

# Rotary Measuring Technology

## Incremental shaft encoder

### Miniature Type ESI 24



- High performance at a competitive price
- Wide temperature range (-20 ... +85 °C)
- Sturdy cable outlet with multiple clamping
- Temperature compensation
- Broad input voltage range (5 ... 24 V or 8 ... 30 V)
- Highly flexible cable withstands constant flexing from 0 °C ... 70 °C
- Low power consumption despite high scanning rate
- Reverse connection protected and Short-circuit proof
- Very high EMV standard

Speed:	max. 12 000min <sup>-1</sup>
Rotor moment of inertia:	approx. 0.1 x 10 <sup>-6</sup> kgm <sup>2</sup>
Starting torque:	<0.001 Nm
Radial load capacity of shaft:	10 N
Axial load capacity of shaft:	20 N
Weight:	approx. 0.06 kg
Protection acc. to EN 60529:	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:

4, 6, 10, 16, 20, 25, 36, 40, 50, 60, 80, 100, 120, 125, 180, 200, 250, 300, 360, 400, 500, 512, 1000, 1024, 1080

#### 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)
- Door and gates systems
- Textil machines