

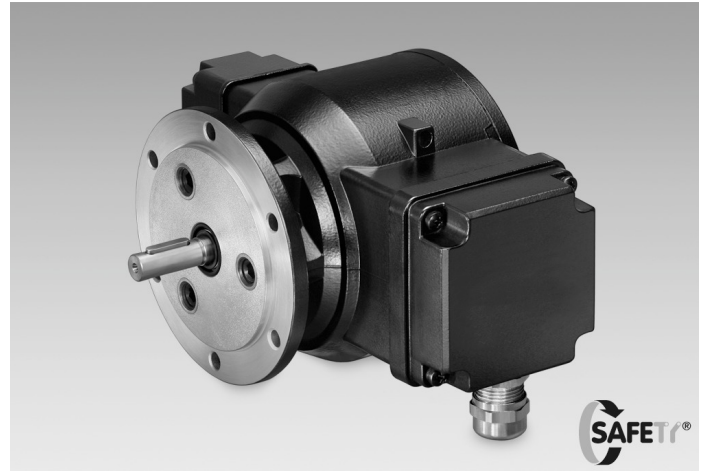
POG 10 + DSL

Encoder with integrated programmable, digital speed switch

Solid shaft with EURO flange B10 and/or housing foot B3 / 512...2500 pulses per revolution

Overview

- Freely programmable on and off switching speed
- Programming via included software (RS485 interface)
- TTL or HTL, 512...2500 pulses per revolution
- EURO flange B10 and/or housing foot B3 / solid shaft $\varnothing 11$ mm
- DSL.R: 3 outputs speed controlled (independent transistor outputs)
- DSL.E: 2 outputs speed controlled and 1 control output



Technical data

Technical data - electrical ratings

| | |
|----------------------|---|
| Voltage supply | With DSL.R: 15...30 VDC With DSL.E: 9...30 VDC |
| Consumption w/o load | ≤ 200 mA |
| Sensing method | Optical |

Technical data - electrical ratings (encoder)

| | |
|-----------------------|------------------------------|
| Pulses per revolution | 512 ... 2500 |
| Phase shift | $90^\circ \pm 20^\circ$ |
| Duty cycle | 40...60 % |
| Reference signal | Zero pulse, width 90° |
| Output frequency | ≤ 120 kHz |
| Output signals | K1, K2, K0 + inverted |
| Output stages | HTL TTL/RS422 |

Technical data - electrical ratings (speed switch)

| | |
|---------------------------|---|
| Interface | RS485 |
| Switching accuracy | ± 2 % (or Digit) |
| Switching outputs | With DSL.R: 3 outputs, speed control With DSL.E: 2 outputs, speed control and 1 control output |
| Output switching capacity | With DSL.R: 12 VDC; ≤ 40 mA With DSL.E: 5...230 VAC/VDC; 5...250 mA (EAC: < 50 VAC / 75 VDC) |
| Switching delay time | ≤ 40 ms |

Technical data - mechanical design

| | |
|---------------------|---|
| Size (flange) | $\varnothing 115$ mm |
| Shaft type | $\varnothing 11$ mm solid shaft |
| Admitted shaft load | ≤ 300 N axial ≤ 450 N radial |

Technical data - mechanical design

| | |
|-------------------------------|--|
| Flange | EURO flange B10 Housing foot B3 |
| Protection EN 60529 | IP 66 |
| Speed (n) | ≤ 6000 rpm |
| Range of switching speed (ns) | Pulses = 512: ± 16 ...6000 rpm Pulses = 1024: ± 8 ...6000 rpm Pulses = 2048: ± 4 ...3500 rpm Pulses = 2500: ± 3 ...2900 rpm |
| Operating torque | ≤ 2 Ncm |
| Rotor moment of inertia | 290 gcm ² |
| Material | Housing: aluminium Shaft: stainless steel |
| Operating temperature | -30...+85 °C |
| Resistance | IEC 60068-2-6 Vibration 20 g, 10-2000 Hz IEC 60068-2-27 Shock 200 g, 6 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 IIIC T135°C Dc (dust) (only with option ATEX) |
| Connection | Terminal box |
| Weight approx. | 3.3 kg |
| Interference immunity | EN 61000-6-2 |
| Emitted interference | EN 61000-6-3 |
| Approval | CE |

Optional

- Relay module DS 93 R (DSL.R version only)

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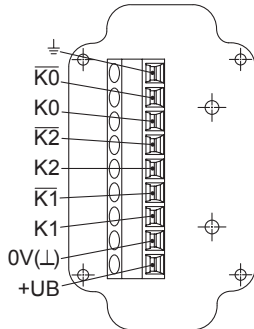
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Terminal assignment

