Inclinometer MEMS / capacitive | 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 standardized 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 parametrization.

RoHS

CANopen

High protection level | Shock / vibration resistant | Reverse polarity protection

Robust and reliable

- Protection rating IP68 / IP69k.
- 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

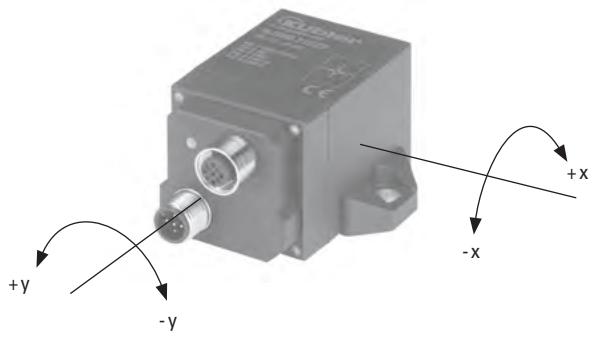
d *Power supply*
2 = 10 ... 30 V DC

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

Connection technology		Order no.
Cordset, pre-assembled	M12 female connector with coupling nut for Bus in, 5-pin 5 m [16.40'] PVC cable	**05.00.6021.2211.005M**
	M12 male connector with external thread for Bus out, 5-pin 5 m [16.40'] PVC cable	**05.00.6021.2411.005M**
Connector, self-assembly (straight)	M12 female connector with coupling nut for Bus in, 5-pin	**05.B-8151-0/9**
	M12 male connector with external thread for Bus out, 5-pin	**05.BS-8151-0/9**

Further accessories can be found in the accessories section or in the accessories area of our website at: www.kuebler.com/accessories
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



Inclinometer MEMS / capacitive | **IS60, 2-dimensional** | **CANopen**

Technical data

Mechanical characteristics

Connection CAN	M12 connector, 5-pin
Weight	approx. 0.2 kg [7.06 oz]
Protection acc. to EN 60529	IP68 / IP69k
Working temperature range	-40°C ... +80°C [-40°F ... +176°F]
Material	plastic PA12-GF30
Shock resistance	300 m/s², 11 ms
Vibration resistance	100 m/s², 10 ... 2000 Hz
Dimensions	68 x 42.5 x 42.5 mm [2.68 x 1.67 x 1.67"]

Interface characteristics CANopen

Interface	CANopen according to CiA DS-301, Profile to CiA DSP-410
Data rates	10 kbit/s, 20 kbit/s, 50 kbit/s, 125 kbit/s, 250 kbit/s, 500 kbit/s, 800 kbit/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

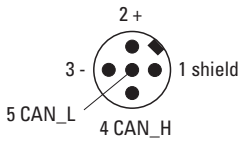
Electrical characteristics

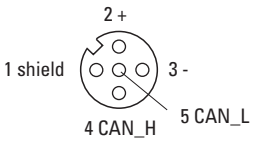
Power supply	10 ... 30 V DC
Power consumption (no load)	40 ... 105 mA
Reverse polarity protection	yes
Measuring axes	2 (x/y)
Measuring range	±10°, ±45°, ±60°
Resolution	0.1°
Linearity deviation	max. ±0.4°
Calibration accuracy – at 25°C [77°F]	±0.1° (Zero point and final values)
Temperature drift (Zero point)	typ. ±0.008°/K
Sampling rate	100 Hz
CE compliant acc. to	EMC guideline 2014/30/EU RoHS guideline 2011/65/EU

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+	Power supply (+24 V DC)
3	CAN_GND	0 V
4	CAN_H	CAN_H Bus cable
5	CAN_L	CAN_L Bus cable





Dimensions

Dimensions in mm [inch]