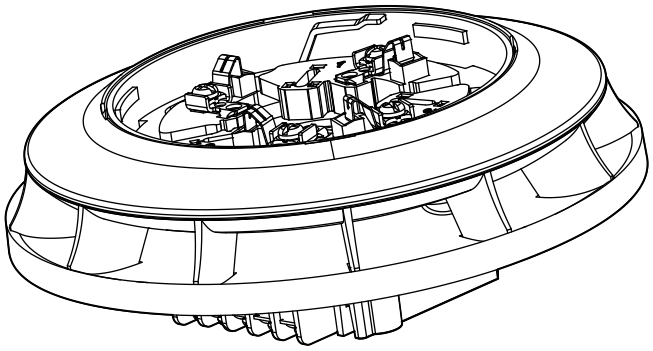
# KI-ABLT Low Frequency Sounder Base Installation Sheet



## Description

The KI-ABLT sounder base adds alarm signaling capability to compatible single-function smoke detectors and combination smoke/CO detectors. See “Specifications” on page 3 for compatible detectors.

The KI-ABLT sounder base is UL listed as a “Low Frequency Sounder” per UL 464 and can be used for sleeping area applications.

The KI-ABLT sounder base is field-configurable for a low dB or high dB output, and for fire alarm mode (T3) or fire-plus-CO alarm mode (T3/T4). See Figure 1.

In fire alarm mode, the KI-ABLT generates the required fire alarm signal and uses a separate synchronization module and polarity reversal relay for signal synchronization. See Figure 2.

In fire-plus-CO-alarm mode, the KI-ABLT uses a T3/T4 module to generate and to synchronize the required fire alarm and CO alarm signals. See Figure 3.

**Note:** The KI-ABLT sounds whichever signal pattern is placed on its input by the T3/T4 module. The KI-ABLT sounds a steady signal when it is activated and the T3/T4 module is not activated.

For application and programming details, refer to the control unit documentation.

## Installation

Install and wire this device in accordance with applicable national and local codes, ordinances, and regulations.

**Cautions**

- To prevent accidentally alarming the system, disconnect the signaling line circuit (SLC) from the control unit before connecting this device.
- Electrical supervision requires that you break the wire run at each terminal. Do not loop the field wires around the terminals.
- Equipment damage hazard. Overtightening the screw terminals can damage the terminal and make wire connections less secure. Tighten screws firmly, but do not overtighten.

**Notes**

- Configure all KI-ABLT sounder bases on the same signal riser for the same output mode. All MODE jumpers installed or all MODE jumpers removed.
- To determine where to locate the sounder base, refer to the detector installation instructions.
- In sleeping area applications, configure the sounder base for a high dB output.

**To install the sounder base:**

1. Configure the sounder base. See Figure 1.

   To select a low dB output, remove the VOLUME jumper. To select a high dB output, install the VOLUME jumper.

   To select fire-plus-CO operation, remove the MODE jumper. To select fire alarm operation, install the MODE jumper.

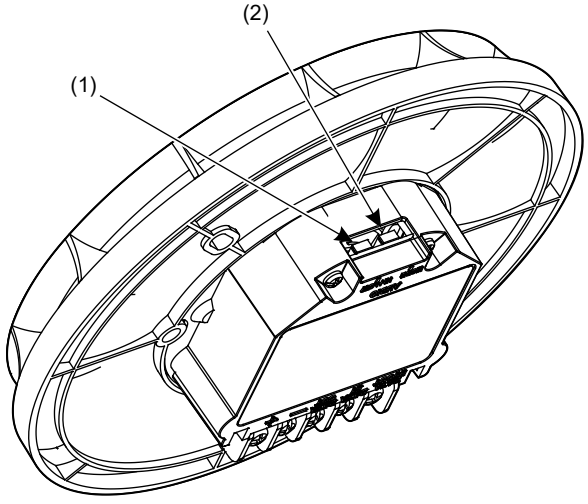
2. Connect the field wiring to the terminals. Observe the signal polarity of the signal riser (plus to minus and minus to plus). See Figure 2 and Figure 3.

3. Attach the base to the electrical box. See Figure 4. Do not overtighten the screws.

   If you are using the AB4G-SB surface mount box, make sure to install a reinforcing plate at each knockout used. Reinforcing plates are included with the AB4G-SB. See Figure 5.

4. Position the trim ring using the alignment marks, press the trim ring onto the base plate, and then turn the trim ring slightly in either direction until the tabs lock.

