

### MAIN FEATURES

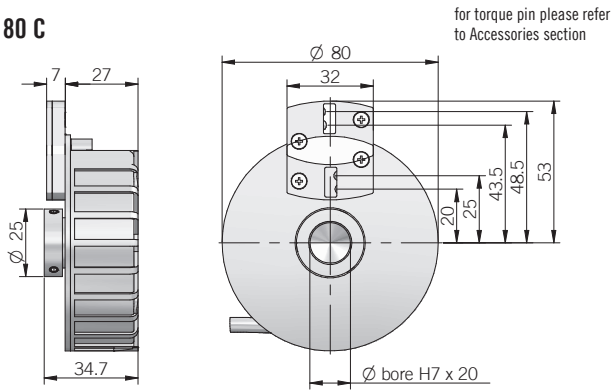
∅ 80 mm encoder series recommended in feedback control systems on AC servomotors.

- 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

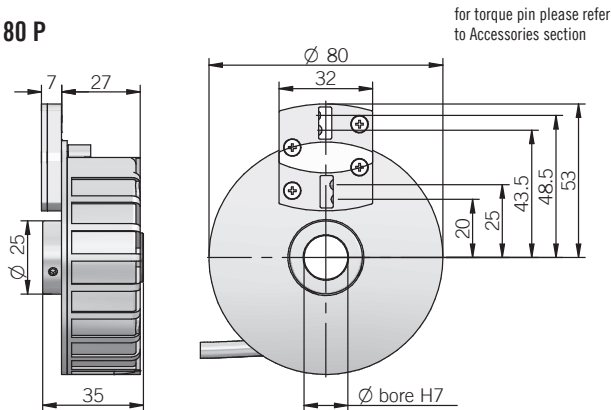


ORDERING CODE	EH80	C	500	S	5	L	8	X	6	PR	.XXX
<p><b>SERIES</b> incremental encoder <b>EH80</b></p> <p><b>MODEL</b> blind hollow shaft <b>C</b> through hollow shaft <b>P</b> through hollow shaft with collar clamping <b>PG</b> blind hollow shaft with rear fixing <b>K</b></p> <p><b>RESOLUTION</b> ppr from <b>1</b> to <b>2048</b> see table for pulses availability</p> <p><b>ZERO PULSE</b> without zero pulse <b>S</b> with zero pulse <b>Z</b></p> <p><b>POWER SUPPLY</b> (with L electrical interface) 5 V DC <b>5</b> 5 ... 28 V DC <b>5/28</b></p> <p><b>ELECTRICAL INTERFACE</b> NPN open collector <b>C</b> push-pull <b>P</b> line driver <b>L</b> power supply 5/28V - output RS-422 <b>RS</b></p> <p><b>BORE DIAMETER</b> (mod. C - P) mm <b>8</b> mm <b>10</b> (mod. C - P) mm <b>12</b> (mod. C - P - PG) mm <b>14</b> (mod. C - P - PG) mm <b>15</b></p> <p><b>ENCLOSURE RATING</b> IP 54 <b>X</b></p> <p><b>MAX ROTATION SPEED</b> (mod. P - PG) 3000 rpm <b>3</b> (mod. C - K) 6000 rpm <b>6</b></p> <p><b>OUTPUT TYPE</b> radial (standard length 0,3 m) <b>PR</b> preferred cable lengths 1,5 / 2 / 3 / 5 / 10 m, to be added after OUTPUT TYPE (eg. PR5)</p> <p style="text-align: right;"><b>VARIANT</b> custom version <b>XXX</b></p>											

