



Incremental encoders  
DKV60 measuring wheel encoder

DKV60-E1K02000



**Model Name** > [DKV60-E1K02000](#)  
**Part No.** > [1035050](#)



*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
Resolution:	0.1 mm
Smallest measuring step:	0.025 mm
Error limits knurled surface:	± 0.5 mm
Pulses per revolution:	2,000 <sup>1)</sup>

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

**Mechanical data**

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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**

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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

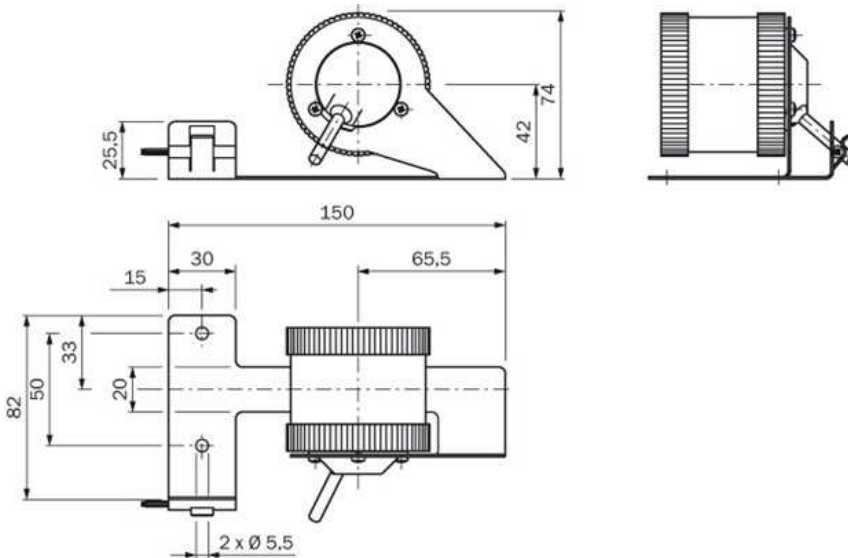
electronic failures are considered hazardous. For more information, see document no. 8015532.

### Ambient data

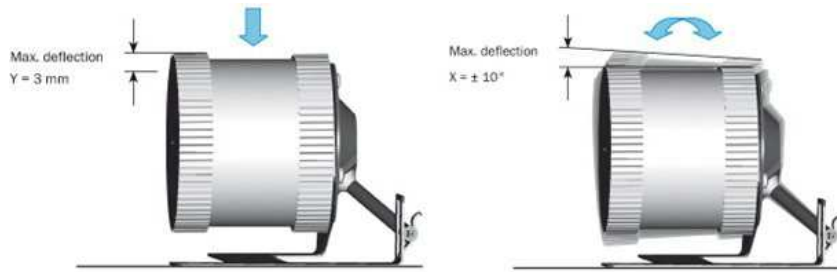
EMC: EN 61000-6-2, EN 61000-6-3  
 Protection class standard: IEC 60529  
 Air humidity: 90 %<sup>1)</sup>  
 Working temperature range: -10 °C ... +60 °C  
 Storage temperature range: -40 °C ... +70 °C, without package  
 Resistance to shocks: 50 g, 7 ms (EN 60068-2-27)  
 Resistance to vibration: 20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

