

## Photoelectric System Smoke Detector

### Applications

The Gentex 8000/8003 Series of photoelectric smoke detectors are designed for commercial, industrial, residential and institutional applications. The 8000/8003 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 ANSI/UL 268 Standards for installation per NFPA 72 and the International Codes (IBC/IFC/IRC). The test feature has the capability to let you know when maintenance is required.

A standard Form A dry relay contact for connection to the system initiating circuit and an auxiliary Form C dry relay contact is provided on all models for use as remote annunciation as a releasing device. Other options include reverse/local 90dBA solid-state piezo horns and 135°F (57.2°C) fixed temperature 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

- Available in 120VAC and 24VDC
- Listed for releasing device service
- Horn frequency 3100 Hz (nominal)
- Temporal 3 evacuation sounding device (8003 Series)
- Patented three position test
- Nominal 2.5% sensitivity
- Easy Wash® on-site maintenance washing program
- Form A/Form C dry relay contacts
- Quick-disconnect wiring harness
- 5-to-1 signal-to-noise ratio
- Pulsing LED sensing chamber
- Fully insect screened
- Solid-state LED condition indicator
- Mounting hardware adapts to standard junction boxes
- Dust cover to prevent contamination during installation
- Protective high air velocity gasket
- 24 month warranty from date of purchase

8000 /  
8003  
SERIES



Easy Wash® -  
On Site  
Maintenance  
Program

### Product Listings

SIGNALING



LISTED



- ANSI/UL 268 Listed
- CSFM: 7272-0569:102
- MEA #928-84-SA
- MSFM Listing #1929

### Product Compliance

- NFPA 72
- IBC/IFC/IRC
- Quality Management System is certified to:  
ISO 9001:2008

NEMA  
MEMBER



ASSEMBLED IN  
THE USA

### 8000 (8240/8100) Series - Solid State Piezo Sounder (P Models only)

Model Number	Part Number	Voltage	Reverse/ Local 90dBA Piezo	Integral 135°F Thermal	Isolated 135°F Thermal	Non-Latching Circuit "Y"
8240	908-1201-002	24VDC				
8240Y	908-1207-002	24VDC				●
8240T	908-1203-002	24VDC		●		
8240P	908-1202-002	24VDC	●			
8240PT	908-1205-002	24VDC	●	●		
8240PTY	908-1209-002	24VDC	●	●		●
8240PY	908-1208-002	24VDC	●			●
8240PH	908-1206-002	24VDC	●		●	
8240PHY	908-1210-002	24VDC	●		●	●
8100	908-1233-002	120VAC				
8100Y	908-1239-002	120VAC				●
8100T	908-1234-002	120VAC		●		
8100P	908-1236-002	120VAC	● (local)			
8100PY	908-1240-002	120VAC	● (local)			●

### 8003 (8243/8103) Series - Temporal 3 Piezo Sounder (P Models only)

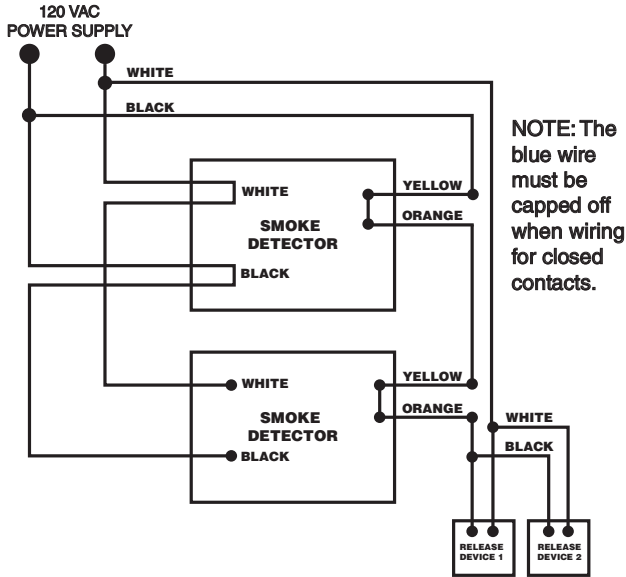
Model Number	Part Number	Voltage	Reverse/ Local 90dBA Piezo	Integral 135°F Thermal	Isolated 135°F Thermal	Non-Latching Circuit "Y"
8243P	908-1211-002	24VDC	●			
8243PT	908-1212-002	24VDC	●	●		
8243PTY	908-1215-002	24VDC	●	●		●
8243PY	908-1214-002	24VDC	●			●
8243PH	908-1213-002	24VDC	●		●	
8243PHY	908-1216-002	24VDC	●		●	●
8103P	908-1243-002	120VAC	● (local)			
8103PY	908-1246-002	120VAC	● (local)			●