**Figure 1: Jumper configuration**

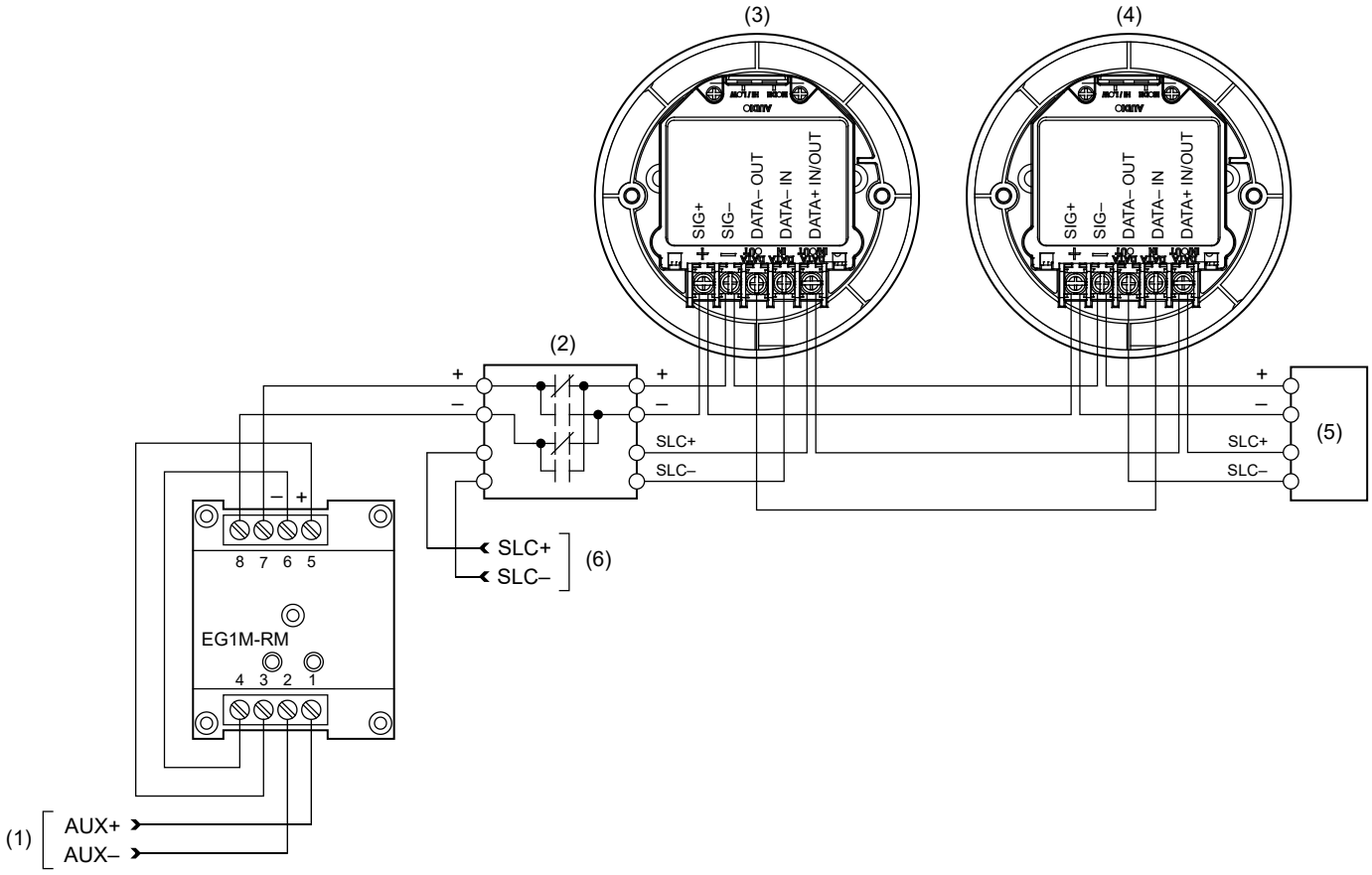



(1) VOLUME jumper. Installed is high dB; removed is low dB.
(2) MODE jumper. Installed is fire alarm; removed is fire-plus-CO alarm.

