

Data Sheet BGE25-24 5V

Part No. 2109100-00



DESCRIPTION

Magnetic rotary pulse encoder for quick and simple adjustment of digital values. This special version includes wear-free magnetic detent and rest, precision ball bearing shaft and an improved follow-up of movement. The direction indication for the BGE25 is ensured by two separate pulse outputs, generated by a wear-free HALL-sensor.

TECHNICAL DATA

CONSTRUCTION AND MECHANICAL DATA (TYPICAL VALUES, T=23°C)

DETENT ANGLE	15°
DETENT GRADUATION	24
MOUNTING	central mounting
DETENT MECHANISM	magnetic
DETENT TORQUE WITH INDEX TYP.	1 Ncm
BEARING	precision ball bearing(s)
PUSHBUTTON ACTUATING FORCE	5 ± 2.5N
PUSHBUTTON ACTUATING PATH	0,8 ± 0,2 mm
FASTENING TORQUE MAX.	5 Nm
LIFE EXPECTANCY (TYPICAL)	> 20 x 10 ⁶ turns
SHAFT LENGTH	acc. drawing
SHAFT DESIGN	round

ELECTRICAL DATA (TYPICAL VALUES, T=23°C)

OPERATION VOLTAGE	5 VDC ± 10%
CURRENT CONSUMPTION	max. 20 mA
SWITCHING VOLTAGE MAX.	5 VDC ± 10%
SWITCHING CURRENT MAX.	max. 4 mA per output signal
INDICATOR OF REVOLUTION DIRECTION	A/B signal
IMPULSES PER OUTPUT	24 pulses per revolution
CONNECTOR	TERMINAL BLOCK 8POS 45DEG 2.5MM AWG20 to AWG24

ENVIRONMENTAL CONDITIONS

OPERATING TEMPERATURE	-20°C to +70°C (others on request)
STORAGE TEMPERATURE	-40°C to +85°C
HUMIDITY	20% to 75% r.H. not condensing
REACH AND ROHS	conform

OTHER

COMPONENTS	with 6k nut M10x0,75x3mm
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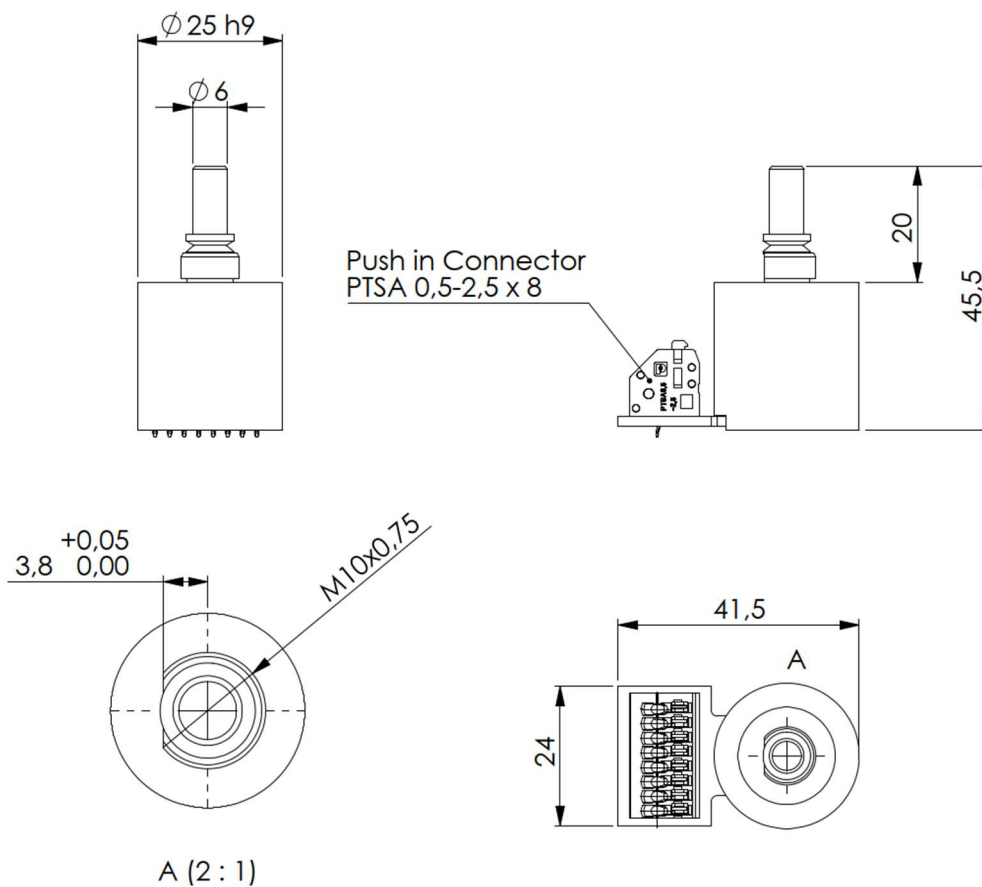
PINOUT AND DRAWINGS

