QG series

QG65 analog H-series

QG65-KD-025H-ASP-CM

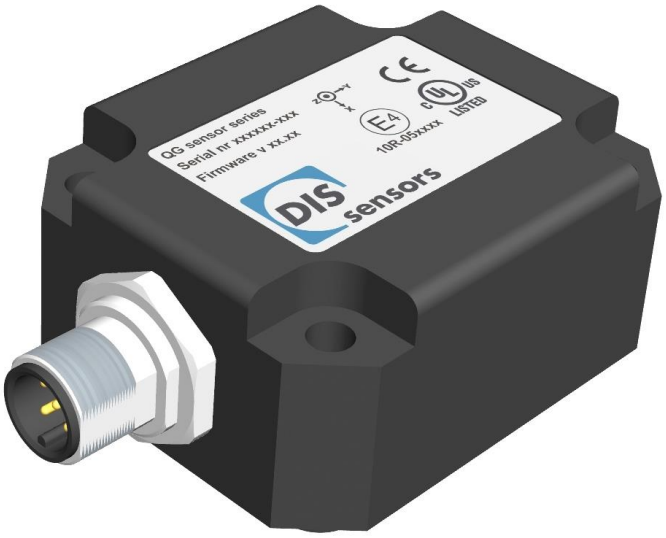
Tilt switch

2 axis horizontal mounting

Factory programmable device
Output: PNP

Switch points programmable
between ±1° and ±25°

Measuring range
Factory default: ±25°



	General specifications 12542, v20210921
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: Factory mounted 2x Ø4mm positioning pins replacing 2x M5x25 mm)
Ingress Protection (IEC 60529)	IP67, IP69K (with IP69K mating connector)
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 .. +60 °C
Storage temperature	-40 .. +85 °C
Measuring range	Factory default: ±25°
Centering function	Yes (0°), range: ±5°
Frequency response (-3dB)	0 - 0,5 Hz
Accuracy (overall @20°C)	0,05° typ.
Offset error	not applicable after zeroing
Non linearity	not applicable
Sensitivity error	not applicable, Repeatability 0,05°
Resolution	0,01°
Temperature coefficient	± 0,005°/K typ.
Max mechanical shock	20.000g
Output	dual PNP
Output load	500 mA cont., protected against back EMF
Short circuit protection	Yes
Boot time	< 100 ms
Programming options	Factory programmable (switch points, delay times, filtering)

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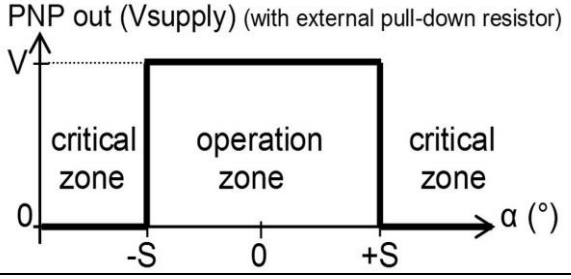
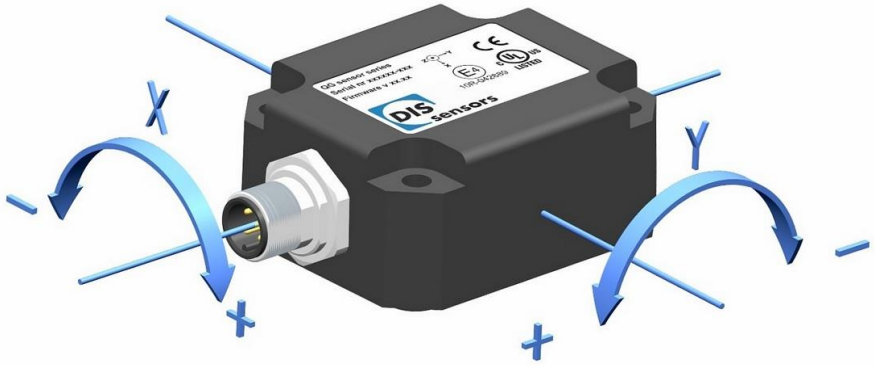
PNP-output:
- Programmable switchpoints ±S
  (opt. QG65 Configurator RS232)
  Factory default: S = ± 25°
- operation zone: conducting
- critical zone: non-conducting
- Unpowered sensor: non-conducting
- hysteresis : 0,2°
- operation ► critical delay : 0,5 s
- critical ► operation delay : 1 s

Transfer characteristic



The default 0° position is when the sensor is mounted horizontally (label upwards) and no acceleration is applied.

Measurement orientation



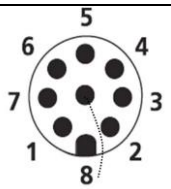
Connectivity (cable length ±10%)

Connection

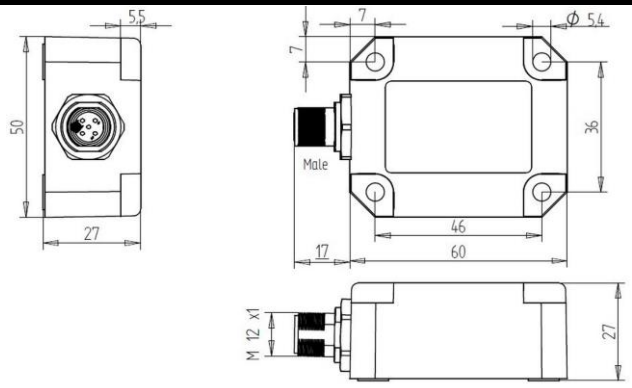
M12 male 8p A-coding connector (Brass Nickel coated, contacts copper alloy)

Wire / pin coding

Pin 1:	Output Y
Pin 2:	Supply voltage
Pin 3:	RS232 DATA from sensor to PC
Pin 4:	RS232 DATA from PC to sensor
Pin 5:	Gnd
Pin 6:	Zero input
Pin 7:	Output X
Pin 8:	Not connected



Mechanical dimensions (indicative only)



Center function

QG series sensors are intended to measure inclination, acceleration or tilt angle after installing in machines, equipment and systems. Flawless function in accordance with the specifications is ensured only when the device is used within its specifications.
Zeroing should be done within 1 min. after power up. After zeroing you've 1 min. left for another centering. Normally the zero input should be left unconnected. Connect zero input to ground for more than 0,5s

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.