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

- 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

<table>
<thead>
<tr>
<th>Model</th>
<th>Part Number</th>
<th>Voltage (VAC)</th>
<th>Integral 135º Thermal</th>
<th>Isolated 135º Thermal</th>
<th>Tandem Up To 12 Units</th>
<th>Tandem Up To 6 Units</th>
<th>Form A/C Contacts</th>
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### 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 (9123, 9123T, 9123H, 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 cannot be interconnected to alarms from other manufacturers
- A maximum of six (6) alarms with a relay may be tandem interconnected (9123F, 9123TF, 9123HF, 9223F, 9223TF, 9223HF)

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

Relay Models
Models: 9123F, 9123TF, 9223F, 9223TF

Isolated Thermal with Optional Accessory Contacts
Models: 9123H, 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
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 90dB 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 9123/9123T/9123H/9223/9223T/9223H and shall have interconnection capabilities of 6 units on 9123F/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.