Inclinometer | IS60, 2-dimensional | CANopen

The inclinometer IS60 permits 2-dimensional inclinations to be measured. Versions are available for the measuring ranges ± 10°, ± 45° or ± 60°.

The sensor has a standardised CANopen interface, which enables easy configuration and start-up. All the parameters are stored in the internal permanent memory.

Can be supplied with customer-specific parameterising

RoHS CANopen

High IP value


Shock / vibration resistant


Reverse polarity protection

Robust and reliable

- Protection rating IP68
- Robust plastic housing
- High shock resistance

User-friendly and accurate

- High resolution and accuracy
- Programmable vibration suppression
- High sampling rate and bandwidth

Order code Inclinometer IS60

8.IS60	.	2	X	5	2	3
Type		a	b	c	d	e

a *Measuring direction*
2 = 2-dimensional X/Y

b *Measuring range*
1 = ± 10°
2 = ± 45°
3 = ± 60°

c *Interface*
5 = CANopen

d *Supply voltage*
2 = 10 ... 30 V DC

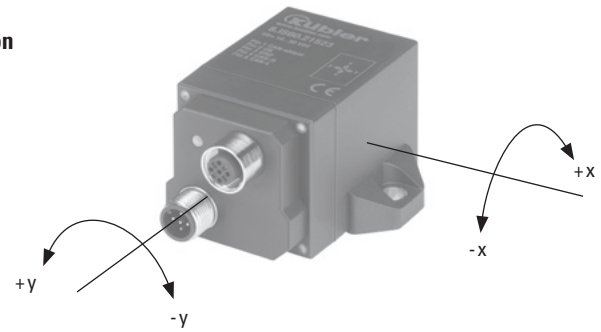
e *Type of connection*
3 = 2 x M12 connector

Connection Technology

Connectors, self-assembly (straight)	Coupling M12 for Bus in	**05.B-8151-0/9**
	Connector M12 for Bus out	**05.BS-8151-0/9**
Cordset, pre-assembled with 6 m PVC cable	Coupling M12 for Bus in	**05.00.6021.2211.006M**
	Connector M12 for Bus out	**05.00.6021.2411.006M**

Additional connectors can be found in the Connection Technology section or in the Connection Technology area of our website at: www.kuebler.com/connection_technology.

Direction of Inclination



1) In relation to the supply voltage 5 V DC
2) Only in combination with interface 4

Inclinometer | IS60, 2-dimensional | CANopen

Mechanical characteristics

Connection CAN	M12 connector, 5-pin
Weight	approx. 0.2 kg
Protection EN 60 529	IP68
Working temperature range	-40°C ... +80°C
Materials	plastic PBT-GF20-V0
Shock resistance	30 g 11ms
Vibration resistance	55Hz (1mm)
Dimensions	68 x 42.5 x 42.5 mm

Interface characteristics CANopen

Interface	CANopen according to CiA DS-301, Profile to CiA DSP-410
Data rates	10 k, 20 k, 50 k, 125 k, 250 k, 500 k, 800 k bit/s, 1 Mbit/s
Functions	TPDO (RTR, cyclic, event-driven, synchronized), parameterization per SDO and object register, digital filter (Butterworth Low pass, 8th order), SYNC Consumer, EMCY Producer, output and control of internal device temperature (±2.0 K accuracy), failure control with the help of Heartbeat or Nodeguarding / Lifeguarding
Note ID	1…127

General electrical characteristics

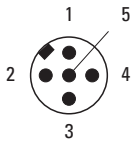
Supply voltage		10 ... 30 V DC
Power consumption (no load)		40 ... 105 mA
Reverse polarity protection (U_B)		yes
Measuring axes		2 (X/Y)
Measuring range		± 10°, ± 45°, ± 60°
Resolution	for version ± 10°	0.05°
	for version ± 45° and ± 60°	0.1°
Absolute accuracy		
	for version ± 10°	0.2°
	for version ± 45°	0.3°
	for version ± 60°	0.4°
Calibration accuracy (at 25°C)		± 0.1° (Zero point and final values)
Temperature drift (Zero point)		typ. ± 0.008°/K
Sampling rate		100 Hz
CE compliant acc. to		EN 61326-2-3 EMC requirements for transducers
RoHS compliant acc. to		EU guideline 2002/95/EG

A full description of the technical data can be found in the relevant product manual at www.kuebler.com.

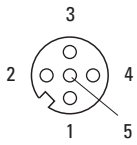
Terminal assignment

PIN	Signal	Assignment
1	CAN_SHLD	Shield
2	CAN V+	Supply voltage (+24 V DC)
3	CAN_GND	GND
4	CAN_H	CAN_H Bus cable
5	CAN_L	CAN_L-Bus cable

Bus in



Bus out



Dimensions