

## Buzzer

## M2BJ-B



### 16-mm Diameter Panel-Mounted Buzzer Unit

- Four models offer eight different types of sounds, plus two modes newly added to the high-sound models
- Intermittent or continuous sound selected by jumper setting
- Three supply voltages: 6 VAC/VDC and 12 to 24 VAC/VDC
- Jumper storage provided at bottom of Unit
- Complements the A16 range of Pushbuttons, Selector Switches, and Key Switches.



### Ordering Information

#### ■ List of Models

Item		Standard sound				High sound	
							
Sound	w/jumper	Intermittent	Intermittent (short)	Intermittent (high-pitched)	Intermittent (short, high-pitched)	Intermittent (high-pitched)	Intermittent (short)
	w/o jumper	Continuous	Intermittent (long)	Continuous (high-pitched)	Intermittent (long, high-pitched)	Continuous	Intermittent (long)
Supply voltage	6 VAC/VDC	M2BJ-B06	M2BJ-B06A	M2BJ-B06B	M2BJ-B06C	M2BJ-BH06D	M2BJ-BH06E
	12 to 24 VAC/VDC	M2BJ-B24	M2BJ-B24A	M2BJ-B24B	M2BJ-B24C	M2BJ-BH24D	M2BJ-BH24E
	12 to 24 VDC	M2BJ-B24-D	---	M2BJ-B24B-D	---	M2BJ-BH24D-D	M2BJ-BH24E-D

**Note:** High-sound models incorporate an LED, which lights when the Buzzer sounds.

# Specifications

## ■ Standard-sound Models

### 6-V Models

Model	M2BJ-B06		M2BJ-B06A		M2BJ-B06B		M2BJ-B06C	
Rated voltage	6 VAC/VDC							
Sound pressure (See note.)	Continuous sound: 80 dB (phons) min.							
Driving frequency	2±0.5 kHz				4±0.5 kHz			
Intervals	190 times/minute±10%		Long: 55 times/minute±10% Short: 700 times/minute±10%		190 times/minute±10%		Long: 55 times/minute±10% Short: 700 times/minute±10%	
Current consumption	DC	7 mA max.				20 mA max.		
	AC	20 mA max.						
Inrush current	1 A max.							
Life expectancy	1,000 hours min.							
Insulation resistance	100 MΩ min. (between ground and current-carrying parts)							
Dielectric strength	1,000 VAC for 1 minute (between grounds)							
Ambient temperature	Operating: -10°C to 55°C (no icing or condensation) Storage: -25°C to 65°C (no icing or condensation)							
Humidity	35% to 85%							
Weight	Approx. 9 g							

**Note:** The figure for sound pressure given above is for measurement at a distance of 0.1 m at the rated voltage.

### 12 to 24-V Models

Model	M2BJ-B24		M2BJ-B24A		M2BJ-B24B		M2BJ-B24C		M2BJ-B24-D		M2BJ-B24B-D		
Rated voltage	12 to 24 VAC/VDC								12 to 24 VDC				
Sound pressure (See note.)	Continuous sound: 80 dB (phons) min.												
Driving frequency	2±0.5 kHz				4±0.5 kHz				2±0.5 kHz, 4±0.5 kHz				
Intervals	190 times/minute ±10%		Long: 55 times/minute± 10% Short: 700 times/minute ±10%		190 times/minute ±10%		Long: 55 times/minute± 10% Short: 700 times/minute ±10%		190 times/minute±10%				
Current consumption	DC	7 mA max.				20 mA max.				7 mA max.		20 mA max.	
	AC	20 mA								---		---	
Inrush current	1 A max.												
Life expectancy	1,000 hours min.												
Insulation resistance	100 MΩ min. (between ground and current-carrying parts)												
Dielectric strength	1,000 VAC for 1 minute (between grounds)												
Ambient temperature	Operating: -10°C to 55°C (no icing or condensation) Storage: -25°C to 65°C (no icing or condensation)												
Humidity	35% to 85%												
Weight	Approx. 9 g												

**Note:** The figure for sound pressure given above is for measurement at a distance of 0.1 m at the rated voltage.

## ■ High-sound Models (LED is incorporated)

Model	M2BJ-BH06D	M2BJ-BH24D	M2BJ-BH06E	M2BJ-BH24E	M2BJ-BH24D-D	M2BJ-BH24E-D
Rated voltage	6 VAC/VDC	12 to 24 VAC/VDC	6 VAC/VDC	12 to 24 VAC/VDC	12 to 24 VDC	
Sound pressure (See note.)	70 to 100 dB (phons)					
Driving frequency	2.8±0.5 kHz					
Intervals	Approx. 190 times/min.		Long: Approx. 55 times/min. Short: Approx. 700 times/min.		Approx. 190 times/min.	Long: Approx. 55 times/min. Short: Approx. 700 times/min.
Current consumption	DC	50 mA max.				
	AC	100 mA max.				---
Inrush current	1 A max.				---	
Life expectancy	1,000 hours min.					
Insulation resistance	100 MΩ min. (between ground and current-carrying parts)					
Dielectric strength	1,000 VAC for 1 minute (between grounds)					
Ambient temperature	Operating: -10°C to 55°C (no icing or condensation) Storage: -25°C to 65°C (no icing or condensation)					
Humidity	35% to 85%					
Weight	Approx. 13 g					

