

Combination

Encoder with integrated centrifugal switch

Solid shaft with EURO flange B10

300...5000 pulses per revolution

POG 11 + FSL



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Features

- Offshore and salt water firm, high protection IP 67
- TTL output driver for cable length up to 500 m
- Mechanical speed monitoring based on centrifugal force
- EURO flange B10 / solid shaft \varnothing 11 mm
- Terminal boxes, turn by 180°

Optional

- Function control with EMS (Enhanced Monitoring System)
- Redundant sensing with two terminal boxes
- Housing foot (B3)

Technical data - electrical ratings

| | |
|-----------------------|--------------|
| Interference immunity | EN 61000-6-2 |
| Emitted interference | EN 61000-6-3 |
| Approval | CE |

Technical data - electrical ratings (encoder)

| | |
|-----------------------|--|
| Voltage supply | 9...30 VDC 5 VDC \pm 5 % |
| Consumption w/o load | \leq 100 mA |
| Pulses per revolution | 300...5000 |
| Phase shift | 90° \pm 20° |
| Duty cycle | 40...60 % |
| Reference signal | Zero pulse, width 90° |
| Output frequency | \leq 120 kHz \leq 300 kHz (on request) |
| Output signals | K1, K2, K0 + inverted Error output (option EMS) |
| Output stages | HTL-P (power linedriver) TTL/RS422 |
| Sensing method | Optical |

Technical data - electrical ratings (centrifugal switch)

| | |
|---------------------------|--|
| Switching accuracy | \pm 4 % ($\Delta n = 2$ rpm/s); = +20 % ($\Delta n = 1500$ rpm/s) |
| Switching deviation | \leq 3 % (cw-ccw rotation) |
| Switching hysteresis | \sim 40 % of switching speed |
| Switching outputs | 1 output, speed control |
| Output switching capacity | \leq 6 A / 230 VAC \leq 1 A / 125 VDC |
| Minimum switching current | 50 mA |

Technical data - mechanical design

| | |
|-------------------------------|--|
| Size (flange) | \varnothing 115 mm |
| Shaft type | \varnothing 11 mm solid shaft |
| Admitted shaft load | \leq 300 N axial \leq 450 N radial |
| Flange | EURO flange B10 |
| Protection DIN EN 60529 | IP 67 |
| Speed (n) | \leq 1.25 · ns |
| Range of switching speed (ns) | 850...4500 rpm ($\Delta n = 2$ rpm/s) |
| Operating torque typ. | 3 Ncm |
| Rotor moment of inertia | 220 gcm ² |
| Materials | Housing: aluminium die-cast Shaft: stainless steel |
| Operating temperature | -40...+100 °C -25...+100 °C (>3072 pulses per revolution) |
| Resistance | IEC 60068-2-6 Vibration 10 g, 10-2000 Hz IEC 60068-2-27 Shock 100 g, 6 ms |
| Corrosion protection | IEC 60068-2-52 Salt mist for ambient conditions CX (C5-M) according to ISO 12944-2 |
| Connection | 2x terminal box 3x terminal box (with option M) |
| Weight approx. | 2.3 kg, 2.5 kg (with option M) |

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Part number

POG11

| | | | | | | | | | |
|--|--|----|--|--|--|-------|--|--|--|
| | | DN | | | | + FSL | | | |
|--|--|----|--|--|--|-------|--|--|--|

| | | | | | |
|--|--|--|--|--|---|
| | | | | | |
| | | | | | <p><u>Mounting type</u> EURO flange B10 B3 Housing foot B3</p> <p><u>Switching speed (ns)</u> 6 850...949 rpm ($\Delta n = 2$ rpm/s)* 5 950...1099 rpm ($\Delta n = 2$ rpm/s)* 4 1100...1299 rpm ($\Delta n = 2$ rpm/s)* 3 1300...1799 rpm ($\Delta n = 2$ rpm/s)* 2 1800...2499 rpm ($\Delta n = 2$ rpm/s)* 1 2500...4500 rpm ($\Delta n = 2$ rpm/s)*</p> <p><u>Voltage supply / signals</u> I 9...30 VDC / output stage HTL with inverted signals TTL 5 VDC / output stage TTL with inverted signals R 9...30 VDC / output stage TTL with inverted signals</p> <p><u>Pulse number - see table</u></p> <p><u>Output signals</u> DN K1, K2, K0</p> <p><u>Redundant sensing</u> Without redundant sensing M With redundant sensing (not possible at version with housing foot B3)</p> <p><u>EMS - Enhanced Monitoring System</u> Without EMS .2 With EMS</p> |

Pulse number

| | | | |
|-----|------|------|------|
| 300 | 1000 | 2048 | 4096 |
| 500 | 1024 | 2500 | 5000 |
| 512 | 1200 | 3072 | |

Other pulse numbers on request.