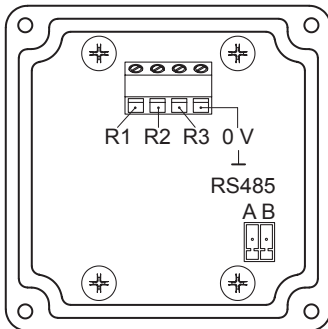
View A (see dimension)

Connecting terminal terminal box encoder



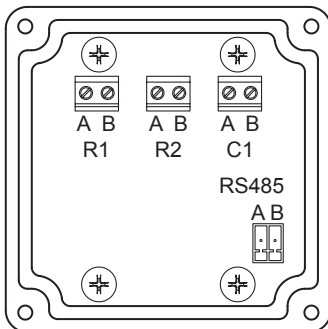
View B (see dimension)

Connecting terminal speed switch DSL.R



View B (see dimension)

Connecting terminal speed switch DSL.E



Terminal significance

Encoder incremental

| | |
|--------|--|
| +UB | Voltage supply |
| 0V (⊥) | Ground |
| ⊥ | Earth ground (housing) |
| K1 | Output signal channel 1 |
| K1 | Output signal channel 1 inverted |
| K2 | Output signal channel 2 (offset by 90° to channel 1) |
| K2 | Output signal channel 2 inverted |
| K0 | Zero pulse (reference signal) |
| K0 | Zero pulse inverted |

Terminal significance

Speed switch DSL.R

| | |
|-------|--|
| R1* | Transistor switching output 1, individually adjustable switching speed, High (12 V), Low (0 V), max. 20 mA |
| R2* | Transistor switching output 2, individually adjustable switching speed, High (12 V), Low (0 V), max. 20 mA |
| R3* | Transistor switching output 3, individually adjustable switching speed, High (12 V), Low (0 V), max. 20 mA |
| GND* | Ground connection |
| RS485 | Interface for PC or Laptop (adapter required). Programming of the DSL via the included software. |

* Connection to relay module, for example DS 93 R (accessory)

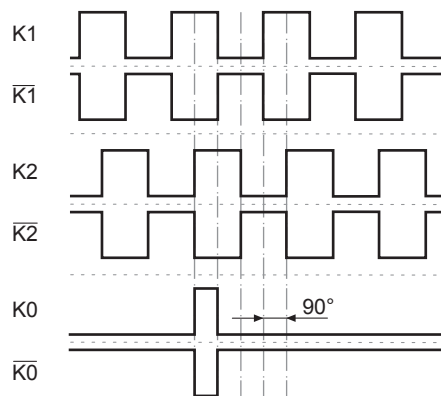
Speed switch DSL.E

| | |
|----------|--|
| R1 (A+B) | Electronic relay output 1, individually adjustable switching speed, 5...230 V AC/DC |
| R2 (A+B) | Electronic relay output 2, individually adjustable switching speed, 5...230 V AC/DC |
| C1 (A+B) | Electronic relay output as a control output, 5...250 mA |
| RS485 | Interface for PC or Laptop (adapter required). Programming of the DSL via the included software. |

Output signals

HTL/TTL

At positive rotating direction (see dimension)

