

# DS-SD Addressable SmartOne® Photoelectric Duct Detector



FOR KIDDE FIRE SYSTEMS INTELLIGENT CONTROL UNITS

Effective: May 2018  
K-76-103

## FEATURES

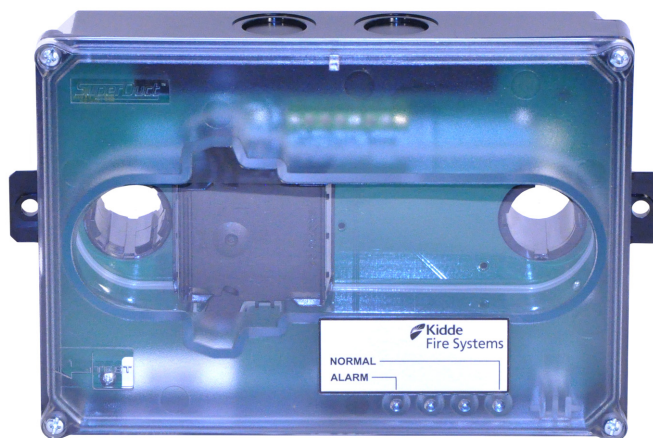
- *Photoelectric Based Duct Detector*
- *UL, ULC, FM listed*
- *Alarm Sensitivity 1.3% to 2.2%/ft obscuration*
- *Works with SmartOne® communications protocol*
- *Compatible with Kidde®, Fenwal® and Chemetron® branded intelligent control units*
- *Operates in conjunction with legacy SmartOne devices*
- *Supports Remote Alarm LED*
- *Integrated design of the photoelectric detector within the duct housing*
- *Less than 2" deep for easy installation*
- *Air velocity rating 100 to 4,000 ft/min*
- *Electronic addressing performed with SmartOne handheld programmer*

## DESCRIPTION

The Model DS-SD Duct Smoke Detector detects the presence of smoke under extended temperature ranges in a building's HVAC system. Its primary purpose is to provide early warning of the presence of smoke in the duct. It is typically used to detect smoke in the supply side of the HVAC system, but can provide supervision of the return side as well.

The Model DS-SD detector is comprised of a plastic housing, a printed circuit board, a clear plastic cover, and an exhaust tube. The clear plastic cover permits visual inspections without having to disassemble the detector. The cover attaches to the detector housing using four captive screws and forms an airtight chamber around the sensing electronics. A sampling tube is required to introduce air into the duct smoke detector. The sampling tube is ordered separately and varies in length depending on the width of the HVAC duct.

The DS-SD Addressable Duct Detector operates on all Kidde Fire Systems addressable fire alarm-suppression control units (Kidde, Fenwal and Chemetron brands) employing SmartOne communications protocol and can be mixed in any order with any current and legacy SmartOne detectors.

