

MAIN FEATURES

Miniaturized $\varnothing 42$ encoder series for general applications.

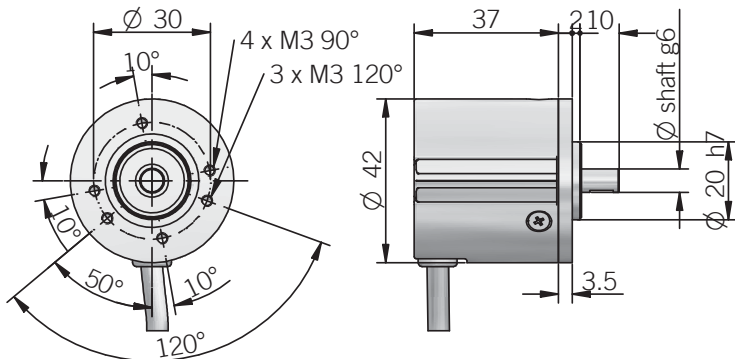
- Up to 25000 ppr with zero signal
- Several output types available
- Up to 28 V DC power supply
- Up to 220 kHz output frequency
- Cable output
- Up to 6000 RPM rotation speed
- Up to IP 66 sealing



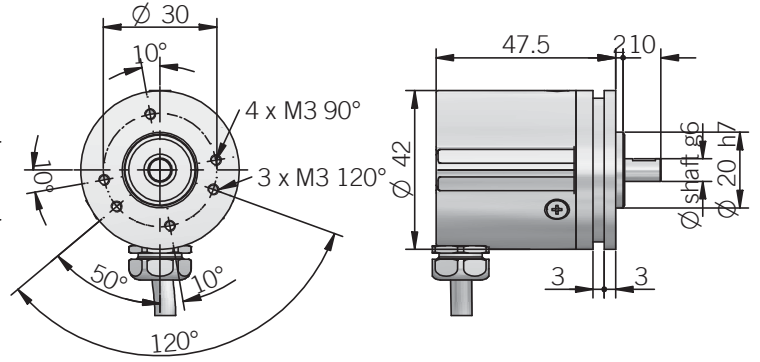
ORDERING CODE

EL	40	A	500	Z	5/28	N	6	X	3	P	R	. XXX
SERIES incremental encoder series EL incremental encoder series ER	SIZE mm 40	TYPE fixing flange $\varnothing 20$ mm A square flange $\square 36,5$ mm B fixing flange $\varnothing 17,46$ mm C fixing flange $\varnothing 15$ mm E threaded flange M18 H threaded flange M21 I synchronous flange $\varnothing 21$ mm N synchronous flange $\varnothing 30$ mm X	RESOLUTION (EL - ER 40 A / B) max ppr 25000 (EL - ER 40 C / E / H / I / N / X) max ppr 2500 <i>N.B.: please see resolution table or directly contact our offices for pulses availability</i>	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	DIRECTION TYPE A axial (excluded EL - ER 40 X) R radial	OUTPUT TYPE P cable output (standard length 0.5 m)	MAX ROTATION SPEED 3 3000 rpm 6 6000 rpm <i>N.B.: 3000 RPM max with S enclosure rating</i>	ENCLOSURE RATING X IP 54 S IP 66 (optional for EL - ER 40 A / B)	SHAFT DIAMETER 4 mm (EL - ER 40 A / B / C / E) 6 mm (EL - ER 40 A / B / C / H / I / N) 8 mm (EL - ER 40 X)	ELECTRONIC INTERFACE N NPN C NPN open collector P push-pull PC protected push-pull (AEIC-7272) L line driver <i>N.B.: with N / C interface max 2500 ppr</i>