* Please specify the exact switching speed in addition to the part number (factory setting).

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Encoder with integrated centrifugal switch

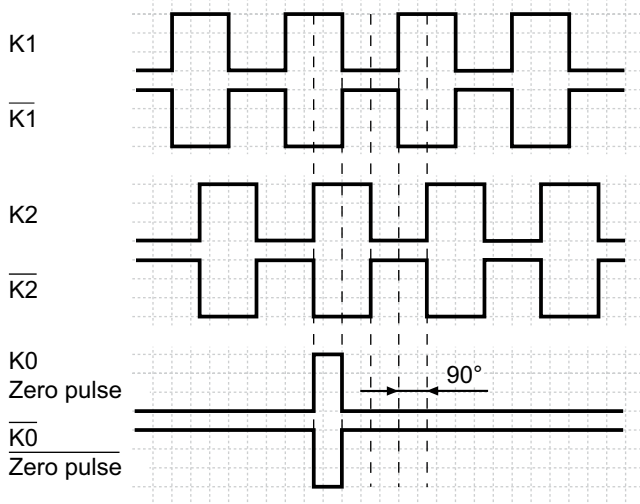
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Output signals

At positive rotating direction



Option EMS: LED status / Error output

| | |
|-------------------|---|
| Flash light red* | Error of signal sequence, zero pulse or pulses (Error output = HIGH-LOW alternation) |
| Red | Overload output driver (Error output = LOW) |
| Flash light green | Device o.k., rotating (Error output = HIGH) |
| Green | Device o.k., stopped (Error output = HIGH) |
| No light | No voltage supply connection or wrong connection (Error output = LOW) |

