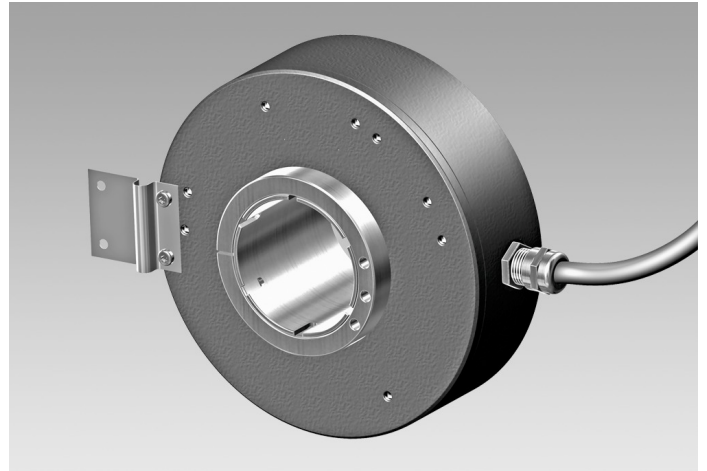


## HOG 12

Through hollow shaft  $\varnothing 30 \dots 45$  mm  
600...1200 pulses per revolution

### Overview

- Through hollow shaft  $\varnothing 30 \dots 45$  mm
- Optical sensing method
- Robust light-metal housing
- Output stage HTL or TTL
- Output stage TTL with regulator UB 9...26 VDC



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### Technical data

#### Technical data - electrical ratings

|                       |                               |
|-----------------------|-------------------------------|
| Voltage supply        | 9...26 VDC<br>5 VDC $\pm 5$ % |
| Consumption w/o load  | $\leq 100$ mA                 |
| Pulses per revolution | 600 ... 1200                  |
| Phase shift           | $90^\circ \pm 20^\circ$       |
| Duty cycle            | 40...60 %                     |
| Reference signal      | Zero pulse, width $90^\circ$  |
| Sensing method        | Optical                       |
| Output frequency      | $\leq 120$ kHz                |
| Output signals        | K1, K2, K0 + inverted         |
| Output stages         | HTL<br>TTL/RS422              |
| Interference immunity | EN 61000-6-2                  |
| Emitted interference  | EN 61000-6-3                  |
| Approval              | CE<br>UL approval / E217823   |

#### Technical data - mechanical design

|                         |  |
|-------------------------|--|
| Size (flange)           | $\varnothing 125$ mm   |
| Shaft type              | $\varnothing 30 \dots 45$ mm (through hollow shaft)                                |
| Admitted shaft load     | $\leq 30$ N axial<br>$\leq 40$ N radial  |
| Protection EN 60529     | IP 54  |
| Operating speed         | $\leq 6000$ rpm (mechanical)   |
| Operating torque typ.   | 10 Ncm   |
| Rotor moment of inertia | 1.3 kgcm <sup>2</sup>  |
| Material                | Housing: aluminium alloy<br>Shaft: stainless steel                                 |
| Operating temperature   | $-30 \dots +85$ °C   |
| Resistance              | IEC 60068-2-6<br>Vibration 10 g, 10-2000 Hz<br>IEC 60068-2-27<br>Shock 100 g, 6 ms |
| Connection              | Cable 1 m  |
| Weight approx.          | 1 kg   |

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## Terminal assignment

### Assignment connecting cable

| Wire colour | Assignment      |
|-------------|-----------------|
| Red         | +UB             |
| Blue        | 0V ( $\perp$ )  |
| White       | K1              |
| Brown       | $\overline{K1}$ |
| Green       | K2              |
| Yellow      | $\overline{K2}$ |
| Grey        | K0              |
| Pink        | $\overline{K0}$ |

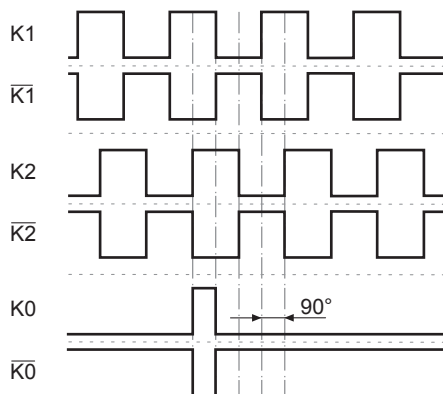
## Terminal significance

|                 |  |
|-----------------|--|
| +UB             | Voltage supply                                       |
| 0V ( $\perp$ )  | Ground   |
| 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                                  |

