

POG 86

Solid shaft with EURO flange B10
500...5000 pulses per revolution

Overview

- Robust, compact housing
- Two bearings with large distance, one at each end
- High shaft load up to 350 N
- Shock resistant up to 300 g
- Highest operating speed 12000 rpm
- TTL output driver for cable length up to 550 m
- Terminal box, turn by 180°



HUBNER
BERLIN
A Baumer Brand

Technical data

Technical data - electrical ratings

| | |
|-----------------------|--|
| Voltage supply | 9...30 VDC 5 VDC ±5 % |
| Consumption w/o load | ≤100 mA |
| Pulses per revolution | 500 ... 5000 |
| Phase shift | 90 ° ±20° |
| Duty cycle | 45...55 % 40...60 % (>3072 pulses) |
| Reference signal | Zero pulse, width 90° |
| Sensing method | Optical |
| Output frequency | ≤170 kHz ≤300 kHz (on request) |
| Output signals | K1, K2, K0 + inverted Error output (option EMS) |
| Output stages | HTL-P (power linedriver) TTL/RS422 |
| Interference immunity | EN 61000-6-2 |
| Emitted interference | EN 61000-6-3 |
| Approval | CE UL approval / E217823 / CSA |

Technical data - mechanical design

| | |
|---------------|--------------------|
| Size (flange) | ø115 mm |
| Shaft type | ø11 mm solid shaft |

Technical data - mechanical design

| | |
|-------------------------|---|
| Admitted shaft load | ≤250 N axial ≤350 N radial |
| Flange | EURO flange B10 |
| Protection EN 60529 | IP 56 |
| Operating speed | ≤12000 rpm (mechanical) |
| Operating torque typ. | 2 Ncm |
| Rotor moment of inertia | 200 gm ² |
| Material | Housing: aluminium, coated Shaft: stainless steel |
| Operating temperature | -40...+100 °C -25...+100 °C (>3072 pulses) |
| Resistance | IEC 60068-2-6 Vibration 10 g, 10-2000 Hz IEC 60068-2-27 Shock 300 g, 1 ms |
| Corrosion protection | IEC 60068-2-52 Salt mist for ambient conditions C4 according to ISO 12944-2 |
| Explosion protection | II 3 G Ex ec IIC T4 Gc (gas) II 3 D Ex tc IIIB T135°C Dc (dust) (only with option ATEX) |
| Connection | Terminal box |
| Weight approx. | 1.4 kg |

Optional

- Function control with EMS (Enhanced Monitoring System)

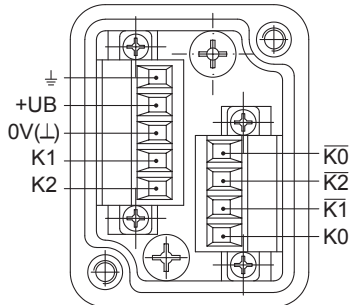
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Terminal assignment

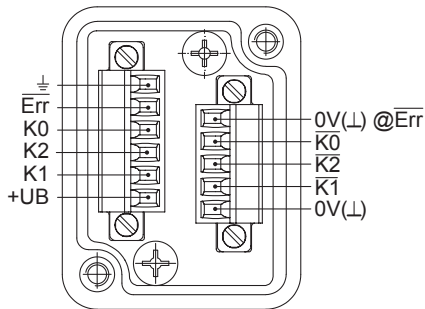
View A (see dimension)

Connecting terminal terminal box



Option EMS: View A (see dimension)

Connecting terminal terminal box



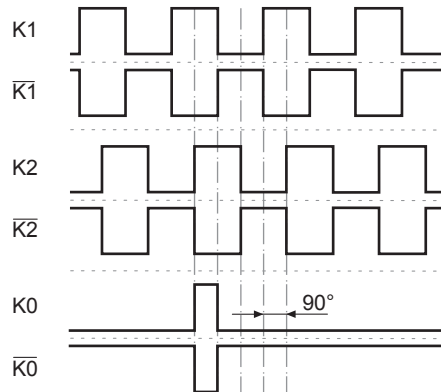
Terminal significance

| | |
|------------------|--|
| +UB | Voltage supply |
| 0V (L) | Ground |
| ⊕ | Earth ground (housing) |
| K1 | Output signal channel 1 |
| $\overline{K1}$ | Output signal channel 1 inverted |
| K2 | Output signal channel 2 (offset by 90° to channel 1) |
| $\overline{K2}$ | Output signal channel 2 inverted |
| K0 | Zero pulse (reference signal) |
| $\overline{K0}$ | Zero pulse inverted |
| \overline{Err} | Error output (option EMS) |

Output signals

HTL/TTL

At positive rotating direction (see dimension)



