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Inclination Sensor with CAN Interface

1-dimensional 360° - 2-dimensional ±90°

Characteristics:

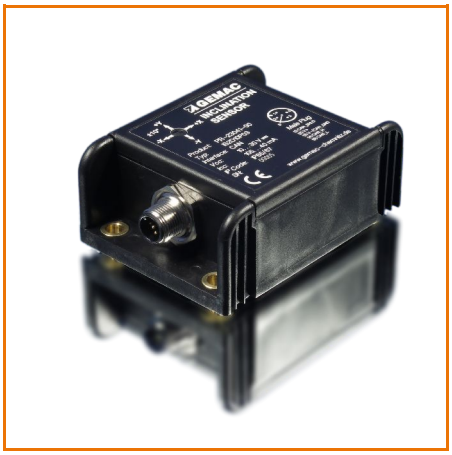

Figure similar

- 1-dim. inclination sensor with measurement range: 360°
- 2-dim. inclination sensor with measurement range:±90° (X/Y)
- High resolution (0.01°) and accuracy (0.05°)
- Compensated cross sensitivity
- Programmable vibration suppression
- Comfortable CAN-Bus-interface
  - Free adjustable IDs
  - Baud rates from 10 kBit/s to 1 MBit/s
  - Automatic baud rate detection
- Functions:
  - Angle request, cyclical output, synchronized outputs
  - Configurable cut-off frequency (digital filter)
- Robust, UV resistant, impact strength plastic housing
- Suitable for industrial use:
  - Temperature range: -40 °C to +80 °C
  - Degree of protection: IP65/67

The inclination sensor IS1D 00 P20 is suitable to measure the inclination in the measurement range of 360°. The 2-dimensional inclination sensor IS2D 90 P20 is suitable to measure the inclination in 2 dimensions (X/Y) in the measurement range of 90°. To ensure a high accuracy, the sensors are calibrated at the factory.

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 setting of all parameters which are stored in the internal permanent memory is possible via CAN bus interface.

Applications:

- Solar thermal and photo-voltaic systems
- Agricultural and forestry machinery
- Construction machinery
- Crane and hoisting technology

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*Technical Data:**

General Parameters**			
Measurement range	360°, ±90°		
Resolution	0.01°		
Accuracy (Type: IS1D 00 P20)	Range 0...360°	typical ±0.04°	maximum ±0.10°
Accuracy (Type: IS2D 90 P20)	Range up to ±60° up to ±70° up to ±80° up to ±85°	typical ±0.02° ±0.04° ±0.08° ±0.16°	maximum ±0.05° ±0.10° ±0.20° ±0.40°
Cross Sensitivity (compensated)	typ. ±0,.0 %, max. ±0.50 %		
Temperature coefficient (zero point)	typ. ±0.008 °/K		
Sampling rate	80 Hz		
Critical frequency	typ. 20 Hz, 2nd order (without digital filter) / 0.1 ... 25 Hz, 8th order (with digital filter)		
Operating temperature	-40 °C to +80 °C		
Characteristics			
Interface	CAN 2.0 A and B (11- and 29-Bit-ID) according to ISO 11898-2		
Data rates	10 k, 20 k, 50 k, 62.5 k, 100 k, 125 k, 250 k, 500 k, 800 k Bit/s, 1 MBit/s automatic detection		
Functions	Angle request, cyclical and synchronized outputs, parametrization, digital filter (Butterworth lowpass, 8th order), configuration via CAN		
Electrical Parameters			
Supply voltage	8 to 48 VDC		
Current consumption	86 to 19 mA, <33 mA @ 24 V		
Mechanical Parameters			
Connector CAN	2x sensor connector 5-pole M12 (loop through connector)		
Degree of protection	IP65/67		
Dimensions / Weight	66 mm x 90 mm x 36 mm / about 215 g		

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

Ordering Information:

Article Number	Product Type	Description/Distinction
PR-23050-30	IS1D 00 P20	1-dimensional, 360°, CAN Bus interface
PR-23054-30	IS2D 90 P20	2-dimensional, ±90°, CAN Bus interface
PR-23999-01	ISPA1	Inclination sensor programming adapter (Starter kit including programming adapter, cables and PC software)