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# Incremental encoders
# DKV60 measuring wheel encoder

DKV60-E2K00200

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# DKV60 measuring wheel encoder

**Model Name** > DKV60-E2K00200
**Part No.** > 1035052

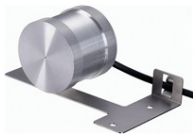

*Illustration may differ*

**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

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## Performance

| | |
|---|---|
| Initialization time: | 40 s |
| Error limits 'O' ring surface: | ± 4 mm |
| Resolution: | 1 mm |
| Smallest measuring step: | 0.25 mm |
| Pulses per revolution: | 200 [1)] |

[1)] Pulses per 200 mm

## Mechanical data

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

## Electrical data

| | |
|---|---|
| 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 |


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| | |
|---|---|
| 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) [1] |

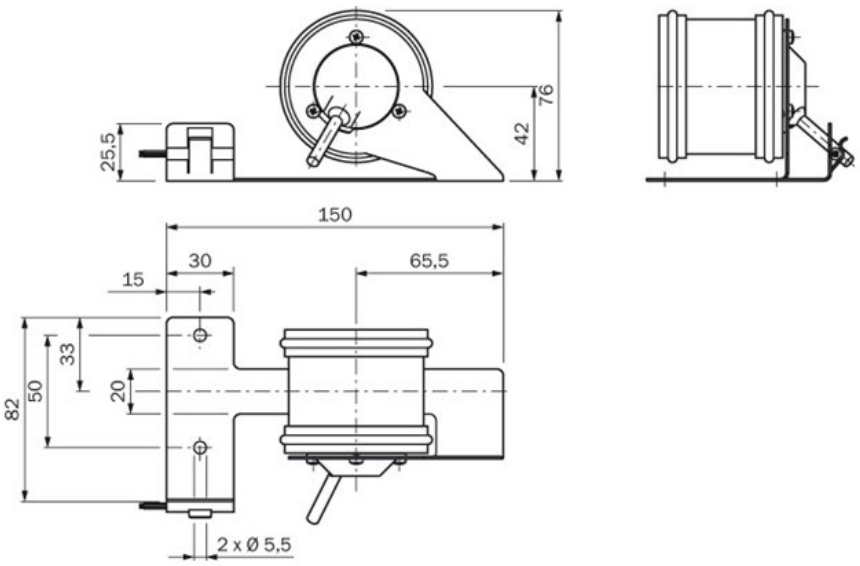
[1] This product is a standard product and does not constitute a safety component as defined in the Machinery Directive. Calculation based on nominal load of components, average ambient temperature 40°C, frequency of use 8760 h/a. All electronic failures are considered hazardous. For more information, see document no. 8015532.

## Ambient data

| | |
|---|---|
| EMC: | EN 61000-6-2, EN 61000-6-3 |
| Protection class standard: | IEC 60529 |
| Air humidity: | 90 % [1] |
| 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 |

[1] Condensation of the optical scanning not permitted

## Dimensional drawing





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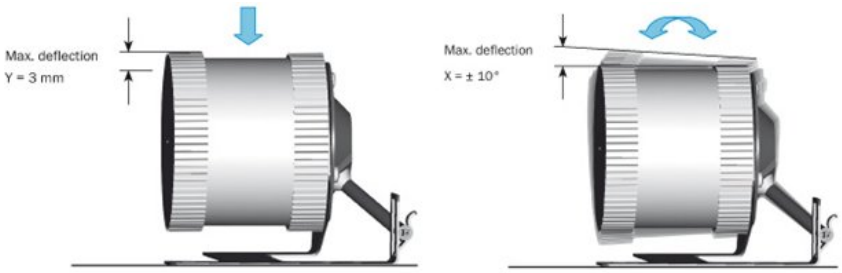
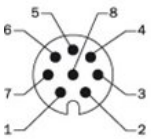
## Proposed fitting




## PIN assignment

View of the connector side of housing




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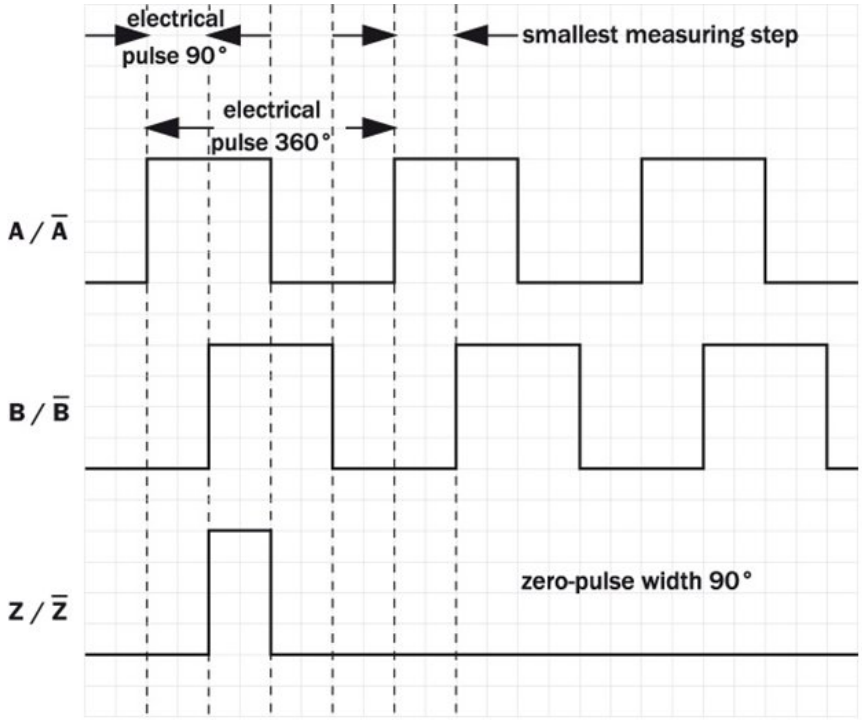
**Signalausgänge**





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