



Incremental encoders  
DKV60 measuring wheel encoder

DKV60-A1K00020



**Model Name** > [DKV60-A1K00020](#)  
**Part No.** > [1035039](#)



*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

Initialization time:	40 s
Resolution:	10 mm
Smallest measuring step:	2.5 mm
Error limits knurled surface:	± 0.5 mm
Pulses per revolution:	20 <sup>1)</sup>

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

#### Mechanical data

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

#### Electrical data

Electrical interface:	4.5 V ... 5.5 V, TTL/RS422, Cable, 1.5 m
Connection type:	Cable, 1.5 m
Supply voltage:	4.5 V ... 5.5 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

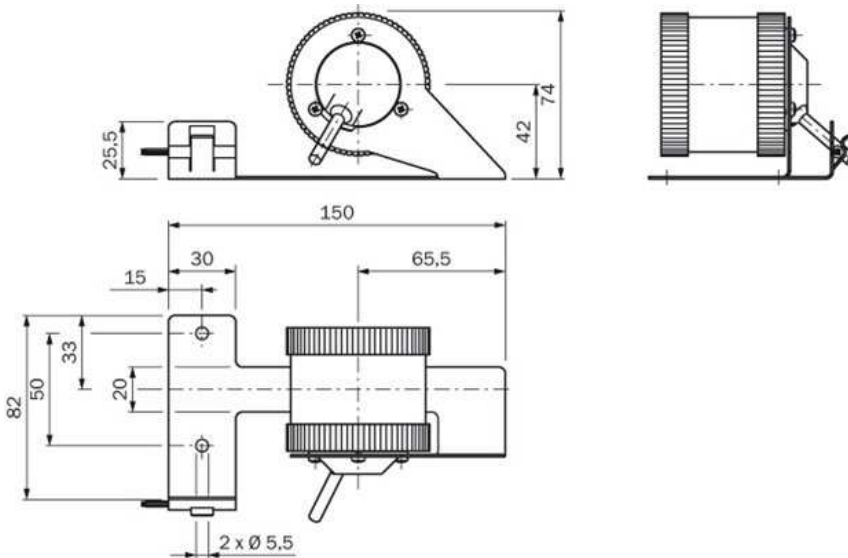
electronic failures are considered hazardous. For more information, see document no. 8015532.

### Ambient data

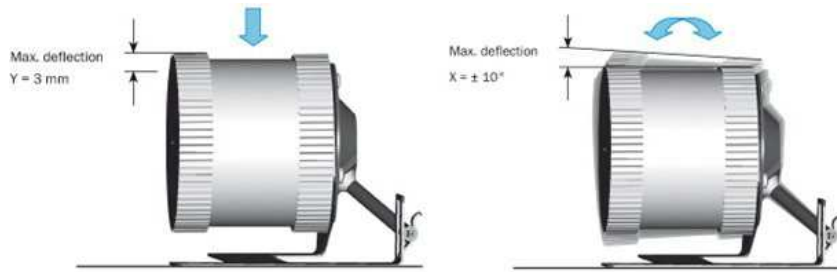
EMC: EN 61000-6-2, EN 61000-6-3  
 Protection class standard: IEC 60529  
 Air humidity: 90 %<sup>1)</sup>  
 Working temperature range: -10 °C ... +60 °C  
 Storage temperature range: -40 °C ... +70 °C, without package  
 Resistance to shocks: 50 g, 7 ms (EN 60068-2-27)  
 Resistance to vibration: 20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

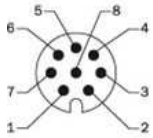


## Proposed fitting



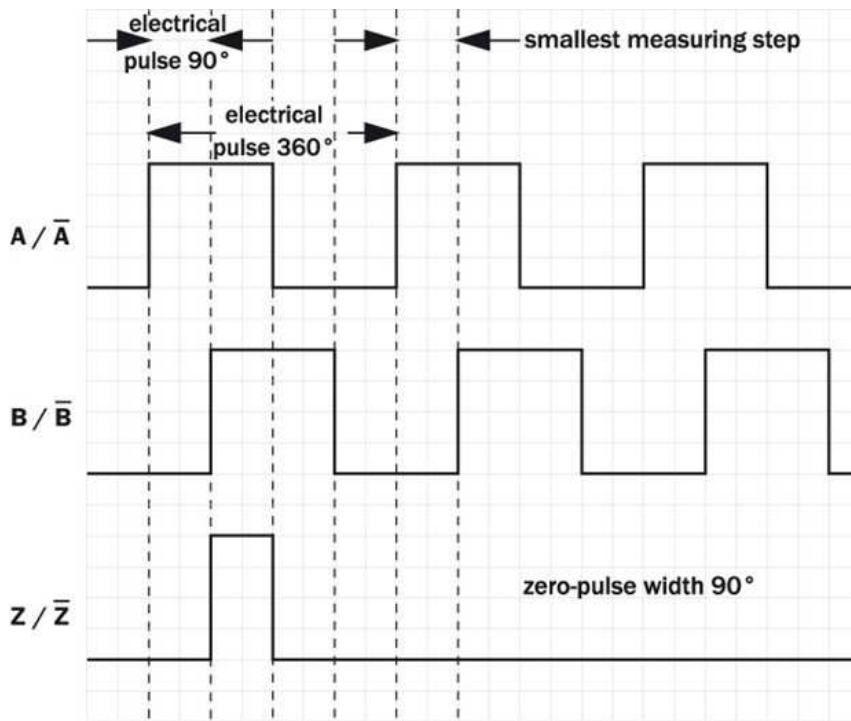
## PIN assignment

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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