### NOTES

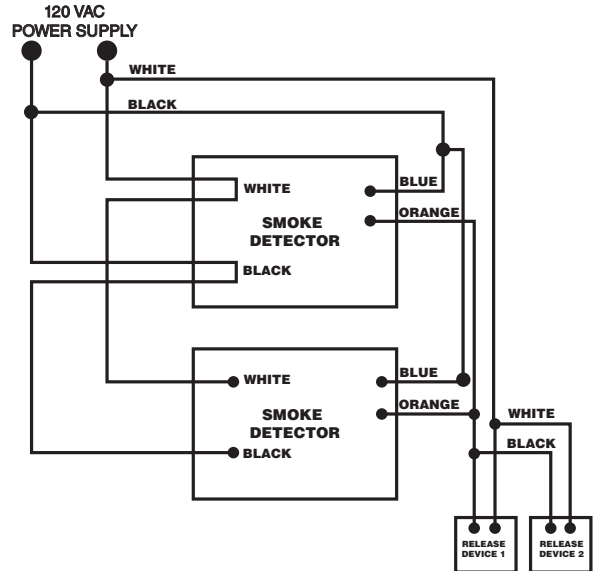
- The 8000/8003 Series are round units.
- When testing 8103P/8243P Series, it may take up to 16 seconds longer for smoke alarm to go in or out of alarm mode.
- It is recommended that 8000/8003 Series smoke detector be tested monthly.
- Refer to Technical Bulletin 002 for Easy Wash® on site washing instructions
- 8100P/8240P units produce a non-temporal audible alarm and are therefore not intended for locations where the desired action of the occupant(s) is evacuation.
- 8103P/8243P units produce a temporal 3 audible alarm. Per NFPA 72, the American National Standard Audible Emergency Evacuation Signal as defined In ANSI S3.41, is required whenever the intended response is to evacuate the building.

