

360°-Inclination Sensor with CANopen & Switching Outputs

IS1D 00 P15 / P16

Characteristics:

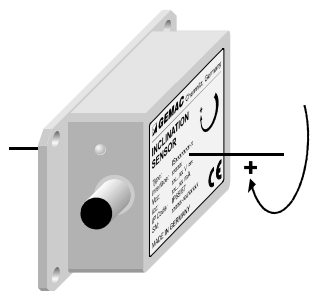
- 1-dimensional 360°-inclination sensor
- High resolution and accuracy
- Comfortable CANopen interface:
 - Fulfills CiA DS 301
 - Device profile according to CiA DS 410
 - Baud rates of 10 kBit/s to 1 MBit/s
- Functions:
 - Angle request and cyclical output
 - Heartbeat producer, EMCY producer (in case of threshold overstepping)
 - Configurable floating averaging
- Four freely configurable, potential-free switching outputs (type IS1D 00 P16 only)
- Robust, simply mountable aluminium housing
- Suitable for industrial use:
 - Temperature range: -40 °C to +80 °C
 - Degree of protection: IP65/67



The 1-dimensional inclination sensors IS1D 00 P15 / P16 enable the measurement of inclinations resp. rotation angles according to a horizontal rotation axis over an angle range of 360°. To guarantee a high accuracy each sensor is calibrated factory-made at 25 °C.

The inclination sensor IS1D 00 P16 includes four freely configurable, potential-free switching outputs and can also be used as transducer in control systems without connection to the CAN Bus.

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 putting into operation is possible by the standardized CANopen interface. All parameters are stored in the internal permanent memory.



Applications:

- Industry automation
- Agricultural and forestry machines
- Utility vehicles
- Crane and hoisting technology

Technical Data*:

General Parameters	
Measurement axes	1
Measurement range	360° (no limit stop)
Resolution	0.05°
Calibration accuracy (at 25° C)	±0.1°
Nonlinearity	max. ±0.2°
Temperature coefficient	max. ±0.008 °/K
Allowed slant	max. ±3°
Critical frequency	typ. 2.6 Hz (without averaging)
Sampling rate	15 s ⁻¹
Operating temperature	-40 °C to +80 °C
Characteristics	
Interface	CANopen according to CiA DS 301 und CiA DS 410
Data rates	10k, 20k, 50k, 125k, 250k, 500k, 800k Bit/s, 1 MBit/s
Functions	angle request, cyclical output, setting of parameters, floating averaging, Heartbeat and EMCY producer, output of the device's internal temperature (±2.0 K accuracy), configurable via CANopen object directory
Four switching outputs**	PhotoMOS relays, synchronically switched, freely configurable
Electrical Parameters	
Supply voltage	10 to 30 V DC
Current consumption (IS1D 00 P15 / P16)	105 mA to 40 mA / 150 mA to 60 mA
Capacity of the switching outputs**	0,5 A, max. 30 V DC, short-circuit-proof
Mechanical Parameters	
Connector CAN	sensor connector 5-pole (M12)
Connector switching outputs**	sensor connector 8-pole (M12)
Degree of protection	IP65/67
Shock survival	max. 3,500 g
Dimensions	58 mm x 90 mm x 31 mm
Mass	about 200 g

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

** type IS1D 00 P16 only

Ordering Information:

Type	Description/Distinction	Article Number
IS1D 00 P15	1-dimensional, 360°, CANopen interface	PR-23100-00
IS1D 00 P16	1-dimensional, 360°, CANopen interface, with four switching outputs	PR-23303-00