

EX Incremental Rotary Encoder

Shaft or hollow shaft



- Max. speed: 6000 rpm
- Shaft/hollow shaft: Ø 12 mm
- Output: RS422 or push-pull
- Cable connection
- Pulse count: max. 5000 pulses
- Max. pulse frequency: 300 kHz
- Supply: 10-30 V_{DC}
- EEx d IIC T6
- Max. temperature: +60°C
- Protection type: IP 64



KOBOLD offices exist in the following countries:

**ARGENTINA, AUSTRIA, BELGIUM, BRAZIL, CANADA,
CHINA, COLOMBIA, FRANCE, GREAT BRITAIN, NETHERLANDS,
POLAND, SWITZERLAND, USA, VENEZUELA**

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Model:
ZDI-E



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:

- Petrochemical industry
- Chemical industry
- Electricity supply

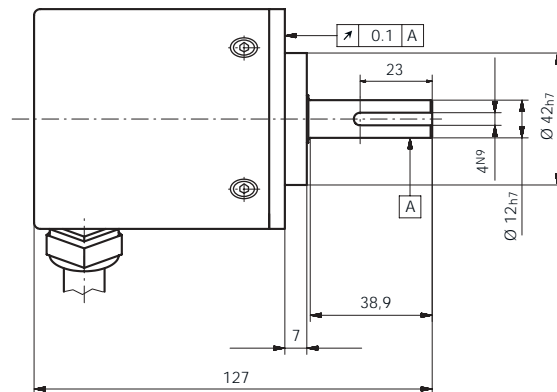
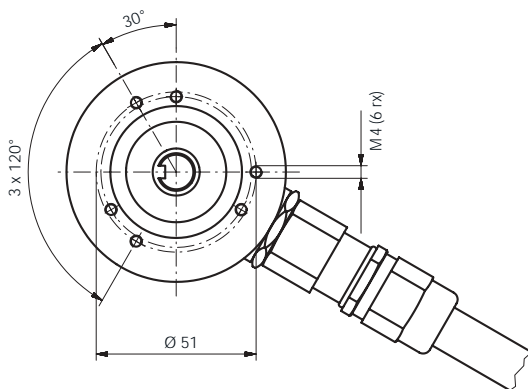
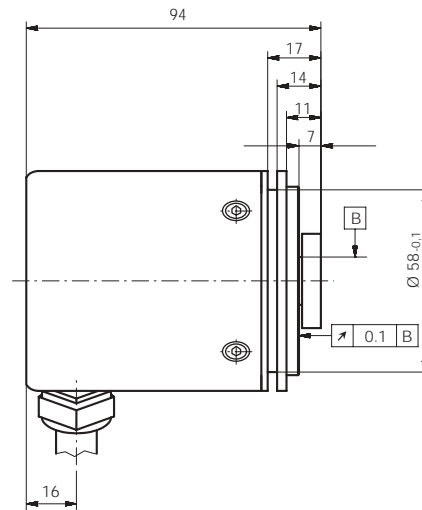
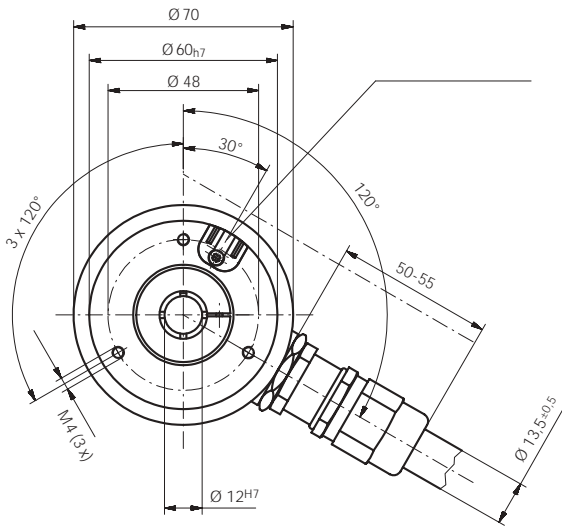
Technical Details:

Max. speed: 6000 rpm
 Moment of inertia of rotor: approximately 15×10^{-6} kgm²
 Initial torque: < 0.05 Nm
 Radial shaft loadability: 20 N (shaft model)
 Axial shaft loadability: 10 N (shaft model)
 Shaft/hollow shaft: Ø 12 mm, stainless steel
 Mechanical connection: synchro flange with hollow shaft
 clamping flange with shaft
 Impact resistance: 1000 m/s², 6 ms
 Vibration resistance: 100 m/s², 10- 2000 Hz
 Operating temperature range: -20 to +60 °C
 Output circuit: push-pull without inversion
 or RS422 with inversion
 (TTL-compatible)
 short-circuit-proof
 Electrical connection: 2 m PVC cable, radial
 Ex approval: EEx d IIC T6
 (pressure resistant encapsulation)
 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. 100 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 /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 64
 Weight: approximately 1.2 kg

Order details (Example: **ZDI-E H25 G 3 0750**)

Model	Description	Type	Output circuit	Electrical connection	Pulse count
ZDI-E...	EX incremental rotary encoder	H25 = synchro flange/ hollow shaft Ø 12 mm W15 = clamping flange shaft Ø 12 mm	G =push-pull without inversion R = RS422 with inversion	5 = 2 m PVC cable, radial Y =special connection	For example: 0010...0750...5000

Dimensions:



Please refer to our brochure A2...



...for humidity measurement technology