EH - EF 80 C / P / K

INCREMENTAL ENCODER
MOTOR SERIES

ISO 9001:2000

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.

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

SIZE
mm 80

TYPE
blind hollow shaft C
through hollow shaft P
blind hollow shaft with rear fixing K

POLES OF THE MOTOR (EF SERIES)
4 poles 4
6 poles 6
8 poles 8

OUTPUT TYPE FOR HALL PHASES (EF SERIES)
NPN open collector C
line driver L

RESOLUTION
ppr from 200 to 2048
N.B.: please directly contact our offices for pulses availability

ZERO PULSE
without zero pulse S
with zero pulse Z

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)

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

BORE DIAMETER
8 ø 8 mm
10 ø 10 mm
14 ø 14 mm
15 ø 15 mm

ENCLOSURE RATING
X IP 54

MAX ROTATION SPEED
3 3000 rpm

OUTPUT TYPE
PR radial cable output
(standard length 0.3 m)

VARIANT
XXX custom version

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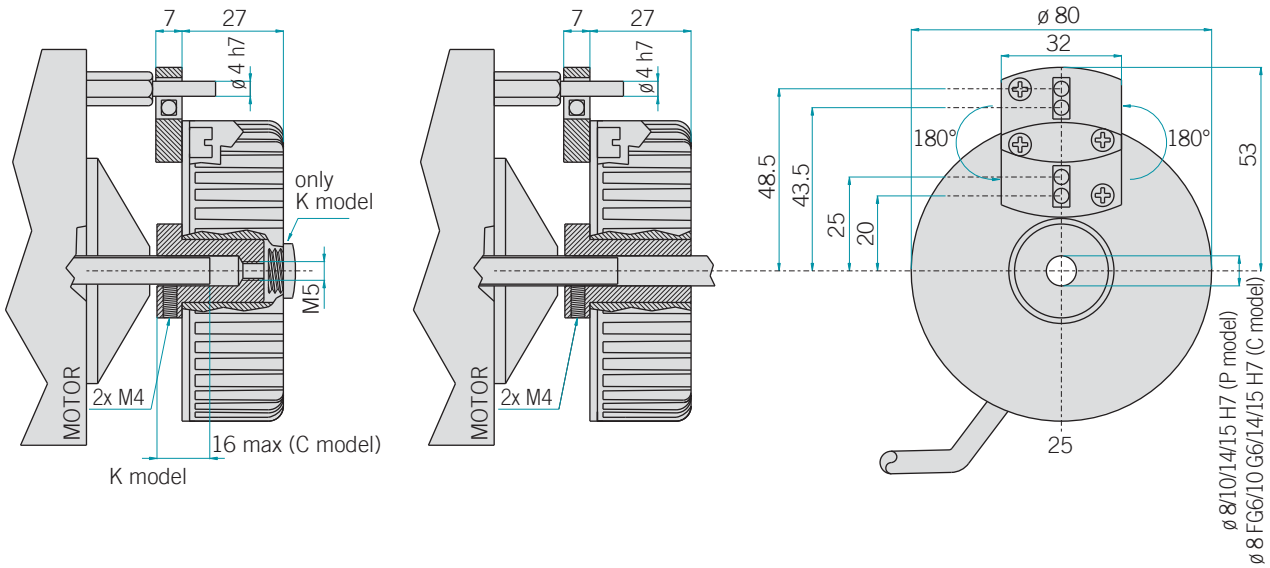
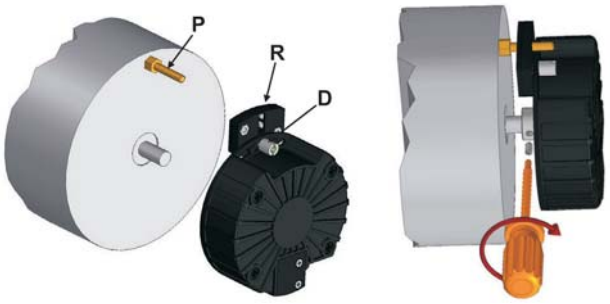


HOW TO MOUNT IT

- 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).



Electrical specifications

Resolution	from 200 to 2048 ppr
Power supply	5 V DC ± 10% 5 ... 28 V DC ± 5% (only EH series) 8 ... 24 V DC ± 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	ø 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	EN-AW 2011 aluminum
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

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