



## INTELLIGENT DUCT SMOKE DETECTORS

### DESCRIPTION

The Fike Eclipse™ Series photoelectric air duct smoke detectors, manufactured by System Sensor, are capable of sensing smoke in air velocities from 500 to 4,000 feet per minute (2.54 to 20.32 m/sec).

The Eclipse Series 63-1056 duct housing can accommodate either the 63-1057 or 63-1062 Intelligent Photoelectric Sensor. The twist-in, twist-out heads allow for quick and easy cleaning or application changes without removing the duct housing.

The Eclipse Series Detector samples air currents passing through a duct and gives dependable performance for shutdown of fans, blowers, and air conditioning systems, preventing the spread of toxic smoke and fire gases through the protected area.

These intelligent sensors communicate and are continuously monitored through the communication line. Detector sensitivity changes caused by dirt, temperature, or humidity are reported to the panel, allowing compensation algorithms to maintain the sensor's set sensitivity. An advance indication at the panel specifies the sensor address, allowing for selected maintenance to be performed as needed.

Remote alarm annunciation can be accomplished by using the 02-3868 Remote Annunciator or the 02-3869 or 02-4998 Remote Test Station. Both these devices allow testing of the detector from a remote location.

The Eclipse Series is designed for simplified installation and easy maintenance.

**WARNING:** Duct smoke detectors have specific limitations.

**DUCT SMOKE DETECTORS ARE:**

NOT a substitute for an open area smoke detector,  
 NOT a substitute for early warning detection, and  
 NOT a replacement for a building's regular fire detection system.

Refer to NFPA 72 and 90A for additional information.

### STANDARD FEATURES AND SPECIFICATIONS

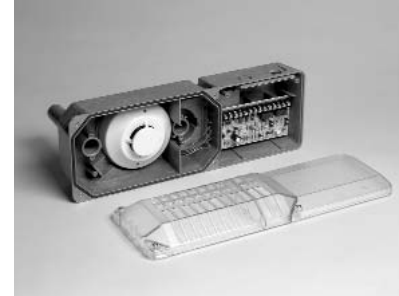
- Air velocity rating from 500 to 4000 feet per minute (2.54 to 20.32 m/sec.)
- Operates from the control panel communication line
- Continuous sensitivity monitoring from the panel
- Intelligent photo isolator or non-isolator heads with twist-in/twist-out removal
- Easy to clean
- UL recognized field-replaceable power boards
- Transparent cover for convenient visual inspection
- 3-year warranty
- Has outputs for remote LED display, remote test
- Requires com line power only
- Powered outputs for remote LED, and remote test and sounder
- Remote test station and remote annunciator accessories
- Operating Temperature Range: 32<sup>o</sup> to 120<sup>o</sup>F (0<sup>o</sup> to 49<sup>o</sup>C)

- Operating Humidity Range: 10% to 93% relative humidity (non-condensing)
- Duct Air Velocity: 500 – 4000 ft./min. (2.54 – 20.32 m/s)
- Shipping Weight: ED-DPR: 4lbs. (1.8 kg)
- Dimensions: 14.5”L x 5”W x 4”D (36.7 cm x 12.7 cm x 10.2 cm)

#### 63-1056 Specifications

Current Requirements (using no accessories):

- Power Supply Voltage: 14-30VDC
- Maximum Standby Current: 360 μ a max.
- Maximum Alarm Current: 7 mA max. @ 24VDC (LED's on)
- Alarm Response Time: 30 sec.
- Power Up Time: 2 sec.
- Self Test Initiation Time: 1 sec.



*Photoelectric Air Duct  
Smoke Detector*

### APPROVALS

- FM Approved
- UL 268A

Form No. P.1.51.01

### Relay Contact Ratings (Each set of Form C Contacts)

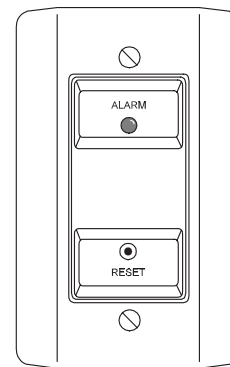
Current Ratings	Maximum Voltage	Load Description	Application
3A	30VDC	Resistive	Non Coded
2A	30VDC	Resistive	Coded
.9A	110VDC	Resistive	Non Coded
.9A	125VAC	Resistive	Non Coded
.5A	30VDC	Inductive (L/R=5ms)	Coded
1A	30VDC	Inductive (L/R=2ms)	Coded
.3A	125VAC	Inductive (PF=.35)	Non Coded
.7A	75VAC	Inductive (PF=.35)	Non Coded
1.5A	25VAC	Inductive (PF=.35)	Non Coded

### Accessory Current Loads at 24VDC

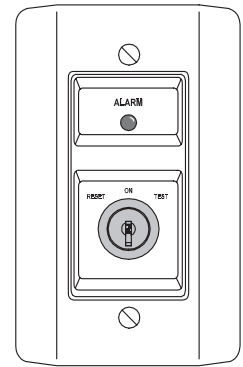
Device	Standby	Alarm
02-3868	0 mA	4.6 mA Max.
02-3869/02-4998	0 mA	4.6 mA Max.

