

Incremental Rotary Encoder

Large hollow shaft



- Max. speed: 6000 rpm
- Shaft: to Ø 42 mm
- Output: RS422 or push-pull
- Connector
- Pulse count: 360 - 5000 pulses
- Max. pulse frequency: 300 kHz
- Supply: 5/10 - 30 V_{DC}
- Max. temperature: +75 °C
- Protection type: IP 65



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Model:
ZDI-CH



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 outputted through different output circuits depending on the field of application.

Areas of application:

- Mounting technology
- Feeders and handling machines for electrical components
- Test equipment
- Mechanical engineering

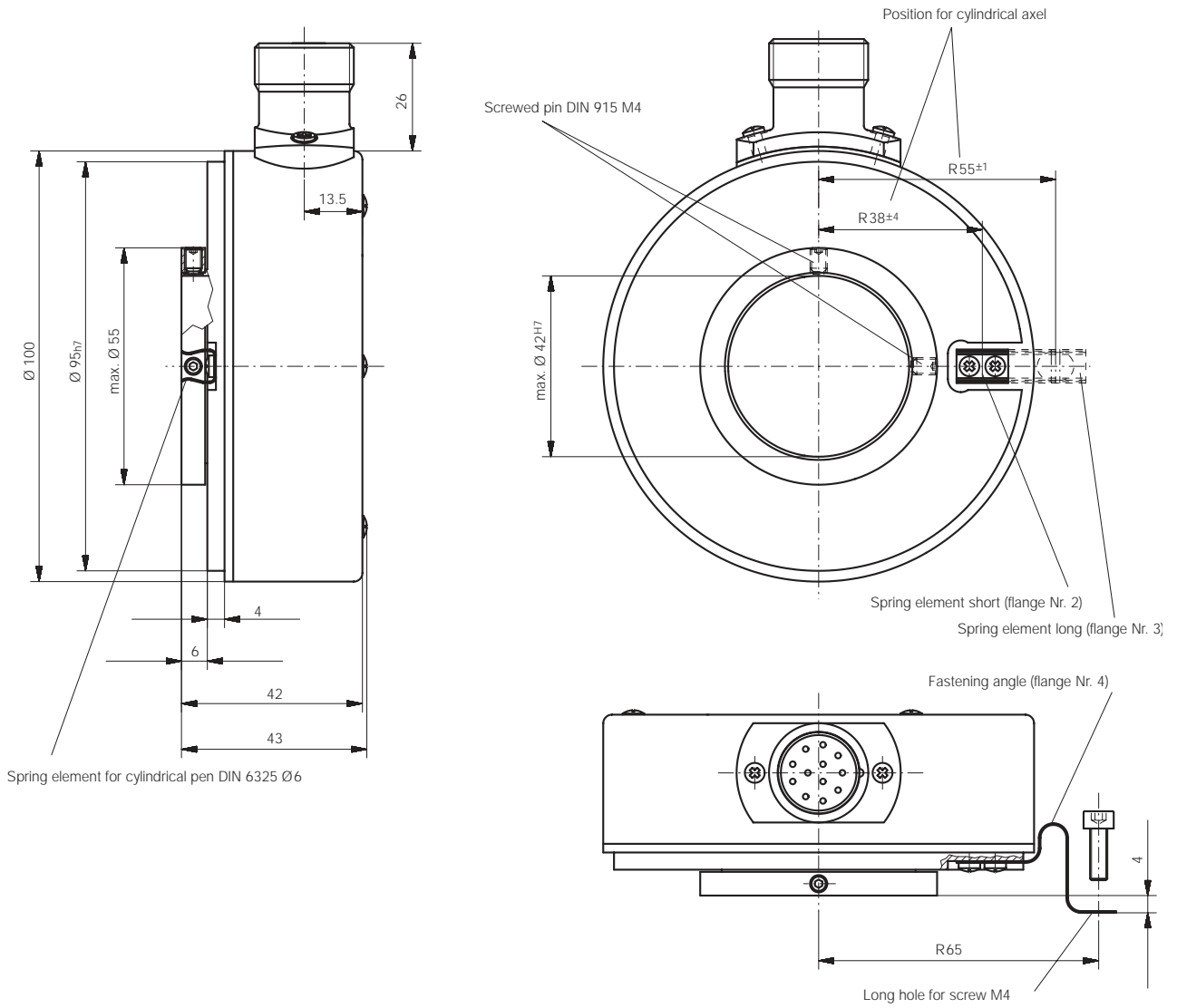
Technical Details

Max. speed:	1.500 rpm
Moment of inertia of rotor:	approximately 150 x 10 ⁻⁶ kgm ²
Initial torque:	< 0.2 Nm
Hollow shaft:	Ø 42 mm or Ø 25 mm stainless steel
Mechanical connection:	flange
Impact resistance:	1000 m/s ² , 6 ms
Vibration resistance:	100 m/s ² , 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-pole plug connector, radial
Max. pulse frequency:	300 kHz
Supply:	10 - 30 V _{DC} (push-pull) 5 V _{DC} ± 5 % (RS422)
Current consumption:	55 mA; max. 125 mA (push-pull) 40 mA; max. 9.0 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. 2.5 V (push-pull) max. 0.5 V (RS422)
Rise time/fall time:	max. 1 µs (push-pull) max. 200 ns (RS422)
Pulses per revolution:	360, 1000, 1024, 2048, 2500, 5000
Protection type:	IP 65
Weight:	approximately 0.7 kg

Order details (Example: **ZDI-CH 1B G 3 0200**)

Model	Description	Hollow shaft	Output circuit	Electrical connection	Pulse count (always use 4 digits)
ZDI-CH...	Incremental rotary encoder - shaft model	19 = Ø 25 mm 1B = Ø 42 mm	G = push-pull without inversion R = RS422 with inversion	3 = 12-pole plug connector, radial	0360, 1000, 1024, 2048, 2500, 5000
ZDZ-G2	12-pole mating connector				

Dimensions



Please refer to our brochure Z4...



...for time measurement