

MAIN FEATURES

Encoder series for critical environments with high mechanical resistance requirements. The 90 model can be mounted by means of flanges or servo-fasteners; the 115 model has a tachometer generator REO-444 type compatible plug.

- Up to 10000 ppr with zero
- Several output types available
- Up to 28 V DC power supply
- Up to 300 kHz output frequency
- Cable or connector output
- Several flanges available
- Up to 6000 RPM rotation speed
- Up to IP 66 sealing for model 90 A



ORDERING CODE

EL	90	A	1000	Z	5/28	N	8	X	6	M	R	.	XXX
SERIES												VARIANT	
incremental encoder series												XXX custom version	
EL												DIRECTION TYPE	
incremental encoder series												A axial	
ER												R radial	
SIZE												OUTPUT TYPE	
mm 90												P cable output (standard length 1,5 m)	
mm 115												M M connector output	
TYPE												J J connector output	
synchronous flange ø 40 mm (mod. 90)												MAX ROTATION SPEED	
flange REO444 (mod. 115) A												3 3000 rpm	
RESOLUTION												6 6000 rpm	
ppr from 1 to 10000												<i>N.B.: 3000 RPM max. with "S" enclosure rating</i>	
<i>N.B.: please see resolution table or directly contact our offices for pulses availability</i>												ENCLOSURE RATING	
ZERO PULSE												X IP 54	
without zero pulse S												S IP 66 (available for model 90 A)	
with zero pulse Z												SHAFT DIAMETER	
POWER SUPPLY												8 mm (90 A)	
(available only with L electronic output) 5 V DC 5												9 ø 9,52 (3/8") mm (90 A)	
(available with L or PC electronic output) 8 ... 24 V DC 8/24												10 mm (90 A / 115 A)	
5 ... 28 V DC 5/28												11 mm (115 A)	
ELECTRONIC INTERFACE													
NPN N													
NPN open collector C													
push-pull P													
protected push-pull (AEIC-7272) PC													
line driver L													

Electrical specifications

Resolution	from 1 to 10000 ppr
Power supply	5 V DC \pm 10% 5 ... 28 V DC \pm 5% 8 ... 24 V DC \pm 5% (reverse polarity protection)
Power draw without load	800 mW
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	300 kHz
Counting direction	A leads B clockwise (shaft view)
Electromagnetic compatibility	IEC 61000-6-2 IEC 61000-6-4

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

EL series resolutions

1 - 2 - 4 - 5 - 10 - 15 - 16 - 20 - 25 - 30 - 32 - 40 - 50 - 60 - 70 - 80 - 90
- 160 - 180 - 350 - 450 - 660 - 700 - 3000 - 3600 - 4000 - 4096 - 5000
- 6000 - 7200 - 8000 - 8192 - 9000 - 10000

Mechanical specifications

Shaft diameter	\varnothing 8 / 9,52 (3/8") / 10 mm (90A) \varnothing 10 / 11 mm (115A)
Grado di protezione	IP 54 (IEC 60529) IP 66 (available for model 90 A) (IEC 60529)
Max rotation speed	3000 rpm 6000 rpm (only with IP 54)
Max shaft load	200 N (20 kgf) axial 200 N (20 kgf) radial
Shock	50 G, 11 ms (plastic disc) (IEC 60068-2-27) 20 G, 11 ms (glass disc) (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	painted aluminum
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	750 g

Connections

Function	N / C / P cable output	Line driver cable output	Output J7 N / C / P	Output J7 Line Driver without Zero	Output M7 N / C / P	Output M7 Line Driver without Zero	Output J10 Line Driver with Zero	Output M10 Line Driver with Zero
+V DC	red	red	6	4	F	D	4 - 5	D - E
0 V	black	black	1	6	A	F	6	F
Ch. A	green	green	3	1	C	A	1	A
Ch. A-	/	brown	/	3	/	C	7	G
Ch. B	yellow	yellow	5	2	E	B	2	B
Ch. B-	/	orange	/	5	/	E	8	H
Ch. Z	blue	blue	4	/	D	/	3	C
Ch. Z-	/	white	/	/	/	/	9	I
\perp	shield	shield	7	7	G	G	10	J