

# RI-12HA3S1-2K2048-H1181/N29

## Incremental Encoder

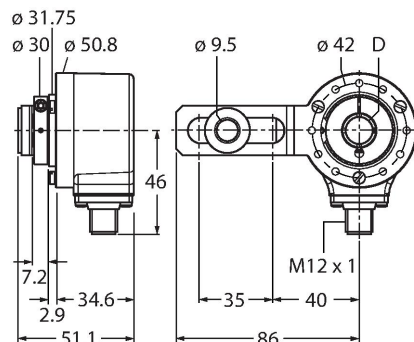
### Industrial Line

#### Features

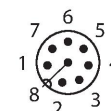
- Flange with tether arm for 40-75mm mounting diameters
- Hollow shaft, Ø 1/2"
- Optical measuring principle
- Shaft material: stainless steel
- Protection class IP67 on housing and shaft side
- -40...+85 °C
- Max. 6000 rpm (continuous operation 3000 rpm)
- 5...30 VDC
- Male connector, M12 x 1, 8-pole
- Push-pull, with inverted signals
- Pulse frequency max. 300 kHz
- 2048 pulses per revolution

#### Technical data

|                                        |                                               |
|----------------------------------------|-----------------------------------------------|
| Type                                   | RI-12HA3S1-2K2048-H1181/N29                   |
| ID                                     | 1545845                                       |
| Measuring principle                    | Optical                                       |
| <b>General data</b>                    |                                               |
| Max. rotational speed                  | 6000 rpm                                      |
| Moment of inertia of the rotor         | $6 \times 10^{-6} \text{ kgm}^2$              |
| Starting torque                        | < 0.05 Nm                                     |
| Output type                            | Incremental                                   |
| Resolution, incremental                | 2048 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                            | Flange with mounting element                  |
| Shaft Type                             | Hollow shaft                                  |



|    |         |
|----|---------|
| 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)               | 12                                  |
| Shaft diameter D                    | 0.5 in                              |
| Shaft material                      | Stainless steel                     |
| Housing material                    | Die-cast zinc                       |
| Electrical connection               | Connector, M12 × 1                  |
|                                     | 8-pin                               |
| Axial shaft load                    | 40 N                                |
| Radial shaft load                   | 80 N                                |
| Environmental conditions            |                                     |
| 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                                |