2: 0ACS100A.00-1, 0ACS100A.90-1 - Technical data

1) The sensor is precalibrated at the factory. Recalibration is not necessary.

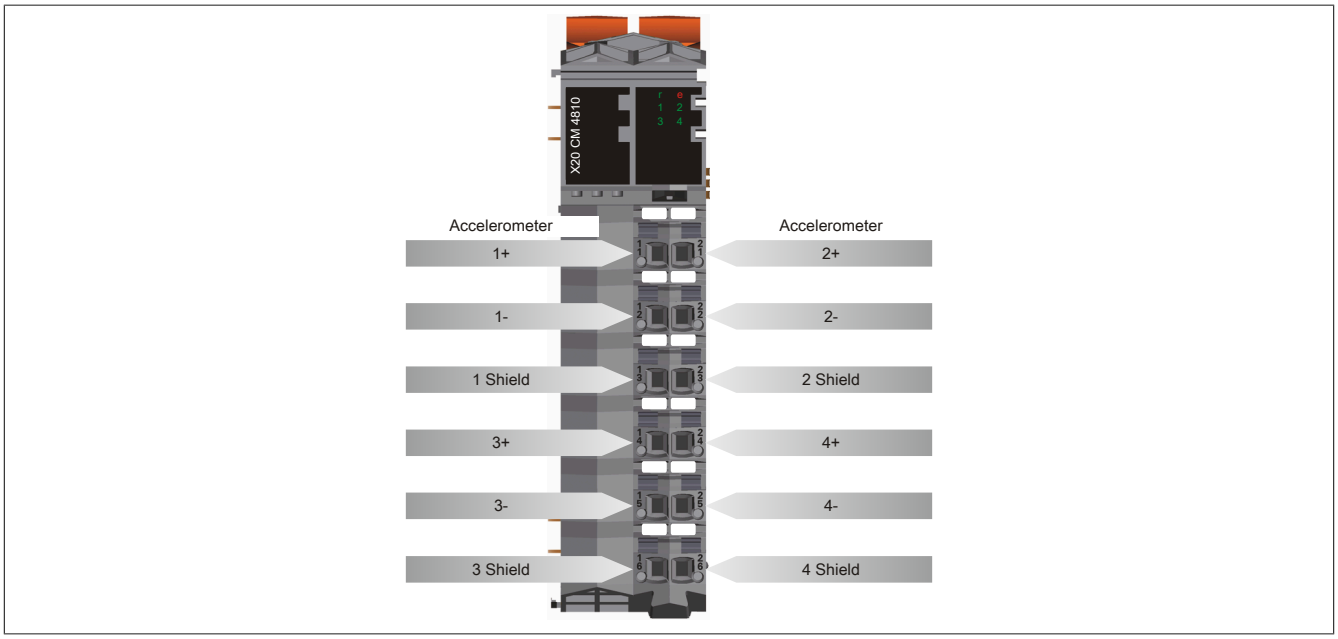
For applicable certifications for the sensor, see the manufacturer's website.

**Certificates**

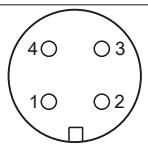
http://www.hansfordsensors.com/resources/certificates/

# 3 Pinout

Pinout using the X20CM4810 as an example




# 4 Pinout




| Pin | Description |
|---|---|
| 1 | Not in use |
| 2 | 18 to 30 V (brown) |
| 3 | Not in use |
| 4 | 0 V (blue) |

# 5 Frequency response

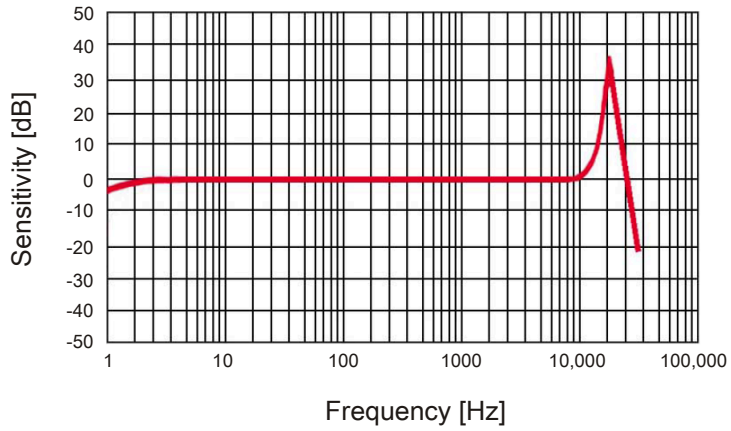
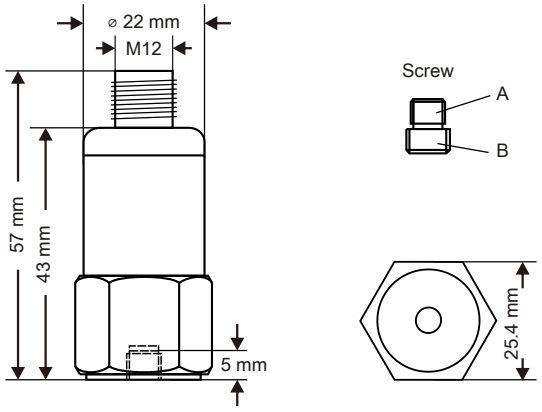



Figure 1: 0ACS100A.x0-1 - Frequency response

# 6 Dimension

**0ACS100A.00-1**




The screw is already installed when delivered.

A 1/4" - 28 UNF (maximum thread length: 5 mm)

B M8 x 6 x 1.25

**0ACS100A.90-1**

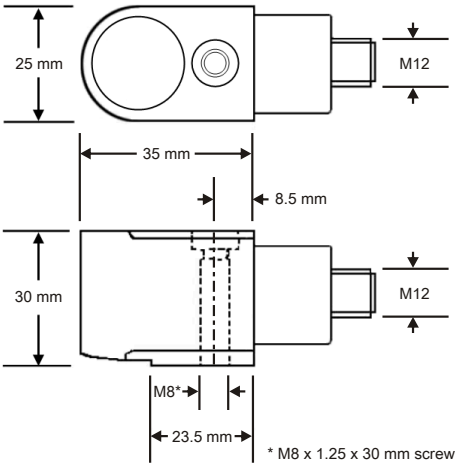
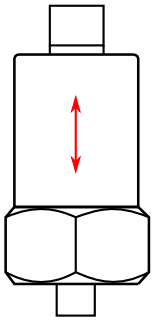



Figure 2: 0ACS100A.90-1 - Dimensions

# 7 Installation direction

**0ACS100A.00-1**

B&R vibration sensor 0ACS100A.00-1 is designed for measurements in the longitudinal axis.



**0ACS100A.90-1**

B&R vibration sensor 0ACS100A.90-1 is designed for measurements in the transverse axis.