

# RI-10S6C-2B2500-H1181

## Incremental Encoder

### Industrial Line



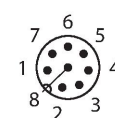
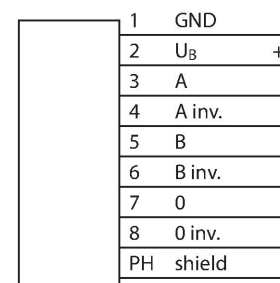
#### Technical data

|                                        |                                      |
|----------------------------------------|--------------------------------------|
| Type                                   | RI-10S6C-2B2500-H1181                |
| ID                                     | 1545202                              |
| 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                        | $< 0.05 \text{ Nm}$                  |
| Output type                            | Incremental                          |
| Resolution incremental                 | 2500 ppr                             |
| <b>Electrical data</b>                 |                                      |
| Operating voltage $U_B$                | 10...30 VDC                          |
| No-load current                        | $\leq 100 \text{ mA}$                |
| Output current                         | $\leq 30 \text{ mA}$                 |
| 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. $0.5 \text{ V}$                 |
| Output function                        | Push-Pull/HTL, with inverted signals |
| <b>Mechanical data</b>                 |                                      |
| Flange type                            | Clamping flange                      |
| Flange diameter                        | $\varnothing 58 \text{ mm}$          |
| Shaft Type                             | Solid shaft                          |

#### Features

- Clamping flange,  $\varnothing 58 \text{ mm}$
- Solid shaft,  $\varnothing 6 \text{ mm} \times 10 \text{ mm}$
- Optical measuring principle
- Shaft material: stainless steel
- Protection class IP67 on housing and shaft side
- $-40 \dots +85 \text{ }^\circ\text{C}$
- Max. 6000 rpm (continuous operation 3000 rpm)
- 10...30 VDC
- Male connector, M12 x 1, 8-pole
- Push-pull, with inverted signals
- Pulse frequency max. 300 kHz
- 2500 pulses per revolution

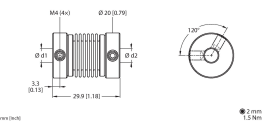
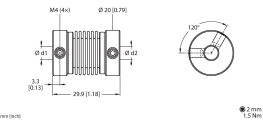
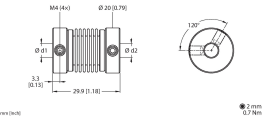
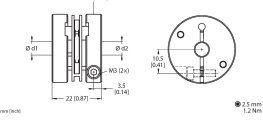
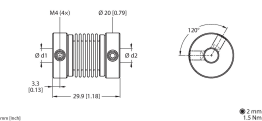
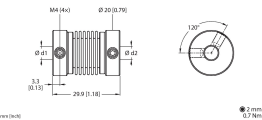
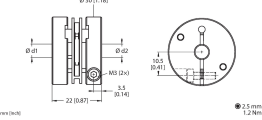
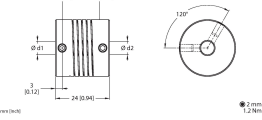
#### Wiring diagram



## Technical data

|                                     |                                     |
|-------------------------------------|-------------------------------------|
| Shaft diameter D (mm)               | 6                                   |
| Shaft Length L [mm]                 | 10                                  |
| 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                                |

