Inclination sensor
1 axis
Non-programmable device
Output: 4 - 20 mA
horizontal/vertical mounting
For demanding applications
Measuring range ± 30°

<table>
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<tr>
<th>QG30-KI-030H-AI-K</th>
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General specifications 04524, v20180111

Plastic injection molded housing (Arnite T06 202 PBT black)

- Housing: 30x30x15 mm
- Dimensions (indicative): 30x30x15 mm
- Ingress Protection: IP67
- Relative humidity: 0 - 100%
- Weight: approx. 15 gram (cable excluded)
- Supply voltage: 10 - 30 V dc
- Polarity protection: Yes
- Current consumption: ≤ 30 mA (excluding output signal)
- Operating temperature: -25 .. +80 °C
- Storage temperature: -25 .. +80 °C
- Measuring range: ± 30°
- Centering function: No
- Frequency response (-3dB): 0 - 18 Hz (± 10 Hz)
- Accuracy (typ. and/or 2σ): overall 0,6° typ. (offset excluded)
  - Offset error: < ± 1° typ. (< ± 3° max.)
  - Non linearity: < ± 0,4°
  - Sensitivity error: < ± 2% typ. (< ± 3.5% max.)
  - Resolution: 0,01°
  - Temperature coefficient: ± 0,01°/K typ
- Max mechanical shock: 20,000g
- Output: 4 - 20 mA
- Output load: Rload ≤ (50*Vs-300) [Ω] (Eg: Vs = 24 V: Rload ≤ 900 Ω)
- Short circuit protection: Yes (max 10 s)
- Repeatability: 0,1°
- Programming options: not applicable

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Transfer characteristic

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

Measurement orientation

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

Connectivity (length ±10%)

2 m PVC/PVC Lyy, black Ø 4,6 mm, wires: 3x0,34 mm² Sensor colors (static usage)

<table>
<thead>
<tr>
<th>Wire / pin coding</th>
<th>Brown</th>
<th>Black</th>
<th>Blue</th>
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<tbody>
<tr>
<td>+ Supply Voltage</td>
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<tr>
<td>Output</td>
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<td>Gnd</td>
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Mechanical dimensions (indicative only)

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 fulfill your requirements.