

Inclination Sensor with CAN/CANopen Interface

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

Characteristics:

- Inclination sensor with measurement range: 360°/±90°
- High sampling rate and bandwidth
- High resolution (0.01°) and accuracy (0.05°)
- Compensated cross sensitivity
- Programmable vibration suppression (digital filter)
- Comfortable CAN interface
 - Free adjustable IDs
- Comfortable CANopen interface
 - Meets the CiA DS-301, device profile CiA DSP-410
 - Setting Node ID and baud rate via LSS Service
- Functions:
 - Angle request, cyclical output, synchronized output, output on angle change
 - Configurable cut-off frequency (digital filter)
- Impact strength plastic housing
- Temperature range: -40 °C to +80 °C
- Degree of protection: IP65/67



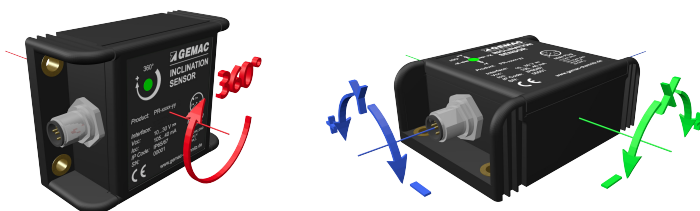
Figure similar

The 1-dimensional inclination sensors IS1BP360-C-CL and IS1BP360-O-CL are suitable to measure the inclination in the measurement range of 360°. The 2-dimensional inclination sensors IS2BP090-C-CL and IS2BP090-O-CL are 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 or CANopen interface.

Applications:

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



Technical Data:*

General Parameters	IS1BP360-C-CL / IS1BP360-O-CL			IS2BP090-C-CL / IS2BP090-O-CL		
Measurement range	360°			±90°		
Resolution	0.01°			0.01°		
Accuracy	Range	typical	maximum	Range	typical	maximum
	0 ... 360°	±0.04°	±0.10°	to ±60°	±0.02°	±0.05°
				to ±70°	±0.04°	±0.10°
				to ±80°	±0.08°	±0.20°
				to ±85°	±0.16°	±0.40°
Cross Sensitivity (compensated)	-			typ. ±0.09° (±0.10 %FS) max. ±0.45° (±0.50 %FS)		
Temperature coefficient (zero point)	typ. ±0.0080 °/K					
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 ... +80 °C					
Interface						
CAN	CAN 2.0 A and B (11- and 29-Bit-ID) according to ISO 11898-2 Angle request, cyclical and synchronized outputs, parametrization, digital filter					
CANopen	CANopen according CiA DS-301, profile according to CiA DSP-410 TPDO dynamically mappable (RTR, cyclic, event-controlled, synchronized) SYNC Consumer, EMCY Producer, Heartbeat or Nodeguarding / Lifeguarding					
Electrical Parameters						
Supply voltage	8 ... 48 VDC					
Current consumption	<33 mA @ 24 V					
Mechanical Parameters						
Connector CAN/CANopen	2x sensor connector 5-pole M12 (loop through connector)					
Degree of protection	IP65/67					
Dimensions / Weight	66 mm x 90 mm x 36 mm / ca. 215 g					

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

Ordering Information:

Article Number	Product Type	Description/Distinction
PR-23050-30	IS1BP360-C-CL	CAN, 1-dimensional, 360°, Plastic housing
PR-23054-30	IS2BP090-C-CL	CAN, 2-dimensional, ±90°, Plastic housing
PR-23150-30	IS1BP360-O-CL	CANopen, 1-dimensional, 360°, Plastic housing
PR-23154-30	IS2BP090-O-CL	CANopen, 2-dimensional, ±90°, Plastic housing
PR-23999-02	ISPA1	Starter kit including programming adapter, cables and PC software