

EH - EF 80 C / P / K

INCREMENTAL ENCODER
MOTOR SERIES



MAIN FEATURES

ø 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.



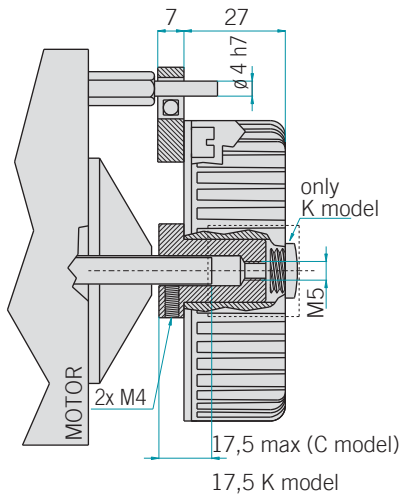
HOLLOW SHAFT INCREMENTAL ENCODERS

ORDERING CODE

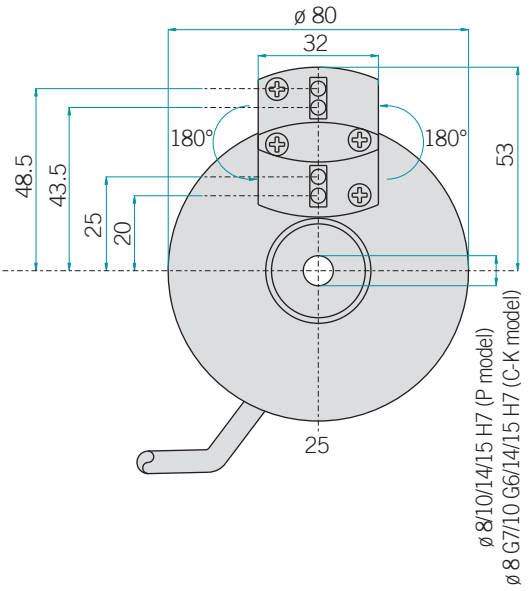
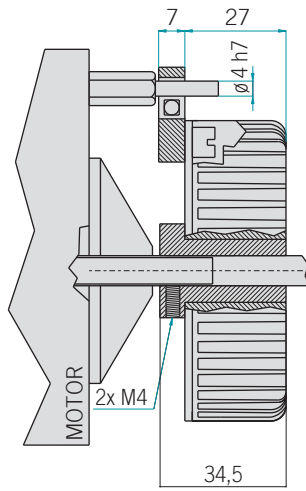
	EF	80	P	6	L	2000	Z	5	L	8	X	3	PR	.	XXX	
SERIES	incremental encoder EH incremental encoder EF with Hall phases															VARIANT XXX custom version
SIZE	mm 80															OUTPUT TYPE PR radial cable output (standard length 0.3 m)
TYPE	blind hollow shaft C through hollow shaft P blind hollow shaft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

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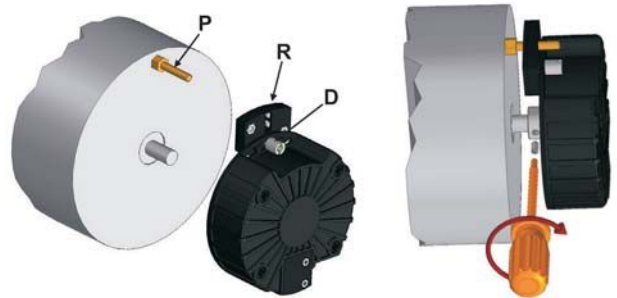


EH - EF 80 P



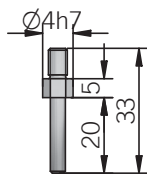
HOW TO MOUNT IT

- 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

Resolution	from 200 to 2048 ppr
Power supply	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)
Current consumption without load	100 mA max (EH series) 200 mA max (EF series)
Max load current	15 mA for channel
Output type (EH series)	NPN NPN open collector push-pull line driver
Output type for incremental signals (EF series)	line driver
Output type for Hall phases (serie EF)	NPN open collector / line driver
Max output frequency	105 kHz
Counting direction	A leads B clockwise (shaft view)
Electromagnetic compatibility	IEC 61000-6-2 IEC 61000-6-4

Mechanical specifications

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