

EL - ER 30 E / H

SOLID SHAFT INCREMENTAL ENCODER



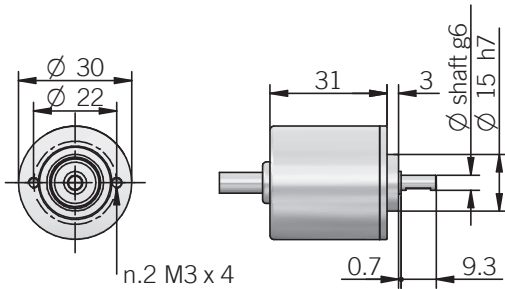
Specifications

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

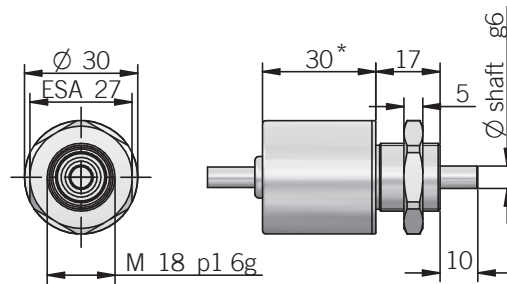
ORDERING CODE	EL	30E	50	S	5/28	N	4	X	3	PA	.XXX
SERIES incremental encoder series EL incremental encoder series ER											
MODEL clamping flange \varnothing 15 mm 30E M18 threaded flange 30H											
RESOLUTION ppr from 1 to 2500 <i>see table for pulses availability</i>											
ZERO PULSE without zero pulse S with zero pulse Z											
POWER SUPPLY (with L electronic interface) 5 V DC 5 (with L or PC electronic interface) 8 ... 24 V DC 8/24 5 ... 28 V DC 5/28											
ELECTRONIC INTERFACE NPN N NPN open collector C push-pull P push-pull protected (AEIC-7272) PC line driver L power supply 5/28V - output RS-422 RS											
SHAFT DIAMETER (mod. E) mm 4 mm 6											
ENCLOSURE RATING IP 54 X											
MAX ROTATION SPEED 3000 rpm 3											
OUTPUT TYPE axial cable (standard length 0,5 m) PA radial cable (standard length 0,5 m) PR											
VARIANT custom version XXX											

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	IEC 61000-6-2 IEC 61000-6-4

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

MECHANICAL SPECIFICATIONS

Shaft diameter	Ø 4 / 6 mm En-
closure 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)

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