

# Incremental encoders

Through hollow shaft  $\varnothing 20$  to  $\varnothing 38$  mm

250...2500 pulses per revolution

## HOG 16



HOG 16

### Technical data - electrical ratings

|                       |   |
|-----------------------|---|
| Voltage supply        | 9...30 VDC<br>5 VDC $\pm 5$ %<br>9...26 VDC |
| Consumption w/o load  | $\leq 100$ mA                               |
| Pulses per revolution | 250...2500                                  |
| Phase shift           | $90^\circ \pm 20^\circ$                     |
| Scan ratio            | 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                                |
| Approvals             | CE, UL approval / E256710                   |

### Features

- Through hollow shaft  $\varnothing 20$ ...38 mm
- Robust light-metal housing
- Output stage HTL or TTL
- Output stage TTL with regulator UB 9...26 VDC
- Special protection against corrosion
- Big terminal box, turn by  $180^\circ$

### Optional

- Redundant sensing with two terminal boxes
- With earthing brushes
- Hybrid bearing

### Technical data - mechanical design

|                         |  |
|-------------------------|--|
| Size (flange)           | $\varnothing 158$ mm   |
| Shaft type              | $\varnothing 20$ ...38 mm (through hollow shaft)                                   |
| Shaft loading           | $\leq 450$ N axial<br>$\leq 600$ N radial  |
| Protection DIN EN 60529 | IP 66  |
| Operating speed         | $\leq 6000$ rpm (mechanical)   |
| Operating torque typ.   | 15 Ncm   |
| Rotor moment of inertia | 4.9 kgcm <sup>2</sup> ( $\varnothing 25$ )   |
| Materials               | Housing: aluminium alloy<br>Shaft: stainless steel                                 |
| Operating temperature   | $-40$ ... $+100$ °C  |
| Resistance              | IEC 60068-2-6<br>Vibration 20 g, 10-2000 Hz<br>IEC 60068-2-27<br>Shock 300 g, 6 ms |
| Connection              | Terminal box<br>2x terminal box (with option M)                                    |
| Weight approx.          | 4.9 kg, 5.1 kg (with option M)   |



# Incremental encoders

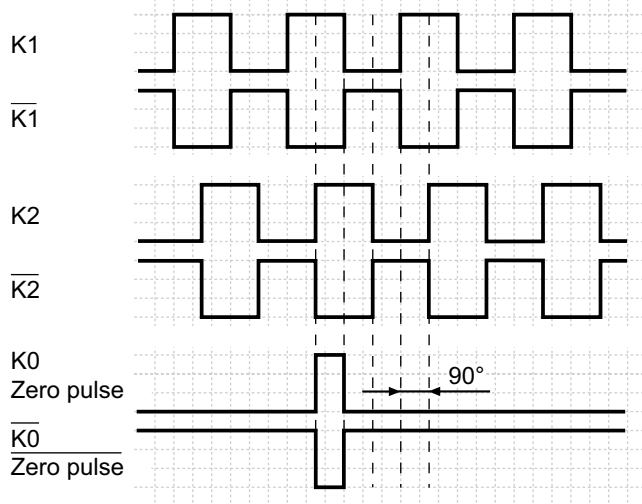
Through hollow shaft  $\varnothing 20$  to  $\varnothing 38$  mm

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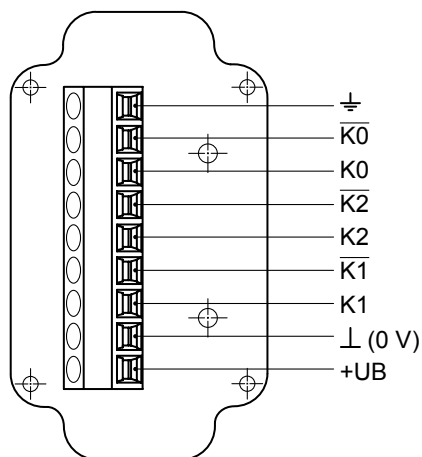
### Output signals

At positive rotating direction



### Terminal assignment

View A - Connecting terminal in terminal box



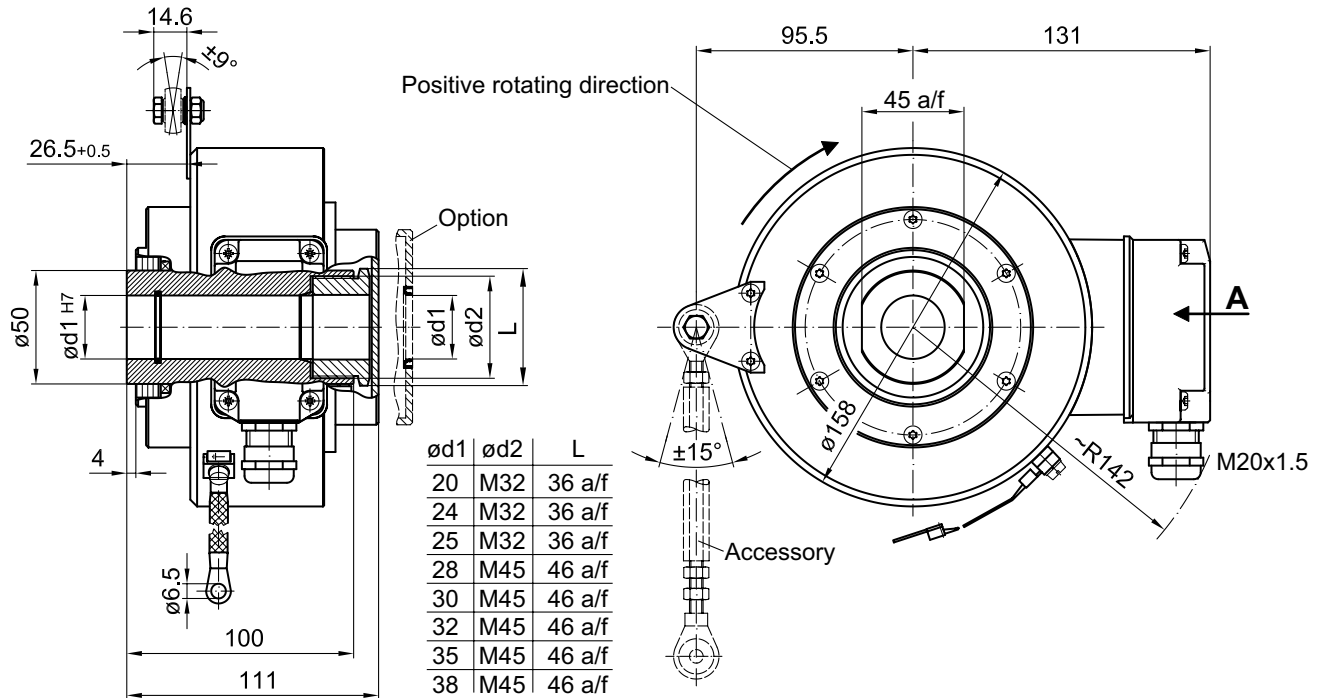
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## Dimensions

### HOG 16 - Version with single sensing



### HOG 16 M - Version with redundant sensing

