

# Conventional Smoke Detection

Models FW-2, FW2-H, FW-4, FW4-H

## FEATURES

- Low profile – Only 1.8" high
- FW2-H & FW4-H models include a built-in thermal heat sensor – for more accurately detecting a wide range of fires (135°F heat detector)
- 2-Wire or 4-Wire models
- Highly stable operation, RF / Transient protection
- Two built-in power / sensitivity supervision / alarm LEDs
- Non-directional smoke chamber
- Vandal-resistant security locking feature (FW-2, FW2-H, FW-4, FW4-H)
- Built-in magnetic Go / No-Go detector test feature
- Removable smoke labyrinth for cleaning or replacement
- Automatic Sensitivity window verification function meets outlined requirements in NFPA 72 Chapter 7, *Inspection, Testing and Maintenance*

## OPERATION

Firewolf FW-2, FW2-H, FW-4, FW4-H advanced photoelectric smoke detectors utilize two bi-colored LEDs for indication of status. In a normal standby condition, the LEDs will flash green every 3 seconds. When the detector senses that its sensitivity has drifted outside the UL Listed sensitivity window, the LEDs will flash red every 3 seconds. When the detector senses smoke and goes into alarm, the status LEDs will latch on red.

The units are comprised of an LED light source and silicon photo diode receiving element. In a normal standby condition, the receiving element receives no light from pulsing light source. In the event of fire, smoke enters the detector and light is reflected from the smoke particles to the receiving element. The light received is converted to an electronic signal; these signals are processed in the comparator, and when two consecutive signals exceeding the basic level are received within a specific period of time, the time delay circuit triggers the SCR switch to activate the alarm signal. The status LED lights continuously during the alarm period.



FW-2 & FW-4 Advanced  
Photoelectric Smoke Detector



FW2-H & FW4-H with  
Built-in Thermal Heat Sensor



## AGENCY LISTINGS

- UL268: Smoke Detectors for Fire Protective Signaling Systems
- NFPA 72 National Fire Alarm Code
- CSFM: California State Fire Marshall

## ENGINEERING SPECIFICATION:

- Detector head UL Listed; compatible with a UL Listed fire alarm control panel.
- Flashing status LED for visual supervision. When the detector is actuated, the flashing LED latches on steady at full brilliance. The detector may be reset by actuating the control panel reset switch.
- Sensitivity window verification feature.
- Vandal resistant, field selectable, security locking feature.
- Smokeless testing method simulates the effects of products of combustion in the chamber to ensure testing of detector circuits.
- Voltage and RF transient suppression techniques to minimize false alarm potential.

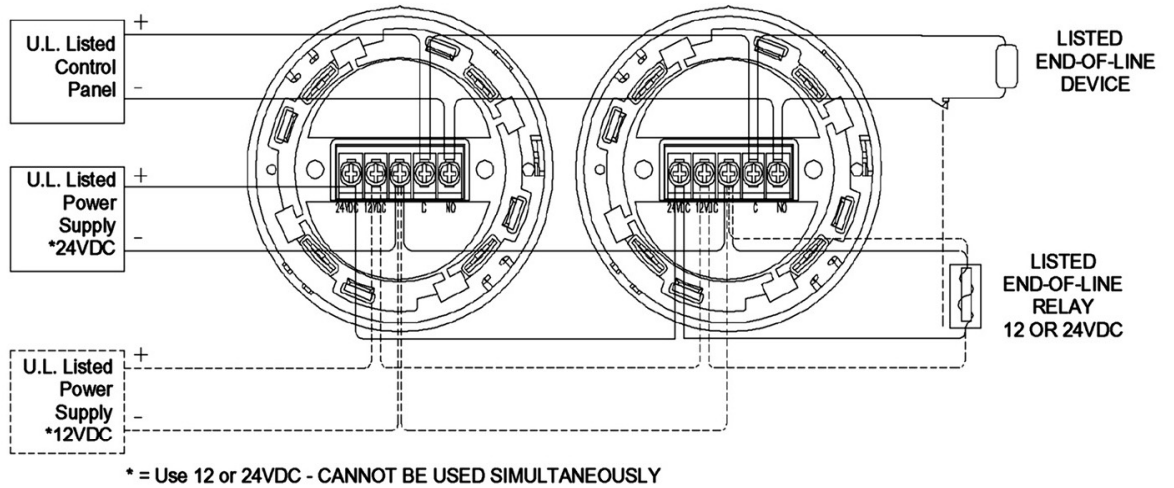
## SPECIFICATIONS

Voltage: Working	8.0 - 35.0 VDC
Voltage Wave Form	Filtered DC 15% Ripple Max.
Maximum Alarm Current (FW-2 & FW2-H)	Limit Current to 150mA @ 35.0 VDC
Maximum Alarm Current (FW-4 & FW4-H)	55mA @ 35.0 VDC
Maximum Surge Current	200µA
Average Standby Current	38µA @ 12VDC; 55µA @ 24VDC; 70µA @ 35VDC
Sensitivity Test Feature	Built-In Test Feature
Heat Element Rating (FW2-H)	135°F
Compatibility Identifier (FW-2 & FW2-H)	HD-6

## HOW TO ORDER

- FW-2:** Two-Wire Conventional Smoke Detector
- FW2-H:** Two-Wire Conventional Smoke Detector with internal Heat Detector
- FW-4:** Four-Wire Conventional Smoke Detector
- FW4-H:** Four-Wire Conventional Smoke Detector with internal Heat Detector

**FW-4 Wiring Diagram**



**FW-2 Wiring Diagram**

