

MAIN FEATURES

Miniaturized \varnothing 30 mm encoder series for application in small devices.
Recommended when a minimal size is required even providing excellent performances.



- 3 channel encoder (A / B / Z) up to 2500 ppr
- Power supply up to +28 VDC with several electronic interfaces available
- Up to 220 kHz output frequency
- Cable output, connectors available on cable end
- Solid shaft diameter up to 6 mm
- Mounting by clamping or threaded flange

ORDERING CODE

EL 30E 50 S 5/28 N 4 X 3 PA

EL
incremental encoder series

MODEL
clamping flange \varnothing 1530E
M18 threaded flange

RESOLUTION
ppr from 1 to 2500
see table for pulses availability

ZERO PULSE
without zero pulse
with zero pulse

POWER SUPPLY
(with L electronic interface) 5 V DC
(with L or PC electronic interface) 8 .. 28 V DC
5 ... 28 V 5/28

ELECTRONIC INTERFACE
NPN
NPN open collector
push-pull
push-pull protected (AEIC-7272)
line driver
power supply 5/28V - output RS-422

SHAFT DIAMETER
(mod. E) mm
mm6

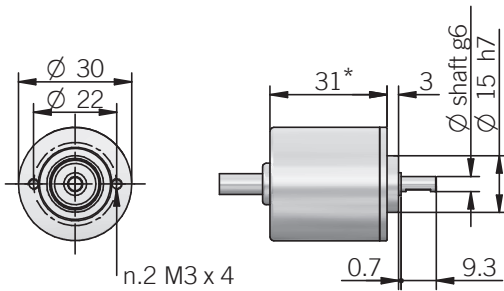
ENCLOSURE RATING
IP 54

MAX ROTATION SPEED
3000 rpm

OUTPUT TYPE
axial cable (standard length 0,8 m)
radial cable (standard length 0,8 m)

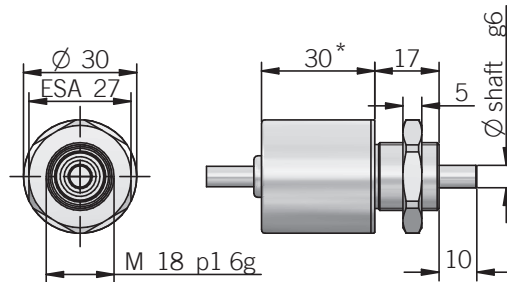
VARIANT
custom version X

EL - ER 30 E (axial output)



dimensions in mm

EL - ER 30 H (axial output)



* radial output + 2,3

ELECTRICAL SPECIFICATIONS

Resolution	from 1 to 2500 ppr
Power supply	5 = 4,5 ... 5,5 V DC 5/28 = 4,75 ... 28,6 V DC 8/24 = 7,6 ... 25,2 V DC (reverse polarity protection)
Power draw without load	800 mW
Max load current	N / C / P / PC = 50 mA / channel L / RS = 20 mA / channel
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

*output levels according to power supply, for further details please see under Technical basics section

EL SERIES RESOLUTIONS

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

ER SERIES RESOLUTIONS

100 - 128 - 200 - 250 - 256 - 300 - 360 - 400 - 500 - 512 - 600 - 625 - 720 - 800 - 1000 - 1024 - 1200 - 1250 - 1440 - 1600 - 2000 - 2048 - 2500

please directly contact our offices for other pulses, preferred resolutions in bold

CONNECTIONS

Function	Cable output N / C / P / PC	Cable output 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

MECHANICAL SPECIFICATIONS

Shaft diameter	∅ 4 / 6 mm
Enclosure rating	IP 54 (IEC 60529)
Max rotation speed	3000 rpm
Max shaft load	5 N axial / radial
Shock	50 G, 11 ms (IEC 60068-2-27)
Vibration	10 G, 10 ... 2000 Hz (IEC 60068-2-6)
Moment of inertia	0,05 x 10 ⁻⁶ kgm ²
Starting torque (at +20°C / +68°F)	< 0,005 Nm
Body material	EN-AW 2011 aluminum
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° ... +60°C (+14° ... +140°F) EL series -25° ... +85°C (-13° ... +185°F) ER series
Storage temperature	-25° ... +85°C (-13° ... +185°F)
Weight	70 g (2,47 oz)