

QG series

QG30-KI-030E-AV-K

Inclination sensor

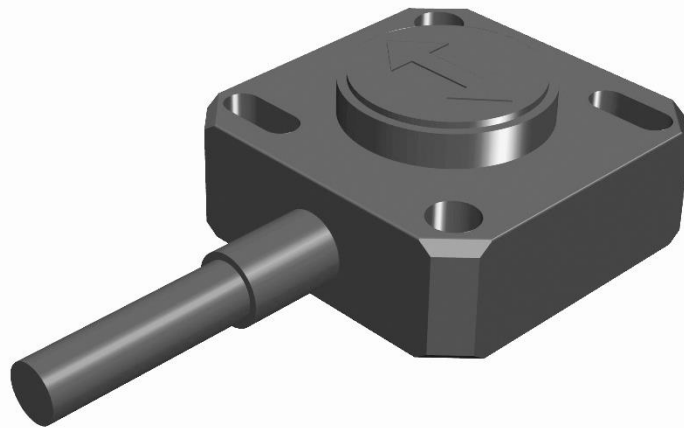
1 axis

Non-programmable device

Output: 0,5 - 4,5 V

horizontal/vertical mounting

Measuring range
 $\pm 30^\circ$



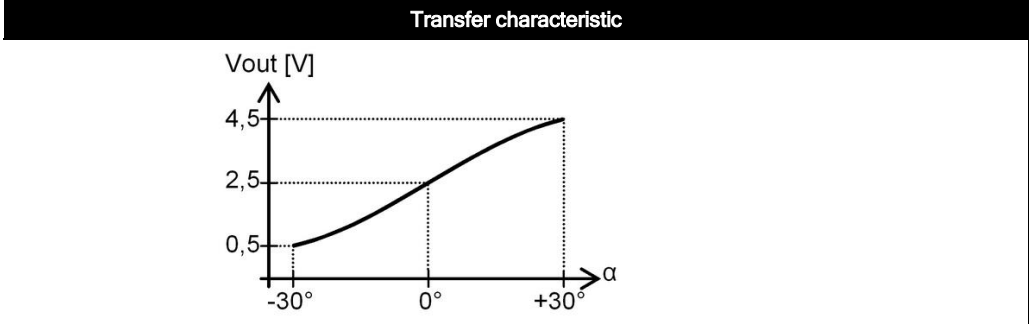
General specifications 11480, v20220221

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
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	0,5 - 4,5 V
Output load	Rload $\geq 20\text{k}\Omega$, Cload ≤ 20 nF
Short circuit protection	Yes (max 10 s)
Output refresh rate	continuous (analog)
Programming options	not applicable

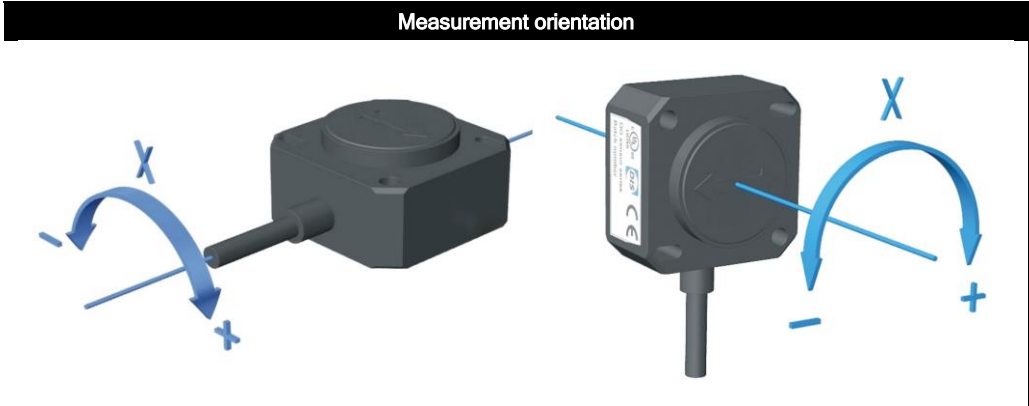
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$V_{out} = 2,5 + 2 \cdot \sin(\alpha) / \sin(30)$ [V]
 output clipping outside measuring range at 0,1 V and 4,9 V approximately



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

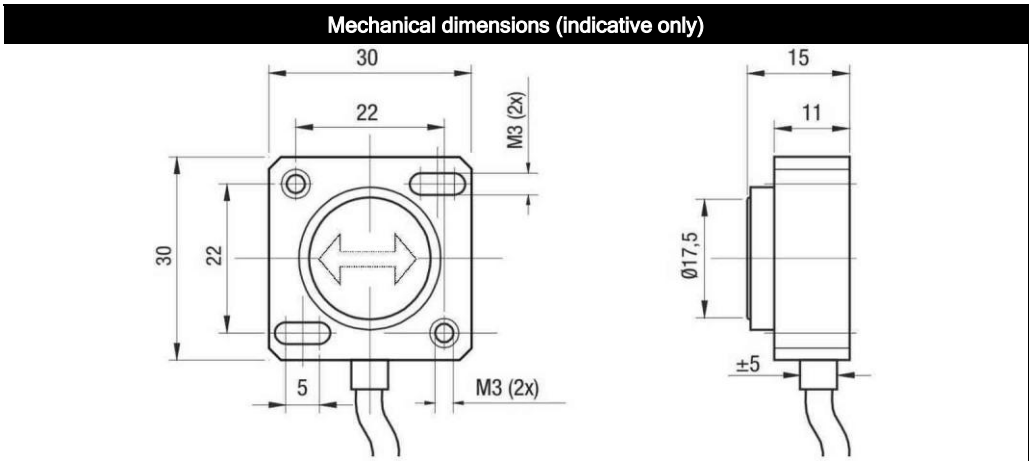


Connection
 Wire / pin coding

Connectivity (cable 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



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.