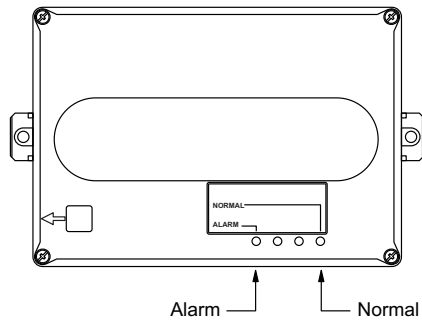


## PART NUMBERS

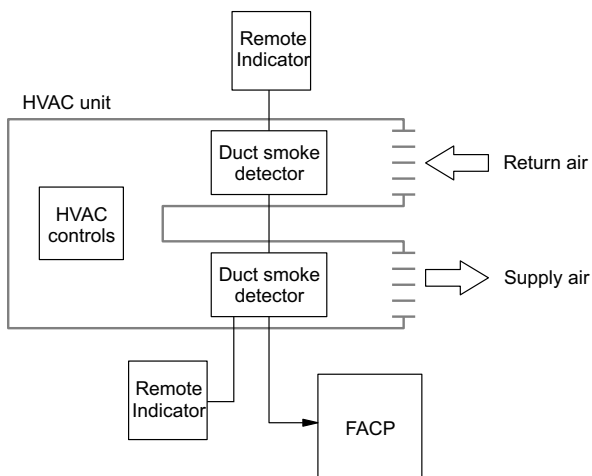
| Model  | Description                         | Model    | Description                                |
|--------|-------------------------------------|----------|--|
| DS-SD  | Addressable Duct Detector, SmartOne | SD-T78   | 78-inch sampling tube                      |
| SD-T8  | 8-inch sample tube                  | SD-T120  | 120-inch sampling tube                     |
| SD-T18 | 18-inch sampling tube               | SD-PH    | Protective housing for high humidity areas |
| SD-T24 | 24-inch sampling tube               | SIGA-LED | Remote LED indicator                       |
| SD-T36 | 36-inch sampling tube               | SD-VTK   | Air velocity test kit                      |
| SD-T42 | 42-inch sampling tube               | SD-GSK   | Cover gasket kit                           |
| SD-T60 | 60-inch sampling tube               |          |  |

## LEDS

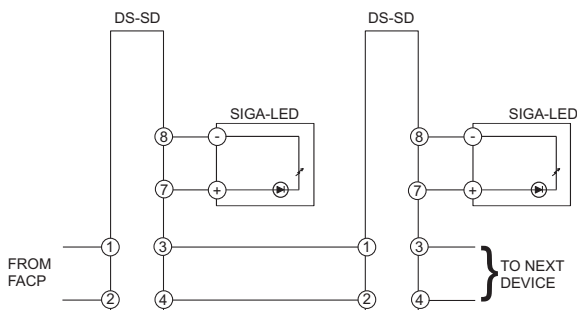
| Control or Indicator | Description                                       |
|----------------------|---|
| Alarm LED            | Flashes (red) when the detector is in Alarm State |
| Normal LED           | Flashes (green) during normal operation           |



## TYPICAL INSTALLATION



## TYPICAL WIRING



## TECHNICAL SPECIFICATIONS

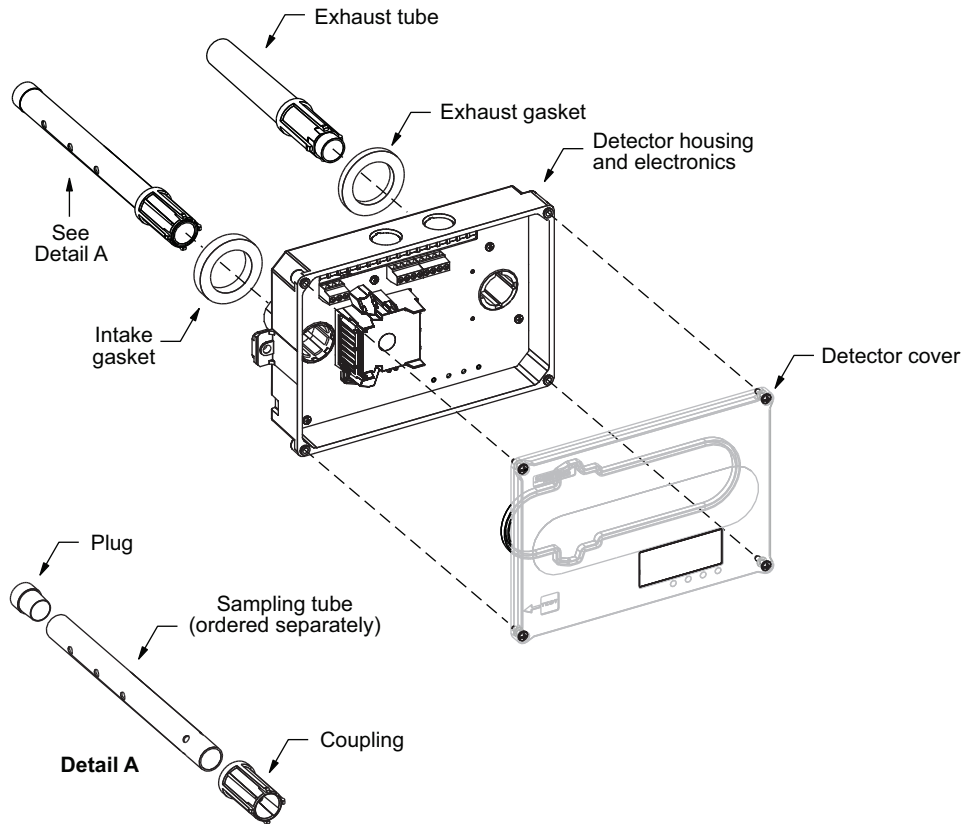
|                                   |   |
|-----------------------------------|---|
| Dimensions                        | 8.70 x 5.45 x 1.90 in<br>(220.98 x 138.43 x 48.26 mm)         |
| Wire size                         | 14 to 22 AWG  |
| Smoke detection method            | Photoelectric<br>(light scattering principle)                 |
| Air velocity rating               | 100 to 4000 ft/min<br>(30.5 to 1219.2 m/min)                  |
| Air pressure differential         | 0.005 to 1.00 in. of water<br>(0.127 to 25.4 mm of water)     |
| Alarm Sensitivity (fixed)         | 1.3% to 2.2%/ft obscuration<br>(4.26% to 7.22%/m obscuration) |
| Pre-Alarm Sensitivity             | Pre-alarm will occur at 75% of the alarm point                |
| LED indicators                    | Alarm (red), Normal (green)                                   |
| Detector operating voltage        | 24 Vdc Nominal  |
| Detector operating current        | Normal<br>150 $\mu$ A<br>Alarm<br>220 $\mu$ A                 |
| Operating environment temperature | 32 to 120 ° F (0 to 49 ° C)                                   |
| Humidity                          | 93% RH, non-condensing  |
| Agency Listing                    | UL, ULC, FM   |

