

# QG series

## H-series

QG30-KI-030H-AI-K

### Inclination sensor

1 axis

Non-programmable device

Output: 4 - 20 mA

horizontal/vertical mounting

For demanding applications

Measuring range  
 $\pm 30^\circ$



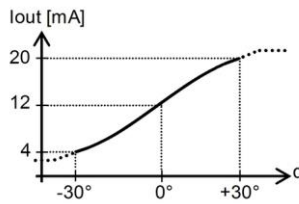
### General specifications 04524, v20180111

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	10 - 30 V dc
Polarity protection	Yes
Current consumption	$\leq 30$ mA ( excluding output signal )
Operating temperature	-25 .. +80 °C
Storage temperature	-25 .. +80 °C
Measuring range	$\pm 30^\circ$
Centering function	No
Frequency response (-3dB)	0 - 18 Hz ( $\pm 10$ Hz)
Accuracy (typ. and/or $2\sigma$ )	overall $0,6^\circ$ typ. (offset excluded)
Offset error	$< \pm 1^\circ$ typ. ( $< \pm 3^\circ$ max.)
Non linearity	$< \pm 0,4^\circ$
Sensitivity error	$< \pm 2\%$ typ. ( $< \pm 3,5\%$ max.)
Resolution	$0,01^\circ$
Temperature coefficient	$\pm 0,01^\circ/\text{K}$ typ
Max mechanical shock	20.000g
Output	4 - 20 mA
Output load	$R_{load} \leq (50 \cdot V_s - 300) [\Omega]$ (Eg: $V_s = 24$ V: $R_{load} \leq 900 \Omega$ )
Short circuit protection	Yes (max 10 s)
Repeatability	$0,1^\circ$
Programming options	not applicable

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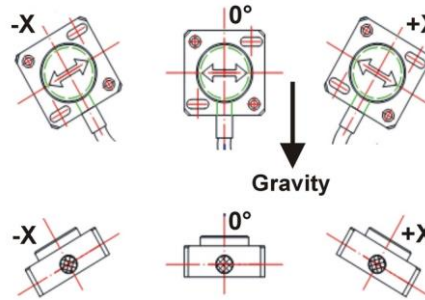
$I_{out} = 12 + 16 \cdot \sin(\alpha)$  [mA]  
 Outside measuring range sensor transfer formula is valid until clip level of approximately 2.5mA & 22.5mA

### Transfer characteristic



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

### Measurement orientation



### Connectivity (length $\pm 10\%$ )

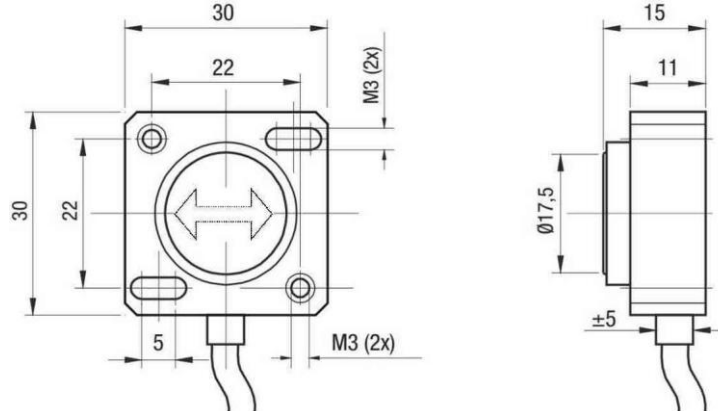
2 m PVC/PVC Liyy, black  $\varnothing$  4,6 mm, wires: 3x0,34 mm<sup>2</sup> Sensor colors (static usage)

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.