

## Photoelectric Smoke Alarm 120VAC and 220VAC with 9VDC Battery Back-Up Single/Multiple Station Smoke Alarm

9000 /  
9003  
SERIES

### Applications

The 9000/9003 Series of photoelectric smoke alarms is designed for residential and commercial residential applications, including homes, apartments, hospitals, hotels and motels, in compliance with UL 217, UL 1730 applicable IBC/IFC Standards and NFPA 72.

Available in many different models, the 9120/9123 Series is engineered to virtually eliminate nuisance alarms and deliver outstanding performance wherever reliable fire protection is required. The 9000/9003 Series is provided with a 9VDC alkaline battery for back-up in the event building power is lost. The battery impedance is verified and the alarm provides a low or missing battery warning.

The Gentex 9000/9003 Series provides an exclusive patented three position test feature that simulates a 0.85% and 3.5% actual smoke condition in full compliance with NFPA 72 and UL Standards.

Options include self-restoring 135°F integral or isolated heat thermals and Form A/Form C dry contacts for remote annunciation. Tandem interconnection of up to 12 units is available on several models; tandem interconnection of up to 6 units is available on "F" models, which activate the dry contacts from the tandem wire or a local alarm.



**Easy Wash™ -  
On Site  
Maintenance  
Program**

### Standard Features

- Available in 120VAC and 220VAC with 9VDC battery back-up
- Horn frequency 3100 Hz (nominal)
- Nominal 2.5% sensitivity
- Patented three position test switch
- Relays operate on battery back-up
- Quick-disconnect wiring harness
- 90dBA continuous piezo horn (9120/9220 Series)
- 90dBA temporal 3 evacuation piezo horn (9123/9223 Series)
- 5-to-1 signal-to-noise ratio
- Pulsing LED sensing chamber
- Fully insect screened
- Interconnect with all Gentex tandem capable smoke alarms
- Easy Wash™ on-site maintenance washing program
- Red LED pulses every 30 seconds, green LED for AC power on
- Mounting hardware adapts to standard junction boxes
- Dust cover to prevent contamination during installation
- Low or missing battery indicator
- 1 year warranty from date of purchase

### Product Listings

SIGNALING



LISTED



- UL 217 and UL 1730 Listed
- CSFM #7257-569:117
- BS+A/MEA #285-91-E
- BFP (City of Chicago)
- MSFM Listing #1929
- Hong Kong FSD Listed (9220 Series ONLY)

### Product Compliance

- NFPA 72
- IBC/IFC/IRC



## 9000 (9120/9220) Series - Continuous Piezo Sounder

Model Number	Part Number	Voltage	Integral 135°F Thermal	Isolated 135°F Thermal	Tandem Up To 12 Units	Tandem Up To 6 Units	Form A/C Contacts
9120	917-0001-002	120VAC			●		
9120T	917-0002-002	120VAC	●		●		
9120H	917-0003-002	120VAC		●	●		
9120F	917-0004-002	120VAC				●	●
9120TF	917-0009-002	120VAC	●			●	●
9120HF	917-0005-002	120VAC		●		●	●
9220	917-0026-002	220VAC			●		
9220T	917-0027-002	220VAC	●		●		
9220H	917-0028-002	220VAC		●	●		
9220F	917-0029-002	220VAC				●	●
9220TF	917-0031-002	220VAC	●			●	●
9220HF	917-0030-002	220VAC		●		●	●

