

## MAIN FEATURES

∅ 80 encoder series recommended in feedback control systems on AC servomotors. They include a traditional incremental encoder and the Hall effect phases.

- Small dimensions
- Wide resolution range available
- High temperature resistant
- Easy mounting

### EH series

Basic version with incremental outputs.  
Several output types available.

### EF series

Optic generation of “Hall effect phases” added to the basic version.  
Signal transmission by parallel bus.

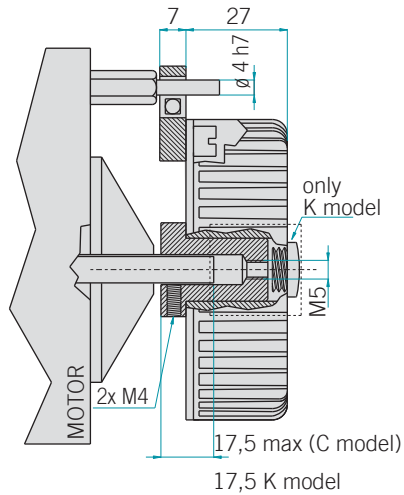


## ORDERING CODE

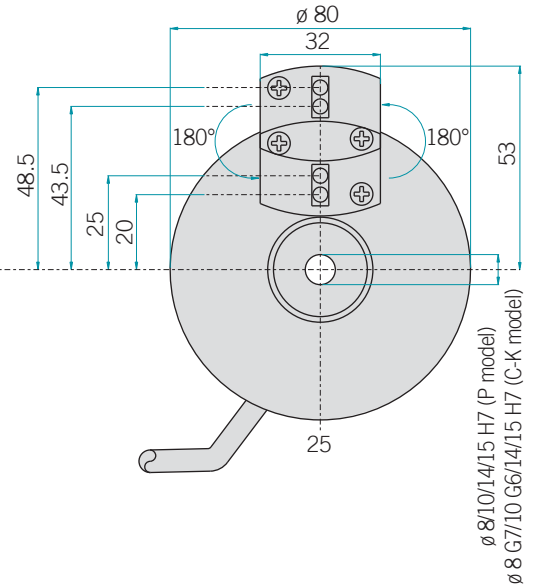
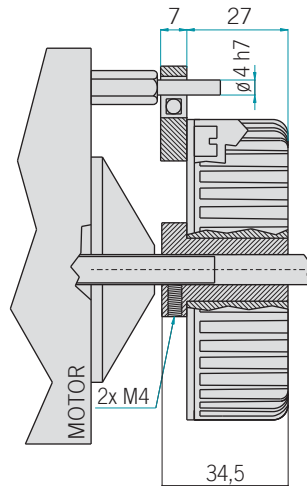
	<b>EF</b>	<b>80</b>	<b>P</b>	<b>6</b>	<b>L</b>	<b>2000</b>	<b>Z</b>	<b>5</b>	<b>L</b>	<b>8</b>	<b>X</b>	<b>3</b>	<b>PR</b>	<b>.</b>	<b>XXX</b>	
<b>SERIES</b>	incremental encoder <b>EH</b>	incremental encoder <b>EF</b>	with Hall phases													<b>VARIANT</b> XXX custom version
<b>SIZE</b>	mm <b>80</b>															<b>OUTPUT TYPE</b> PR radial cable output (standard length 0.3 m)
<b>TYPE</b>	blind hollow shaft <b>C</b>	through hollow shaft <b>P</b>	blind hollow shaft with rear fixing <b>K</b>													<b>MAX ROTATION SPEED</b> 3 3000 rpm
<b>POLES OF THE MOTOR (EF SERIES)</b>	4 poles <b>4</b>	6 poles <b>6</b>	8 poles <b>8</b>													<b>ENCLOSURE RATING</b> X IP 54
<b>OUTPUT TYPE FOR HALL PHASES (EF SERIES)</b>	NPN open collector <b>C</b>	line driver <b>L</b>														<b>BORE DIAMETER</b> 8 ∅ 8 mm 10 ∅ 10 mm 14 ∅ 14 mm 15 ∅ 15 mm
<b>RESOLUTION</b>	ppr from <b>200</b> to <b>2048</b>															<b>OUTPUT TYPE FOR INCREMENTAL SIGNALS</b> N NPN (EH series) C NPN open collector (EH series) P push pull (EH series) PC protected push-pull (AEIC-7272) L line driver
<b>ZERO PULSE</b>	without zero pulse <b>S</b>	with zero pulse <b>Z</b>														<b>POWER SUPPLY</b> 5 5 V DC (available only with L electronic output) 5/28 5 ... 28 V DC (EH series) 8/24 8 ... 24 V DC (available only with L / PC electronic output EH series)

