

## Absolute & Incremental rotary encoders

rev3.2 20191217

Family	QR30	QR30N	QR40	QR40EMN	QR40EMN Redundant
Type	incremental A/B-pulse	absolute	absolute	absolute	absolute
Style	external magnet, no shaft	external magnet, no shaft	shaft, internal magnet	external magnet, no shaft	external magnet, no shaft
Magnet placing	rear (potting side)	front side	internal	front side	front side
Magnet distance (Std magnet)	0 - 2 mm	0 - 7 mm	internal	0 - 10mm	0 - 10mm
Centering function	no	no	yes	no	no
Functional safety	no	no	no	no	full redundant
Measuring range	not applicable	90°   180°   360°	90°   180°   360°	90°   180°   360°	90°   180°   360°
Output format	A/B pulse push pull	4-20mA / 0-5V	4-20mA / 0-5V some models	4-20mA / 0-5V	4-20mA / 0-5V
Output response time	< 30.000 rpm	4 ms, <100 rpm	10 ms, <15 rpm	4 ms, <100 rpm	4 ms, <100 rpm
Resolution	32/64/128/256/1024 PPR	12 bit (step 0,09°)	11 bit (step 0,09°)	11 or 12 bit (step 0,18 or 0,09°)	11 or 12 bit (step 0,18 or 0,09°)
Non linearity	not applicable	< ±1°	< ± 1,4°	< ± 1,0°	< ± 1,0°
Repeatability	not applicable	0,12°	0,27°	0,27 or 0,12°	0,27 or 0,12°
Housing material	Plastic PBTP black	Plastic PBTP black	Plastic PBTP black	Plastic PBTP black	Plastic PBTP black
Size	30x30x15mm	30x30x15mm	40x40x22mm	40x40x17mm	40x40x17mm
Temp. range	-25 .. +85°C	-25 .. +85°C	-25 .. +85°C	-40 .. +85°C	-40 .. +80°C
Protection class	IP67	IP67	IP66	IP67, IP69K	IP67
Certification	CE, optional UL	CE, optional UL	CE, optional UL	CE, UL	CE, optional UL
Connection standard	PVC cable 2m	PVC cable 2m	PVC cable 2m	M12 5-pole	PUR cable 2m
Options:	Different output formats, ranges, cables, connectors etc.				