

QR series



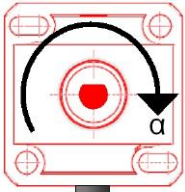
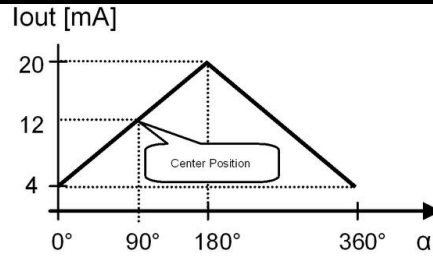
QR40-180HB-IK
Absolute rotary encoder (contactless)
Output 4 - 20 mA
Supply voltage 10 - 30V dc
Measuring range 180° (out of 360°)



General specifications 11920, v20200323	
Housing	Quadro40: PBT black
Dimensions (indicative)	40x40x22 mm
Mounting	Included: 2x M4x25 stainless steel pozidrive pan head screws, self-tapping (PZ DIN7500CZ)
Ingress Protection (IEC 60529)	IP66
Relative Humidity	0 - 95% (non condensing, fully potted)
Weight	approx 75 gr (excl. cable)
Shaft	Stainless steel Ø 6 mm
Shaft type	D-form
Shaft bearing	Polyamide (glass-filled), Radial force < 1Nm, Axial force < 8N (push & pull)
Shaft length	8 mm
Supply voltage	10 - 30V dc
Polarity protection	Yes
Current consumption	≤ 50 mA (excluding output signal)
Operating temperature	-25 to 80°C
Storage temperature	-25 to 85°C
Measuring range	180° (out of 360°)
Programmable center position	Yes (12 mA / 90°)
Accuracy	
Resolution	11 bit over 360° (min. step 0,18°)
Sensitivity error	±0.5% typ. (@20°C), ±1% typ. (full Temp. range)
Offset error	± 1% (after centering)
Non linearity	< ± 1,4°
Repeatability	0,26°
Response time	< 10 ms
Max speed	15 rpm
Output signal	4 - 20 mA
Short circuit protection	Yes (T<55°C), Max 10 s (T>55°C)
Output load resistor	Rload ≤ 50*Vs - 250 [Ω] (Eg: Vs = 24 V: Rload ≤ 950 Ω)
Connection (length ±10%)	Cable 2 m PVC/PVC Liyy, black Ø 4,6 mm, wires: 4x0,25 mm² Sensor colors (static usage)
Wire coding	Brown + Supply voltage Black Output Blue Gnd White Center input

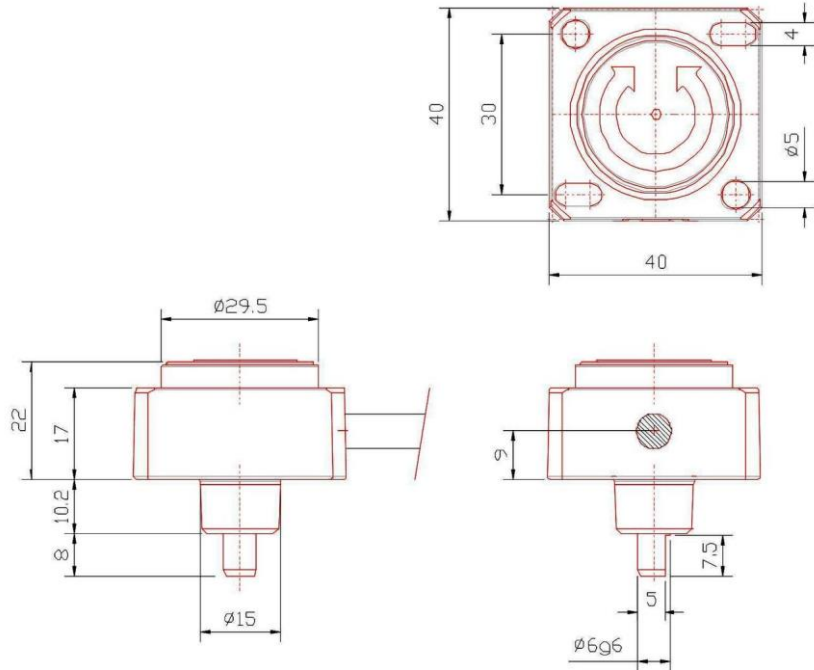
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Transfer characteristic



Rotation axis: CW

Dimensions (indicative only)



Centering

Centering will store the current angle position as new center position into permanent memory. Centering can only be done in the 1st min. after power up, or within the 1st min. after centering. To perform a centering action the center input should be unconnected during power up, than connect the center input to ground for more than 1/2 sec. to activate centering. Centering is used to correct mechanical offsets.