# Wiring for Releasing Device Service

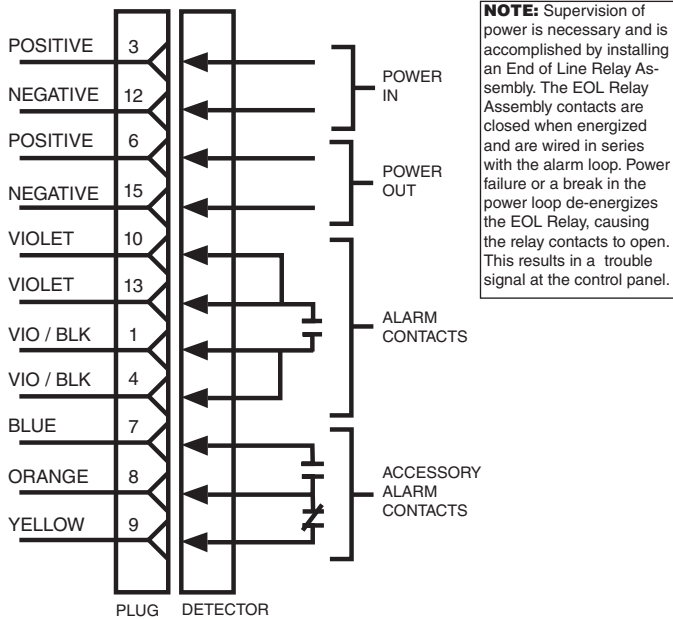
## Normally Closed Configuration



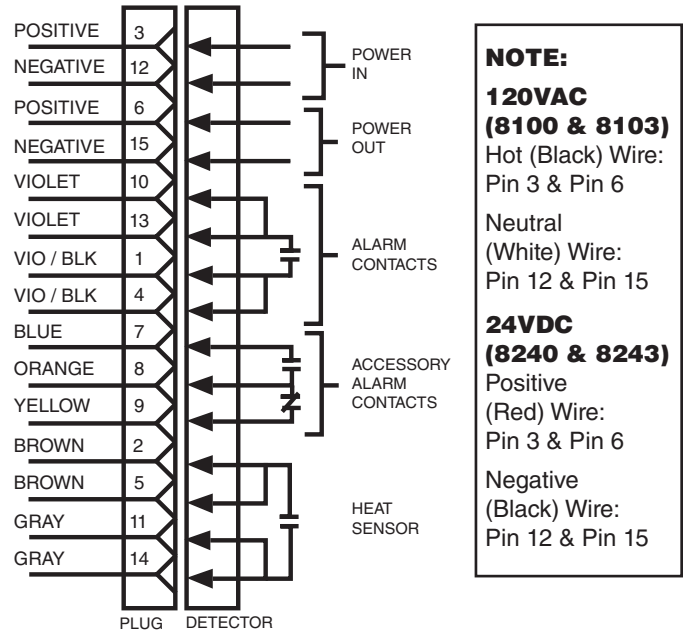
## Normally Open Configuration



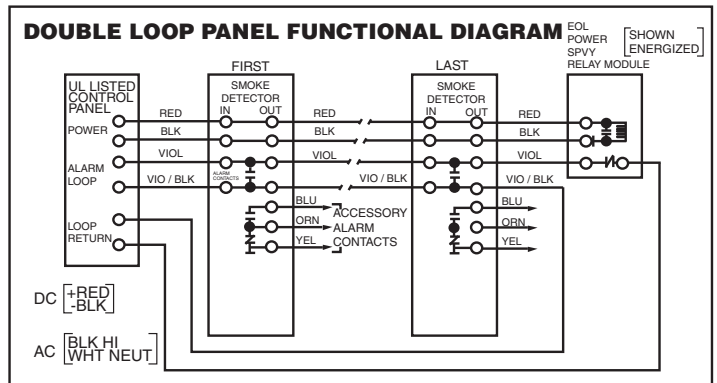
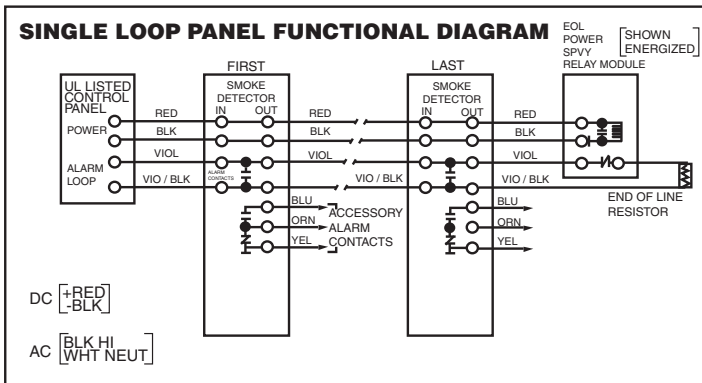
## Detector Wiring Diagram



## For "H" — Isolated Thermal



## Supervised Wiring Diagrams



# 8000 / 8003 SERIES

## Electrical Specifications

<b>Model Numbers</b>	<b>8240</b>	<b>8100</b>
Operating Voltage Nominal:	24VDC	120VAC
Range Min:	18VDC	110VAC
Max:	30VDC	130VAC
Frequency	—	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	
	. . . . .0.6A at 120 VAC	
Auxiliary	.1 Form C –N.O. (Resistive)	
	. . . . .1 Amp at 24 VDC	
	. . . . .0.6A at 120 VAC	
Temperature	.40° - 100°F. (4.4° - 38°C)	
Humidity	.10%-93% Relative Humidity	
Size	.Diameter at base: 5.75 in. (14.605 cm)	
	. . . . .Overall diameter: 6.25 in. (16.51 cm)	
	. . . . .Depth: 2.625 in.	

## Architect & Engineering Specifications

The photoelectric smoke detector shall be a Gentex Model 8100/8103/8240/8243 or approved equal 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 2 Position, scatters the detector's LED light source to the equivalent of a nominal .85% actual smoke condition, when in TEST 1 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 90dBA 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 (57.2°C) fixed temperature.

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 each 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.

24 units per carton  
32 pounds per carton

# GENTEX CORPORATION

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