

Absolute & Incremental rotary encoders													rev3.3 20220208			
Family	QR30	QR30N			QR40			QR46			QR40EMN			QR40EMN Redundant		
Product life cycle status	released	released			released			released			released			released		
Type	incremental A/B-pulse	absolute			absolute			absolute			absolute			absolute		
Style	external magnet, no shaft	external magnet, no shaft			D-shaft, internal magnet			D-shaft, internal magnet			external magnet, no shaft			external magnet, no shaft		
Magnet placing	rear (potting side)	front side			internal			internal			front side			front side		
Magnet distance (Std magnet)	0 - 2 mm	0 - 7 mm			not applicable			not applicable			0 - 10mm			0 - 10mm		
Centering function	no	no			no			no			no			no		
Functional safety	no	no			no			no			no			full redundant		
Measuring range	not applicable	90°	180°	360°	90°	180°	360°	90°	180°	360°	90°	180°	360°	90°	180°	360°
Supply Voltage	8 - 30 Vdc	10 - 32 Vdc / 5 Vdc			10 - 32 Vdc / 5 Vdc			10 - 32 Vdc / 5 Vdc			10 - 32 Vdc / 5 Vdc			10 - 30 Vdc / 5 Vdc		
Output format	A/B pulse push pull	4-20mA / 0-5V Vcc=5V: 0-5V ratiometric			4-20mA / 0-5V Vcc=5V: 0-5V ratiometric			4-20mA / 0-5V Vcc=5V: 0-5V ratiometric			4-20mA / 0-5V Vcc=5V: 0-5V ratiometric			4-20mA / 0-5V Vcc=5V: 0-5V ratiometric		
Output response time	< 30.000 rpm	4 ms, <100 rpm			4 ms, <15 rpm			4 ms, <15 rpm			4 ms, <100 rpm			4 ms, <100 rpm		
Resolution	32/64/128/256/1024 PPR	12 bit (step 0,09°)			12 bit (step 0,09°)	11 bit		12 bit (step 0,09°)	11 bit		12 bit (step 0,09°)	11 bit		12 bit (step 0,09°)	11 bit	
Non linearity	not applicable	< ±1°			< ±1°			< ±1°			< ±1,0°			< ±1,0°		
Sensitivity-error	±0,5% typ @20°C ±1% typ. (full Temp. range)	±0,5% typ @20°C ±1% typ. (full Temp. range)			±0,5% typ @20°C ±1% typ. (full Temp. range)			±0,5% typ @20°C ±1% typ. (full Temp. range)			±0,5% typ @20°C ±1% typ. (full Temp. range)			±0,5% typ @20°C ±1% typ. (full Temp. range)		
Repeatability	not applicable	0,12°			0,12°	0,27°		0,12°	0,27°		0,12°	0,27°		0,12°	0,27°	
Housing material	Plastic	Plastic			Reinforced Plastic			Reinforced Plastic			Reinforced Plastic			Reinforced Plastic		
Size	30x30x15mm	30x30x15mm			40x40x22mm, shaft excluded			40,5x63x28mm, shaft excluded			40x40x17mm			40x40x17mm		
Temp. range	-25 . . +85°C	-25 . . +85°C			-25 . . +85°C			-25 . . +80°C			-40 . . +85°C			-40 . . +80°C		
Protection class	IP67	IP67			IP66			IP66			IP67, IP69K			IP67		
Certification	CE, optional UL	CE, optional UL			CE, optional UL			CE			CE, UL			CE, optional UL		
Connection standard	PVC cable 2m	PVC cable 2m			PVC cable 2m			Pigtail 0,1m PUR with AMP Superseal 1.5 series			M12 5-pole			PUR cable 2m		
Remarks								Mounting & shaft compatible with brands like Elobau						See Declaration of Conformity for functional safety figures		
Options:	Different output formats (i.e. 0,5-4,5V, 0-10V etc), subranges, zero-point, cables, connectors etc.															