

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:

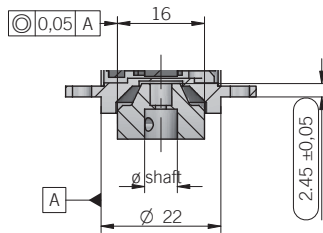
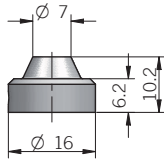
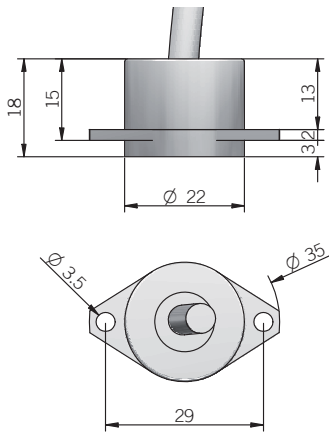
- Compact dimensions
- Absence of physical contact between encoder and motor shaft
- High temperature resistant
- High resolution and precision
- High protection rating
- High operating speed
- Excellent mechanical sturdiness
- Very easy mounting



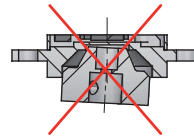
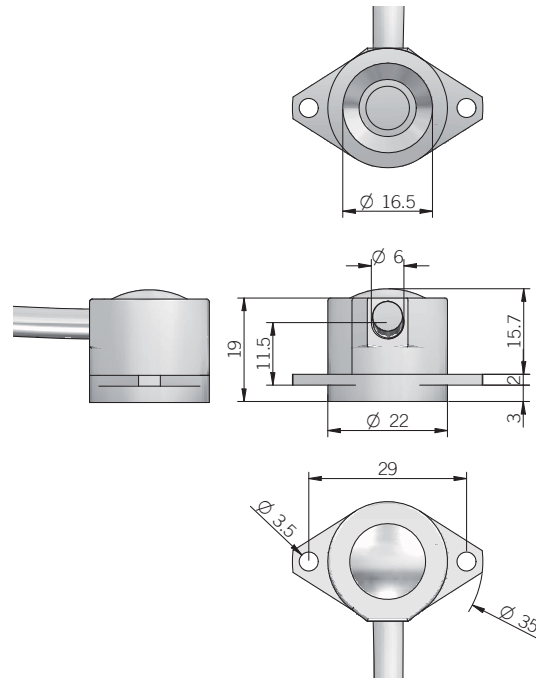
ORDERING CODE

EM	A	22	A	512	B	5	S	P	X	6	S	10	P	R	.	XXX
SERIES magnetic encoder EM	TYPE absolute A sinusoidal S	SIZE mm 22	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	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 (standard length 0.5 m)	MAX ROTATION SPEED 10 10000 rpm	ENCLOSURE RATING S IP 68	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 22 cable output axial



EMA - EMS 22 cable output radial



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 per channel (EMS series)	
Power supply	5 V DC ±10%	
Output types	RS422 SSI (EMA series) sine - cosine (EMS series) 1 Vpp	
Max output frequency	1 MHz (EMA series) 1 KHz (EMS series)	
Monostable time (SSI)	10 ÷ 25 µs	
Accuracy	± 0.35° max	
Counting direction	decreasing clockwise (shaft view)	
Electromagnetic compatibility	IEC 61000-6-2 IEC 61000-6-3	

Connections and standard colours

Wire colours	Function (EMA 22)	Function (EMS 22)
black	0 Volt	0 Volt
red	+ Vdc	+ Vdc
green	Data +	Sin +
brown	Data -	Sin -
yellow	Clk +	Cos +
orange	Clk -	Cos -
shield	⊥	⊥

Mechanical specifications

Bore diameter (magnet carrier)	upt to 10 mm
Enclosure rating	IP 68
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
Housing material	aluminum UNI 9002/5
Magnet carrier material	aluminum UNI 9002/5
Operating temperature	-40° ... +125 °C
Storage temperature	-25° ... +85 °C
Weight	30 g
Mounting tolerances	± 0.2 mm (axial) ± 0.1 mm (radial)