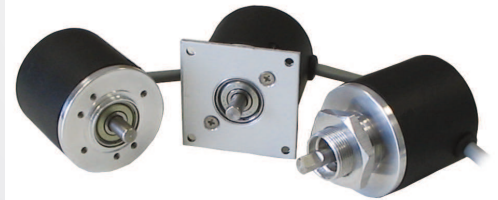


MAIN FEATURES

Miniaturized \varnothing 42 mm encoder series for general factory automation applications.

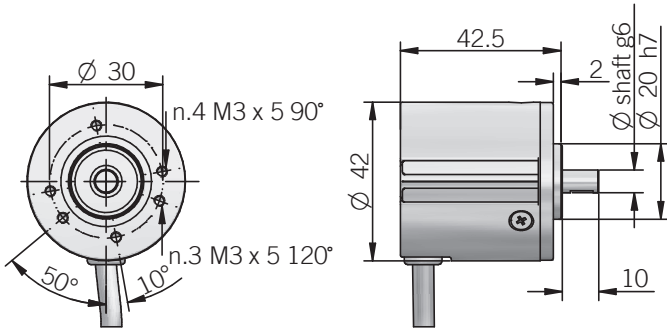
- 3 channel encoder (A / B / Z) up to 14400 ppr
- Power supply up to +28 VDC with several electronic interfaces available
- Up to 220 kHz output frequency
- Cable output, connectors available on cable end
- Solid shaft diameter up to 8 mm
- Mounting by clamping, threaded or synchronous flange



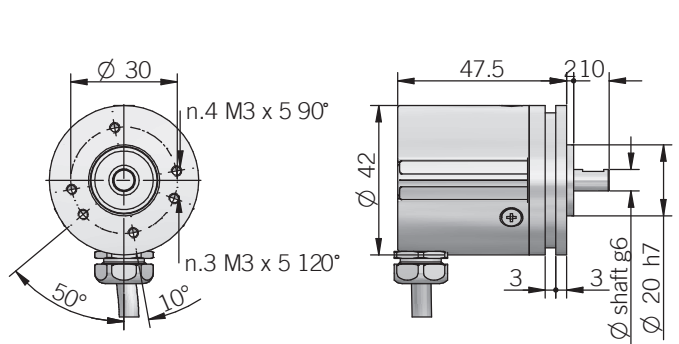
ORDERING CODE

	ER	40A	100	S	5/28	N	6	X	6	P	R	.XXX
SERIES	incremental encoder series EL incremental encoder series ER											
MODEL	clamping flange \varnothing 20 mm 40A square flange \square 36,5 mm 40B clamping flange \varnothing 17,46 mm 40C M18 threaded flange 40H M21 threaded flange 40I synchronous flange \varnothing 21 mm 40N synchronous flange \varnothing 30 mm 40X											
RESOLUTION	(mod. A / B) ppr 1 ... 14400 (mod. C / H / I / N / X) ppr 1 ... 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	(max 2.500 ppr) NPN N (max 2.500 ppr) 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. C) mm 4 (mod. A / B / C / H / I / N) mm 6 (mod. X) mm 8											
ENCLOSURE RATING	IP 54 X (mod. A / B) IP 66 S											
MAX ROTATION SPEED	(IP 66) 3000 rpm 3 (IP 54) 6000 rpm 6											
OUTPUT TYPE	cable (standard length 0,5 m) P											
DIRECTION TYPE	(mod. A / B / C / H / I / N) axial A radial R											
VARIANT	custom version XXX											

