

MAIN FEATURES

Miniaturized \varnothing 30 encoder series for general applications. Recommended when a minimal size is required even providing excellent performances.

- Up to 2048 ppr with zero signal
- Several output types available
- Up to 28 V DC power supply
- Up to 220 kHz output frequency
- Cable output
- Up to 3000 RPM rotation speed
- Up to IP 54 sealing



ORDERING CODE

EL 30 E 50 Z 5 L 4 X 3 PA . XXX

SERIES
incremental encoder series **EL**
incremental encoder series **ER**

SIZE
mm **30**

TYPE
clamping flange **E**
M18 threaded flange **H**
M20 threaded flange **I**

RESOLUTION
(see table) ppr from **1** to **2048**

N.B.: please directly contact our offices for pulses availability

ZERO PULSE
without zero pulse **S**
with zero pulse **Z**

POWER SUPPLY
(available only with L electronic output) 5 V DC **5**
(available only with L or PC electronic output) 8 ... 24 V DC **8/24**
5 ... 28 V DC **5/28**

VARIANT
XXX custom version

OUTPUT TYPE
PA axial cable output (standard length 0.5 m)

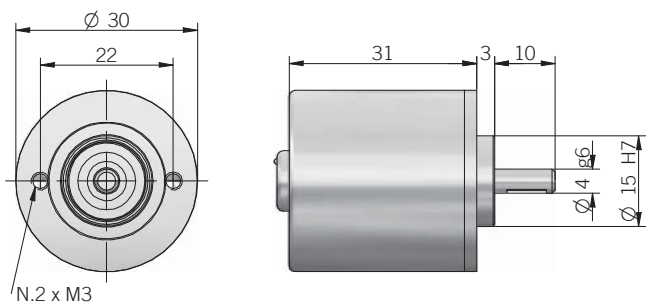
MAX ROTATION SPEED
3 3000 rpm

ENCLOSURE RATING
X IP 54

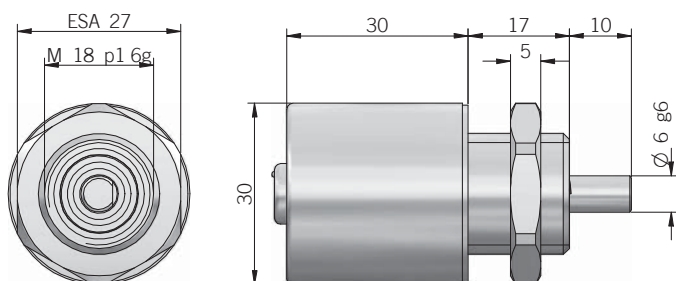
SHAFT DIAMETER
4 mm (EL 30 E)
6 mm (EL 30 E / H / I)

ELECTRONIC INTERFACE
N NPN
C NPN open collector
P push-pull
L line driver

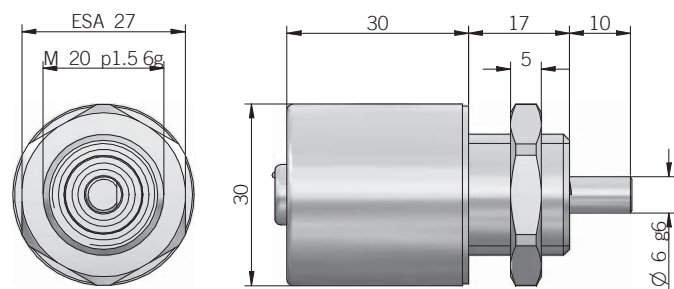
EL - ER 30 E



EL - ER 30 H



EL - ER 30 I



Electrical specifications

Resolution	from 1 to 2048 ppr
Power supply	5 V DC $\pm 10\%$ 5 ... 28 V DC $\pm 5\%$ 8 ... 24 V DC $\pm 5\%$ (reverse polarity protection)
Current consumption without load	100 mA max
Max load current	50 mA for channel 20 mA for channel (line driver)
Output type	NPN NPN open collector push-pull line driver
Max output frequency	100 kHz EL series 220 kHz ER series
Counting direction	A leads B clockwise (shaft view)
Electromagnetic compatibility	IEC 61000-6-2 IEC 61000-6-4

Mechanical specifications

Shaft diameter	$\varnothing 4$ (EL 30 E) mm $\varnothing 6$ (EL 30 E / H / I) mm
Enclosure rating	IP 54 (IEC 60529)
Max rotation speed	3000 rpm
Max shaft load	5 N (0.5 kgf) axial 5 N (0.5 kgf) radial
Shock	50 G, 11 ms (IEC 60068-2-27)
Vibration	10 G, 10 ... 2000 Hz (IEC 60068-2-6)
Body material	aluminum EN-AW 2011
Shaft material	1.4305 / AISI 303 stainless steel
Housing material	PA66 glass fiber reinforced
Bearings	2 ball bearings
Bearings life	10^9 revolutions
Operating temperature	$-10^\circ \dots +60^\circ\text{C}$ EL series $-20^\circ \dots +70^\circ\text{C}$ ER series
Storage temperature	$-25^\circ \dots 70^\circ\text{C}$
Weight	50 g

Connections and standard colours

Function	Push pull / Npn / Npn open collector	Line driver
+V DC	red	red
0 V	black	black
Ch. A	green	green
Ch. A-	/	brown
Ch. B	yellow	yellow
Ch. B-	/	orange
Ch. Z	blue	blue
Ch. Z-	/	white
---	shield	shield

ER series resolutions

100 - 200 - 300 - 360 - 400 - 500 - 512 - 600 - 720 - 1000 - 1024 - 1200 - 1440 - 2000 - 2048

EL series resolutions

1 - 10 - 20 - 25 - 50 - 60 - 64 - 150 - 250 - 256

