

**Autonics**

Piezoelectric buzzer

**B2PB-B1D**

**INSTRUCTION MANUAL**



Thank you for choosing our Autonics product.  
Please read the following safety considerations before use.

**■ Safety Considerations**

※Please observe all safety considerations for safe and proper product operation to avoid hazards.

※Safety considerations are categorized as follows.

**▲Warning** Failure to follow these instructions may result in serious injury or death.

**▲Caution** Failure to follow these instructions may result in personal injury or product damage.

※The symbols used on the product and instruction manual represent the following

▲ symbol represents caution due to special circumstances in which hazards may occur.

**▲Warning**

**1. 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.

**2. Power must be insulated DC voltage.**  
Failure to follow this instruction may result in electric shock.

**3. Do not disassemble or modify this unit. Please contact us if it is required.**  
Failure to follow this instruction may result in electric shock or fire.

**4. Do not use this unit close to ears.**  
Failure to follow this instruction may result in injury.

**▲Caution**

**1. This unit shall not be used outdoors.**  
Failure to follow this instruction may result in shortening the life cycle of the product or electric shock.

**2. Please observe the rated specifications.**  
Failure to follow this instruction may result in shortening the life cycle of the product or electric shock.

**3. Please observe the rated power supply and do not supply AC power to the DC type product.**  
Failure to follow this instruction may result in damage to the product.

**4. In cleaning the unit, do not use water or organic solvent. And use dry cloth.**  
Failure to follow this instruction may result in electric shock or fire.

**5. Do not use this unit where there are flammable or explosive gas, humidity, direct ray the sun, radiant heat, vibration, impact etc.**  
Failure to follow this instruction may result in damage to the product or malfunction.

**■ Terminal Specification**



(unit: mm)

	A	B	C	D	Applicable wires
Forked	Min. 4.1	Max. 16.0	Min. 3.0	Max. 5.9	AWG 22-16
Round	Min. 4.1	Max. 16.0	Min. 3.0	Max. 5.9	(0.30~1.25mm <sup>2</sup> )

※The above specifications are subject to change and some models may be discontinued without notice.

※Be sure to follow cautions written in the instruction manual and the technical descriptions (catalog, homepage).

**■ Specifications**

Model	B2PB-B1D	B2PB-B1D-R
Power supply	12-24VDC±10%	
Current consumption	Max. 25mA	
Sound pressure	98 ±8dB (distance 0.1m)*1	
Sound frequency	Approx. 2.5kHz	
Sound type*2	Continuous sound, intermittent sound	
Mounting hole	For both Ø22 and Ø25	
Operation indicator	Green LED	Red LED
Insulation resistance	Over 1,000MΩ (at 500VDC megger)	
Dielectric strength	500VAC 50/60Hz for 1 minute (between all terminals and case)	
Vibration	Mechanical	0.75mm amplitude at frequency of 10 to 55Hz (for 1 min) in each X, Y, Z direction for 1 hour
	Malfunction	0.75mm amplitude at frequency of 10 to 55Hz (for 1 min) in each X, Y, Z direction for 10 min
Shock	Mechanical	500m/s <sup>2</sup> (50G) in X, Y, Z directions for 3 times
	Malfunction	147m/s <sup>2</sup> (15G) in X, Y, Z directions for 3 times
Environment	Ambient temp.	-15 to 55°C, storage: -25 to 65°C
	Ambient humi.	35 to 85%RH, storage: 35 to 85%RH
Protection	IP65 (front, IEC standard)	
Material	Cap: polycarbonate, body: polyamide 6	
Tightening torque	0.4 to 0.6N·m	
Approval	CE	
Weight*3	Approx. 305g (approx. 18g)	

※1: It is for power supply 24VDC. (Sound pressure may be decreased for using 12VDC.)

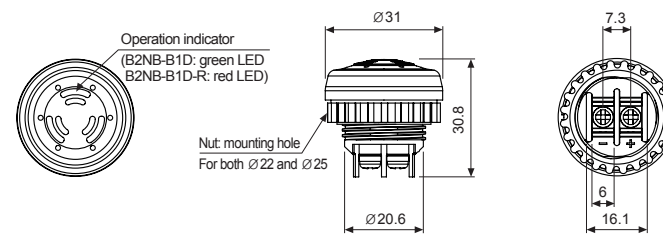
※2: To operate with continuous sound (beep—), connect the power in the right direction. To operate with intermittent sound (beep- beep-), connect the power in the reverse direction.

