NAPCO | COMMERCIAL
FIREWOLF

Addressable Photoelectric Smoke Dete
FWC-FSLC-SMK

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 02/06/17

FEATURES:

- Low Profile - Only 2.0" high, including base
- Simple and reliable device addressing method
- Automatic compensation for sensor contamination
- Built-in fire test feature
- Uses noise immune communication protocol that utilizes interrupts for fast response to fires
- Two built-in power/alarm LEDs
- Programmable Non-polling LEDs
- Non-directional smoke chamber
- Vandal-resistant security locking feature
- Removable smoke labyrinth for cleaning or replacement

DESCRIPTION:

The detection chamber consists of a light emitting diode (LED) and photodiode arrangement. The chamber is designed such that light emitted by the LED cannot normally reach the photo diode. In the event of fire, particles of smoke enter the chamber and scatter the light. As the smoke level increases, the scattering effect increases, causing more light to hit the photodiode. The chamber contains a unique baffle design that allows smoke to enter the chamber while preventing external light from affecting the photodiode. The photodiode input level is sampled to sense smoke density.

When the smoke density exceeds a preset threshold, the sensor transmits an interrupt to the fire alarm control panel indicating a fire condition. The fire alarm control panel can adjust the sensor threshold to compensate for contamination.

Up to 127 devices are permitted on each loop. A sensor address can be set by a hand held programming unit. The sensor mounts to an electronics-free base and incorporates a locking mechanism for secure installation. The base provides mounting slots, terminals for field wiring and a third contact for a remote indicator/LED. The sensor incorporates dual LEDs for easy viewing of sensor status.

LISTINGS:

- UL268: Smoke Detectors for Fire Alarm Signaling Systems
- UL268A: Smoke Detectors for Duct Application replacement head for the DUCT
- NFPA 72 National Fire Alarm Code
- CSFM: California State Fire Marshall

APPLICATION:

The Napco FWC-FSLC-SMK Photoelectric Smoke Sensor is particularly suited to detecting optically dense smoke typical of fires involving materials such as soft furnishings, plastic, foam or other similar materials that tend to smolder and produce large visible smoke particles. Napco's unique design allows fast response to flaming fires as well as smoldering fires while eliminating false alarms.

ENGINEERING SPECIFICATION:

The contractor shall furnish and install where indicated on the plans, photoelectric sensors FWC-FSLC-SMK. The combination sensor head and twist lock base shall be UL Listed compatible with a UL Listed fire alarm control panel. The base shall permit direct interchange with the FWC-FSLC-HEAT heat sensor. The sensitivity of the sensor shall be capable of being measured by the control panel. The vandal-resistant, security locking feature shall be used in those areas as indicated on the drawing. The locking feature shall be optional and can be implemented when required.

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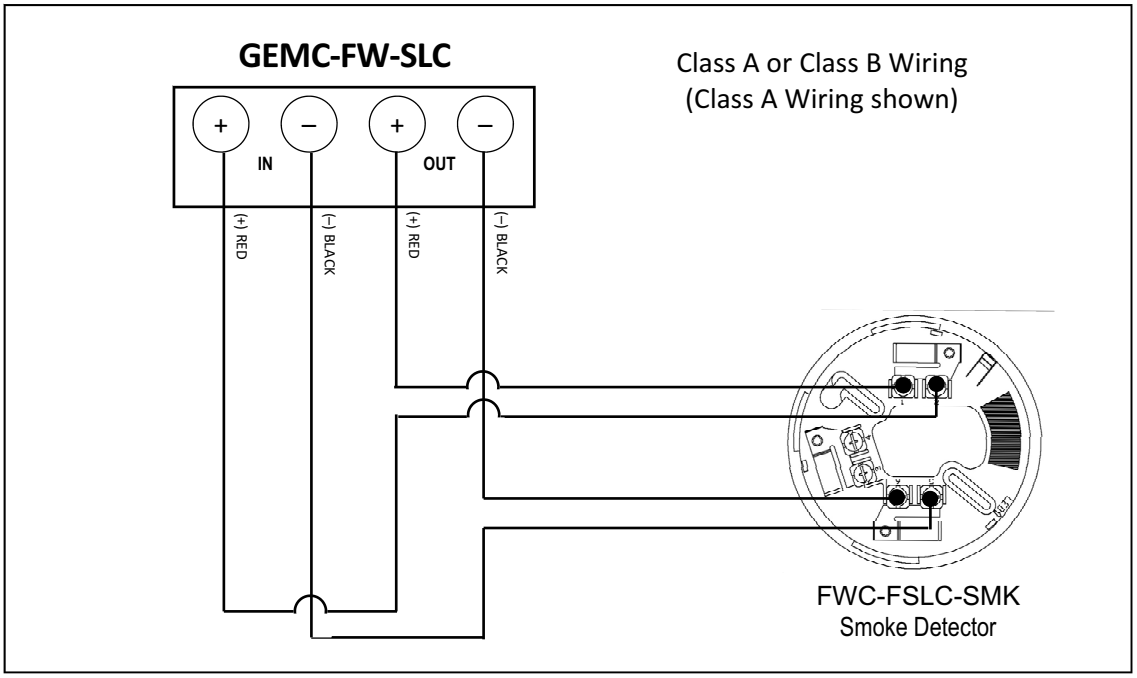
SPECIFICATIONS	
Operating Voltage Range (V_H) (S-SC)	22.9 ~ 39.5 VDC; 39.5 VDC Max
Current Consumption (S-SC) Normal Mode	390µA Typical; 800µA Maximum
Current Consumption (S-SC) when polled	2mA
Device Type Code	88 Hex
Operating Temperature	14°F to 122°F (-10°C to 50°C)
UL Listed Temperature	32°F to 100°F (0°C to 37.8°C)
Storage Temperature	-4°F to 140°F (-20°C to 60°C)
Dimensions	3-15/16"D x 1-1/2"H
Environment	Indoor Use Only
Visual Alarm / Power Indicator	Dual LED



Coverage

- One smoke detector covers 450 to 900 square feet (42 to 84 square meters)

WARNING: HEAT DETECTORS ARE NOT LIFE SAFETY DEVICES. WHERE LIFE SAFETY IS A FACTOR SMOKE DETECTORS ARE RECOMMENDED.

Examples:

You may use 30 foot (9.1m) spacing on smooth ceilings for smoke detectors. Beams and other obstructions extending more than 18" (45.7cm) below the ceiling reduce the effective range of the detectors. Such obstructions should designate a new separation point, and be considered a border for a new section.

Beams or other obstructions extending more than 8" (20.3cm) but less than 18" (45.7cm) require reduced spacing at the perpendicular of the obstructions. **NOTE:** FOR INFORMATION ON DIFFERING STYLES OF CONSTRUCTION, CONSULT THE NFPA HANDBOOK, SECTION 72.

WARNING: DO **NOT** INSTALL SMOKE DETECTORS IN THE FOLLOWING AREAS:

- Where temperatures are likely to exceed 100°F (37.8°C) or fall below 32°F (0°C)
- Closer than 4 inches to any side wall
- Where forced ventilation can dilute the smoke from a fire
- In known areas of combustion such as kitchens or furnace rooms

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