



# EMI 30 M

## MAGNETIC INCREMENTAL KIT ENCODER

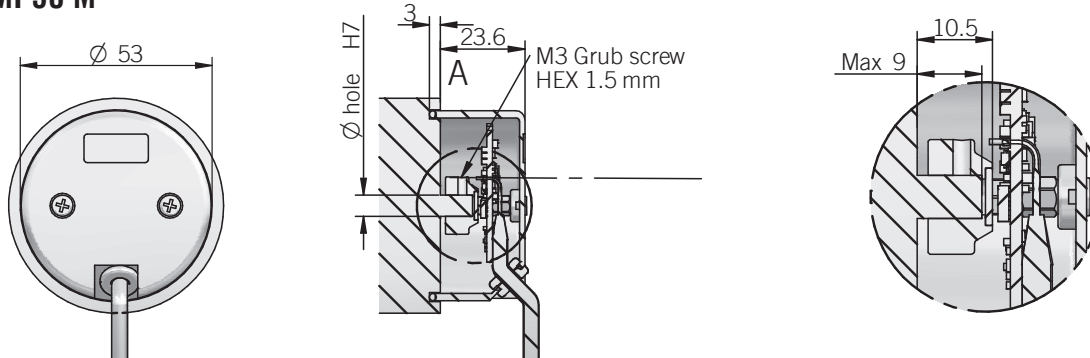
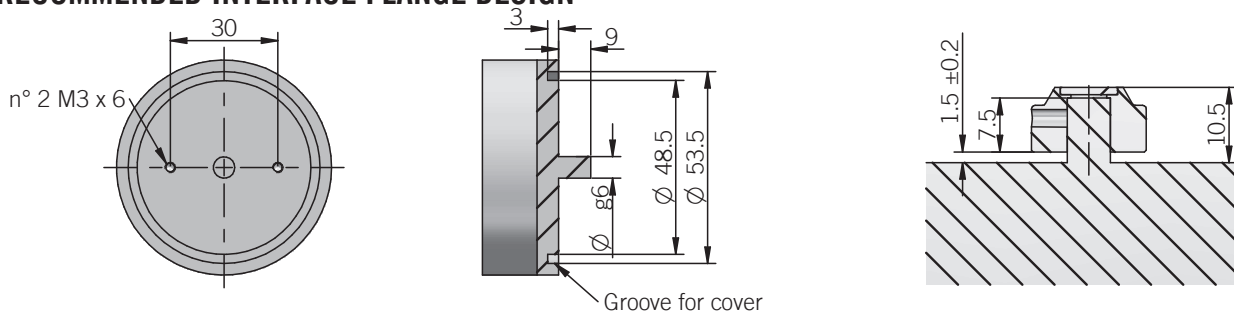


### Specifications

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 VDC with several electronic 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	N	6	X	X	PR	.XXX
<b>SERIES</b> magnetic incremental encoder series EMI												
<b>MODEL</b> kit encoder 30M												
<b>COVER</b> * add if without cover S												
<b>RESOLUTION</b> ppr from 1 to 90												
<b>ZERO PULSE</b> without zero pulse S with zero pulse Z												
<b>POWER SUPPLY</b> 5 V DC 5 5 ... 30 V DC 5/30												
<b>ELECTRONIC INTERFACE</b> NPN N NPN open collector C push-pull protected (AEIC-7272) P line driver L power supply 5/30V - output RS-422 RS												
<b>BORE DIAMETER</b> mm 6 (1/4") mm 6,35 mm 8 mm 10												
<b>ENCLOSURE RATING</b> IP 54 X												
<b>OPTION</b> to be reported X												
<b>OUTPUT TYPE</b> radial cable (length 0,5 m) PR												
<b>VARIANT</b> custom version XXX												

**EMI 30 M**

**RECOMMENDED INTERFACE FLANGE DESIGN**


ELECTRICAL SPECIFICATIONS	
<b>Resolution</b>	from 1 to 90 ppr
<b>Power supply</b>	5 = 4,5 ... 5,5 V DC 5/30 = 4,5 ... 30 V DC (reverse polarity protection)
<b>Power draw without load</b>	5 = 200 mW typical 5/30 = < 400 mW
<b>Max load current</b>	N / C / P = 50 mA for channel L / RS = 20 mA per channel
<b>Output type*</b>	NPN / NPN open collector / push-pull / line driver
<b>Max output frequency</b>	15 kHz
<b>Counting direction</b>	A leads B clockwise (magnet actuator view)
<b>Accuracy</b>	± 0,35° typical ± 0,60° max <i>according to mounting tolerances and temperature range</i>
<b>Startup time</b>	150 ms
<b>Electromagnetic compatibility</b>	IEC 61000-6-2 IEC 61000-6-4

CONNECTIONS		
Function	Cable output N / C / P	Cable output Line driver
+V DC	red	red
0 V	black	black
Ch. A	green	green
Ch. A-	/	brown
Ch. B	yellow	yellow
Ch. B-	/	orange
Ch. Z	blue	blue
Ch. Z-	/	white
≡	shield	shield

MECHANICAL SPECIFICATIONS	
<b>Bore diameter</b>	ø 6 / 6,35 (1/4") / 8 / 10 mm
<b>Enclosure rating</b>	IP 54 (IEC 60529) when properly installed with supplied oring
<b>Max rotation speed</b>	limited only by output frequency
<b>Shock</b>	50 G, 11 ms (IEC 60068-2-27)
<b>Vibration</b>	20 G, 10 ... 2000 Hz (IEC 60068-2-6)
<b>Moment of inertia</b>	0,1 x 10 <sup>-6</sup> kgm <sup>2</sup>
<b>Magnet holder material</b>	EN-AW 2011 aluminium
<b>Cover material</b>	PA66 glass fiber reinforced
<b>Operating temperature</b>	-20° ... +100°C (-4° ... +212°F)
<b>Storage temperature</b>	-20° ... +100°C (-4° ... +212°F)
<b>Nominal airgap +</b>	0,75 mm ± 0,5 mm <i>(including mounting tolerances)</i>
<b>PCB fixing holes / shaft eccentricity tolerance</b>	± 0,5 mm
<b>Fixing torque for grub screws</b>	40 cN max
<b>Weight</b>	100 g approx (3,5 oz)