

MAIN FEATURES

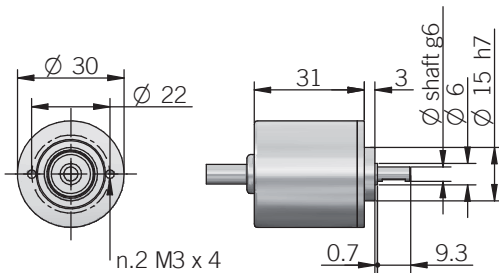
Miniaturized \varnothing 30 mm encoder series for application in small devices.
 Recommended when a minimal size is required even providing excellent performances.

- 3 channel encoder (A / B / Z) up to 2500 ppr
- Power supply up to +28 V DC with several electrical 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



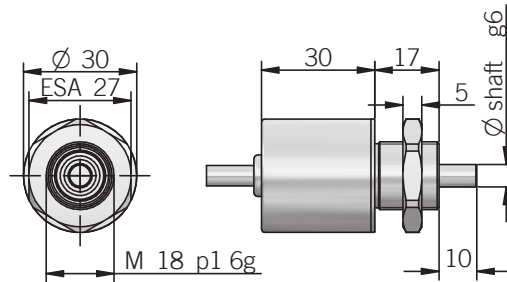
ORDERING CODE	EL	30E	50	S	5/28	C	4	X	3	PA	.XXX
SERIES incremental encoder series EL incremental encoder series ER											
MODEL clamping flange \varnothing 15 mm 30E M18 threaded flange 30H											
RESOLUTION ppr from 1 to 2500 refer to the available pulses list											
ZERO PULSE without zero pulse S with zero pulse Z											
POWER SUPPLY (with L electrical interface) 5 V DC 5 5 ... 28 V DC 5/28											
ELECTRICAL INTERFACE NPN open collector C push-pull P 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 preferred cable lengths 1,5 / 2 / 3 / 5 / 10 m, to be added after OUTPUT TYPE (eg. PR5)											
VARIANT custom version XXX											

30 E (axial output)



recommended mating shaft tolerance H7
dimensions in mm

30 H (axial output)



ELECTRICAL SPECIFICATIONS

Resolution	from 1 to 2500 ppr
Power supply ¹	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	C / P = 50 mA / channel L / RS = 20 mA / channel
Electrical interface ²	NPN open collector (AEIC-7273, pull-up max +30 V DC) push-pull / line driver HTL (AEIC-7272) line driver RS-422 (AELT-5000 or similar)
Max output frequency	100 kHz EL series 220 kHz ER series
Counting direction	A leads B clockwise (shaft view)
Electromagnetic compatibility	according to 2014/30/EU directive
RoHS	according to 2011/65/EU directive
UL / CSA	certificate n. E212495

CONNECTIONS

Function	Cable C / P	Cable L / RS
+V DC	red	red
0 V	black	black
A+	green	green
A-	/	brown or grey
B+	yellow	yellow
B-	/	orange
Z+	blue	blue
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 ³	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 (1,2 x 10 ⁻⁶ lbf ²)
Starting torque (at +20°C / +68°F)	< 0,005 Nm (0,71 Ozin)
Bearing stage material	EN-AW 2011 aluminum
Shaft material	1.4305 / AISI 303 stainless steel
Housing material	PA66 glass fiber reinforced
Bearings	n.2 ball bearings
Bearings life	10 ⁹ revolutions
Operating temperature ^{4,5}	-10° ... +60°C (+14° ... +140°F) EL series -25° ... +85°C (-13° ... +185°F) ER series
Storage temperature ⁵	-25° ... +85°C (-13° ... +185°F)
Weight	70 g (2,47 oz)

¹ as measured at the transducer without cable influences

² for further details refer to OUTPUT LEVELS on TECHNICAL BASICS section

³ maximum load for static usage

⁴ measured on the transducer flange

⁵ condensation not allowed

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