QR series

QR40-360HB-VK-5V

Absolute rotary encoder (contactless)

Output
0 - 5 V (ratiometric to 5 V supply voltage)

Supply voltage
5V dc

Measuring range
360°

General specifications 12646, 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	5V dc
Polarity protection	No
Current consumption	≤ 50 mA
Operating temperature	-25 to 80°C
Storage temperature	-25 to 85°C
Measuring range	360°
Programmable center position	Yes (2,5 V / 180°)
Accuracy	
Resolution	12 bit over 360° (min. step 0,09°)
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	0 - 5 V (ratiometric to 5 V supply voltage)
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: 4x0,25 mm² Sensor colors (static usage)
Wire coding	Brown + Supply voltage Black Output Blue Gnd White Center input

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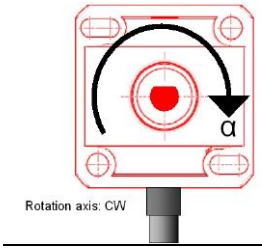
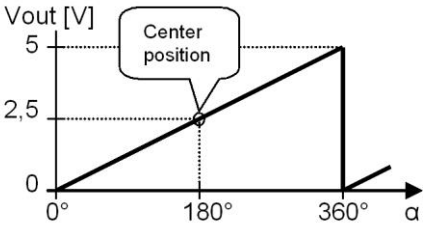
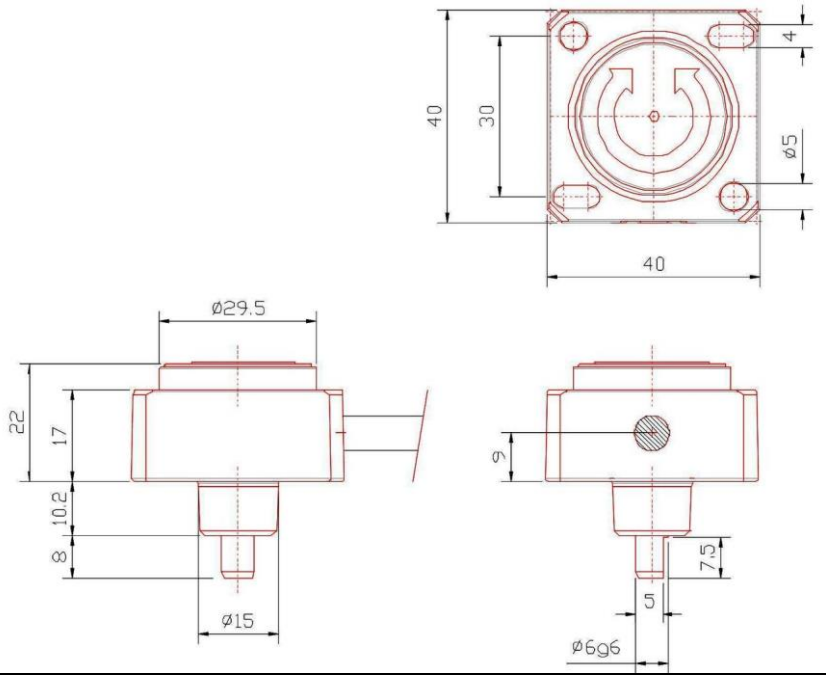


Transfer characteristic



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 ½ sec. to activate centering.
Centering is used to correct mechanical offsets.