

MAIN FEATURES

∅ 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

EH80 C 500 S 5 L 8 X 6 PR .XXX

nur noch ab 100 ppr
verfügbar

SERIES
incremental encoder **EH80**

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

RESOLUTION
ppr from **1** to **2048**
see table for pulses availability

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**

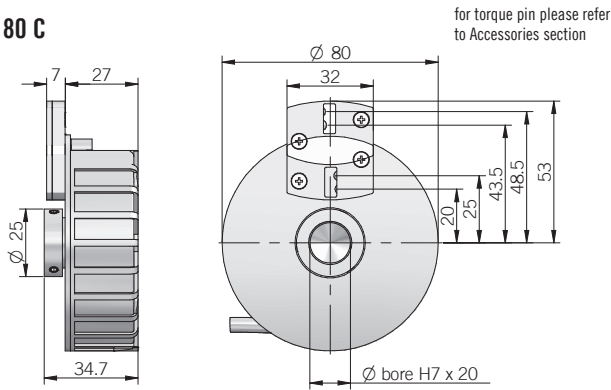
ENCLOSURE RATING
IP 54 **X**

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

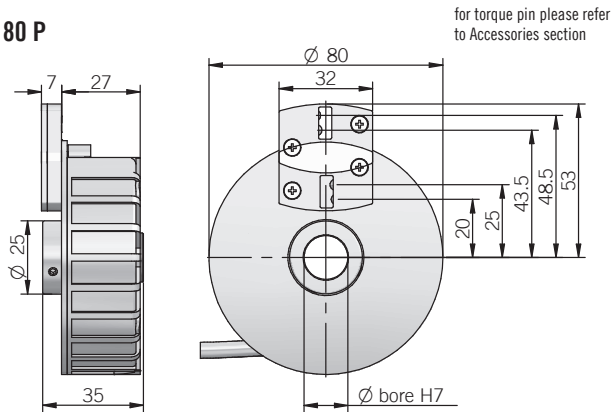
OUTPUT TYPE
radial (standard length 0,3 m) **PR**
preferred cable lengths 1,5 / 2 / 3 / 5 / 10 m, to be added after OUTPUT TYPE (eg. PR5)

VARIANT
custom version **XXX**

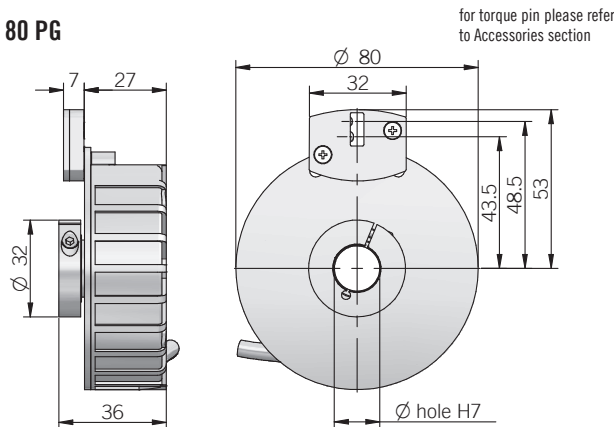
80 C



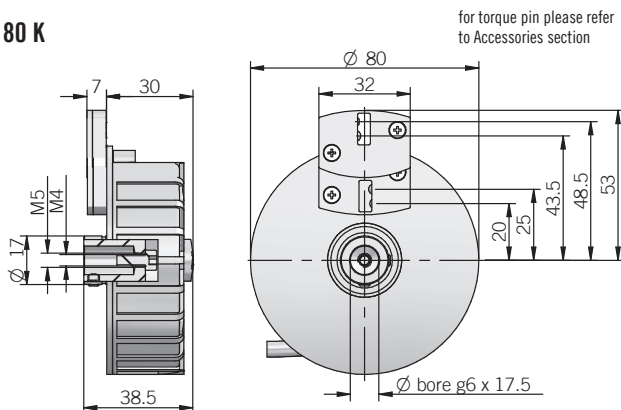
80 P



80 PG



80 K



dimensions in mm

ELECTRICAL SPECIFICATIONS

Resolution	from 1 to 2048 ppr
Power supply	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	20 mA / channel
Output type*	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 2011/65/EU directive
UL / CSA	certificate n. E212495

* for further details please see OUTPUT LEVELS under TECHNICAL BASICS section

MECHANICAL SPECIFICATIONS

Bore diameter	Ø 8 / 10 / 12 / 14 / 15 mm
Enclosure rating	IP 54 (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	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 (106 Ozin)
Fixing torque for collar clamping	1 Nm recommended (142 Ozin)
Weight	250 g (8,82 oz)

CONNECTIONS

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

RESOLUTIONS

1 - 2 - 4 - 5 - 10 - 25 - 30 - 50 - 60 - 100* - 200 - 250 - 256 - 360 - 400 - 500 - 512 - 600 - 1000 - 1024 - 2000 - 2048

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