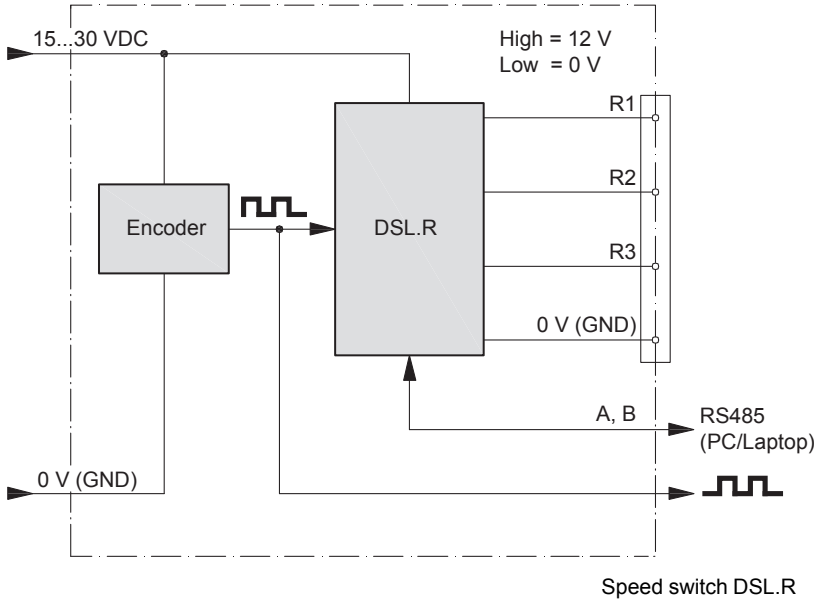


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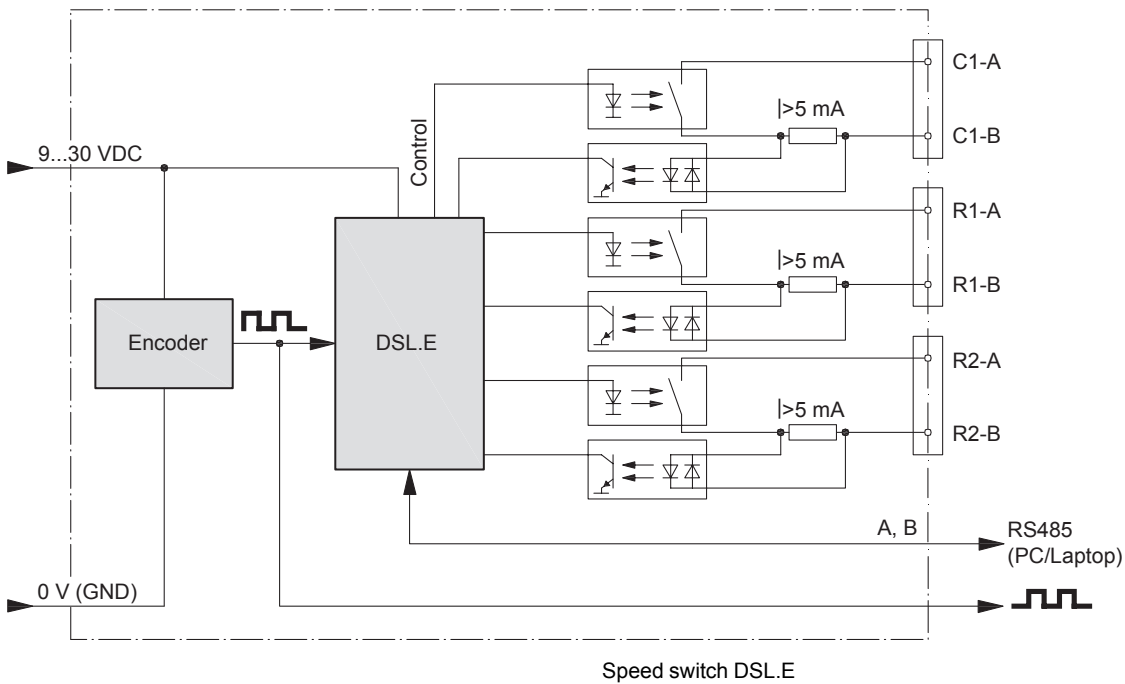
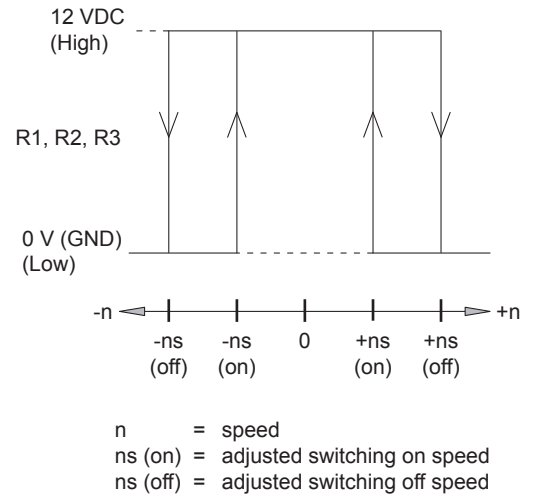
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Block circuit diagram



