

QG76 CAN series

QG76-SD-030H-CAN-C(F)M

Inclination sensor

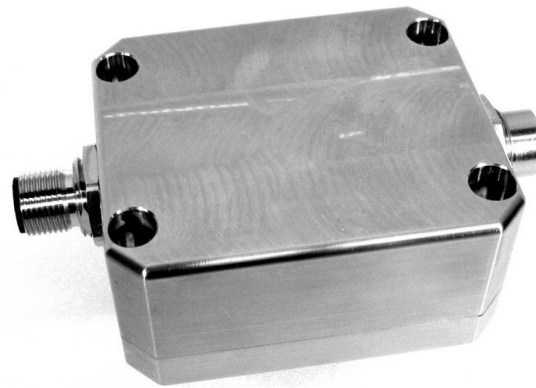
2 axis horizontal mounting

Programmable device

Interface: CANopen

Parameters programmable
by CANopen object dictionary

Measuring range
 $\pm 30^\circ$



CANopen



Housing	
Dimensions (indicative)	
Mounting	
Ingress Protection (IEC 60529)	
Relative humidity	
Weight	
Supply voltage	
Polarity protection	
Current consumption	
Operating temperature	
Storage temperature	
Measuring range	
Centering function	
Frequency response (-3dB)	
Typ. Accuracy @20°C (2σ)	
Offset error	
Non linearity	
Sensitivity error	
Resolution	
Temperature coefficient	
Max mechanical shock	
CAN interface (hardware)	
CANopen application layer and communication profile	
Baud rate	
Node Id	
TPDO	
Event time	
Sync mode	
Heartbeat	
Programming options	
Output format	
Temperature compensation	
Filtering	
Modes of operation	
Boot time	
Programming options	

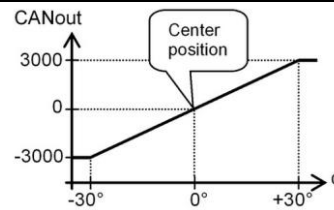
General specifications v20180125	
	Stainless steel (AISI 316)
	70x60x33 mm
	Included: 4x M4x30 mm stainless steel (A4) Hexagon socket head screws
	IP67 (IP68 with optional cable gland)
	0 - 100%
	approx. 700 gram
	10 - 30 V dc
	Yes
	≤ 50 mA
	-40 .. +85 °C
	-40 .. +85 °C
	$\pm 30^\circ$
	Yes (CANout 0 = 0°), range: $\pm 5^\circ$
	0 - 10 Hz
	overall 0,05° typ.
	< $\pm 0,03^\circ$ typ. (< $\pm 0,08^\circ$ max.) after centering
	< $\pm 0,04^\circ$ typ. (< $\pm 0,09^\circ$ max.)
	not applicable
	0,01°
	$\pm 0,005^\circ/K$ typ.
	20.000g
	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)
	125 kbit/s (default), 250 kbit/s, 500 kbit/s, 1Mbit/s
	01h (range: 01h - 7Fh)
	TPDO1: 181h (for Node ID=01h)
	TPDO1: 5 - 500 ms (default: 100 ms)
	On/off (default: off)
	On/off (default: on, 2s)
	Baudrate, Node Id, Event time, Sync mode, Heartbeat, Output format
	Integer: -3000 to +3000 (PDO1:X=byte2,1;Y=byte4,3)
	Yes
	Input filter enabled, output filter disabled
	Event mode, Sync-mode
	< 1 s
	by CANopen object dictionary (CAN parameters, filtering)

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CANoutput = 100*α

Clipping outside measuring range

Transfer characteristic

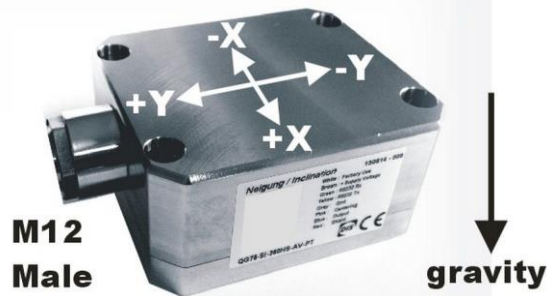


Default 0°: horizontal (label upwards), no acceleration applied. To eliminate mounting offsets the sensor can be centered within ±5° tilt (by the CAN object dictionary)

Cross tilt sensitivity error:
 $< (0,12 * \text{cross tilt angle})^2 \% \text{ typ.}$

→ one axis <10° tilt for max. accuracy

Measurement orientation



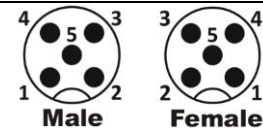
Connectivity (length ±10%)

Male only or Male & Female (internal T-junction) M12 connector (5 pins, A-coding) (CiA303 V1.8.0) (stainless steel 1.4404 (316L), 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)

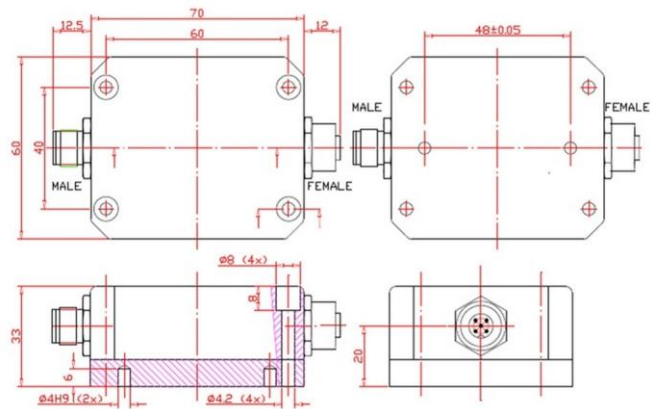
Connection

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)



Center function, CAN-manual, EDS-file, Ordering codes

Centering can be done to eliminate mechanical offsets. (can be done by CAN object 300Fh)
 The current sensor position will be stored as the new Center position in the internal Eeprom.

A CAN-manual is available at www.dis-sensors.com, see 'downloads'
 EDS-file (CiA306 V1.3.0) is 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: QG76-SD-030H-CAN-CM
 M12 Male & Female: QG76-SD-030H-CAN-CFM 11750