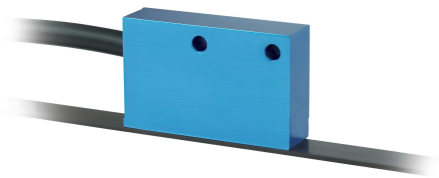
ETMA 1 / 2 / 4 / 5 / 6

MAGNETIC INCREMENTAL LINEAR SENSOR

MAIN FEATURES

Incremental linear system based on the magnetic principle with no wear thanks to non-contact technology. Thanks to its high IP rating, ETMA is suitable for applications in harsh environments such as marble and glass processing machines, washing machines.

- Resolution up to 0,01 mm
- Power supply up to +30 V DC with various electrical interfaces available
- Up to 4 m/s travel speed
- IP 67 as protection grade
- Cable output, connectors available at cable end



ORDERING CODE

ETMA	1	Z	5	L	S	PR3	. XXX

SERIES
magnetic incremental linear sensor ETMA

RESOLUTION
0,1 mm 1
0,04 mm 2
0,2 mm 4
0,5 mm 5
1 mm 6

ZERO PULSE
without zero pulse S
with zero pulse Z

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

ENCLOSURE RATING
IP 67 S

OUTPUT TYPE
cable length 3m PR3
preferred cable lengths 6 / 10 / 20 m, to be added after output type

VARIANT
custom version XXX

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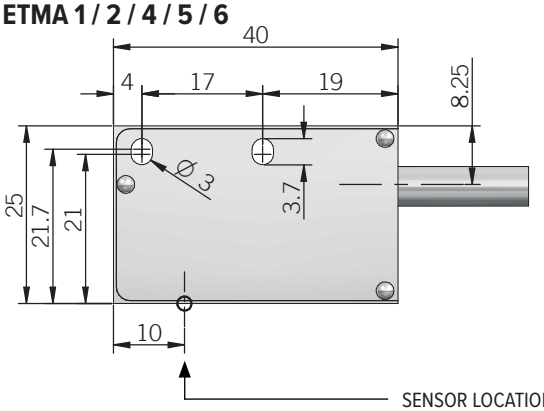
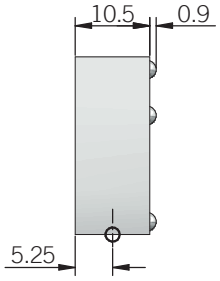
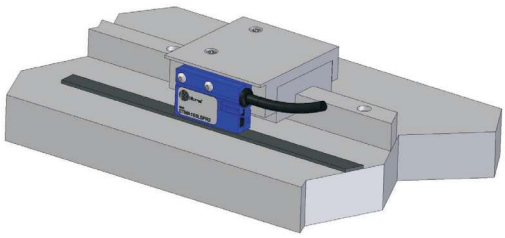
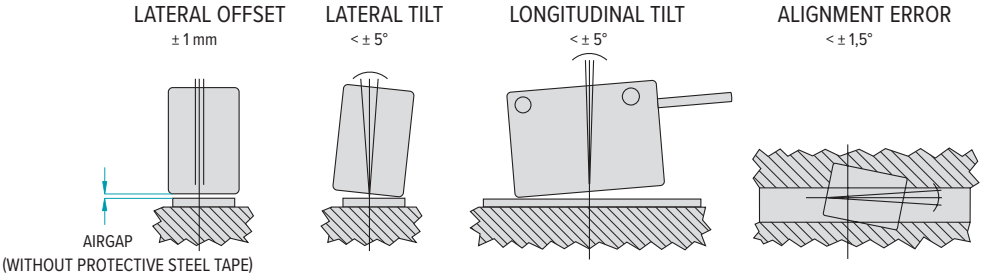
ETMA 1 / 2 / 4 / 5 / 6







MECHANICAL TOLERANCES



dimensions in mm

ELECTRICAL SPECIFICATIONS

Resolution	1 = 0,1 mm (0,025 mm after quad eval) 2 = 0,04 mm (0,01 mm after quad eval) 4 = 0,2 mm (0,05 mm after quad eval) 5 = 0,5 mm (0,125 mm after quad eval) 6 = 1 mm (0,25 mm after quad eval)
Zero pulse	ETMA 1 / 4 / 5 = every 5 mm ETMA 2 / 6 = every 2 mm
Power supply[1]	5 = 4,5 ... 5,5 V DC 5/28 = 4,5 ... 30 V DC (reverse polarity protection)
Current consumption without load	30 mA max
Max load current	20 mA / channel
Electrical interface[2]	push-pull / line driver HTL (AEIC-7272 or similar) line driver RS-422 (AELT-5000 or similar)
Accuracy (at +20°C / +68°F)	± 1/4 pulse with recommended airgap
Travel speed	4 m/s
Cable type	shielded - fixed or flexible installation conductors section 0,14 mm² / AWG 26 min bending radius min 60 mm
Mean time to dangerous failure ($MTTF_d$)[3] **according to EN ISO 13849-1**	318 years
Mission time (Tm)[3]	20 years
Diagnostic coverage (DC)[3]	0%
Electromagnetic compatibility	according to 2014/30/EU directive
RoHS	according to 2011/65/EU directive
UL / CSA	file n. E212495

[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

MECHANICAL SPECIFICATIONS

Enclosure rating	IP 67 (IEC 60529)
Shock	50 G, 11 ms (IEC 60068-2-27)
Vibration	20 G, 10 ... 2000 Hz (IEC 60068-2-6)
Housing material	anodized aluminium
Fixing	n.2 holes ø 3 mm
Operating temperature[4,5]	-20° ... +85°C (-4° ... +185°F)
Storage temperature[5]	-25° ... +70°C (-13° ... +158°F)
Air gap	ETMA 1 / 4 / 5 1 ... 2 mm (1,5 mm recommended) ETMA 2 / 6 0,1 ... 1 mm (0,3 mm recommended)
Weight	150 g (5,29 oz)

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
Z+	blue or white	blue
Z-	/	white
⏚	shield	shield

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