Piezo Buzzers

B2PB Series

PRODUCT MANUAL

For your safety, read and follow the considerations written in the instruction manual, other manuals and Autonics website.

The specifications, dimensions, etc. are subject to change without notice for product improvement. Some models may be discontinued without notice.

Features

- Clear and loud sound : up to 98 ±8 dB (at 0.1m)
- Select between continuous or intermittent sound settings
- Mounting hole : Ø22/25 mm / Panel thickness: 6 mm

Safety Considerations

- Observe all 'Safety Considerations' for safe and proper operation to avoid hazards.
- ⚠ symbol indicates caution due to special circumstances in which hazards may occur.

⚠ Warning Failure to follow instructions may result in serious injury or death.

01. **Fail-safe device must be installed when using the unit with machinery that may cause serious injury or substantial economic loss. (e.g. nuclear power control, medical equipment, ships, vehicles, railways, aircraft, combustion apparatus, safety equipment, crime/disaster prevention devices, etc.)**
    Failure to follow this instruction may result in personal injury, fire, or economic loss.
02. **Do not use the unit in the place where flammable/explosive/corrosive gas, high humidity, direct sunlight, radiant heat, vibration, impact, or salinity may be present.**
    Failure to follow this instruction may result in fire or explosion.
03. **Do not disassemble or modify the unit.**
    Failure to follow this instruction may result in electric shock or fire.
04. **Check 'Connections' before wiring.**
    Failure to follow this instruction may result in electric shock or fire.
05. **Do not use this unit close to ears.**
    Failure to follow this instruction may result in injury.

⚠ Caution Failure to follow instructions may result in injury or product damage.

01. **Do not use the unit outdoors.**
    Failure to follow this instruction may result in shorten the life cycle of the unit
02. **Use the unit within the rated specifications.**
    Failure to follow this instruction may result in fire or product damage.
03. **When connecting the power input, use AWG 26-16 (0.30 to 1.25 mm^2)cable and tighten the terminal screw with a tightening torque of 0.4 to 0.6 N.m.**
    Failure to follow this instruction may result in fire or malfunction due to contact failure.
04. **Use dry cloth to clean the unit, and do not use water or organic solvent.**
    Failure to follow this instruction may result in electric shock or fire.

Cautions during Use

- Follow instructions in 'Cautions during Use'. Otherwise, It may cause unexpected accidents.
- 12 - 24 VDC⎓ power supply should be insulated and limited voltage/current or Class 2, SELV power supply device.
- Do not use this unit at below places.
  - Place where there is severe vibration or impact
  - Place where strong alkalis or acids are used
  - Place where there are direct ray of the sun
  - Place where strong magnetic field or electric noise are generated
- This unit may be used in the following environments.
  - Indoors (in the environment condition rated in 'Specifications')
  - Altitude max. 2,000 m
  - Pollution degree 2
  - Installation Category II

Ordering Information

This is only for reference, the actual product does not support all combinations.
For selecting the specified model, follow the Autonics website.

B2PB - ❶ ❷ - ❸

❶ Sound type
B1: Mixed
(Continuous sound / Intermittent sound)

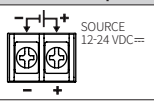
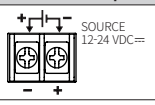
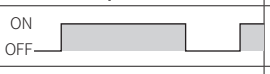
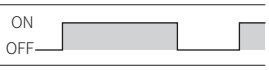
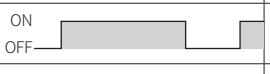
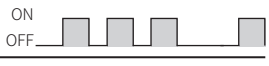
❷ Power supply
D: 12 -24 VDC⎓

❸ Operation indicator
No mark: Green
R: Red

Product Components

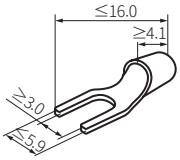
- Product
- Instruction manual

Connections and Operation Timing Chart

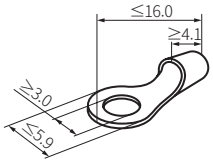
	Right direction power: continuous sound (beep ---)	Reverse direction power: intermittent sound (beep- beep-)
Connections		
Power supply		
Buzzer sound		
Operatin indicator		

