

MAIN FEATURES

Hollow shaft encoder series for industrial applications with high mechanical resistance requirements. These encoders are designed to withstand high radial and axial shaft loads.

- Up to 25000 ppr with zero signal
- Several output types available
- Up to 28 V DC power supply
- Up to 300 kHz output frequency
- Cable or connector output



ORDERING CODE

ER 63 G M* 1000 Z 5/28 N 8 X 3 M R . XXX

SERIES
incremental encoder series **EL**
incremental encoder series **ER**

SIZE
mm **58**
mm **63**

TYPE
blind hollow shaft with spring **F**
blind hollow shaft with anti-rotation pin **G**
(EL 63 P) through hollow shaft with anti-rotation pin **P**

METAL COVER
(58 F / G, 63 F / G) **M**
** add for metal cover*

RESOLUTION
(58 G, 63 P) ppr from **1** to **2500**
(58 F, 63 F / G) ppr from **1** to **25000**
N.B.: please directly contact our offices for pulses availability

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 (58 F / G, 63 F / G)
R radial

OUTPUT TYPE
P cable output (standard length 1.5 m)
M M connector output (58 F / G, 63 F / G)
J J connector output (58 F / G, 63 F / G)

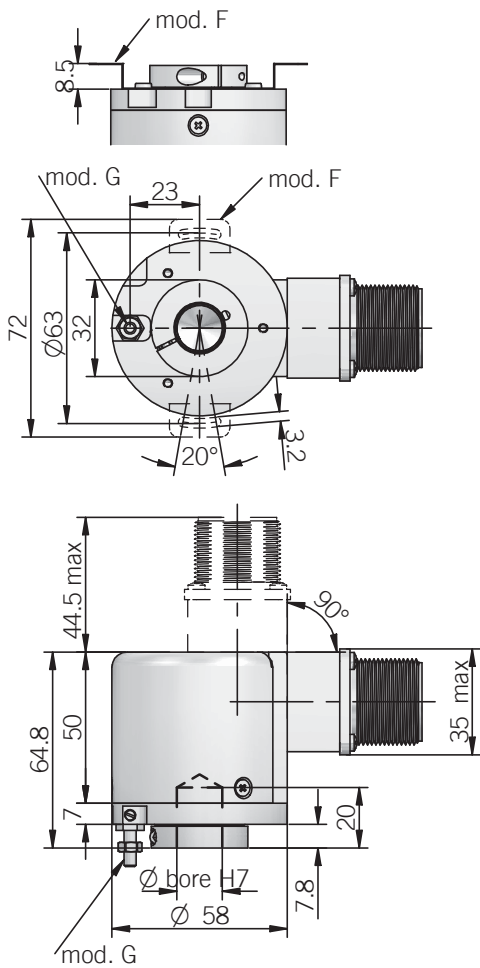
MAX ROTATION SPEED
3 3000 rpm

ENCLOSURE RATING
X IP 54
S IP 66 (*available for 58 F / G, 63 F / G*)

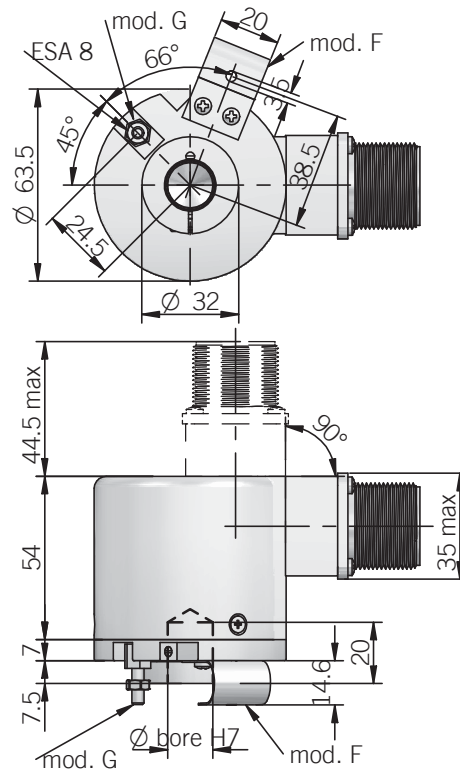
BORE DIAMETER
8 mm
10 mm
12 mm
14 mm
15 mm

ELECTRONIC INTERFACE
N NPN
C NPN open collector
P push-pull
PC protected push-pull (AEIC-7272)
L line driver

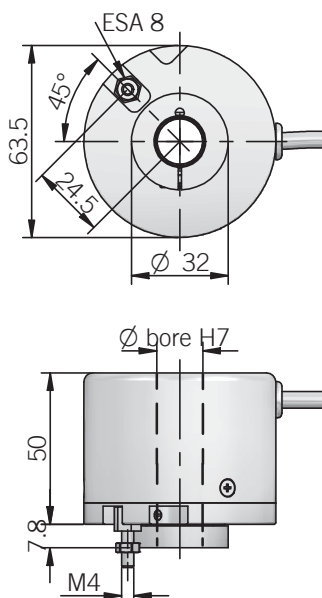
EL - ER 58 F / G



EL - ER 63 F / G



EL 63 P



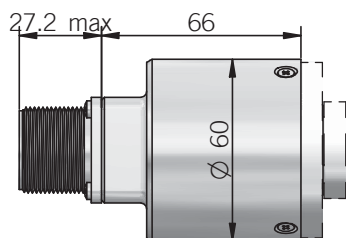
EL 58 F, EL 63 F mounting instructions

1. Couple encoder shaft with motor shaft
2. Fix spring to motor flange without tightening it
3. Fix encoder shaft on motor shaft
4. Turn encoder for electrical adjustment (phasing)
5. Fix spring

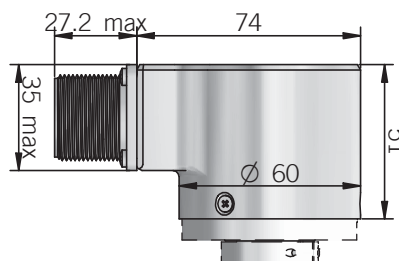
EL 58 G, EL 63 G, EL 63 P mounting instructions

1. Fix anti-rotation pin on motor flange
2. Couple encoder shaft with motor shaft, making sure pin is inserted in the hole on the front part of the encoder (maintaining a minimum distance of 0.5 mm).
3. Fix encoder shaft on motor shaft

Dimensions with metal cover axial output



Dimensions with metal cover radial output



Electrical specifications

Resolution	from 1 to 2500 ppr (EL 58 G, EL 63 P) from 1 to 25000 ppr (EL 58 F, EL 63 F / G)
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 - 7500 - 8000 - 8192 - 9000 - 10000 - 10240 - 12000 - 14400 - 15000 - 16000 - 16384 - 18000 - 20000 - 20480 - 25000

Mechanical specifications

Shaft diameter	\varnothing 8 / 10 / 12 / 14 / 15 mm
Enclosure rating	IP 54 (IEC 60529) IP 66 (available for 58 F / G, 63 F / G) (IEC 60529)
Max rotation speed	3000 rpm
Max shaft load	200 N (20 kp)
Shock	50 G, 11 ms up to 2500 ppr (IEC 60068-2-27) 20 G, 11 ms from 3000 ppr (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 / 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	350 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
⊕	shield	shield	7	7	G	G	10	J

