

QG series

H-series

QG30-KI-010H-AV-K-5V

Inclination sensor

1 axis

Non-programmable device

Output: 0,5 - 4,5 V

horizontal/vertical mounting

For demanding applications

Measuring range
 $\pm 10^\circ$



General specifications 12275, v20180111

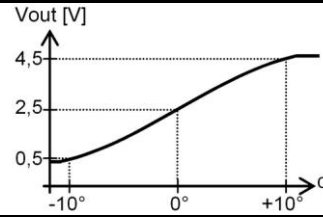
Housing	Plastic injection molded housing (Arnite T06 202 PBT black)
Dimensions (indicative)	30x30x15 mm
Mounting	Included: 2x M3x16 mm zinc plated steel pozidrive pan head screws, self-tapping (PZ DIN 7500C)
Ingress Protection (IEC 60529)	IP67
Relative humidity	0 - 100%
Weight	approx. 15 gram (cable 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	$\pm 10^\circ$
Centering function	No
Frequency response (-3dB)	0 - 18 Hz (± 10 Hz)
Accuracy (typ. and/or 2σ)	overall 0,3° typ. (offset excluded)
Offset error	$< \pm 1^\circ$ typ. ($< \pm 3^\circ$ max.)
Non linearity	$< \pm 0,2^\circ$
Sensitivity error	$< \pm 2\%$ typ. ($< \pm 3.5\%$ max.)
Resolution	0,01°
Temperature coefficient	$\pm 0,01^\circ/\text{K}$ typ
Max mechanical shock	20.000g
Output	0,5 - 4,5 V Ratiometric
Output load	Rload $\geq 20\text{k}\Omega$, Cload ≤ 20 nF
Short circuit protection	Yes (max 10 s)
Repeatability	0,1°
Programming options	not applicable

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$$U_{out} = 2,5 + 11,52 \cdot \sin(\alpha) [V]$$

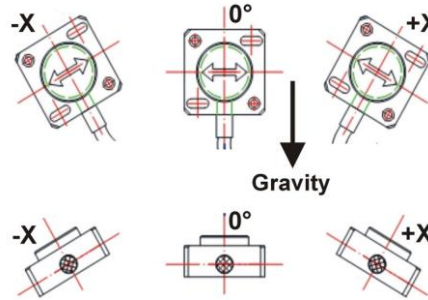
output clipping outside measuring range at 0,3 V and 4,7 V approximately

Transfer characteristic



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

Measurement orientation



Connectivity (length $\pm 10\%$)

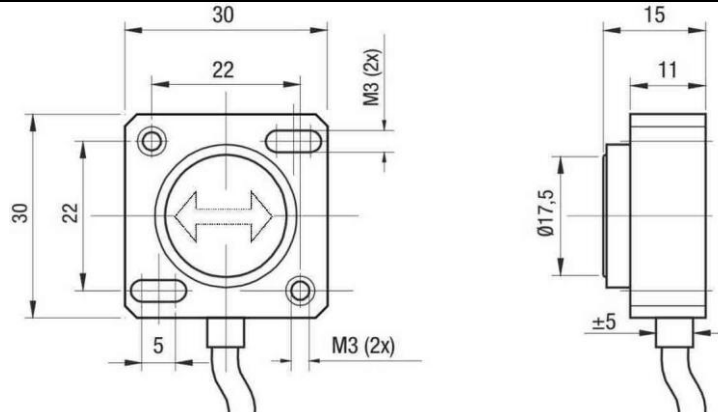
2 m PVC/PVC Liyy, black $\varnothing 4,6$ mm, wires: 3x0,34 mm² Sensor colors (static usage)

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.