

# CANopen Inclinometer

XY-CAN-EFS is a three-axis inclinometer sensor with CANopen protocol. The sensor can be used for measuring the tilt and swing angle of any object with respect to gravity. It can also simultaneously operate as a 360° sensor. Inclination measuring is based on the high accuracy accelerometer IC.



- 3-axis measuring for XYZ inclination
  - Precise measuring range  $\pm 60^\circ$ , Measures inclination up to  $\pm 90^\circ$
  - The cover upwards or downwards at XY null position
  - Precise measuring range  $\pm 180^\circ$
  - Sensor measures a full 360° of orientation at the same time
  - Rotation axis towards the cover
  - Connectors downwards at null position
  - Accuracy better than  $\pm 0.2^\circ$ , typically below  $\pm 0.1^\circ$
  - Actual reading resolution up to 0.01°
  - Temperature compensated measuring
  - Filtered measuring, adjustable time constant  $\sim 0.5s \dots \sim 2.1s$
  - Nearly immune to vibration
  - Two M12 connectors for CAN-bus IN/OUT
  - Standard CANopen connector pin-out
  - CAN-bus interface (ISO11898) Baudrate up to 1Mbit/s
  - CANopen according to CiA DS 301 V4.02
  - Inclinometer device profile DSP 410 V1.1
  - Supports Layer Setting Services DSP 305 V2.0
  - Operating voltage 9...30V DC
  - Operating temperature range  $-40^\circ C \dots +80^\circ C$
  - Weight  $\sim 330g$
- Protection class IP 67

## Applications

The XY-CAN-EFS is a very robust inclinometer with an acid-proof casing that can handle harsh and hostile environments. The XY-CAN-EFS is widely used inclination sensor in mobile machine applications like boom or crane applications.

## Sensor features

The sensors from Memsic do also give accurate values even if vibrating. Thanks to the two M12 connectors you can avoid T-connectors and drop cables which can be a source for errors. Thanks to the metallic housing which is also equipped with fastening flanges, the Inclinometer can be easily mounted on the target system.