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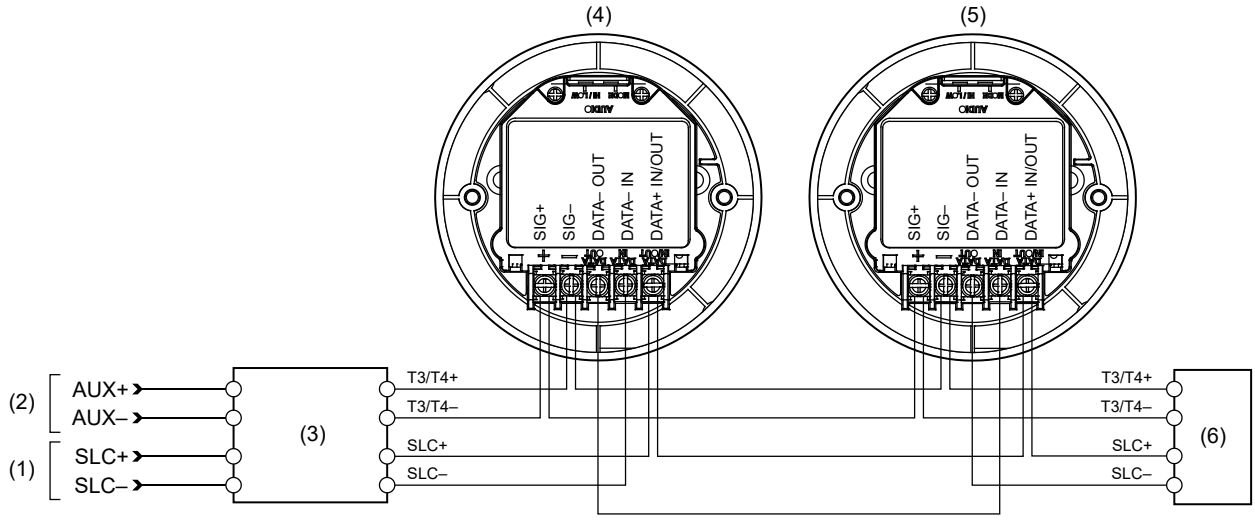
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**Figure 2: Typical synchronized sounder base circuit (fire alarm mode)**




(1) From a 24 VDC auxiliary power supply that is UL/ULC Listed for fire protective signaling systems.
(2) Polarity reversal relay module. Polarity shown in the normal state. For VM/VS systems, use a GSA-CRR or a GSA-MCRR module. For FX intelligent systems, use an FX-RLY module.
(3) First KI-ABLT on the AUX riser. MODE jumper installed.
(4) Last KI-ABLT on the AUX riser. MODE jumper installed.
(5) AUX riser supervision circuit. For VM/VS systems, use a GSA-RM1 or a GSA-MRM1 module. For FX intelligent systems, use an FX-NAC module.
(6) From the control unit signaling line circuit controller.

**Figure 3: Typical synchronized sounder base circuit (fire-plus-CO mode)**




(1) From the control unit signaling line circuit controller.
(2) From a 24 VDC auxiliary power supply that is UL/ULC Listed for fire protective signaling systems.
(3) Compatible T3/T4 module. Polarity shown in the normal state. For VM/VS systems, use a GSA-T3T4 module. For FX intelligent systems, use an FX-T3T4 module.
(4) First KI-ABLT on the T3/T4 riser. MODE jumper removed.
(5) Last KI-ABLT on the T3/T4 riser. MODE jumper removed.
(6) T3/T4 riser supervision circuit. For VM/VS systems, use a GSA-RM1 or GSA-MRM1 module. For FX intelligent systems, use an FX-NAC module.

**Figure 4: Installing the KI-ABLT**

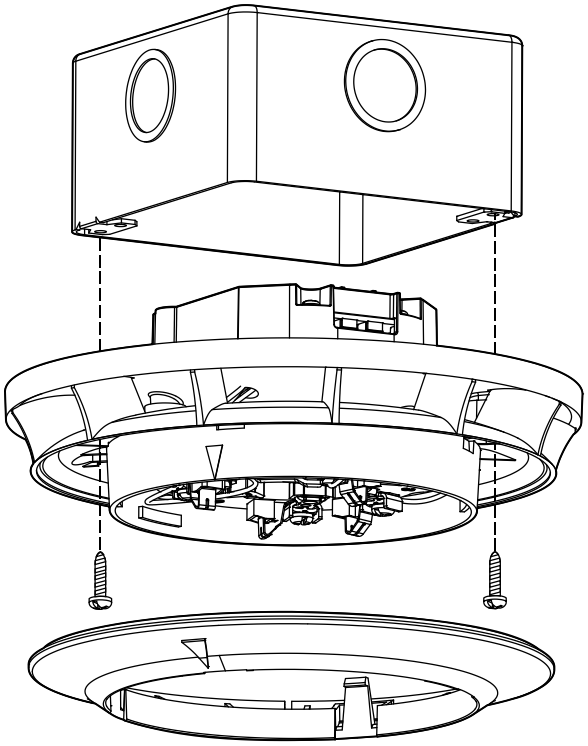
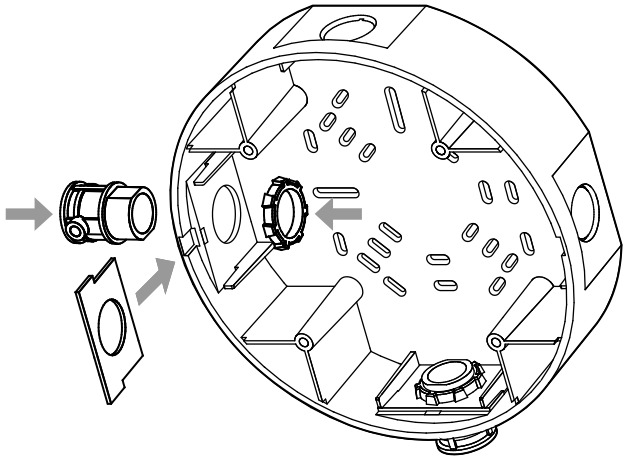


