KS-HD Addressable SmartOne® Protocol Heat Detector

Kidde Fire Systems

Effective: January 2021
K-71-102

FEATURES

- ***Initiates an alarm based on rate-of-rise/fixed temperature heat sensing technology***
- ***Advanced data analysis reduces chance of nuisance alarms***
- ***Compatible with Kidde®, Fenwal® and Chemetron® intelligent control units***
- ***Works with SmartOne® communication protocol***
- ***Operates in conjunction with legacy SmartOne DS, PSD, CPD and THD smoke and heat detectors***
- ***Two-color (green/red) status LED***
- ***Supports remote LED alarm indication***
- ***Detector head and terminal base design (bases sold separately)***
- ***Low-profile design blends into ceiling***
- ***Attractive 6 in. diameter trim ring provided with bases***
- ***Electronic addressing performed with SmartOne Hand-Held Programmer***
- ***FM Approved***
- ***cULus Listed***
- ***California State Fire Marshal Listed***

DESCRIPTION

The KS-HD Heat Detector is an intelligent fixed temperature device that contains a rate-of-rise heat sensor with a fixed temperature setting. The heat sensor monitors the temperature of the air in its surroundings and the detector analyzes the data and determines whether to initiate an alarm. The heat sensor by itself does not provide life safety protection; it provides additional detection when used with smoke detectors.

ADDRESSING

KS-HD detectors feature electronic addressing. No addressing switches are used.

PROTOCOL

This product will operate only on a Kidde Fire Systems fire alarm-suppression control unit employing SmartOne communications protocol.

STATUS LED

KS-HD detectors use an LED to indicate the detector's condition. In normal, standby condition, a green LED flashes at a 9 second repetition rate. An alarm is indicated by a red flash at a 2.50 second repetition rate.

REMOTE ALARM LED

An optional SIGA-LED Remote Indicator can be connected to the standard DS-SB base if the KS-HD detector status LED is in a location where it cannot be easily viewed.

INSTALLATION

KS-HD detectors (with base) mount to North American 1-gang boxes, 3-1/2 inch or 4 inch octagon boxes, and to 4 inch square electrical boxes,1-1/2 inches (38 mm) deep.

EASY TWIST HEAD

A KS-HD detector head is installed onto its base by aligning arrow marks and gently twisting the head clockwise until secure. Removal is just as easy and is done by grasping the head and gently pressing down while turning counter-clockwise. Removal can be aided with the optional SIGA Removal Tool (P/N SIGA-RTA). This tool can be attached to a telescoping pole to avoid the use of ladders.

ALARM THRESHOLDS

The KS-HD detector has a fixed temperature Alarm threshold of 135 degrees F and an optional Pre-alarm threshold of 120 degrees F.

DETECTOR BASES

The KS-HD detector head attaches easily to these compatible bases. Detector bases have wiring terminals that are accessible from the “room-side” after mounting the base to the electrical box. A trim ring is supplied with the 4-inch base to help hide surface imperfections.

- **Model DS-SB Standard Base:** Connects the detector to the Signaling Line Circuit (SLC).
- **Model DS-RB Relay Base:** Connects the detector to the Signaling Line Circuit (SLC) and provides optional Relay functionality to the KS-HD detector.

ORDERING INFORMATION

KS-HD	Intelligent Heat Detector, head only 
DS-SB	Detector Mounting Base, 4 in. diameter, with 6 in. trim ring, for 2-wire connection to SmartOne SLC 
DS-RB	Detector Mounting Base, 4 in. diameter, with relay option and 6 in. trim ring, for 2-wire connection to SmartOne SLC 
SIGA-LED	Optional Remote Alarm LED
SIGA-VA	Detector Vacuum Attachment
SIGA-RTA	Detector Removal Tool Attachment

TECHNICAL SPECIFICATIONS

Operating voltage	24 VDC (nominal)
Current	
Normal Operating	150 µA
Alarm	220 µA
Maximum spacing	
UL/cUL:	50 ft. (15.2 m) centers
FM:	20 ft. X 20 ft. (6 m X 6 m)
Wall mounting: distance from ceiling	12 in. (305 mm) max.
Compatible bases	DS-SB (Standard) DS-RB (Relay)
Operating environment	
Temperature	32 to 100°F (0 to 38°C)
Relative humidity	0 to 93% non-condensing
Storage temperature	−4 to 140°F (−20 to 60°C)
UL and cUL fixed-temp alarm rating:	135°F (57.2°C) **Note that temperature alarm setpoint is not configurable.**
Rate-of-rise	15°F/min (8°C/min)
Alarm Point	
UL:	129 to 141°F (53.9 to 60.5°C) (at 50 ft. centers spacing)
cUL:	129 to 141°F (53.9 to 60.5°C) (at 50 ft. centers spacing)
FM:	130 to 140°F (54 to 60°C) (at 20 ft. X 20 ft. spacing)
Response Time Index	Quick (as evaluated by FM Approvals)
Regulatory Information:	
North American standards	UL 521, CAN/ULC-S530-M91, FM Approvals 3230

Compliances:

- This device complies with Part 15, Class A 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.
- ICES-003, Class A
- EN 55011, Class A
- AS/NZS CISPR 11, Class A

INTEGRATION OF DETECTORS

KS-HD detectors can be mixed in any order with SmartOne legacy detectors on a Kidde Fire Systems intelligent control unit running SmartOne protocol.

