



**SILENT
KNIGHT**

by Honeywell

Addressable Photoelectric Smoke Detector

**Detect smoldering fires quickly and
get help fast with IntelliKnight®
photoelectric smoke detectors.**

IntelliKnight addressable photoelectric smoke detectors are the clear choice for commercial settings where smoldering fires are a threat. In addition to accurately detecting a smoldering fire, each SD505-PHOTO photoelectric detector has a unique address, which is recognized by the IntelliKnight panel. No precious seconds are wasted in determining location of an alarm.

The SD505-PHOTO compensates automatically for contamination in the environment. And detector testing is simple—even from a remote site. Like other IntelliKnight detector models, the SD505-PHOTO 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 for all your fire protection needs.

Model SD505-PHOTO

Analog / Addressable Photoelectric Type Smoke Detector

The SD505-PHOTO is particularly suited to detecting dense smoke typical of fires involving materials such as soft furnishings, plastic, foam or other similar materials which tend to smolder and produce large visible particles.

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 Windows™ based downloading software).

Operation

The SD505-PHOTO units made up of an LED light source and a silicon photo diode receiving element. In a normal standby condition, the receiving element receives no light from the pulsing light source. In the event of fire, smoke enters the detector and light is reflected from the smoke particles to the receiving element.

The light received is converted into an electronic signal. Under normal conditions, the status LED blinks

approximately every 15 seconds, indicating that the head is communicating with the loop. The LED lights continuously during the alarm period.

Features

- Low profile, 2 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 software.
- Vandal-resistance locking features
- Field cleanable
- UL listed, meets NFPA 72 Ch 7 requirements
- CSFM approved
- MEA approved
- FM Approved

Specifications

Operating Voltage: 24-41 VDC

Current Consumption:

Standby:	.55 mA
Alarm:	.55 mA



SD505-PHOTO Smoke Detector

Ambient Temperature: 32°F to 120°F (0°C to 49°C)

Mounting: 4" Square, 4" OCT, Single gang mud ring

Relative Humidity: 85% non-condensing

Air Velocity: 0 - 300 FPM

Compatible Bases: SD505-6AB
(Sold Separately) SD505-6IB
SD505-6RB
SD505-6SB

P/N 350225 Rev G

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Model SD505-PHOTO

Addressable Photoelectric

Smoke Detector

Engineering Specifications

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

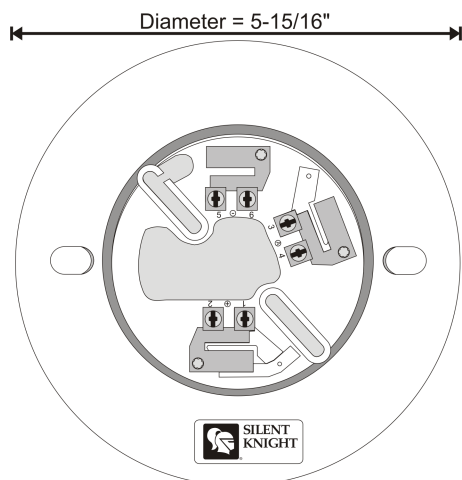
The base shall permit direct interchange with Silent Knight SD505-HEAT Heat Detector. Base shall be the appropriate twist-lock base SD505-6AB.

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.

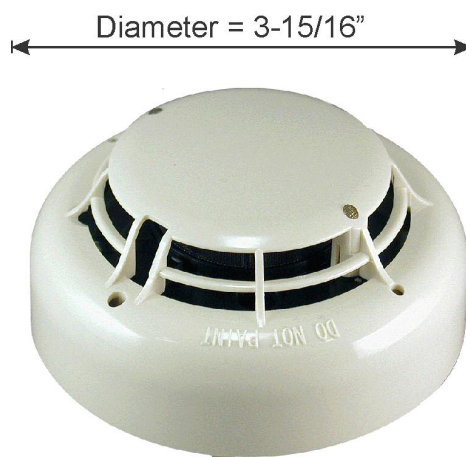
The calibration of the detector shall be capable of being selected and measured by the control panel without the need for external test apparatus.

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-PHOTO 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.



Model SD505-6AB Detector Base
(front view)



Model SD505-PHOTO Detector Head
(front view)



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. For more information, contact Silent Knight 12 Clintonville Road, Northford, CT 06472-1610 Phone: (800) 328-0103, Fax: (203) 484-7118. www.silentknight.com



SILENT KNIGHT

INSTALLATION INSTRUCTION FOR SILENT KNIGHT SD505 ANALOG SMOKE SENSORS

These instructions apply to all Silent Knight SD-505 (Digital Communication Protocol) analog sensors and bases.

