



# EH-EL90A/115 A-R INCREMENTAL ENCODER



## Incremental encoder

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

- Up to 10.000 ppr with zero for EL series, up to 1024 ppr for EH series.
- Several output types available.  
Up to 28 Vdc input voltage for EL series and up to 24 Vdc for EH series.
- Up to 300 kHz frequency response for EL series and up to 100 kHz for EH series
- Output cable with connector.
- Several flanges available
- Up to 6.000 rpm speed rotation
- Up to IP66 sealing model 90A



shaft INCREMENTAL ENCODERS

## Ordering code

Full stop to separate special versions

EL 90 A 1000 Z 5/28 N 1000 Z 5/28 N 8 X 6 M R . XXX

incremental encoder series **EL**  
 incremental encoder series **EH**  
 body dimension **90**  
 body dimension **115**  
**Type of flange**  
 mod.EH-EL 90A / 115A **A**  
 only mod.EH / EL115R **R**

**R** radial  
**A** axial  
**P** cable output (standard length 1,5 m)  
**M** connector MS3106E 16S-1S or 18-1S  
**J** connector JMS1607 F or 1610 F

Special version code numbered from 001 to 999

### Resolution

from **1** to **10000** PPR for series EL  
 from **40** to **1024** PPR for series EH  
*Please, directly contact our offices for pulses availability*

### Zero pulse

without zero pulse **S**  
 with zero pulse **Z**

### Input voltage

input voltage EL **5 ÷ 28**  
 input voltage EH **5 / 8 ÷ 24**  
*LINE DRIVER available only with input voltage 5 Vdc or 8 ÷ 24 Vdc*

### Output types

NPN **N**  
 NPN OPEN COLLECTOR **C**  
 PUSH PULL **P**  
 LINE DRIVER **L**

*For options about output types please refer to incremental output section*

### R.P.M.

**3** 3000  
**6** 6000

*Enclosure rating S 3000 turn*

### Enclosure rating

**X** standard IP54  
**S** optional IP66 for mod 90 A

### Shaft diameter

**8** ø 8 g6 mm EH-EL90  
**9** ø 9,52 g6 mm (3/8") EH-EL90  
**10** ø 10 g6 mm EH-EL90 / 115  
**11** ø 11 g6 mm EH-EL115

### Output types

### Input voltage

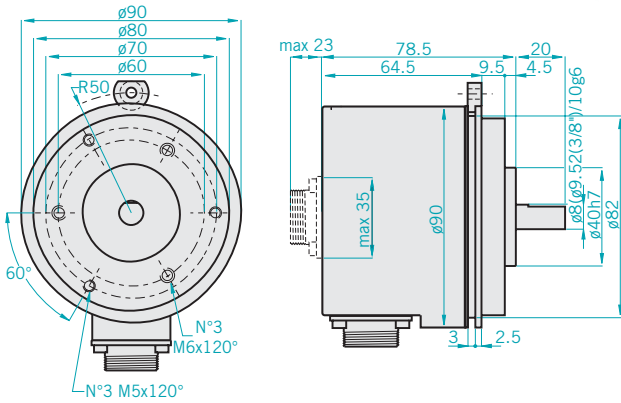
### Zero pulse

### Resolution

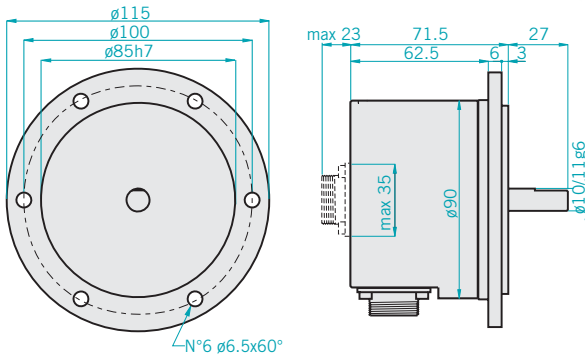
*To be indicated only on models with double electronics for more information please contact our offices)*

EH-EL 90A/115 A-R

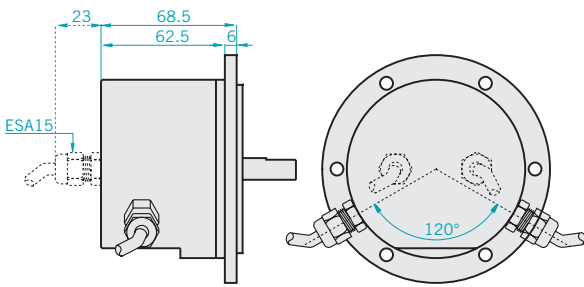
## EH-EL 90 A



## EH-EL 115 A

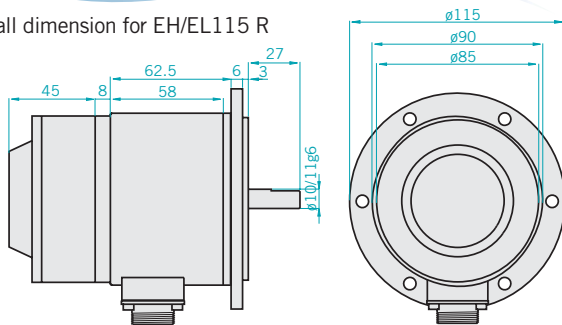


## EH-EL 90 A/115 A with double electronic



## EH-EL 115 R with centrifugal relè

Overall dimension for EH/EL115 R



### EL series electrical specifications

<b>Resolution</b>	From 1 to 10000 PPR
<b>Input voltage</b>	5 ÷ 28 Vdc LINE DRIVER only available with input voltage 5 / 8÷24 Vdc
<b>Input current with no output load</b>	100 mA Max
<b>Source and sink current</b>	50 mA for channel 20 mA for channel LINE DRIVER
<b>Output types</b>	NPN / NPN OPEN COLLECTOR / PUSH PULL / LINE DRIVER
<b>Frequency response</b>	300 KHz Max $F = \frac{RPM \times Resolution}{60}$

### EH series electrical specifications

<b>Resolution</b>	From 40 to 1024 PPR
<b>Input voltage</b>	5 Vdc / 8 ÷ 24 Vdc
<b>Input current with no output load</b>	100 mA Max
<b>Source and sink current</b>	50 mA for channel 20 mA for channel LINE DRIVER
<b>Output types</b>	NPN / NPN OPEN COLLECTOR / PUSH PULL / LINE DRIVER
<b>Frequency response</b>	100 KHz Max $F = \frac{RPM \times Resolution}{60}$

### Mechanical specifications

<b>Shaft diameter</b>	ø8 / ø9,52 (3/8") / ø10 mm g6 ø10 / ø11 mm g6	EH-EL90 EH-EL115
<b>Enclosure rating</b>	IP54 standard IP66 optional mod. 90 A	
<b>Shaft speed</b>	3000 RPM 6000 RPM 3000 RPM MAX with "S" rating	
<b>Max shaft load</b>	200N (20 Kp) axial 200N (20 Kp) radial	
<b>Shock</b>	50 G for 11 msec (with plastic disc) 20 G for 11 msec (with glass disc)	
<b>Vibrations</b>	10G 10 ÷ 2000 Hz	
<b>Bearings life</b>	10 <sup>9</sup> revolu-	
<b>Bearings</b>	n° 2 Ball bearings	
<b>Shaft material</b>	Stainless steel AISI303	
<b>Body material</b>	Aluminium D11S - UNI	
<b>Housing material</b>	Painted aluminium	
<b>Operating temperature</b>	0° ÷ +60°C	
<b>Storage temperature</b>	-25° ÷ +70°C	
<b>Weight</b>	750 g	