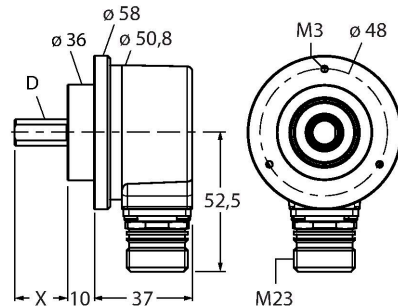


# RI-10S12C-4A1024-12M23

## Incremental Shaft Encoder

### Industrial Line



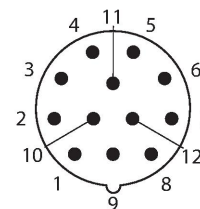
#### Features

- Clamping flange, Ø 58 mm
- Solid shaft, Ø 12 mm × 20 mm
- Optical measuring principle
- Shaft material: stainless steel
- Protection class IP67 on housing and shaft side
- -40...+85 °C
- Max. 6000 rpm (continuous operation 3000 rpm)
- 5 VDC
- Male connector, M23, 12-pole
- RS422 with inverted signals
- Pulse frequency max. 300 kHz
- 1024 pulses per revolution

#### Technical data

|                                        |                                       |
|----------------------------------------|---------------------------------------|
| Type                                   | RI-10S12C-4A1024-12M23                |
| ID                                     | 100020496                             |
| Measuring principle                    | Optical                               |
| <b>General data</b>                    |                                       |
| Max. rotational speed                  | 6000 rpm                              |
| Moment of inertia of the rotor         | $1.8 \times 10^{-6} \text{ kgm}^2$    |
| Starting torque                        | < 0.05 Nm                             |
| Output type                            | Incremental                           |
| Resolution incremental                 | 1024 ppr                              |
| <b>Electrical data</b>                 |                                       |
| Operating voltage $U_B$                | 5 VDC                                 |
| No-load current                        | $\leq 90 \text{ mA}$                  |
| Output current                         | $\leq 20 \text{ mA}$                  |
| Short-circuit protection               | yes                                   |
| Wire break/reverse polarity protection | no                                    |
| Pulse frequency max.                   | 300 kHz                               |
| Signal level high                      | min. 2.5 V                            |
| Signal level low                       | max. 0.5 V                            |
| Output function                        | 12-wire, RS422, with inverted signals |
| <b>Mechanical data</b>                 |                                       |
| Flange type                            | Clamping flange                       |
| Flange diameter                        | Ø 58 mm                               |
| Shaft Type                             | Solid shaft                           |

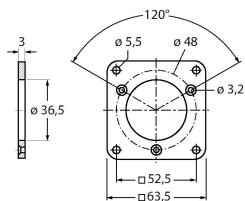
|    |              |
|----|--------------|
| 1  | B inv.       |
| 2  | $U_B$ sens + |
| 3  | 0 -          |
| 4  | 0 inv. -     |
| 5  | A            |
| 6  | A inv.       |
| 7  | n.c.         |
| 8  | B            |
| 9  | n.c.         |
| 10 | GND          |
| 11 | 0V sens      |
| 12 | $U_B$ +      |
| PH | shield       |



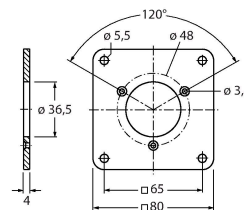
## Technical data

|                                     |                                     |
|-------------------------------------|-------------------------------------|
| Shaft diameter D (mm)               | 10                                  |
| Shaft Length L [mm]                 | 20                                  |
| Shaft material                      | Stainless steel                     |
| Housing material                    | Die-cast zinc                       |
| Electrical connection               | Connector, M23                      |
|                                     | M23, 12-pin                         |
| Axial shaft load                    | 50 N                                |
| Radial shaft load                   | 100 N                               |
| <b>Environmental conditions</b>     |                                     |
| Ambient temperature                 | -40...+85 °C                        |
| Vibration resistance (EN 60068-2-6) | 300 m/s <sup>2</sup> , 10...2000 Hz |
| Shock resistance (EN 60068-2-27)    | 3000 m/s <sup>2</sup> , 6 ms        |
| Protection class                    | IP67                                |
| Protection class shaft              | IP67                                |

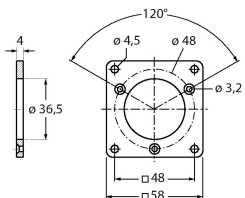
## Accessories

**RFA-2**
**1544631**


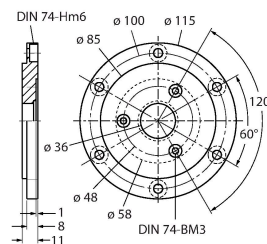
Aluminium flange adapter, rectangular, for solid shaft encoders with clamping flange; edge length 63.5 mm; 3 mm thick

**RFA-13**
**1544642**


Aluminium flange adapter, rectangular, for solid shaft encoders with clamping flange; edge length 80 mm; 4 mm thick

**RFA-1**
**1544630**


Aluminium flange adapter, rectangular, for solid shaft encoders with clamping flange; edge length 58 mm; 4 mm thick

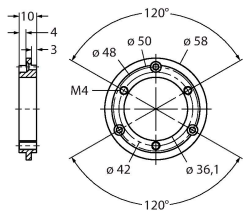
**RFA-4**
**1544633**


Euro flange – aluminium flange adapter for solid shaft encoders, Ø 115 mm; reference diameter 100 mm; adapts 58 mm clamping flange to Euro flange

RFA-6

1544635

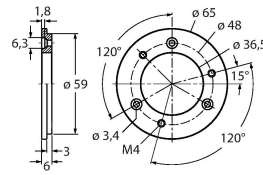
Aluminium flange adapter for solid shaft encoders with clamping flange, Ø 58 mm; adapts clamping flange to synchro flange



RFA-7

1544636

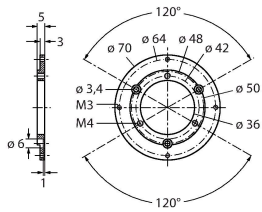
Aluminium flange adapter for solid shaft encoders, Ø 65 mm; adapts to Ø 65 mm flange and 48 mm reference diameter



RFA-8

1544637

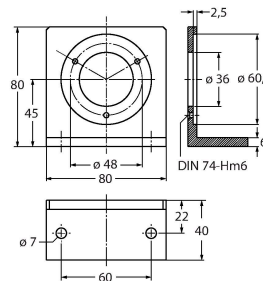
Aluminium flange adapter for solid shaft encoders with clamping flange, Ø 70 mm; thickness 4 mm, adapts to Ø 70 mm flange



RFA-9

1544638

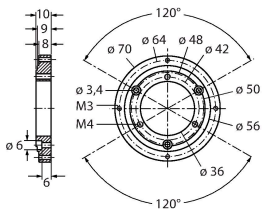
Aluminium angle flange for solid shaft encoders with Ø 58 mm clamping flange



RFA-11

1544640

Aluminium flange adapter for solid shaft encoders with clamping flange, Ø 70 mm; thickness 10 mm, adapts to Ø 70 mm flange



RFA-12

1544641

Aluminium flange adapter, rectangular, for solid shaft encoders with clamping flange; edge length 70 mm; 10 mm thick

