

# EN580E.IL-SC10.GA1S1.01024.K

Solid shaft with clamping flange, 1024 sinewave cycles per revolution

Article number: 11246031

## Overview

- Size  $\varnothing 58$  mm
- Precise optical sensing
- Output signal level SinCos
- Sinewave cycles per revolution 1024
- High connection flexibility thanks to flexible connector M12



## Technical data

### Technical data - electrical ratings

|                                |                         |
|--------------------------------|-------------------------|
| Voltage supply                 | 5 VDC $\pm 5\%$         |
| Reverse polarity protection    | Yes                     |
| Short-circuit proof            | Yes                     |
| Consumption w/o load           | $\leq 70$ mA            |
| Sinewave cycles per revolution | 1024                    |
| Phase shift                    | $90^\circ \pm 10^\circ$ |
| Sensing method                 | Optical                 |
| Output frequency               | $\leq 180$ kHz (-3 dB)  |
| Output signals                 | A+, B+, R+, A-, B-, R-  |
| Output stages                  | SinCos 1 Vpp            |
| Interference immunity          | EN 61000-6-2            |
| Emitted interference           | EN 61000-6-4            |
| Approval                       | UL Class 2              |

### Technical data - mechanical design

|               |  |
|---------------|--|
| Size (flange) | $\varnothing 58$ mm                                  |
| Shaft type    | $\varnothing 10 \times 20$ mm, solid shaft with flat |

### Technical data - mechanical design

|                       |   |
|-----------------------|---|
| Admitted shaft load   | $\leq 40$ N axial<br>$\leq 80$ N radial   |
| Flange                | Clamping flange   |
| Protection EN 60529   | IP 54 (flange side)<br>IP 65 (housing side)   |
| Operating speed       | $\leq 6000$ rpm (+25 °C)  |
| Starting torque       | $\leq 0.02$ Nm  |
| Material              | Housing: aluminium<br>Solid shaft: stainless steel  |
| Operating temperature | -25...+100 °C (see general information)   |
| Relative humidity     | 95 % non-condensing   |
| Resistance            | EN 60068-2-6<br>Vibration $\pm 0.75$ mm - 10-58 Hz 20 g - 58-2000 Hz<br>EN 60068-2-27<br>Shock 100 g, 11 ms |
| Connection            | Connector M12, 8-pin, flexible  |
| Weight approx.        | 300 g   |

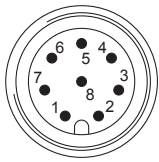
**General information**

Self-heating correlated to installation and ambient conditions as well as to electronics and supply voltage must be considered for precise thermal dimensioning. Operating the encoder close to the maximum limits requires measuring the real prevailing temperature at the encoder flange.

**Terminal assignment**

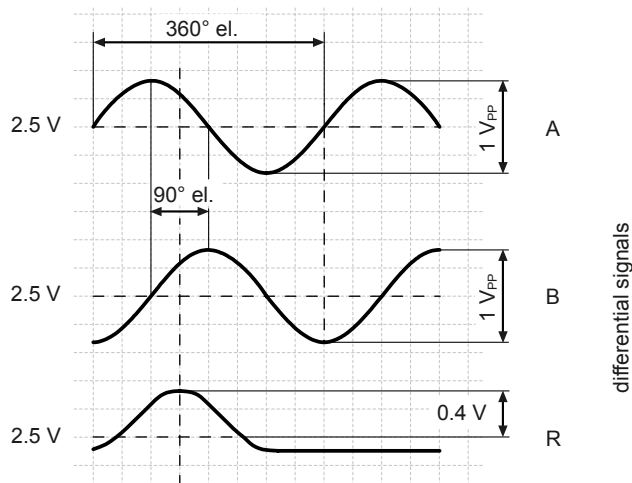
Connector M12, 8-pin

| Pin | Assignment |
|-----|------------|
| 1   | 0 V        |
| 2   | +Vs        |
| 3   | A+         |
| 4   | A-         |
| 5   | B+         |
| 6   | B-         |
| 7   | R+         |
| 8   | R-         |



**Output signals**

Clockwise rotation when looking at flange.



