

Inclination Sensors with current and voltage interface 1-dimensional 360° - 2-dimensional ±90°

Characteristics:

- Inclination sensors with measurement range: 360° / ±90°
- Linearized output, high accuracy
- Compensated cross sensitivity
- Programmable vibration suppression
- Freely programmable current or voltage interface
- Robust, UV resistant, impact strength plastic housing
- Suitable for industrial use



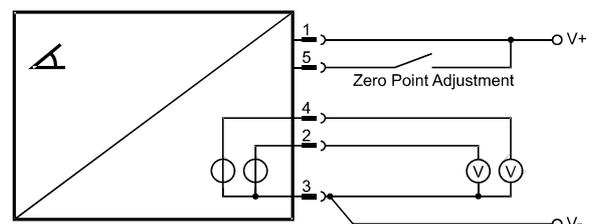
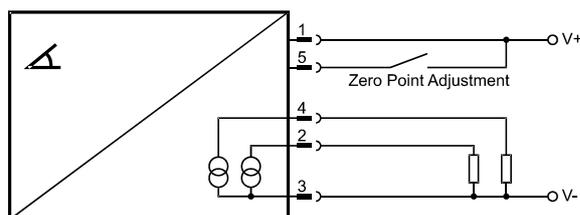
Figure similar

The compact and robust design makes the sensor a suitable angle measurement device in rough surroundings for different applications in industry and vehicle technology.

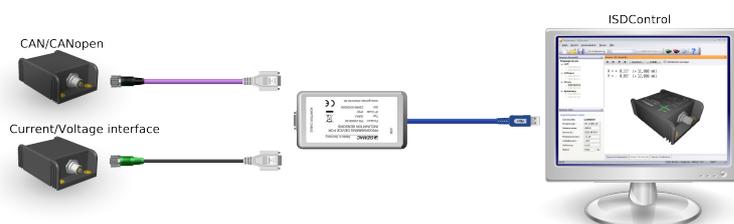
Fields of Applications:

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

Connection diagrams:



Inclination Sensor Programming Adapter:



Technical Data*:

General Parameters*	IS1BP360-I-CL / IS1BP360-U-CL	IS2BP090-I-CL / IS2BP090-U-CL																					
Measurement range	360°	±90°																					
Resolution	0.01°	0.01°																					
Accuracy	<table border="1"> <thead> <tr> <th>Range</th> <th>typical</th> <th>maximum</th> </tr> </thead> <tbody> <tr> <td>0 ... 360°</td> <td>±0.04°</td> <td>±0.12°</td> </tr> </tbody> </table>	Range	typical	maximum	0 ... 360°	±0.04°	±0.12°	<table border="1"> <thead> <tr> <th>Range</th> <th>typical</th> <th>maximum</th> </tr> </thead> <tbody> <tr> <td>up to ±60°</td> <td>±0.02°</td> <td>±0.06°</td> </tr> <tr> <td>up to ±70°</td> <td>±0.04°</td> <td>±0.12°</td> </tr> <tr> <td>up to ±80°</td> <td>±0.08°</td> <td>±0.24°</td> </tr> <tr> <td>up to ±85°</td> <td>±0.16°</td> <td>±0.48°</td> </tr> </tbody> </table>	Range	typical	maximum	up to ±60°	±0.02°	±0.06°	up to ±70°	±0.04°	±0.12°	up to ±80°	±0.08°	±0.24°	up to ±85°	±0.16°	±0.48°
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Cross Sensitivity (compensated)	-	typ. ±0.09° (±0.10 %FS) max. ±0.45° (±0.50 %FS)																					
Temperature coefficient (zero point)	Current interface: Voltage interface:	typ. +0.0088 °/K, -0.0102 °/K typ. ±0.0083 °/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 to +80 °C																						
Characteristics																							
Current interface	freely adjustable output in the range 0 ... 20.48 mA (factory default: 4 ... 20 mA)																						
Voltage interface	freely adjustable output in the range -10.48 ... 10.48 V (factory default: 0 ... 10 V)																						
Functions	freely adjustable angle in the range 0 ... 360° / ±90° Teach input for zero point adjustment when installed Limit value, Axis direction and assignment of the outputs are adjustable Digital filter (Butterworth lowpass, 8 th order)																						
Electrical Parameters																							
Supply voltage	Current interface:	17 ... 35 VDC																					
	Voltage interface:	10 ... 35 VDC																					
Current consumption	Current interface:	40 mA @ 24 V + I _{loop}																					
	Voltage interface:	55 mA @ 24 V																					
Mechanical Parameters																							
Connection	Sensor connector 5-pole M12																						
Degree of protection	IP65/67																						
Dimensions / Weight	66 mm x 90 mm x 36 mm / about 200 g																						

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

Ordering Information:

Article Number	Product Type	Description/Distinction
PR-23450-00	IS1BP360-I-CL	1-dimensional, 360°, current interface
PR-23454-00	IS2BP090-I-CL	2-dimensional, ±90°, current interface
PR-23550-00	IS1BP360-U-CL	1-dimensional, 360°, voltage interface
PR-23554-00	IS2BP090-U-CL	2-dimensional, ±90°, voltage interface
PR-23999-02	ISPA1	Starter kit including programming adapter, cables and PC software