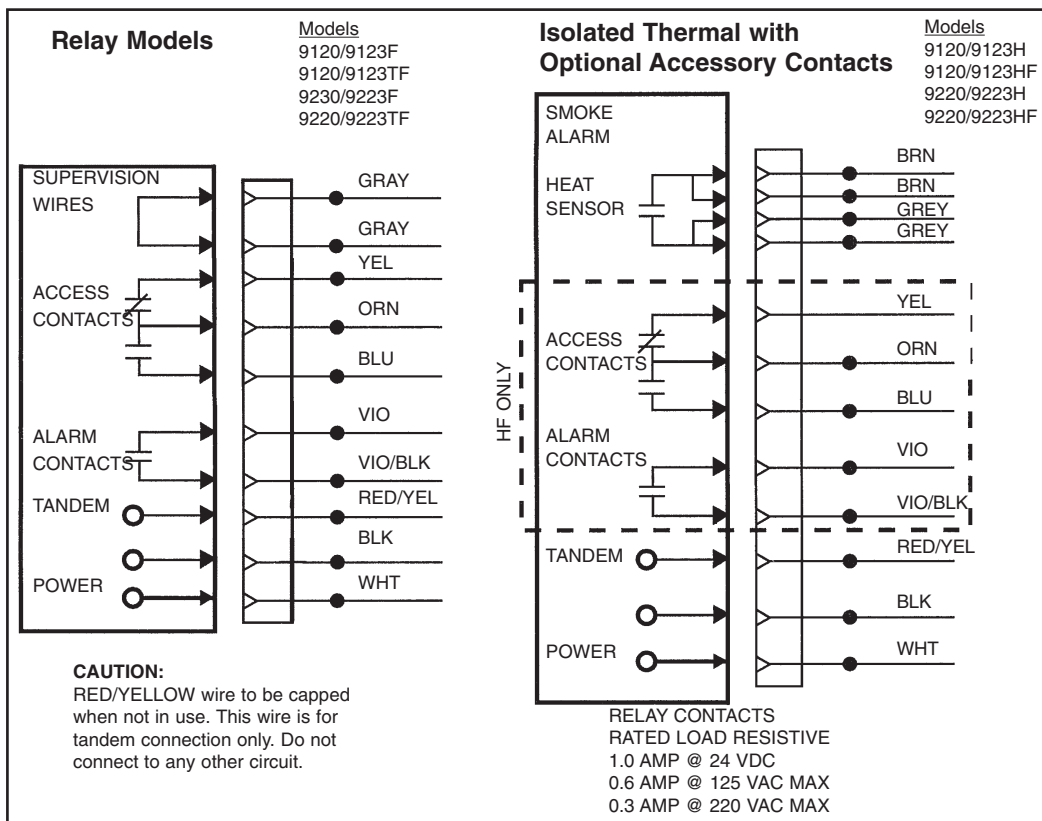
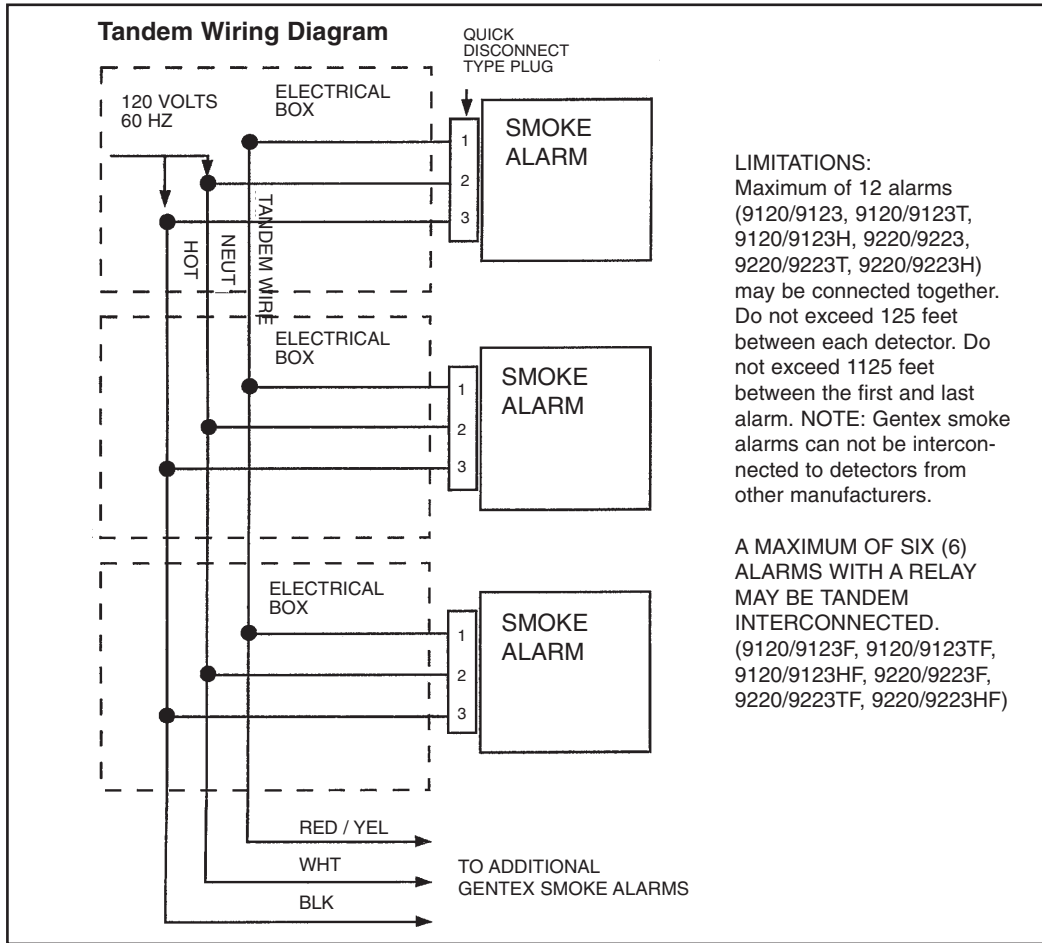
## 9003 (9123/9223) Series - Temporal 3 Evacuation Piezo Sounder

