Analog Duct Sensors

VF5013-00 and VF5014-00 (with relays)

Standard Features

- Detects and limits the spread of smoke throughout building HVAC ducts
- Compatible with building automation and fire alarm systems
- Installs quickly and easily
- No screens or filters to clean
- Rugged gray steel back box with clear cover
- Accessories - Remote LED alarm indication capability
- Meets UL 268A Requirements

Operation

The VF5013 and VF5014 are designed and built to meet all local requirements, as well as the NFPA regulations regarding duct smoke sensors.

Output terminals are provided for remote accessories such as a horn, strobe, remote status indicators and reset key switches or push buttons. Air sampling is accomplished by two tubes which protrude into the duct. An exhaust tube of one standard length (7.5") is supplied in the installation kit with the smoke duct unit. Once the duct width has been determined the air intake sampling tubes must be ordered. Sampling tubes are supplied in three standard lengths 3 ft., 5 ft. and 10 ft. and cut to size to fit the duct.

Mounting the duct smoke unit is accomplished by the use of a template and 4 sheet metal screws, which are provided. Mounting can be achieved without the removal of the clear cover which is secured by 4 capture screws.

The compact VF5014 contains 2 sets of form "C" contacts rated at 10 amps.

The pilot and alarm visual indicators, provided on the front of the VF5014 duct unit, signal the operating status of the device. A manual test/ reset switch is located alongside the visual indicators.

After addressing, Analog Duct Sensors are fully configurable through Loop Explorer Software.

Technical Specifications

Operating Voltage	17-41 VDC
Average Current Consumption (on S-SC Line)	**VF5013** 2mA **VF5014** 10mA **NOTE** AUX power required for the VF5014
Contacts	**VF5013** N/A **VF5014** 2 Independently Controlled
Alarm Current	**VF5013** 8mA **VF5014** 55mA
Operating Temperature Range	32° F to 120° F
Relative Humidity	10-85%, non-condensing
Contact Rating	1A @ 30VDC 0.5A @1 25VAC
Air Velocity	300 to 4,000 ft/min
Sampling Tubes	3' (VF5003) 5' (VF5004) 10' (VF5005)
Remote Indication	**VF5013-00** Alarm **VF5014-00** Alarm, Pilot

Application

The VES VF5013 and VF5014 Analog Photoelectric Duct Smoke Sensor provides early detection of smoke and products of combustion present in air moving through HVAC ducts in Commercial, Industrial, and Residential applications.

The Analog Photoelectric Duct Smoke Sensor is designed to prevent the recirculation of smoke in areas by the air handling systems, fans and blowers. Complete systems may be shut down in the event of smoke detection.
The VES VF5013 and VF5014 operate on a DCP powered loop (24 VDC source required for VF5014).

Engineering Specification

The Dealer shall furnish and install where indicated on the plans, the VF5013 or VF5014 Analog Photoelectric Duct Sensors. The modules shall be UL listed compatible with VES Digital Communications Protocol (DCP) supporting Elite control panel loops. The sensors shall be listed by Underwriters Laboratories per UL 268A.

The sensors shall operate at air velocities from 300 feet per minute to 4,000 feet per minute. The duct detector housings shall be of metal construction and complete mechanical installation may be performed without removal of detector cover. The duct sensor shall not require additional filters or screens which must be maintained. The housing shall contain a base which will accept an analog photoelectric sensor head. Terminal connections shall be of the screw type and be a minimum of #6 screw. For installations requiring relay function, terminals shall be provided for remote pilot, remote alarm indication, strobe/horn and remote key switch. For installation not requiring relay function, visual indication of alarm and power must be provided on detector front.

A manual reset switch shall be located on front of the device. All wiring must comply with local codes and regulations.

State-of-the-art communications protocol, DCP, allows multiple system component types to be used concurrently in a system's Signaling Line Circuit.