QG series

QG65N CAN series

QG65N-KDXYh-090-CAN-C(F)M

Inclination sensor

2 axis horizontal mounting

Programmable device
Interface: CANopen

Parameters programmable
by CANopen object dictionary

Measuring range
± 90°

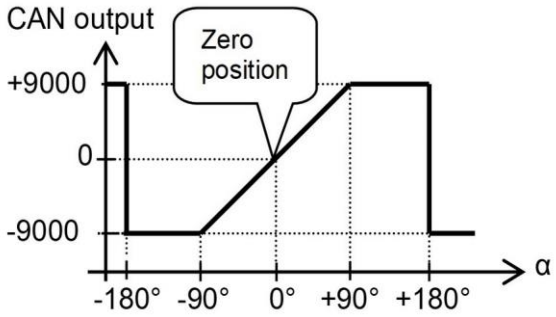
	General specifications 11778/11544, v20221011
Housing	Reinforced plastic injection molded (Faradex DS, black, EMI shielded by stainless steel fiber in PC)
Dimensions (indicative)	60x50x27 mm
Mounting	Included: 4x M5x25 mm zinc plated steel pozidrive pan head screws, self-tapping (PZ DIN7500CZ) (optional: 2x Ø4mm positioning pins replacing 2x M5x25 mm)
Ingress Protection (IEC 60529)	IP67
Relative humidity	0 - 95% (non condensing, housing fully potted)
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	± 90°
Centering function	Yes (CANout 0 = 0°), range: ±5°
Frequency response (-3dB)	0 - 20 Hz
Accuracy (overall @20°C)	overall 0,15° typ.
Offset error	< ± 0,05° typ. (< ± 0,1° max.) after centering
Non linearity	< ± 0,1° typ. (< ± 0,2° max.)
Sensitivity error	not applicable
Resolution	0,05°
Temperature coefficient	± 0,01°/K typ.
Max mechanical shock	10.000 g
CAN interface (physical layer)	According to ISO 11898-1 & ISO 11898-2 (also known as CAN 2.0 A/B)
CANopen application layer and communication profile	CANopen protocol: EN 50325-4 (CiA 301 v4.0 and v4.2.0)
Baud rate Node Id TPDO messages TPDO1 event time Sync mode Heartbeat Programming options Output format Filtering	125 kbit/s (default, range 50/125/250/500/1000 kbit/s) 01h (range: 01h - 7Fh) TPDO1: 181h (for Node ID=01h) 50 ms (default, range 10-32767 ms) On/off (default: off) On/off (default: off) Baudrate, Node Id, Event time, Sync mode, Heartbeat, Output format Integer: -9000 to +9000 (PDO1:X=byte2,1;Y=byte4,3) Output filter disabled
Boot time	< 1 s
Programming options	by CANopen object dictionary (CAN parameters, filtering)

