

# 9123 / 9223 Series

## Photoelectric Smoke Alarm

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

24 units per carton, 34 pounds per carton

### Applications

The 9123/9223 Series of photoelectric smoke alarms is designed for residential and commercial residential applications, including homes, apartments, hospitals, hotels and motels. Available in several different models, the 9123/9223 Series is engineered to virtually eliminate nuisance alarms and deliver outstanding performance wherever reliable fire protection is required.

The 9123/9223 Series is provided with a 9V alkaline battery for back-up in the event building power is lost. The Gentex 9123/9223 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.

The 9123/9223 smoke alarms are ANSI/UL 217 and ANSI/UL 1730 listed and are warranted for one year from date of purchase.

### Standard Features

- Available in 120VAC and 220VAC models with 9V battery back-up
- Photoelectric smoke sensing technology
- Horn frequency 3100 Hz (nominal)
- 90dBA temporal 3 evacuation piezo horn
- Nominal 2.5% sensitivity
- Patented three-position test switch
- Relays operate on battery back-up
- Quick-disconnect wiring harness
- Interconnect with Gentex tandem capable smoke alarms
- Non-latching (self restoring) alarm
- 5-to-1 signal-to-noise ratio
- Pulsing LED sensing chamber
- Fully insect screened
- 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
- One year warranty from date of purchase



### Product Listings

SIGNALING



LISTED

- ANSI/UL 217 and ANSI/UL 1730 Listed
- BS+A/MEA #285-91-E
- BFP (City of Chicago)
- MSFM Listing #1929
- Hong Kong FSD Listed (9223 Series only)

### Product Compliance

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

 **Easy Wash®**  
On Site Maintenance Program

9123 / 9223 Series

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

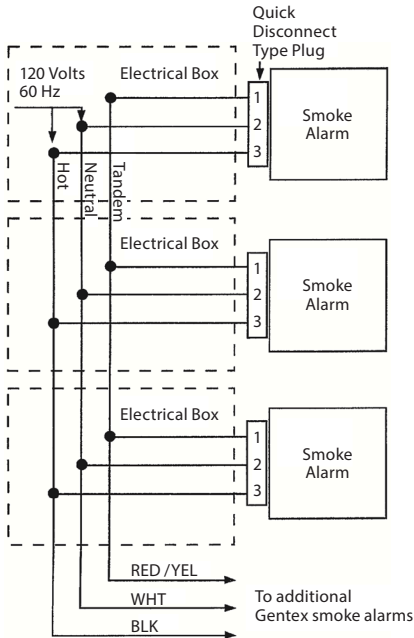
**Notes**

- 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 9123/9223 Series smoke alarm be tested weekly
- Refer to Technical Bulletin 002 for Easy Wash® on site washing instructions
- Units produce a temporal 3 audible alarm

**Electrical Specifications**

Operating Voltage (9123) .....	120 VAC, 60 Hz
Operating Voltage (9223).....	220 VAC, 50 Hz
Operating Current .....	0.045 amps
Operating Current (Relay Options).....	0.070 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 and 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” OA (5.75” at base) Depth: 2.625”
Secondary Power Source .....	Alkaline 9V battery Duracell® MN 1604

# Tandem Wiring Diagram

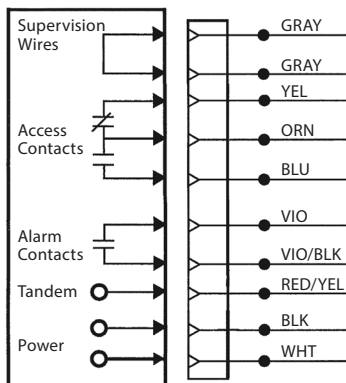


## Limitations

- Maximum of 12 alarms (9223, 9223T, 9223H) may be connected together
- Do not exceed 125 ft. between each alarm
- Do not exceed 1125 ft. between the first and last alarm
- Note: Gentex smoke alarms can not be interconnected to alarms from other manufacturers
- A maximum of six (6) alarms with a relay may be tandem interconnected (9123TF, 9123HF, 9223F, 9223TF, 9223HF)

## Relay Models

Models: 9123TF, 9223F, 9223TF

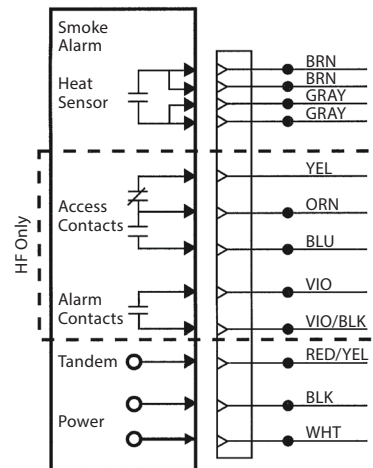


### Caution

- RED/YELLOW wire to be capped when not in use
- This wire is for tandem connection only
- Do not connect to any other circuit

## Isolated Thermal with Optional Accessory Contacts

Models: 9123HF, 9223H, 9223HF



### Relay Contacts Rated Load Resistive

- 1.0 AMP @ 24 VDC
- 0.6 AMP @ 125 VAC MAX
- 0.3 AMP @ 220 VAC MAX

# 9123 / 9223 Series

## Photoelectric Smoke Alarm

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### Architect & Engineering Specifications

The photoelectric smoke alarm shall be a Gentex model 9123/9223 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 9V alkaline battery as a back-up in the event building power is lost.
- The 9V 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 temporal 3 piezo alarm rated at 90 dBA 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 alarm shall have interconnect capabilities of up to 12 units or 6 units with relay.
- The alarm shall have interconnection capabilities of 12 units on 9223/9223T/9223H and shall have interconnection capabilities of 6 units on 9123TF/9123HF/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 ANSI/UL 217 and ANSI/UL 1730 listed for both wall and ceiling mount.
- Unit shall be listed by Underwriters Laboratories.

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.