EH 80 C / P / PG / K

BLIND / THROUGH HOLLOW SHAFT INCREMENTAL ENCODER

MAIN FEATURES

ø 80 mm encoder series recommended in feedback control systems on AC servomotors.

- 3 channel encoder (A / B / Z) up to 2048 ppr
- Power supply up to +30 V DC with several electric interfaces available
- Up to 105 kHz output frequency
- Cable output, connector available on cable end
- Through or blind hollow shaft diameter up to 15 mm
- Shaft fixing by grain or collar clamping

ORDERING CODE

EH	80C	500	S	5	L	8	X	6	PR	.XXX

SERIES
incremental encoder EH

MODEL
blind hollow shaft 80C
blind hollow shaft with rear fixing 80K
through hollow shaft 80P
through hollow shaft with collar clamping 80PG

RESOLUTION
ppr from 1 to 2048
refer to the available pulses list

ZERO PULSE
without zero pulse S
with zero pulse Z

POWER SUPPLY
(with L electrical interface) 5 V DC 5
5 ... 28 V DC 5/28

ELECTRICAL INTERFACE
NPN open collector C
push-pull P
line driver L
power supply 5/28V - output RS-422 RS

BORE DIAMETER
(mod. C - P) mm 8
mm 10
(mod. C - P) mm 12
(mod. C - P - PG) mm 14
(mod. C - P - PG) mm 15

ENCLOSURE RATING
IP 64 X

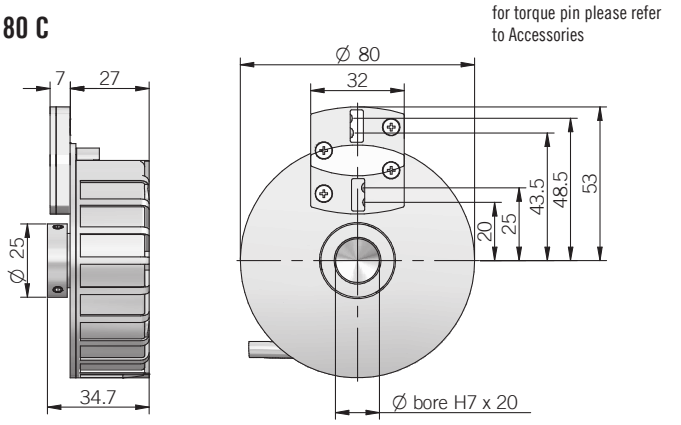
MAX ROTATION SPEED
(mod. P - PG) 3000 rpm 3
(mod. C - K) 6000 rpm 6

OUTPUT TYPE
radial (standard length 0,3 m) PR
preferred cable lengths 1,5 / 2 / 3 / 5 / 10 m, to be added after OUTPUT TYPE (eg. PR5)