## COMPATIBLE CONTROL UNITS

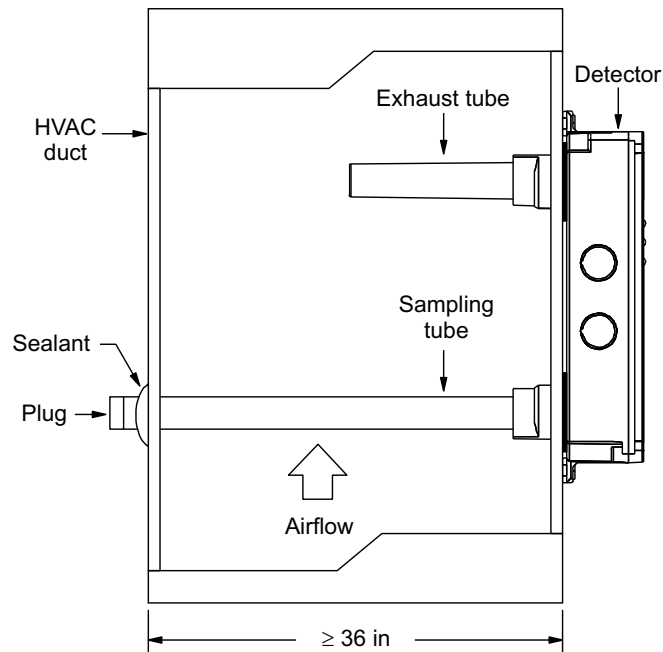
|           |                   |
|-----------|-------------------|
| Kidde     | ARIES NETLink     |
| Kidde     | ARIES             |
| Kidde     | PEGAsys *         |
| Fenwal    | FenwalNET 8000-ML |
| Fenwal    | FenwalNET 6000    |
| Fenwal    | FenwalNET 2000 *  |
| Chemetron | MICRO MLX         |
| Chemetron | MICRO SLX         |

\* DS Series detectors are compatible with FenwalNET 2000 and PEGAsys control units running software version 82.4. Note that FenwalNET 2000 and PEGAsys control units are no longer UL Listed or FM Approved. DS Series detectors have not been compatibility-tested on legacy control units older than FenwalNET 2000 and PEGAsys.

