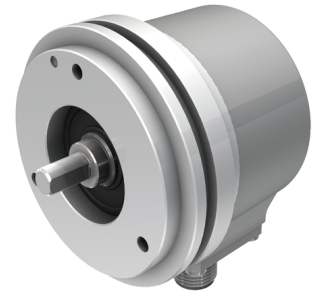
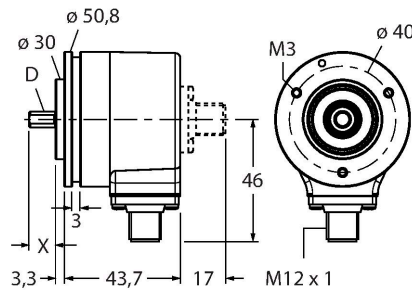


# RI-10SA1Z2-2K5000-H1181

## Incremental Shaft Encoder

### Industrial Line



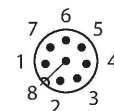
#### Technical data

|                                        |                                               |
|----------------------------------------|-----------------------------------------------|
| Type                                   | RI-10SA1Z2-2K5000-H1181                       |
| ID                                     | 1546826                                       |
| 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                | 5000 ppr                                      |
| <b>Electrical data</b>                 |                                               |
| Operating voltage $U_B$                | 5...30 VDC                                    |
| No-load current                        | $\leq 100 \text{ mA}$                         |
| 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. $U_B - 2 \text{ V}$                      |
| Signal level low                       | max. 0.5 V                                    |
| Output function                        | 8-wire, Push-Pull 7272, with inverted signals |
| <b>Mechanical data</b>                 |                                               |
| Flange type                            | Synchro flange                                |
| Flange diameter                        | $\varnothing 50.8 \text{ mm}$                 |

#### Features

- Servo flange,  $\varnothing 50.8 \text{ mm}$
- Solid shaft,  $\varnothing 3/8" \times 5/8"$
- Optical measuring principle
- Shaft material, stainless steel
- Protection class IP67 on housing and shaft side
- $-40...+85 \text{ }^\circ\text{C}$
- Max. 6000 rpm (continuous operation 3000 rpm)
- 5...30 VDC
- Male connector, M12 x 1, 8-pole
- Push-pull, with inverted signals
- Pulse frequency max. 300 kHz
- 5000 pulses per revolution

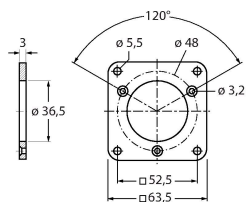
|    |         |
|----|---------|
| 1  | GND     |
| 2  | $U_B$ + |
| 3  | A       |
| 4  | A inv.  |
| 5  | B       |
| 6  | B inv.  |
| 7  | 0       |
| 8  | 0 inv.  |
| PH | shield  |



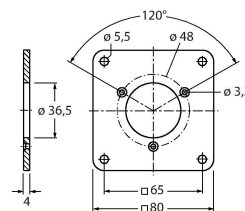
## Technical data

|                                     |                                     |
|-------------------------------------|-------------------------------------|
| Shaft Type                          | Solid shaft                         |
| Shaft diameter D (mm)               | 9.525                               |
| Shaft diameter D                    | 0.375 in                            |
| Shaft length (L)                    | 0.625 in                            |
| 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                                |

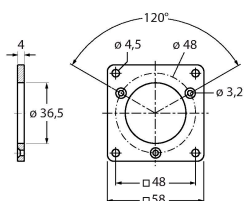
## Accessories

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


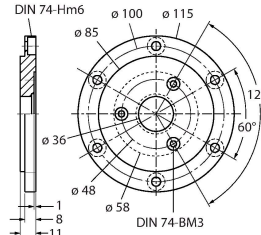
Aluminium flange adapter, rectangular, for solid shaft encoders with clamping flange; edge length 63.5 mm; 3 mm thick

**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

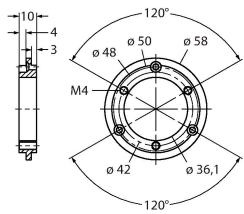
**RFA-4**
**1544633**


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

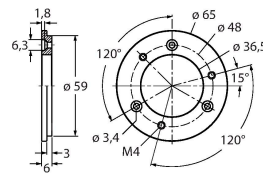
Aluminium flange adapter for solid shaft encoders with clamping flange, Ø 58 mm; adapts clamping flange to synchro flange



RFA-7

1544636

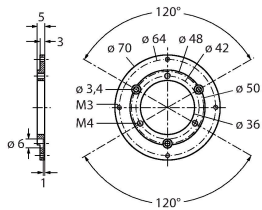
Aluminium flange adapter for solid shaft encoders, Ø 65 mm; adapts to Ø 65 mm flange and 48 mm reference diameter



RFA-8

1544637

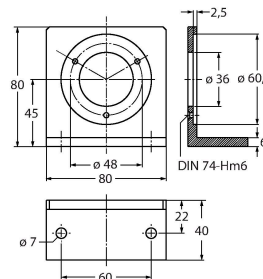
Aluminium flange adapter for solid shaft encoders with clamping flange, Ø 70 mm; thickness 4 mm, adapts to Ø 70 mm flange



RFA-9

1544638

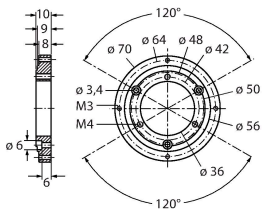
Aluminium angle flange for solid shaft encoders with Ø 58 mm clamping flange



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