These units must be installed and maintained in accordance with applicable N.F.P.A. standards, local codes and any authority having jurisdiction. Please refer to N.F.P.A. 72 Standard for Automatic Fire Detectors for installation guidelines and testing Procedures. Also refer to Technical Bulletin HA-96 for testing, cleaning, and maintenance.

Smoke detectors should be tested upon completion of installation and at least semiannually there-

BASE BOX MOUNTING		
3"-O	4"-O	4"-S
YES	YES	YES

after, in accordance with N.F.P.A. 72, section on "Inspections, Tests and Maintenance".

To install the detector insert the detector into the base. Turn the detector clockwise until it stops. Tighten tamper screw.

Use "3M" Weatherban #606 non-flammable sealing compound to seal field wiring conduit openings in the mounting back box. Compliance with this request may reduce the occurrence of the "STACK EFFECT".

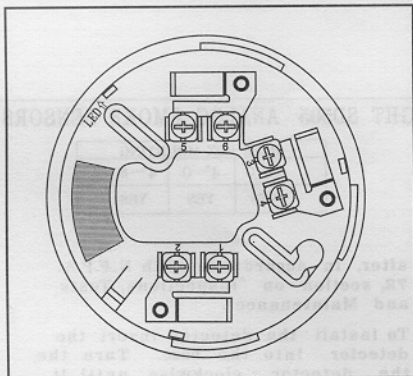
SPECIFICATIONS

CATEGORY	SD505-APS	SD505-AIS	SD505-AIS	SD505-4AB	SD505-6AB
Absolute Maximum Applied Voltage	41.0 VDC	41.0 VDC	41.0 VDC	41.0 VDC	41.0 VDC
Operating Voltage Range (V _{DC} /S-SC)	24 ~ 40.7 VDC	24 ~ 40.7 VDC	24 ~ 40.7 VDC	24 ~ 40.7 VDC	24 ~ 40.7 VDC
Sensitivity Range	0.88~2.57 %/ft.	0.55~1.15 %/ft.	135°~150°F.	N/A	N/A
Average Current Consumption (S-SC) Normal Mode	390µA Typical 540µA Maximum	390µA Typical 540µA Maximum	390µA Typical 540µA Maximum	N/A	N/A
Average Current Consumption (S-SC) Low Power Mode	120µA @ 0.75s 110µA @ 1.50s	120µA @ 0.75s 110µA @ 1.50s	120µA @ 0.75s 110µA @ 1.50s	N/A	N/A
Average Current Consumption (S-SC) When Called	2mA	2mA	2mA	N/A	N/A
Alarm Current (S-SC)	(See Base)	(See Base)	(See Base)	8mA (Typical)	8mA (Typical)
Remote LED Current	(See Base)	(See Base)	(See Base)	8mA (Typical)	8mA (Typical)
Device Type Code	88 Hex	AB Hex	88 Hex	N/A	N/A
Operating Temperature	0° ~ 49° C	0° ~ 49° C	0° ~ 49° C	0° ~ 49° C	0° ~ 49° C
Storage Temperature	-20° ~ 60° C	-20° ~ 60° C	-20° ~ 60° C	-20° ~ 60° C	-20° ~ 60° C
Test	*	*	*	N/A	N/A
Dimensions	3-15/16" X 1-1/2" H	3-15/16" X 1-3/4" H	3-15/16" X 1-9/16" H	3-15/16" X 15/32" H	5-7/8" X 15/32" H
Environment	Indoor Use Only	Indoor Use Only	Indoor Use Only	Indoor Use Only	Indoor Use Only
Visual Alarm/Power Indicator	Bi-Directional	Bi-Directional	Bi-Directional	See Sensor	See Sensor
Address Setting	*	*	*	N/A	N/A

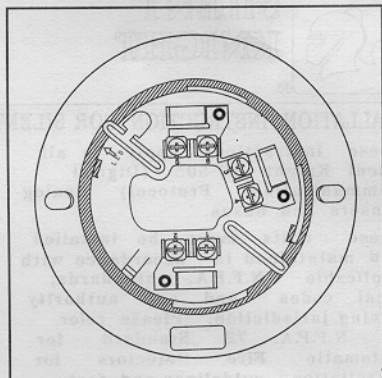
* = See Control Panel For proper address setting and testing procedure.