## Output signals

### HTL/TTL

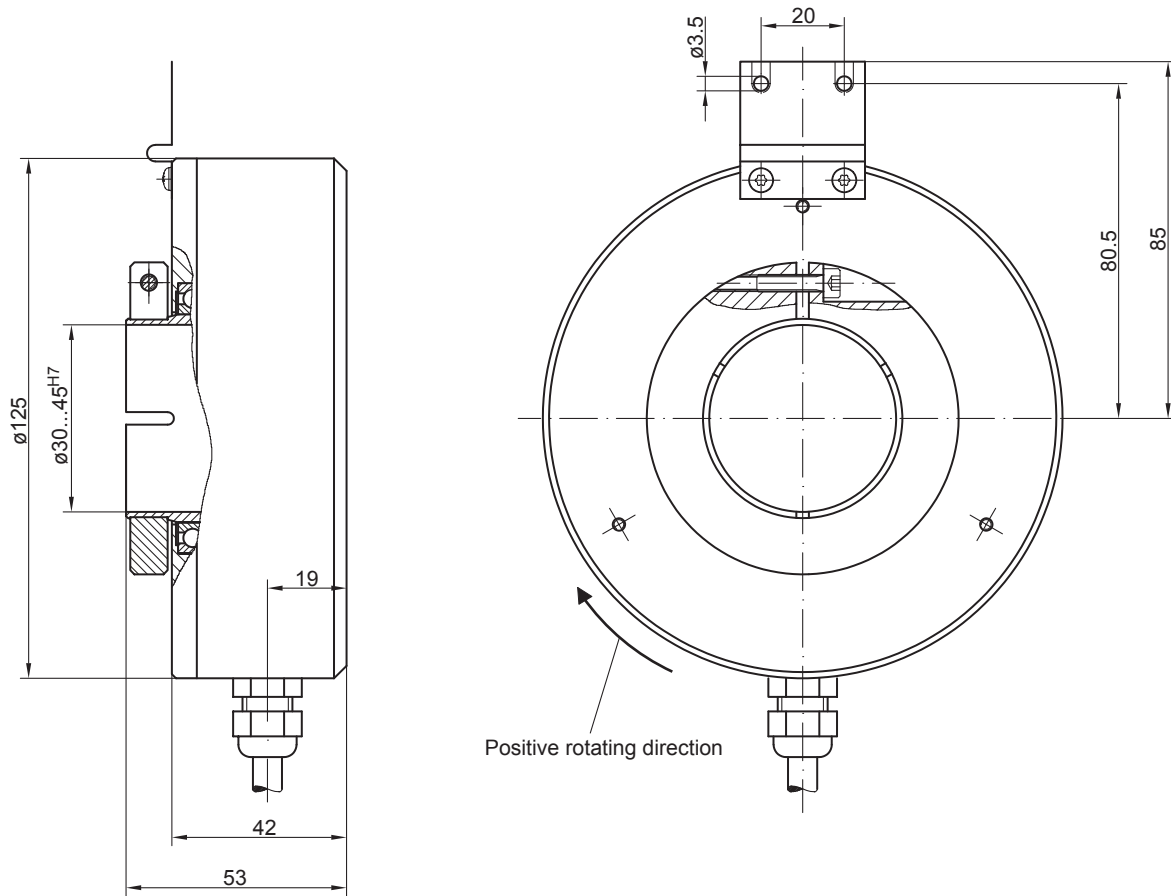
At positive rotating direction (*see dimension*)



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## Dimensions



# HOG 12

Through hollow shaft  $\varnothing 30 \dots 45$  mm  
 600...1200 pulses per revolution

## Ordering reference

|   |  | HOG12 | DN | #### | ### | ##### |
|---|--|-------|----|------|-----|-------|
| <b>Product</b>  |  |       |    |      |     |       |
| Incremental encoder                                     |  | HOG12 |    |      |     |       |
| <b>Output signals</b>                                   |  |       |    |      |     |       |
| K1, K2, K0  |  |       | DN |      |     |       |
| <b>Pulse number<sup>(1)</sup></b>                       |  |       |    |      |     |       |
| 600   |  |       |    | 600  |     |       |
| 1024  |  |       |    | 1024 |     |       |
| 1200  |  |       |    | 1200 |     |       |
| <b>Voltage supply / output stage</b>                    |  |       |    |      |     |       |
| 9...26 VDC / output stage HTL (C) with inverted signals |  |       |    |      |     | CI    |
| 5 VDC $\pm 5\%$ / TTL                                   |  |       |    |      |     | T     |
| 9...26 VDC / output stage TTL with inverted signals     |  |       |    |      |     | R     |
| <b>Shaft diameter</b>                                   |  |       |    |      |     |       |
| Through hollow shaft $\varnothing 30$ mm                |  |       |    |      |     | 30H7  |
| Blind hollow shaft $\varnothing 38$ mm                  |  |       |    |      |     | 38H7  |
| Through hollow shaft $\varnothing 40$ mm                |  |       |    |      |     | 40H7  |
| Through hollow shaft $\varnothing 45$ mm                |  |       |    |      |     | 45H7  |

(1) Other pulse numbers on request.