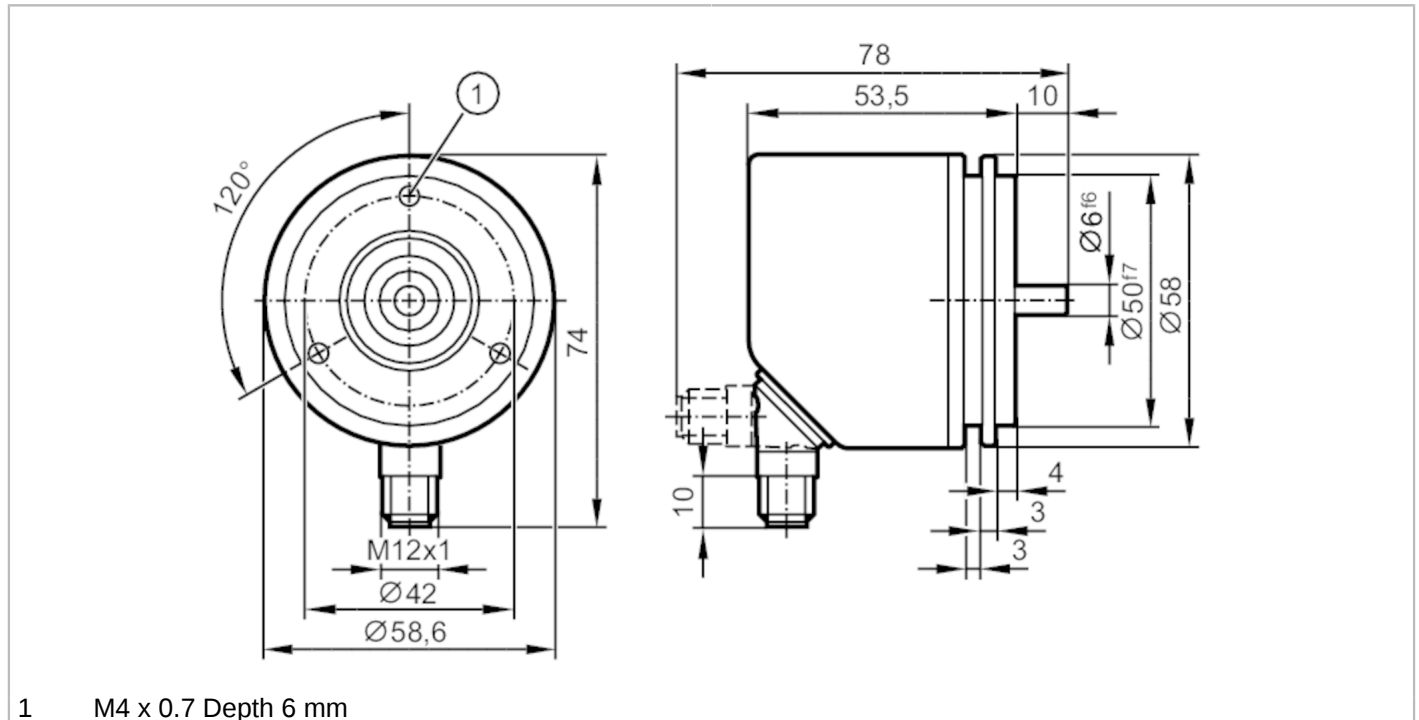


RU3100



Incremental encoder with solid shaft

INCREMENTAL ENCODER BASIC LINE



1 M4 x 0.7 Depth 6 mm



Product characteristics

| | |
|-------------------------|--|
| Resolution | 1...10000; (parameterisable; 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 and B [°] | 90 |

Measuring/setting range

| | |
|------------|--|
| Resolution | 1...10000; (parameterisable; Factory setting: 1024) resolution |
|------------|--|



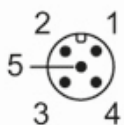
Incremental encoder with solid shaft

INCREMENTAL ENCODER BASIC LINE

| Accuracy / deviations | |
|---|--|
| Accuracy | [°] 0.1 |
| 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...85 |
| Storage temperature | [°C] -40...85 |
| Max. relative air humidity | [%] 95; (condensation not permissible) |
| Protection | IP 65; IP 66; (on the housing: IP67; on the shaft: IP64) |
| Tests / approvals | |
| Shock resistance | 100 g |
| Vibration resistance | 20 g |
| MTTF | [years] 292 |
| Mechanical data | |
| Weight | [g] 381 |
| Dimensions | [mm] Ø 58 / L = 63.5 |
| Materials | flange: aluminium; housing: stainless steel (1.4521 / 444) |
| 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

Connector: 1 x M12, radial, can also be used axially; coding: A; Moulded body: stainless steel (1.4401 / 316); Maximum cable length: 100 m; (IO-Link: max. 20 m)





Incremental encoder with solid shaft

INCREMENTAL ENCODER BASIC LINE

IO-Link

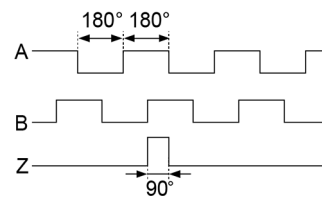
| | |
|--------|----------------|
| 1 | L+ |
| 2 | not to be used |
| 3 | L- |
| 4 | IO-Link |
| 5 | not to be used |
| Screen | plug |

encoder

| | |
|--------|--------------------|
| 1 | UB |
| 2 | A |
| 3 | GND |
| 4 | Z/0-Pulse (90 deg) |
| 5 | B |
| Screen | plug |

Diagrams and graphs

Pulse diagram



direction of rotation clockwise (looking at the shaft)