# B200S
# Intelligent Sounder Base

This model is compatible with Sytem Sensor Models MDL, MDL3R, MDLW, MDL3W and SYNC-1

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## Specifications

| | |
|---|---|
| Base Diameter: | 6.875" (17.46 cm) |
| Base Height (less sensor): | 2.0" (5.08 cm) |
| Weight: | 0.50 lb. (227 gm) |
| Operating Temperature Range: | 32° to 120°F (0° to 49°C) |
| Operating Humidity Range: | 10% to 93% relative humidity (non-condensing) |
| **External Supply Electrical Ratings** | |
| External Supply Voltage: | 16 to 33 VDC (VFWR) |
| Standby Current: | 500 µA maximum |
| Alarm Current: | 35 mA maximum (at high volume setting)<br>15 mA maximum (at low volume setting) |
| **SLC Electrical Ratings** | |
| SLC Operating Voltage: | 15 to 32 VDC |
| SLC Standby Current: | 300 µA maximum |
| **Sound Output** | |
| High Volume: | Greater than 85 dBA minimum measured in a UL reverberant room at 10 feet, 24 Volts (in continuous tone) |
| Low Volume: | Greater than 75 dBA minimum measured in a UL reverberant room at 10 feet, 24 Volts (in continuous tone) |

## BEFORE INSTALLING

Please read the System Sensor Smoke Detector Application Guide, which provides detailed information on sensor spacing, placement, zoning, wiring, and special applications. Copies of this manual are available from System Sensor. NFPA 72 and NEMA guidelines should be observed.

**NOTICE**: This manual should be left with the owner/user of this equipment.

**IMPORTANT**: The detector used with this base must be tested and maintained regularly following NFPA 72 requirements. The detector should be cleaned at least once a year.

## GENERAL DESCRIPTION

The B200S sounder base is used with System Sensor 200-Series sensor heads or equivalent. For a list of compatible sensors, refer to the System Sensor website at www.systemsensor.com. Refer to the appropriate manual for more information on sensors.

The B200S sounder base was designed specifically to meet the needs of dwelling unit applications. It offers maximum flexibility in configuration and operation to meet or exceed the requirements of UL268 and UL464.

The sounder base is capable of producing a variety of tone patterns, including the distinctive three-pulse temporal pattern (ANSI Temporal 3) fire alarm signal now required by NFPA 72 for commercial and residential applications.

The B200S can be commanded by the Fire Alarm Control Panel to adopt the address of the attached sensor head, but as a unique device type on the loop. By using the address, the fire alarm control panel can command an individual sounder base to activate, or a group of sounders in a suite or other multi-room configuration. The command set from the panel can be tailored to the specific event, allowing selection of volume, tone, and group. The device offers two volume levels: 75 dBA nd 85 dBA. The available tones are Continuous, ANSI Temporal 3, ANSI Temporal 4, and March Time. In addition, some fire alarm panels will offer the ability to command a custom tone pattern. Refer to the appropriate fire alarm control panel manual for more information.

In addition, the B200S is equipped with the circuitry to recognize the System Sensor synchronization protocol, enabling the sounder base to be used as a component of the general evacuation signal – producing an NFPA 72 compliant Temporal 3 pattern in synchronization with other System Sensor notification devices. This requires connection to a power supply capable of generating the System Sensor synchronization pulses. In this scenario, the sounder bases will have the ability to synchronize with other System Sensor horns, horn/strobes, and chimes using the same power source.

The sounder base is intended for use with intelligent systems. The sounder base requires an external 24 VDC power supply. The connections for the external power supply and the communication loop are isolated to prevent electrical interaction between them. Refer to the panel manual for maximum allowable number of units per loop.

**NOTE:** For NFPA72 Installations, the Temporal 3 tone at high volume should be used for public mode evacuation. The use of other tone styles and low volume level will be at the discretion of the local Authority Having Jurisdiction (AHJ).

**NOTE**: When not used as a supplementary evacuation system, the external 24 VDC supply shall be treated as a component of the main power supply system and shall fall under the requirements of the main power supply system per NFPA 72.

## WIRING GUIDELINES

All wiring must be installed in compliance with the National Electrical Code and the local codes having jurisdiction and must not be of such length or wire size which would cause the base to operate outside of its published specifications. The conductors used to connect smoke sensors to control panels and accessory devices should be color coded to reduce the likelihood of wiring errors. Improper connections can prevent a system from responding properly in the event of a fire.

Wire sizes up to 12 AWG (2.5 $mm^2$) may be used with the base. The sounder base will be shipped with the screw terminals set for 14 AWG wiring. If 12 AWG wire is to be used, back out the screws to allow the wire to fit beneath the clamping plates.For best system performance, the power (+ and -) wires and the communication circuit wires should be twisted air or shielded cable installed in a separate grounded conduit to protect the communication loop from electrical interference.

