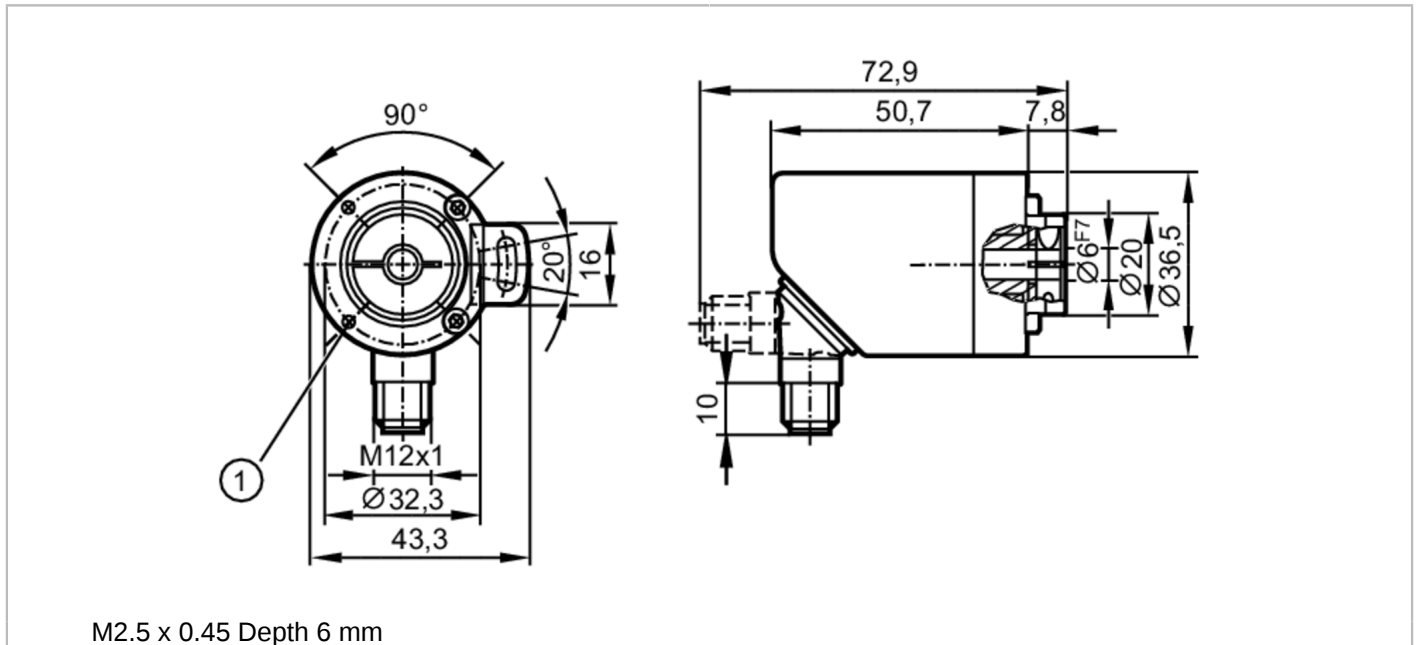


RA3100



Incremental encoder with hollow shaft

INCREMENTAL ENCODER BASIC LINE



| Product characteristics | |
|------------------------------------|--|
| Resolution | 1...10000; (parameterisable; Factory setting: 1024) resolution |
| Communication interface | IO-Link |
| Shaft design | hollow shaft open to one side |
| 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 |
| Accuracy / deviations | |
| Accuracy [°] | 0.1 |



Incremental encoder with hollow shaft

INCREMENTAL ENCODER BASIC LINE

| Software / programming | |
|-------------------------------------|--|
| Parameter setting options | Resolution; direction of rotation; HTL; TTL |
| Interfaces | |
| Communication interface | IO-Link |
| Transmission type | COM 2 |
| 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: IP 67; on the shaft: IP 64) |
| Tests / approvals | |
| Shock resistance | 100 g |
| Vibration resistance | 20 g |
| MTTF [years] | 292 |
| Mechanical data | |
| Weight [g] | 267 |
| Dimensions [mm] | Ø 36.5 / L = 58.5 |
| Materials | flange: aluminium; housing: stainless steel (1.4521 / 444); plug: stainless steel (1.4401 / 316) |
| Tightening torque [Nm] | < 0.7; (Mounting screw) |
| Max. revolution, mechanical [U/min] | 12000 |
| Max. starting torque [Nm] | 1 |
| Reference temperature torque [°C] | 20 |
| Shaft design | hollow shaft open to one side |
| Shaft diameter [mm] | 6 |
| Shaft material | stainless steel |
| Installation depth of shaft [mm] | 18 |
| Max. axial shaft misalignment [mm] | 0,5 |
| Electrical connection | |
| IO-Link | |
| 1 | L+ |
| 2 | not to be used |
| 3 | L- |
| 4 | IO-Link |
| 5 | not to be used |
| Screen | plug |

RA3100



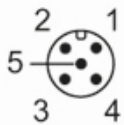
Incremental encoder with hollow shaft

INCREMENTAL ENCODER BASIC LINE

encoder

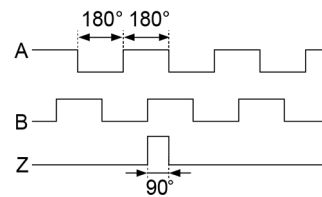
| | |
|--------|--------------------|
| 1 | UB |
| 2 | A |
| 3 | GND |
| 4 | Z/0-Pulse (90 deg) |
| 5 | B |
| Screen | plug |

Connector: 1 x M12, radial, can also be used axially; Moulded body: stainless steel (1.4401 / 316)



Diagrams and graphs

Pulse diagram



direction of rotation clockwise (looking at the shaft)