

QG series

QG40N-KIXv-360-AI-CM

Inclination sensor

1 axis vertical mounting

Output
4 - 20 mA

Supply voltage
10 - 30V dc

Measuring range
360°



QG40N-KIXv-360-AI-CM

Housing
Dimensions
Mounting
Ingress Protection (IEC 60529)
Relative humidity
Weight
Supply voltage
Polarity protection
Current consumption
Operating temperature
Storage temperature
Measuring range
Centering function
Frequency response (-3dB)
Accuracy
Offset error
Non linearity
Sensitivity error
Resolution
Temperature coefficient
Max mechanical shock
Output
Output load
Short circuit protection
Output refresh rate

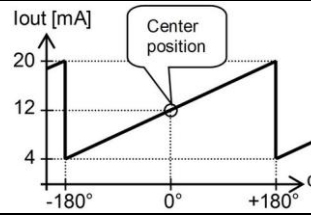
General specifications v20140709

Plastic injection molded housing (Quadro40, PBTP black)
40x40x25 mm
2x M3x25 mm steel zinc plated pozidrive screws
IP67
0 - 95% non condensing
ca 45 gr
10 - 30V dc
Yes
≤ 15 mA (excluding output signal)
-25 .. +85°C
-40 .. +85°C
360°
Yes (12 mA = 0°), range 360°
10 Hz
overall 0,5° typ.
< ± 0,3° (after centering)
< ± 0,4°
< ± 0,3%
0,09°
± 0,04°/K typ.
10.000g
4 - 20 mA
Rload ≤ (50°Vs-300) [Ω] (Eg: Vs = 24 V: Rload ≤ 900 Ω)
Yes (max 10 s)
20 ms

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

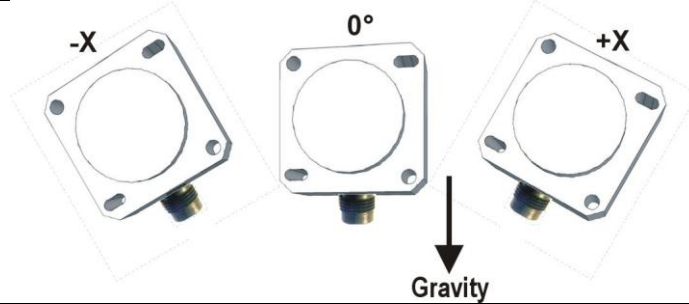
Transfer characteristic



QG40N-KIXv-360-AI-CM

Rotation in vertical plane.
Lateral tilt sensitivity error:
$\pm 0,03^\circ$ lateral tilt (typ.)
Max. lateral tilt: 45°

Measurement orientation



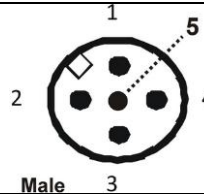
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Connection

Wire / pin coding

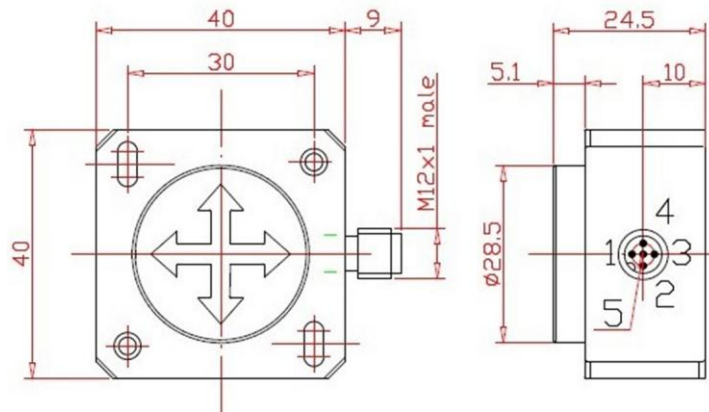
M12 5p male connector

- Pin 1: + Supply Voltage
- Pin 2: For factory use only
- Pin 3: Gnd
- Pin 4: output
- Pin 5: centering



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Mechanical dimensions



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Center function

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.