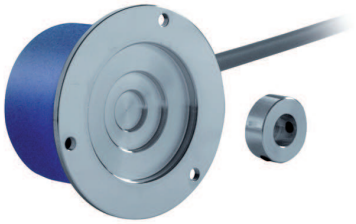
EMI 55 A / AY

MAGNETIC INCREMENTAL KIT ENCODER

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) up to 2048 ppr
- Power supply up to +28 V DC with several electrical interfaces available
- Cable or M12 connector output, other connector 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° ... +125°C (-40° ... +257°F)



ORDERING CODE	EMI	55A	512	Z	5/28	P	10	X	10	P	R	. XXX

SERIES
magnetic incremental encoder series EMI

MODEL
fixing holes ø 48 mm 55A
fixing holes ø 48 mm anodized 55AY

RESOLUTION
ppr from 2 to 2048
see table for pulses availability

ZERO PULSE
without zero pulse S
with zero pulse Z

POWER SUPPLY
(with L electrical interface) 5 V DC 5
5 ... 28 V DC 5/28

ELECTRICAL INTERFACE
push-pull P
line driver L
power supply 5/28 V - output RS-422 RS

MAGNET ACTUATOR BORE DIAMETER
mm 6
mm 8
(3/8") 9,52 mm 9
mm 10

ENCLOSURE RATING
IP 64 X
IP 67 S

MAX ROTATION SPEED
10000 rpm 10

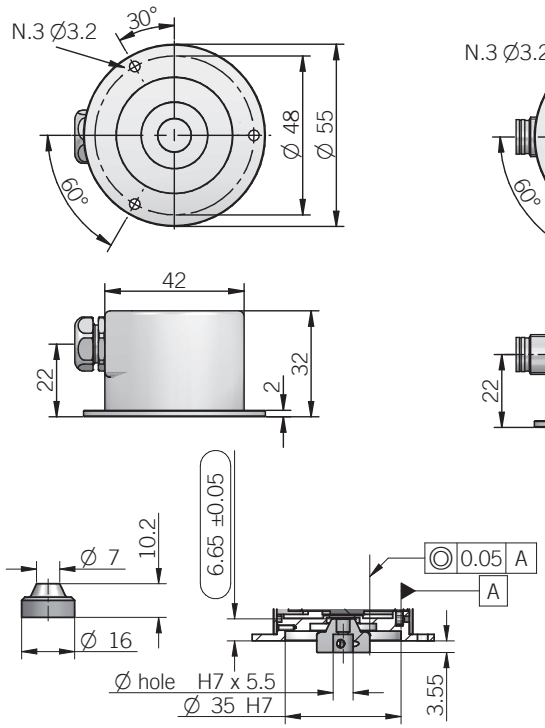
OUTPUT TYPE
cable (standard length 0,5 m) P
preferred cable lengths 1,5 / 2 / 3 / 5 / 10 m, to be added after DIRECTION TYPE (eg. PR5)
M12 connector M12
female connector included, without female please add 162 as variant code

DIRECTION TYPE
axial A
radial R

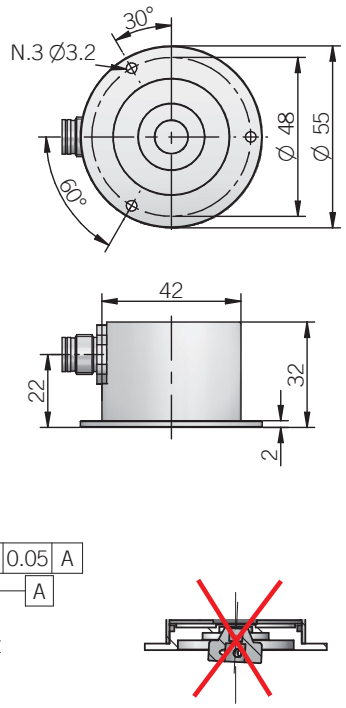
VARIANT
custom version XXX

1985 - 2015
eltra@eltra.it | www.eltra.it

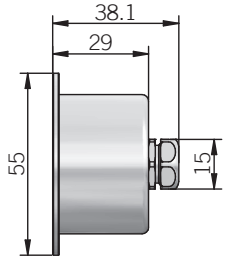
55 A radial cable output



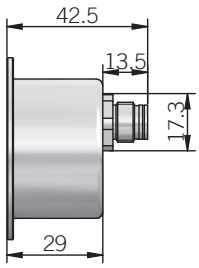
55 A radial M12 output



55 A axial cable output



55 A axial M12 output



dimensions in mm

ELECTRICAL SPECIFICATIONS

Resolution	from 2 to 2048 ppr
Power supply	5 = 4,5 ... 5,5 V DC 5/28 = 4,5 ... 30 V DC (reverse polarity protection)
Power draw without load	800 mW max
Max load current	15 mA / channel
Output type*	push-pull / line driver HTL (AEIC-7272) line driver RS-422 (AELT-5000 or equivalent)
Max output frequency	205 kHz
Counting direction	A leads B clockwise (shaft view)
Accuracy	± 0,35° typical / ± 0,50° max
Electromagnetic compatibility	according to 2014/30/EU directive
RoHS	according to 2011/65/EU directive
UL / CSA	certificate n. E212495

* for further details please see OUTPUT LEVELS under TECHNICAL BASICS section

MECHANICAL SPECIFICATIONS

Bore diameter (magnet-actuator)	ø 6 / 8 / 9,52 (3/8") / 10 mm
Enclosure rating	X = IP 64 (IEC 60529) S = 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} lbft^2)
Bearing stage material	EN-AW 2011 aluminum
Housing material	painted aluminum
Magnet-actuator material	EN-AW 2011 aluminum
Operating temperature	-40°... +125°C (-40°... +257°F) (with + 5 V DC) -40°... +100°C (-40°... +212°F)
Storage temperature	-40°... +125°C (-40° ... +257°F)
Weight	150 g (5,29 oz)
Magnet actuator mounting tolerances (to get best electrical performances)	± 0,2 mm (axial) ± 0,1 mm (radial)

CONNECTIONS

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

RESOLUTIONS

2 - 4 - 8 - 10 - 16 - 20 - 32 - 40 - 64 - 80 - 100 - 125 - 128 - 200 - 250 - 256 - 400 - 500 - 512 - 1024 - 2048

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

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