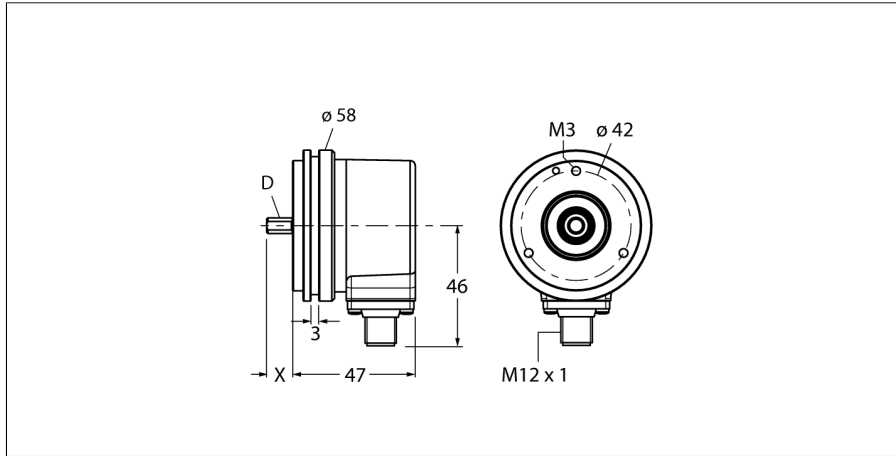


**Rotative measurement  
Incremental rotary encoder  
Ri-10S10S-2B4096-H1181**



- Synchro flange, Ø 58 mm
- Solid shaft, Ø 10mm x 20mm
- Optical measuring principle
- Shaft material, stainless steel
- Protection class IP67 on the shaft side
- -40...+85°C
- Max. 6000 rev/min (continuous operation 3000 rev/min)
- 10...30 VDC
- Male connector, M12 x 1 , 8-pole
- Push-pull, with inversion
- Pulse frequency max. 300 kHz
- 4096 pulses

|                  |                        |
|------------------|------------------------|
| <b>Type code</b> | Ri-10S10S-2B4096-H1181 |
| Ident no.        | 1545216                |

|                                |  |
|--------------------------------|--|
| <b>Measuring principle</b>     | Photoelectric                          |
| max. Drehzahl                  | 6.000 U/min                            |
| Moment of inertia of the rotor | 1.8 x10 <sup>-6</sup> kgm <sup>2</sup> |
| Starting torque                | 0.05 Nm                                |
| Ambient temperature            | -40...+85 °C                           |

|                                |                               |
|--------------------------------|-------------------------------|
| <b>Operating voltage</b>       | 10...30VDC                    |
| No-load current I <sub>0</sub> | ≤ 100 mA                      |
| Output current                 | ≤ 20 mA                       |
| Short-circuit protection       | yes                           |
| Output function                | 8-wire, push-Pull, invertable |
| Output type                    | incremental                   |
| Resolution, incremental        | 4096                          |
| Pulse frequency max.           | 300 kHz                       |
| Signal level high              | min. U <sub>s</sub> - 1 V     |
| Signal level low               | max. 0.5 V                    |

|                                     |                                     |
|-------------------------------------|-------------------------------------|
| <b>Design</b>                       | Solid shaft                         |
| Flange type                         | Synchro flange                      |
| Flange diameter                     | 58 mm                               |
| Shaft type                          | Shaft                               |
| Shaft diameter D                    | 10 mm                               |
| Shaft length X                      | 20 mm                               |
| Shaft material                      | Stainless steel                     |
| Housing material                    | aluminium                           |
| Connection                          | male, M12 x 1<br>M12, 8-pole        |
| Axial shaft load                    | 40 N                                |
| Radial shaft load                   | 80 N                                |
| Vibration resistance (EN 60068-2-6) | 100 m/s <sup>2</sup> , 10...2000 Hz |
| Shock resistance (EN 60068-2-27)    | 2500 m/s <sup>2</sup> , 6 ms        |
| Protection class housing            | IP67                                |
| Protection class shaft              | IP67                                |

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

**Rotative measurement  
Incremental rotary encoder  
Ri-10S10S-2B4096-H1181****Pin configuration**

| Signal            | Gnd | +U <sub>e</sub> | A | A inv. | B | B inv. | 0 | 0 inv. | Shield |
|-------------------|-----|-----------------|---|--------|---|--------|---|--------|--------|
| Pin configuration | 1   | 2               | 3 | 4      | 5 | 6      | 7 | 8      | PH     |

**Rotative measurement  
Incremental rotary encoder  
Ri-10S10S-2B4096-H1181**

**Accessories**

| Type code | Ident no. | Description   | Dimension drawing |
|-----------|-----------|---|-------------------|
| RFA-2     | 1544631   | Aluminium flange adapter, rectangular, for solid shaft encoders with clamping flange; edge length 63.5mm; 3mm thick                               |                   |
| RFA-12    | 1544641   | Aluminium flange adapter, rectangular, for solid shaft encoders with clamping flange; edge length 70mm; 10mm thick                                |                   |
| RFA-13    | 1544642   | Aluminium flange adapter, rectangular, for solid shaft encoders with clamping flange; edge length 80mm; 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 |                   |

**Rotative measurement  
Incremental rotary encoder  
Ri-10S10S-2B4096-H1181**

**Accessories**

| Type code | Ident no. | Description   | Dimension drawing |
|-----------|-----------|---|-------------------|
| 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 10mm, adapts to Ø 70 mm flange |                   |

**Rotative measurement  
Incremental rotary encoder  
Ri-10S10S-2B4096-H1181**

**Accessories**

| Type code | Ident no. | Description   | Dimension drawing |
|-----------|-----------|---|-------------------|
| RMW-1     | 1544643   | Spring arm for encoders; max. contact pressure 40 N; for encoders with measuring wheel                            |                   |
| RMW-2     | 1544644   | Aluminium measuring wheel (cross-knurled) for encoders, perimeter 0.2 m, width 12 mm, depth 10 mm                 |                   |
| RMW-3     | 1544645   | Hytrel measuring wheel (smooth) for encoders, perimeter 0.2 m, width 12 mm, temp.range -10...+50°C, depth 10 mm   |                   |
| RMW-4     | 1544646   | Hytrel measuring wheel (grooved) for encoders, perimeter 0.2 m, width 12 mm, temp.range -10...+70 °C, depth 10 mm |                   |
| RMW-5     | 1544647   | Aluminium measuring wheel (cross-knurled) for encoders, perimeter 0.5 m, width 25 mm, depth 10 mm                 |                   |

**Rotative measurement  
Incremental rotary encoder  
Ri-10S10S-2B4096-H1181**

**Accessories**

| Type code | Ident no. | Description  | Dimension drawing |
|-----------|-----------|--|-------------------|
| RMW-6     | 1544648   | Hytrel measuring wheel (smooth) for encoders, perimeter 0.5 m, width 25 mm, temp.range -10...+50°C, depth 10 mm                      |                   |
| RMW-7     | 1544649   | Vulkollan measuring wheel (smooth) for encoders, perimeter 0.5 m, width 25 mm, temp.range -30...+80°C, depth 10 mm                   |                   |
| RMW-8     | 1544650   | Aluminium measuring wheel with knobby rubber surface for encoders, perimeter 0.5 m, width 25 mm, temp.range -30...+80°C, depth 10 mm |                   |
| RMW-9     | 1544651   | Hytrel measuring wheel (grooved) for encoders, perimeter 0.5 m, width 25 mm, temp.range -10...50 °C, depth 10 mm                     |                   |