**Figure 5: Installing reinforcing plates on the AB4G-SB box**



## Specifications

| | |
|---|---|
| Voltage | 16 to 33 VDC (24 VDC nominal) |
| Current | |
| Operating | See Table 1 and Table 2 |
| Supervisory | 6 mA |
| Sound level output | See Table 4, Table 5, and Table 6 |
| Resonant frequency | 520 Hz ±10% |
| Audible directional characteristics | See Table 3 |
| Output modes | |
| Fire | T3 temporal |
| Fire-plus-CO [1] | T3 or T4 temporal |
| Default configuration | |
| Mode | Fire |
| Volume | High dBA |
| Wire size | 12 to 18 AWG (1.0 to 4.0 mm²) |
| Screw torque | |
| Base mounting | 18 lbf-in (2.0 N·m) max. |
| Terminal | 12 lbf-in (1.4 N·m) max. |
| Base diameter | 6.8 in. (173 mm) |
| Base height from box | 1.4 in. (35 mm) |
| Compatible detectors | All KI Series and KIR Series detectors |
| Compatible electrical boxes | AB4G-SB surface box<br>4 in. square box, 2-1/8 in. (54 mm) deep;<br>Standard European 100 mm² box |
| Operating environment | |
| Temperature | 32 to 120°F (0 to 49°C) |
| Relative humidity | 0 to 93% noncondensing |

[1] A compatible T3/T4 module is required when the KI-ABLT output mode is configured for fire-plus-CO.

**Table 1: Operating current (mA RMS) [1]**

| Signal | Voltage | Low dBA | High dBA |
|---|---|---|---|
| TC3 | 16 VDC | 76.0 | 92.0 |
| | 24 VDC | 76.4 | 76.0 |
| | 33 VDC | 85.6 | 93.6 |
| TC4 | 16 VDC | 112.8 | 107.2 |
| | 24 VDC | 148.0 | 150.0 |
| | 33 VDC | 125.6 | 150.8 |
| Constant | 16 VDC | 75.2 | 143.0 |
| | 24 VDC | 76.0 | 92.0 |
| | 33 VDC | 92.4 | 97.0 |

[1] UL/ULC ratings

**Table 2: Alarm current for battery calculations (mA)**

| Signal | Low dBA | High dBA |
|---|---|---|
| TC3/TC4 | 35 | 92 |
| TC4 only | 32 | 45 |
| Steady | 53 | 143 |

**Table 3: Audible directional characteristics [1]**

| Angle (degrees) | Change in output sound pressure level |
|---|---|
| 90 (ref) | 0 dBA (ref) |
| 18 and 162 | −3 dBA |
| 2 and 178 | −6 dBA |

[1] ULC anechoic room

**Table 4: Sound level output per CAN/ULC-S525 (anechoic)**

| Signal | Low dBA | High dBA [1] |
|---|---|---|
| TC3 | 83.3 | 87.4 |
| TC4 | 82.6 | 86.8 |
| Steady | 83.4 | 87.9 |

[1] The high dBA setting meets the minimum dBA requirement for CAN/ULC-S525.

**Table 5: Sound level output per UL 268, UL 521, UL 2075, CAN/CSA 6.19 (reverberant)**

| Signal | Low dBA | High dBA [1] |
|---|---|---|
| TC3 | 76.3 | 80.8 |
| TC4 | 73.0 | 77.4 |
| Steady | 80.9 | 85.3 |

[1] For NFPA 72 and NFPA 720 applications, the high dBA settings can be used for public mode evacuation.

**Table 6: Sound level output per UL 464 (reverberant)**

| Signal | Low dBA | High dBA [1] |
|---|---|---|
| TC3 | 70.3 | 74.8 |
| TC4 | 67.0 | 71.4 |
| Steady | 74.9 | 79.3 |

[1] For NFPA 72 and NFPA 720 applications, the high dBA settings can be used for public mode operation.

## Regulatory information

| | |
|---|---|
| UL and ULC rating | Regulated 24 DC |
| Environment class | Indoor, dry |
| FCC compliance | This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. |
| Industry Canada compliance | This Class A digital apparatus complies with Canadian ICES-003. |

## Contact information

For contact information, see www.kidde-esfire.com.



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