

# **EMI 30 M**

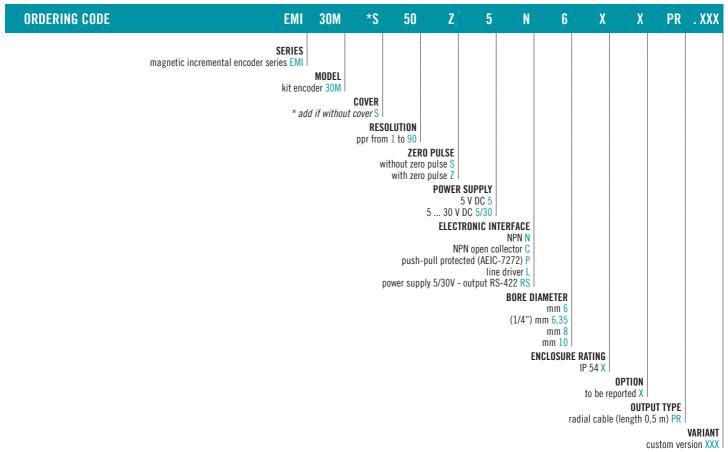
#### MAGNETIC INCREMENTAL KIT ENCODER



#### **Specifications**

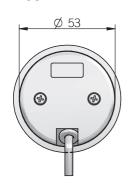
Series of miniaturized encoders for integration on small size AC/DC motors, stepper motors or for limited size applications.

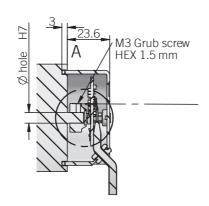
- · 3 channel encoder (A / B / Z) up to 90 ppr
- · Power supply up to +30 VDC with several electronic interfaces available
- · Cable output, connector available on cable end
- · Compact dimensions (only 23,6 mm height)
- · No wear due to no contact magnetic technology
- · Bore shaft diameter up to 10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

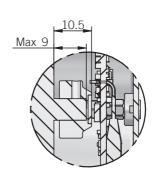




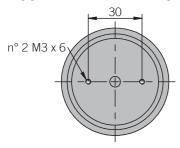
## **EMI 30 M**

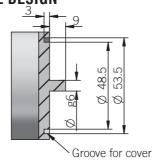


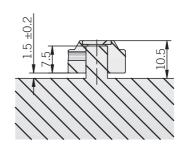




### RECOMMENDED INTERFACE FLANGE DESIGN







ELECTRICAL SPECIFICATIONS		
Resolution	from 1 to 90 ppr	
Power supply	$5 = 4.5 \dots 5.5 \text{ V DC}$ $5/30 = 4.5 \dots 30 \text{ V DC}$ (reverse polarity protection)	
Power draw without load	5 = 200 mW typical 5/30 = < 400 mW	
Max load current	N/C/P = 50 mA for channel $L/RS = 20$ mA per channel	
Output type*	NPN / NPN open collector / push-pull / line driver	
Max output frequency	15 kHz	
Counting direction	A leads B clockwise (magnet actuator view)	
Accuracy	± 0,35° typical ± 0,60° max according to mounting tolerances and temperature range	
Startup time	150 ms	
Electromagnetic compatibility	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-	1	brown
Ch. B	yellow	yellow
Ch. B-	/	orange
Ch. Z	blue	blue
Ch. Z-	/	white
<u>+</u>	shield	shield

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 <sup>-6</sup> kgm <sup>2</sup>	
Magnet holder material	EN-AW 2011 aluminium	
Cover material	PA66 glass fiber reinforced	
Operating temperature	-20° +100°C (-4° +212°F)	
Storage temperature	-20° +100°C (-4° +212°F)	
Nominal airgap +	$0.75 \text{ mm} \pm 0.5 \text{ mm}$ (including mounting tolerances)	
PCB fixing holes / shaft eccentricity tolerance	± 0,5 mm	
Fixing torque for grub screws	40 cN max	
Weight	100 g approx (3,5 oz)	