

**Overview**

- Solid shaft  $\varnothing 6$  mm
- Up to 5000 sinewaves cycles per turn
- SinCos output-signals 1 Vpp
- Low harmonic content (patented LowHarmonics technology)
- Compact, robust die-cast housing
- Inside connecting terminals
- High protection IP 66



**Technical data**

**Technical data - electrical ratings**

|                                |                                |
|--------------------------------|--------------------------------|
| Voltage supply                 | 5 VDC $\pm 10$ %<br>9...30 VDC |
| Consumption w/o load           | $\leq 90$ mA                   |
| Sinewave cycles per revolution | 1024 ... 5000                  |
| Phase shift                    | 90 °                           |
| Reference signal               | Zero pulse, width 90°          |
| Sensing method                 | Optical                        |
| Output signals                 | K1, K2, K0 + inverted          |
| Output stages                  | SinCos 1 Vpp                   |
| Difference of SinCos amplitude | $\leq 20$ mV                   |
| Harmonics typ.                 | -50 dB                         |
| DC offset                      | $\leq 20$ mV                   |
| Bandwidth                      | 250 kHz (-3 dB)                |
| Interference immunity          | EN 61000-6-2                   |
| Emitted interference           | EN 61000-6-3                   |
| Approval                       | CE<br>UL approval / E217823    |

**Technical data - mechanical design**

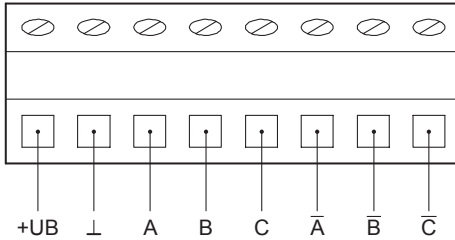
|                         |  |
|-------------------------|--|
| Size (flange)           | $\varnothing 58$ mm  |
| Shaft type              | $\varnothing 6$ mm solid shaft   |
| Admitted shaft load     | $\leq 30$ N axial<br>$\leq 40$ N radial  |
| Flange                  | Synchro flange   |
| Protection EN 60529     | IP 66  |
| Operating speed         | $\leq 10000$ rpm (mechanical)  |
| Operating torque typ.   | 1 Ncm  |
| Rotor moment of inertia | 25 gcm <sup>2</sup>  |
| Material                | Housing: aluminium die-cast<br>Shaft: stainless steel  |
| Operating temperature   | -20...+85 °C   |
| Resistance              | IEC 60068-2-6<br>Vibration 10 g, 10-2000 Hz<br>IEC 60068-2-27<br>Shock 300 g, 6 ms               |
| Explosion protection    | II 3 G Ex ec IIC T4 Gc X (gas)<br>II 3 D Ex tc IIIC T85°C Dc X (dust)<br>(only with option ATEX) |
| Connection              | Connecting terminal  |
| Weight approx.          | 350 g  |

2023-08-22 The product features and technical data specified do not express or imply any warranty. Technical modifications subject to change.

**Terminal assignment**

**View A** (see dimension)

Connecting terminal



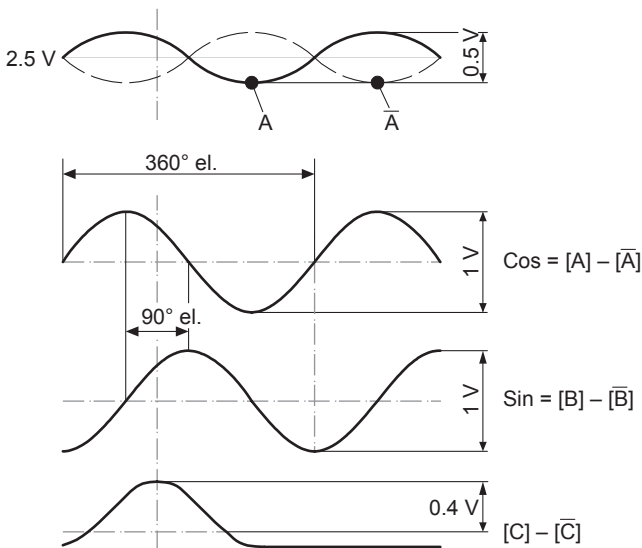
**Terminal significance**

|     |  |
|-----|--|
| +UB | Voltage supply                                       |
| ⊥   | Ground   |
| A   | Output signal channel 1                              |
| A̅  | Output signal channel 1 inverted                     |
| B   | Output signal channel 2 (offset by 90° to channel 1) |
| B̅  | Output signal channel 2 inverted                     |
| C   | Zero pulse (reference signal)                        |
| C̅  | Zero pulse inverted                                  |

