Special Incremental Rotary Encoder

Stainless hollow shaft

- Max. speed: 6000 rpm
- Hollow shaft: Ø 10 mm and Ø 12 mm
- Output: RS422 or push-pull
- Cable connection
- Pulse count: max. 5000 pulses
- Max. pulse frequency: 300 kHz
- Supply: 5-30 V_{DC}
- Max. temperature: +85 °C
- Protection type: IP 66

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Model:
ZDI-DH

Description

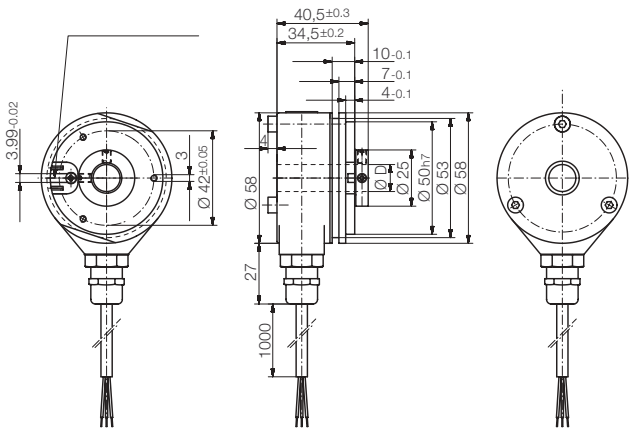
Rotary encoders are used to measure length, position, rotational speed and angle. They convert mechanical motion to electrical signals. Incremental rotary encoders output a frequency signal which can represent speed, length or position.

A rotatable disc, on which a grating is attached, is mounted between an LED and a receiver. The light emitted from the LED is modulated by the grating and hits the receiver, which outputs a sinusoidal signal that is proportional to the light received. The sinusoidal signal is processed by specially designed electronics. Standard control systems - including all KOBOLD counters - require digital, square-wave signals at the input. Thus the signal is conditioned in the rotary encoder and is outputed through different output circuits depending on the field of application.

Areas of application:

- Food-processing industry
- Chemical industry
- Medical engineering, for example stirring machines

Dimensions:



Technical Details:

Max. speed:	6000 rpm
Moment of inertia of rotor:	approximately 6 x 10^{-6} kgm²
Initial torque:	< 0.05 Nm
Hollow shaft:	Ø 10 mm or Ø 12 mm stainless steel with seal
Mechanical connection:	flange with through shaft
Impact resistance:	2000 m/s², 6 ms
Vibration resistance:	100 m/s², 10 - 2000 Hz
Operating temperature range:	-20 to +80 °C
Working temperature range:	-20 to +85 °C
Output circuit:	push-pull with inversion or RS422 with inversion (TTL-compatible) short-circuit-proof
Electrical connection:	1 m cable, radial
Max. pulse frequency:	300 kHz
Supply:	5 - 30 V_{DC} (push-pull) 5 V_{DC} ±5 % (RS422)
Current consumption:	max. 150 mA (push-pull) max. 100 mA (RS422)
Permissible load / channel:	max. ±30 mA (push-pull) max. ±20 mA (RS422)
Signal level high:	min. U_B –1.5 V (push-pull) min. 2.5 V (RS422)
Signal level low:	max. 1.5 V (push-pull) max. 0.5 V (RS422)
Rise time / fall time:	max. 1 µs (push-pull) max. 200 ns (RS422)
Pulses per revolution:	10, 20, 25, 30, 50, 60, 100, 120, 125, 127, 150, 180, 200, 216, 240, 250, 254, 256, 300, 314, 360, 375, 400, 500, 512, 600, 625, 720, 745, 750, 762, 800, 900, 927, 1000, 1024, 1250, 1270, 1400, 1500, 1800, 2000, 2048, 2250, 2400, 2500, 3000, 3600, 4000, 4096, 5000
Protection type:	IP 66
Weight:	approximately 0.4 kg

Order details (Example: **ZDI-DH 14 H 1 0010**)

Model	Description	Hollow shaft	Output circuit	Electrical connection	Pulse count (always use 4 digits)
ZDI-DH...	Special incremental rotary encoder with stainless steel hollow shaft	**14** = Ø 10 mm **15** = Ø 12 mm	**H** = push-pull with inversion **R** = RS422 with inversion	**1** = 1 m cable, radial	for example: **0010...0720...5000**

01/1101/Ko/10