

# QR series



QR30N-090HB-IK

## Absolute rotary encoder (contactless)

Output  
4 - 20 mA

Supply voltage  
10 - 32V dc

Measuring range  
90° (out of 360°)



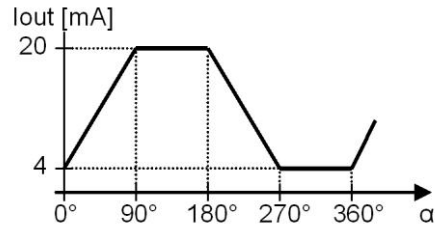
### General specifications 11497, v20150107

Housing	Quadro30: PBT black
Dimensions	30x30x15 mm
Mounting	2x steel zinc plated M3x16 mm screws
Ingress Protection (IEC 60529)	IP67
Weight	approx 15 gr (excl. cable)
Magnet type	8x5,5x11,2 mm Neodymium/N35/nickel coated/remanention 1,2 T
Magnet distance to sensor	d = 0,1 to 3 mm
Max magnet misalignment	± 0,25 mm off axis
Direction of magnetization	Axial in 8 mm (N marked with red dot)
Supply voltage	10 - 32V dc
Polarity protection	Yes
Current consumption	≤ 25 mA ( excluding output signal )
Operating temperature	-25 to 85°C
Storage temperature	-25 to 85°C
Measuring range	90° (out of 360°)
Programmable center position	No
Accuracy	
Resolution	12 bit f.s. (min step 0,088°)
Max offset error	Not applicable
Non linearity	< ± 1° (in magnet alignment range)
Repeatability	0,12°
Response time	< 4 ms
Max speed	15 rpm
Output signal	4 - 20 mA
Short circuit protection	Yes (max 10 s)
Output load resistor	Rload ≤ 50*Vs - 300 [Ω]
Connection	Cable 2 m PVC/PVC Liyy, black Ø 4,6 mm, wires: 3x0,34 mm² Sensor colors (static usage)
Wire coding	Brown + Supply voltage Black Output Blue Gnd

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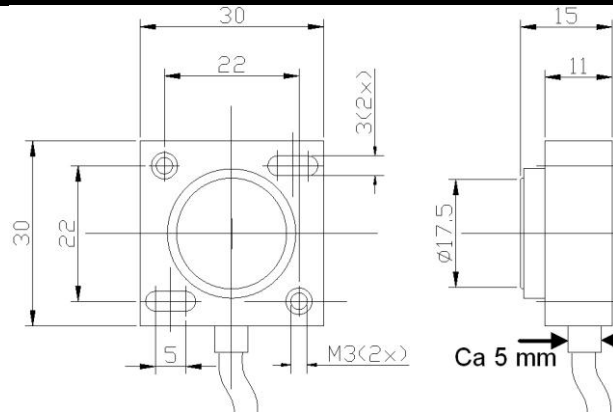
Output approx. 22mA when magnetic field outside specifications

## Transfer characteristic



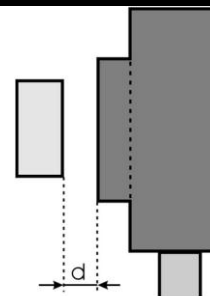
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## Dimensions



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## Magnet distance to sensor



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## Magnet position

Magnet drawn in  $\alpha=0^\circ$  position. While rotating the magnet clockwise  $\alpha$  increases. The magnet's north pole (N) is indicated with a red dot on the magnet.