**FIGURE 1:**

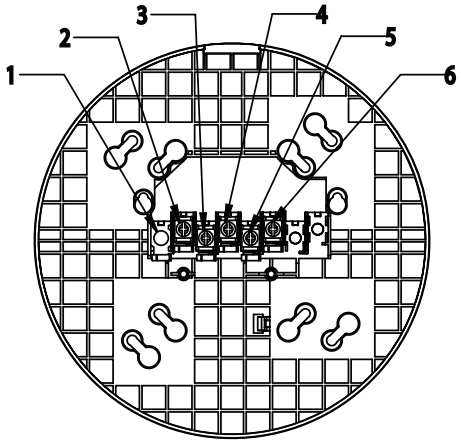


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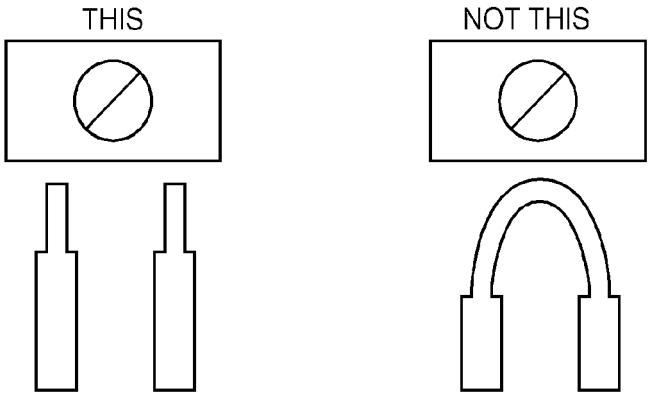
**FIGURE 2:**

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Make wire connections by stripping about 3/8" of insulation from the end of the wire. Then, slide the bare end of the wire under the appropriate clamping plate (See Figure 1), and tighten the clamping plate screw. Do NOT loop the wire under the clamping plate (See Figure 2) The wiring diagram for a typical 2-wire intelligent system is shown in Figure 4.

**⚠CAUTION**

For system monitoring - for terminals 2, 3, 4, and 5, do not use looped wire under terminals. Break wire run as shown in Figure 2 to provide monitoring of connections.

### B200S TERMINALS

No. Function

1. Not Used
2. Positive (+) Comm. Line In and Out
3. Negative (-) Comm. Line In and Out
4. External Supply Positive (+)
5. External Supply Negative (-)
6. Remote Annunciator

### MOUNTING

Mount the B200S mounting plate directly to an electrical box. The plate will mount directly to 4" square, 4" octagon, single gang and double gang junction boxes.

1. Connect field wiring to terminals, as shown in Figure 1 and 2.
2. Attach the mounting plate to the junction box as shown in Figure 3.
3. To mount the sounder base, hook the tab on the sounder base to the groove on the mounting plate.
4. Then, swing the sounder base into position to engage the pins on the product with the terminals on the mounting plate.
5. Secure the sounder base by tightening the mounting screws.
6. Install a compatible smoke sensor as described in the installation manual for the sensor.

### TESTING AND MAINTENANCE

Sensors and bases must be tested after installation and as an integral part of a periodic maintenance program. Test the B200S as follows:

NOTE: Before testing, notify the proper authorities that the smoke sensor system is undergoing maintenance and, therefore, will be temporarily out of service. Disable the system undergoing maintenance to prevent unwanted alarms.

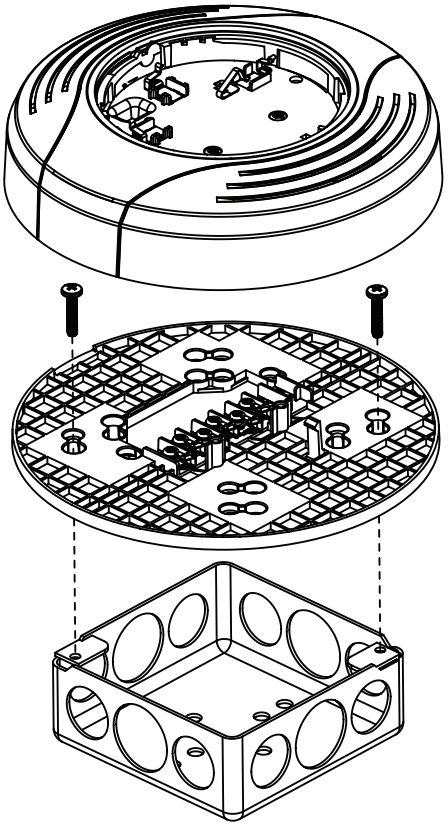
1. Via the fire alarm control panel, command the individual B200S to activate using the associated sensor address. That sounder base should sound in approximately five seconds.
2. Via the fire alarm control panel, command all B200S sounder bases to activate using group communication to all associated addresses. All devices on the loop should sound, and if a temporal tone is commanded, the tones can be synchronized to each other.

NOTE: Synchronization requires a power supply capable of producing the System Sensor synchronization pulses.

When performing maintenance on connected smoke sensors, carefully note the location and address of each removed sensor. When re-installed, the B200S will confirm that address of the sensor matches the address stored in the sounder base memory. If there is a mismatch, this will be communicated to the fire alarm control panel and the sounder base can be commanded to chirp at regular intervals until the correct head is installed.

If a replacement head is installed or address changes are required, the mismatch may be resolved at the panel by commanding the B200S sounder base to re-enter its address learning mode and adopting the address of the new sensor.

**FIGURE 3: MOUNTING**



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