



## Addressable Ionization Type Smoke Detector



**An IntelliKnight® addressable ionization smoke detectors combine early warning with pin-point location ID. A combination that saves lives and property.**

Hospitals, industrial environments and other locations where rapid fire development is expected should consider ionization smoke detectors as part of their IntelliKnight detection package. Ionization smoke detectors provide early warning in fast-flaming fires that show little visible smoke. The IntelliKnight panel recognizes each detector by its specific address, so precious seconds are not wasted in determining location of an alarm.

The SD505-AIS automatically compensates for contamination in the environment. Checking detector calibration is simple—even from a remote site. Like other IntelliKnight detector models, the SD505-AIS offers a low profile for pleasing aesthetics. The IntelliKnight family of detectors has been designed to use a common base, Model SD505-6AB, allowing complete application and placement flexibility. Combine all this with the features you've come to expect from Silent Knight smoke detectors—easy installation, stable operation, RF/transient protection, and vandal-resistant locking—and it adds up to a flexible solution to your fire protection needs.

### Model SD505-AIS Addressable Ionization Type Smoke Detector

The SD505-AIS has responsive, yet high operational stability for an extremely wide range of uses. The SD505-AIS can be used in areas where early warning of trouble from super-heated or flaming combustibles is expected.

The detector features automatic compensation for contamination, and a simple detector calibration test procedure that can be run from the panel, or remotely (using the Window™ based downloading software).

### Operation

The SD505-AIS ionization smoke detector has two chambers: a sampling chamber, and a reference chamber. Smoke or invisible combustion gases can freely penetrate the sampling chamber, but the reference chamber is virtually closed to prevent easy entry. With both chambers ionized by a single radioactive source, a very small current flows.

Presence of visible smoke or invisible gases greatly influences the current flow in the sampling chamber, changing the voltage ratio between the two chambers. This difference is amplified

inside the detector. After reaching the critical level, the detector triggers into alarm.

The SD505-AIS includes a status LED which blinks approximately every 15 seconds, indicating that the head is communicating with the loop. The status LED lights continuously during an alarm.

### Specifications

Radioactive Source:	AM-241 .098μCi
Operating Voltage:	24 VDC
Current Consumption:	
Standby:	.55 mA
Alarm:	.55 mA
Ambient Temperature:	32°F to 100°F (0°C to 50°C)
Mounting:	4" SQR, 4" OCT, Single gang mud ring
Relative Humidity:	85% noncondensing
Air Velocity:	0 - 300 FPM
Compatible Bases: (Sold Separately)	SD505-6AB (6" Base) SD505-4AB (4" Base)



**SD505-AIS Smoke Detector**

### Features

- Low profile, 2.25 inches, including base
- Simple and reliable addressing without mechanical switches
- Automatic compensation for sensor contamination
- Built-in fire test feature
- Simple detector calibration testing through the control panel, or remotely through a Windows™ based computer. (Windows™ software required for remote testing.)
- Vandal-resistant locking feature
- Field cleanable
- UL listed, meets NFPA 72 Ch 7
- CSFM approved
- MEA approved
- FM approved



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# Model SD505-AIS

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### Engineering Specifications

The contractor shall furnish and install where indicated on the plans, dual-chamber, addressable ionization smoke detector Silent Knight SD505-AIS. The combination detector head, and twist-lock base, shall be UL® listed compatible with Silent Knight's IntelliKnight fire alarm control panels.

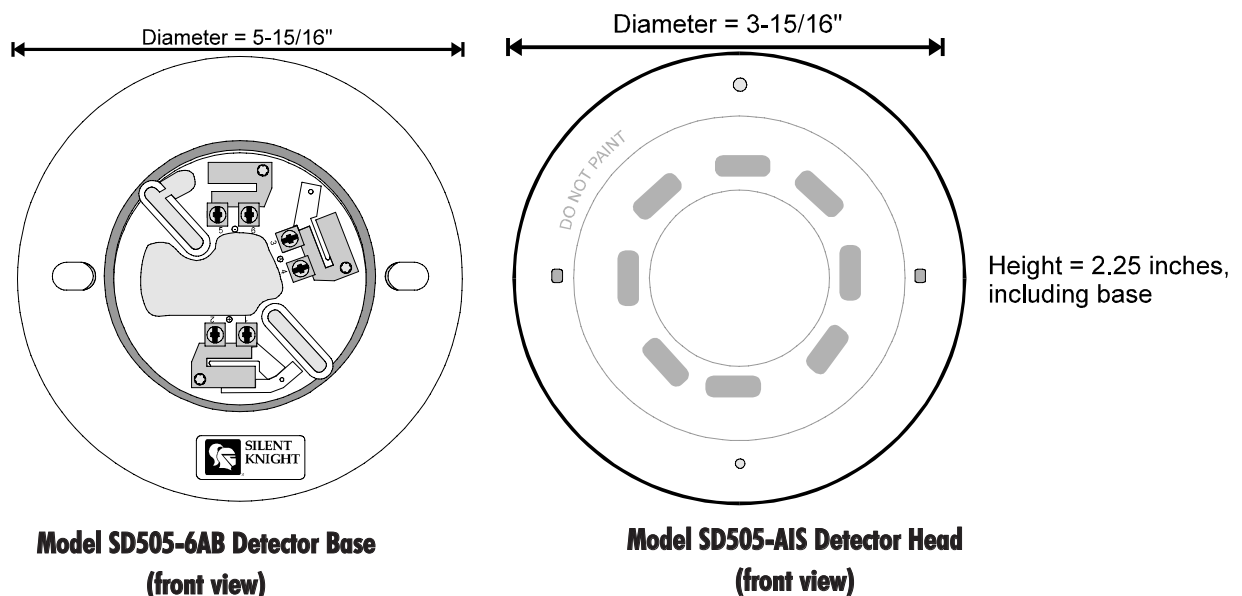
The base shall permit direct interchange with Silent Knight SD505-APS Photoelectric Smoke Detector, or SD505-AHS Heat Detector. Base shall be the appropriate twist-lock base SD505-6AB.

The smoke detector shall have a flashing status LED for visual supervision. When the detector is actuated, the flashing LED will latch on steady. The detector may be reset by actuating the control panel reset switch.

The calibration of the detector shall be capable of being selected and measured by the control panel without the need for external test apparatus.

The vandal-resistant, security locking feature shall be used in those areas as indicated on the drawing. The locking feature shall be field selectable as required.

The SD505-AIS shall automatically perform a functional test of the detector. The test method shall simulate effects of products of combustion in the chamber to ensure testing of detector circuits.



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**MADE IN AMERICA**

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