

MAIN FEATURES

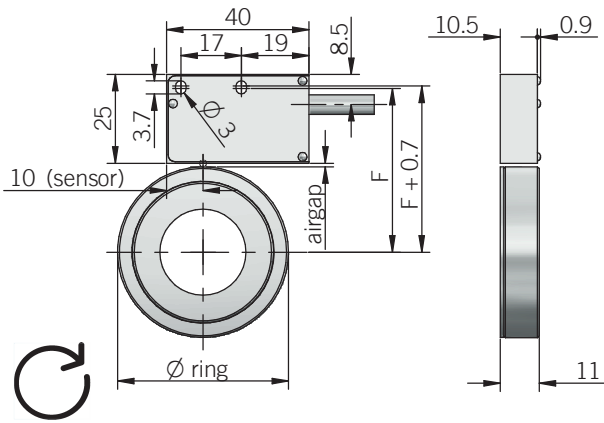
Contactless encoder with through hollow shaft up to 28 mm. The compact size (only 11 mm thickness), the high IP grade and resistance to vibrations make this product an excellent solutions for heavy duty applications.

- 2 channel encoder (A / B) up to 4096 ppr
- Power supply up to +28 V DC with several electrical interfaces available
- Up to 350 kHz output frequency
- Cable output, connectors available on cable end
- Through hollow shaft diameter up to 28 mm
- Shaft mounting by tolerance ring
- Wide operating temperature -20° ... +85°C (-4° ... +185°F)



ORDERING CODE	ETMR	A	4096	S	5	L	9	S	8	PR	.XXX
SERIES incremental encoder with magnetic ring ETMR											
MODEL bore diameter from 9 ... 19 mm A bore diameter 24 / 28 mm B											
RESOLUTION ppr from 64 to 4096 refer to the available pulses list											
ZERO PULSE without zero pulse S											
POWER SUPPLY (with L electrical interface) 5 V DC 5 5 ... 28 V DC 5/28											
ELECTRICAL INTERFACE push-pull P line driver L power supply 5/28 V DC - output RS-422 RS											
BORE DIAMETER mm 9 (3/8") mm 9,52 mm 10 mm 11 mm 14 mm 19 mm 24 mm 28											
ENCLOSURE RATING IP 67 S											
MAX ROTATION SPEED 8000 rpm 8											
OUTPUT TYPE cable (standard length 1,5 m) PR preferred cable lengths 2 / 3 / 5 / 10 m, to be added after OUTPUT TYPE (eg. PR5)											
VARIANT custom version XXX											

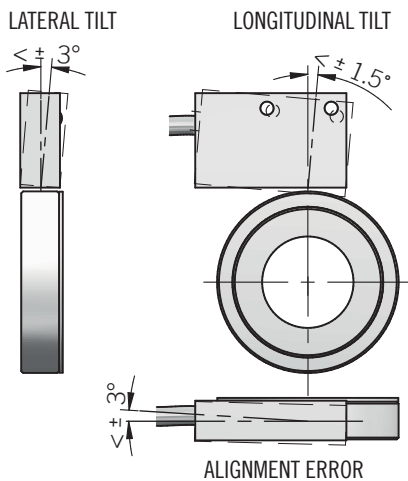
ETMRA / B



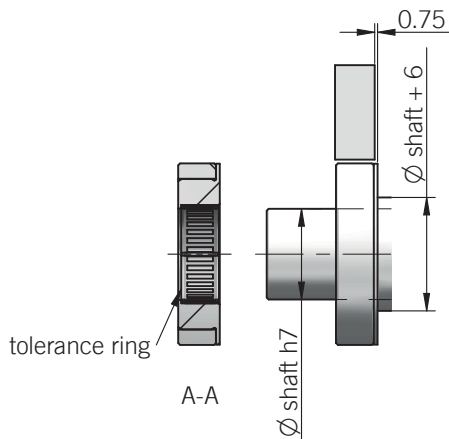
Model	A	B
Ø ring	41,2	48
Fixing (F)	41,9	46
Airgap	0,3 ± 0,1	1 ± 0,1

tolerance ring is included
for mounting instruction please refer to product installation notes

MOUNTING TOLERANCES



RECOMMENDED INTERFACE DESIGN



dimensions in mm

ELECTRICAL SPECIFICATIONS

Resolution	from 64 to 4096 ppr (powers of 2)
Pole pitch	model A = 2 mm model B = 5 mm
Power supply¹	5 = 4,5 ... 5,5 V DC 5/28 = 4,5 ... 30 V DC (reverse polarity protection)
Power draw without load	800 mW max
Max load current	20 mA / channel
Electrical interface²	push-pull / line driver HTL (AEIC-7272 or similar) line driver RS-422 (AELT-5000 or similar)
Max output frequency	350 kHz
Counting direction	A leads B clockwise (front view)
Accuracy	± 0,35° typical / ± 0,50° max
Mean time to dangerous failure (MTTF)³ according to EN ISO 13849-1	318 years
Mission time (Tm)³	20 years
Diagnostic coverage (DC)³	0%
Cable type	shielded - fixed installation conductors section 0,14 mm ² / AWG 26 min bending radius min 60 mm
Electromagnetic compatibility	according to 2014/30/EU directive
RoHS	according to 2011/65/EU directive
UL / CSA	file n. E212495

MECHANICAL SPECIFICATIONS

Bore diameter	Ø 9 / 9,52 (3/8") / 10 / 11 / 14 / 19 / 24 / 28 mm
Enclosure rating	IP 67 (IEC 60529)
Max rotation speed	8000 rpm
Shock	50 G, 11 ms (IEC 60068-2-27)
Vibration	20 G, 10 ... 2000 Hz (IEC 60068-2-6)
Moment of inertia	115 x 10 ⁻⁶ kgm ² (27,29 x 10 ⁻⁴ lbfm ²)
Sensor body material	anodized aluminum
Magnet-actuator material	stainless steel
Operating temperature^{4,5}	-20° ... +85°C (-4° ... +185°F)
Storage temperature⁵	-20° ... +85°C (-4° ... +185°F)
Weight	100 g (3,53 oz)

¹ as measured at the transducer without cable influences

² for further details refer to OUTPUT LEVELS on TECHNICAL BASICS section

³ this product is not a safety component, for further details refer to TECHNICAL BASICS section

⁴ measured on the transducer flange

⁵ condensation allowed

CONNECTIONS

Function	Cable P	Cable L / RS
+V DC	red or brown	red
0 V	black or grey	black
A+	green	green
A-	/	brown or grey
B+	yellow	yellow
B-	/	orange
⊖	shield	shield

RESOLUTIONS

64* - 128 - 256 - 512 - 1024 - 2048 - 4096

* available with mod.B; please directly contact our offices for other pulses