EMI 30 M

MAGNETIC INCREMENTAL KIT ENCODER

MAIN FEATURES

Series of miniaturized encoders for integration on small size AC/DC motors, stepper motors or for limited size applications.

- 3 channel encoder (A / B / Z) up to 90 ppr
- Power supply up to +30 V DC with several electrical interfaces available
- Cable output, connector available on cable end
- Compact dimensions (only 23,6 mm height)
- No wear due to no contact magnetic technology
- Bore shaft diameter up to 10 mm
- Wide operating temperature -20° ... +100°C (-4° ... +212°F)
- OEM version without cover available

ORDERING CODE	EMI	30M	*S	50	Z	5/30	P	6	X	X	PR	. XXX

SERIES
magnetic incremental encoder series EMI

MODEL
kit encoder 30M

COVER
* add if without cover S

RESOLUTION
ppr from 1 to 90

ZERO PULSE
without zero pulse S
with zero pulse Z

POWER SUPPLY
5 V DC 5
5 ... 30 V DC 5/30

ELECTRICAL INTERFACE
NPN open collector C
push-pull P
line driver L
power supply 5/30V - output RS-422 RS

BORE DIAMETER
mm 6
(1/4") mm 6,35
mm 8
mm 10

ENCLOSURE RATING
IP 54 X

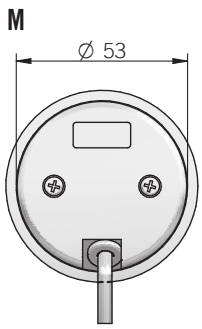
OPTION
to be reported X

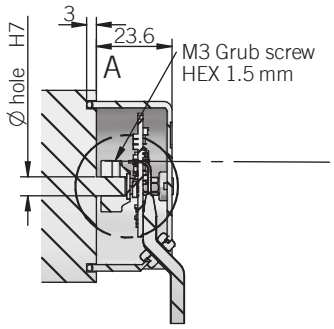
OUTPUT TYPE
radial cable (standard length 0,5 m) PR
preferred cable lengths 1,5 / 2 / 3 / 5 / 10 m, to be added after OUTPUT TYPE (eg. PR5)

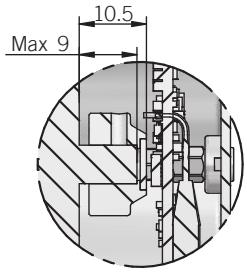
VARIANT
custom version XXX

eltra@eltra.it

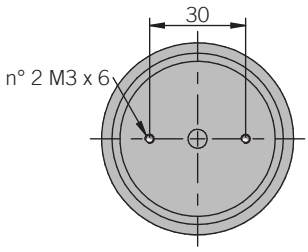
30 M

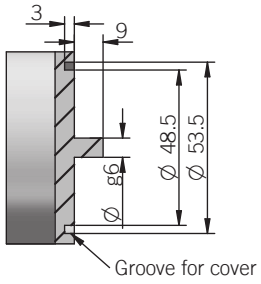


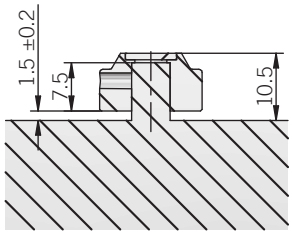




RECOMMENDED INTERFACE FLANGE DESIGN







dimensions in mm

ELECTRICAL SPECIFICATIONS

Resolution	from 1 to 90 ppr
Power supply[1]	5 = 4,5 ... 5,5 V DC 5/30 = 4,5 ... 30 V DC (reverse polarity protection)
Power draw without load	5 = 200 mW typical 5/30 = < 400 mW
Max load current	C / P = 50 mA for channel L / RS = 20 mA per channel
Electrical interface[2]	NPN open collector (AEIC-7273, pull-up max +30 V DC) push-pull / line driver HTL (AEIC-7272) line driver RS-422 (AELT-5000 or equivalent)
Max output frequency	15 kHz
Counting direction	A leads B clockwise (magnet actuator view)
Accuracy	± 0,35° typical / ± 0,90° max according to mounting tolerances and temperature range
Startup time	150 ms
Electromagnetic compatibility	according to 2014/30/EU directive
RoHs	according to 2015/863/EU directive
UL / CSA	certificate n. E212495

MECHANICAL SPECIFICATIONS

Bore diameter	ø 6 / 6,35 (1/4") / 8 / 10 mm
Enclosure rating	IP 54 (IEC 60529) when properly installed with supplied oring
Max rotation speed	limited only by output frequency
Shock	50 G, 11 ms (IEC 60068-2-27)
Vibration	20 G, 10 ... 2000 Hz (IEC 60068-2-6)
Moment of inertia	0,1 x 10^{-6} kgm^2 (2,4 x 10^{-6} lbft^2)
Magnet-actuator material	EN-AW 2011 aluminium
Cover material	PA66 glass fiber reinforced
Shaft radial play allowed	± 0,25 mm
Shaft axial play allowed	± 0,5 mm
Operating temperature[3, 4]	-20° ... +100°C (-4° ... +212°F)
Storage temperature[4]	-20° ... +100°C (-4° ... +212°F)
Weight	100 g approx (3,5 oz)

[1] as measured at the transducer without cable influences
[2] for further details refer to OUTPUT LEVELS on TECHNICAL BASICS section
[3] measured on the transducer flange
[4] condensation not allowed

CONNECTIONS

Function	Cable C / P	Cable L / RS
+V DC	red	red
0 V	black	black
A+	green	green
A-	/	brown or grey
B+	yellow	yellow
B-	/	orange
Z+	blue	blue
Z-	/	white
⏚	shield	shield