

QR series



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|--------------------------------------------------|
| QR30N-360HB-VK |
| Absolute rotary encoder (contactless) |
| Output 0 - 5 V |
| Supply voltage 10 - 32V dc |
| Measuring range 360° |

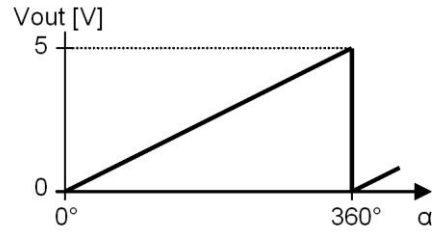


| General specifications 11400, v20180418 | |
|-----------------------------------------|----------------------------------------------------------------------------------------|
| Housing | Quadro30: PBT black |
| Dimensions (indicative) | 30x30x15 mm |
| Mounting | 2x steel zinc plated M3x16 mm screws |
| Ingress Protection (IEC 60529) | IP67 |
| Relative Humidity | 0 - 95% (non condensing, fully potted) |
| Weight | approx 15 gr (excl. cable) |
| Magnet type | 11,2 x 5,5 x 8 mm Neodymium/N35/nickel coated/remantion 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) |
| Supply voltage | 10 - 32V dc |
| Polarity protection | Yes |
| Current consumption | ≤ 25 mA |
| Operating temperature | -25 to 80°C |
| Storage temperature | -25 to 85°C |
| Measuring range | 360° |
| Programmable center position | No |
| Accuracy | |
| Resolution | 12 bit over 360° (min. step 0,09°) |
| Sensitivity error | ±0.5% typ. (@20°C), ±1% typ. (full Temp. range) |
| Offset error | Magnet + Sensor: <3° typ. (with perfect external magnet positioning) |
| Non linearity | < ± 1° (in magnet alignment range) |
| Repeatability | 0,13° |
| Response time | < 4 ms |
| Max speed | 100 rpm |
| Output signal | 0 - 5 V |
| Short circuit protection | Yes (T<55°C), Max 10 s (T>55°C) |
| Output load resistor | ≥ 20 kΩ |
| 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 |

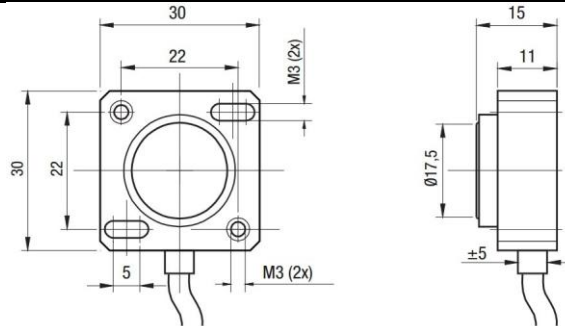
QR30N-360HB-VK

Output approx. 0V when magnetic field outside specifications

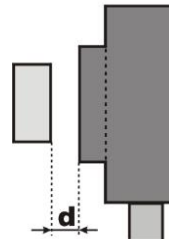
Transfer characteristic



Dimensions (indicative only)



Magnet distance (side view)



Front view

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

Magnet North pole is indicated

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

Magnet orientation

