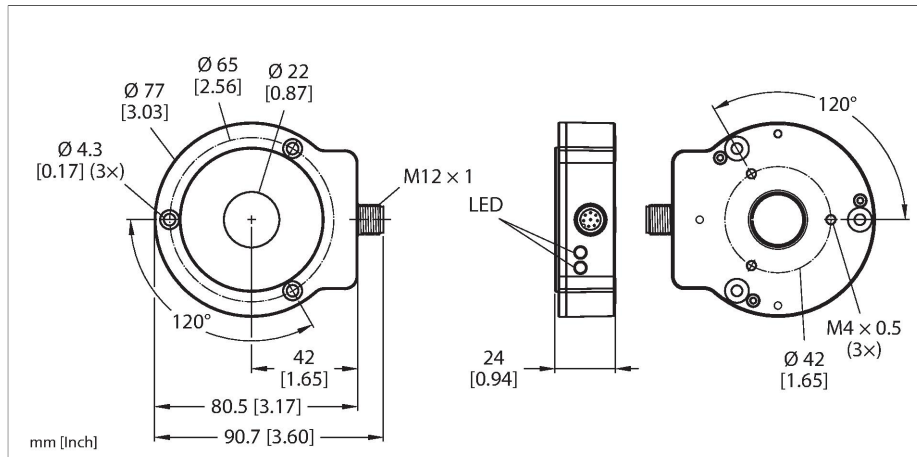


RI360P0-QR24M0-0250X2-H1181

Contactless Encoder – Incremental: 250 ppr

Premium Line



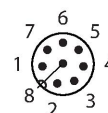
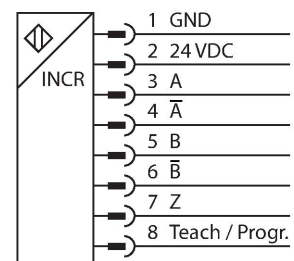
Technical data

Type	RI360P0-QR24M0-0250X2-H1181
ID	1593110
Measuring principle	Inductive
General data	
Max. Rotational Speed	10000 rpm
	Determined with standardized construction, with a steel shaft Ø 20 mm, L = 50 mm and reducer Ø 20 mm
Starting torque shaft load (radial / axial)	not applicable, because of contactless measuring principle
Nominal distance	1.5 mm
Repeat accuracy	≤ 0.01 % of full scale
Linearity deviation	≤ 0.05 % f.s.
Temperature drift	≤ ± 0.003 %/K
Output type	Incremental
Resolution, incremental	250 ppr
Electrical data	
Operating voltage	10...30 VDC
Residual ripple	≤ 10 % U _{ss}
Isolation test voltage	≤ 0.5 kV
Short-circuit protection	yes / Cyclic
Wire breakage/Reverse polarity protection	yes / yes (voltage supply)
Pulse frequency max.	200 kHz
Signal level high	min. U _B - 2 V
Signal level low	max. 2.0 V
Output function	8-pin, Push-Pull/HTL

Features

- Compact, rugged housing
- Many mounting possibilities
- Status displayed via LED
- Immune to electromagnetic interference
- Position of z-track can be set via Easy-Teach
- Burst function, absolute angular position output incrementally via Easy-Teach pulse
- 10...30 VDC
- Male M12 x 1, 8-pin
- Push-pull A, B, Z, A (inverse), B (inverse)

Wiring diagram



Functional principle

The measuring principle of inductive angle sensors is based on oscillation circuit coupling between the positioning element and the sensor, whereby an output signal is provided

Technical data

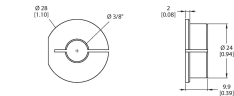
Sample rate	1000 Hz
Current consumption	< 100 mA
Mechanical data	
Design	QR24
Dimensions	81 x 78 x 24 mm
Flange type	Flange without mounting element
Shaft Type	Hollow shaft
Shaft diameter D [mm]	6 6.35 9.525 10 12 12.7 14 15.875 19.05 20
Housing material	Metal/plastic, ZnAlCu1/PBT-GF30-V0
Electrical connection	Connector, M12 × 1
Environmental conditions	
Ambient temperature	-25...+85 °C
	Acc. to UL approval to +70 °C
Vibration resistance	55 Hz (1 mm)
Vibration resistance (EN 60068-2-6)	20 g; 10...3000 Hz; 50 cycles; 3 axes
Shock resistance (EN 60068-2-27)	100 g; 11 ms ½ sine; 3 × each; 3 axes
Continuous shock resistance (EN 60068-2-29)	40 g; 6 ms ½ sine; 4000 × each; 3 axes
Protection class	IP68 IP69K
MTTF	138 years acc. to SN 29500 (Ed. 99) 40 °C
Power-on indication	LED, Green
Measuring range display	LED, yellow, yellow flashing
Included in delivery	MT-QR24 mounting aid

proportional to the angle of the positioning element. The rugged sensors are wear and maintenance-free, thanks to the contactless operating principle. They convince through their excellent repeatability, resolution and linearity within a broad temperature range. The innovative technology ensures a high immunity to electromagnetic DC and AC fields.

