

### 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 2048 ppr
- Several output types available
- Up to 24 V DC
- Up to 100 kHz
- Cable or connector output
- Up to 6000 RPM rotation speed
- Up to IP 66 sealing for model 90 A



### ORDERING CODE

**RELAY INTERVENTION SPEED**  
from 600 to 4300  
*N.B.: for higher speeds contact our offices directly*

EH	90	A	1000	Z	8/24	N	1000	Z	8/24	N	8	X	6	M	R	.XXX + 2000
<b>SERIES</b> incremental encoder series EH	<b>SIZE</b> mm 90 mm 115	<b>TYPE</b> synchronous flange ø 40 mm (mod. 90) flange REO444 (mod. 115) flange REO 444 with centrifugal relay (mod. 115)	<b>RESOLUTION</b> ppr from 200 to 2048 <i>N.B.: please directly contact our offices for pulses availability</i>	<b>ZERO PULSE</b> without zero pulse S with zero pulse Z	<b>POWER SUPPLY</b> (excluding electronic PC )5 V DC 5 8 ... 24 V DC 8/24	<b>ELECTRONIC INTERFACE</b> NPN N NPN open collector C PUSH PULL P protected push-pull (AEIC-7272) PC line driver L	<b>RESOLUTION</b>	<b>ZERO PULSE</b>	<b>POWER SUPPLY</b>	<b>OUTPUT TYPE</b>	<b>SHAFT DIAMETER</b> 8 mm (EH 90) 9 ø 9,52 (3/8") mm (EH 90) 10 mm (EH 90 / EH 115) 11 mm (EH 115)	<b>ENCLOSURE RATING</b> X IP 54 S IP 66 (available for model EH 90)	<b>MAX ROTATION SPEED</b> 3 3000 rpm 6 6000 rpm <i>N.B.: 3000 RPM max. with "S" enclosure rating</i>	<b>OUTPUT TYPE</b> P cable output (standard length 1,5 m) M M connector output J J connector output	<b>DIRECTION TYPE</b> A axial R radial	<b>VARIANT</b> XXX custom version

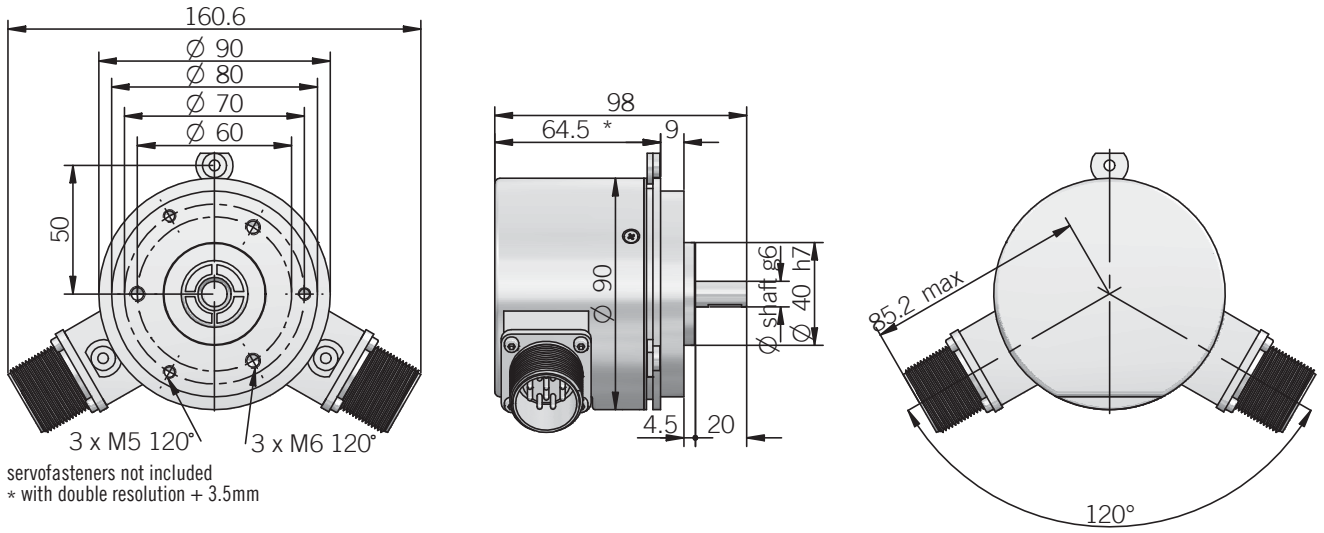
*N.B.: To be indicated only in the models "A" for double electronics and double resolution. See examples:*

