

R360 Inclinometer family (truck, off-highway, railway)

Two-axis inclinometer sensor



The automation of vehicles and mobile machines can no longer be imagined without controller electronics and sensors. Often the horizontal alignment of machines or machine parts is an important requirement for reliable operation. Typical examples are mobile cranes or access platforms.

The inclinometer detects precisely the deviations of the two measurement axes (X- and Y-direction). As the sensor must often be mounted at difficult positions in the vehicle, special attention has been given to the mechanical and electrical properties of the sensor during development. The high accuracy is achieved with measuring cells which operate to the conductometric principle. The change in conductivity of a liquid is determined.

Depending on the sensor inclination the electrodes are surrounded by a different level of liquid. This results in a behaviour comparable to that of a potentiometer. Due to a suitable arrangement of the electrodes the signed values for the two axes are obtained.

- Operating voltage 10 V_{DC} to 30 V_{DC}
- Operating temperature –25 °C to +85 °C
- Parameterisable resolution up to 0,001°
- High protection rating IP67
- Compact, rugged mechanical design
- Housing aluminum, black anodised
- Mounting plate aluminum, natural-colored
- Dimensions (w × h × d) 90 mm × 60 mm × 41 mm
- Universal M12 connector for operating voltage and CAN interface

2-axis inclinometer sensor, CR 2101

- Measuring range ±15°
- CE, e1 type approval

2-axis inclinometer sensor, CR2102

- Measuring range ±45°
- Analog outputs 4 mA to 20 mA
- CE, e1 type approval

Contact

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Features

NMT	NMT slave
Error control	Node guarding Life guarding Heartbeat producer
Boot-up	Yes
Node ID range	From 1 to 127
Node ID	Software switch Proprietary
CANopen bit-rates	50 kbit/s 125 kbit/s 250 kbit/s 500 kbit/s 800 kbit/s 1 000 kbit/s
Type of bit-rate adjustment	None
RPDOs	No
TPDOs	3
PDO modes	Event-triggered Triggered by event-timer Synchronous (cyclic)
PDO linking	Yes
PDO mapping	Variable
SDO server	1
SDO client	No
Emergency producer	Yes
Emergency consumer	No
Sync producer	No
Sync counter	No
Time stamp	No
Additional functions	Self-starting device Program download

CANopen version	CiA 301 V 4.0.2
Frameworks	CiA 302
Device profiles CiA 401: CANopen device profile for generic I/O modules CiA 410: CANopen device profile for inclinometer	
Certified	No
Availability	In stock