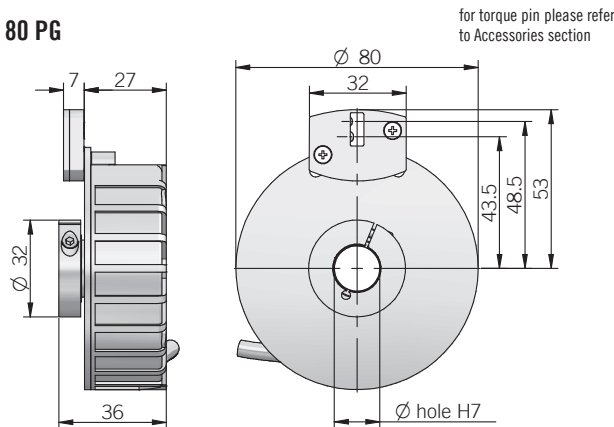
**80 C**



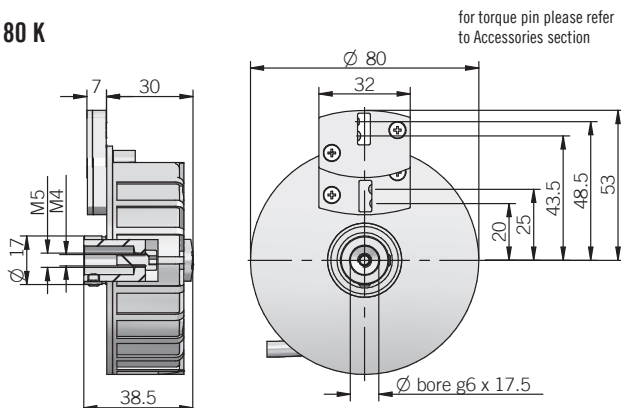
**80 P**



**80 PG**



**80 K**



dimensions in mm

**ELECTRICAL SPECIFICATIONS**

<b>Resolution</b>	from 1 to 2048 ppr
<b>Power supply</b>	5 = 4,5 ... 5,5 V DC 5/28 = 4,5 ... 30 V DC (reverse polarity protection)
<b>Power draw without load</b>	800 mW max
<b>Max load current</b>	20 mA / channel
<b>Output type*</b>	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)
<b>Max output frequency</b>	105 kHz
<b>Counting direction</b>	A leads B clockwise (shaft view)
<b>Electromagnetic compatibility</b>	according to 2014/30/EU directive
<b>RoHS</b>	according to 2011/65/EU directive
<b>UL / CSA</b>	certificate n. E212495

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

**MECHANICAL SPECIFICATIONS**

<b>Bore diameter</b>	ø 8 / 10 / 12 / 14 / 15 mm
<b>Enclosure rating</b>	IP 54 (IEC 60529)
<b>Max rotation speed</b>	3000 rpm (mod.P / PG) 6000 rpm (mod.C / K)
<b>Shock</b>	50 G, 11 ms (IEC 60068-2-27)
<b>Vibration</b>	20 G, 10 ... 2000 Hz (IEC 60068-2-6)
<b>Moment of inertia</b>	4 x 10 <sup>-6</sup> kgm <sup>2</sup> (95 x 10 <sup>-6</sup> lbft <sup>2</sup> )
<b>Starting torque (at +20°C / +68°F)</b>	< 0,04 Nm (5,66 Ozin)
<b>Bearing stage material</b>	PA66 glass fiber reinforced
<b>Shaft material</b>	EN-AW 2011 aluminum (mod. C / K) 1.4305 / AISI 303 stainless steel (mod.P / PG)
<b>Housing material</b>	PA66 glass fiber reinforced
<b>Bearings</b>	2 ball bearings
<b>Bearings life</b>	10 <sup>9</sup> revolutions
<b>Operating temperature</b>	-20° ... +85 °C (-4° ... +185°F) -20° ... +100°C (-4° ... +212°F) on demand
<b>Storage temperature</b>	-25° ... +85 °C (-13° ... +185°F)
<b>Fixing torque for grub screws</b>	max 0,75 Nm (106 Ozin)
<b>Fixing torque for collar clamping</b>	1 Nm recommended (142 Ozin)
<b>Weight</b>	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