Switching characteristics

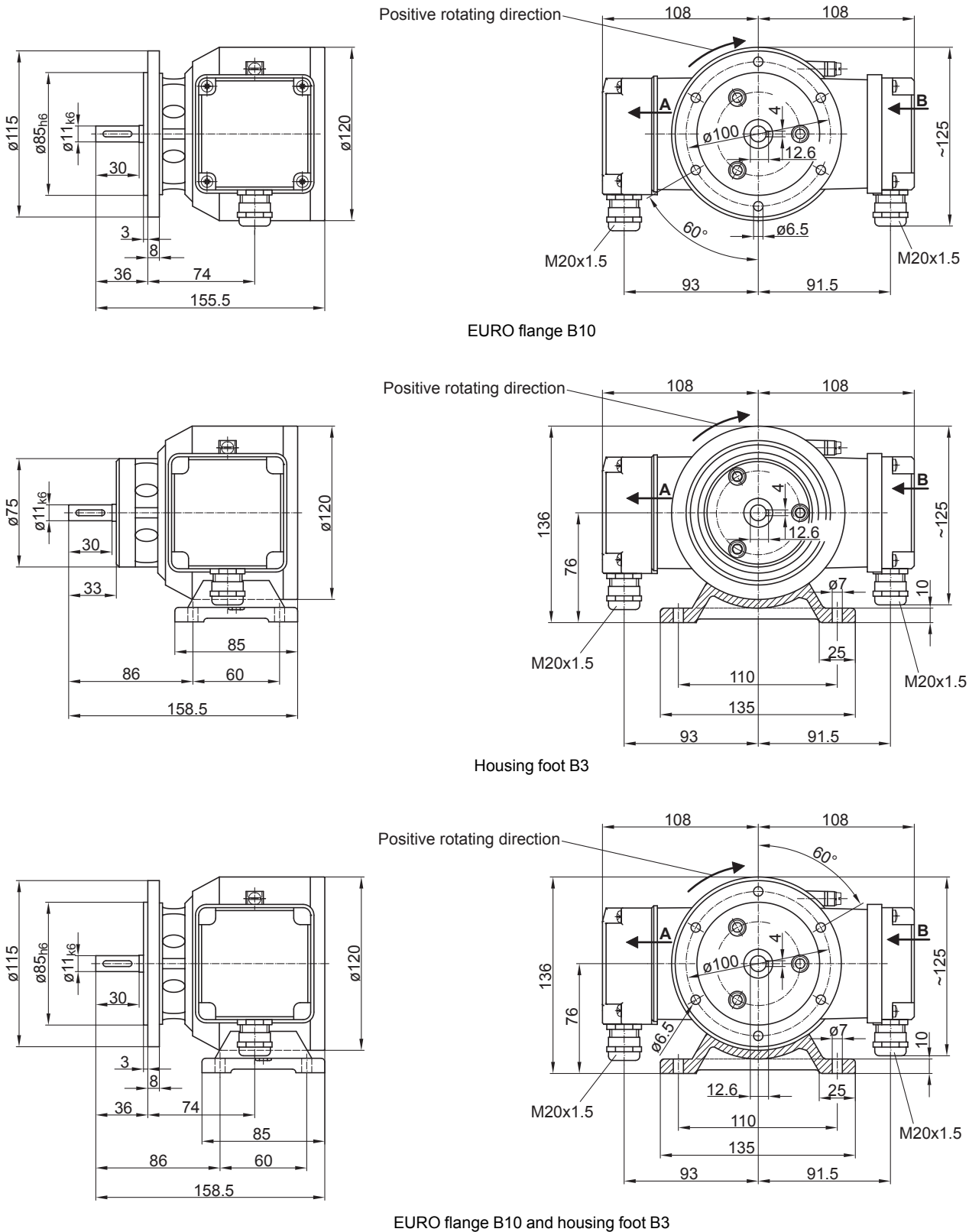


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Dimensions



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Ordering reference

| | POG10 | DN | #### | # | ##### | ##### |
|---|-------|----|------|---|--------|---------|
| Product | | | | | | |
| Incremental encoder + Speed switch | POG10 | | | | | |
| Output signals | | | | | | |
| K1, K2, K0 | | DN | | | | |
| Pulse number | | | | | | |
| 512 | | | 512 | | | |
| 1024 | | | 1024 | | | |
| 2048 | | | 2048 | | | |
| 2500 | | | 2500 | | | |
| Incremental output | | | | | | |
| Output circuit HTL with inverted signals | | | | I | | |
| Output circuit TTL with inverted signals | | | | R | | |
| Mounting type | | | | | | |
| EURO flange B10 | | | | | | |
| Housing foot B3 | | | | | B3 | |
| Housing foot B3 + EURO flange B10 | | | | | B3/B10 | |
| Version speed switch | | | | | | |
| 2 outputs, speed control and 1 control output | | | | | | + DSL.E |
| 3 outputs, speed control | | | | | | + DSL.R |

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)

Diagnostic accessories

- 11075858 Analyzer for encoders HENQ 1100
- 11075880 Analyzer for encoders HENQ 1100 B