

QR series

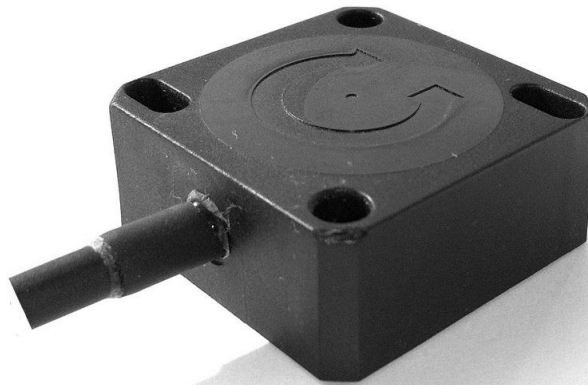
QR40EMN-360H-2I-PT

**Absolute rotary encoder
(contactless)
Full Redundant**

Output
4 - 20 mA / 20 - 4 mA

Supply voltage
10 - 30 Vdc

Measuring range
360°



General specifications v20141203

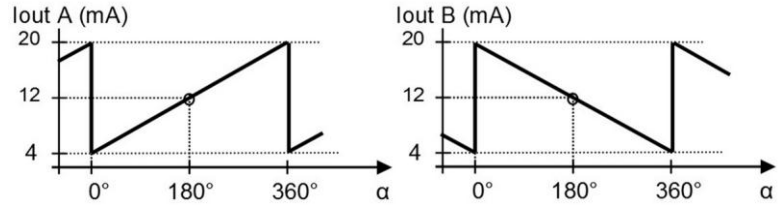
Housing	Quadro40: PBT black												
Dimensions	40x40x17 mm												
Mounting	2x stainless M4x25 mm screws												
Ingress Protection (IEC 60529)	IP67												
Weight	approx 50 gr												
Magnet type	8x5,5x11,2 mm Neodymium/N35/nickel coated/remanention 1,2 T												
Magnet distance to sensor	d = 0,5 to 5 mm												
Max magnet misalignment	± 0,25 mm off axis												
Direction of magnetization	Axial in 8 mm (N marked with red dot)												
Supply voltage	10 - 30 Vdc												
Polarity protection	Yes												
Current consumption	≤ 50 mA (excluding output signals)												
Operating temperature	-25 to 85°C												
Storage temperature	-40 to 85°C												
Measuring range	360°												
Programmable center position	No												
Accuracy													
Resolution	11 bit f.s. (min step 0,176°)												
Max offset error	Not applicable												
Non linearity	< ± 1,5° (both outputs individual)												
Repeatability	0,26°												
Response time	< 4 ms												
Max speed	15 rpm												
Output signal	4 - 20 mA / 20 - 4 mA												
Short circuit protection	Yes (max 10 s)												
Output load resistor	Rload ≤ 50*Vs - 250 [Ω] (Eg: Vs = 24 V: Rload ≤ 950 Ω)												
Connection	2 m PUR/TPE Li12y11y, black Ø 5,1 mm, wires: 6x0,34 mm² DIN colors												
Pinout connector	<table border="0"> <tbody> <tr> <td>Green</td> <td>Gnd A</td> </tr> <tr> <td>Brown</td> <td>+ Supply voltage A</td> </tr> <tr> <td>Grey</td> <td>Output A</td> </tr> <tr> <td>White</td> <td>Gnd B</td> </tr> <tr> <td>Yellow</td> <td>+ Supply voltage B</td> </tr> <tr> <td>Pink</td> <td>Output B</td> </tr> </tbody> </table>	Green	Gnd A	Brown	+ Supply voltage A	Grey	Output A	White	Gnd B	Yellow	+ Supply voltage B	Pink	Output B
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Magnet field within specifications:
Differences between the outputs < 3°

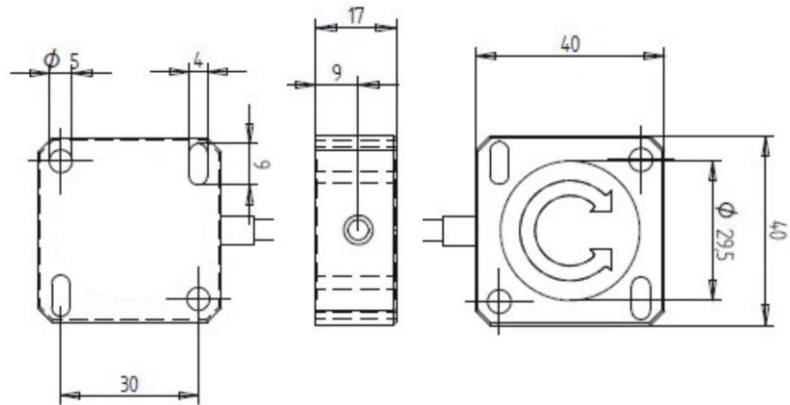
Magnet field outside specifications:
Differences between the outputs up to 360°

Transfer characteristic



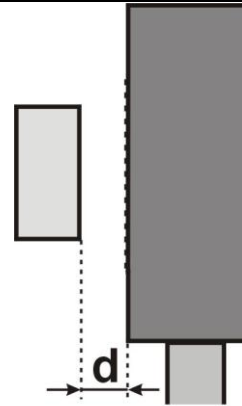
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Dimensions



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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
 α increases.
The magnet's north pole (N)
is indicated with a red dot on the magnet.

