

HALL EFFECT ENCODER SWITCH

BTME14 SERIES

14mm hall effect encoder switch

NEW



Features

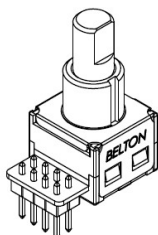
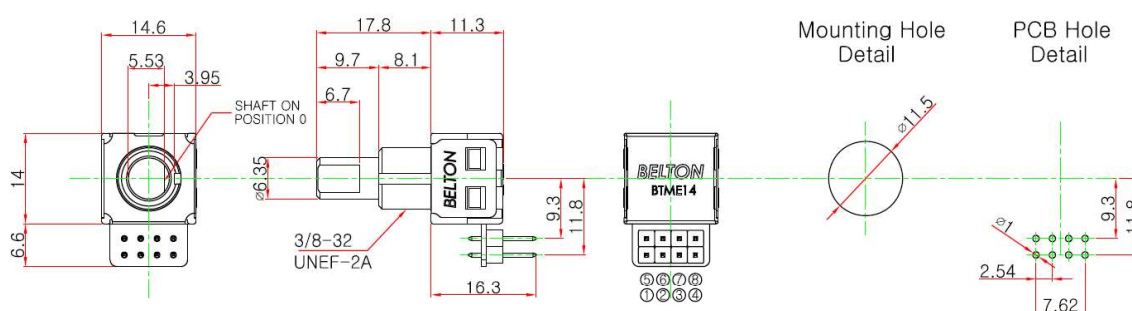
- Plastic housing with Metal shaft
- 14 X 14 Economical Size
- Quadrature output, 12-bit resolution max.
- Debris resistant Hall effect sensor technology
- Over 1 million rotational cycles
- Push function included

Applications


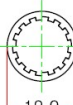
- All kinds of level control, tuning and position setting in the digitalized medical, measuring, radio, and communication equipment.
- Test & Measurement equipment
- Audio / Visual equipment
- Rotary position sensor

Standard Dimensions

BTME14P-512-F10-P-5



Mounting Parts

Nut	Star Washer
t=2.4	t=0.9
	
12	12.9

Terminal	Function
1	Ground
2	Reserved
3	Reserved
4	Reserved
5	Output 'A'
6	Output 'B'
7	For Switch
8	Power 3.3V

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Electrical specifications

- Supplying voltage : DC 3.3V or DC 5V \pm 10%
- Supplying current : 6mA \pm 1mA
- Resolution : 2, 4, 8, 16, 32, 64, 128, 256, 512 pulses per 1 Rotation (refer to the followings)
- Output wave form : incremental quadrature A /B (refer to the followings), 12-bit resolution max.
- Continuous Power Dissipation : 50mW
- Electrical life : Over 1,000,000 cycles

Mechanical specifications

- Rotational torque : 25 gf·cm \pm 10 gf·cm
- Maximum rotational speed : 100 rpm
- Mechanical life : Over 1,000,000 cycles of operation
(1 cycle is a rotation through all positions and a full return.)
- Operating force of Push-button switch : 500 gf·cm \pm 100 gf·cm
- Mechanical life of Push-button switch : Over 1,000,000 cycles

Durability characteristics

- Over 1,000,000 cycles of operation shall be performed under operating temp. range continuously at rate of 15 ~ 20 cycles/minute with load

Humidity characteristics

- During 48 hours, put specimen in the chamber which is controlled at temp. $40 \pm 2^{\circ}\text{C}$, moisture 90 ~ 95% condition, and then exposure to normal atmospheric condition for 1 hour

Soldering recommendation

- Hand solder only per IPC J-STD-001

Operating temperature range

- - 40°C ~ +85°C

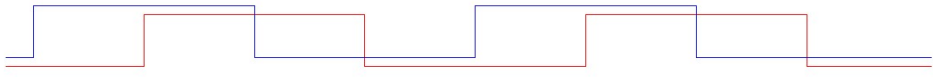
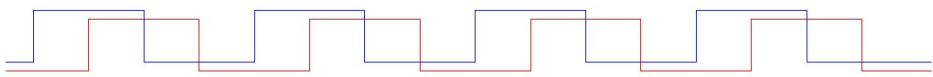
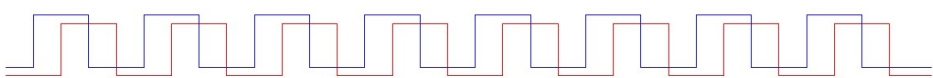
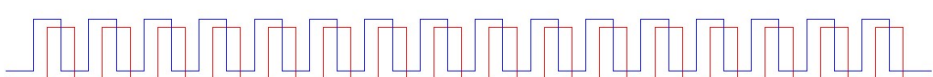
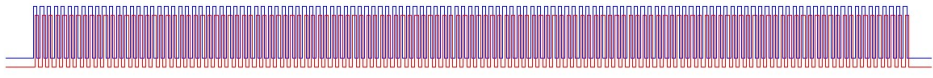
Storage temperature range

- - 55°C ~ +85°C

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Output wave form / No. of pulses 1 rotation

2 pulses	
4 pulses	
8 pulses	
16 pulses	
⋮	⋮
512 pulses	

Mechanical construction

- A magnet holder with a magnet attached on its shaft is enclosed to place on the surface of one-chip IC. This IC is a programmable Hall-based rotary magnetic position sensor with incremental quadrature (A/B) and 12-bit digital output.

Additionally, the PUSH output indicates fast airgap changes between IC and magnet which can be used to implement a contactless pushbutton function.

Suggested Ordering Code