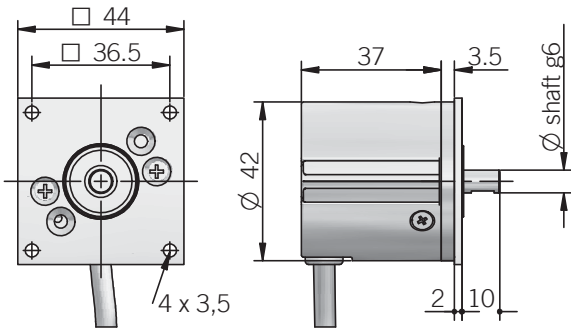
EL - ER 40 A



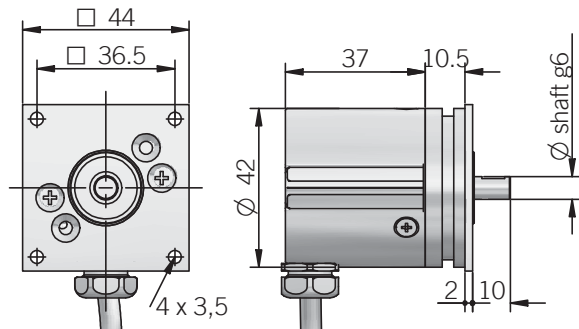
**EL - ER 40 A
IP 66 version**



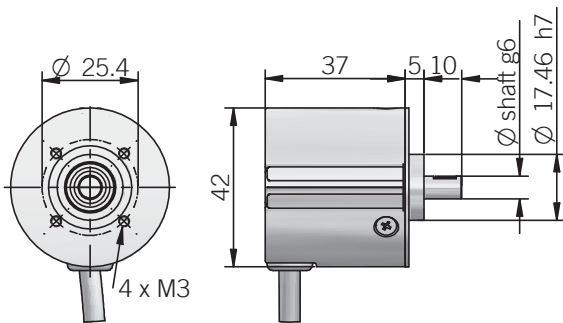
EL - ER 40 B



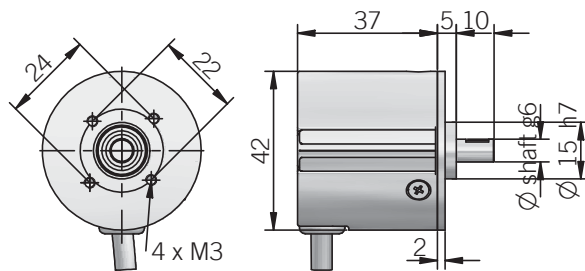
**EL - ER 40 B
IP 66 version**



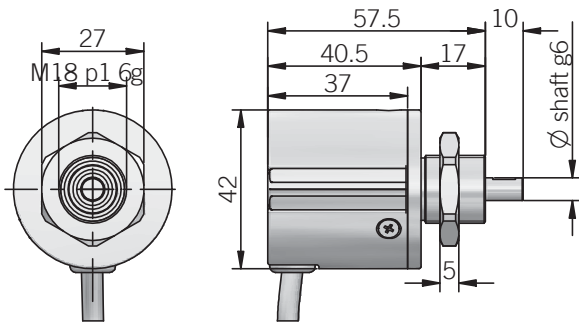
EL - ER 40 C



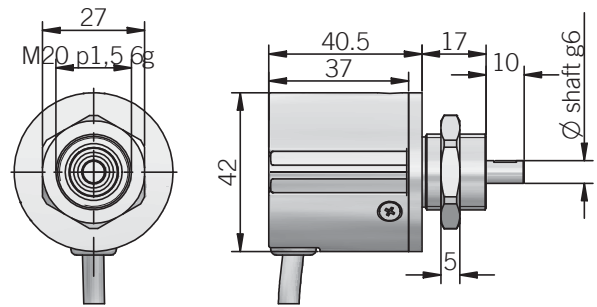
EL - ER 40 E



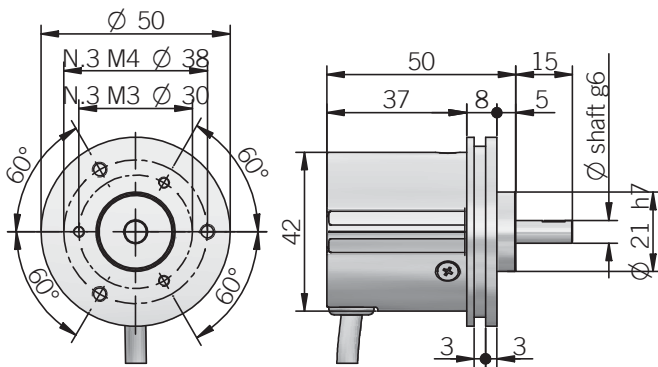
EL - ER 40 H



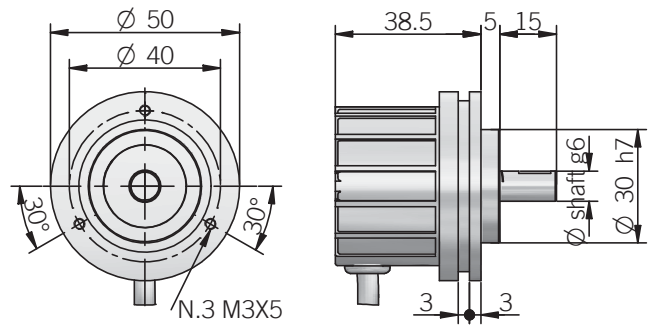
EL - ER 40 I



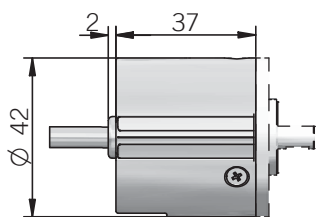
EL - ER 40 N



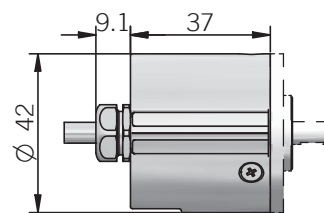
EL - ER 40 X



EL - ER 40
dimension with axial output



EL - ER 40
dimension with IP 66 axial output



Electrical specifications

Resolution	from 1 to 25000 ppr (EL - ER 40 A/B) from 1 to 2500 ppr (EL - ER 40 C/E/H/I/N/X)
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	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

Mechanical specifications

Shaft diameter	\varnothing 4 mm (EL - ER 40 A/B/C/E) \varnothing 6 mm (EL - ER 40 A/B/C/H/I/N) \varnothing 8 mm (EL - ER 40 X)
Enclosure rating	IP 54 (IEC 60529) IP 66 (optional for EL - ER 40 A/B) (IEC 60529)
Max rotation speed	3000 rpm 6000 rpm (only IP 54)
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	EN-AW 2011 aluminum
Shaft material	1.4305 / AISI 303 stainless steel
Housing material	PA 66 glass fiber reinforced
Bearings	2 ball bearings
Bearings life	10 ⁹ revolutions
Operating temperature	-10° ... +60°C EL series -20° ... +70°C ER series
Storage temperature	-25° ... +70°C
Weight	100 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
\equiv	shield	shield

Resolutions ER series

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

Resolutions EL series

1 - 2 - 4 - 5 - 10 - 15 - 16 - 20 - 30 - 32 - 40 - 50 - 70 - 80 - 90 - 160 - 180 - 350 - 450 - 660 - 700 - 2880 - 3000 - 3600 - 4000 - 4096 - 5000 - 6000 - 7200 - 7500 - 8000 - 8192 - 10000 - 10240 - 12000 - 15000 - 16000 - 16384 - 20000 - 20480 - 25000