

MAIN FEATURES

EM 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.

Main characteristics:

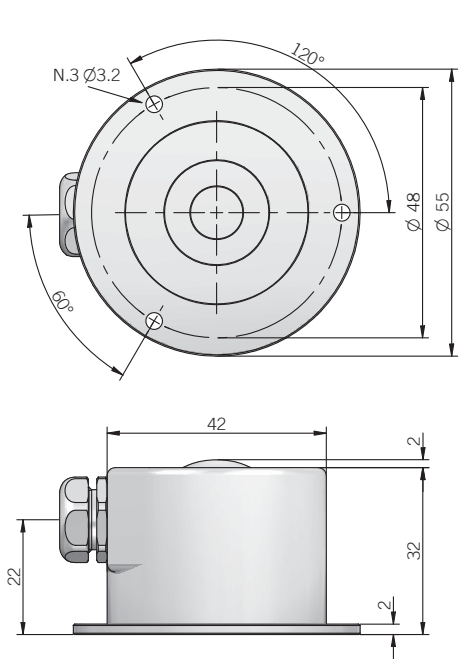
- Compact dimensions
- Absence of physical contact between encoder and motor shaft
- High temperature resistant
- High resolution and precision
- High protection rating
- High operating speed
- Excellent mechanical sturdiness
- Very easy mounting



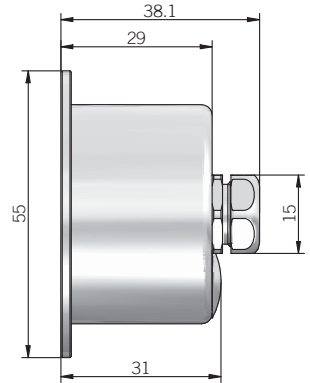
ORDERING CODE

EM	A	55	A	512	B	5	S	P	X	6	X	10	P	R	.	XXX	
SERIES magnetic encoder EM	TYPE absolute A sinusoidal S	SIZE mm 55	TYPE BODY AND FLANGING flange type A aluminum A flange type A anodized aluminum AY		RESOLUTION (EMA series) (only powers of 2) ppr from 4 to 8192 (EMA series) ppr 40 / 80 / 100 / 160 / 200 / 320 / 400 / 500 / 800 / 1000 / 1600 / 2000 (EMS series) ppr 1 <i>please directly contact our offices for pulses availability</i>		CODE (EMA series) binary B (EMS series) unused option X	POWER SUPPLY 5 V DC 5 8 ... 28 V DC 8/28	OUTPUT TYPE (EMA series) SSI S (EMS series) sine - cosine line driver L	VARIANT XXX custom version	OUTPUT DIRECTION A axial R radial	OUTPUT TYPE P cable output with cable gland (standard length 0.5 m) M12 M12 connector output (8-pin)	MAX ROTATION SPEED 10 10000 rpm	ENCLOSURE RATING X IP 65 standard S IP 67 optional	BORE DIAMETER (MAGNET CARRIER) 6 ϕ 6 mm 8 ϕ 8 mm 9 ϕ 9.52 mm (3/8") 10 ϕ 10 mm	OPTION X unused option	LOGIC P positive (EMA series) X unused option (EMS series)

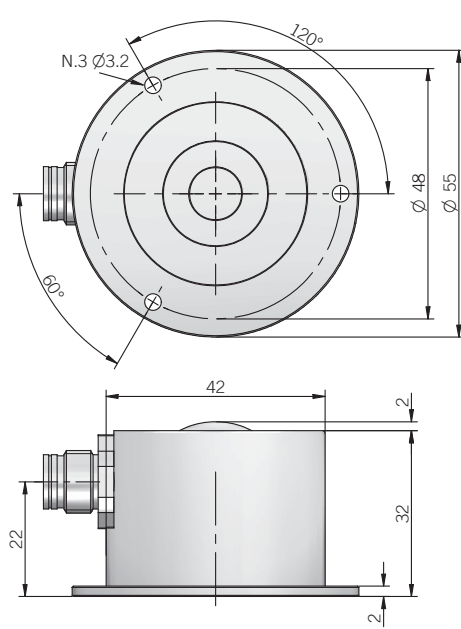
EMA - EMS 55 radial cable output



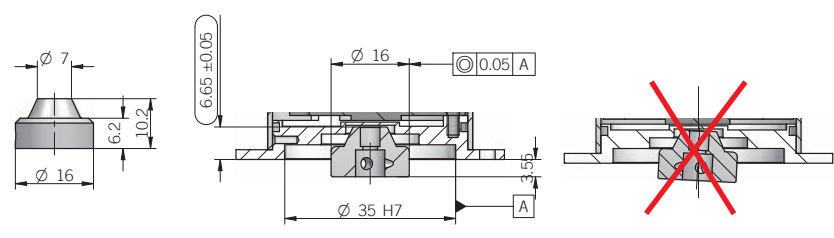
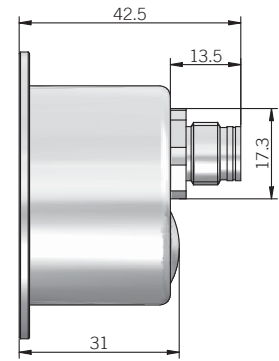
EMA - EMS 55 axial cable output



EMA - EMS 55 radial M12 output



EMA - EMS 55 axial M12 output



Electrical specifications

Resolution	up to 8192 ppr (EMA series) 1 ppr (EMS series)
Current consumption without load	100 mA max
Max load current	15 mA for channel (EMS)
Power supply	5 V DC $\pm 10\%$ 8 ... 28 V DC $\pm 5\%$
Output types	RS422 SSI (EMA series) sine - cosine (EMS series)
Max output frequency	1 MHz (SSI) 1 KHz (EMS series)
Monostable time (SSI)	10 ÷ 25 μ s
Counting direction	decreasing clockwise (shaft view)
Accuracy	$\pm 0.35^\circ$ max
Electromagnetic compatibility	IEC 61000-6-2 IEC 61000-6-3

Mechanical specifications

Magnet carrier bore diameter	up to 10 mm
Enclosure rating	IP 65 (standard) (IEC 60529) IP 67 (optional) (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)
Body material	aluminum UNI 9002/5
Magnet-carrier material	aluminum UNI 9002/5
Housing material	aluminum UNI 9002/5
Operating temperature	-25° ... +100°C
Storage temperature	-25° ... +85°C
Weight	150 g
Mounting tolerances	± 0.2 mm (axial) ± 0.1 mm (radial)

Connections for EMA series

Function	Wire cable	Connector M12 (8-pin)
+ V dc	red	8
0 Volt	black	5
data +	green	3
data -	brown	2
clk +	yellow	4
clk -	orange or pink	6
---	shield	/

Connections for EMS series

Function	Wire cable	Connector M12 (8-pin)
+ V dc	red	8
0 Volt	black	5
sin +	green	3
sin -	brown	2
cos +	yellow	4
cos -	orange or pink	6
---	shield	/

Connector M12 (8-pin)
(front view)

