Incremental Rotary Encoder

Shaft model

- Max. speed: 12 000 rpm
- Shaft: Ø 6/10 mm
- Output: RS422 or push-pull
- 12-pole connector
- Pulse count: 10 - 5000 pulses
- Max. pulse frequency: 200 kHz
- Supply: 5/10 - 30 V_{DC}
- Max. temperature: +75 °C
- Protection type: IP 65

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Model:
ZDI-BW

01/0604/Ko/10

Description

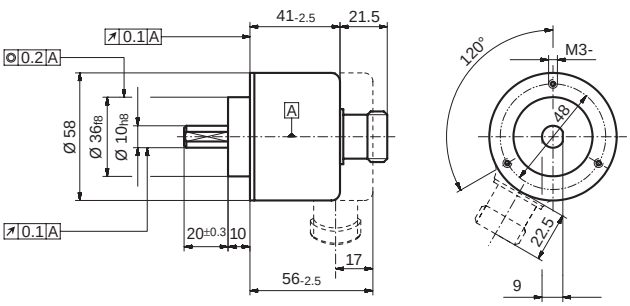
KOBOLD rotary encoders are used to measure length, position, rotational speed and angle. They convert mechanical motion to electrical signals. Incremental rotary encoders output a frequency signal which can represent speed, length or position.

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:

- Mounting technology
- Feeders and handling machines for electrical components
- Test equipment
- Medical engineering, for example stirring machines
- Inserting plant / letter opening machines
- Inspection platforms
- Labelling machines
- Pipe inspection machines (camera control)

Dimensions (clamping flange):



Technical Details:

Max. speed:	12 000 rpm
Moment of inertia of rotor:	approximately 1.8 x 10^{-6} kgm²
Initial torque:	< 0.01 Nm
Radial shaft loadability:	80 N
Axial shaft loadability:	40 N
Shaft:	Ø 10 x 20 mm (clamping flange) or Ø 6 x 10 mm (synchro flange) stainless steel
Flange connection:	clamping flange Ø 36 mm or synchro flange Ø 58 mm
Impact resistance:	1000 m/s², 6 ms
Vibration resistance:	100 m/s², 10 - 2000 Hz
Operating temperature range:	- 20 to + 70 °C
Working temperature range:	- 20 to + 75 °C
Output circuit:	push-pull without inversion or RS422 with inversion (TTL-compatible) short-circuit-proof
Electrical connection:	12-pin plug connector axial or radial
Pulse output:	10 - 5000 pulses
Max. pulse frequency:	300 kHz
Supply:	10 - 30 V_{DC} (push-pull) 5 V_{DC} ± 5 % (RS422)
Current consumption:	max. 125 mA (push-pull) max. 90 mA (RS422)
Permissible load / channel:	max. ± 30 mA (push-pull) max. ± 20 mA (RS422)
Signal level high:	min. U_B -3 V (push-pull) min. 2.5 V (RS422)
Signal level low:	max. 2.0 V (push-pull) max. 0.5 V (RS422)
Rise time / fall time:	max. 1 µs (push-pull) max. 200 ns (RS422)
Pulses per revolution:	200, 500, 1000, 1024, 2500, 3600, 5000
Protection type:	IP 65
Weight:	approximately 0.4 kg

Order details (Example: **ZDI-BW 14 G 3 0200**)

Model	Description	Flange / shaft	Output circuit	Electrical connection	Pulse count (always use 4 digits)
ZDI-BW...	Incremental rotary encoder - shaft model	**14** = clamping flange Ø 10 mm **22** = synchro flange Ø 6 mm	**G** = push-pull without inversion **R** = RS422 with inversion	**3** = 12-pole plug connector, radial **4** = 12-pole plug connector, axial	**0200, 0500, 1000, 1024, 2500, 3600, 5000**
ZDZ-G2	12-pole mating connector				

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