

# GENTEX

# 8000/8003 SERIES

## Photoelectric Open Area Smoke Detector

### 4-Wire Detectors for 24 VDC and 120 VAC Fire Alarm Systems

#### Application

The Gentex 8000/8003 Series of photoelectric detectors is specifically designed for commercial, industrial, and institutional applications, including hotels, motels, dormitories, and other multi-family dwellings. Gentex offers a full range of detectors that are compatible with 4-wire control panels from leading manufacturers. The 8000/8003 Series is engineered to provide outstanding performance wherever reliable fire protection is required.

The Gentex 8000/8003 Series provides an exclusive patented three position test feature that simulates a 0.85% and a 3.5% actual smoke condition, in full compliance with NFPA 72 and UL 268 Standards. The test feature has the capability to let you know when maintenance is required.

A standard Form A dry contact for connection to the system initiating circuit and an auxiliary Form C dry contact are provided on all models. Other options include reverse/local 90dB solid-state piezo horns and 135°F self-restoring integral or isolated thermals to meet your specific requirements.

The 8003 Series provides the temporal 3 evacuation tone as a standard feature. When testing the 8003 Series it may take up to 16 seconds longer to go in or out of alarm.

#### Standard Features

- 2 Year Warranty from Date of Purchase
- Functional Test Switch — Patented Three Position Test
- Nominal 2.5% Sensitivity
- 5-to-1 Signal-to-Noise Ratio
- Pulsing LED Sensing Chamber
- Fully Insect Screened
- Form A/Form C Dry Contacts
- Solid-State LED Condition Indicator
- Quick-Disconnect Wiring Harness
- Mounting Hardware Adapts to Standard Junction Boxes
- Dust Cover to Prevent Contamination During Installation
- Protective High Air Velocity Gasket
- On Site Maintenance Washing Program
- Suitable for release device service



8000/8003 Series

#### Approvals



This symbol on the product's nameplate means it is Listed by UNDERWRITERS LABORATORIES, INC.

- Americans with Disabilities Act (ADA)
- BS+A/MEA #928-84-SA
- CSFM Listings (7272-0569:102)
- MSFM Listing #1929
- NFPA 72
- UL 268

#### Available Models

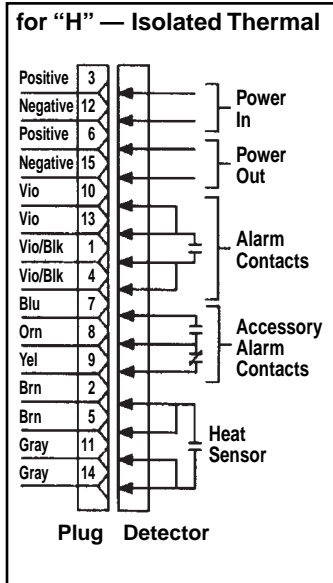
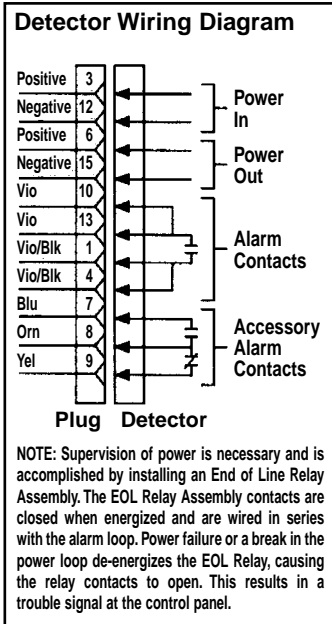
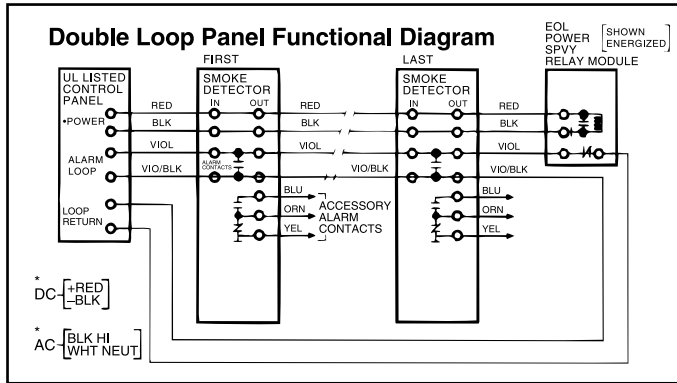
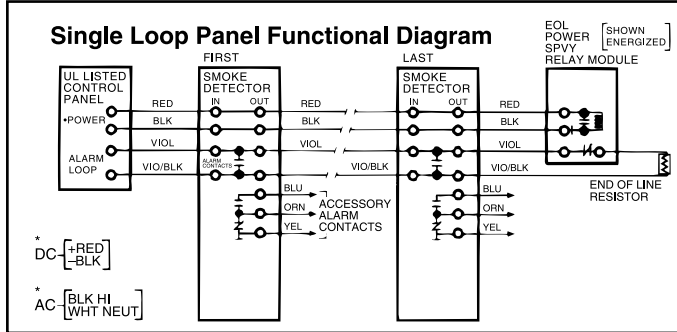
MODEL NUMBER	VOLTAGE	OPTIONS			
		Integral 135°F Thermal	Isolated 135°F Thermal	Reverse/Local Piezo 90dB	Tempo 3 Sound
8100	120 VAC				
8100T	120 VAC	•			
8100P	120 VAC			• (local)	
8103P	120 VAC			• (local)	•
8240	24 VDC				
8240T	24 VDC	•			
8240P	24 VDC			•	
8243P	24 VDC			•	•
8240PH	24 VDC		•	•	
8243PH	24 VDC		•	•	•
8240PT	24 VDC	•		•	
8243PT	24 VDC	•		•	•

