



EH - EF 80 C / P / K

BLIND / THROUGH HOLLOW SHAFT INCREMENTAL ENCODER

MAIN FEATURES

∅ 80 mm encoder series recommended in feedback control systems on AC servomotors. They include a traditional incremental encoder and commutation signals (Hall effect phases).

- Easy mechanical mounting
- Small dimensions
- Wide range of resolutions available
- High temperature resistance

EL series

Basic version with 3 channels incremental outputs. Several output types available

EF series

6 channels encoder with optical generation of "Hall effect phases" (commutation signals)
Signal transmission by bit parallel bus



ORDERING CODE

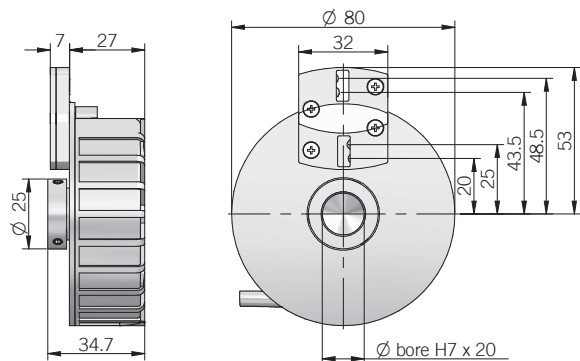
	EF	80C	6	L	500	S	5	L	8	X	3	PR	.XXX
SERIES													
incremental encoder	EH												
incremental encoder with Hall phases	EF												
MODEL													
blind hollow shaft		80C											
through hollow shaft		80P											
blind hollow shaft with rear fixing		80K											
MOD. EF - MOTOR POLES													
4 poles (2 poles pair)			4										
6 poles (3 poles pair)			6										
8 poles (4 poles pair)			8										
MOD. EF - ELECTRONIC INTERFACE FOR COMMUTATION SIGNALS													
NPN open collector						C							
line driver RS-422						L							
RESOLUTION													
ppr from						200	to						
						2048							
						see table for pulses availability							
ZERO PULSE													
without zero pulse						S							
with zero pulse						Z							
POWER SUPPLY													
(with L electronic interface)						5 V DC	5						
(mod. EH, with L or PC electronic interface)						8 ... 24 V DC	8/24						
(mod. EH)						5 ... 28 V DC	5/28						
ELECTRONIC INTERFACE													
(mod. EH) NPN						N							
(mod. EH) NPN open collector						C							
(mod. EH) push-pull						P							
line driver						L							
(mod. EH) power supply 5/28V - output RS-422						RS							
BORE DIAMETER													
mm						8							
						10							
						14							
						15							
ENCLOSURE RATING													
						IP 54	X						
MAX ROTATION SPEED													
(mod. P)						3000 rpm	3						
						6000 rpm	6						
OUTPUT TYPE													
radial cable (standard length 0,3 m)						PR							
VARIANT													
custom version						XXX							



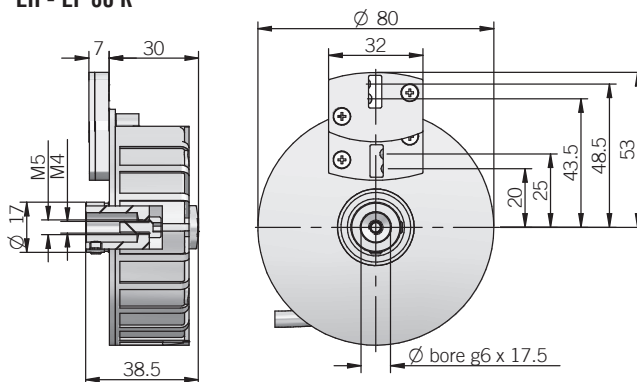
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OPTICAL HOLLOW SHAFT INCREMENTAL ENCODERS | EH - EF 80 C / P / K

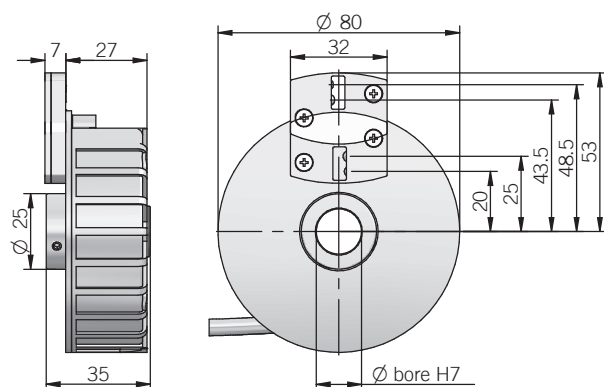
EH - EF 80 C



EH - EF 80 K



EH - EF 80 P



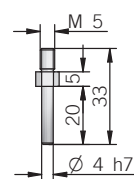
dimensions in mm

CONNECTIONS

Function	EH cable output N / C / P	EH cable output Line driver	EF cable output
+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 or pink
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

ACCESSORIES

Antirotation pin



Description	P/N	Thread	HEX
Antirotation pin	23240008	M5	7

ELECTRICAL SPECIFICATIONS

Resolution	from 200 to 2048 ppr
Power supply	5 = 4,5 ... 5,5 V DC 5/28 = 4,75 ... 29,4 V DC (EH series) 8/24 = 7,6 ... 25,2 V DC (reverse polarity protection EH series)
Current consumption without load	100 mA max (EH series) 200 mA max (EF series)
Max load current	20 mA / channel
Output type (EH series)*	NPN / NPN open collector / push-pull / line driver
Output type for incremental signals (EF series)	line driver RS-422
Output type for Hall phases	NPN open collector (pullup max +30V DC) line driver RS-422
Max output frequency	105 kHz
Counting direction	A leads B clockwise (shaft view)
Electromagnetic compatibility	IEC 61000-6-2 IEC 61000-6-4

*output levels according to power supply, for further details please see under Technical basics section

MECHANICAL SPECIFICATIONS

Bore diameter	ø 8 / 10 / 14 / 15 mm
Enclosure rating	IP 54 (IEC 60529)
Max rotation speed	3000 rpm (mod.P) 6000 rpm (mod.C / K)
Shock	50 G, 11 ms (IEC 60068-2-27)
Vibration	20 G, 10 ... 2000 Hz (IEC 60068-2-6)
Moment of inertia	4 x 10 ⁻⁶ kgm ²
Starting torque (at +20°C / +68°F)	< 0,04 Nm
Body material	PA66 glass fiber reinforced
Shaft material	1.4305 / AISI 303 stainless steel
Housing material	PA66 glass fiber reinforced
Bearings	2 ball bearings
Bearings life	10 ⁹ revolutions
Operating temperature	-20° ... +85 °C (-4° ... +185°F) -20° ... +100°C (-4° ... +212°F) on demand
Storage temperature	-25° ... +85 °C (-13° ... +185°F)
Fixing torque for grub screws	max 0,75 Nm
Weight	250 g (8,82 oz)

RESOLUTIONS

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



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