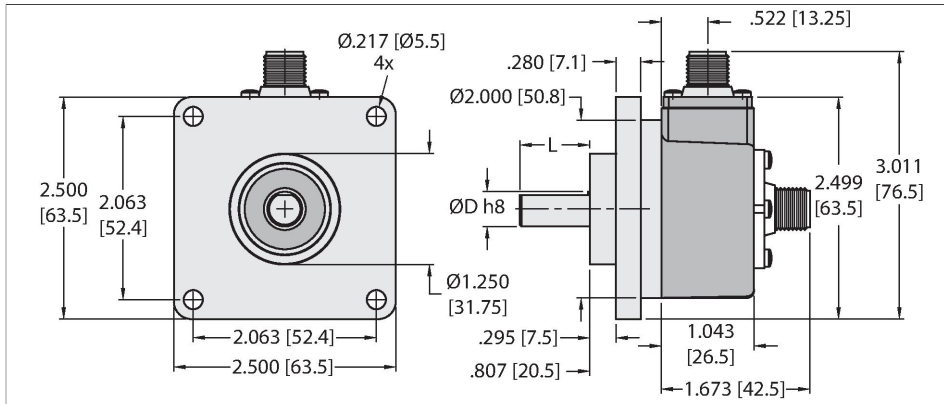


# RI-10SA1C-4B4-H1181

## Incremental Shaft Encoder

### Industrial Line



#### Technical data

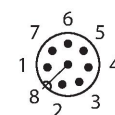
|                                           |                                    |
|-------------------------------------------|------------------------------------|
| Type                                      | RI-10SA1C-4B4-H1181                |
| ID                                        | 100046038                          |
| 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                   | 4 ppr                              |
| <b>Electrical data</b>                    |                                    |
| Operating voltage                         | 5...30 VDC                         |
| No-load current                           | 90 mA                              |
| Output current                            | ≤ 20 mA                            |
| Short-circuit protection                  | yes                                |
| Wire breakage/Reverse polarity protection | yes                                |
| Pulse frequency max.                      | 300 kHz                            |
| Signal level high                         | min. 2.5 V                         |
| Signal level low                          | max. 0.5 V                         |
| Output function                           | RS422/TTL, with inverted signals   |
| <b>Mechanical data</b>                    |                                    |
| Design                                    | Solid shaft                        |
| Flange type                               | Clamping flange                    |
| Flange diameter                           | Ø 58 mm                            |
| Shaft Type                                | Solid shaft                        |

#### Features

- Clamping flange, Ø 58 mm
- Solid shaft, Ø 3/8" x 5/8"
- 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...30 VDC
- Male connector, M12 x 1, 8-pole
- RS422 with inverted signals
- Pulse frequency max. 300 kHz
- 4 pulses per revolution

#### Wiring diagram

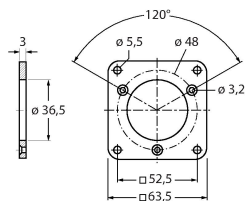
|    |                |   |
|----|----------------|---|
| 1  | GND            |   |
| 2  | U <sub>B</sub> | + |
| 3  | A              |   |
| 4  | A inv.         |   |
| 5  | B              |   |
| 6  | B inv.         |   |
| 7  | 0              | - |
| 8  | 0 inv.         | - |
| PH | shield         |   |



## Technical data

|                                     |                                     |
|-------------------------------------|-------------------------------------|
| Shaft diameter D [mm]               | 9.525                               |
| Shaft Length L [mm]                 | 15.875                              |
| Shaft material                      | Stainless steel                     |
| Housing material                    | Die-cast zinc                       |
| Electrical connection               | Connector, M12 × 1                  |
|                                     | 8-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                                |

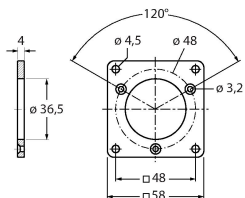
## Accessories

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


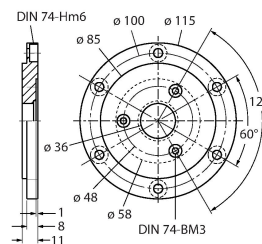
Aluminium flange adapter, rectangular, for solid shaft encoders with clamping flange; edge length 63.5 mm; 3 mm thick

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


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

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


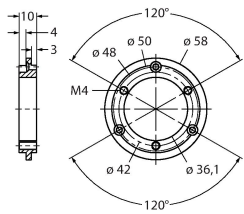
Aluminium flange adapter, rectangular, for solid shaft encoders with clamping flange; edge length 58 mm; 4 mm thick

**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

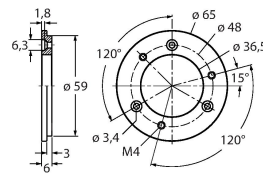
1544635



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

RFA-7

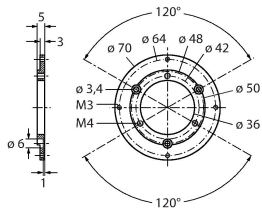
1544636



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

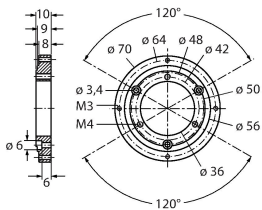
1544638



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