# 8000/8003

SERIES

# GENTEX

## Wiring Diagrams



## Electrical Specifications

Model Numbers	8240	8100
Operating Voltage		
Nominal:	24 VDC	120 VAC
Range	Min: 18 VDC	110 VAC
	Max: 30 VDC	130 VAC
Frequency	-	50-60HZ
Current Consumption at Nominal Operating Voltage (Milliamperes):		
Standby	6mA	70mA
Alarm	60mA	70mA

Note: For "P" Option (Horn), Alarm Current Consumption is unchanged.

Sensitivity	2.5% Nominal
Alarm Contacts	1 Form A -N.O. (Resistive)
	1 Amp at 24 VDC
	0.5A at 120 VAC
Auxiliary	1 Form C -N.O. (Resistive)
	1 Amp at 24 VDC
	0.5A at 120 VAC
Temperature	40°-100°F. (4.4°C-38°C)
Humidity	10%-93% Relative Humidity
Size	Diameter: 6 1/2 OD (5 3/4 in. at ceiling)
	Depth: 2 5/8 in.

## Architect & Engineering Specifications

The Photoelectric Smoke Detector shall be a Gentex Model \_\_\_\_\_ and shall operate on the photoelectric light scattering principle and shall be listed by Underwriter's Laboratories, Inc., the State of California Fire Marshal and the Bureau of Standards and Appeals (NYC).

The smoke detector shall contain an infrared LED light source and a light sensing photodiode. These components shall be positioned such that when smoke particles enter the sensing area, light from the LED reflects onto the photodiode. When the amount of light reflected onto the photodiode reaches a predetermined level, the detector shall latch into alarm.

The smoke detector shall contain a test knob that, when in TEST 1 Position, scatters the detector's LED light source to the equivalent of a nominal .85% actual smoke condition, when in Test 2 position the detector shall simulate an equivalent of a nominal 3.5% actual smoke condition. Test feature shall indicate when maintenance is required without the need of additional equipment. A magnetic switch closure or other switch closure, or smoke generating equipment which does not scatter the light beam or test sensitivity is not sufficient.

The smoke detector shall be able to contain an optional internal 90dB horn (at 10 feet) which emits an intermittent tone when the detector alarms. Also have the provision of reverse polarity operation. The horn shall have the capability of being self-restoring.

The smoke detector shall be able to provide a self-restoring integral/isolated heat sensor set to alarm at 135°F.

The smoke detector shall be provided from the manufacturer with all internal wiring (power in, power out and alarm contacts have 2 wires, auxiliary relay contacts have 1 wire) leading into a plug-in terminal socket for ease of field installation. Screws are not acceptable since they make service more difficult. The manufacturer shall further supply the field wiring harness with plug connector for connection to insulated wire connectors.

The smoke detector shall mount to a 2" x 3" switch box or 4" octagon junction box using a standard bracket that does not have to be purchased separately. The smoke detector shall be listed for wall or ceiling mounting.

# GENTEX CORPORATION

Fire Protection Products:  
10985 Chicago Dr., Box 310, Zeeland, MI 49464  
616/392-7195 1-800/436-8391 FAX: 616/392-4219

Gentex corporation reserves the right to make changes to the product data sheets at their discretion.

## CSFM Listing

7257-569:102



All are suitable for releasing device service.