

QG series

QG30-KI-030E-AI-K

Inclination sensor

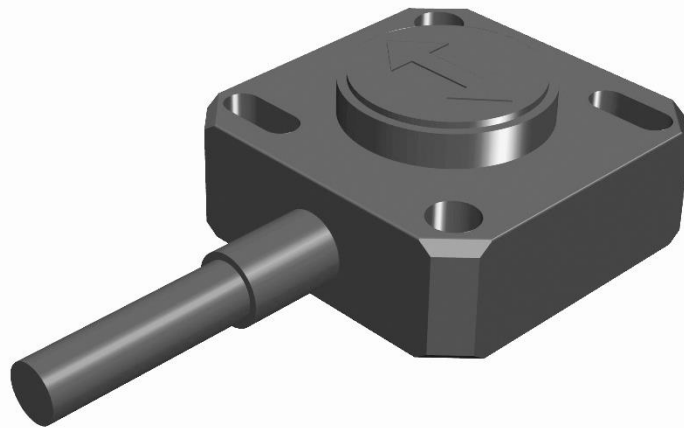
1 axis

Non-programmable device

Output: 4 - 20 mA

horizontal/vertical mounting

Measuring range
 $\pm 30^\circ$



General specifications 11315, v20220221

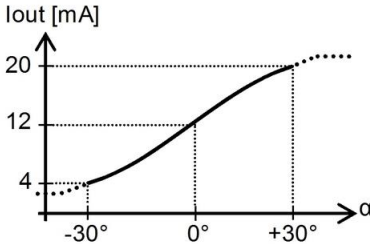
Housing	Plastic injection molded housing (Arnite T06 202 PBT black)
Dimensions (indicative)	30x30x15 mm
Mounting	Included: 2x M3x16 mm zinc plated steel pozidrive pan head screws, self-tapping (PZ DIN 7500CZ) Mounting on flat surface only. Screw with maximum Torque 1,5 Nm
Ingress Protection (IEC 60529)	IP67
Relative humidity	0 - 95% (non condensing, housing fully potted)
Weight	approx. 15 gram (cable excluded)
Supply voltage	10 - 30 V dc
Polarity protection	Yes
Current consumption	≤ 10 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 - 10 Hz ($\pm 2,5$ Hz)
Accuracy (overall @20°C)	0,6° typ. (offset excluded)
Offset error	$\pm 1^\circ$ typ. ($\pm 3^\circ 2\sigma$)
Non linearity	$\pm 0,4^\circ$ typ.
Sensitivity error	$\pm 2\%$ typ., Repeatability 0.1°
Resolution	0,03°
Temperature coefficient	$\pm 0,02^\circ/\text{K}$ typ.
Max mechanical shock	3.500g
Output	4 - 20 mA
Output load	Rload $\leq (50 \cdot V_s - 300)$ (Ω) (Eg: $V_s = 24$ V: Rload $\leq 900 \Omega$)
Short circuit protection	Yes (T<55°C), Max 10 s (T>55°C)
Output refresh rate	continuous (analog)
Programming options	not applicable

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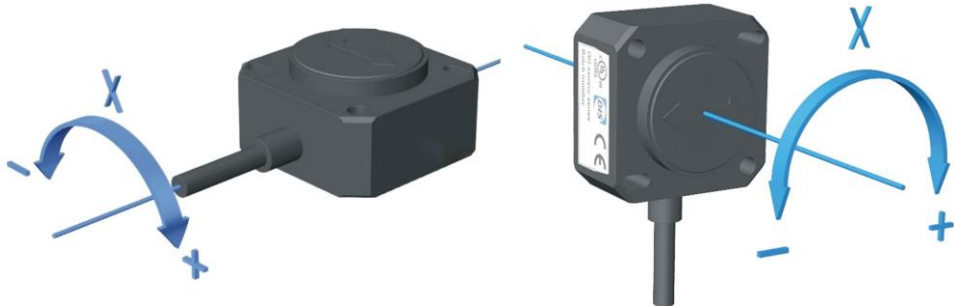
$I_{out} = 12 + 16 \cdot \sin(\alpha)$ [mA]
 Outside measuring range sensor transfer formula is valid until clip level of approximately 2.5mA & 22.5mA

Transfer characteristic



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

Measurement orientation



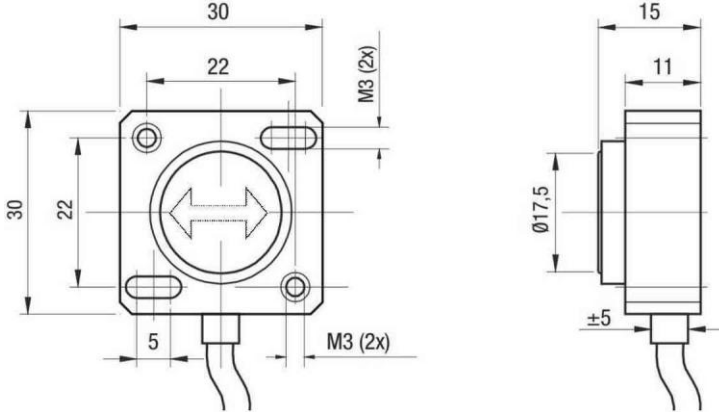
Connection

Wire / pin coding

Connectivity (cable 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

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.