**Output signal level**

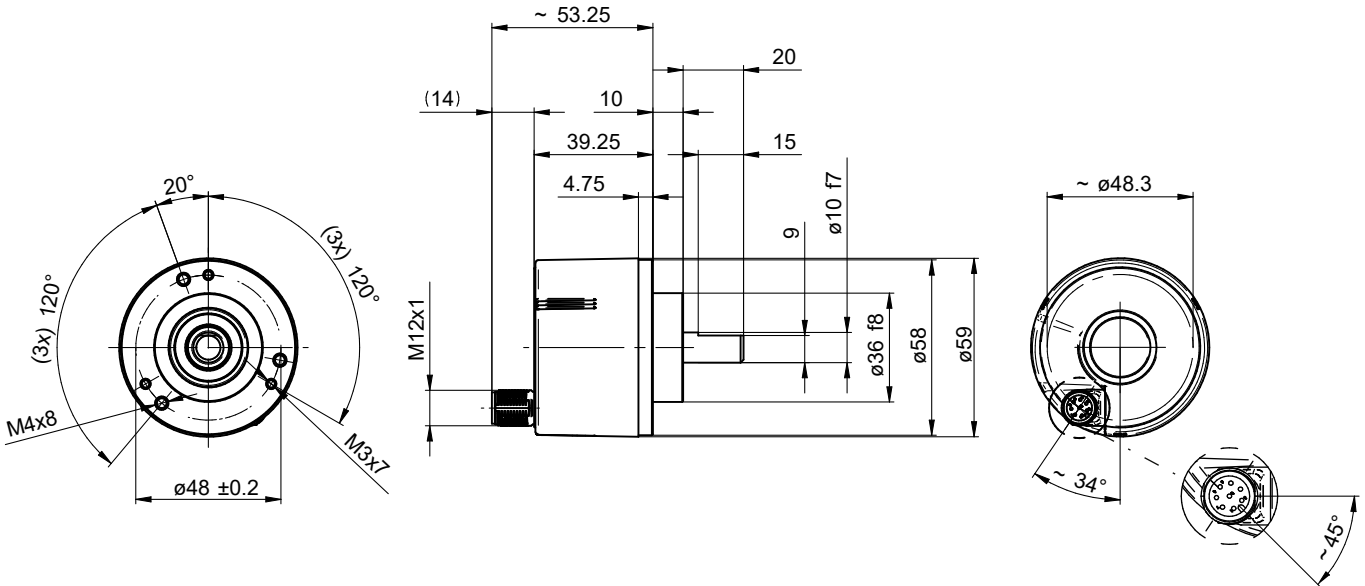
| Outputs                | Sine   |
|------------------------|--|
| Output amplitude A + B | 1 V <sub>ss</sub> at Z <sub>0</sub> = 120 Ω          |
| Output amplitude R     | Appr. 0.4 V (useable part) at Z <sub>0</sub> = 120 Ω |

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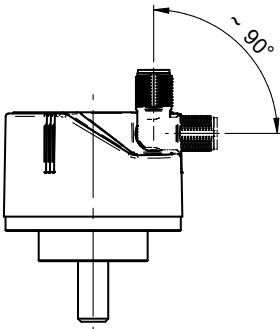
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## Dimensions



Clamping flange, connector M12



Clamping flange, flexible connector M12

**Accessories****Mounting accessories**

|          |   |
|----------|---|
| 11101781 | Double loops coupling (D1=10 / D2=10)                               |
| 11050507 | Bellows coupling aluminium/stainless steel D1=06 / D2=10            |
| 11065923 | Coupling CPS25 L=19 d1=10/d2=10                                     |
| 11065922 | Coupling CPS25 L=19 d1=10/d2=06                                     |
| 10141132 | Spring washer coupling D1=6 / D2=10                                 |
| 10141133 | Spring washer coupling D1=10 / D2=10                                |
| 11069337 | Coupling CPS37 L=24 d1=10/d2=06                                     |
| 11069340 | Coupling CPS37 L=24 d1=10/d2=10                                     |
| 11053277 | Bellows coupling aluminium/stainless steel 10 mm                    |
| 11101893 | Spring encoder arm  |
| 10125051 | Mounting adaptor for encoders with clamping flange (M3) (Z 119.017) |