If replacing a SmartOne legacy heat detector with a KS-HD detector, ensure that the Alarm threshold and spacing are changed in the system configuration to the required KS-HD default settings: 135 degrees F and 50 feet spacing.

NOTES:

1. Detectors are not polarity sensitive. Terminals 3 and 7 (SmartOne legacy detectors) or Terminals 2 and 4 (KS or DS Series detectors) can be reversed.
2. Detectors can be installed in any order.
3. SLC loop is not sensitive to the location of the control unit (can be left or right end of loop).
4. Four-wire loops will be wired as shown, bringing loose end of loop back to the control unit.
5. KS Series Detectors should be configured as DS Series Detectors in the control unit configuration.

COMPATIBLE CONTROL UNITS

Fire Alarm Control Unit (FACU) Type	Current Product	Legacy Product
Single Loop	ARIES®-SLX	ARIES FenwalNET™ 6000 MICRO SLX PEGAsys™* FenwalNET 2000*
Multiple Loop	ARIES®-MLX	ARIES NET*Link* FenwalNET 8000-ML MICRO MLX PEGAsys* FenwalNET 2000*

* FACUs running software revision 82.4 are compatibility-tested but not agency listed with the device(s) in this data sheet.

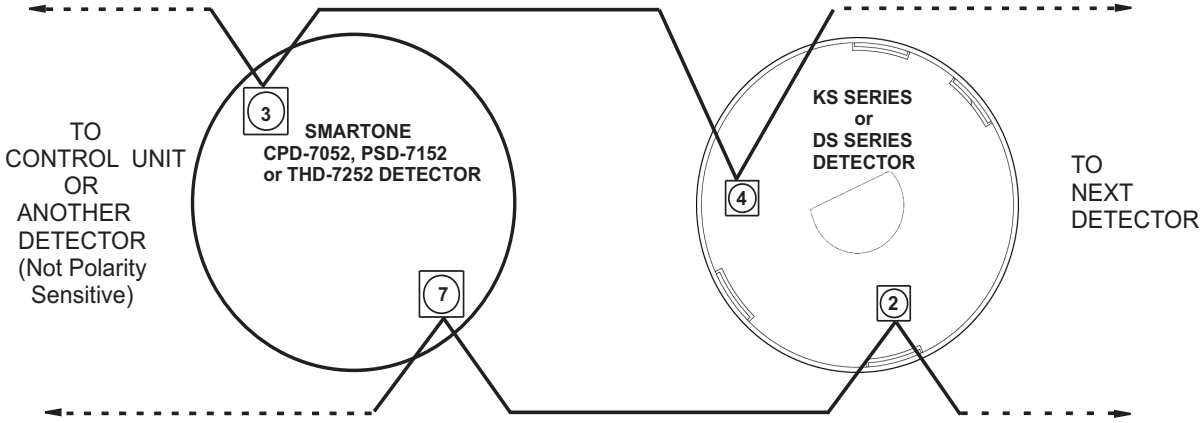
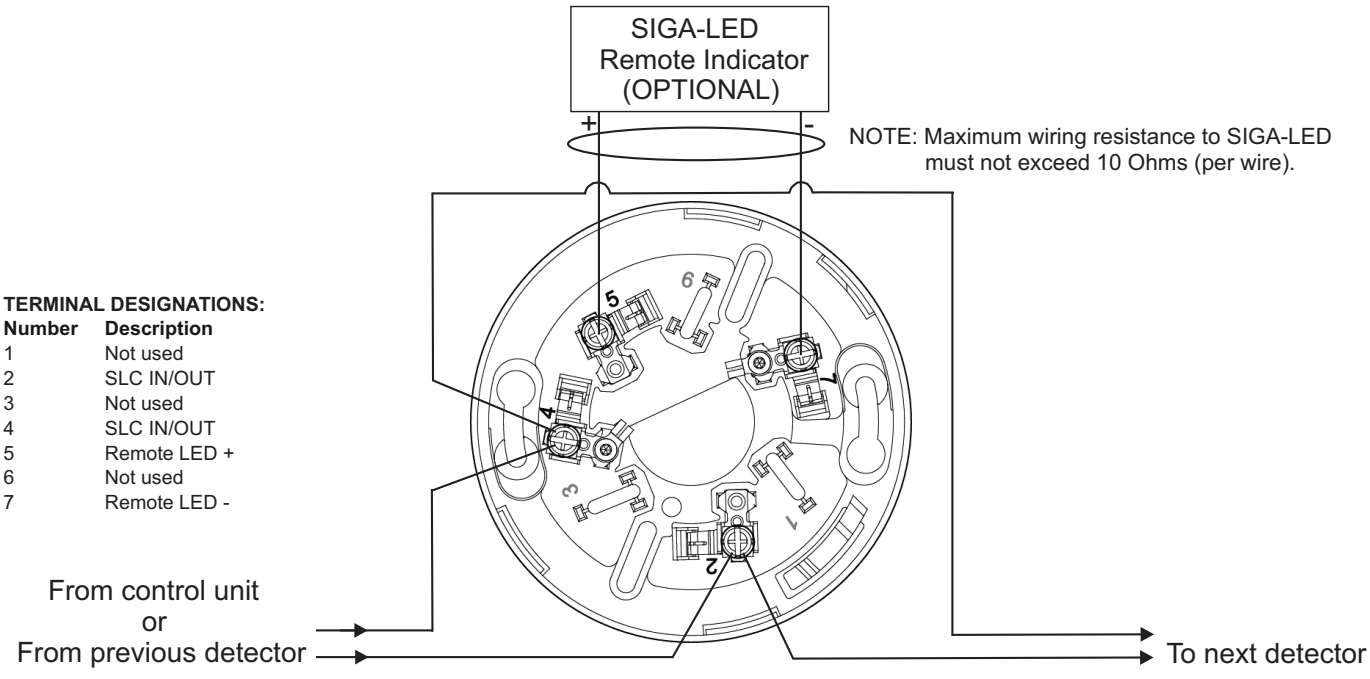
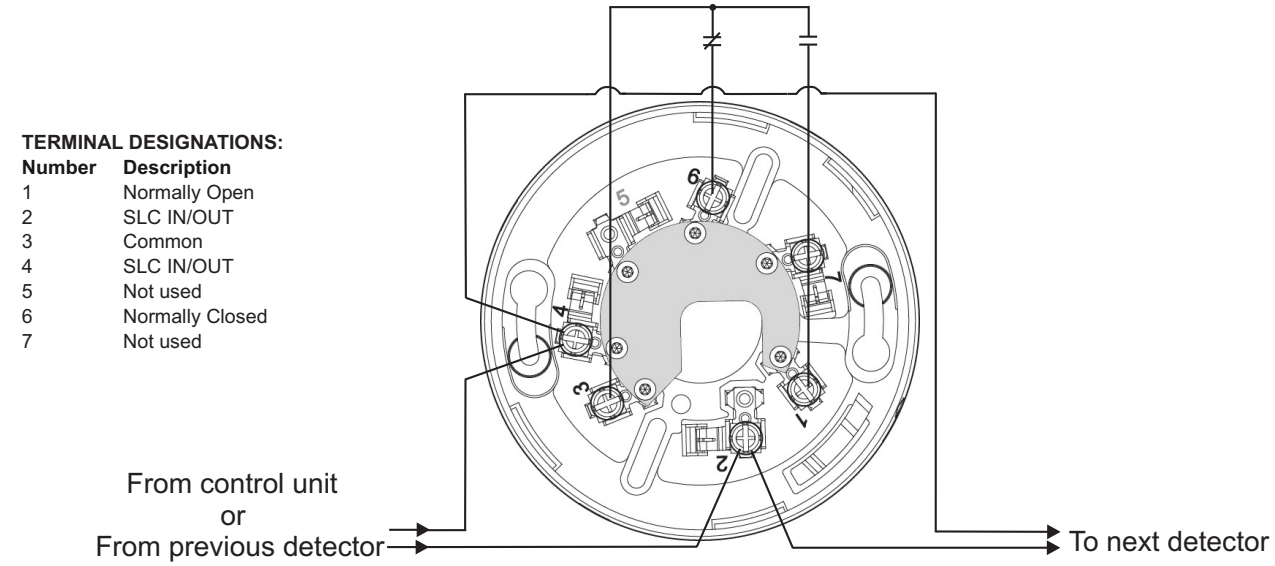


Figure 1: Combining Legacy Detectors with KS Series Detectors
(Class B Wiring Style Shown)



DS-SB Standard Base
(Shown with Class B Wiring and Optional Remote LED)



DS-RB Standard Base
(Shown with Class B Wiring)

EXPORT INFORMATION (USA)
Jurisdiction: EAR
US ECCN: EAR99
This document contains technical data subject to the EAR.

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