

ACK-XHR

Capacitive accelerometer extra high range

SN: A#####

Texense sensors are designed for data logging. Should the users want to include this sensor in a closed loop system, they must undertake total responsibility from doing so.

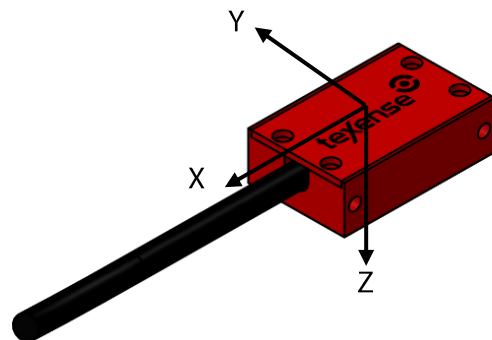
| Measurement features | | | |
|------------------------------------|-------------|-------------------|------|
| Range | | ±50, ±100 or ±200 | G |
| Sensitivity | Range ±50G | 40 ± 2% | mV/G |
| | Range ±100G | 20 ± 3% | |
| | Range ±200G | 10 ± 4% | |
| Sensitivity drift (20 to 80°C) | | ±4 | % |
| Signal at 0G | | 2.500 ± 0.020 | V |
| Offset drift (20 to 80°C) | Range ±50G | ±100 | mV |
| | Range ±100G | ±50 | |
| | Range ±200G | ±25 | |
| Cut-off frequency -3dB (±10%) | Min | 50 | Hz |
| | Default | 1000 | |
| | Max | 1000 | |
| Calibrator | | LDS V406 | |
| Resonance | | 16500 | Hz |
| Max Cross axis sensitivity | | 6 | % |
| Electrical features | | | |
| Supply Voltage ⁽¹⁾ | | 5 to 30 | V |
| Supply Current | | 2 | mA |
| Output Voltage ⁽¹⁾ | | 0 – 5 | V |
| Output Impedance | | < 10 | Ω |
| Max output load | | 5000 | Ω |
| Mechanical features | | | |
| Dim | | 25x16x8 | mm |
| Material | | Aluminium | |
| Weight | | 15 | g |
| Protection | | IP66 | |
| Environment | | | |
| Shock | | 1000 | G |
| Insulation under 50V _{DC} | | >100 | MΩ |
| Operating Temp | | -20 to +105 | °C |
| Storage Temp | | -40 to +125 | °C |

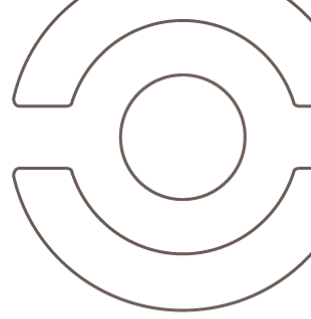
(1) Output signal is saturated to supply voltage – 0.350V. Thus, at 5V supply voltage, the outputs are limited to 4.650V. Offset and sensitivity are not changed as they are regulated.

| | | | |
|-------------|-----------------------|----------|--|
| Date | | Operator | |
| Customer | | | |
| Order | | | |
| Product Ref | ACK-XHR-#-X#-Y#-Z#-## | | |

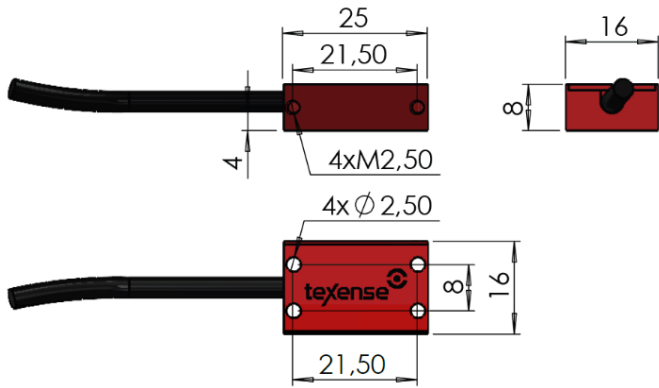
| Sensor readings | | | |
|---------------------------------|---------|---------|---------|
| | X | Y | Z |
| Signal (V) @ 0G | ...V | ...V | ...V |
| Sensitivity (mV/G) | ...mV/G | ...mV/G | ...mV/G |
| Cut off frequency (Hz) at -3 dB | ...Hz | ...Hz | ...Hz |
| Cross Axis (%) | ...% | ...% | ...% |

| Acceleration | Calibration table | | |
|--------------|-------------------|------------|------------|
| | Range 50G | Range 100G | Range 200G |
| | 40mV/G | 20 mV/G | 10 mV/G |
| G | V | V | V |
| -200 | | | 0.500 |
| -150 | | | 1.000 |
| -100 | | 0.500 | 1.500 |
| -50 | 0.500 | 1.500 | 2.000 |
| 0 | 2.500 | 2.500 | 2.500 |
| 50 | 4.500 | 3.500 | 3.000 |
| 100 | | 4.500 | 3.500 |
| 150 | | | 4.000 |
| 200 | | | 4.500 |





Mechanical drawing



Wiring

| Cable | | | | |
|---|-----------------------|--------------|------------|----------|
| 26 AWG FEP tinned copper braided cable 250V 200°C | | | | |
| Length: 1000mm | | Tubing: 50mm | | |
| Connector: on request | | | | |
| Axis configuration | | | Wire color | Function |
| Number of axis | Total number of wires | Axis | | |
| | | | Red | Supply |
| | | | Black | 0V |
| 1 | 3 | X | White | X output |
| | | Y | White | Y output |
| | | Z | White | Z output |
| 2 | 4 | XY | White | X output |
| | | | Green | Y output |
| | | YZ | White | Y output |
| | | | Green | Z output |
| | | XZ | White | X output |
| | | | Green | Z output |
| 3 | 5 | XYZ | White | X output |
| | | | Green | Y output |
| | | | Yellow | Z output |
| - | | - | Braid | - |

Ordering information

Ordering ref:

ACK - XHR - Nb Axis - XRange - YRange - ZRange - Cut off frequency

XHR: Extra high range

N: Not wired
 50: Range ±50G
 100: Range ±100G
 200: Range ±200G

...
 1000: 1000Hz (default, max)

Cut off frequency -3dB in Hz
 50: 50Hz (min)

ex: ACK-XHR-2-X100-YN-Z200-1000:

- 2 axis:
 - X axis range ±100G
 - Z axis range ±200G
- 1000Hz cut-off frequency at -3dB