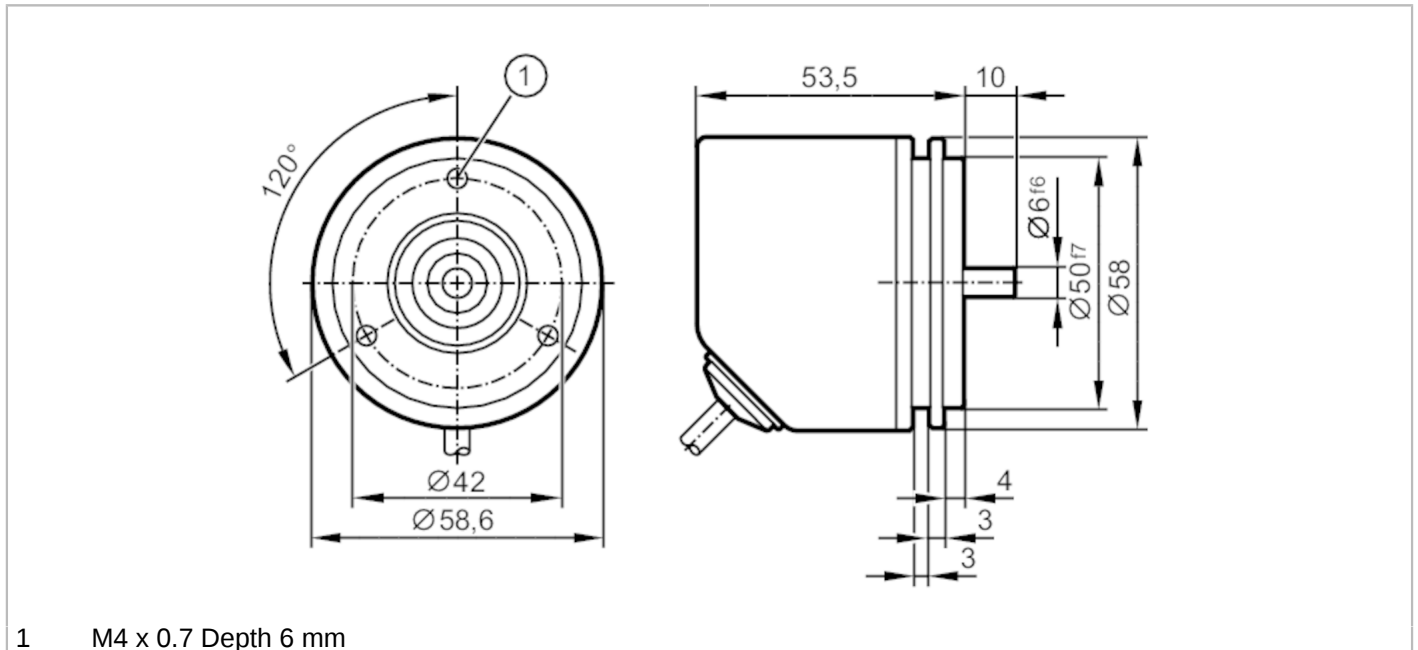


# RU3500



## Incremental encoder with solid shaft

INCREMENTAL ENCODER BASIC LINE



1 M4 x 0.7 Depth 6 mm



| Product characteristics            |   |
|------------------------------------|---|
| Resolution                         | 1...10000; (configurable; Factory setting: 1024) resolution |
| Communication interface            | IO-Link   |
| Shaft design                       | solid shaft   |
| Shaft diameter [mm]                | 6   |
| Application                        |   |
| Function principle                 | incremental   |
| Detection system                   | magnetic  |
| Electrical data                    |   |
| Operating voltage [V]              | 4.75...30 DC  |
| Current consumption [mA]           | < 150   |
| Protection class                   | III   |
| Reverse polarity protection        | yes   |
| Power-on delay time [s]            | 0.5   |
| Max. revolution electrical [U/min] | 12000   |
| Outputs                            |   |
| Electrical design                  | HTL/TTL   |
| Switching frequency [kHz]          | 1000  |
| Factory setting                    | Output function: HTL (50 mA)                                |
| Short-circuit protection           | yes   |
| Phase difference A und B [°]       | 90  |
| Measuring/setting range            |   |
| Resolution                         | 1...10000; (configurable; Factory setting: 1024) resolution |
| Accuracy / deviations              |   |
| Accuracy [°]                       | 0.1   |



## Incremental encoder with solid shaft

INCREMENTAL ENCODER BASIC LINE

| Software / programming   |   |
|--|---|
| Parameter setting options  | Resolution; Direction of rotation; HTL; TTL                               |
| Interfaces   |   |
| Communication interface  | IO-Link   |
| Transmission type  | COM2 (38,4 kBaud)   |
| IO-Link revision   | 1.1   |
| SIO mode   | yes   |
| Min. process cycle time [ms]   | 2.3   |
| Operating conditions   |   |
| Ambient temperature [°C]   | -40...80  |
| Note on ambient temperature  | for flexibly laid cable: -25 °C   |
| Storage temperature [°C]   | -40...80  |
| Max. relative air humidity [%]   | 95; (Condensation not permissible)  |
| Protection   | IP 65; IP 66; (on the housing: IP 67; on the shaft: IP 64)                |
| Tests / approvals  |   |
| Shock resistance   | 100 g   |
| Vibration resistance   | 20 g  |
| MTTF [years]   | 292   |
| Mechanical data  |   |
| Weight [g]   | 434.5   |
| Dimensions [mm]  | ∅ 58 / L = 63.5   |
| Material   | flange: aluminum; housing: stainless steel (1.4521 / 444); cable plug: PA |
| Max. revolution, mechanical [U/min]  | 12000   |
| Max. starting torque [Nm]  | 1   |
| Reference temperature torque [°C]  | 20  |
| Shaft design   | solid shaft   |
| Shaft diameter [mm]  | 6   |
| Shaft material   | stainless steel   |
| Max. shaft load axial (at the shaft end) [N]                                     | 40  |
| Max. shaft load radial (at the shaft end) [N]                                    | 60  |
| Fixing flange  | Synchro-flange  |
| Electrical connection  |   |
| Cable: 2 m, ∅ 4.9 mm; radial, can also be used axially; 5 x 0.14 mm <sup>2</sup> |   |
| IO-Link  |   |
| brown  | L+  |
| white  | not to be used  |
| blue   | L-  |
| grey   | not to be used  |
| black  | IO-Link   |
| screen   | housing   |

# RU3500



## Incremental encoder with solid shaft

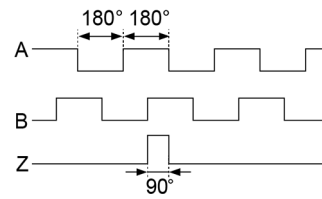
INCREMENTAL ENCODER BASIC LINE

### encoder

|        |                    |
|--------|--------------------|
| brown  | UB                 |
| white  | A                  |
| blue   | GND                |
| grey   | B                  |
| black  | Z/0-Pulse (90 deg) |
| screen | housing            |

### Diagrams and graphs

Pulse diagram



Direction of rotation clockwise (looking at the shaft)