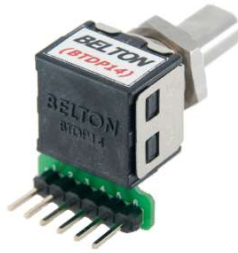


# HALL EFFECT POTENTIOMETER

## BTDP14 SERIES

### 14mm hall effect potentiometer

NEW



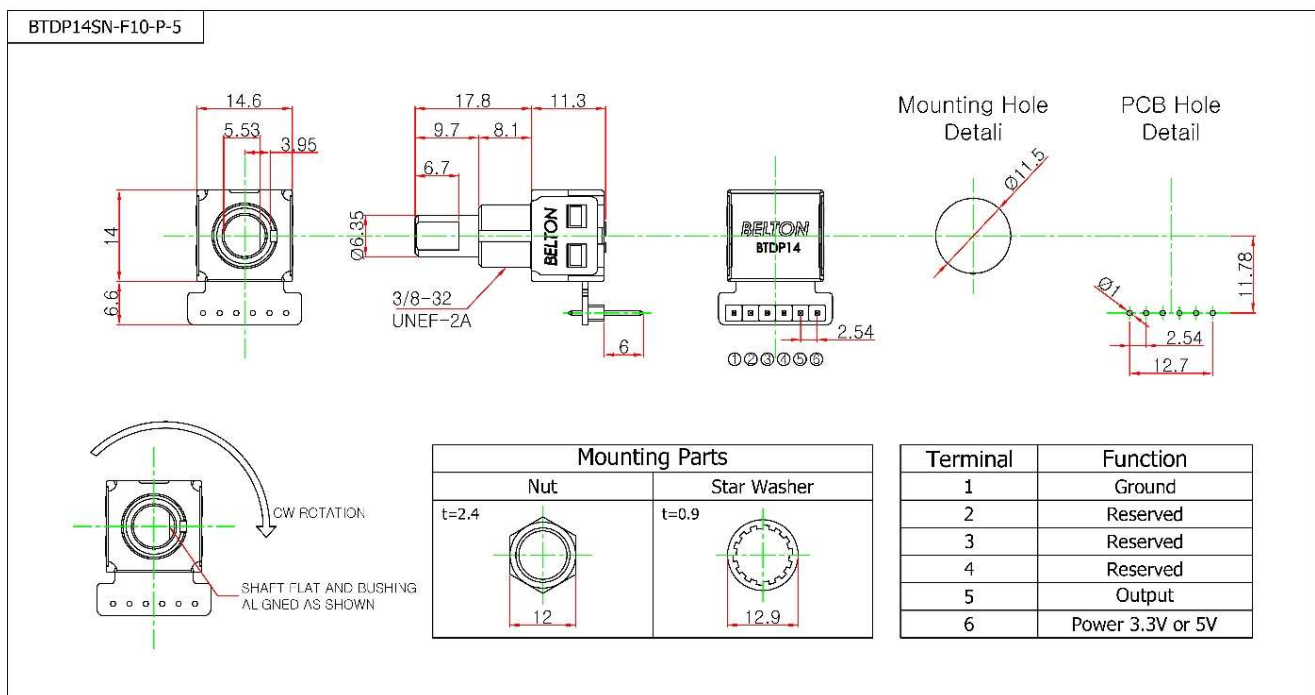
#### Features

- Plastic housing with Metal shaft
- 14 X 14 Economical Size
- Ratiometric analog output
- Debris resistant Hall effect sensor technology
- Over 1 million rotational cycles
- Custom output options

#### 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
- Potentiometer substitute with long life
- Agriculture & Construction engine speed control
- Rotary position sensor

#### Standard Dimensions



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### Electrical specifications

- Supplying voltage : DC 3.3V or DC 5V  $\pm$  10%
- Supplying current : 6mA  $\pm$  1mA Max.
- Resolution : 12 bits DAC output per Rotation
- Output : 0 – 3.3V or 5V (Analog Linear Taper)
- Continuous Power Dissipation : 50mW
- Electrical life : Over 1,000,000 cycles
- Output curve : Refer to the followings

### Mechanical specifications

- Rotational torque : 10 gf·cm  $\pm$  5 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.)

### 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°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

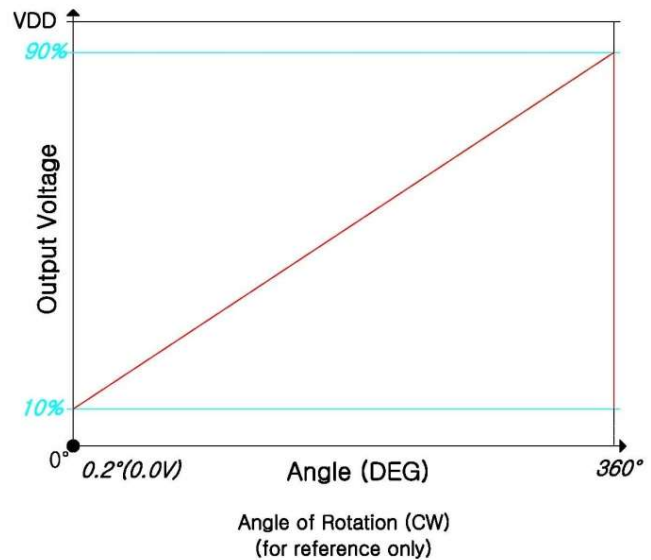
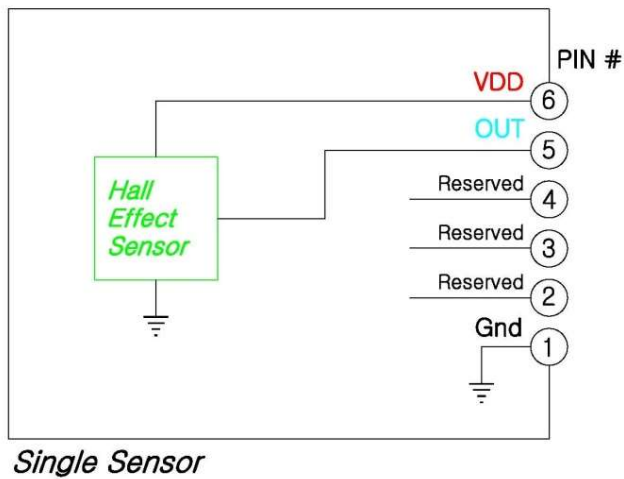
### Storage temperature range

- - 55°C ~ +85°C

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### Electrical schematic



### 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 a high-resolution 12-bit analog for contactless potentiometers.
- Also, this IC is a Hall-based rotary magnetic position sensor using planar sensors that convert the magnetic field component perpendicular to the surface of the chip into a voltage.

### Suggested Ordering Code