*N.B.: please directly contact our offices for pulses availability*

## EH - EF 80 C / K

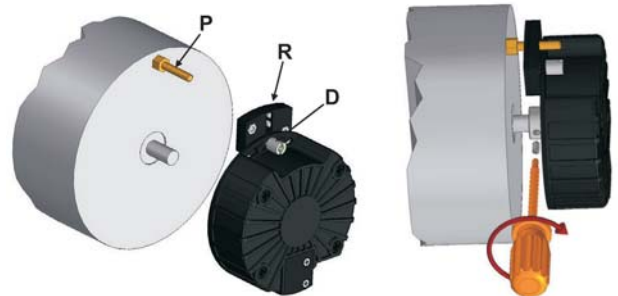


## EH - EF 80 P



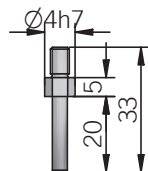
### HOW TO MOUNT IT

- Fix the anti-rotation pin (P).
- Insert the encoder on the motor shaft with misalignment recovery system corresponding to the pin (P).
- Screw the nut (D) (don't tighten it if you need to phase zero signal).
- Couple the encoder shaft with the motor shaft, making sure the pin (P) is inserted in the hole of the misalignment recovery system (R).
- Fix the encoder shaft with the two M4 grub screws.
- For zero phasing turn the encoder (22° max.), then screw the nut (D).



### Accessories

Anti-rotation pin D.4h7 L=5mm ESA7 (EH-EF80)  
ordering code: 23240008



## Electrical specifications

<b>Resolution</b>	from 200 to 2048 ppr
<b>Power supply</b>	5 V DC $\pm$ 10% 5 ... 28 V DC $\pm$ 5% (only EH series) 8 ... 24 V DC $\pm$ 5% (reverse polarity protection only EH series)
<b>Current consumption without load</b>	100 mA max (EH series) 200 mA max (EF series)
<b>Max load current</b>	15 mA for channel
<b>Output type (EH series)</b>	NPN NPN open collector push-pull line driver
<b>Output type for incremental signals (EF series)</b>	line driver
<b>Output type for Hall phases (serie EF)</b>	NPN open collector / line driver
<b>Max output frequency</b>	105 kHz
<b>Counting direction</b>	A leads B clockwise (shaft view)
<b>Electromagnetic compatibility</b>	IEC 61000-6-2 IEC 61000-6-4

## Mechanical specifications

<b>Bore diameter</b>	$\varnothing$ 8 / 10 / 14 / 15 mm
<b>Enclosure rating</b>	IP 54 (IEC 60529)
<b>Max rotation speed</b>	3000 rpm
<b>Shock</b>	50 G, 11 ms
<b>Vibration</b>	5 G, 10 ... 500 Hz
<b>Body material</b>	PA66 glass fiber reinforced
<b>Shaft material</b>	1.4305 / AISI 303 stainless steel
<b>Housing material</b>	PA66 glass fiber reinforced
<b>Bearings</b>	n° 2 ball bearings
<b>Bearings life</b>	10 <sup>9</sup> revolutions
<b>Operating temperature</b>	-10° ... +85°C -10° ... +100°C on demand
<b>Storage temperature</b>	-25° ... +85°C
<b>Weight</b>	250 g

## Resolutions EH - EF 80

200 6 poles  
 250 6 poles  
 500 4 / 6 / 8 poles  
 512 6 poles  
 1000 4 / 6 poles  
 1024 4 / 6 / 8 poles  
 2000 6 poles  
 2048 6 poles

## Connections

Function	EH Push pull / Npn / Npn open collector	EH Line driver	EF
+V DC	red	red	red
0 V	black	black	black
Ch. A	green	green	green
Ch. B	yellow	yellow	yellow
Ch. Z	blue	blue	blue
Ch. A-	/	brown	brown
Ch. B-	/	orange	orange
Ch. Z-	/	white	white
Ch. U	/	/	gray
Ch. V	/	/	violet
Ch. W	/	/	gray-pink
Ch. U-	/	/	red-blue
Ch. V-	/	/	white-green
Ch. W-	/	/	brown-green
$\equiv$	shield	shield	shield