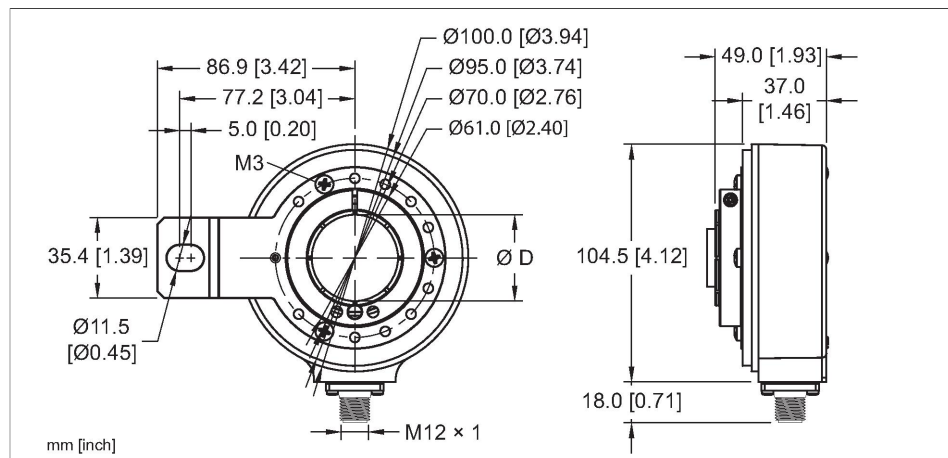


# RI-43HA4E2-AA1024-H1181/N42

## Incremental Hollow Shaft Rotary Encoder

### Industrial Line



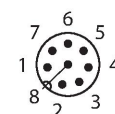
#### Technical data

|                                        |                                            |
|----------------------------------------|--------------------------------------------|
| Type                                   | RI-43HA4E2-AA1024-H1181/N42                |
| ID                                     | 1546632                                    |
| Measuring principle                    | Optical                                    |
| <b>General data</b>                    |                                            |
| Max. rotational speed                  | 6000 rpm                                   |
| Moment of inertia of the rotor         | $220 \times 10^{-6} \text{ kgm}^2$         |
| Starting torque                        | < 0.2 Nm                                   |
| Output type                            | Incremental                                |
| Resolution, incremental                | 1024 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. $U_B - 3 \text{ V}$                   |
| Signal level low                       | max. 2.5 V                                 |
| Output function                        | 8-wire, Sine/Cosine, with inverted signals |
| <b>Mechanical data</b>                 |                                            |
| Flange type                            | Flange with mounting element               |
| Flange diameter                        | Ø 100 mm                                   |
| Shaft Type                             | Hollow shaft                               |

#### Features

- Flange with 4 – ½" C-Face Tether, Ø 100 mm
- Hollow shaft, Ø 5/8"
- (N42) Isolation insert 1545818 RSA-A4
- Optical measuring principle
- Shaft material, stainless steel
- Protection class IP65 on the shaft side
- -40...+80°C
- max. 6000 rev / min
- 10...30 VDC
- Male connector, M12 x 1 , 8-pole
- SIN/COS 1 Vss with inverted signals
- Pulse frequency max. 300 kHz
- 1024 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 diameter D (mm)               | 15.875                                     |
| Shaft diameter D                    | 0.625 in                                   |
| Shaft material                      | Stainless steel                            |
| Housing material                    | Die-cast zinc                              |
| Electrical connection               | Connector, M12 × 1                         |
|                                     | M12, 8-pin                                 |
| Axial shaft load                    | 100 N                                      |
| Radial shaft load                   | 200 N                                      |
| <b>Environmental conditions</b>     |                                            |
| Ambient temperature                 | -40...+80 °C                               |
| Vibration resistance (EN 60068-2-6) | 10 g (100 m/s <sup>2</sup> ), 10...2000 Hz |
| Shock resistance (EN 60068-2-27)    | 200 g (1000 m/s <sup>2</sup> ), 6 ms       |
| Protection class                    | IP65                                       |
| Protection class shaft              | IP65                                       |
| Included in delivery                | 4 - 1/2" C-Face tether                     |

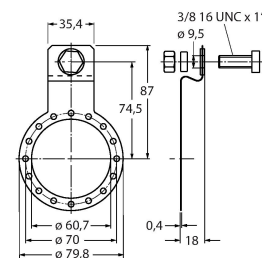
## Accessories

**RA-43-S4**
**1545911**

Stainless steel long anti-rotation  
spring 110 mm reference diameter


**RA-43-E2**
**1545912**

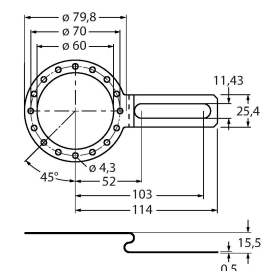
Stainless steel 4 1/2" C-face tether  
149 mm reference diameter


**RA-43-S5**
**1545910**

Stainless steel short anti-rotation  
spring 76 mm reference diameter


**RA-43-S8**
**1545909**

Stainless steel long tether arm 104 -  
206 mm reference diameter



RA-43-E

1545946

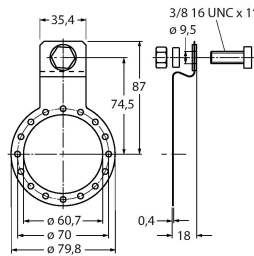
Stainless steel slotted fexmount  
119mm reference diameter



RME-5

1544616

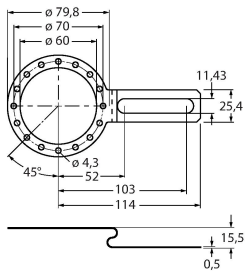
Stainless steel mounting panel for  
hollow shaft encoders, reference  
diameter 149 mm, for applications  
with axial play



RME-6

1544617

Stainless steel mounting panel for  
hollow shaft encoders, reference  
diameter 104...206 mm, for  
applications with fixing points on  
adjustable reference diameter



RME-10

1544621

Stainless steel mounting element for  
hollow shaft encoders, pitch diameter  
110 mm, for applications with high  
axial play



RME-11

1544622

Stainless steel mounting element for  
hollow shaft encoders, pitch diameter  
76 mm, for applications with limited  
mounting space



RME-15

1544626

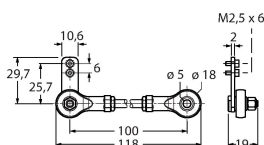
Metal arm bracket, for hollow  
shaft encoders, length 70 mm; for  
applications with little axial and radial  
play; flexibly adjustable



RME-16

1544627

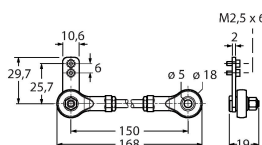
Metal arm bracket, for hollow shaft  
encoders, length 100 mm; for  
applications with little axial and radial  
play; flexibly adjustable



RME-17

1544628

Metal arm bracket, for hollow shaft  
encoders, length 150 mm; for  
applications with little axial and radial  
play; flexibly adjustable



RME-18

1544629

Stainless steel stator coupling for  
hollow shaft encoders, reference  
diameter 119 mm, for highly dynamic  
applications with axial and radial play

