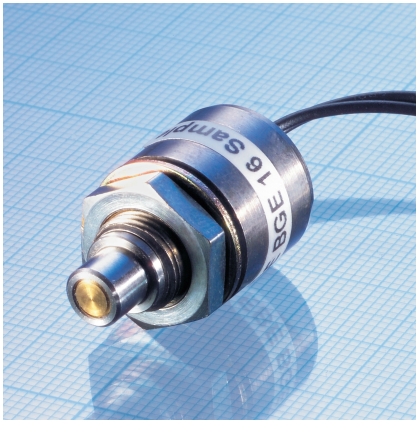


Rotary Encoder BGE 16



Electronic rotary pulse generator for quick and simple adjustment of digital values. Also suitable for motion and angle tracking.

- Shaft either double ball bearing or friction bearing
- Recognition of rotation sense via quadrature signals (AB-Track signals)
- Options:
 - Index signal
 - Rotary pulse and direction signal
 - Absolute rotation angle
 - Waterproof

1.0 Construction

1.1 Function	Magnetic rotary impulse encoder with detent mechanism
1.2 Angle resolution	Maximum 10 Bit
1.3 Angle differential error value	Differential non linearity $< \pm 0,176^\circ$, Integral non linearity $< \pm 1,4^\circ$
1.4 Indication of resolution direction*	Alternatively via 2 AB track signals (AB) or destination indicator and pulse signals (DI)
1.5 Zero point recognition	Index signal
1.6 Angle output	PWM-Signal 0...100% (1 kHz $\pm$ 10%)
1.7 Electrical connections	Cable connection with 150mm cable, customized connector on request

*See impulse diagram

2.0 Electrical Data

2.1 Operation voltage	5 VDC $\pm$ 10%, 3,3 VDC $\pm$ 10%
2.2 Current consumption	< 25 mA
2.3 Output signals	TTL: high $> V_{cc} - 0,5$ V, low $< V_{ss} + 0,5$ V Capacity max. 4 mA per output

3.0 Resolution

3.1 Resolution	256, 128, 64 or 32 lines AB Alternative: 512 (256, 128, 64) pulses with 1024 (512, 256, 128) flank exchanges symmetrically spread
----------------	--

4.0 Mechanical Data

4.1 Max. revolutions per minute	33.000 min ⁻¹
4.2 Life expectancy	Ball-bearing: > 10 mio revolutions Friction bearing: > 2 mio 180° right – left cycles 10 N Axial and 4 N radial force at the shaft extension
4.3 Frontside seal	With O-ring, type „WD“ = waterproof
4.4 Backside seal	Potting compound
4.5 Mounting	Central mounting M10 x 0,75
4.6 Shaft length	20 mm
4.7 Shaft diameter	6 mm

5.0 Other Data

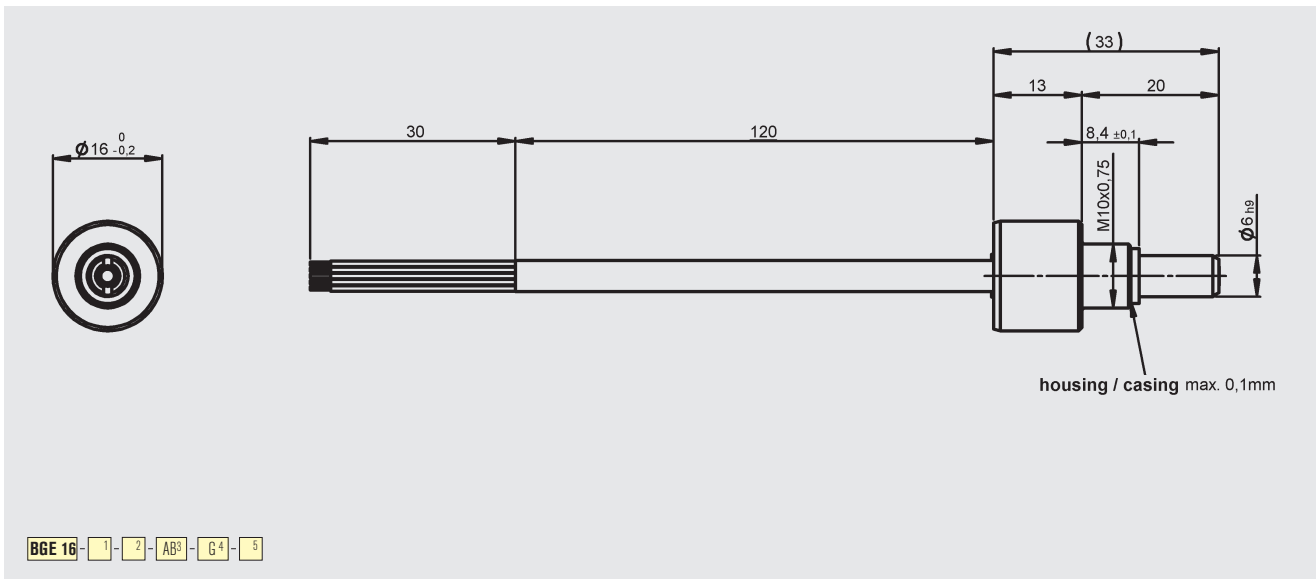
5.1 Ambient temperature	$- 40$ to 85°C
5.2 Storage temperature	$- 40$ to 125°C
5.3 ESD acc. to	IEC 61000-4-2 Level 4 (± 15 kV)
5.4 Vibration resistance acc. to IEC 68-2-6	10 to 150 Hz; 5 g, 5 cycles, 1 octave/minute
5.5 Shock test ISO 9022-30-08	500 g, 0,5 ms ² ; 3x per shaft and direction Continual shock 25 g, 6 ms, 3 x 4000 shocks
5.6 Protection class acc. to IEC 529	IP 54 (optional waterproof version)

