QG series

QG65N CAN series

QG65N-KAXYZ-8-CAN-C(F)M

Acceleration sensor

3 axis horizontal/vertical mounting
(RMS or Signed Peak value)

Programmable device
Interface: CANopen

Parameters programmable by CANopen object dictionary

Measuring range
± 8 g

General specifications v20180824	
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	± 8 g
Centering function	Yes, 2 horizontal axes only, (CANout 0 = 0 g), range: ±5°
Frequency response (-3dB)	0 - 1600 Hz
Accuracy (typ. and/or 2σ)	Range ±1/2/4/8 g: overall 0,02/0,04/0,08/0,16 g typ.
Offset error	< ± 0,5 mg typ. (< ± 1,5 mg max.) after zeroing
Non linearity	< ± 0,4% full scale
Sensitivity error	< ± 2%
Resolution	0,002 g
Temperature coefficient	± 0,3 mg/K typ.
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 application layer and communication profile	CANopen protocol: EN 50325-4 (CiA 301 v4.0 & and v4.2.0) CANopen device profile for inclinometers: CiA 410 version 2.0.0
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: -8000 to +8000 (PDO1:X=byte2,1;Y=byte4,3; Z=byte6,5)
Filtering	High pass filter disabled. Default output mode: Peak
Boot time	< 1 s
Programming options	by CANopen object dictionary (CAN parameters, filtering)

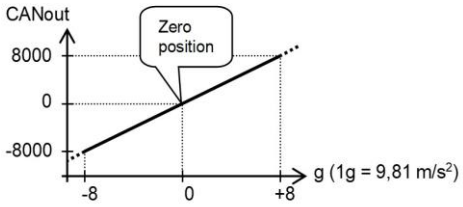
QG series

QG65N-KAXYZ-8-CAN-C(F)M

CANoutput = 1000*g

No clipping outside measuring range

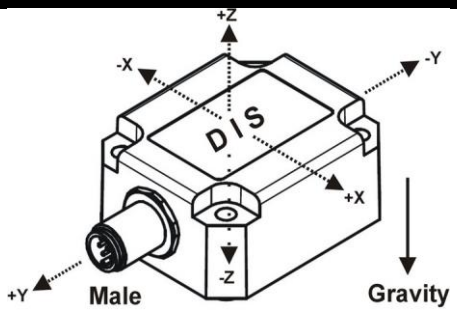
Transfer characteristic



The default 0 g position is when the sensor is mounted horizontal or vertical and no acceleration is applied. The axis parallel to earth gravity will indicate 1 g, the two horizontal axes will indicate 0 g.
The two horizontal axes can be zero-ed within ±5° tilt (by the CAN object dictionary) to eliminate mounting offsets.
The axis parallel to earth gravity cannot be zero-ed.
Optional the axis parallel to earth gravity can be compensated for 1 g gravity by the CAN object dictionary

Output value: Signed Peak (default) or RMS (selectable by CAN object dict.)

Measurement orientation



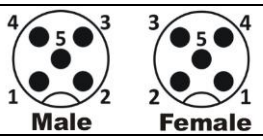
Connectivity (length ±10%)

Connection

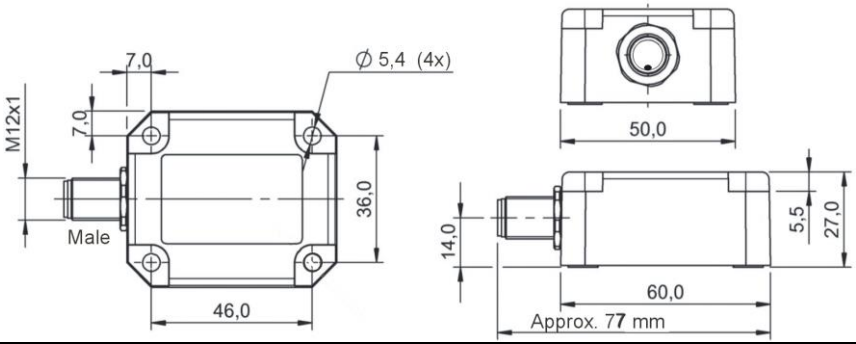
Male only or Male & Female (internal T-junction) M12 connector (5 pins, A-coding)
(CiA303 V1.8.0) (Brass Nickel coated, contacts copper alloy)
No bus termination inside. A CANbus always has to be terminated properly. For bus termination order seperate M12 termination resistor (optional: T-connector)

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)



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 Declaratoin of conformity are available at www.dis-sensors.com, see 'downloads'

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

Ordering codes:
M12 Male: QG65N-KAXYZ-8,0-CAN-CM, to be defined
M12 Male & Female: QG65N-KAXYZ-8,0-CAN-CFM, 12115