Crimp Terminal Specifications

- Unit: mm, Use the crimp terminal of follow shape.
- AWG 22-16 (0.30 to 1.25 mm²)



Fork crimp terminal



Round crimp terminal

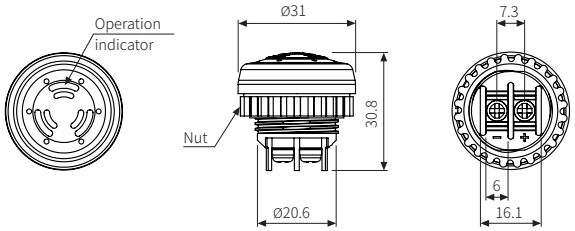
Specifications

Model	B2PB-B1D	B2PB-B1D-R
Power supply	12-24 VDC⎓	
Permissible voltage range	90 to 110 % of rated voltage	
Power consumption	≤ 0.6 W	
Current consumption	≤ 25 mA	
Sound pressure	98±8 dB (distance: 0.1 m) 01)	
Sound frequency	≈ 2.5 kHz	
Sound type 02)	Continuous sound, intermittent sound	
Mounting hole	Ø 22/25 mm compatible	
Operation indicator	Green	Red
Insulation resistance	≥ 1,000 MΩ (500 VDC⎓ megger)	
Dielectric strength	Between the charging part and the case: 500 VAC~ 50/60 Hz for 1 min	
Vibration	0.75 mm amplitude at frequency of 10 to 55 Hz in each X, Y, Z direction for 1 hour	
Vibration (malfunction)	0.75 mm amplitude at frequency of 10 to 55 Hz in each X, Y, Z direction for 10 min	
Shock	500 m/s² (≈ 50 G) in each X, Y, Z direction for 3 times	
Shock (malfunction)	147 m/s² (≈ 15 G) in each X, Y, Z direction for 3 times	
Ambient temperature	-15 to 55 °C, storage: -25 to 65 °C (no freezing or condensation)	
Ambient humidity	35 to 85 %RH, storage: 35 to 85 %RH (no freezing or condensation)	
Protection structure	IP65 (front, IEC standard)	
Material	Cap: PC, Body: PA6 (G15%)	
Tightening torque	0.4 to 0.6 N m	
Certification	CE UK EAC	
Unit weight (packaged)	≈ 18 g (≈ 305 g, 10 units)	

01) It is rated at power supply 24 VDC⎓. (sound pressure may be decreased when using 12 VDC⎓.)
02) Connect the power in the right direction: continuous sound (beep ---), Connect the power in the reverse direction: intermittent sound (beep- beep-)

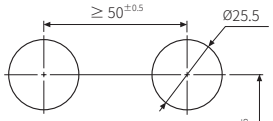
Dimensions

- Unit: mm, For the detailed drawings, follow the Autonics website.

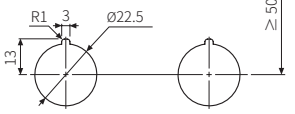


■ Panel cut-out

Installation hole: Ø25

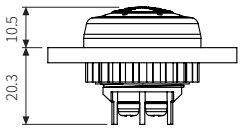


Installation hole: Ø22



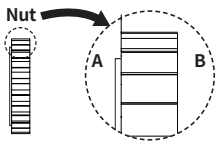
■ Panel mounting

- Panel thickness: ≤ 4 mm



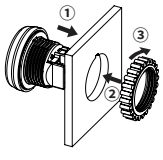
Panel Mounting

When cutting a hole of the panel to Ø25, the A side should be on the panel. When cutting a hole of the panel to Ø22, the B side should be on the panel.



■ Assembly sequence

: ① → ② → ③



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