QG65N-KDXYh-090-CAN-C(F)M

CANoutput = 100*α

Clipping outside measuring range

Transfer characteristic

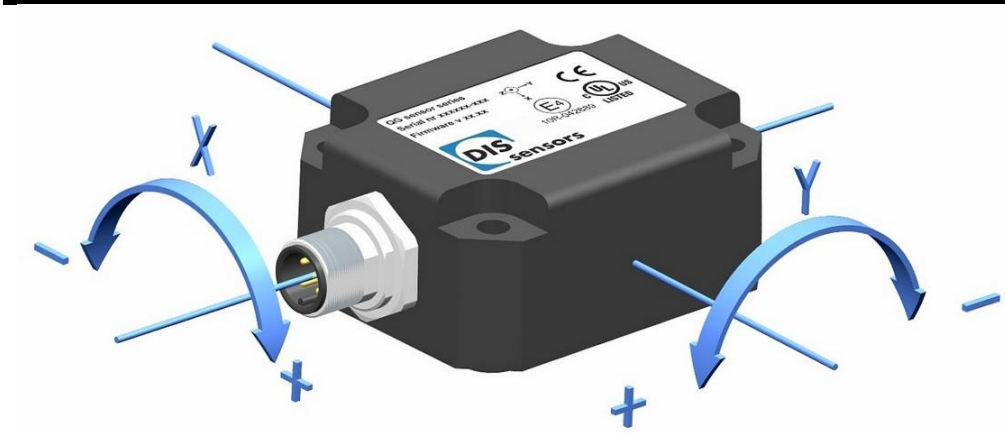


Default 0°: horizontal (label upwards), no acceleration applied. To eliminate mounting offsets the sensor can be centered within ±5° tilt (by the CAN object dictionary)

Cross tilt sensitivity error:
< (0,12 * cross tilt angle)² % typ.

→ one axis <10° tilt for max. accuracy
→ only one axis may exceed 45° tilt

Measurement orientation



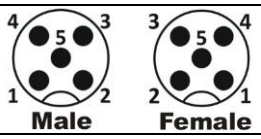
Connectivity (cable length ±10%)

Connection

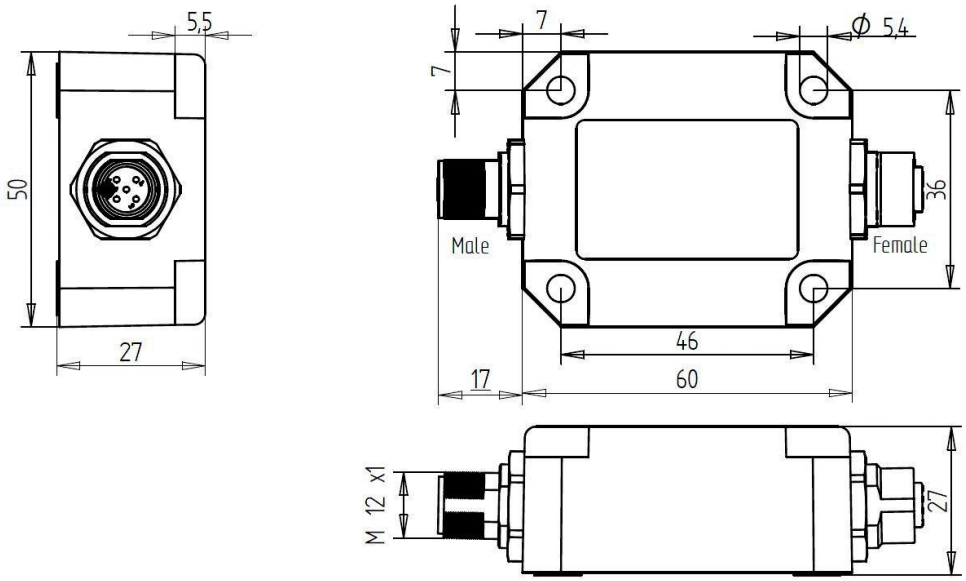
Male only or Male & Female (internal T-junction) M12 connector (5 pins, A-coding)
(CiA303 V1.8.0) (Brass Nickel coated, contacts copper alloy)
No bus termination inside. A CANbus always has to be terminated properly. For bus termination order seperate M12 termination resistor (optional: T-connector)

Wire / pin coding

Pin 1:	Shield
Pin 2:	Vcc
Pin 3:	Gnd & CAN_GND
Pin 4:	CAN_H
Pin 5:	CAN_L



Mechanical dimensions (indicative only)



E4ready, CAN-manual, EDS-file, Ordering codes

This product is E4ready and meets Automotive EMC requirements

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 for accelerations/vibrations. Application specific testing must be carried out to check whether this sensor will fulfil your requirements.

Ordering codes:
M12 Male: QG65N-KDXYh-090-CAN-CM, 11778
M12 Male & Female: QG65N-KDXYh-090-CAN-CFM, 11544