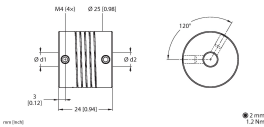
## Accessories

|                                                                                                                 |                                                                                          |
|-----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| <b>RA-BC-20-06-06</b><br>    | <b>100048777</b><br>Bellows coupling with aluminum hub<br>Ø 20 mm; d1 = 6 mm, d2 = 6 mm  |
| <b>RA-BC-20-06-10</b><br>    | <b>100048779</b><br>Bellows coupling with aluminum hub<br>Ø 20 mm; d1 = 6 mm, d2 = 10 mm |
| <b>RA-BC-E-20-06-10</b><br>  | <b>100048786</b><br>Stainless steel bellows coupling Ø<br>20 mm; d1 = 6 mm, d2 = 10 mm   |
| <b>RA-SDC-30-06-06</b><br>   | <b>100048790</b><br>Spring disc coupling Ø 30 mm; d1 =<br>6 mm, d2 = 6 mm                |
| <b>RA-BC-20-06-08</b><br>   | <b>100048778</b><br>Bellows coupling with aluminum hub<br>Ø 20 mm; d1 = 6 mm, d2 = 8 mm  |
| <b>RA-BC-E-20-06-06</b><br> | <b>100048785</b><br>Stainless steel bellows coupling Ø<br>20 mm; d1 = 6 mm, d2 = 6 mm    |
| <b>RA-SDC-30-06-10</b><br>  | <b>100048791</b><br>Spring disc coupling Ø 30 mm; d1 =<br>6 mm, d2 = 10 mm               |
| <b>RA-HC-25-06-06</b><br>   | <b>100048794</b><br>Aluminum helix coupling Ø 25 mm; d1<br>= 6 mm, d2 = 6 mm             |

RA-HC-25-06-10

100048795

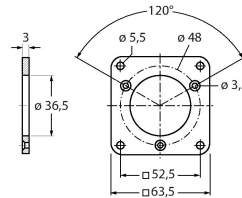
Aluminum helix coupling Ø 25 mm; d1 = 6 mm, d2 = 10 mm



RFA-2

1544631

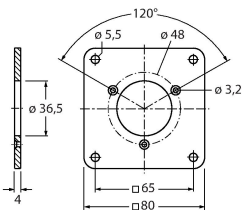
Aluminium flange adapter, rectangular, for solid shaft encoders with clamping flange; edge length 63.5 mm; 3 mm thick



RFA-13

1544642

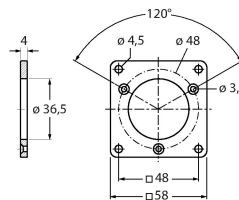
Aluminium flange adapter, rectangular, for solid shaft encoders with clamping flange; edge length 80 mm; 4 mm thick



RFA-1

1544630

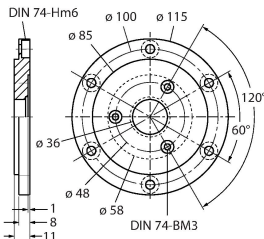
Aluminium flange adapter, rectangular, for solid shaft encoders with clamping flange; edge length 58 mm; 4 mm thick



RFA-4

1544633

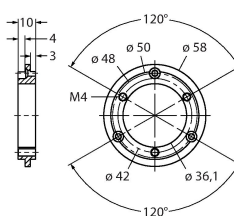
Euro flange – aluminium flange adapter for solid shaft encoders, Ø 115 mm; reference diameter 100 mm; adapts 58 mm clamping flange to Euro flange



RFA-6

1544635

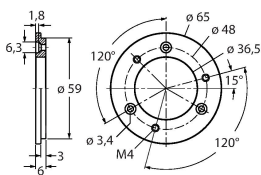
Aluminium flange adapter for solid shaft encoders with clamping flange, Ø 58 mm; adapts clamping flange to synchro flange



RFA-7

1544636

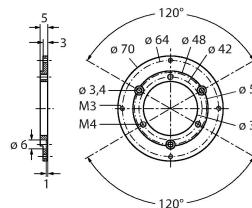
Aluminium flange adapter for solid shaft encoders, Ø 65 mm; adapts to Ø 65 mm flange and 48 mm reference diameter



RFA-8

1544637

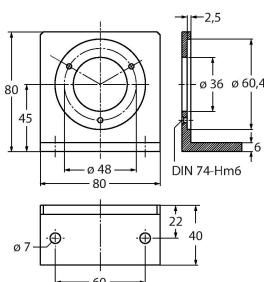
Aluminium flange adapter for solid shaft encoders with clamping flange, Ø 70 mm; thickness 4 mm, adapts to Ø 70 mm flange



RFA-9

1544638

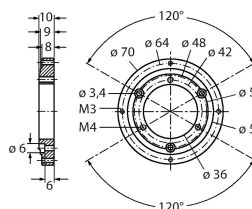
Aluminium angle flange for solid shaft encoders with Ø 58 mm clamping flange



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

