UNI EN ISO 9001

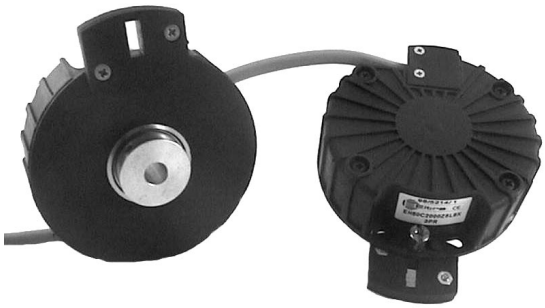
EH-EF80C / P
INCREMENTAL ENCODERS

Incremental Encoders for Motors

The encoders of the "80" series are applied in retroaction systems on AC servomotors; they integrate, more than a traditional incremental encoder, the optic generation of "Hall effect phases".
The main characteristics are:
- contained dimensions
- high temperatures resistance
- wide range of resolutions available
- easy assembly

Serie EH
Base version with incremental encoder.
Availability of various electronic output configurations

Serie EF
Optic generation of the "Hall phases" Integrates to the base version
The transmission of signals happens in a parallel way.



General electronic characteristics

Resolutions (imp./turn)	from 200 to 2048 not electronically multiplied
Source and Sink current	15 mA per channel with Line Driver 40 mA per channel with other electronics
Max output frequency	100 KHz $F = \frac{\text{R.P.M. x Resolutions}}{60}$

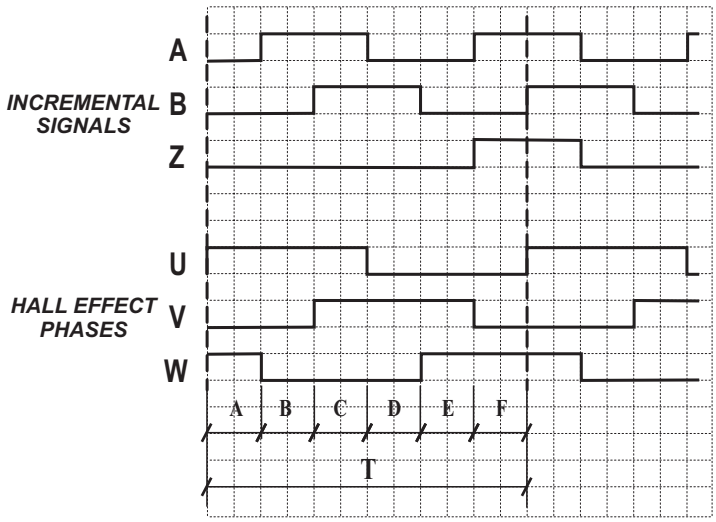
"EH" Electronic characteristics

Power supply	5 / 8 ÷ 24 Vdc
Available Electronics	NPN / NPN OPEN COLLECTOR / PUSH PULL / LINE DRIVER
Current consumption without load	100 mA

"EF" Electronic characteristics

Power supply	5Vdc ± 5%
Electronics for incremental phases	LINE DRIVER
Electronics for Hall effect phases	LINE DRIVER/ NPN OPEN COLLECTOR
Current consumption without load	200 mA

