QG series

QG30-KI-030E-AV-K-5V

Inclination sensor

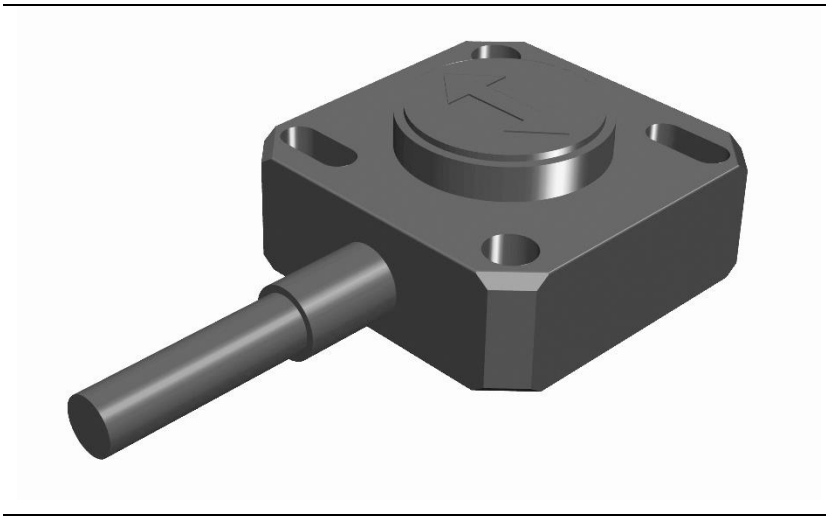
1 axis

Non-programmable device

Output: 0,5 - 4,5 V

horizontal/vertical mounting

Measuring range
± 30°



General specifications 11885, 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	5 V dc
Polarity protection	Yes
Current consumption	≤ 10 mA
Operating temperature	-25 .. +80 °C
Storage temperature	-25 .. +80 °C
Measuring range	± 30°
Centering function	No
Frequency response (-3dB)	0 - 10 Hz (±2,5 Hz)
Accuracy (overall @20°C)	0,6° typ. (offset excluded)
Offset error	± 1° typ. (± 3° 2σ)
Non linearity	± 0,4° typ.
Sensitivity error	± 2% typ., Repeatability 0.1°
Resolution	0,03°
Temperature coefficient	± 0,02°/K typ.
Max mechanical shock	3.500g
Output	0,5 - 4,5 V Ratiometric
Output load	Rload ≥20kΩ, Cload ≤20 nF
Short circuit protection	Yes (max 10 s)
Output refresh rate	continuous (analog)
Programming options	not applicable

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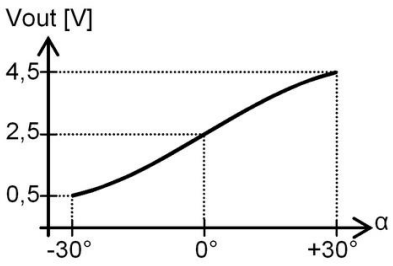
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Uout = 2,5 + 2*sin(α)/sin(30) [V]

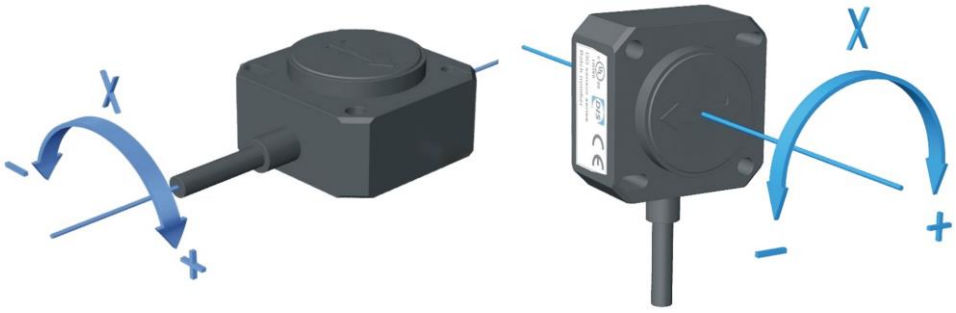
output clipping outside measuring range at 0,1 V and 4,9 V approximately

Transfer characteristic



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

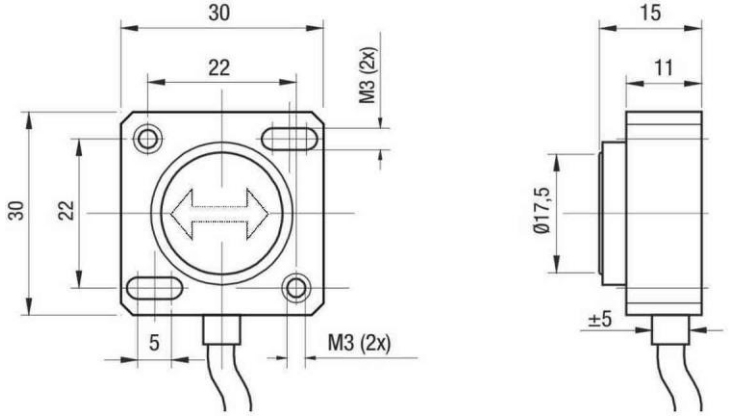
Measurement orientation



Connectivity (cable length ±10%)

Connection	
Wire / pin coding	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

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.

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