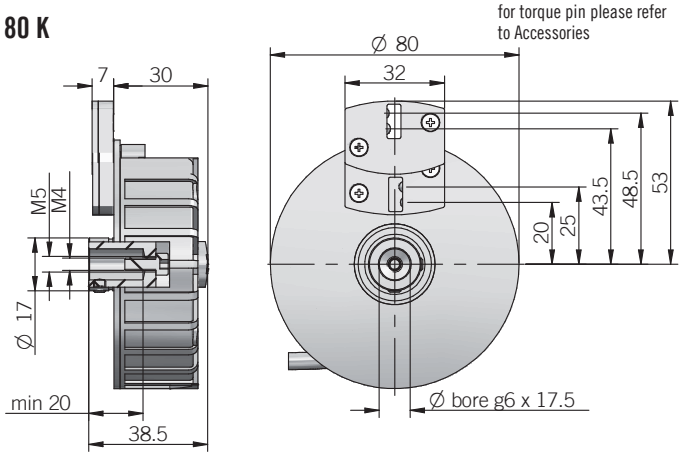
VARIANT
custom version XXX

eltra@eltra.it

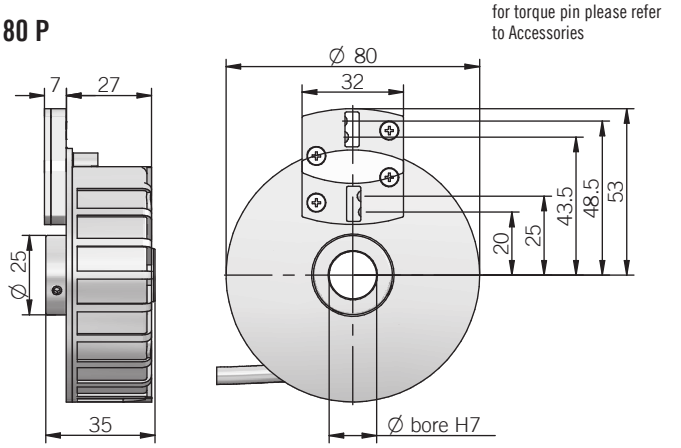
80 C



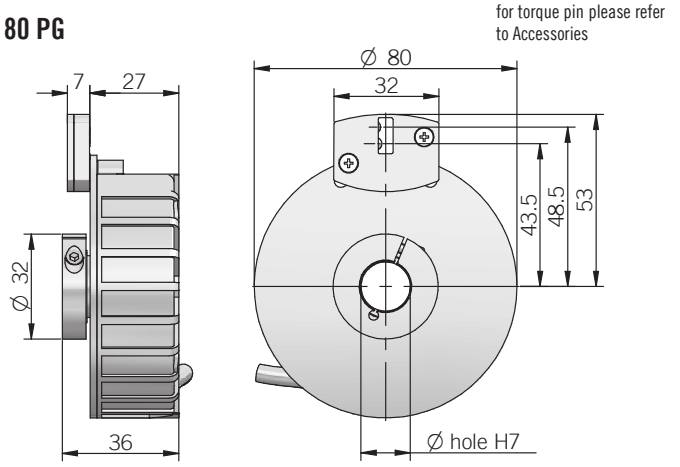
80 K



80 P



80 PG



dimensions in mm

ELECTRICAL SPECIFICATIONS

Resolution	from 1 to 2048 ppr
Power supply[1]	5 = 4,5 ... 5,5 V DC 5/28 = 4,5 ... 30 V DC (reverse polarity protection)
Power draw without load	800 mW max
Max load current	C / P = 50 mA / channel L / RS = 20 mA / channel
Electrical interface[2]	NPN open collector (AEIC-7273, pull-up max +30 V DC) push-pull / line driver HTL (AEIC-7272) line driver RS-422 (AELT-5000 or equivalent)
Max output frequency	105 kHz
Counting direction	A leads B clockwise (shaft view)
Electromagnetic compatibility	according to 2014/30/EU directive
RoHS	according to 2015/863/EU directive
UL / CSA	certificate n. E212495

MECHANICAL SPECIFICATIONS

Bore diameter	ø 8 / 10 / 12 / 14 / 15 mm
Enclosure rating	IP 64 (IEC 60529)
Max rotation speed	3000 rpm (mod.P / PG) 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 (95 x 10^{-6} lbft^2)
Starting torque (at +20°C / +68°F)	< 0,04 Nm (5,66 Ozin)
Bearing stage material	PA66 glass fiber reinforced
Shaft material	EN-AW 2011 aluminum (mod. C / K) 1.4305 / AISI 303 stainless steel (mod.P / PG)
Housing material	PA66 glass fiber reinforced
Bearings	n.2 ball bearings
Bearings life	10^9 revolutions
Operating temperature[3, 4]	-20° ... +85 °C (-4° ... +185°F) -20° ... +100°C (-4° ... +212°F) on demand
Storage temperature[4]	-25° ... +85 °C (-13° ... +185°F)
Weight	250 g (8,82 oz)

[1] as measured at the transducer without cable influences
[2] for further details refer to OUTPUT LEVELS on TECHNICAL BASICS section
[3] measured on the transducer flange
[4] condensation not allowed

CONNECTIONS

Function	Cable C / P	Cable L / RS
+V DC	red	red
0 V	black	black
A+	green	green
A-	/	brown or grey
B+	yellow	yellow
B-	/	orange
Z+	blue	blue
Z-	/	white
⏚	shield	shield

RESOLUTIONS

100* - **200** - 250 - 256 - 360 - 400 - **500** - 512 - 600 - **1000** - **1024** - **2000** - **2048**

*available without zero pulse
please directly contact our offices for other pulses, preferred resolutions in bold