# RO1305

## Incremental encoder with hollow shaft

RO-0100-I05/N11

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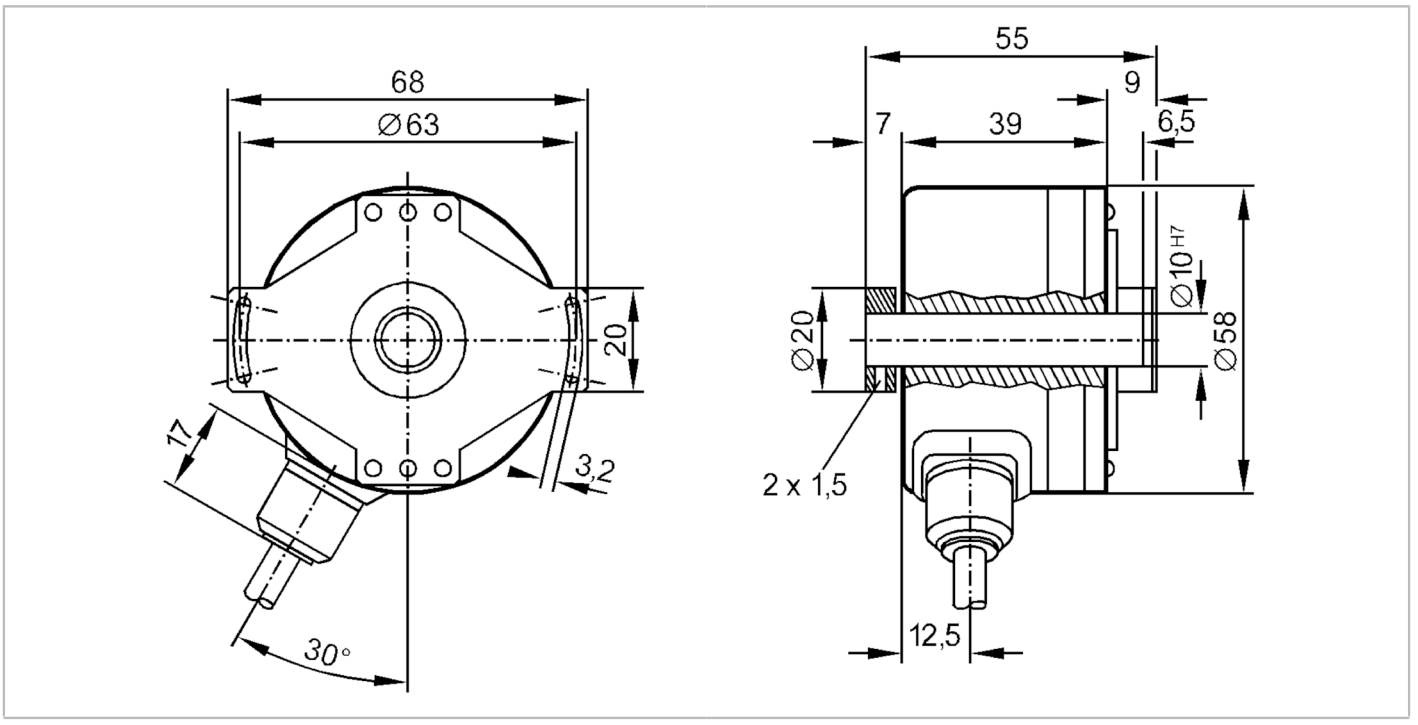


CE

| | | |
|---|---|---|
| **Product characteristics** | | |
| Resolution | | 100 resolution |
| Shaft design | | continuous hollow shaft |
| Shaft diameter | [mm] | 10 |
| **Electrical data** | | |
| Operating voltage tolerance | [%] | 10 |
| Operating voltage | [V] | 5 DC |
| Current consumption | [mA] | < 150 |
| **Outputs** | | |
| Electrical design | | TTL |
| Max. current load per output | [mA] | 20 |
| Switching frequency | [kHz] | 300 |
| Phase difference A and B | [°] | 90 |
| **Measuring/setting range** | | |
| Resolution | | 100 resolution |
| **Operating conditions** | | |
| Ambient temperature | [°C] | -30...100 |
| Storage temperature | [°C] | -30...100 |
| Max. relative air humidity | [%] | 98 |
| Protection | | IP 64 |
| **Tests / approvals** | | |
| Shock resistance | | 100 g (6 ms) |

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| | | |
|---|---|---|
| Vibration resistance | | 10 g (55...2000 Hz) |

### Mechanical data

| | | |
|---|---|---|
| Dimensions | [mm] | Ø 58 / L = 55 |
| Materials | | aluminium |
| Max. revolution, mechanical | [U/min] | 12000 |
| Max. starting torque | [Nm] | 2.5 |
| Reference temperature torque | [°C] | 20 |
| Shaft design | | continuous hollow shaft |
| Shaft diameter | [mm] | 10 |
| Shaft fit | | H7 |
| Shaft material | | stainless steel |
| Installation depth of shaft | [mm] | 10 |
| Max. axial shaft misalignment | [mm] | 1;  (max. radial shaft alignment: ± 0,05 mm) |

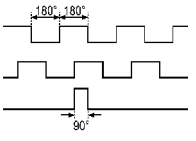
### Electrical connection

Cable: 1 m, PUR; radial

| | |
|---|---|
| brown | A |
| green | A inverted |
| grey | B |
| pink | B inverted |
| red | 0 index |
| black | 0 index inverted |
| blue | L+ sensor |
| white | 0V sensor |
| brown/green | L+ (Up) |
| white/green | 0V (Un) |
| lilac | failure inverted |
| screen | housing |

### Diagrams and graphs

Pulse diagram




direction of rotation clockwise (looking at the shaft)