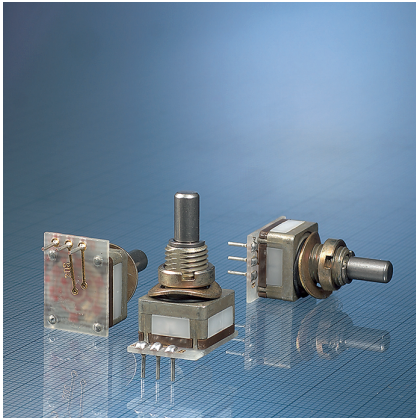# Rotary Encoder BG12

Rotary pulse generator for quick and simple adjustment of digital values.

- Rotary encoders, code switches and rotary step switches can be easily used alongside each other as their dimensions are the same.
- Low-cost and space saving solution for quick adjustments.
- Adjustment forwards and backwards.
- Digit-exact precision adjustment by precise mechanical detent.
- Recognition of rotation sense by two separate outputs

1.0 Construction	
1.1 Function	Rotary encoder with detent mechanism
1.2 Detent angle	60°
1.3 Detent graduation	6 detents per revolution
1.4 Indication of revolution direction*	2 independent outputs
1.5 Contacts	Soldering pins
1.6 Mounting	Central mounting

* See Impulse diagram.

2.0 Electrical Data		
2.1 Switching power max.		1,5 VA/W
2.2 Switching voltage max.		30 V $\simeq$
2.3 Switching current max.		50 mA
2.4 Rest current max. at ∂u 20°C		2 A
2.5 Test voltage at 50 Hz		200 V
2.6 Life expectancy	without power	≥ 240 000 detents
		≥ 40 000 cycles
	with power max.	≥ 120 000 detents
		≥ 20 000 cycles
2.7 Contact resistance	initial value	≤ 60 mΩ
Contact resistance	without electrical load	≤ 100 mΩ
after life expectancy	with electrical load	≤ 100 mΩ
2.8 Insulation resistance		≥ 10^{10} Ω
2.9 Capacity between 2 contacts		≤ 2 pF
Capacity between contact and ground		≤ 2 pF
2.10 Impulses per output		6 impulses per revolution

3.0 Mechanical Data	
3.1 Detent mechanism	Mechanical without stop
3.2 Operating torque	2,2 Ncm for sealed version
3.3 Vibratory strength	10 g
3.4 Shock strength	50 g
3.5 Waterproofing	Watertight against front panel up to 0,2 bar as special design

4.0 Other Data	
4.1 Contact material	Au over Ni barrier layer
4.2 Insulating material	Epoxide glass laminate, EP
4.3 Soldering time and temperature max.	5 s at 260°C

Ordering Codes

Designation of type	**BG 12**
1. Detent graduations	**6** per revolution
2. Shaft length	mm
3. Shaft design	**A** = standard

The data in the yellow order blocks match the specifications
of the standard version.

Dimensional Drawings · Dimensions in mm

Seal on request

View without seal, spring washer
and nut

Clockwise operation

Counter clockwise operation

Impulse diagram
viewed from operating side

Mounting
layout

Hole location
diagram

BG 12 - 6[1] - 15[2] - A[3]

BG 12 · Rotary encoder