

MAIN FEATURES

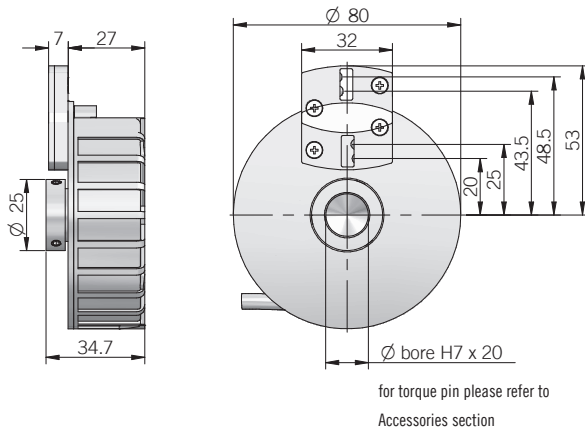
ø 80 mm encoder series recommended in feedback control systems on AC servomotors.
 They include a traditional incremental encoder and commutation signals (Hall effect phases).

- Easy mechanical mounting
- Small dimensions
- Wide range of resolutions available
- High temperature resistance
- 6 channels encoder with optical generation of "Hall effect phases" (commutation signals)
- Signal transmission by bit parallel bus



ORDERING CODE	EF80	C	6	L	500	S	5	L	8	X	3	PR	.XXX
SERIES incremental encoder with Hall phases EF80													
MODEL blind hollow shaft C through hollow shaft P													
MOTOR POLES 4 poles (2 poles pair) 4 6 poles (3 poles pair) 6 8 poles (4 poles pair) 8													
ELECTRICAL INTERFACE FOR COMMUTATION SIGNALS NPN open collector C line driver RS-422 L													
INCREMENTAL RESOLUTION ppr from 200 to 2048 see table for pulses availability													
ZERO PULSE without zero pulse S with zero pulse Z													
POWER SUPPLY 5 V DC 5													
ELECTRICAL INTERFACE FOR INCREMENTAL SIGNALS line driver RS-422 L													
BORE DIAMETER mm 8 mm 10 mm 14 mm 15													
ENCLOSURE RATING IP 54 X													
MAX ROTATION SPEED (mod. P) 3000 rpm 3 (mod. C) 6000 rpm 6													
OUTPUT TYPE radial (standard length 0,3 m) PR preferred cable lengths 1 / 2 / 3 / 5 / 10 m, to be added after OUTPUT TYPE (eg. PR5)													
VARIANT custom version XXX													

EF 80 C



dimensions in mm

ELECTRICAL SPECIFICATIONS

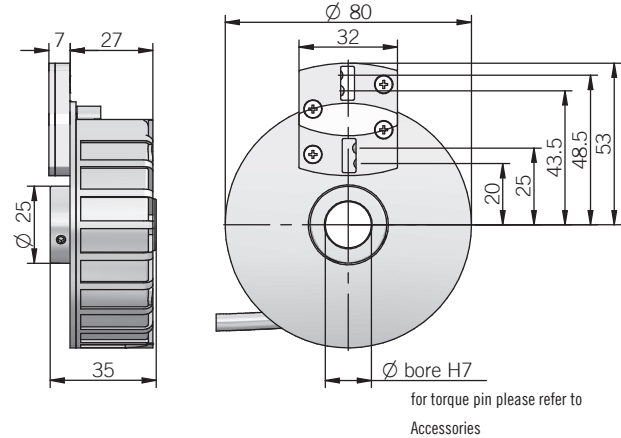
Incremental resolution	from 200 to 2048 ppr
Power supply	4,5 ... 5,5 V DC
Current consumption without load	200 mA max
Max load current	20 mA / channel
Output type for incremental signals *	line driver RS-422 (AELT-5000 or equivalent)
Output type for Hall phases*	NPN open collector (pull-up max +30V DC) 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

CONNECTIONS

Function	Cable
+V DC	red
0 V	black
Ch. A	green
Ch. B	yellow
Ch. Z	blue
Ch. A-	brown
Ch. B-	orange or pink
Ch. Z-	white
Ch. U	grey
Ch. V	violet
Ch. W	grey-pink
Ch. U-	red-blue
Ch. V-	white-green
Ch. W-	brown-green
⏏	shield

EF 80 P



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)
Shock	50 G, 11 ms (IEC 60068-2-27)
Vibration	20 G, 10 ... 2000 Hz (IEC 60068-2-6)
Moment of inertia	$4 \times 10^{-6} \text{ kgm}^2$ ($95 \times 10^{-6} \text{ lbft}^2$)
Starting torque (at +20°C / +68°F)	< 0,04 Nm (5,66 Ozin)
Bearing stage 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)
Storage temperature	-25° ... +85 °C (-13° ... +185°F)
Fixing torque for grub screws	max 0,75 Nm (106 Ozin)
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