Ordering Codes

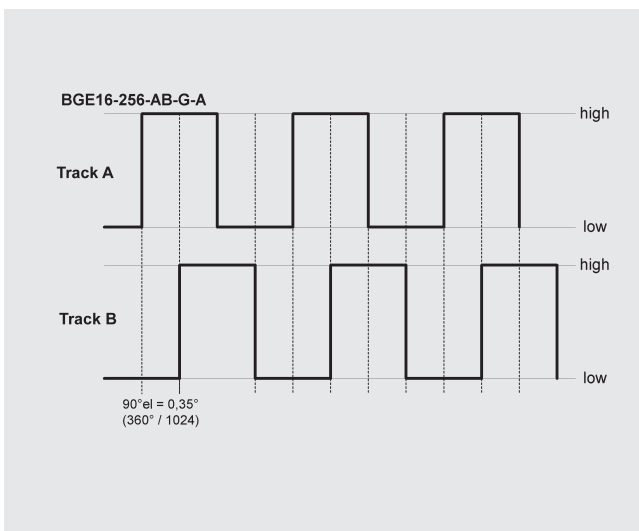
Designation of type	BGE 16
1. Resolution	256, 128, 64 or 32 lines
2. Output	AB = quadrature, DI = direction and pulses
3. Bearing	G = friction bearing, K = ball bearing
4. Shaft length	A = standard 20mm
5. Flange seal	0 = without, 1 = waterproof

The bold-typed data in the yellow order blocks remain unchanged.
Normal-typed data match the drawings and can be modified according to your wishes.
Blanks need to be completed according to the ordering details on the previous page.

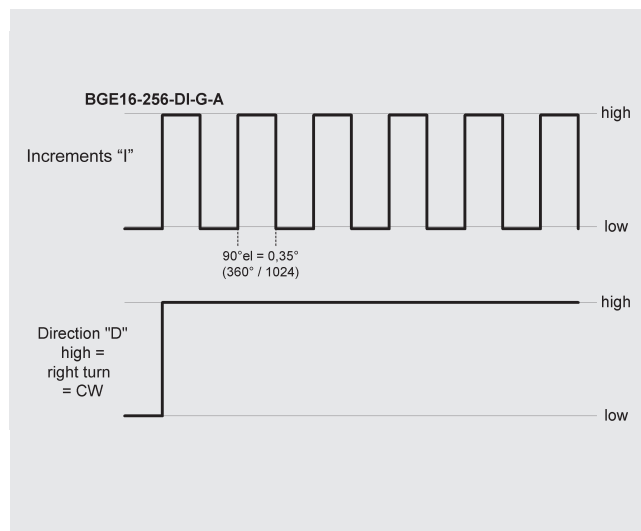
Dimensional Drawings · Dimensions in mm



BGE 16 · Standard version



BGE 16 · AB Track signal



BGE 16 · DI Track signal

Wire assignment

Wiring colour	Version „AB“	Version „DI“
yellow	Track A	Increment
green	Track B	Direction
grey	Index	Absolute position
		PWM Output
white	Vcc	Vcc
brown	Vss	Vss