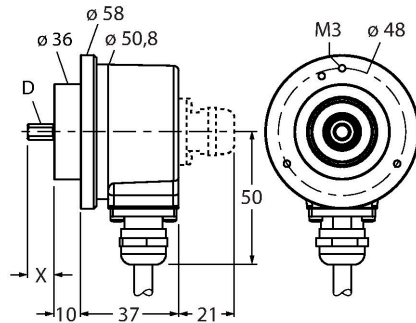


# RI-10T12C-2B1-CA1M

## 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 IP65 on shaft side
- -40...+85 °C
- Max. 12000 rpm (continuous operation 6000)
- 10...30 VDC
- Cable connection, 8-pole
- Push-pull, with inverted signals
- Pulse frequency max. 300 kHz
- 1 pulse per revolution

#### Technical data

|                                        |                                      |
|----------------------------------------|--------------------------------------|
| Type                                   | RI-10T12C-2B1-CA1M                   |
| ID                                     | 100046400                            |
| Measuring principle                    | Optical                              |
| <b>General data</b>                    |                                      |
| Max. rotational speed                  | 12,000 rpm                           |
| Moment of inertia of the rotor         | $1.8 \times 10^{-6} \text{ kgm}^2$   |
| Starting torque                        | < 0.05 Nm                            |
| Output type                            | Incremental                          |
| <b>Electrical data</b>                 |                                      |
| Operating voltage $U_B$                | 10...30 VDC                          |
| No-load current                        | ≤ 100 mA                             |
| Output current                         | ≤ 30 mA                              |
| Short-circuit protection               | yes                                  |
| Wire break/reverse polarity protection | yes                                  |
| Pulse frequency max.                   | 300 kHz                              |
| Signal level high                      | min. $U_B - 1 \text{ V}$             |
| Signal level low                       | max. 0.5 V                           |
| Output function                        | Push-Pull/HTL, with inverted signals |
| <b>Mechanical data</b>                 |                                      |
| Flange type                            | Clamping flange                      |
| Flange diameter                        | Ø 58 mm                              |
| Shaft Type                             | Solid shaft                          |
| Shaft material                         | Stainless steel                      |

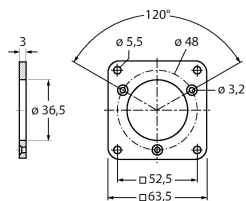
#### Wiring diagram

|    |         |
|----|---------|
| WH | GND     |
| BN | $U_B$ + |
| GN | A       |
| YE | A inv.  |
| GY | B       |
| PK | B inv.  |
| BU | 0       |
| RD | 0 inv.  |

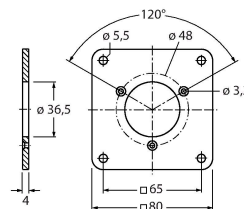
## Technical data

|                                     |                                     |
|-------------------------------------|-------------------------------------|
| Housing material                    | Die-cast zinc                       |
| Electrical connection               | Cable                               |
|                                     | radial                              |
| cable length                        | 1 m                                 |
| Axial shaft load                    | 40 N                                |
| Radial shaft load                   | 80 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 housing            | IP65                                |
| Protection class shaft              | IP65                                |

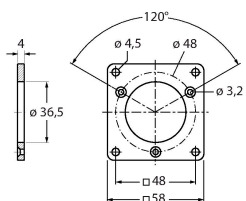
## Accessories

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


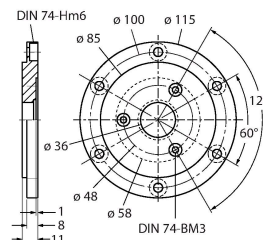
Aluminium flange adapter, rectangular, for solid shaft encoders with clamping flange; edge length 63.5 mm; 3 mm thick

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


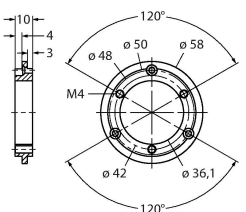
Aluminium flange adapter, rectangular, for solid shaft encoders with clamping flange; edge length 80 mm; 4 mm thick

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


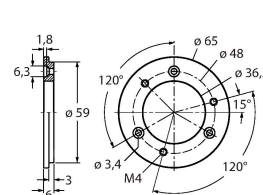
Aluminium flange adapter, rectangular, for solid shaft encoders with clamping flange; edge length 58 mm; 4 mm thick

**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**


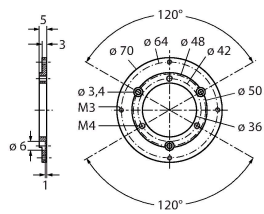
Aluminium flange adapter for solid shaft encoders with clamping flange, Ø 58 mm; adapts clamping flange to synchro flange

**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

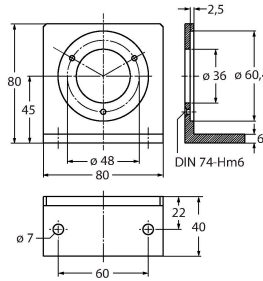
1544637



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

RFA-9

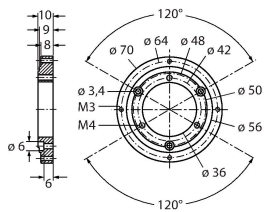
1544638



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

RFA-11

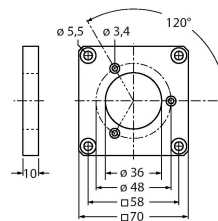
1544640



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