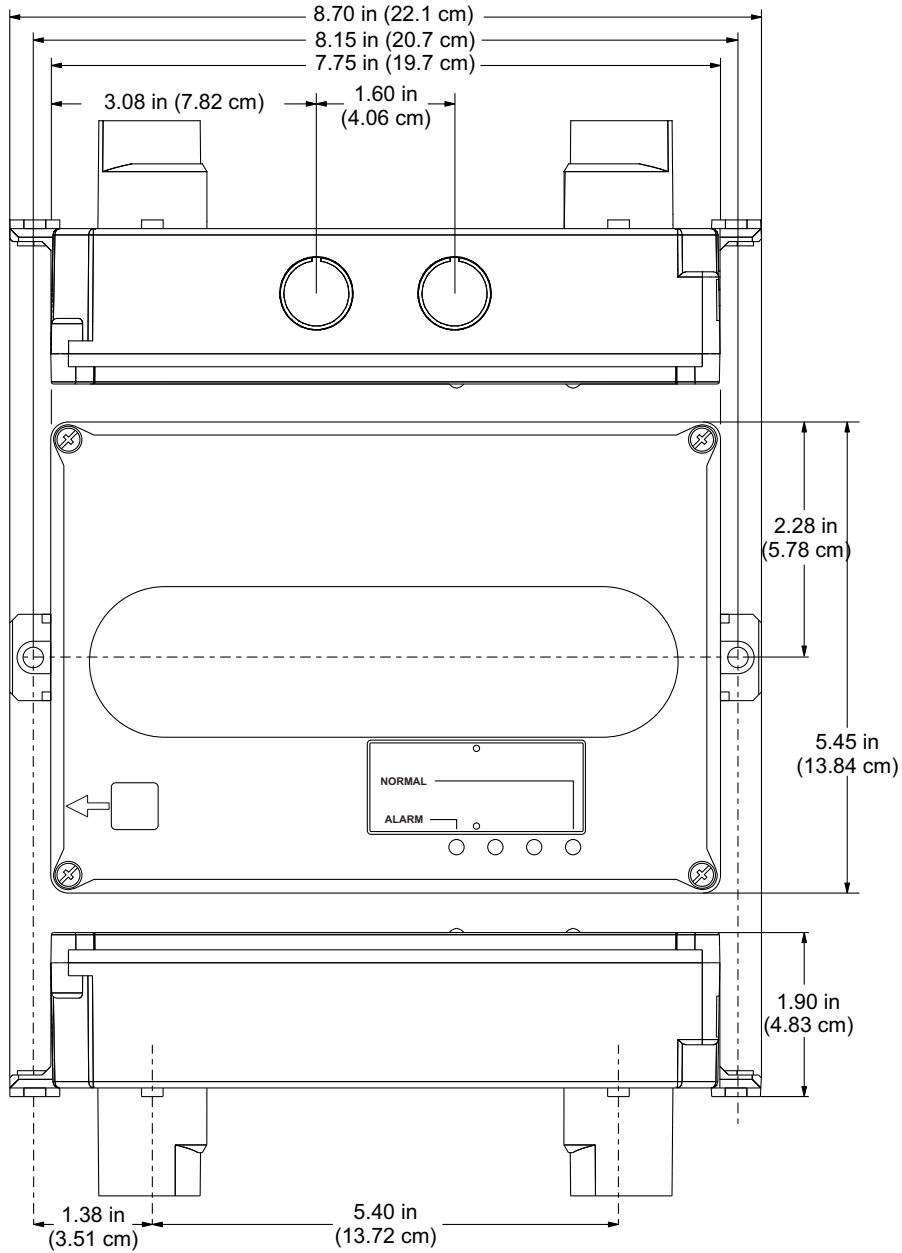
## EXPLODED VIEW



## SIDE VIEW



**DIMENSIONS**



**EXPORT INFORMATION (USA)**

Jurisdiction: EAR

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