QG65N CAN series

Inclination sensor
1 axis vertical mounting

Programmable device
Interface: CANopen

Parameters programmable by CANopen object dictionary

Measuring range 360°

General specifications 11785/11522, v20190325

Reinforced plastic injection molded (Faradex DS, black, EMI shielded by stainless steel fiber in PC)

- Measuring range 360°
- Centering function: Yes (CANout 0 = 0°), range: 360°

Housing
Reinforced plastic injection molded (Faradex DS, black, EMI shielded by stainless steel fiber in PC)

Dimensions (indicative)
60x50x27 mm

Mounting
4x M5x25 mm zinc plated pozidrive screws included (optional: 2x Ø4mm positioning pins)

Ingress Protection (IEC 60529)
IP67

Relative humidity
0 - 100%

Weight
approx. 110 gram

Supply voltage
8 - 30 V dc

Polarity protection
Yes

Current consumption
≤ 50 mA

Operating temperature
-40 .. +85 °C

Storage temperature
-40 .. +85 °C

Measuring range
360°

Centering function
Yes (CANout 0 = 0°), range: 360°

Frequency response (-3dB)
0 - 20 Hz

Typ. Accuracy @20°C (2σ)
overall 0,15° typ.
< ± 0,05° typ. (< ± 0,1° max.) after centering
< ± 0,1° typ. (< ± 0,2° max.)

Offset error
not applicable

Non linearity
0,05°

Sensitivity error
± 0,01°/K typ.

Temperature coefficient
10.000 g

Max mechanical shock
10.000 g

CAN interface (hardware)
According to ISO 11898-1 & ISO 11898-2 (also known as CAN 2.0 A/B)

CANopen protocol: EN 50325-4 (CiA 301 v4.0 & and v4.2.0)

Baud rate
125 kbit/s (default, range 50/125/250/500/1000 kbit/s)

Node Id
01h (range: 01h - 7Fh)

TPDO messages
TPDO1: 181h (for Node ID=01h)

TPDO1 event time
50 ms (default, range 10-500 ms)

Sync mode
On/off (default: off)

Heartbeat
On/off (default: on, 2s)

Programming options
Baudrate, Node Id, Event time, Sync mode, Heartbeat, Output format

Output format
Integer: -17999 to +18000 (PDO1: byte 2,1)

Output filter disabled

Filtering
< 1 s

by CANopen object dictionary (CAN parameters, filtering)
QG series

QG65N-KIXv-360-CAN-C(F)M

**Transfer characteristic**

**CANoutput = 100°α**

**Measurement orientation**

Rotation in vertical plane.

Lateral tilt sensitivity error:

< ± 0,03°/° lateral tilt (typ.)

Max. lateral tilt: 45°

Drawn in the default 0° position.

**Connectivity (length ±10%)**

Male only or Male & Female (internal T-junction) M12 connector (5 pins, A-coding)

(CIA303 V1.8.0) (Brass Nickel coated, contacts copper alloy)

No bus termination inside. A CANbus always has to be terminated properly. For bus termination order separate M12 termination resistor (optional: T-connector)

**Wire / pin coding**

<table>
<thead>
<tr>
<th>Pin 1:</th>
<th>Pin 2:</th>
<th>Pin 3:</th>
<th>Pin 4:</th>
<th>Pin 5:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shield</td>
<td>Vcc</td>
<td>Gnd &amp; CAN_GND</td>
<td>CAN_H</td>
<td>CAN_L</td>
</tr>
</tbody>
</table>

**Mechanical dimensions (indicative only)**

**E4, CAN-manual, EDS-file, Ordering codes**

This product is approved for automotive use, approval number: E4-10R-04-2889

A CAN-manual (Ftype), an EDS-file (Ftype) and a Declaration of conformity are available at www.dis-sensors.com, see ‘downloads’

As this device is accelerometer-based the sensor is inherent sensitive to accelerations/vibrations. Application specific testing must be carried out to check whether this sensor will fulfill your requirements.

Ordering codes:

M12 Male: QG65N-KIXv-360-CAN-CM, 11785

M12 Male & Female: QG65N-KIXv-360-CAN-CFM, 11522