**Output signals**

**SinCos**

At positive rotating direction (see dimension)

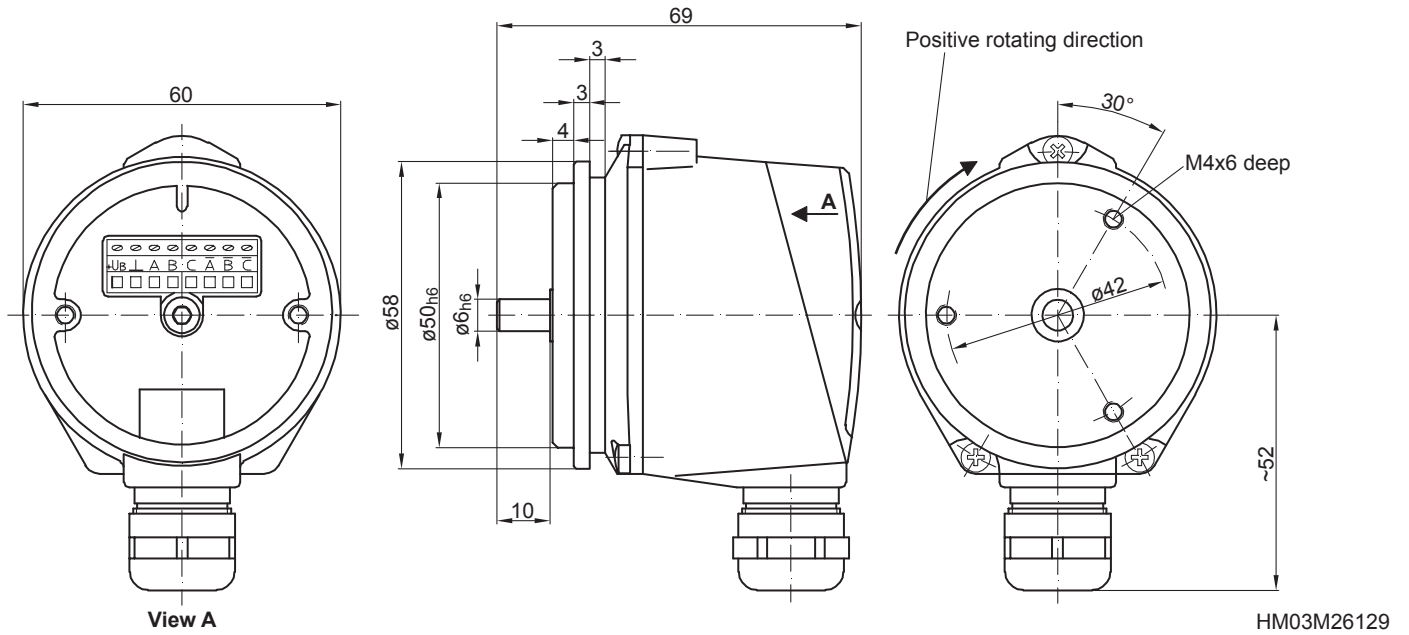


# OGS 71

Solid shaft with synchro flange

1024...5000 sinewave cycles per turn

## Dimensions



# OGS 71

Solid shaft with synchro flange  
1024...5000 sinewave cycles per turn

## Ordering reference

|                        | OGS71 | DN | #### | #    |
|------------------------|-------|----|------|------|
| <b>Product</b>         |       |    |      |      |
| Sine encoder           | OGS71 |    |      |      |
| <b>Output signals</b>  |       |    |      |      |
| A, B, C                |       | DN |      |      |
| <b>Sinewave cycles</b> |       |    |      |      |
| 1024                   |       |    |      | 1024 |
| 2048                   |       |    |      | 2048 |
| 5000                   |       |    |      | 5000 |
| <b>Voltage supply</b>  |       |    |      |      |
| 5 VDC                  |       |    |      | -    |
| 9...30 VDC             |       |    |      | R    |

## Accessories

### Mounting accessories

Eccentric disks (clamping claws)