

MAIN FEATURES

∅ 50 encoder series recommended as motor feedback.

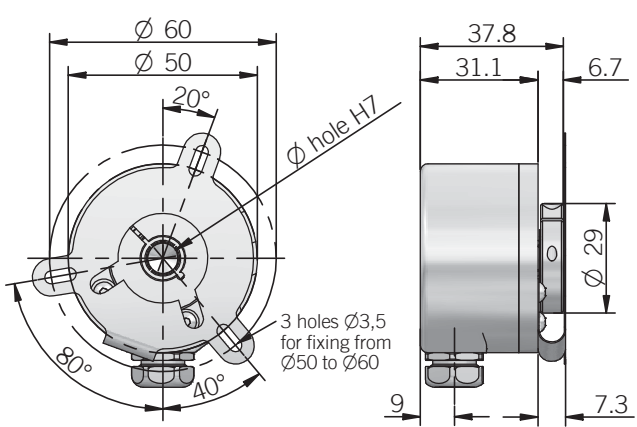
- Several ways to fix it
- Easy mechanical mounting
- Small dimensions
- Up to 2048 ppr with zero signal
- Several output types available
- Up to 205 kHz output frequency
- Up to 6000 RPM rotation speed



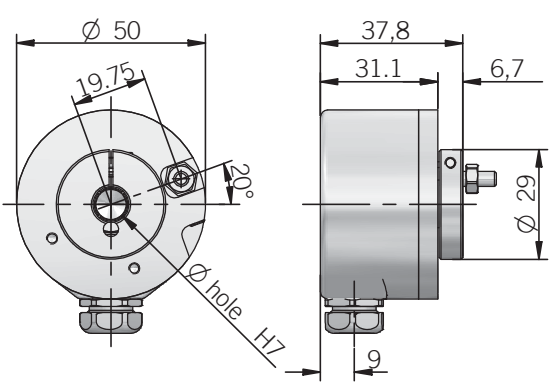
ORDERING CODE

EF 50 F 6 L 2000 Z 5 L 8 X 6 PR . XXX
SERIES incremental encoder with Hall phases EF
SIZE mm 50
TYPE blind hollow shaft (front fixing with spring) F blind hollow shaft (front fixing with pin) G blind hollow shaft (rear fixing with screw) K
POLES OF THE MOTOR 4 poles 4 6 poles 6 8 poles 8
OUTPUT TYPE FOR HALL PHASES NPN open collector C line driver L
RESOLUTION ppr from 1 to 2048 <i>N.B.: please directly contact our offices for pulses availability</i>
ZERO PULSE without zero pulse S with zero pulse Z
POWER SUPPLY 5 5 V DC
VARIANT XXX custom version
OUTPUT TYPE P radial cable output with cable gland (standard length 0.5 m)
MAX ROTATION SPEED 3 3000 rpm 6 6000 rpm <i>N.B.: 3000 RPM max. with "S" enclosure rating</i>
ENCLOSURE RATING X IP 40 S IP 64
SHAFT DIAMETER 6 mm 8 mm 9 mm ∅ 9,52 (3/8") 10 mm
OUTPUT TYPE FOR INCREMENTAL SIGNALS L line driver

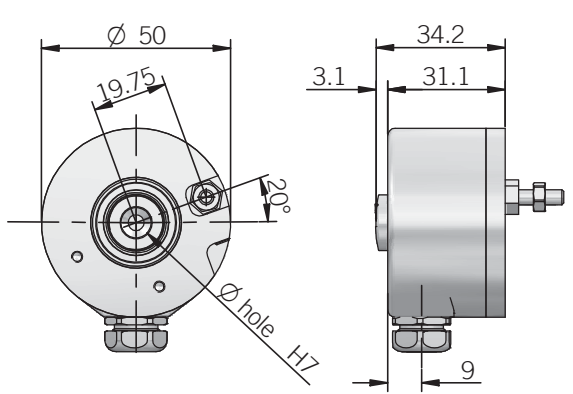
EF 50 F



EF 50 G



EF 50 K



Electrical specifications

Resolution	from 1 to 2048 ppr
Power supply	5 V DC ± 10%
Current consumption without load	150 mA max
Max load current	15 mA for channel (line driver) 30 mA for channel
Output type for incremental signals	line driver
Output type for Hall phases	NPN open collector / line driver
Max output frequency	205 kHz
Counting direction	A leads B clockwise (shaft view)
Electromagnetic compatibility	IEC 61000-6-1 IEC 61000-6-3

Mechanical specifications

Shaft diameter	6 / 8 / 9,52 (3/8") / 10 mm
Enclosure rating	IP 40 (IEC 60529) IP 64 (IEC 60529)
Max rotation speed	3000 rpm 6000 rpm
Shock	50 G, 11 ms (IEC 60068-2-27)
Vibration	5 G, 10 ... 500 Hz (IEC 60068-2-6)
Bearings	2 ball bearings
Bearings life	10 ⁹ revolutions
Body material	EN-AW 2011 aluminum
Shaft material	1.4305 / AISI 303 stainless steel
Housing material	EN-AW 2011 aluminum
Operating temperature	-10° ... +70 °C -10° ... +85 °C on request
Storage temperature	-25° ... +70 °C
Weight	150 g

Connections and standard colours

Function	14 core wire
+V DC	red
0 V	black
Ch. A	green
Ch. B	yellow
Ch. Z	blue
Ch. A-	brown
Ch. B-	orange
Ch. Z-	white
Ch. U	gray
Ch. V	violet
Ch. W	gray-pink
Ch. U-	red-blue
Ch. V-	white-green
Ch. W-	brown-green
⊕	shield

HOW TO MOUNT IT

- Fix the anti-rotation pin (A).
- Insert encoder on the motor shaft with misalignment recovery system just next to the pin (A).
- Insert the washer (B) on the back and block it using the encoder screw on the motor axle.
- Turn for phasing.
- Fix encoder shaft by metal ring.
- Close the encoder with the plug (C).