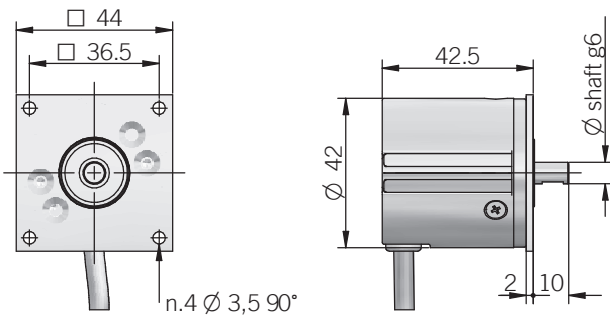
EL - ER 40 A



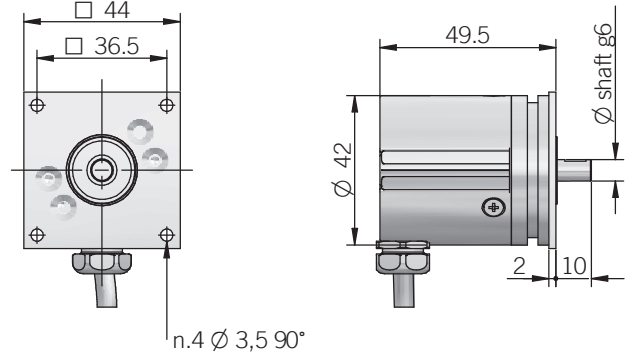
EL - ER 40 A (IP 66)



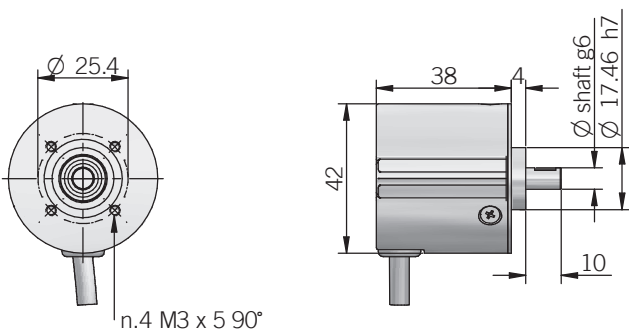
EL - ER 40 B



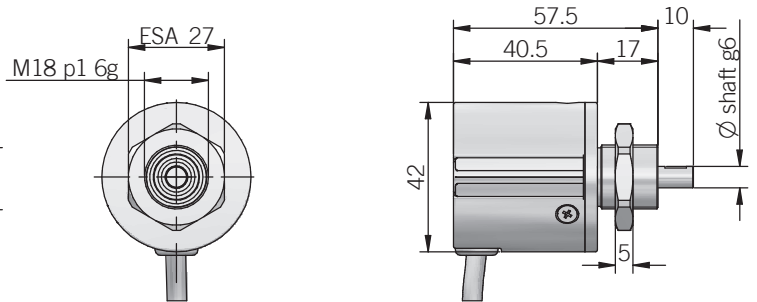
EL - ER 40 B (IP 66)



