

# EH 50 FA / FP

### THROUGH HOLLOW SHAFT INCREMENTAL ENCODER



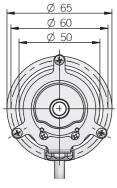
## **Specifications**

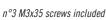
- ø 50 mm encoder recommended for motor feedback. Suitable for small size motors due to its reduced dimensions.
- $\cdot$  3 channel encoder (A / B / Z) up to 1024 ppr
- · Higly integrated optical ASIC
- · Wide power supply up to +30 VDCC
- · Through hollow shaft up to 10 mm diameter
- · Mounting by coupling flange or stator coupling (front or rear fixing)
- · IP 65 as protection grade
- · Wide temperature range -40 ... + 100°C

| ORDERING CODE | ЕН   | 50FP                            | 1024                      | S                           | 5/30            | P                      | 6                       | X                             | 6  | PR                  | . XXX                |
|---------------|--|---------------------------------|---------------------------|-----------------------------|-----------------|------------------------|-------------------------|-------------------------------|--|---------------------|----------------------|
| i             | SERIES<br>ncremental encoder series EH                             |                                 |                           |                             |                 |                        |                         |                               |  |                     |                      |
| thr<br>thr    | ough hollow shaft with front fi<br>rough hollow shaft with rear fi | MODEL<br>xing 50FA<br>xing 50FP |                           |                             |                 |                        |                         |                               |  |                     |                      |
|               | pp<br>see table fo   | or from 10                      | oto 1024<br>vailability   |                             |                 |                        |                         |                               |  |                     |                      |
|               |  |                                 | <b>ZEF</b><br>vithout zer | RO PULSE                    |                 |                        |                         |                               |  |                     |                      |
|               |  |                                 |                           | <b>POWER</b> 5 30 V         |                 | TERFACE                |                         |                               |  |                     |                      |
|               |  |                                 |                           | universal li<br>ply 5/30V - | pu<br>ne driver | sh-pull P<br>TTL/HTL L |                         |                               |  |                     |                      |
|               |  |                                 | power sup                 | pry 5/50 v                  | σατρατικ        |                        | IAMETER<br>mm 6<br>mm 8 |                               |  |                     |                      |
|               |  |                                 |                           |                             |                 | 1                      | 0 mm 10                 |                               |  |                     |                      |
|               |  |                                 |                           |                             |                 | ı                      | NCLOSUR<br>Ma           | IP 65 X<br>I <b>X rotatio</b> | N SPEED                                  |                     |                      |
|               |  |                                 |                           |                             |                 |                        | cable radia             |                               | 00 rpm 6  <br><b>OUTP</b><br>rd length 0 | UT TYPE<br>,5 m) PR |                      |
|               |  |                                 |                           |                             |                 |                        |                         |                               |  |                     | VARIANT<br>rsion XXX |

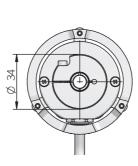


### **EH 50 FA**

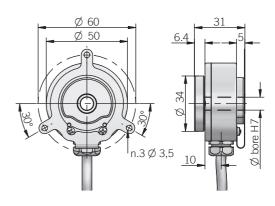




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#### **EH 50 FP**



dimensions in mm

| ELECTRICAL SPECIFICATIONS  |  |  |
|--|--|--|
| Resolution   | from 100 to 1024 ppr                           |  |
| Power supply   | 4,5 30 V DC (with reverse polarity protection) |  |
| Power draw without load  | d 600 mW                                       |  |
| Max load current   | t 20 mA / channel                              |  |
| Output type*   | push-pull / line driver                        |  |
| Max output frequency   | 105 kHz  |  |
| Counting direction   | A leads B clockwise (shaft view)               |  |
| Electromagnetic   IEC 61000-6-2<br>compatibility   IEC 61000-6-4 |  |  |

<sup>\*</sup>output levels according to power supply, for further details please see under Technical basics section

| CONNECTIONS |                             |                           |
|-------------|-----------------------------|---------------------------|
| Function    | Cable output<br>Line driver | Cable output<br>Push-pull |
| +V DC       | red                         | red                       |
| 0 V         | black                       | black                     |
| Ch. A       | green                       | green                     |
| Ch. A-      | grey or brown               | /                         |
| Ch. B       | yellow                      | yellow                    |
| Ch. B-      | orange                      | /                         |
| Ch. Z       | blue                        | blue                      |
| Ch. Z-      | white                       | /                         |
| <u></u>     | shield                      | shield                    |

#### **RESOLUTIONS**

100 - 200 - 256 - **360** - 400 - 500 - **1000** - **1024** ppr

please directly contact our offices for other pulses, preferred resolutions in bold

| MECHANICAL SPECIFICATIONS          |  |  |
|------------------------------------|--|--|
| Bore 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 x 10 <sup>-6</sup> kgm <sup>2</sup>          |  |
| Starting torque (at +20°C / +68°F) | < 0,01 Nm  |  |
| Fixing torque for collar clamping  |  |  |
| Body material                      | EN-AW 2011 aluminum                              |  |
| Shaft material                     | 1.4305 / AISI 303 stainless steel                |  |
| Housing material                   | EN-AW 2011 aluminum                              |  |
| Bearings                           | 2 ball bearings                                  |  |
| Bearings life                      | 10 <sup>9</sup> revolutions                      |  |
| Operating temperature              | -40° +100 °C (-40° +212°F)                       |  |
| Storage temperature                | -40° +100 °C (-40° +212°F)                       |  |
| Weight                             | 150 g (5,29 oz) mod.FP<br>200 g (7,05 oz) mod.FA |  |