

QG series

H-series

QG30-KI-090H-AV-K-5V

Inclination sensor

1 axis

Non-programmable device

Output: 0,5 - 4,5 V

horizontal/vertical mounting

For demanding applications

Measuring range
± 90°



General specifications 04309, v20180115

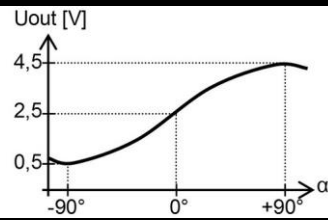
Housing	Plastic injection molded housing (Arnite T06 202 PBT black)
Dimensions (indicative)	30x30x15 mm
Mounting	Included: 2x M3x16 mm zinc plated steel pozidrive pan head screws, self-tapping (PZ DIN 7500C)
Ingress Protection (IEC 60529)	IP67
Relative humidity	0 - 100%
Weight	approx. 15 gram (cable excluded)
Supply voltage	5 V dc
Polarity protection	No
Current consumption	≤ 30 mA
Operating temperature	-25 .. +80 °C
Storage temperature	-25 .. +80 °C
Measuring range	± 90°
Centering function	No
Frequency response (-3dB)	0 - 18 Hz (±10 Hz)
Accuracy (typ. and/or 2σ)	overall 0,9° typ. (offset excluded) (-45°...+45°)
Offset error	< ± 1° typ. (< ± 3° max.)
Non linearity	< ± 0,6° (-45°...+45°)
Sensitivity error	< ± 2% typ. (< ± 3.5% max.)
Resolution	0,01°
Temperature coefficient	± 0,01°/K typ
Max mechanical shock	20.000g
Output	0,5 - 4,5 V Ratiometric
Output load	Rload ≥ 20kΩ, Cload ≤ 20 nF
Short circuit protection	Yes (max 10 s)
Repeatability	0,1°
Programming options	not applicable

QG30-KI-090H-AV-K-5V

$$U_{out} = 2,5 + 2 \cdot \sin(\alpha) \text{ [V]}$$

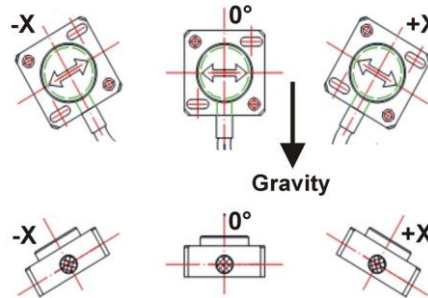
output clipping outside measuring range at 0,3 V and 4,7 V approximately

Transfer characteristic



The QG30 can be used in both vertical and horizontal mounting position.

Measurement orientation



Connectivity (length ±10%)

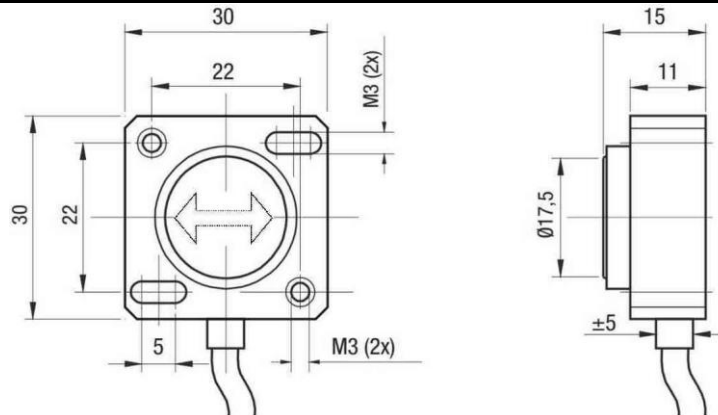
2 m PVC/PVC Liyy, black Ø 4,6 mm, wires: 3x0,34 mm² Sensor colors (static usage)

Brown	+ Supply Voltage
Black	Output
Blue	Gnd

Connection

Wire / pin coding

Mechanical dimensions (indicative only)



Remarks

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.

QG series

QG40N-series

QG40N-KDXYh-080-ASP-CM-UL

Tilt switch

2 axis horizontal mounting

Programmable device

Output: PNP

Switch points programmable
between $\pm 1^\circ$ and $\pm 80^\circ$

Measuring range
Factory defaults: $\pm 80^\circ$



General specifications 11630, v20180115

Housing	Plastic injection molded housing (Arnite T06 202 PBT black)
Dimensions (indicative)	40x40x25 mm
Mounting	Included: 2x M3x25 mm zinc plated steel pozidrive pan head screws, self-tapping (PZ DIN 7500C)
Ingress Protection (IEC 60529)	IP67
Relative humidity	0 - 100%
Weight	approx. 45 gram
Supply voltage	8 - 30V dc
Polarity protection	Yes
Current consumption	≤ 25 mA
Operating temperature	-40 .. +85 °C
Storage temperature	-40 .. +85 °C
Measuring range	Factory defaults: $\pm 80^\circ$
Centering function	Yes (0°), range: $\pm 5^\circ$
Frequency response (-3dB)	0-0,5 Hz
Accuracy (typ. and/or 2σ)	$\pm 0,5^\circ$
Offset error	0° (after zeroing)
Non linearity	not applicable
Sensitivity error	not applicable
Resolution	$0,1^\circ$
Temperature coefficient	$\pm 0,04^\circ/\text{K}$ typ.
Max mechanical shock	10.000 g
Output	dual PNP
Output load	150 mA cont., 250 mA max 10 sec., protected against back EMF
Short circuit protection	Yes (max 10 s)
Boot time	< 100 ms
Programming options	by optional QG40N-configurator (switch points, delay times, filtering)