Option EMS: Status LED / error output

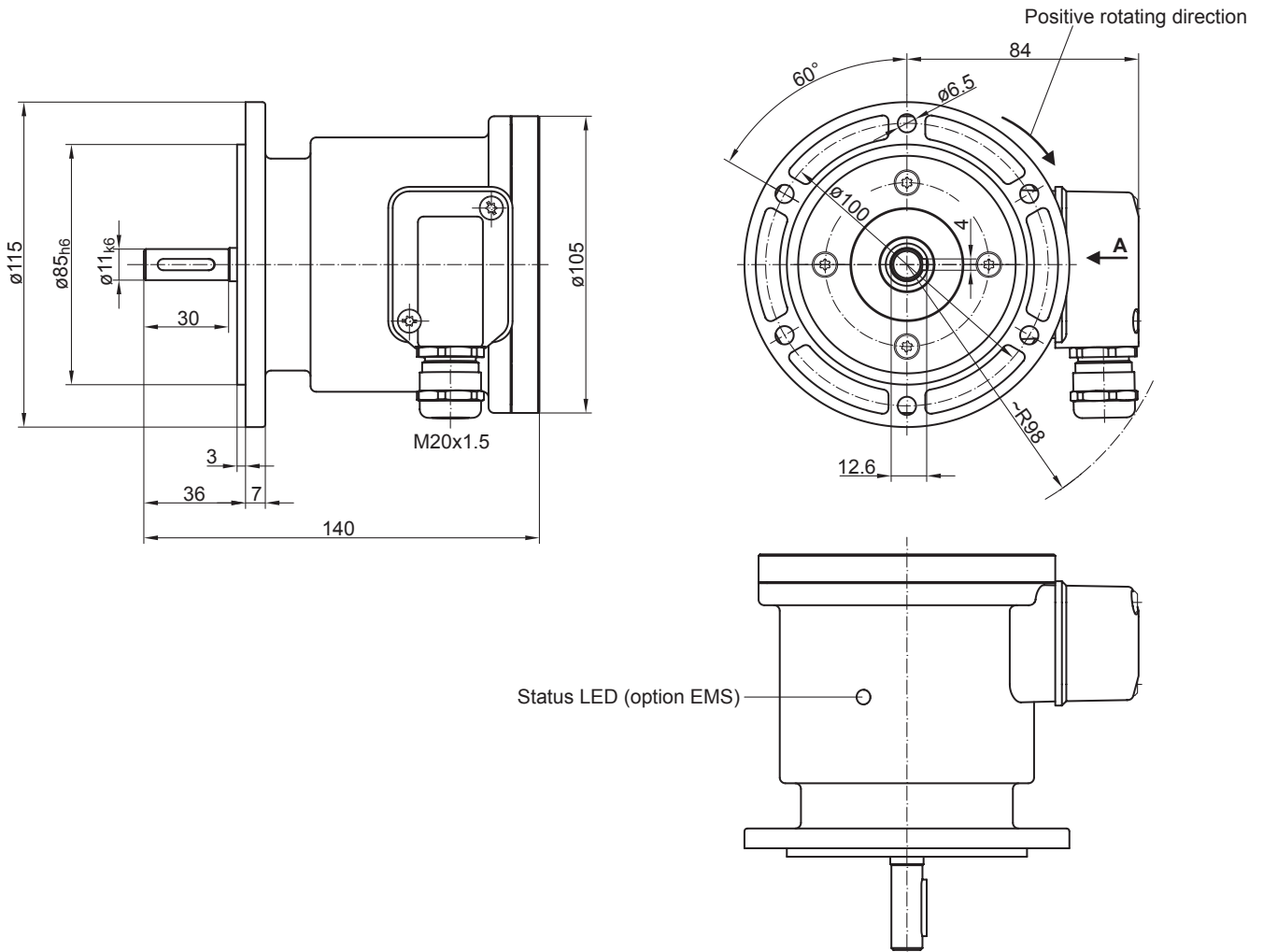
| | |
|-------------------|---|
| Flash light red* | Error of signal sequence, zero pulse or pulses (Error output = HIGH-LOW alternation) |
| Red | Overload output transistors (Error output = LOW) |
| Flash light green | Device o.k., rotating (Error output = HIGH) |
| Green | Device o.k., stopped (Error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

* Only at rotating device

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Dimensions



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Ordering reference

| | POG86 | . | # | T | N | 1 | DN | ##### | # |
|--|---------------------|---|---|---|---|---|----|-------|---|
| Product | Incremental encoder | | | | | | | | |
| | POG86 | | | | | | | | |
| EMS Enhanced Monitoring System | | | | | | | | | |
| With EMS | | | | 2 | | | | | |
| Without EMS | | | | - | | | | | |
| Connection | | | | | | | | | |
| Terminal box, radial, M20 cable gland for 5 - 13mm cable | | | | T | | | | | |
| Shaft insulation | | | | | | | | | |
| No shaft insulation | | | | | N | | | | |
| Shaft diameter | | | | | | | | | |
| Solid shaft Ø11 mm | | | | | | 1 | | | |
| Output signals | | | | | | | | | |
| K1, K2, K0 inverted signals | | | | | | | DN | | |
| Pulse number⁽¹⁾ | | | | | | | | | |
| 500 | | | | | | | | 500 | |
| 512 | | | | | | | | 512 | |
| 1000 | | | | | | | | 1000 | |
| 1024 | | | | | | | | 1024 | |
| 1250 | | | | | | | | 1250 | |
| 2048 | | | | | | | | 2048 | |
| 2500 | | | | | | | | 2500 | |
| 3072 | | | | | | | | 3072 | |
| 4096 | | | | | | | | 4096 | |
| 5000 | | | | | | | | 5000 | |
| Voltage supply / signals | | | | | | | | | |
| 9...30 VDC / output stage HTL with inverted signals | | | | | | | | | I |
| 5 VDC / output stage TTL with inverted signals | | | | | | | | | T |
| 9...30 VDC / output stage TTL with inverted signals | | | | | | | | | R |

(1) Other pulse numbers on request.

Accessories

Mounting accessories

Spring disk coupling K 35 (shaft ø6...12 mm)

Spring disk coupling K 50 (shaft ø11...16 mm)

Spring disk coupling K 60 (shaft ø11...22 mm)