WARNING!!!!

Failure to follow these instructions may result in the failure of the detector to initiate an alarm condition. Silent Knight is not responsible for detectors that have been improperly installed, tested or maintained.



SD505-4AB BASE



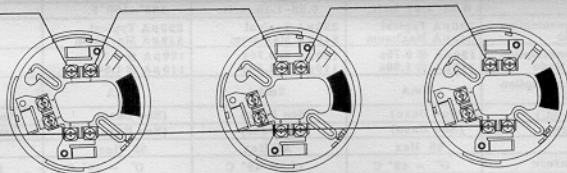
SD505-6AB BASE

ATTENTION!!!!
 INSTALLATION WIRING SHALL NOT EXCEED
 50 OHMS (14-18 AWG.)

U.L.
 LISTED
 INTELLIKNIGHT
 CONTROL
 PANEL
 OR
 SLC LOOP
 EXPANDER

(+)

(-)

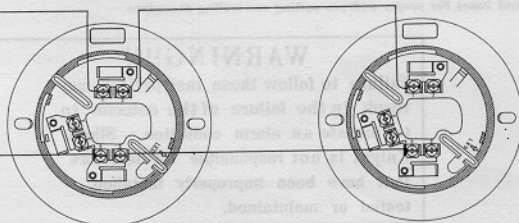


SD505-4AB

U.L.
 LISTED
 INTELLIKNIGHT
 CONTROL
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 OR
 SLC LOOP
 EXPANDER

(+)

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SD505-6AB

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Instructions For Implementing The Security Feature

The following instructions will enable the user to activate the security locking and to release the base security locking tab so as to remove the sensor from the base.

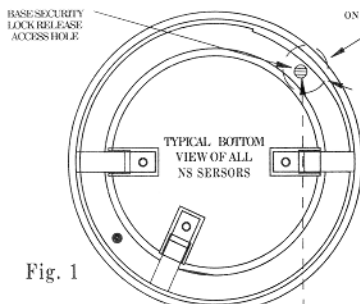


Fig. 1

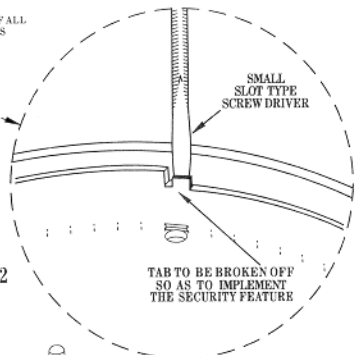


Fig. 2

ALIGNMENT OF SECURITY HOLE ON SENSOR TO THE SECURITY LOCKING TAB ON BASE

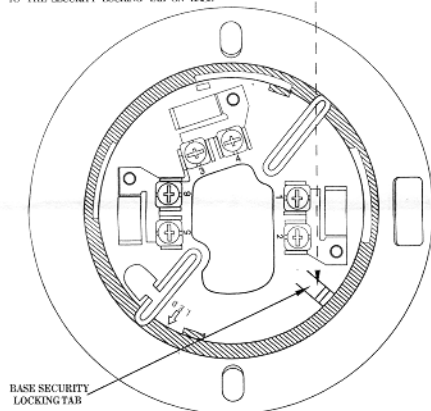


Fig. 3

INSERT SMALL BLADE TYPE SCREW DRIVER INTO SECURITY HOLE OF A TYPICAL SD605 SENSOR TO RELEASE LOCKING TAB ON BASE

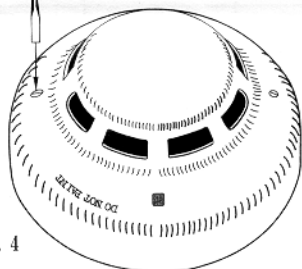


Fig. 4

- 1) Take any sensor and turn it over to view the bottom as shown in Fig. 1. Using a small blade type screw driver break the tab as shown in Fig. 2. This will allow the base security locking tab, as shown in Fig. 3 to stay elevated. This will prevent the sensor from being removed from its base.
- 2) To remove the sensor from its base, take a small diameter screw driver and insert it into the large hole on the outer rim of the sensor (see Fig. 4). Use caution when pushing the base security locking tab down. Only use enough force to remove the sensor. While pushing the tab down rotate the sensor counter clockwise enough to clear the base security locking tab. Once this is accomplished the sensor can be completely removed.

CAUTION!!! DO NOT USE EXCESSIVE FORCE WHEN UNLOCKING THE BASE SECURITY LOCKING TAB

