



Incremental encoders  
DKV60 measuring wheel encoder

DKV60-E2K01000



**Model Name** > **DKV60-E2K01000**  
**Part No.** > **1035053**



*Illustration may differ*

**At a glance**

- Complete, preassembled measuring system
- Measuring wheel with knurl or O-ring for adaptation to the measuring surface
- Mounting bracket made from anti-corrosive spring steel
- High resolution up to 0.1 mm (1 ... 2.000 pulses/revolution)
- Electrical interfaces: Open collector NPN, TTL/RS-422 or HTL/push pull.
- Connection via cable outlet, for radial or axial use with open ends or fitted with an M12 connector

**Your benefits**

- Complete system with universal mounting clamps and integrated cable guidance enables simple and quick mounting
- Spring steel mounting clamps allow high level of measuring accuracy when deflecting the measuring wheel in X and Y directions
- Low-cost encoder with outstanding performance
- Withstands harsh environments due to a high IP protection class, a non-corrosive mounting bracket and a rugged housing
- Compact dimensions enable simple installation even where space is cramped



**Performance**

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|                                |                     |
|--------------------------------|---------------------|
| Initialization time:           | 40 s                |
| Error limits 'O' ring surface: | ± 4 mm              |
| Resolution:                    | 0.2 mm              |
| Smallest measuring step:       | 0.05 mm             |
| Pulses per revolution:         | 1,000 <sup>1)</sup> |

<sup>1)</sup> Pulses per 200 mm

**Mechanical data**

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|                          |                                 |
|--------------------------|---------------------------------|
| Mechanical interface:    | Measuring drum, O ring surface  |
| Mass:                    | 0.42 kg                         |
| Maximum operating speed: | 1,500 U/min                     |
| Bearing lifetime:        | 2 x 10 <sup>9</sup> revolutions |

**Electrical data**

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|                       |                                            |
|-----------------------|--------------------------------------------|
| Electrical interface: | 10 V ... 30 V, HTL/Push pull, Cable, 1.5 m |
| Connection type:      | Cable, 1.5 m                               |
| Supply voltage:       | 10 V ... 30 V                              |

Output current: 30  
 Reference signal, number: 1  
 Reference signal, position: 90 °, electronically, gated with A and B  
 MTTFd: mean time to dangerous failure: 600 a (EN ISO 13849-1)<sup>1)</sup>

<sup>1)</sup> This product is a standard product and does not constitute a safety component as defined in the Machinery Directive.

Calculation based on nominal load of components, average ambient temperature 40°C, frequency of use 8760 h/a. All

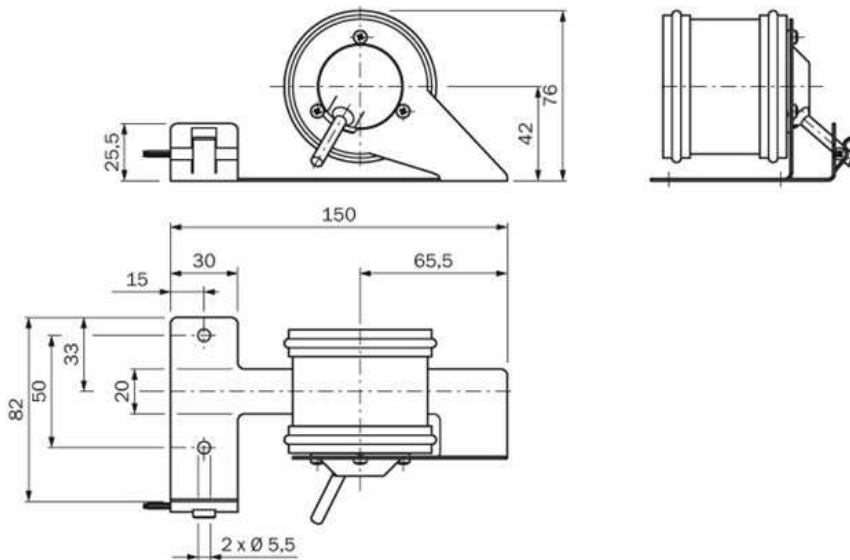
electronic failures are considered hazardous. For more information, see document no. 8015532.

