

Sine encoders

Solid shaft with synchro flange

1000...5000 sinewave cycles per turn

BDT sine



BDT sine

Features

- Encoder with solid shaft $\varnothing 6$ mm
- Optical sensing method
- Up to 5000 sinewaves cycles per turn
- Sine output
- Small profile depth
- Synchro flange

Technical data - electrical ratings

| | |
|--------------------------|--------------------------|
| Voltage supply | 5 VDC ± 5 % |
| Consumption typ. | 100 mA (5 VDC, w/o load) |
| Sinewave cycles per turn | 1000...5000 |
| Reference signal | Zero pulse, width 90° |
| Sensing method | Optical |
| Output frequency | ≤ 160 kHz |
| Output signals | A 90° B, N + inverted |
| Output stages | SinCos 1 Vpp |
| Interference immunity | DIN EN 61000-6-2 |
| Emitted interference | DIN EN 61000-6-3 |
| Approval | UL approval / E217823 |

Technical data - mechanical design

| | |
|-------------------------|---|
| Size (flange) | $\varnothing 58$ mm |
| Shaft type | $\varnothing 6$ mm solid shaft (synchro flange) |
| Shaft loading | ≤ 10 N axial ≤ 20 N radial |
| Flange | Synchro flange |
| Protection DIN EN 60529 | IP 65, IP 42 |
| Operating speed | ≤ 12000 rpm (IP 42) ≤ 6000 rpm (IP 65) |
| Operating torque typ. | 0.0023 Nm (IP 42) 0.026 Nm (IP 65) |
| Materials | Housing: steel Housing: steel (connection -A) Flange: aluminium |
| Operating temperature | -20...+85 °C |
| Relative humidity | 95 % non-condensing |
| Resistance | DIN EN 60068-2-6 Vibration 10 g, 10-200 Hz DIN EN 60068-2-27 Shock 50 g, 11 ms |
| Connection | Connector M23, 12-pin Cable 2 m |
| Weight approx. | 300 g |

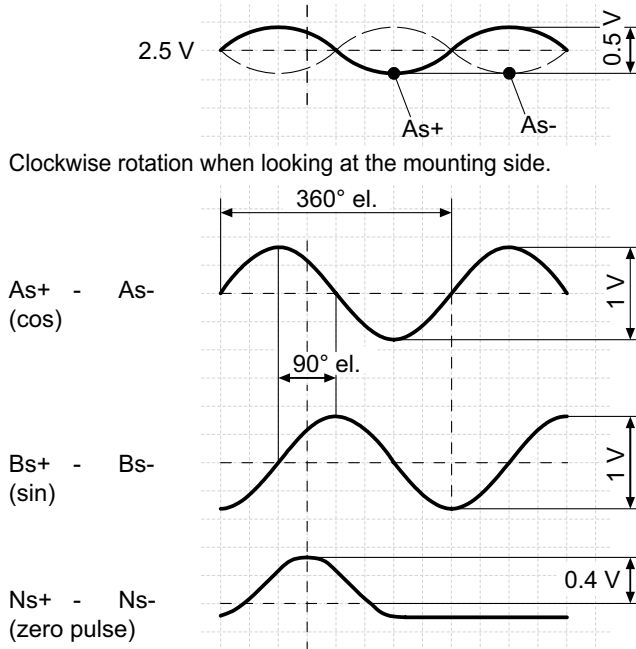
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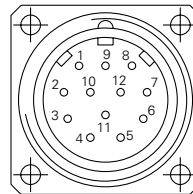
Output signals



Terminal assignment

Cable / Connector M23 male
for connection references **-A** and **-5**

| Connector | Core colour | Signals |
|------------|--------------------------|---------|
| Pin 1 | pink | Bs- |
| Pin 2 | blue | +Vs |
| Pin 3 | red | Ns+ |
| Pin 4 | black | Ns- |
| Pin 5 | brown | As+ |
| Pin 6 | green | As- |
| Pin 7 | yellow | n.c. |
| Pin 8 | grey | Bs+ |
| Pin 9 | – | n.c. |
| Pin 10 | white | 0 V |
| Pin 11 | – | 0 V |
| Pin 12 | – | +Vs |
| Screen | connected to housing | |
| Cable data | 9 x 0,14 mm ² | |



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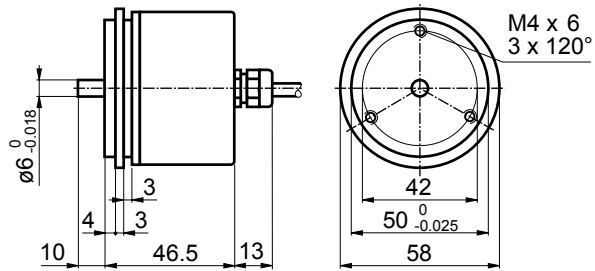
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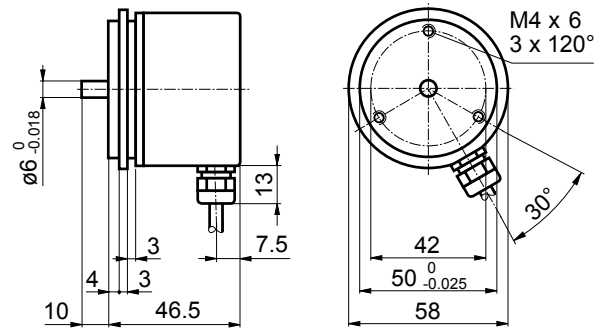
BDT sine

Dimensions

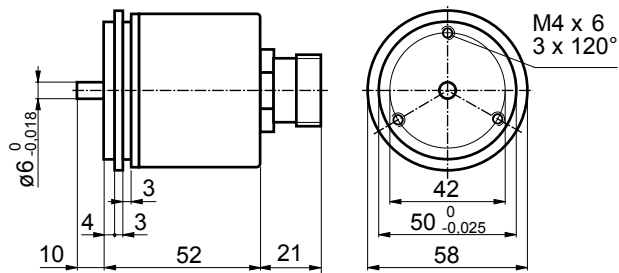
BDT sine, cable axial



BDT sine, cable radial



BDT sine, connector output axial



BDT sine, connector output radial