Model Number	Part Number	Voltage	Integral 135°F Thermal	Isolated 135°F Thermal	Tandem Up To 12 Units	Tandem Up To 6 Units	Form A/C Contacts
9123	917-0012-002	120VAC			●		
9123T	917-0013-002	120VAC	●		●		
9123H	917-0014-002	120VAC		●	●		
9123F	917-0015-002	120VAC				●	●
9123TF	917-0017-002	120VAC	●			●	●
9123HF	917-0016-002	120VAC		●		●	●
9223	917-0032-002	220VAC			●		
9223T	917-0033-002	220VAC	●		●		
9223H	917-0034-002	220VAC		●	●		
9223F	917-0035-002	220VAC				●	●
9223TF	917-0037-002	220VAC	●			●	●
9223HF	917-0036-002	220VAC		●		●	●

### NOTES:

- Series available in round configuration only.
- When testing 9123 Series, it may take up to 16 seconds longer for smoke alarm to go in or out of alarm mode.
- It is recommended that 9000/9003 Series smoke alarm be tested weekly.
- Refer to Technical Bulletin 002 for *Easy Wash™* on site washing instructions
- 9120/9220 units produce a non-temporal audible alarm and are therefore not intended for locations where the desired action of the occupant(s) is evacuation.
- 9123/9223 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.

# 9000/9003 Series Wiring Diagrams



# 9000 / 9003 SERIES

## Electrical Specifications

Operating Voltage (9120/9123) .....	120VAC, 60Hz
Operating Voltage (9220/9223) .....	220VAC, 50Hz
Operating Current .....	.045 amps
Operating Current (Relay Options) .....	.070 amps
Operating Ambient Temp Range .....	40°F to 100°F
Alarm Horn Rating .....	90dBA at 10 feet
Nominal Sensitivity .....	2.5% obscuration
"F" Auxiliary Relay .....	1 Form A & 1 Form C (0.6 amp)
"T" Integral Thermal (Self-Restoring) .....	135°F at 50 feet
"H" Isolated Thermal Form A (Self-Restoring) .....	135°F at 50 feet
Size .....	Diameter: 6.5 in. OA (5.75 in. at Ceiling) Depth: 2.625 in.
Secondary Power Source .....	Alkaline 9VDC battery

## Architect & Engineering Specifications

The Photoelectric Smoke alarm shall be a Gentex Model 9120/9123/9220/9223 or approved equal which shall provide at least the following features and functions.

- Nominal sensitivity shall be 2.5%.
- The alarm shall utilize an infrared LED sensing circuit which pulses in 4 to 5 second intervals when subjected to smoke. After 2 consecutive pulses in smoke, the alarm will activate.
- The alarm shall have a 9VDC alkaline battery as a back-up in the event building power is lost.
- The 9VDC battery impedance shall be verified by the circuit of the smoke alarm.
- The alarm shall provide an indicator when the battery is low in power or high impedance or is missing.
- The alarm shall provide minimum 5-to-1 signal-to-noise ratio in the optics frame to assure stability of operation in environments of high RF and transient conditions.
- The sensing chamber shall be fully screened to prevent entrance of small insects, thus reducing the probability of false alarms.
- A solid state piezo alarm rated at 90dBA at 10ft.
- A visual LED monitor (condition indicator) will slow pulse in normal operation and rapid pulse in alarm.
- An easily accessible test knob shall be provided. The test knob in the TEST position will simulate an actual smoke condition of approximately 3.5% causing the detector to alarm within 20-36 seconds. It will also have the capability of testing to 0.85% as a required minimum. 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, as indicated in National Code.
- The detector shall have interconnect capabilities of up to 12 units or 6 units with relay.
- The alarm shall have interconnection capabilities of 12 units on 9120/9120T/9120H/9123/9123T/9123H/9220/922T/9220H/9223/9223T/9223H and shall have interconnection capabilities of 6 units on 9120F/9120TF/9120HF/9123F/9123TF/9123HF/9220F/9220TF/9220HF/9223F/9223TF/9223HF.
- The manufacturer shall provide other compatible alarm models with the following optional features: a) 135°F isolated thermal with normally opened contact for remote connection to local alarm or annunciator; b) 135°F integral thermal; c) auxiliary Form A/Form C relay contacts for initiating remote functions and annunciation; d) relay option that is capable of activation by tandem interconnect wire. Thermal sensor shall be self-restoring.
- Unit must be UL 217 and UL 1730 listed for both wall and ceiling mount.
- Unit shall be listed by Underwriters Laboratories, California State Fire Marshal (CSFM) and the Bureau of Standards and Appeals (NYC).

All equipment shall be completely factory assembled, wired and tested, and the contractor shall be prepared to submit a certified letter testifying to this condition. Alarms which do not meet all of the requirements of this specification will not be considered.

24 units per carton  
34 pounds per carton

# GENTEX CORPORATION

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