### Ambient data

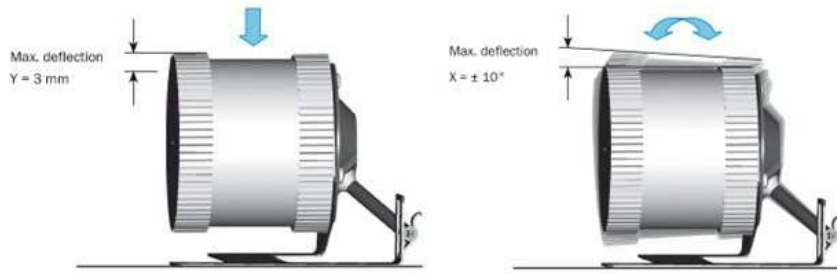
EMC: EN 61000-6-2, EN 61000-6-3  
 Protection class standard: IEC 60529  
 Air humidity: 90 %<sup>1)</sup>  
 Working temperature range: -10 °C ... +60 °C  
 Storage temperature range: -40 °C ... +70 °C, without package  
 Resistance to shocks: 50 g, 7 ms (EN 60068-2-27)  
 Resistance to vibration: 20 g, 10 Hz ... 2,000 Hz (EN 60068-2-6)  
 Enclosure rating: IP 65

<sup>1)</sup> Condensation of the optical scanning not permitted

### Dimensional drawing

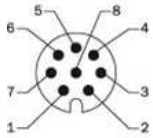


## Proposed fitting



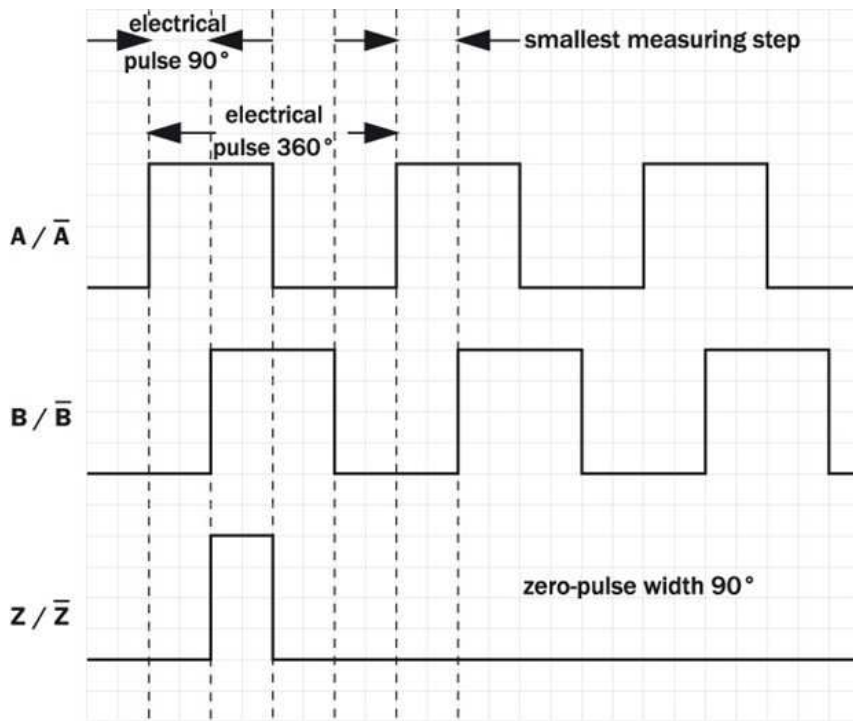
## PIN assignment

View of the connector side of housing



| PIN, 8-pin, connector M12 | Color of wires | Signal TTL, HTL | Explanation                                   |
|---------------------------|----------------|-----------------|-----------------------------------------------|
| 1                         | Brown          | $\bar{A}$       | Signal line                                   |
| 2                         | White          | A               | Signal line                                   |
| 3                         | Black          | $\bar{B}$       | Signal line                                   |
| 4                         | Pink           | B               | Signal line                                   |
| 5                         | Yellow         | $\bar{Z}$       | Signal line                                   |
| 6                         | Lilac          | Z               | Signal line                                   |
| 7                         | Blue           | GND             | Ground connection of the encoder              |
| 8                         | Red            | +U <sub>s</sub> | Supply voltage, potential free to the housing |
| Screen                    | Screen         | Screen          | Screen connected to encoder housing           |

# Signalausgänge



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