

Inclination Sensor with CANopen Interface

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

Characteristics:

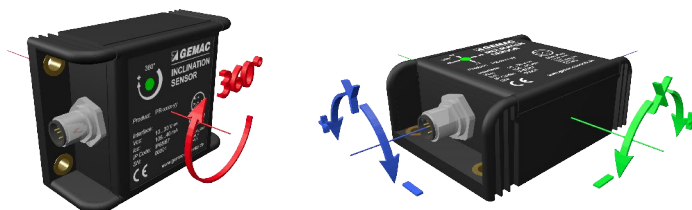
- 1-dim. inclination sensor with measurement range: 360°
- 2-dim. inclination sensor with measurement range: ±90° (X/Y)
- High resolution (0.01°) and accuracy (0.05°)
- Compensated cross sensitivity
- Programmable vibration suppression
- Comfortable CANopen interface
 - Meets the CiA DS-301, device profile CiA DSP-410
 - Baud rates from 10 kBit/s to 1 MBit/s
 - Automatic baud rate detection
 - Setting Node ID and baud rate via LSS Service
- Functions:
 - One TPDO dynamically mappable (RTR, cyclic, event-controlled, synchronized)
 - SYNC Consumer (synchronized transmission of the TPDO after receiving a SYNC message)
 - EMCY Producer
 - Failure monitoring via Heartbeat or Nodeguarding / Lifeguarding
- Robust, UV resistant, impact strength plastic housing
- Suitable for industrial use:
 - Temperature range: -40 °C to +80 °C
 - Degree of protection: IP65/67



Figure similar

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

Technical Data:*

General Parameters**			
Measurement range	360°, ±90°		
Resolution	0.01°		
Accuracy (Type: IS1D 00 P21)	Range	typical	maximum
	0...360°	±0.04°	±0.10°
Accuracy (Type: IS2D 90 P21)	Range	typical	maximum
	up to ±60°	±0.02°	±0.05°
	up to ±70°	±0.04°	±0.10°
	up to ±80°	±0.08°	±0.20°
	up to ±85°	±0.16°	±0.40°
Cross Sensitivity (compensated)	typ. ±0.10 %, max. ±0.50 %		
Temperature coefficient (zero point)	typ. ±0.008 °/K		
Sampling rate	80 Hz		
Cut-off frequency	typ. 20 Hz, 2 nd order (without digital filter) / 0.1 ... 25 Hz, 8 th order (with digital filter)		
Operating temperature	-40 °C to +80 °C		
Characteristics			
Interface	CANopen according CiA DS-301, profile according to CiA DSP-410		
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, 8 th order), configuration via object dictionary		
Electrical Parameters			
Supply voltage	8 to 48 VDC		
Current consumption	86 mA 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-23150-30	IS1D 00 P21	1-dimensional, 360°, CANopen interface
PR-23154-30	IS2D 90 P21	2-dimensional, ±90°, CANopen interface
PR-23999-01	ISPA1	Inclination sensor programming adapter (Starter kit including programming adapter, cables and PC software)