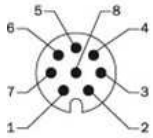


## Proposed fitting



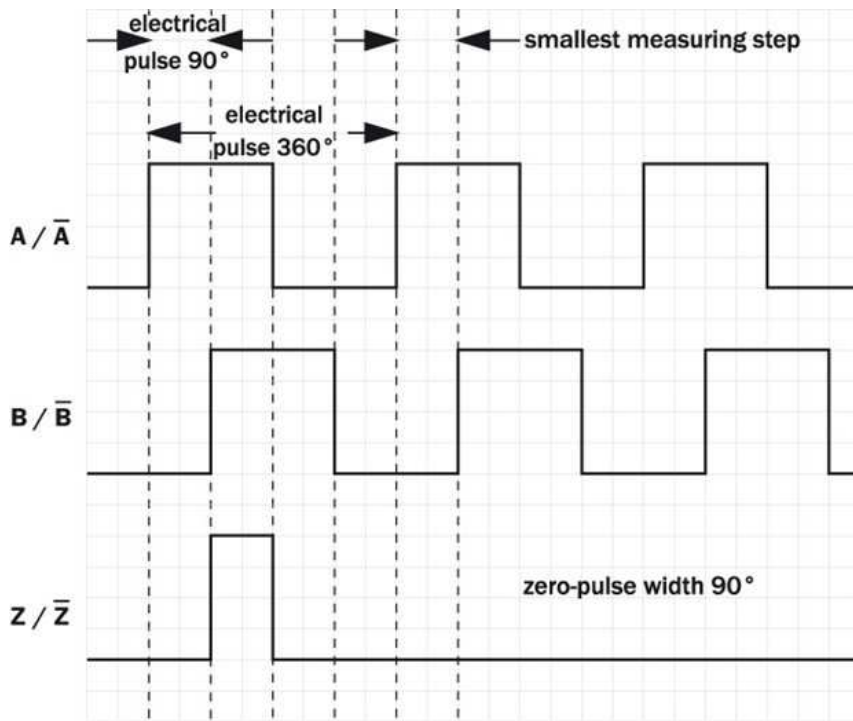
## PIN assignment

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



**Australia**

Phone +61 3 9457 0600  
1800 33 48 02 – tollfree  
E-Mail sales@sick.com.au

**Belgium/Luxembourg**

Phone +32 (0)2 466 55 66  
E-Mail info@sick.be

**Brasil**

Phone +55 11 3215-4900  
E-Mail marketing@sick.com.br

**Canada**

Phone +1 905 771 14 44  
E-Mail information@sick.com

**Česká republika**

Phone +420 2 57 91 18 50  
E-Mail sick@sick.cz

**China**

Phone +86 4000 121 000  
E-Mail info.china@sick.net.cn  
Phone +852-2153 6300  
E-Mail ghk@sick.com.hk

**Danmark**

Phone +45 45 82 64 00  
E-Mail sick@sick.dk

**Deutschland**

Phone +49 211 5301-301  
E-Mail info@sick.de

**España**

Phone +34 93 480 31 00  
E-Mail info@sick.es

**France**

Phone +33 1 64 62 35 00  
E-Mail info@sick.fr

**Great Britain**

Phone +44 (0)1727 831121  
E-Mail info@sick.co.uk

**India**

Phone +91-22-4033 8333  
E-Mail info@sick-india.com

**Israel**

Phone +972-4-6881000  
E-Mail info@sick-sensors.com

**Italia**

Phone +39 02 27 43 41  
E-Mail info@sick.it

**Japan**

Phone +81 (0)3 5309 2112  
E-Mail support@sick.jp

**Magyarország**

Phone +36 1 371 2680  
E-Mail office@sick.hu

**Nederland**

Phone +31 (0)30 229 25 44  
E-Mail info@sick.nl

**Norge**

Phone +47 67 81 50 00  
E-Mail sick@sick.no

**Österreich**

Phone +43 (0)22 36 62 28 8-0  
E-Mail office@sick.at

**Polska**

Phone +48 22 837 40 50  
E-Mail info@sick.pl

**România**

Phone +40 356 171 120  
E-Mail office@sick.ro

**Russia**

Phone +7-495-775-05-30  
E-Mail info@sick.ru

**Schweiz**

Phone +41 41 619 29 39  
E-Mail contact@sick.ch

**Singapore**

Phone +65 6744 3732  
E-Mail sales.gsg@sick.com

**Slovenija**

Phone +386 (0)1-47 69 990  
E-Mail office@sick.si

**South Africa**

Phone +27 11 472 3733  
E-Mail info@sickautomation.co.za

**South Korea**

Phone +82 2 786 6321/4  
E-Mail info@sickkorea.net

**Suomi**

Phone +358-9-25 15 800  
E-Mail sick@sick.fi

**Sverige**

Phone +46 10 110 10 00  
E-Mail info@sick.se

**Taiwan**

Phone +886 2 2375-6288  
E-Mail sales@sick.com.tw

**Türkiye**

Phone +90 (216) 528 50 00  
E-Mail info@sick.com.tr

**United Arab Emirates**

Phone +971 (0) 4 88 65 878  
E-Mail info@sick.ae

**USA/México**

Phone +1(952) 941-6780  
1 (800) 325-7425 – tollfree  
E-Mail info@sickusa.com

More representatives and agencies  
at [www.sick.com](http://www.sick.com)