Accessories

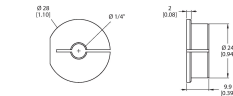
P1-RI-QR24 	1590921 Positioning element, for Ø 20 mm shafts
P2-RI-QR24 	1590922 Positioning element, for Ø 14 mm shafts
P3-RI-QR24 	1590923 Positioning element, for Ø 12 mm shafts
P4-RI-QR24 	1590924 Positioning element, for Ø 10 mm shafts
P5-RI-QR24 	1590925 Positioning element, for Ø 6 mm shafts
P6-RI-QR24 	1590926 Positioning element, for Ø 3/8" shafts
P7-RI-QR24 	1590927 Positioning element, for Ø 1/4" shafts
P9-RI-QR24 	1593012 Positioning element for installation on Ø 1/2" shafts
P10-RI-QR24 	1593013 Positioning element for installation on Ø 5/8" shafts
P11-RI-QR24 	1593014 Positioning element for installation on Ø 3/4" shafts
P8-RI-QR24 	1590916 Positioning element with blanking plug for large shafts
PE1-QR24 	1590937 Positioning element without adapter sleeve
RA2-QR24 	1590929 Adapter sleeve, for Ø 14 mm shafts
RA3-QR24 	1590930 Adapter sleeve, for Ø 12 mm shafts
RA4-QR24 	1590931 Adapter sleeve, for Ø 10 mm shafts
RA5-QR24 	1590932 Adapter sleeve, for Ø 6 mm shafts
M1-QR24 	1590920 Aluminum protecting ring, for inductive encoders RI-QR24
RA1-QR24 	1590928 Adapter sleeve, for Ø 20 mm shafts

RA6-QR24 1590933 Adapter sleeve, for Ø 3/8" shafts



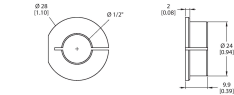
19/11/2012

RA7-QR24 1590934 Adapter sleeve, for Ø 1/4" shafts



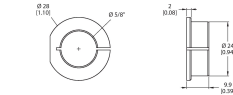
19/11/2012

RA9-QR24 1590960 Adapter sleeve, for Ø 1/2" shafts



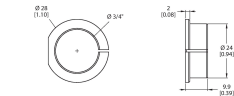
19/11/2012

RA10-QR24 1590961 Adapter sleeve, for Ø 5/8" shafts



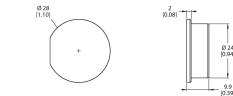
19/11/2012

RA11-QR24 1590962 Adapter sleeve, for Ø 3/4" shafts



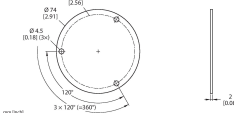
19/11/2012

RA8-QR24 1590959 Plug for mounting option C



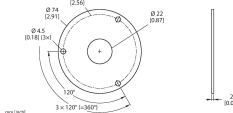
19/11/2012

SP1-QR24 1590938 Shield plate Ø 74 mm, aluminium



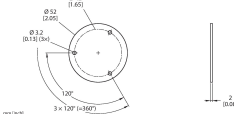
19/11/2012

SP2-QR24 1590939 Shield plate Ø 74 mm, aluminium, with borehole for shaft feedthrough



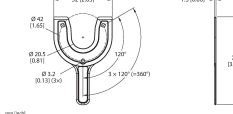
19/11/2012

SP3-QR24 1590958 Shield plate Ø 52 mm, aluminium



19/11/2012

MT-QR24 1590935 Mounting aid for optimal alignment of positioning element

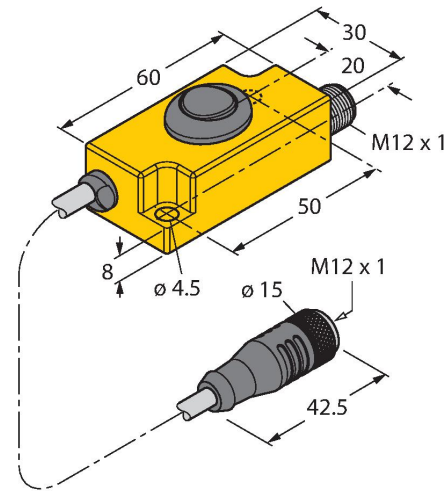


19/11/2012

Accessories

Dimension drawing	Type	ID	
	RKC8T-2/TXL	6625142	Connection cable, M12 female connector, straight, 8-pin, cable length: 2 m, jacket material: PUR, black; cULus approval
	E-RKC 8T-264-2	U-04781	Connection cable, female M12, straight, 8-pin (twisted pairs), shielded, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see www.turck.com

Accessories

Dimension drawing	Type	ID	
	TX2-Q20L60	6967117	Teach adapter for inductive encoders with 8-pin male M12 x 1, for simple programming via Easy Teach