

# QR series

QR30N-360HB-IK
<b>Absolute rotary encoder (contactless)</b>
Output 4 - 20 mA
Supply voltage 10 - 32V dc
Measuring range 360°

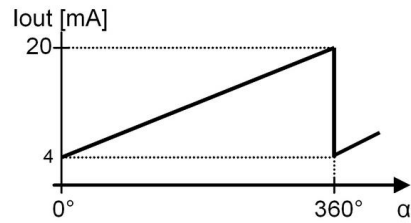


General specifications 11295, v20170511	
Housing	Quadro30: PBT black
Dimensions (indicative)	30x30x15 mm
Mounting	2x steel zinc plated M3x16 mm screws
Ingress Protection (IEC 60529)	IP67
Weight	approx 15 gr (excl. cable)
Magnet type	11,2 x 5,5 x 8 mm Neodymium/N35/nickel coated/remanention 1,2 T included
Magnet distance to sensor	0 to 7 mm, magnet at front side, see 'magnet distance' picture on page 2
Max. radial magnet misalignment	1 mm Radial Off Axis ( < 0,3 mm for minimum non-linearity)
Direction of magnetization	Axial in 8 mm (Northpole marked with red dot)
Supply voltage	10 - 32V dc
Polarity protection	Yes
Current consumption	≤ 25 mA ( excluding output signal )
Operating temperature & humidity	-25 to 85°C, 0 to 100% RH
Storage temperature	-25 to 85°C
Measuring range	360°
Programmable center position	No
Accuracy (2σ)	
Resolution	11 bit over 360° (min. step 0,18°)
Max offset error	Not applicable
Non linearity	< ± 1° (in magnet alignment range)
Repeatability	0,24°
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 (length ±10%)	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

## QR30N-360HB-IK

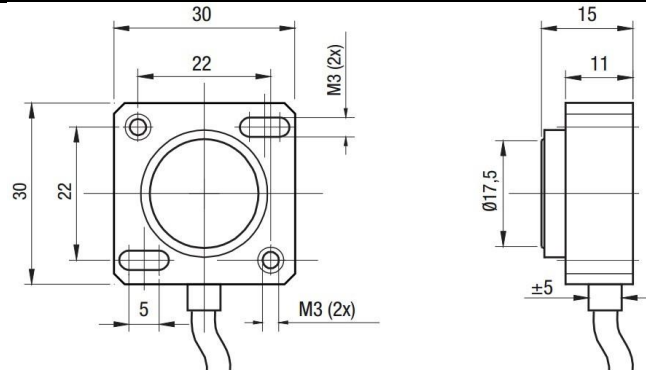
Output approx. 22mA when magnetic field outside specifications

## Transfer characteristic



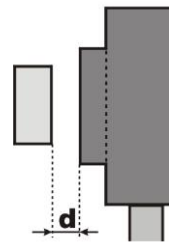
## QR30N-360HB-IK

## Dimensions (indicative only)



## QR30N-360HB-IK

## Magnet distance (side view)



## QR30N-360HB-IK

## Magnet orientation

Front view

Magnet drawn in  $\alpha=0^\circ$  position  
Magnet rotates clockwise:  $\alpha$  increases

Magnet North pole indication: red dot

Magnet surface to sensor: 11,2 x 8mm  
Magnet height: 5,5mm

