

Inclinometers

**Inclinometer
MEMS / capacitive**

IS60, 1-dimensional

CANopen



With the IS60 inclinometer 1-dimensional inclinations in the measuring range 360° can be measured.

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



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 . **14523**
Type a b c d e

Attention:

This is not a standard product. Delivery on request.
Min. order quantity / frame order required.

a Measuring direction
1 = 1-dimensional

b Measuring range
4 = 360°

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.

Connector, self-assembly (straight)

M12 female connector with coupling, Bus in
M12 male connector with external thread, Bus out

05.B-8151-0/9

05.BS-8151-0/9

Cordset, pre-assembled

M12 female connector with coupling, 6 m [19.69'] PVC cable, Bus in
M12 male connector with external thread, 6 m [19.69'] PVC cable, Bus out

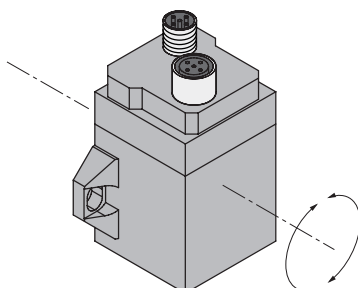
05.00.6021.2211.006M

05.00.6021.2411.006M

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



Inclinometers

| | | |
|---|----------------------------|----------------|
| Inclinometer MEMS / capacitive | IS60, 1-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/s ² , 11 ms |
| Vibration resistance | 100 m/s ² , 10 ... 2000 Hz |
| Dimensions | 68 x 42.5 x 42.5 mm [2.68 x 1.67 x 1.67"] |

| General electrical characteristics | |
|---------------------------------------|--|
| Power supply | 10 ... 30 V DC |
| Power consumption | 40 ... 105 mA |
| Reverse polarity protection | yes |
| Measuring axes | 1 |
| Measuring range | 360°, no limit stop |
| Resolution | 0.1° |
| Linearity deviation | max. ±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 | EMC guideline 2004/108/EC RoHS guideline 2011/65/EU |

| 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 |

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 | 0 V |
| 4 | CAN_H | CAN_H Bus cable |
| 5 | CAN_L | CAN_L-Bus cable |



Dimensions

Dimensions in mm [inch]