### AVAILABLE MODELS

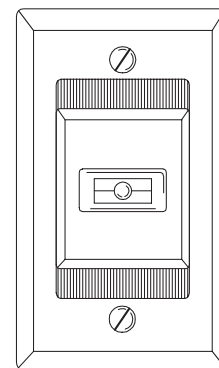
Description	File P/N
Eclipse Series intelligent duct smoke detector housing	63-1056
Photoelectric duct sensor head	63-1057
Photoelectric isolator duct sensor head	63-1062
Metal sampling tube duct widths 1'-2'	02-3721
Metal sampling tube duct widths 2'-4'	02-3722
Metal sampling tube duct widths 4'-8'	02-3723
Metal sampling tube duct widths 8'-12'	02-3724
Replacement Eclipse Power Board	20-1077
Remote test station (see right)	02-3869
Remote test station w/key (see right)	02-4998
Remote LED (see right)	02-3868
Replacement filters	20-1078
End cap for metal sampling tube	20-1070
Replacement plastic sampling tub	20-1080



02-3869  
Remote Test Station  
(UL S2522)

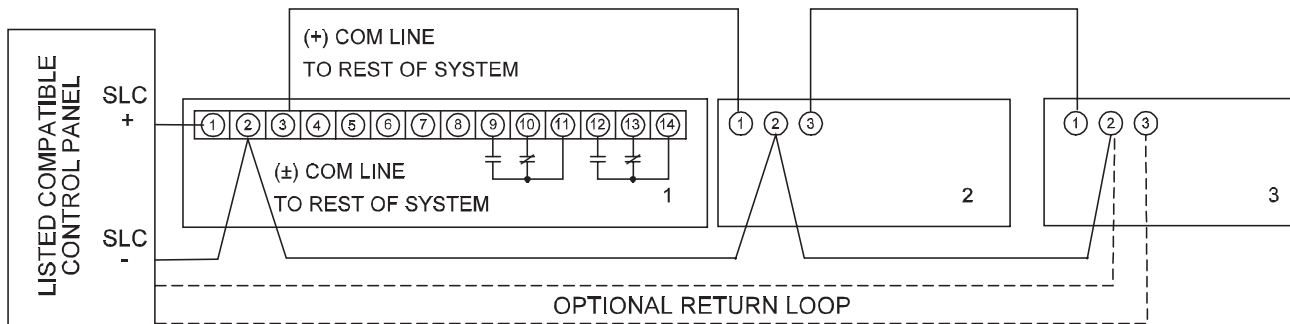


02-4998  
Remote Test Station  
with key (UL S2522)



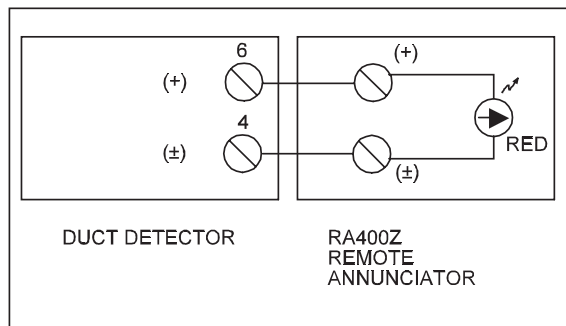
02-3868  
Remote Annunciator  
(UL S2522)

**Wiring Diagram: 63-1056 Duct Smoke Detector Using a UL Listed Control Panel**



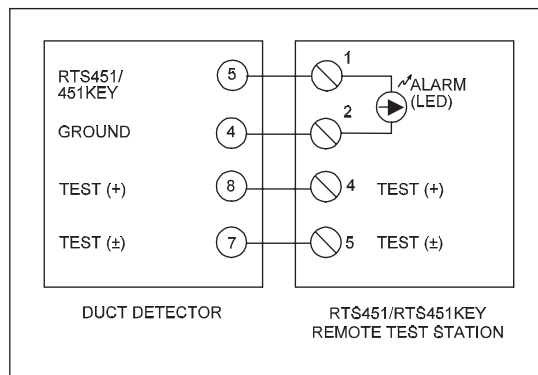
NOTE: For terminals 9 through 14, normally closed and normally opened relay positions are defined with product in reset condition, not in alarm.

**Wiring Diagram: 63-1056 Duct Smoke Detector with Optional 02-3868**



NOTE: Break tab on 02-3868 for use with 63-1056

**Wiring Diagram: 63-1056 Duct Smoke Detector with 02-3869/02-4998**



**ARCHITECT AND ENGINEERING SPECIFICATIONS**

The duct smoke detector shall be a Fike Model 63-1056 Intelligent Duct Smoke Detector to be used with compatible control panels. The duct smoke detector shall be UL listed per UL 268A, Standard for Smoke Detectors for Duct Applications, specifically for use in air handling systems. The detector shall operate in air velocities from 500 to 4000 feet per minute. The detector housing shall be equipped with an integral mounting base capable of accommodating the 63-1062 photoelectric detector head. It shall be capable of remote testing from the 02-3869 or 02-4998 Remote Test Station. The duct smoke detector housing shall incorporate an airtight smoke chamber in compliance with UL 268A. The housing shall be capable of mounting to either rectangular or round ducts without adapter brackets. An integral filter system shall be included to reduce dust and residue effects, thereby reducing maintenance and servicing. Sampling tubes shall be easily installed after the housing is mounted to the duct by passing through the duct housing. Terminal connections shall be of the strip and clamp method suitable for 14-18 AWG wiring.

