# AC-CAP-PRO-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 | ±100 or ±200 | G |
| Sensitivity — Range ±100G | 20 ± 3% | mV/G |
| Sensitivity — Range ±200G | 10 ± 4% | mV/G |
| Sensitivity drift (20 to 80°C) | ±4 | % |
| Signal at 0G | 2.500 ± 0.020 | V |
| Offset drift (20 to 80°C) — Range ±100G | ±50 | mV |
| Offset drift (20 to 80°C) — Range ±200G | ±25 | mV |
| Cut-off frequency -3dB (±10%) — Min | 50 | Hz |
| Cut-off frequency -3dB (±10%) — Default | 1000 | Hz |
| Cut-off frequency -3dB (±10%) — Max | 1200 | Hz |
| Calibrator | LDS V406 | |
| Resonance | 16500 | Hz |
| Max Cross axis sensitivity | 5 | % |

| 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 | 38x22x18 | mm |
| Material | Aluminium | |
| Weight | 19 | 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 | AC-CAP-PRO-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 (%) | …% | …% | …% |

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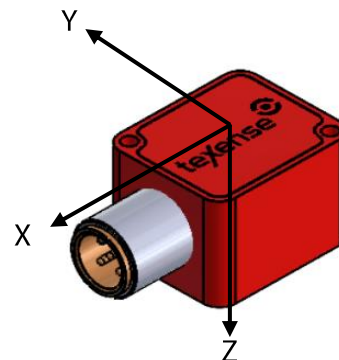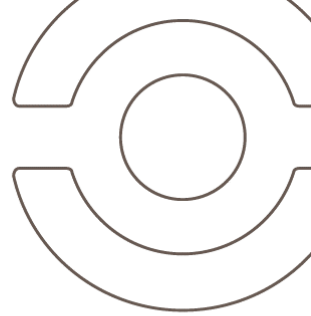
## Mechanical drawing

Main key
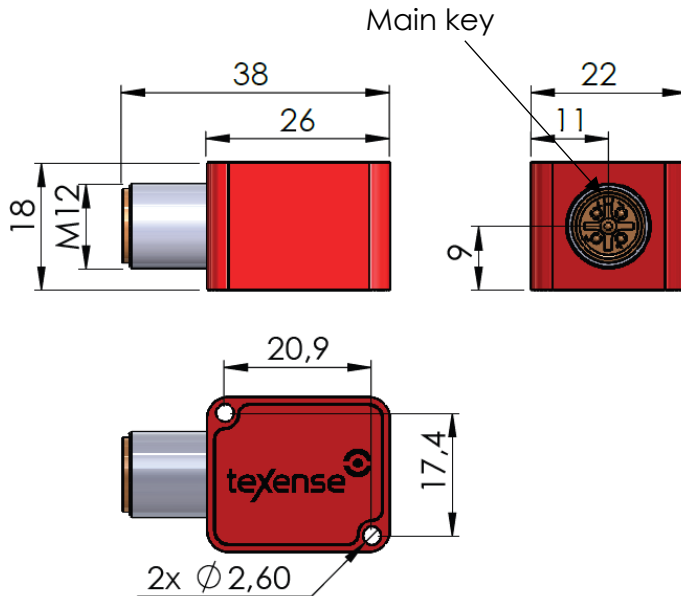


## Pinout

| Connector | | |
|---|---|---|
| M12-A 5 pins connector | | |
| Pin | Function | Comment |
| 1 | Supply | |
| 2 | 0V | |
| 3 | Signal X | Not wired if XN code |
| 4 | Signal Y | Not wired if YN code |
| 5 | Signal Z | Not wired if ZN code |

## Ordering information

**Ordering ref:**

AC-CAP-PRO- *XHR – Nb Axis – XRange – YRange – ZRange – Cut off frequency*

*XHR:* Extra high range

*1:* 1 axis
*2:* 2 axis
*3:* 3 axis

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

Cut off frequency -3dB in Hz
*50:* 50Hz (min)
…
*1000:* 1000Hz (default)
…
*1200:* 1200Hz (max)

ex: AC-CAP-PRO-XHR-2-X100-YN-Z200-1000:
- 2 axis:
    - X axis range ±100G
    - Z axis range ±200G
- 1000Hz cut-off frequency at -3dB

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