

MAIN FEATURES

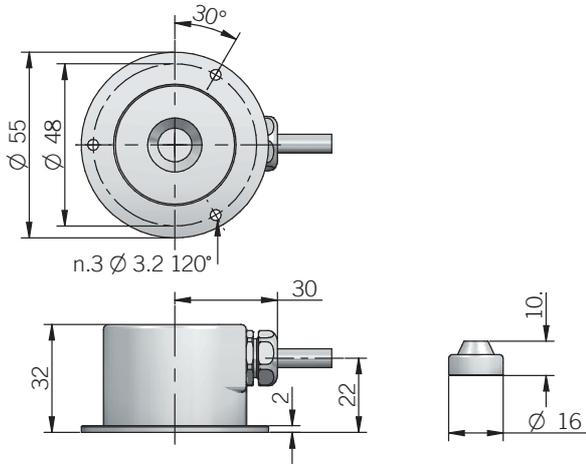
EMI series encoders are suitable for several application fields like electric motors marine industry, iron and steel industry, textile machines, wood-working, paper-working, glass working, marble-working machinery and, more generally, automation and process control fields.

- 3 channel encoder (A / B / Z) with resolution up to 10000 ppr
- Power supply up to +30 V DC with several electrical interfaces available
- Cable or M12 connector output, other connectors available on cable end
- Compact dimensions
- No wear due to no contact magnetic technology
- Bore shaft diameter up to 10 mm
- IP 67 enclosure rating
- Wide operating temperature -40° ... +100°C (-40° ... +212°F)

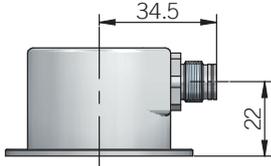


ORDERING CODE	EMI	55M	512	Z	5/30	P	10	X	X	M12	R	.162	+XXX
SERIES magnetic incremental encoder series EMI													
MODEL kit encoder ø 55 mm 55M													
RESOLUTION ppr from 1 to 10000 please refer to the preferred resolutions list													
ZERO PULSE without zero pulse S with zero pulse Z													
POWER SUPPLY (with L electrical interface) 5 V DC 5 5 ... 30 V DC 5/30													
ELECTRICAL INTERFACE NPN open-collector C push-pull P line driver L power supply 5/30 V DC - output RS-422 RS													
MAGNET ACTUATOR BORE DIAMETER mm 6 mm 8 (3/8") mm 9,52 mm 10													
ENCLOSURE RATING IP 67 X													
OPTION to be reported X													
OUTPUT TYPE cable (standard length 0,5 m) P preferred cable lengths 1,5 / 2 / 3 / 5 / 10 m, to be added after DIRECTION TYPE (eg. PR5) M12 male connector M12													
DIRECTION TYPE radial R													
MATING CONNECTOR mating connector not included .162 to be reported only with connector output (eg. M12.162), for mating connector see Accessories													
VARIANT custom version XXX													

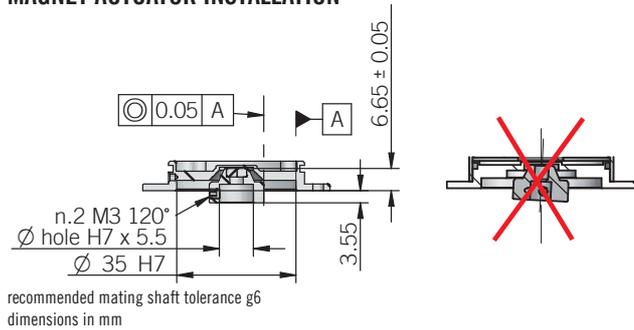
EMI 55 M WITH CABLE OUTPUT



DIMENSIONS WITH M12 CONNECTOR



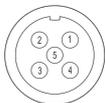
MAGNET ACTUATOR INSTALLATION



CONNECTIONS

Function	Cable C / P	Cable L / RS	5 pin M12 C / P	8 pin M12 L / RS
+V DC	red	red	2	7
0 V	black	black	4	1
A+	green	green	3	6
A-	/	brown or grey	/	5
B+	yellow	yellow	1	4
B-	/	orange	/	3
Z+	blue	blue	5	2
Z-	/	white	/	8
⊖	shield	shield	housing	housing

M12 connector (5 pin)
M12 A coded
solder side view FV



M12 connector (8 pin)
M12 A coded
solder side view FV



ELECTRICAL SPECIFICATIONS

Resolution	from 1 to 10000 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 typical	0,4 W
Max load current	C / P = 50 mA / channel L / RS = 20 mA / channel
Electrical interface ²	NPN open collector (AEIC-7273, pull-up max +30 V DC) push-pull / line driver HTL (AEIC-7272 or similar) line driver RS-422 (AELT-5000 or similar)
Max output frequency	800 kHz
Counting direction	A leads B clockwise (shaft view)
Index signal	180°e (Z&A)
Startup time typical	10 ms
Accuracy	< 0,3° at +20°C (+68°F) ± 0,5° in the operating temperature range
Hysteresis	0,70° up to 256 ppr 0,35° from 257 ppr to 10000 ppr
Electromagnetic compatibility	according to 2014/30/EU directive
RoHs	according to 2011/65/EU directive
UL / CSA	file n. E212495

MECHANICAL SPECIFICATIONS

Bore diameter (magnet-actuator)	∅ 6 / 8 / 9,52 (3/8") / 10 mm
Enclosure rating	IP 67 (IEC 60529)
Max rotation speed	10000 rpm
Shock	50 G, 11 ms (IEC 60068-2-27)
Vibration	10 G, 10 ... 2000 Hz (IEC 60068-2-6)
Moment of inertia (magnet actuator)	0,1 x 10 ⁻⁶ kgm ² (2,4 x 10 ⁻⁶ lbf ²)
Flange material	EN-AW 2011 or 2033 aluminum
Housing material	painted aluminum
Magnet-actuator material	EN-AW 2011 or 2033 aluminum
Magnet actuator allowable play	± 0,2 mm (axial) ± 0,1 mm (radial)
Operating temperature ^{3,4}	-40° ... +100°C (-40° ... +212°F) -25° ... +85°C (-13° ... +185°F) with M12 connector
Storage temperature ⁴	-25° ... +85°C (-13° ... +185°F)
Weight	150 g (5,29 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

PREFERRED RESOLUTIONS

2 - 4 - 5 - 6 - 8 - 10 - 12 - 16 - 20 - 30 - 40 - 50 - 60 - 80 - 90 - 100 - 125 - 128 - 200 - 250 - 256 - 360 - 400 - 500 - 512 - 720 - 1000 - 1024 - 1440 - 2000 - 2048 - 3600 - 4096 - 5000 - 7200 - 10000

please directly contact our offices for other pulses