PINOUT AND DESCRIPTION

PIN	SIGNAL	DESCRIPTION
1	GND	Power supply ground
2	VCC	Positive power supply
3	PW	Pulse toggle output
4	DIR	Direction output
5	Pushbutton	Active low pushbutton output
6	Track A	Track A output
7	Track B	Track B output
8	Reset	Active low MCU reset

Voltage levels for power supply and encoder output voltage are defined in table electrical data.

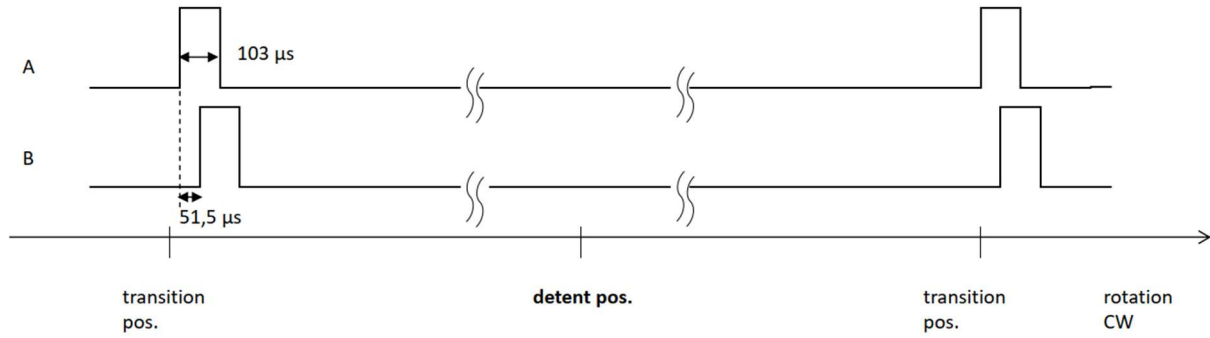
OUTLINE DRAWINGS



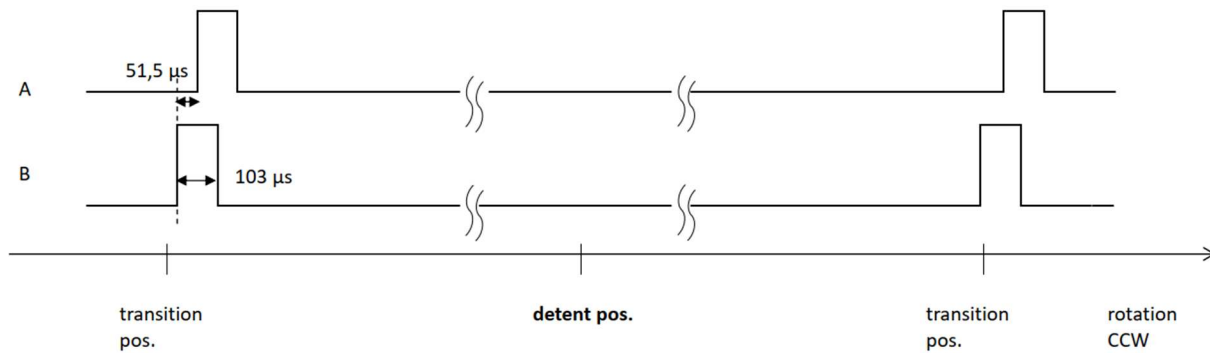
Units in mm

OUTPUT SIGNALS

Rotation CW for track output (A, B):



Rotation CCW for track output (A, B):



Typical electrical timings:

SYMBOL	CHARACTERISTIC	VALUE
t_{low}	Duration of low status of /A imp and /B imp	22,4 μs +/- 5%
t_{AB}	Delay /A imp -> /B imp (CW) Delay /B imp -> /A imp (CCW)	11,2 μs +/- 5%

DISCLAIMER

The information contained in this document is for general guidance only. The user is responsible for determining the suitability of the technical information referred to herein for his application. On delivery of the component, EBE is only obliged to implement those properties set out and agreed upon in this technical data sheet. Further properties are not included. No guarantee is given. The component has been designed for installation in our customer's products. Manufacturer of the resulting product and consequent liability according to the Product Liability Act lies with the customer.

REVISION

REVISION	DATE	DESCRIPTION
1.0	05.05.2025	Initial Data Sheet BGE25-24 5V