*Double resolution and double electronics: EH90A1024Z5L-2048Z8/24L10X...*

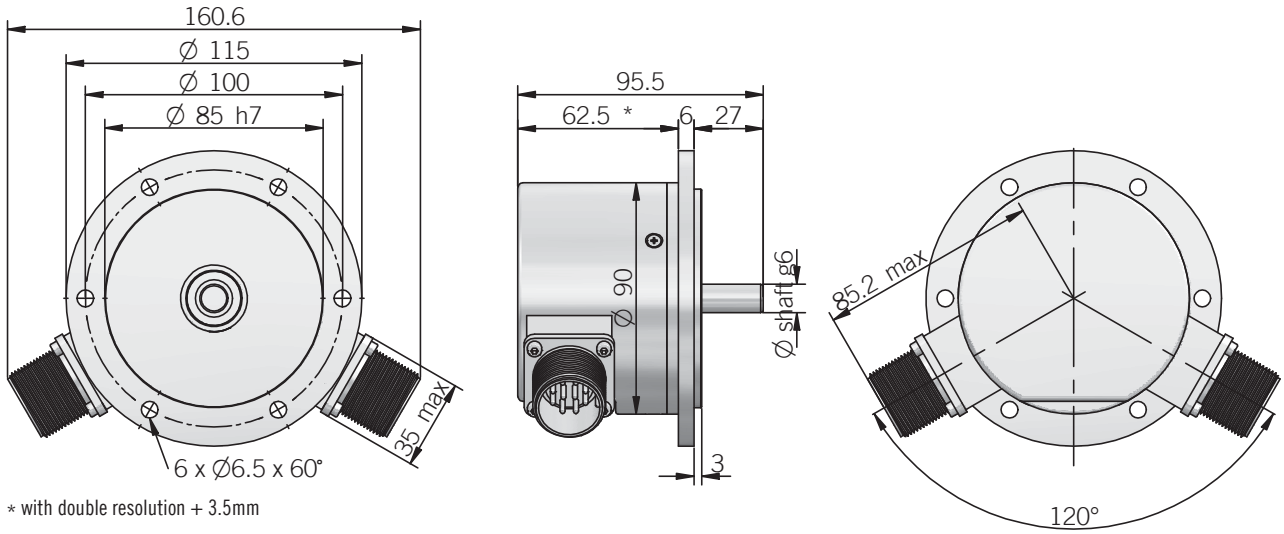
*Double resolution and same electronics: EH90A1024-2048Z5L10X...*

*Same resolution and double electronics: EH90A1024Z5L-Z8/24L10X...*

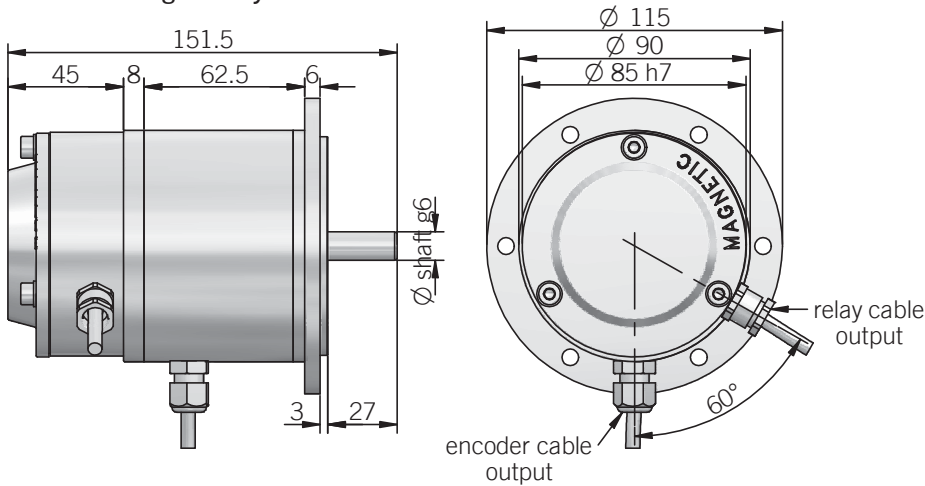
**EH 90 A**  
with double electronics / resolution



**EH 115 A**  
with double electronics / resolution



**EH 115 R**  
with centrifugal relay



## Electrical specifications

<b>Resolution</b>	from 200 to 2048 ppr
<b>Power supply</b>	5 V DC $\pm$ 10% 8 ... 24 V DC $\pm$ 5% (reverse polarity protection)
<b>Current consumption without load</b>	100 mA max
<b>Max load current</b>	50 mA for channel 20 mA for channel (line driver)
<b>Output type</b>	NPN NPN open collector push-pull line driver
<b>Max output frequency</b>	100 kHz
<b>Counting direction</b>	A leads B clockwise (shaft view)
<b>Electromagnetic compatibility</b>	IEC 61000-6-1 IEC 61000-6-3

## Relay characteristics

<b>Intervention speed</b>	from 600 to 4300 rpm
<b>Accuracy</b>	$\pm$ 3 %
<b>Contact capacity</b>	2 A / 250 V AC 3,3 A / 125 V AC
<b>Type of contact</b>	Normally Closed (NC)

## Mechanical specifications

<b>Shaft diameter</b>	$\varnothing$ 8 / 9,52 (3/8") / 10 mm (EH 90) $\varnothing$ 10 / 11 mm (EH 115)
<b>Enclosure rating</b>	IP 54 (IEC 60529) IP 66 (available for model EH 90) (IEC 60529)
<b>Max rotation speed</b>	3000 rpm 6000 rpm (only with IP 54)
<b>Max shaft load</b>	200 N (20 Kgf) axial 200 N (20 Kgf) radial
<b>Shock</b>	50 G, 11 ms (IEC 60068-2-27)
<b>Vibration</b>	10 G, 10 ... 2000 Hz (IEC 60068-2-6)
<b>Body material</b>	EN-AW 2011 aluminum
<b>Shaft material</b>	1.4305 / AISI 303 stainless steel
<b>Housing material</b>	painted aluminum
<b>Bearings</b>	2 ball bearings
<b>Bearings life</b>	10 <sup>9</sup> revolutions
<b>Operating temperature</b>	-10° ... +60°C
<b>Storage temperature</b>	-25° ... +70°C
<b>Weight</b>	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
$\text{⏏}$	shield	shield	7	7	G	G	10	J