Signal configurations

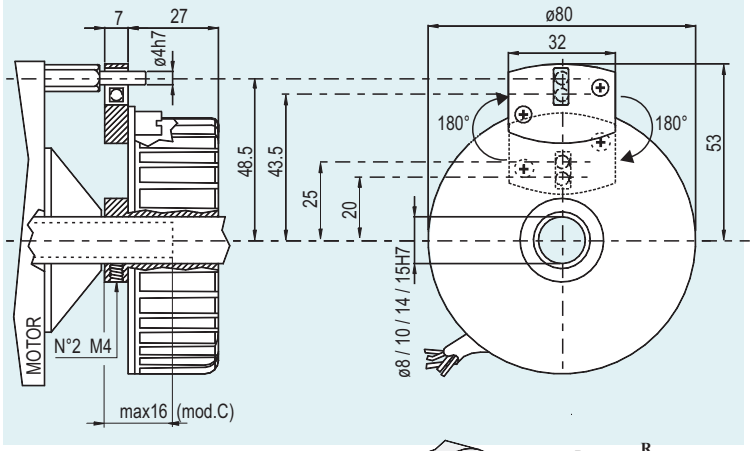


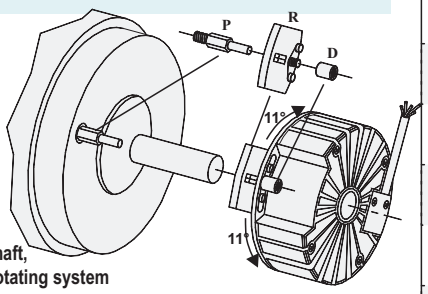
N° POLES	A / B / C / D / E / F	T
4	30° ± 1.5°	180°
6	20° ± 1.5°	120°
8	15° ± 1.5°	90°

Cable colour

COLOUR	FUNCTION	EL	EF
RED	+Vdc	●	●
BLACK	0 Volt	●	●
GREEN	A	●	●
YELLOW	B	●	●
BLUE	Z	●	●
BROWN	$\overline{A}$	●	●
ORANGE	$\overline{B}$	●	●
WHITE	$\overline{Z}$	●	●
GREY	U		●
VIOLET	V		●
GREY/PINK	W		●
RED/BLUE	$\overline{U}$		●
WHITE/GREEN	$\overline{V}$		●
BROWN/GREEN	$\overline{W}$		●

EH-EF80C-P





1- Fix the antirotational pin.
2- Insert the Antirotating System for slack recuperation R in the relative encoder slot
3- Screw nut D
(In the case of zero timing, don't fix it)
4- Couple the encoder shaft with the motor shaft, ensuring that pin P is inserted in the Antirotating system
5- Fix the encoder shaft with the 2 M4 dowels
6- To time the zero position rotate the encoder (max 22°) then fix nut D.

Mechanical Characteristics

Through hole diameter EH/EF80P (mm)	ø8 / ø10 / ø14 / 15H7
Blind hole diameter EH / EF80C (mm)	ø8 FG6 / ø10 G6 N.B.: In the case of.80Cmod max insertion motor shaft16 mm
Protection	IP54 - Standard
R.P.M.	3000
Vibrations	10G 10 ÷ 2000 Hz
Bearings life	10^9 revolutions
Bearings	n°2 ball bearings
Shaft Material	Aluminium
Cover Material	Special plastic reinforced with fibre glass
Operating Temperature	-10° ÷ +85°C
Storage Temperature	-25° ÷ +85°C
Weight	250 g

Ordering Codes

In case of particular Customer variant separate by a full stop

EF 80 P 6 L 2000 Z 5 L 8 X 3 P R . XXX

EH = incremental encoder EH series
EF = incremental encoder EF series + HALL effect phases

80 = Body dimension

C = with blind hole
P = with through hole

N.B.: TO BE INDICATED ONLY FOR EF / EW MODELS
4 = n° 4 poles
6 = n° 6 poles
8 = n° 8 poles
N° poles of the motor

C = NPN OPEN COLLECTOR
L = LINE DRIVER
Electronic for Hall effect phases

from **200** to **2048** imp./turn
Resolutions incremental encoder

S = Without zero impulse
Z = Witht zero impulse
Zero impulse

5 = 5Vdc
Power supply of EF model

5 / 8 ÷ 24 = 5Vdc / da 8 a 24Vdc
Encoder power supply

N.B.: LINE DRIVER available only with 5 Vdc or 8 ÷ 24 Vdc power supply

XXX = Special Customer variants indicated by a number from 001 to 999

R = radial

P = output cable standard length 0.3 m

3 = 3000 **R.P.M.**

X = standard IP54 **Protection**

8 = ø 8 mm for EH/EF80C
10 = ø 10 mm for EH/EF80C-EH/EF80P
14 = ø 14 mm for EH/EF80P
15 = ø 15 mm for EH/EF80P
Shaft hole diameter

L = LINE DRIVER
Electronics for EF mod

N = NPN
C = NPN OPEN COLLECTOR
P = PUSH PULL
L = LINE DRIVER
Electronics output configuration

N.B.: For the optionals on the output configurations see the incremental output connections card

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