

QG series

QG40N-KDXYh-015-AI-PT5

Inclination sensor

2 axis horizontal mounting

Output
4 - 20 mA

Supply voltage
10 - 30 Vdc

Measuring range
 $\pm 15^\circ$

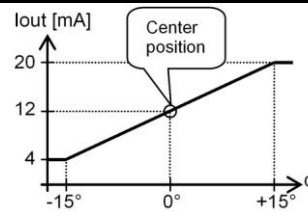


General specifications v20161021

Housing	Plastic injection molded housing (Quadro40, PBTP black)
Dimensions (indicative)	40x40x25 mm
Mounting	2x M3x25 mm zinc plated steel pozidrive screws included
Ingress Protection (IEC 60529)	IP67
Relative humidity	0 - 100%
Weight	ca. 45 gr (excl cable)
Supply voltage	10 - 30 Vdc
Polarity protection	Yes
Current consumption	≤ 15 mA (excluding output signal)
Operating temperature	-25 .. +85°C
Storage temperature	-40 .. +85°C
Measuring range	$\pm 15^\circ$
Centering function	Yes (12 mA = 0°), range: $\pm 5^\circ$
Frequency response (-3dB)	0 - 10Hz
Accuracy (2 σ)	overall 0,3° typ.
Offset error	$< \pm 0,2^\circ$ (after centering)
Non linearity	$< \pm 0,3^\circ$
Sensitivity error	not applicable
Resolution	0,09°
Temperature coefficient	$\pm 0,04^\circ/\text{K}$ typ.
Max mechanical shock	10.000 g
Output	4 - 20 mA
Output load	Rload $\leq (50 \cdot V_s - 300)$ (Ω) (Eg: $V_s = 24$ V: Rload ≤ 900 Ω)
Short circuit protection	Yes (max 10 s)
Output refresh rate	20 ms

$$I_{out} = 12 + 8 \cdot (\alpha/15) \text{ [mA]}$$

Transfer characteristic

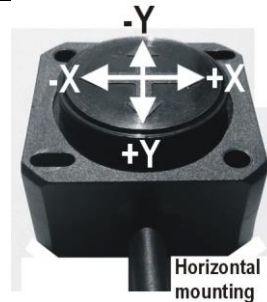


Default 0°: horizontal, no acceleration applied.

Cross tilt sensitivity error:
 $< (0,12 \cdot \text{cross tilt angle})^2 \% \text{ typ.}$

Note:
 one axis $< 10^\circ$ tilt for max. accuracy

Measurement orientation



Connectivity (length $\pm 10\%$)

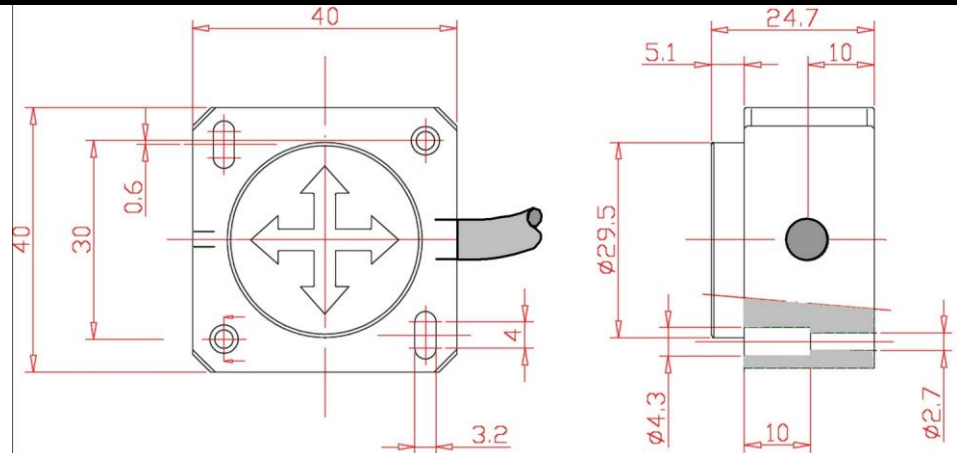
5 m PUR/TPE Li12y11y, black $\varnothing 4,7$ mm, wires: 5x0,34 mm² DIN colors

White	Center
Brown	+ Supply Voltage
Green	GND
Yellow	Output X
Grey	Output Y

Connection

Wire / pin coding

Mechanical dimensions (indicative only)



Center function

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