※3: The weight is for 10 units including packaging, the weight in parenthesis is for a single unit.

※Environment resistance is rated at no freezing or condensation.

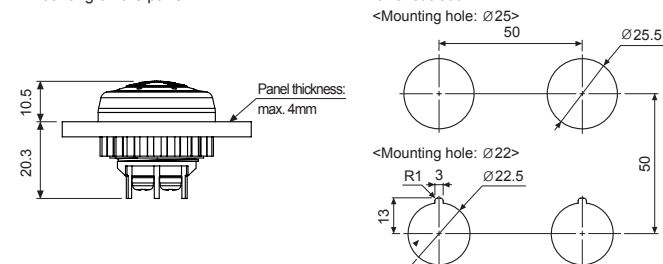
**■ Dimensions**

(unit: mm)



●Mounting on the panel

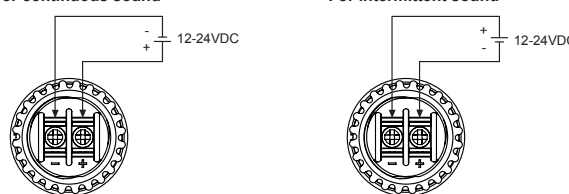
●Panel cut-out



**■ Connections**

●For continuous sound

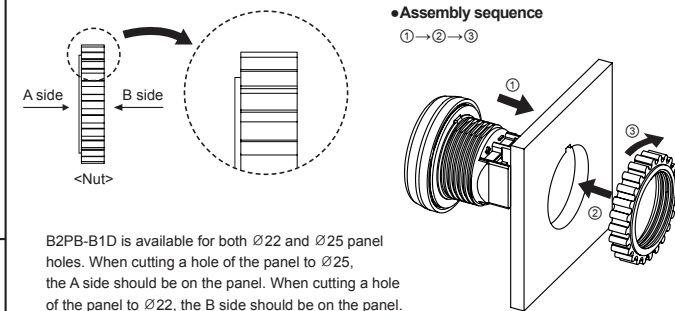
●For intermittent sound



**■ Operation**

	Power in the right direction (continuous sound)	Power in the reverse direction (intermittent sound)
Power supply	ON  OFF	ON  OFF
Buzzer sound	ON  OFF	ON  OFF
Operation indicator (green/red LED)	ON  OFF	ON  OFF

**■ Panel Mounting**



B2PB-B1D is available for both Ø22 and Ø25 panel holes. 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.

**■ Cautions during Use**

- Use this unit within the rated temperature and humidity.
- Do not tighten the nut with excessive force.
- Maintain voltage fluctuations in the power supply within specified range.
- Use AWG16(1.25mm<sup>2</sup>) wire and applicable crimp terminals to the terminal block.
- Do not use this unit at below places.
  - ①Place where there is severe vibration or impact
  - ②Place where strong alkalis or acids are used
  - ③Place where there are direct ray of the sun
  - ④Place where strong magnetic field or electric noise are generated
- This unit may be used in the following environments.
  - ①Indoors
  - ②Altitude max. 2,000m
  - ③Pollution Degree 2
  - ④Installation Category II

※Failure to follow these instructions may result in product damage.

**■ Major Products**

- Photoelectric Sensors
- Fiber Optic Sensors
- Door Sensors
- Door Side Sensors
- Area Sensors
- Proximity Sensors
- Pressure Sensors
- Rotary Encoders
- Connectors/Socket
- Switching Mode Power Supplies
- Control Switches/Lamps/Buzzers
- I/O Terminal Blocks & Cables
- Stepper Motors/Drivers/Motion Controllers
- Graphic/Logic Panels
- Field Network Devices
- Laser Marking System(Fiber, CO<sub>2</sub>, Nd:YAG)
- Laser Welding/Cutting System
- Temperature Controllers
- Temperature/Humidity Transducers
- SSRs/Power Controllers
- Counters
- Timers
- Panel Meters
- Tachometers/Pulse(Rate)Meters
- Display Units
- Sensor Controllers

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