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Sensorik. Messtechnik. ASIC-Design.

Inclination Sensors and Switches

Overview

Characteristics:

- Measurement angles: 1 and 2 Axes
- Interfaces: current, voltage, CAN, CANopen
- Measurement range: 0 ... 360° (according to the type)
- High resolution and accuracy
- Available as a high impact strength UV-resistent plastic housing or aluminium housing
- Sensor connection: M12 (5-polig)
- Suitable for industrial use:
  - Temperature range: -40 °C up to +80 °C
  - Degree of protection: IP65/67

Inclination sensors with plastic or aluminum housing

The inclination sensors are suitable, according to the type, for one or two dimensional static measurement of inclinations in the standard ranges ±10°, ±45°, ±60°, ±90° and 360°. The output values of the inclination sensors with linearized current or voltage interface can be set as needed within their regular angle range by the customers.

The compact and robust design makes the sensor a suitable angle measurement device in rough surroundings for different applications in industry and automotive technology. A simple configuration and start-up is possible by the CAN bus interface. All parameters are stored in the internal permanent memory.

Applications:

- Solar thermal and photo-voltaic systems
- Agricultural and forestry machines
- Construction machines
- Utility vehicles
- Crane and hoisting technology
- Industry automation

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*Technical Data:**

Type	Axes 1	Axes 2	Angle	Interface	Resolution	Non-linearity	Temperature coefficient max.	Cross Sensitivity	Critical frequency	Supply voltage	Article Number
Inclination Sensor	x	x	0 ... ±90°	Current Voltage	0,01° ... 0,05°	±0,1° ... ±1,5°	±0,0025°/K ... ±0,009°/K	0,5 % ... 5 %	typ. 18 Hz	11 V ... 30 V	PR-24000-00 … PR-24344-00
Inclination Sensor SIL3		x	±45°	Current redundant	0,01°	±0,° ... ±0,4°	±0,009°/K	max. 5 %	typ. 18 Hz	11 V … 36 V	PR-24040-00
Gyro/Inclination sensor combined			±15 °/s , ±45°	Current	0,015°/s 0,05°	±0,035 °/s ±0,3°	0,005°/sK 0,025°	max. 5 %	typ. 7 Hz 7 Hz	11 V … 30 V	PR-24950-00
Acceleration sensor	x		±0,4 g	Current	0,002°	0,0043g	0,00026 g/K	max. 5 %	typ. 25 Hz	12 V … 35 V	PR-24901-00
Inclination sensor linearized		x	0 ... ±90°	Current Voltage CAN CANopen	0,01°	typ. ±0,02° max. ±0,10°	±0,008°/K	compensated typ. 0,1 % max. 0.5 %	20 Hz (without digital filter) 0,3 - 25 Hz (with digital filter)	10 V ... 48 V	PR-23xxx-xx
Inclination sensor linearized	x		360°					-			
Inclination Switch	x		±20°	High-side 2 x 2 A	0,25°	typ. ±0,25° max. ±0,5°	±0,008°/K	max. 5 %	-	12 V, 24V	PR-24009-xx, PR-24014-xx
Inclination Switch	x	x	±60°	NPN 4 x 250 mA							PR-24xxx-00
Inclination Switch		x	±10° ±45° ±60° 360°	CAN Potential -free 4 x 0,5 A		-					PR-23240-00 … PR-23243-00 PR-23200-00 … PR-23203-00 PR-23340-00 … PR-23343-00 PR-23300-00 … PR-23303-00

* The manual contains a complete description of the technical data (www.gemac-chemnitz.de).

Further sensors: In addition to standard sensors, we offer a variety of additional specific sensors, on request customized development, too.