* Only at rotating device

Accessories

Connectors and cables

HEK 8 Sensor cable for encoders

Mounting accessories

K 35 Spring washer coupling for solid shaft $\varnothing 6...12$ mm

K 50 Spring washer coupling for solid shaft $\varnothing 11...16$ mm

K 60 Spring washer coupling for solid shaft $\varnothing 11...22$ mm

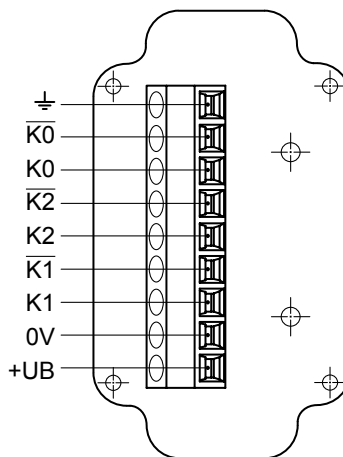
Diagnostic accessories

11075858 Analyzer for encoders HENQ 1100

Terminal assignment

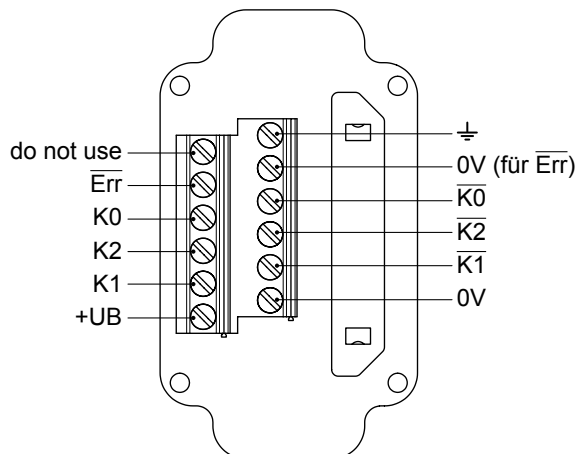
View A

Connecting terminal in terminal box POG 11



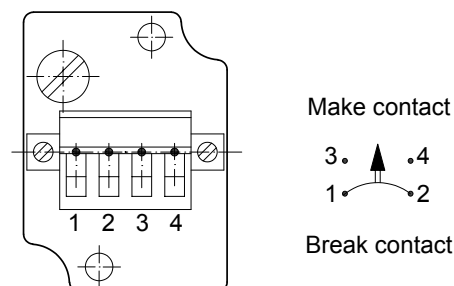
Option EMS: View A

Connecting terminal in terminal box POG 11.2



View B

Connecting terminal mechanical centrifugal switch FSL



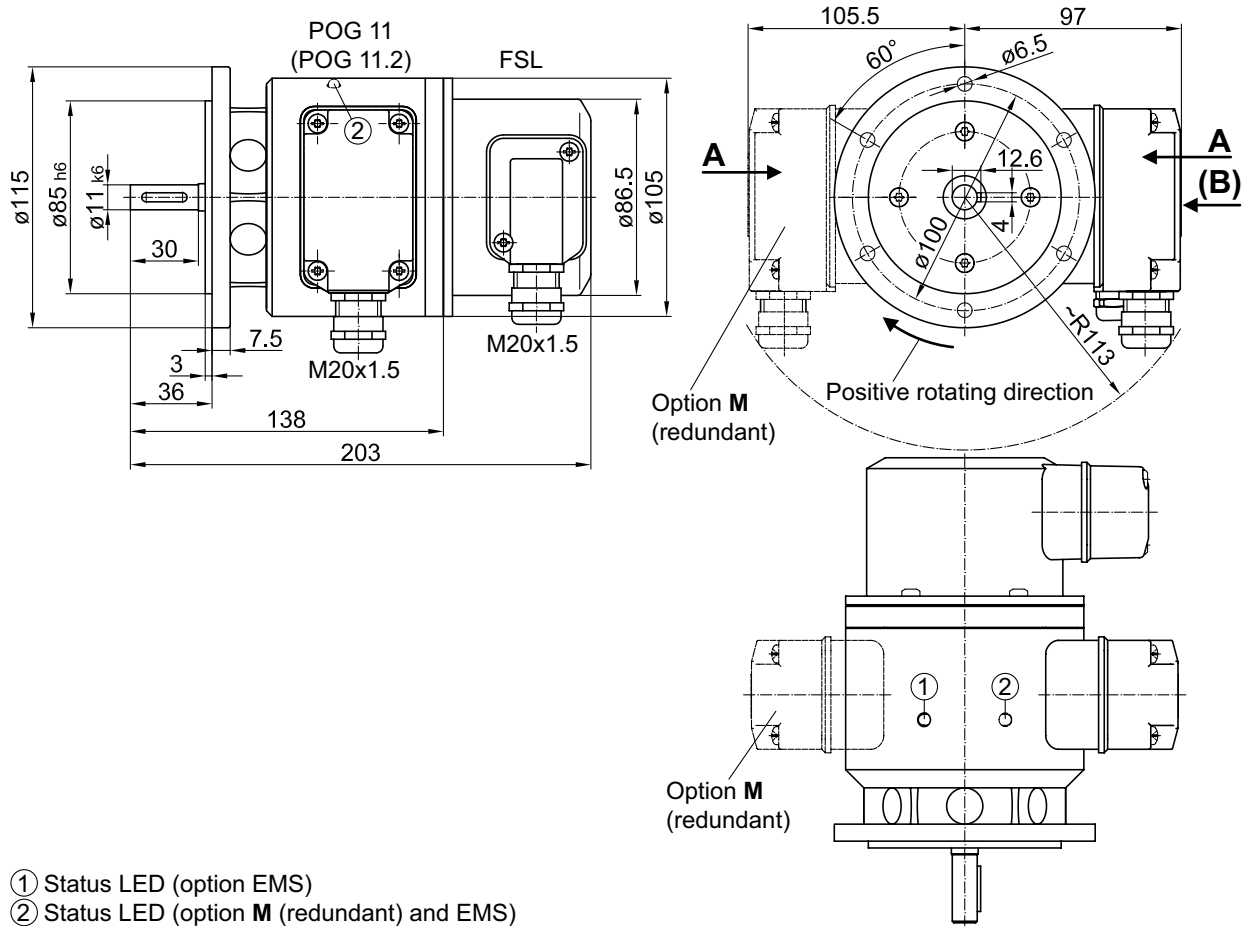
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Dimensions

EURO flange B10



Housing foot B3

