# RV6046

## Incremental encoder with solid shaft

RV-1000-I24/J

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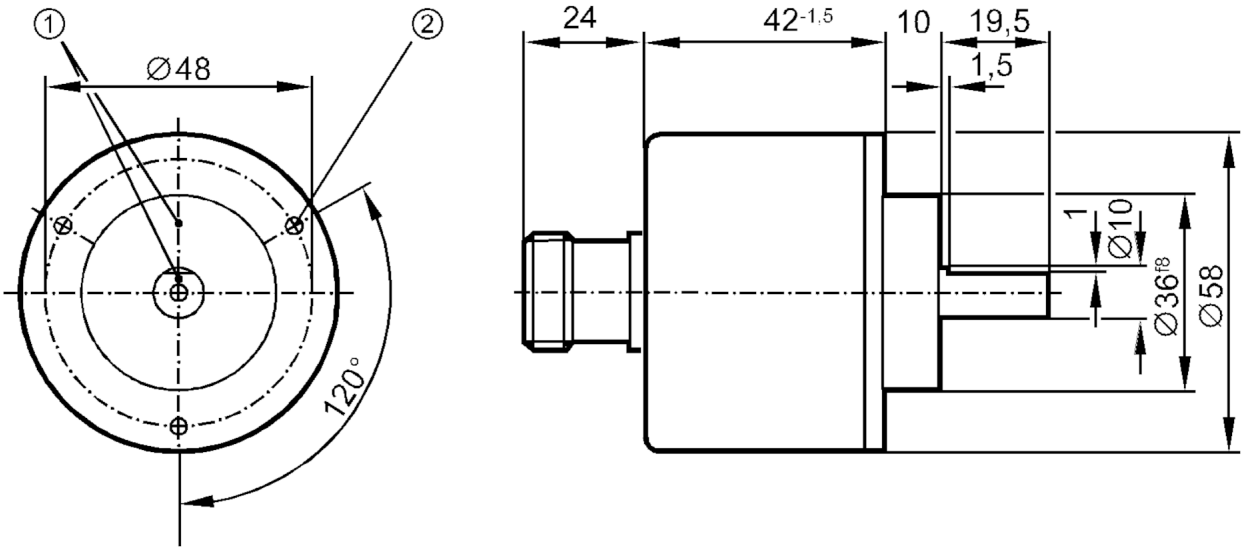


1 reference mark
2 M3 Depth 5 mm

| | | |
|---|---|---|
| **Product characteristics** | | |
| Resolution | | 1000 resolution |
| Shaft design | | solid shaft |
| Shaft diameter | [mm] | 10 |
| **Electrical data** | | |
| Operating voltage | [V] | 10...30 DC |
| Current consumption | [mA] | 150 |
| **Outputs** | | |
| Electrical design | | HTL |
| Max. current load per output | [mA] | 50 |
| Switching frequency | [kHz] | 160 |
| Type of short-circuit protection | | < 60 s |
| Phase difference A and B | [°] | 90 |
| **Measuring/setting range** | | |
| Resolution | | 1000 resolution |
| **Operating conditions** | | |
| Ambient temperature | [°C] | -30...85 |
| Storage temperature | [°C] | -30...100 |
| Max. relative air humidity | [%] | 98 |
| Protection | | IP 64 |

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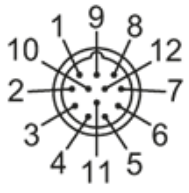
| Tests / approvals | | |
|---|---|---|
| Shock resistance | | 100 g (6 ms) |
| Vibration resistance | | 15 g (55...2000 Hz) |

| Mechanical data | | |
|---|---|---|
| Dimensions | [mm] | Ø 58 / L = 95.5 |
| Materials | | aluminium |
| Max. revolution, mechanical | [U/min] | 12000 |
| Max. starting torque | [Nm] | 1 |
| Reference temperature torque | [°C] | 20 |
| Shaft design | | solid shaft |
| Shaft diameter | [mm] | 10 |
| Shaft material | | steel (1.4104) |
| Max. shaft load axial (at the shaft end) | [N] | 10 |
| Max. shaft load radial (at the shaft end) | [N] | 20 |

## Electrical connection

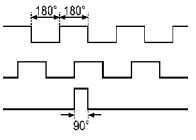
Connector: 1 x M23 (ifm 1001.4), axial




| | |
|---|---|
| 1 | B inverted |
| 2 | L+ sensor |
| 3 | 0 index |
| 4 | 0 index inverted |
| 5 | A |
| 6 | A inverted |
| 7 | failure inverted |
| 8 | B |
| 9 | n.c. |
| 10 | 0V |
| 11 | 0V sensor |
| 12 | L+ |

## Diagrams and graphs

Pulse diagram




direction of rotation clockwise (looking at the shaft)