



Velociti® Series ADPF and ADPRF

Description

The Gamewell-FCI Velociti® Series, low-flow photoelectric air duct smoke sensors are capable of sensing smoke in air velocities from 100 to 4,000 feet per minute (0.5 to 20.32 m/sec.).

ADPF sensors feature low-flow technology that enables 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. ADPF low-flow technology can detect smoke at air speed velocities of 100 feet per minute or greater, while continuing the same reliable performance to 4,000 feet per minute.

The ADPF sensor 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.

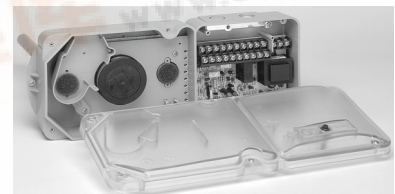
The Velociti® Series use a communication protocol that substantially increases the speed of communication between the sensors and certain Gamewell-FCI analog addressable fire alarm controls. These devices operate in a grouped fashion. If one of the devices in the group has a status change, the panel's microprocessor stops the group poll and concentrates on the single device. The net effect is a response speed up to five times greater than earlier designs.

These intelligent sensors communicate and are continuously monitored through the signaling line circuit. Sensor 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.

Analog Addressable Low-Flow Duct Sensor



ADPF



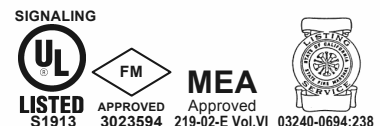
ADPRF

Features

- Air velocity rating from 100 to 4,000 feet per minute (0.5 to 20.32 m/sec.)
- Patented telescopic sampling tube
- Easily accessible code switches
- Outside mounting tabs
- Easy and quick mounting to round or rectangular ducts from 1'-12' (0.3-3.7 meters) wide
- Easy to clean
- UL recognized field-replaceable power and sensor boards
- Transparent cover for convenient visual inspection. Bi-color LEDs flash green whenever the sensor is addressed, and light steady red on alarm

*Note: Only the red LED is operative in panels that do not operate in Velociti mode.

An ISO 9000-2000 Company



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GAMEWELL-FCI

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Description (continued)

Remote alarm annunciation can be accomplished by using the RA400Z remote annunciator or the RTS451or RTS451KEY remote test station. Both these devices allow testing of the sensor from a remote location.

ADPF low-flow duct sensors are 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.

The ADPF (non-relay) has outputs for a remote LED display and remote test switch. It incorporates zener diodes to conserve power for communications to other devices. The ADPF is a 2-wire device that requires signaling line circuit power only.

The ADPRF (with relay) has powered outputs for remote LED indication with a remote test switch and audible sounder. Two form "C" auxiliary contacts can be configured as a relay version or jumpered to mimic the non-relay version. It has a patented cover tamper trouble signal. The ADPRF is a 4-wire device that requires both signaling line circuit power and either 24VAC/DC or 120/240VAC for proper operation.

Specifications

Operating Temperature 32° to 131° F (0° to 55° C)
Operating Humidity 10 to 93% relative humidity
Range: (non-condensing)
Storage Temperature -22° to 158° F
Range: (-30° to +70° C)
Duct Air Velocity: 100-4000 ft./min.
 (0.5—20.32 m/s)
Shipping Weight: ADPF: 3.35 lbs. (1.5 kg)
 ADPRF: 3.90 lbs. (1.8 kg)

Dimensions

Length: 14 3/4" (37 cm)
Width: 5 1/2" (14 cm)
Depth: 2 3/4" (7 cm)

Model ADPF (Non-relay)

Voltage Range: 15 to 32 VDC
Standby Current: 300 µA @ 24 VDC
 (one communication every 5 seconds with LED flash enabled)

Model ADPRF (with Relay)

Current Requirements (using no accessories)

Power
Supply Voltage: 20-30 VDC 30 VAC, 120 VAC, 22/240 VAC,
 50-60 Hz 50-60 Hz 50-60 Hz

Max. Standby

Current: 26 mA 65 mA RMS 44 mA RMS 25 mA RMS

Max. Alarm

Current: 87 mA 182 mA RMS 52 mA RMS 30 mA RMS

Alarm Response

Time: 3 to 10 sec. 3 to 10 sec. 3 to 10 sec. 3 to 10 sec.

Auxiliary Relay Contact Ratings

Alarm auxiliary contacts* (DPDT):

10 A @ 30 VDC

10 A @ 277 VAC (0.75 power factor)

240 VA @ 249 VAC (0.4 power factor)

1/8 HP @ 120 VAC

1/4 HP @ 240 VAC

Supervisory contact (SPST):

2.0 A @ 30 VDC (resistive)

Minimum switching current for auxiliary contact must be 100 mA DC minimum @ 5 VDC.

Accessory Current Loads at 24 VDC

Device	Standby	Alarm
PA400	0 mA	15 mA Max.
RA400Z	0 mA	12 mA Max.
RTS451/	0 mA	10 mA Max.
RTS451KEY		

Ordering Information

Part Number Description

ADPF	Analog addressable low-flow photoelectric non-relay duct smoke sensor
ADPRF	Analog addressable low-flow photoelectric with relay duct smoke sensor
ST-1.5	Sampling tube duct widths 1'-2'
ST-3	Sampling tube duct widths 2'-4'
ST-5	Sampling tube duct widths 4'-8'
ST-10	Sampling tube duct widths 8'-12'
A5060	Replacement power board for ADPF-RF (w/relay)
A5067	Replacement power board for ADPF (w/o relay)

Accessories Description

RTS451	Remote test station
RTS451KEY	Remote test station w/key
RA400Z	Remote LED
F36-09-11	Replacement filters
M02-04-00	Test magnet
P48-21-00	End cap of metal sampling tube
P48-61-00	End cap for plastic sampling tube
S08-39-01	Replacement photo insect screen

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