

INTELLIGENT BASES

Standard, Relay, Isolator, Sounder, and Low Frequency Sounder Bases

To meet local code and application requirements, Silent Knight® offers standard 4" and 6" bases, as well as specialty base designs including relay, isolator, sounder and low frequency sounder bases that are UL listed for low frequency operation and comply with NFPA 72 requirements for sleeping spaces for the new SK-W Series of addressable detectors as well as previous generations.

The standard 4" and 6" bases offer a plug-in detector base intended for use in intelligent systems, with screw terminals provided for power (+ and -), and remote annunciator connections. Communication takes place over the power (+ and -) lines. The 4" base offers a compact design while the 6" base provides compatibility with a wider range of junction boxes.

The specialty bases support application driven requirements. These bases employ a separate mounting plate that installs on various junction box sizes to eliminate unsightly surface-mount boxes. The mounting plate enables pre-wiring of all connections to speed and simplify installation.

Relay bases (B224RB-WH/B224RB-IV) provide one form-C contact relay for control of auxiliary functions, such as door closure and elevator recall. The relay can operate in two different modes (short and long delay). The activation time for the short delay is 60-100 milliseconds, while the activation time for the long delay is 6-10 seconds. A shunt with pin headers, located on the base PC board, is used to set the delay timing.

Isolator bases (B224BI-WH/B224BI-IV) allow the Signaling Line Circuit (SLC) loop to operate under fault conditions created from a short circuit preventing an entire communication loop from being disabled. The base isolates the section of the loop containing the short circuit from the remainder of the circuit and automatically restores when the fault is corrected.

Sounder and low frequency (-LF) sounder bases are designed for new and existing dwelling unit applications. They offer maximum flexibility in installation, configuration, and operation to meet or exceed UL 268 and UL 464 requirements. The low frequency sounder bases are designed to meet the NFPA 72 sleeping space requirement to produce a fundamental frequency of 520 Hz +/- 10% with a square wave or its equivalent. Studies show that a lower frequency, centered around 520 Hz, is the most ideal to wake sleeping occupants, even those with mild to severe hearing loss.



B300-6 Standard 6" Base (White)



B300-6-IV Standard 6" Base (Ivory)



B200S-WH Sounder Base (White)



B200S-LF-WH Low Frequency Sounder Base (White)



B501-WHITE Flangeless 4" Base (White)



B501-BL Flangeless 4" Base (Black)

FEATURES AND BENEFITS

- Bases enable quick and secure detector plug-in
- SEMS Screws provide easy wiring connection
- UL 268 compliant
- Support for 12-24 AWG provides installation flexibility
- Multiple base formats meet application requirements
- Standard white color with ivory and black options
- Mechanical locking feature restricts removal of attached sensor head
- Specialty Base Features:
 - Pre-wired mounting plate simplifies installation
 - Application driven feature sets
- Sounder bases both UL268 and UL464 compliant

The B200S sounder and LF sounder bases (B200S-WH/B200S-IV/B200S-LF-WH/B200S-LF-IV) adopt the same address as the detector, but use a unique device type on the loop. The Fire Alarm Control Panel (FACP) can use that address to command an individual sounder – or a group of sounders – to activate. The command set from the FACP can be tailored to multiple event-driven tone outputs allowing selection of volume (75 or 85 dBA), tone (ANSI Temporal 3, ANSI Temporal 4, or March Time) and group. In addition, some FACPs will enable custom tone patterns. The B200S series sounder bases recognize the System Sensor synchronization protocol. This enables them to be used as a component of the general evacuation signal – along with other System Sensor AV appliances – when connected to a power supply or FACP output capable of generating the System Sensor synchronization pulses.

The B200SR sounder and LF sounder bases (B200SR-WH/B200SR-IV/B200SR-LF-WH/B200SR-LF-IV) are fully compatible with existing B501BH Series sounder base installations. The device enables users to select one of two B501-supported tones (ANSI Temporal 3 or Continuous) through a jumper.

PRODUCT LINE INFORMATION

INTELLIGENT BASES

“-IV” suffix indicates Ivory color model.