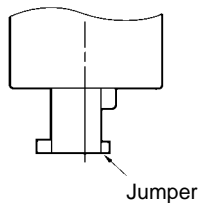
**Note:** The sound pressure can be adjusted. The figure for sound pressure given above is for measurement at a distance of 0.1 m at the rated voltage.

## Operation

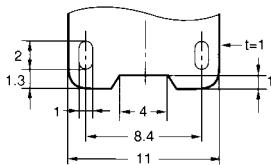
### ■ Contact Form

All Models

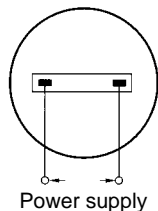
(Standard and High-sound Models)



Terminal Hole Dimensions



Terminal Arrangement (Bottom view)

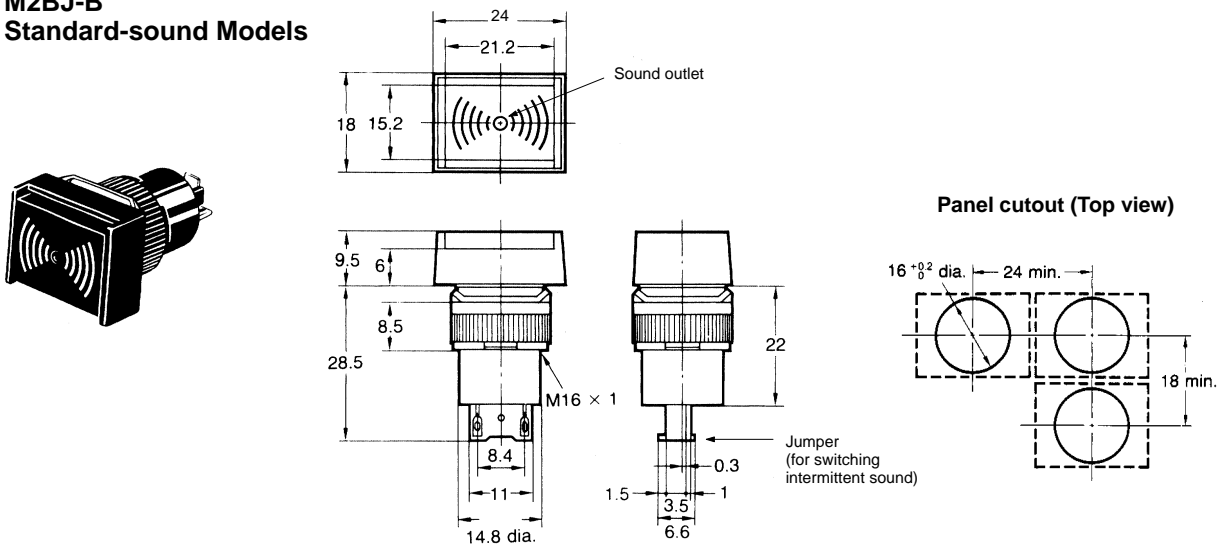


**Note:** There is no +/- polarity.

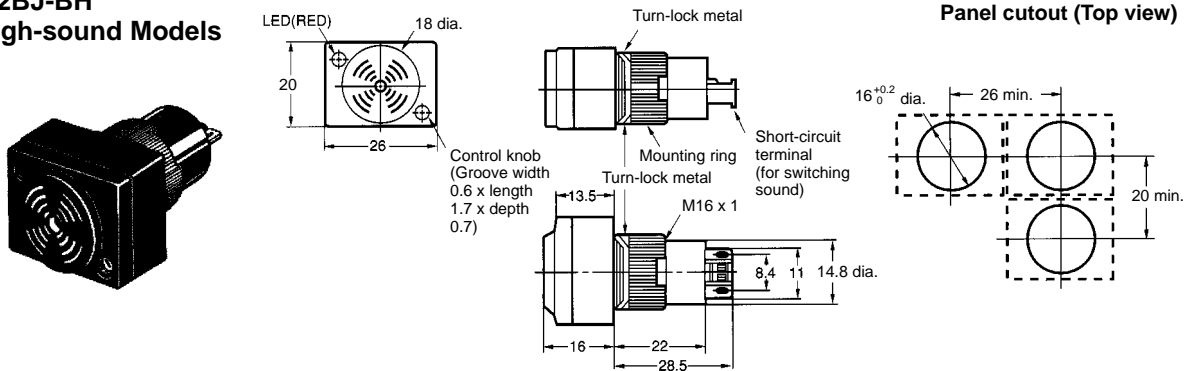
# Dimensions

**Note:** All units are in millimeters unless otherwise indicated.

## M2BJ-B Standard-sound Models



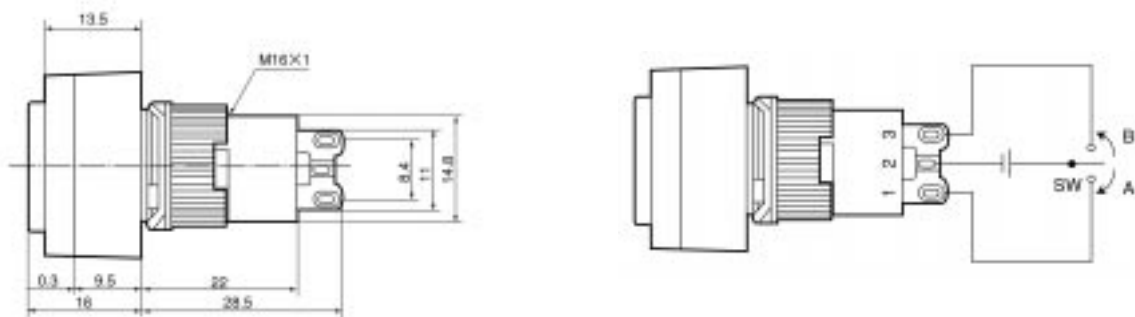
## M2BJ-BH High-sound Models



**Note:** Recommended panel thickness: 1.0 to 3.2 mm.

## M2BJ-BH24D-DA External Signal Selection Model

An external signal selection model is also available. With this model, it is possible to switch between continuous and intermittent sound using an external signal instead of the jumper.



SW:  
When A direction is ON (terminals 1, 2 ON): intermittent sound  
When B direction is ON (terminals 2, 3 ON): continuous sound

**Note:** Ensure that voltage is not applied simultaneously between terminals 1, 2, and 3.

## Precautions

### ■ Correct Use

#### Application Precautions

When power is supplied, there is an inrush current of up to 1 A. Confirm that this will not adversely affect operation or damage any devices before using the M2BJ in application. There is no inrush current with DC-only models (M2BJ-□□□□-D).

