

# Rotary Measuring Technology

## Incremental hollow shaft encoder

### Miniature Type ENI 24



- Low price with high performance
- IP 64
- Wide temperature range (-20 ... +85 °C)
- Sturdy cable output with multiple clamping
- Temperature compensation
- Broad input voltage range (5 ... 24 V or 8 ... 30 V)
- Highly flexible cable with stands constant flexing at 0 °C ... 70 °C)
- Low power consumption despite high scanning rate
- Reverse connection protected and short-circuit proof

#### Mechanical characteristics:

|  |   |
|--|---|
| Speed:                                       | max. 12000 min <sup>-1</sup>                    |
| Rotor moment of inertia:                     | approx. 0,1 x 10 <sup>-6</sup> kgm <sup>2</sup> |
| Starting torque:                             | < 0.001 Nm                                      |
| Weight:                                      | approx. 0.06 kg                                 |
| Protection acc. to EN 60 529:                | IP 64 housing side                              |
| Working temperature:                         | -20° C ... +85 °C <sup>2)</sup>                 |
| Operating temperature:                       | -20° C ... +90 °C <sup>2)</sup>                 |
| Shaft:                                       | stainless steel                                 |
| Shock resistance acc. to DIN-IEC 68-2-27:    | 1000 m/s <sup>2</sup> , 6 ms                    |
| Vibration resistance acc. to DIN-IEC 68-2-6: | 100 m/s <sup>2</sup> , 55 ... 2000 Hz           |

<sup>2)</sup> Non-condensing

#### Pulse rates available at short notice:

10, 25, 36, **50**, 60, **100**, 125, 180, 200, 250, **360**, **500**, **512**, 1000, **1024**

Other pulse rates on request

#### Electrical characteristics:

| Output circuit:   | Push-pull (7272) <sup>1)</sup> | Push-pull (7272) <sup>1)</sup> |
|---|--------------------------------|--------------------------------|
| Supply voltage:   | 5 ... 24 V DC                  | 8 ... 30 V DC                  |
| Power consumption (no load):  | max. 50 mA                     | max. 50 mA                     |
| Permissible load/channel:   | max. 50 mA                     | max. 50 mA                     |
| Pulse frequency:  | max. 160 kHz                   | max. 160 kHz                   |
| Signal level high:  | min. U <sub>B</sub> = -2.5 V   | min. U <sub>B</sub> = -3 V     |
| Signal level low:   | max. 0.5 V                     | max. 0.5 V                     |
| Rise time t <sub>r</sub> :  | max. 1 μs                      | max. 1 μs                      |
| Fall time t <sub>f</sub> :  | max. 1 μs                      | max. 1 μs                      |
| Short circuit proof outputs:  | yes                            | yes                            |
| Conforms to CE requirements acc. to EN 61000-6-1, EN 61000-6-4 and EN 61000-6-3 |                                |                                |

<sup>1)</sup> Max. recommended cable length 30 m

#### Applications:

- Pick and place machines
- Handling machines for electronic components
- Quality testing machines
- Medical machines
- Mail opening and mail stuffing machines
- Check weighers
- Labelling machines
- Mole machines (camera control)
- Doors and gates system
- Textil machines

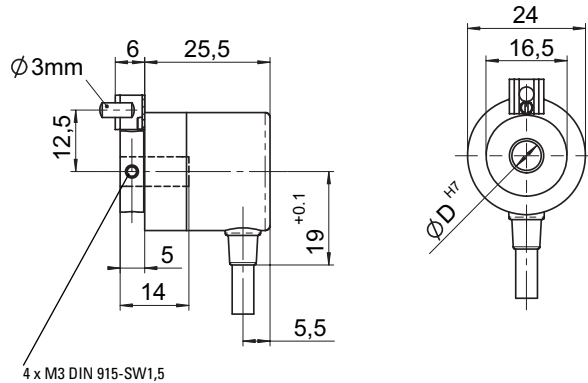
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#### Terminal assignment

|                          |    |                 |    |           |    |           |    |           |  |
|--------------------------|----|-----------------|----|-----------|----|-----------|----|-----------|--|
| Signal:                  | 0V | +U <sub>B</sub> | A  | $\bar{A}$ | B  | $\bar{B}$ | 0  | $\bar{0}$ |  |
| Colour:                  | WH | BN              | GN | YE        | GY | PK        | BU | RD        |  |
| without inverted signal: | WH | BN              | GN |           | YE |           | GY |           |  |

Insulate unused outputs before initial startup.

#### Dimensions



#### Mounting advice:

The brackets and shafts of the encoder and drive should not both be rigidly coupled together at the same time! We recommend the use of suitable couplings (see Accessories section).

#### Order code:

ENI 24.1XXX.XXXX