“-BL” suffix indicates Black color model.

“-WH” and “-WHITE” suffix indicates White color model.

B300-6: White, 6” base, standard flanged low-profile mounting base; replacement base for the B210LP.

B300-6-BP: Bulk pack of B300-6, package contains 10; replacement for the B210LPBP.

B300-6-IV: Ivory, 6” base, standard flanged low-profile mounting base.

B501-WHITE: White, 4” standard European flangeless mounting base. UL/ULC listed

B501-WHITE-BP: Bulk pack of B501-WHITE, contains 10

B501-BL: Black, 4” standard European flangeless mounting base

B501-IV: Ivory color, 4” standard European flangeless mounting base

B224RB-WH: White, relay base

B224RB-IV: Ivory, relay base

JUNCTION BOX SELECTION GUIDE

Base Models	Single Gang	Double Gang	3.5" Oct.	4.0" Oct.	4.0" Square	4.0" Square with 3.0" mud ring	50 mm	60 mm	70 mm	75 mm
B200S,B200SR	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No
B501	No	No	Yes	No	No	Yes	Yes	Yes	Yes	No
B300-6	Yes	No	Yes	Yes	Yes	Yes	No	No	No	No
B224BI,B224RB	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No

Box depth contingent on base and wire size.

Refer to National Electric Code or applicable local codes for appropriate recommendations.

Applies to all model variants “BL”, “-LF”, “-IV”, “-WH”, and “-WHITE”. See Product Line Information for detailed model description.

B224BI-WH: White, isolator detector base

B224BI-IV: Ivory isolator detector base

B200S-WH: White, Intelligent addressable sounder base capable of producing sound output in high or low volume with ANSI Temporal 3, ANSI Temporal 4, continuous tone, marching tone, and custom tone; Uses SK protocol

B200S-IV: Ivory, Intelligent addressable sounder base capable of producing sound output in high or low volume with ANSI Temporal 3, ANSI Temporal 4, continuous tone, marching tone, and custom tone; Uses SK protocol

B200S-LF-WH: White, Low Frequency Intelligent, programmable sounder base, produces a fundamental frequency of 520 Hz +/- 10% with a square wave or its equivalent; designed to meet the NFPA 72 sleeping space requirement

B200S-LF-IV: Ivory, Low Frequency Intelligent, programmable sounder base, produces a fundamental frequency of 520 Hz +/- 10% with a square wave or its equivalent; designed to meet the NFPA 72 sleeping space requirement

B200SR-WH: White, Intelligent sounder base capable of producing sound output with ANSI Temporal 3 or continuous tone; Intended for retrofit applications

B200SR-IV: Ivory, Intelligent sounder base capable of producing sound output with ANSI Temporal 3 or continuous tone; Intended for retrofit applications

B200SR-LF-WH: White, Low Frequency Intelligent, programmable sounder base, produces a fundamental frequency of 520 Hz +/- 10% with a square wave or its equivalent; designed to meet the NFPA 72 sleeping space requirement; intended for retrofit applications

B200SR-LF-IV: Ivory, Low Frequency Intelligent, programmable sounder base, produces a fundamental frequency of 520 Hz +/- 10% with a square wave or its equivalent; designed to meet the NFPA 72 sleeping space requirement. Intended for retrofit applications.

MOUNTING KITS AND ACCESSORIES

TR300: White, replacement flange for B300-6 base

TR300-IV: Ivory, replacement flange for B300-6-IV base

RA100Z: Remote LED annunciator, 3 – 32 VDC, mounts to a U.S. single-gang electrical box; For use with B501 and B300-6

M02-04-00: Test magnet

M02-09-00: Test magnet with telescoping handle

CK300: White, detector color kit, pack of 10

CK300-IV: Ivory, detector color kit, pack of 10

CK300-BL: Black, detector color kit, pack of 10

INTELLIGENT BASES TECHNICAL SPECIFICATIONS

ELECTRICAL

For B300-6 Series bases:

- **Operating voltage:** 15 to 32 VDC
- **Standby current:** 170 μ A maximum

For B501 Series bases:

- **Operating voltage:** 15 to 32 VDC
- **Standby current:** 150 μ A maximum

For B200 Series bases:

- **External supply voltage:** 16 to 33 VDC (FWR)
- **Standby current:** 500 μ A maximum
- **Alarm current for B200S(-IV)(-WH):**
35 mA maximum at high-volume setting
15 mA maximum at low-volume setting
- **Alarm current for B200S-LF(-IV)(-WH) High-volume setting:**
70 mA maximum @ 33.0 VDC
90 mA maximum @ 24.0 VDC
140 mA maximum @ 16.0 VDC
- **Alarm current for B200S-LF(-IV)(-WH) Low-volume setting:**
15 mA maximum @ 33.0 VDC
20 mA maximum @ 24.0 VDC
25 mA maximum @ 16.0 VDC
- **Alarm current for B200SR(-IV)(-WH):** 35 mA maximum
- **Alarm current for B200SR-LF(-IV)(-WH):**
65 mA maximum @ 33.0 VDC
90 mA maximum @ 24.0 VDC
125 mA maximum @ 16.0 VDC

SLC operating voltage: 15 to 32 VDC

SLC standby current: See applicable sensor specification

Sound output: Greater than 85 dBA minimum; measured in a UL reverberant room at 10 feet, 24 Volts (continuous tone)

For B224BI, B224RB (-IV) (-WH) bases:

- **Operating voltage:** 15 to 32 VDC (powered by SLC)
- **Standby ratings:** <450 μ A maximum @ 24 VDC
- **Set time: (B224RB(-IV)(-WH) only):** short delay 60-100 msec; long delay 6-10 seconds
- **Reset time: (B224RB/-IV/-WH only):** 20 milliseconds maximum
- **Relay characteristics: (B224RB/-IV/-WH only):** two-coil latching relay; one Form-C contact; ratings (UL/CSA): 0.9 A @ 125 VAC, 0.9 A @ 110 VDC, and 3.0 A @ 30 VDC

PHYSICAL

Note: Specifications applies to all model variants "-BL", "-LF", "-IV", "-WH", "-WHITE". See Product Line Information for detailed model description.

Diameter:

- **B501-WHITE:** 4" (10.16 cm)
- **B300-6, :** 6.1" (15.49 cm)
- **B224BI, B224RB:** 6.2" (15.748 cm)
- **B200S, B200SR:** 6.875" (17.46 cm)

Wire gauge:

- **B224BI, B224RB:** 14 to 24 AWG
- **B300-6, B501, B200S, B200SR** 12 to 24 AWG

Temperature range:

- **B224BI, B224RB, B200S, B200SR:** 32°F to 120°F (0°C to 49°C)
- **B300-6, B501:** -4°F to 150°F (-20°C to 66°C)

Humidity range: 10% to 93% RH, non-condensing

System temperature and humidity ranges:

This system meets NFPA requirements for operation at 0°C to 49°C (32°F to 120°F); and at a relative humidity (non-condensing) of 85% at 30°C (86°F) per NFPA, and 93% \pm 2% at 32°C \pm 2°C (89.6°F \pm 1.1°F) per ULC. However, the useful life of the system's standby batteries and the electronic components may be adversely affected by extreme temperature ranges and humidity. Therefore, it is recommended that this system and all peripherals be installed in an environment with a nominal room temperature of 15°C to 27°C (60°F to 80°F).

AGENCY LISTINGS AND APPROVALS

The listings and approvals below apply to intelligent bases as noted. In some cases, certain modules or applications may not be listed by certain approval agencies, or listing may be in process. Consult factory for latest listing status.

UL Listed: S911

FM Approved

CSFM: 7300-1653:0109, 7300-1653:0126, 7300-1653:0213, 7300-1653:0238

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This document is not intended to be used for installation purposes. We try to keep our product information up-to-date and accurate. We cannot cover all specific applications or anticipate all requirements. All specifications are subject to change without notice.

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