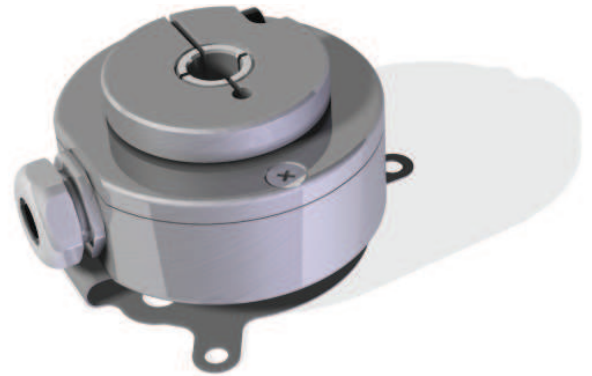# EH 50  FA / FP

INCREMENTAL ENCODER
MOTOR SERIES

## MAIN FEATURES

ø 50 encoder series recommended as motor feedback.
Suitable for small size motors due to its reduced dimensions.

· Easy mechanical mounting, front or rear fixing
· Small dimensions
· Higly integrated optical ASIC
· Resolution up to 1024 ppr with zero signal
· Up to 105 kHz output frequency
· Up to 6000 RPM rotation speed
· IP 65 as protection grade
· Wide temperature range -40 ... + 100°C
· Power supply with reverse polarity protection
· Electronic output with active short circuit protection



## ORDERING CODE

**EH  50  F  P  1024  Z  5/30  P  8  X  6  P  R  .  XXX**

**SERIES**
incremental encoder
series EH

**SIZE**
mm 50

**TYPE**
fixing with spring F

**FIXING**
through hollow shaft with front fixing A
through hollow shaft with rear fixing P

**RESOLUTION**
ppr  100 / 200 / 256 / 360 / 400 / 500 / 1000 / 1024
*please directly contact our offices for pulses availability*

**ZERO PULSE**
without zero pulse S
with zero pulse Z

**POWER SUPPLY**
5 ... 30 V DC 5/30

**ELECTRONIC INTERFACE**
P push-pull
L universal line driver TTL/HTL

**SHAFT DIAMETER**
6 mm
8 mm
9,52 mm (3/8")
10 mm

**ENCLOSURE RATING**
X IP 65

**MAX ROTATION SPEED**
6 6000 rpm

**OUTPUT TYPE**
P cable output cable gland
(standard length 0.5 m)

**OUTPUT DIRECTION**
R radial

**VARIANT**
XXX custom version

## EH 50 FA
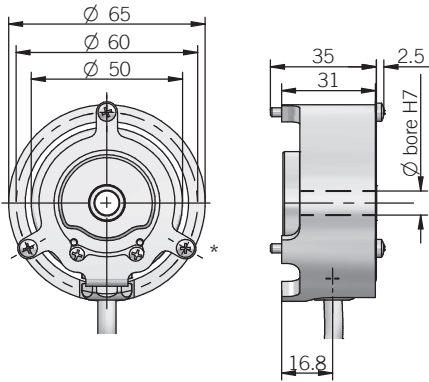


* n°3 M3x35 screws included

## EH 50 FP
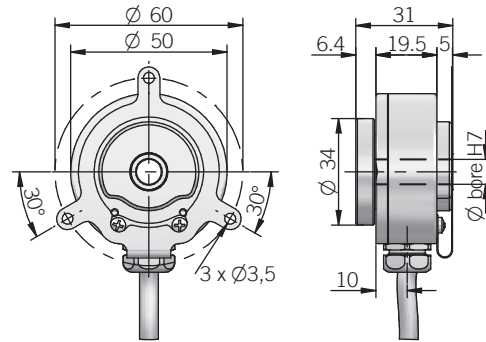
## Mechanical specifications

| | |
|---|---|
| Shaft diameter | ø 6 / 8 / 9,52 (3/8") / 10 mm |
| Enclosure rating | IP 65 (IEC 60529) |
| Max rotation speed | 6000 rpm |
| Shock | 50 G, 11 ms (IEC 60068-2-27) |
| Vibration | 10 G, 10 ... 2000 Hz (IEC 60068-2-6) |
| Moment of inertia | $0,5 \times 10^{-6}$ kgm$^2$ |
| Fixing torque for collar clamping | recommended max 1Nm |
| 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 | -40° ... +100 °C (-40° ... +212°F) |
| Storage temperature | -40° ... +100 °C (-40° ... +212°F) |
| Weight | 150 g |

## Electrical specifications

| | |
|---|---|
| Resolution | 100 / 200 / 256 / 360 / 400 / 500 / 1000 / 1024 ppr |
| Power supply | 4,5 ... 30 V DC (with reverse polarity protection) |
| Power draw without load | 600 mW |
| Max load current | 20 mA per channel |
| Output type | push-pull line driver *RS422 compatible with +5 Vdc power supply* |
| Max output frequency | 105 kHz |
| Counting direction | A leads B clockwise (shaft view) |
| Electromagnetic compatibility | IEC 61000-6-2 IEC 61000-6-4 |

## Connections and standard colours

| Function | Line driver | Push-pull |
|---|---|---|
| +V DC | red | red |
| 0 V | black | black |
| Ch. A | green | green |
| Ch. A- | gray or brown | / |
| Ch. B | yellow | yellow |
| Ch. B- | orange | / |
| Ch. Z | blue | blue |
| Ch. Z- | white | / |
| ⏚ | shield | shield |

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**Eltra**® *sensing technology*