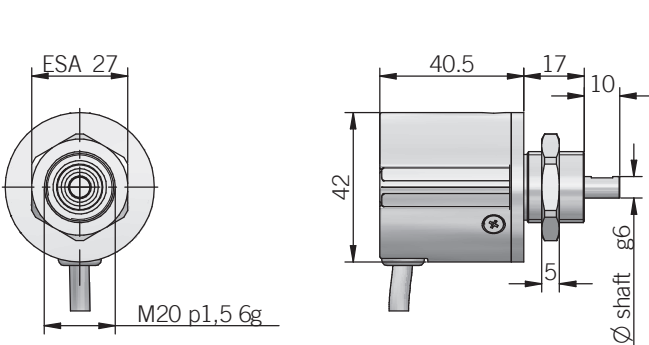
EL - ER 40 C



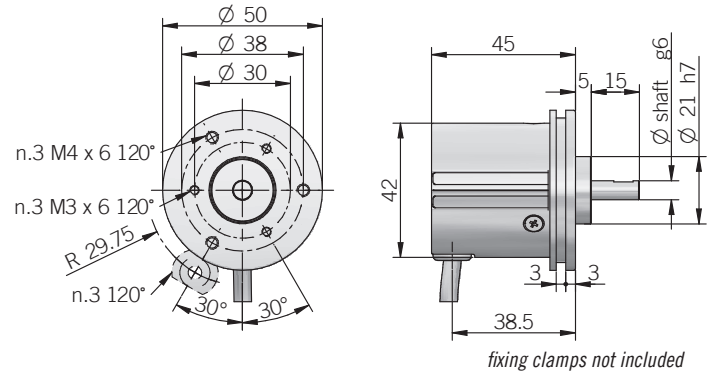
EL - ER 40 H



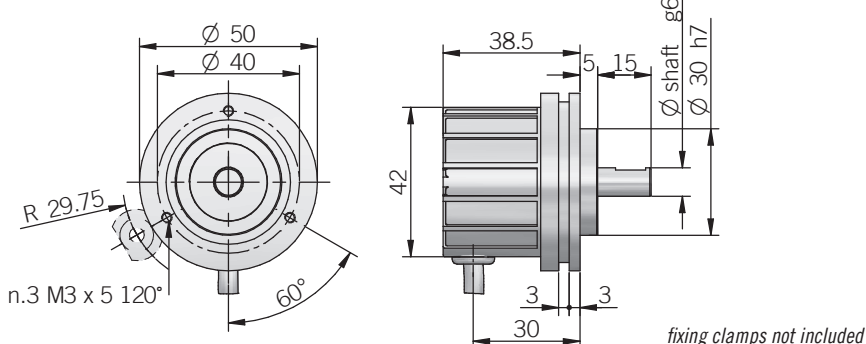
EL - ER 40 I



EL - ER 40 N



EL - ER 40 X

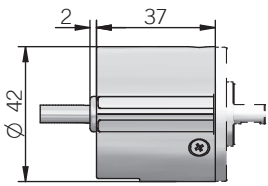


fixing clamps not included

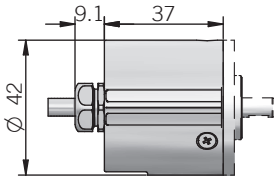
fixing clamps not included

dimensions in mm

EL - ER 40 (axial output)



EL - ER 40 (IP 66 axial output)



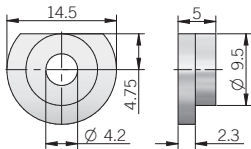
ELECTRICAL SPECIFICATIONS

Resolution	from 1 to 14400 ppr (mod. A/B) from 1 to 2500 ppr (mod. C/H/I/N/X)
Power supply	5 = 4,5 ... 5,5 V DC 5/28 = 4,75 ... 29,4 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	150 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

ACCESSORIES

set n.3 fixing clamps for model 40 X / 40 N
P/N 94080001



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	Ø 4 / 6 / 8 mm
Enclosure rating	X = IP 54 (IEC 60529) S = IP 66 (IEC 60529)
Max rotation speed	3000 rpm (IP 66) 6000 rpm (IP 54)
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	0,1 x 10 ⁻⁶ kgm ²
Starting torque (at +20°C / +68°F)	< 0,01 Nm (IP 54) < 0,05 Nm (IP 66)
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° ... +70°C (-13° ... +158°F)
Weight	100 g (3,52 oz)

EL SERIES RESOLUTIONS

1 - 2 - 4 - 5 - 10 - 15 - 16 - 20 - 30 - 32 - 40 - 50 - 70 - 80 - 90 - 3000 - 3600
- 4000 - 4096 - 5000 - 6000 - 7200 - 8000 - 8192 - 10000 - 12000 - 14400

ER SERIES RESOLUTIONS

100 - 120 - 128 - 150 - 200 - 240 - 250 - 256 - 300 - 360 - 400 - 480 - 500 - 512
- 600 - 625 - 720 - 750 - 800 - 900 - **1000 - 1024 - 1200 - 1250 - 1440 - 1500**
- 1600 - 1800 - **2000 - 2048** - 2500

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