#### Wiring

Perform soldering promptly and correctly at 30 W within 5 seconds or at a temperature of 240°C within 3 seconds. Wait for one minute after soldering before exerting any external force on the solder.

If flux is required, use non-corrosive rosin liquid. Ensure that the flux does not penetrate the inside of the case.

In order to improve the reliability of the soldering and to prevent pattern burnout, loop the wire through the terminal hole before soldering.

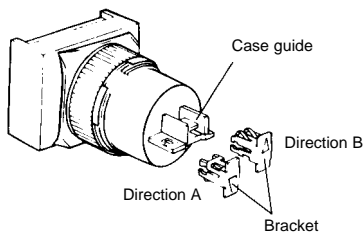
In order to fit the terminal holes, use lead wires with a nominal cross-sectional area of 0.25 mm<sup>2</sup> max.

#### Operating Environment

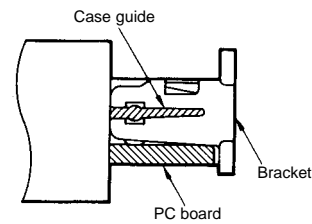
Do not use the Buzzer in environments where foreign substances may enter the sound outlet. Otherwise, the Buzzer may not sound.

#### Short-circuiting Jumper (M2BJ-BTH)

The Buzzer sounds continuously or intermittently depending on how the short-circuiting bracket is attached to the case guide. When the bracket is attached with the triangle on it facing direction A (PC board side), the Buzzer sounds intermittently.



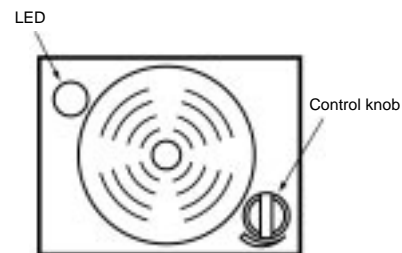
To produce continuous sounds, attach the bracket to the case guide so that the triangle on the bracket faces direction B.



#### Volume Adjustment Mechanism (M2BJ-BH Only)

Adjust the volume by turning the control knob on the face of the Buzzer using a screwdriver. Turn to the right to increase the volume and turn to the left to decrease the volume.

Turn the control knob with a torque of 0.98 to 2.94 mN·m.



**ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.**

To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.