# QG30-KI-010E-AV-K5V

## Inclination sensor

1 axis

Non-programmable device

Output: 0.5 - 4.5 V

horizontal/vertical mounting

For standard applications

Measuring range

± 10°

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### General specifications 12270, 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**: 5 V dc
- **Current consumption**: ≤ 10 mA
- **Polarity protection**: Yes
- **Operating temperature**: -25.. +80 °C
- **Storage temperature**: -25.. +80 °C
- **Measuring range**: ± 10°
- **Centering function**: No
- **Frequency response (-3dB)**: 0 - 10 Hz (±2.5 Hz)
- **Typ. Accuracy @20°C (2σ)**: overall 0.3° typ. (offset excluded)
- **Offset error**: < ± 1° typ. (< ± 3° max.)
- **Non linearity**: < ± 0.2°
- **Sensitivity error**: < ± 2% typ. (< ± 3.5% max.)
- **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)
- **Repeatability**: ± 0.1°
- **Programming options**: not applicable
QG series

QG30-KI-010E-AV-K-5V

Transfer characteristic

\[ U_{\text{out}} = 2.5 + 11.52 \sin(\alpha) \] [V]

Output clipping outside measuring range at 0.1 V and 4.9 V approximately

Measurement orientation

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

Connectivity (length ±10%)

<table>
<thead>
<tr>
<th>Connection</th>
<th>2 m PVC/PVC Lixy, black Ø 4.6 mm, wires: 3x0.34 mm² Sensor colors (static usage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brown</td>
<td>+ Supply Voltage</td>
</tr>
<tr>
<td>Black</td>
<td>Output</td>
</tr>
<tr>
<td>Blue</td>
<td>Gnd</td>
</tr>
</tbody>
</table>

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.