



## 2-WIRE LOW-FLOW DUCT SMOKE DETECTOR

### DESCRIPTION

The System Sensor Innovair™ (Fike P/N 63-1050) is a 2-wire photoelectric air duct smoke detector capable of sensing smoke in air velocities from 100 to 4000 feet per minute (0.5 to 20.32 m/sec.) This Innovair features Low-Flow technology enabling duct smoke detection throughout a broad range of airflow environments. Many difficult to solve HVAC applications occur in low airflow duct applications where reliable smoke detection is critical. Innovair with Low-Flow technology can detect smoke at air speed velocities of 100 feet per minute or greater, while continuing the same reliable performance to 4000 feet per minute.

The Innovair family is designed for simplified installation and easy maintenance. The modular construction allows for easy cleaning and uncomplicated field replacement of the UL recognized power and sensor boards.



**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 duct smoke detector application information

#### APPROVALS

- UL Listed

### FEATURES

- Air velocity rating from 100 to 4000 feet per minute (0.5 to 20.32 m/sec.)
- Patented telescopic sampling tube 12/24 VDC operation
- Built-in reset button
- Outside mounting tabs
- Easy and quick mounting to round or rectangular ducts from 1'-12' (0.3-3.7 meters) wide
- Photoelectric models available
- Easy to clean
- UL recognized field-replaceable power and sensor boards
- Remote test station option
- Remote annunciator option
- Transparent cover for convenient visual inspection
- UL 268A listed
- 3-year warranty

### ARCHITECTURAL/ENGINEERING SPECIFICATIONS

The air duct smoke detector shall be a System Sensor Model (Fike P/N 63-1050) Series Duct Smoke Detector. The detector housing shall be UL listed per UL 268A specifically for use in air handling systems. The detector shall operate at air velocities of 100 feet per minute to 4000 feet per minute (0.5 to 20.32 m/sec.). It shall be capable of local testing via magnetic switch or remote testing using P/N 02-4998 Remote Test Station. The unit shall be reset by local reset button or P/N 02-4998. The duct detector housing shall incorporate an airtight smoke chamber in compliance with UL 268A, Standard for Smoke Detectors for Duct Applications. 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 on detector and housing, thereby reducing maintenance and servicing. Sampling tubes shall either be plastic or easily installed after the housing is mounted to the duct by passing through the duct housing. The enclosure shall meet all applicable NEC and NFPA standards regarding electrical junction boxes. Terminal connections shall be of the strip and clamp method suitable for 12-18 AWG wiring.

Form No. P.1.81.01

## STANDARD SPECIFICATIONS

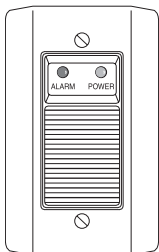
Size:	14-3/8" (37 cm) Length, 5-1/2" (14 cm) Width, 2-3/4" (7 cm) Depth
Shipping Weight:	3-1/4 lbs. (1.5 kg)
Operating Temperature Range:	32° to 131°F (0° to 55°C)
Operating Humidity Range:	10% to 93% relative humidity
Air Duct Velocity:	100 to 4000 ft./min. (0.5 to 20.32 m/sec.)

## ELECTRICAL RATINGS

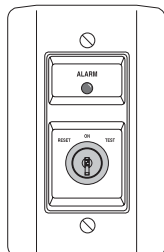
System Voltage:	12/24 VDC
Ripple Voltage:	4 Volts peak to peak
Start-up Capacitance:	0.02μF maximum
Standby Ratings:	8.5 VDC minimum, 35 VDC maximum, 120μA maximum
Alarm Ratings:	4.2 VDC minimum at 10mA 5.5 VDC maximum at 100mA Alarm current must be limited to 100mA or less by the control panel. If used, the P/N 02-3868 remote lamp operates within the specified alarm currents.
Reset Voltage:	2.50 VDC minimum
Reset Time:	0.3 Sec. maximum
Start-up Time:	34.0 Sec. maximum

## ACCESSORIES

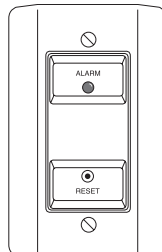
System Sensor provides system flexibility with a variety of accessories, including two remote test stations, and several different means of visible and audible system annunciation. As with our duct detectors, all duct smoke detector accessories are UL listed.



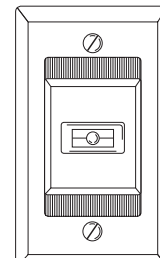
P/N 02-11490  
Piezo Annunciator  
(UL S4011)



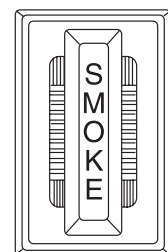
P/N 02-4998  
Remote Test Station  
with Key (UL S2522)



P/N 02-3869  
Remote Test Station  
(UL S2522)



