

## SLR-24VN PHOTOELECTRIC SMOKE DETECTOR



Shown without base

### STANDARD FEATURES

- Low profile, 1.8" high (with base)
- 2 or 4 wire base compatibility, relay base available
- Highly stable operation, RF/transient protection
- Two built-in power/sensitivity supervision/alarm LEDs
- Non-directional smoke chamber
- Removable smoke labyrinth for cleaning or replacement
- Automatic Sensitivity window verification function meets outlined requirements in NFPA 72, Chapters 2 & 7 inspections, testing and maintenance

### SPECIFICATIONS

Light Source	GaAIAs infrared Light Emitting Diode
Rated Voltage	17.7 - 30.0 VDC
Working Voltage	15.0 - 33.0 VDC
Maximum Voltage	42 VDC
Nominal Voltage	24 VDC
Supervisory Current	45µA @ 24 VDC
Surge Current	160µA max. @ 24 VDC
Alarm Current	150mA max. @ 24VDC
Air Velocity Range	0-4000 fpm
Ambient Temperature	32°F to 100°F (0°C to 49°C)
Maximum Humidity	95% RH Non-condensing
Color & Case Material	Bone PC/ABS Blend
Mounting	Refer to NS Conventional Detector Base Data Sheet

### APPLICATIONS

The Hochiki SLR-24VN can be used in all areas where Photoelectric Smoke/Heat Detectors are required. The Patented smoke chamber makes the SLR-24VN (Without reed Switch Model) is well suited for fires ranging from smoldering to fast-flame fires.

NS-4 Series, NS-6 Series, HSC-4R or HSC-R Style bases may be used with the SLV-24VN. Current interchangeable/compatible devices are the SIJ-24 ionization detector, SLR-24H photoelectric smoke detector with heat sensor, and the DCD-135/190 heat detectors.

All NS conventional devices are mechanically compatible with Hochiki America HSB, HSC, and YBA type bases which may have been used in previous installations. Please check individual panel listings for compatible bases.

### OPERATION

The SLR-24VN photoelectric smoke detector utilizes two bi-colored LEDs for indication of status. In a normal standby condition the LEDs flash GREEN every 3 seconds. When the detector senses smoke, and goes into alarm the status LEDs with latch on RED.

The detector utilizes an infrared LED light source and silicon photo diode receiving element in smoke chamber. In a normal standby condition, the receiving element receives no light from the pulsing LED light source. In the event of a fire, smoke enters the chamber and light is reflected from the smoke particles to the receiving element. The light received is converted into an electronic signal.

Signals are processed and compared to a reference level, and when two consecutive signals exceeding the reference level are received within a specific period of time. The time delay circuit triggers the SCR switch to activate the alarm signal. The status LEDs light continuously during the alarm period

**PRODUCT LISTINGS**

**SIGNALING**



**LISTED**  
S1383



California State  
Fire Marshal  
7272-0410:107

Specifications subject to change without notice.

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### ENGINEERING SPECIFICATIONS

The contractor shall furnish and install Hochiki's SLR-24VN Photoelectric Smoke Detectors as indicated on the plans. The detector head and twist lock base is UL Listed and it's compatible with an UL Listed fire alarm control panel. The base permits direct interchange with the Hochiki SLR-H combination photoelectric smoke/heat detector, SIJ-24 ionization type smoke detector and/or DCD-135/190 fixed temperature/rate-of-rise heat detectors. The base shall be appropriate twist-lock base NS-4 Series, NS-6 Series, HSC-4R, or HSC-R. In the event of partial or complete retrofit, the SLV-24VN may be used in conjunction with, or as a replacement for, Hochiki America detectors (SLK-24, SLK-24FH and the SIH-24) on most HSB and HSC base applications.

The smoke detector shall have two flashing status LEDs for visual supervision. When the detector is in standby condition the LEDs will flash Green. When the detector is actuated, the flashing LEDs will latch on Red. The detector may be reset by actuating the control panel reset switch. The sensitivity of the detector shall be capable of being measured. To facilitate installation, the detector shall be non-polarized. Voltage and RF transient suppression techniques shall be employed in the detector to minimize false alarm potential. Auxiliary SPDT relays shall be installed where indicated. The vandal-resistant, security locking feature shall be used in those areas as indicated on the drawing. The locking feature shall be field removable when not required.

### TYPICAL WIRING DIAGRAMS

