# QG65 analog H-series

**Inclination sensor**
1 axis vertical mounting

Programmable device
Output: 4 - 20 mA

Measuring range programmable between 1° and 360°

Measuring range
Factory default: 360°

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## General specifications 11377, v20180117

- **Reinforced plastic injection molded (Faradex DS, black, EMI shielded by stainless steel fiber in PC)**
- **Dimensions (indicative)**: 60x50x27 mm
- **4x M5x25 mm zinc plated pozidrive screws included (optional: 2x Ø4mm positioning pins)**
- **IP67**
- **0 - 100% approx. 110 gram**
- **10 - 30 V dc (excluding output signal)**
- **≤ 25 mA (excluding output signal)**
- **-40 .. +85 °C**
- **-40 .. +85 °C**
- **Factory default: 360°**
- **Yes (12 mA = 0°), range 360°**
- **0 - 10 Hz**
- **overall 0,07° typ.**
- **< ± 0,03° typ. (< ± 0,08° max.) after centering**
- **< ± 0,06° typ. (< ± 0,15° max.)**
- **not applicable**
- **0,01°**
- **± 0,005°/K typ.**
- **20.000g**
- **4 - 20 mA**
- **Rload ≤ (50*Vs-300) [Ω] (Eg: Vs = 24 V: Rload ≤ 900 Ω)**
- **Yes (max 10 s)**
- **20 ms**

by optional QG65-configurator (measuring range, filtering)
QG series

Transfer characteristic

\[ I_{out} = 12 + 8\left(\alpha/180\right) \text{ [mA]} \]

Measurement orientation

Rotation in vertical plane.

Lateral tilt sensitivity error:
\(< \pm 0.03^\circ/\circ\text{ lateral tilt (typ.)} \)
Max. lateral tilt: 45°

Connectivity (length ±10%)

M12 male 8p connector (Brass Nickel coated, contacts copper alloy)

<table>
<thead>
<tr>
<th>Pin 1:</th>
<th>Output for factory use only</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pin 2:</td>
<td>Supply voltage</td>
</tr>
<tr>
<td>Pin 3:</td>
<td>Programming interface RS232 Rx</td>
</tr>
<tr>
<td>Pin 4:</td>
<td>Programming interface RS232 Tx</td>
</tr>
<tr>
<td>Pin 5:</td>
<td>Gnd</td>
</tr>
<tr>
<td>Pin 6:</td>
<td>Centering input</td>
</tr>
<tr>
<td>Pin 7:</td>
<td>Output</td>
</tr>
<tr>
<td>Pin 8:</td>
<td>not connected</td>
</tr>
</tbody>
</table>

Mechanical dimensions (indicative only)

Centering can be done to eliminate mechanical offsets. To execute centering connect center input to ground (>0,5sec) within 1 min. after power up. After centering you have 1 min. left for another centering. Normally the center input should be left unconnected.

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.