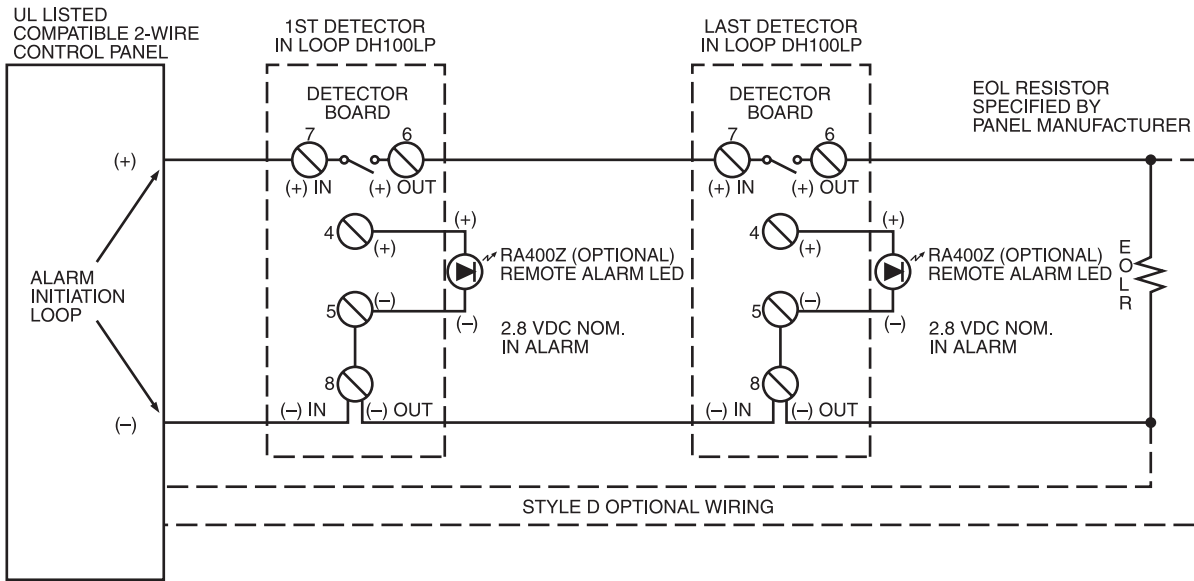
P/N 02-3868  
Remote Annunciator  
(UL S2522)



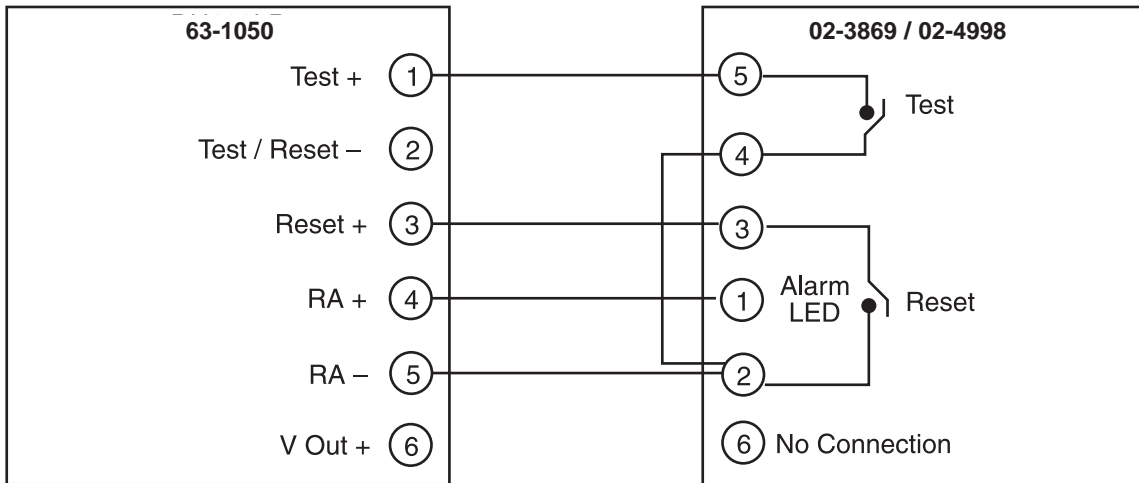
P/N 20-130-134  
Mini-Alert Sounder  
(UL S3593)

### 63-1050 WIRING GUIDE

System wiring for 2-wire duct smoke detectors (detectors powered from initiating device circuit)



Wiring diagram for 02-4998 Remote Test Station to 2-wire duct smoke detectors



## ORDERING INFORMATION

Fike P/N	Mfg. P/N	Description
63-1050	DH100LP	2-wire photoelectric duct smoke detector
63-1026	A5069	Replacement photoelectric detector board
02-4673	A5064	Replacement 4-wire power board
02-3721	ST-1.5	Metal sampling tube duct widths 1'-2' (0.3-0.6 m)
02-3722	ST-3	Metal sampling tube duct widths 2'-4' (0.6-1.2 m)
02-3723	ST-5	Metal sampling tube duct widths 4'-8' (1.2-2.4 m)
02-3724	ST-10	Metal sampling tube duct widths 8'-12' (2.4-3.7 m)
02-4674	T80-71-00	Replacement telescoping sampling tube
02-4675	P48-55-00	Replacement end cap for Fike P/N 02-4675
02-11489	SSK451	Multi-Signaling accessory
02-4998	RTS451KEY	Remote rest station with key lock
02-3869	RTS451	Remote test station
02-11490	APA451	Remote annunciator with piezo alarm
02-3727	MOD400R	Sensitivity test module
02-3868	RA400Z	Remote annunciator alarm LED
02-4676	F36-09-00	Replacement air filters (two per package)
02-4980	M02-04-00	Test magnet
02-4677	P48-21-00	End cap for metal sampling tubes
02-9976	S08-39-01	Photo replacement screen
20-130-134	PA400W	Mini-Alert sounder
20-1091	PS24LOW	Mini-Alert add-on strobe
02-11491	PS12/24SLENSW	Wall-mount "SMOKE" lens

