

Smoke Alarm User's Manual

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PHOTOELECTRIC SMOKE ALARM



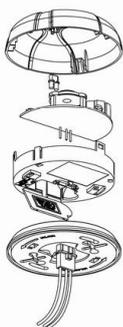
MODEL: SA/PE



Photoelectric smoke alarms are generally more effective at detecting smoldering fires which smolder for hours before bursting into flame. Sources of these fires may include cigarettes burning in couches or bedding.

MAIN FEATURES

- AC/DC Operated Photoelectric Type Smoke Alarm
- Photoelectric sensor
- Non-radioactive technology
- High and stable sensitivity: 3.0-6.0 %Obs/in
- Operated with 220-240V AC 50Hz and 9V DC Battery back-up
- Compact size: 110mm diameter
- Quick fit mounting bracket and simple AC connector for easy installation
- Fitting and battery tamper-resist feature
- Inter-connectable up to 40 units
- Self-test Button
- 2 color LED indicator (Alarm and AC power indicator)
- Extra loud alarm sound over 85dB
- Low-battery and battery missing warning indicator
- Auto-reset when smoke clears



SPECIFICATION

- Model Number: SA/PE
- Operating Temperature: 5°C to 45°C
- Electrical Rating: 220-240V AC 50Hz and 9V DC Battery back-up
- Battery Back-life: In the event of a break in the mains supply the battery will give detector operation for 1 year minimum
- Standby Current (9V battery): 15uA max
- Alarm Current (9V battery): 20mA max
- Horn Output: 85 decibels at 3m(10 feet)
- Humidity Rating: 10%-90%

- Interconnect Quantities: 40 Smoke detectors and/or heat detectors over 150m maximum
- Reactive Threshold: 3.0-6.0 %Obs/in

IMPORTANT SAFETY INFORMATION

- This smoke alarm requires constant 220-240V AC 50Hz mains power supply to operate properly. Backup 9V DC battery will offer additional protection in the event of power failure. This smoke alarm WILL NOT work if AC power is not connected or has failed or been interrupted for any reason. AND if the backup battery is removed, drained or improperly connected, the alarm will not work during a power failure. DO NOT use any other kind of battery except as specified.
- The push-to-test button accurately tests all smoke alarm functions. Do not use any other test method. Test smoke alarm weekly to ensure proper operation.
- DO NOT cut off AC power supply, remove or disconnect backup battery to quiet unwanted alarms. This will remove your protection. Open windows or fan the air around smoke alarm to silence it.
- Observe and follow all local and national electrical and building codes for installation.
- This smoke alarm is designed to be used inside a single room only. In multi-room buildings, each individual living unit should have its own smoke alarms. Do not install in non-residential buildings. And this smoke alarm is not a substitute for a complete alarm system.
- Smoke may not reach the smoke alarm for many reasons. For example, if a fire starts in a remote part of the home, on another level, in a chimney, wall, roof, or on the other side of a closed door, smoke may not reach the smoke alarm in time to alert household members. A smoke alarm will not promptly detect a fire except in the area or room in which it is installed.
- Smoke alarms may not alert every household member every time. The alarm horn is loud in order to alert individuals to a potential danger. However, there may be limiting circumstances where a household member may not hear the alarm (i.e. outdoor or indoor noise, sound sleepers, drug or alcohol usage, the hard of hearing, etc.). If you suspect that this smoke alarm may not alert a household member, install and maintain specialty smoke alarms. Household member must hear the alarm's warning sound and quickly respond to it to reduce the risk of damage, injury, or death that may result from fire. If a household member is hard of hearing, install special smoke alarms with lights or vibrating devices to alert occupants.
- Smoke alarms can only sound their alarms when they detect smoke. Smoke alarms detect combustion particles in the air. They do not sense heat, flame, or gas. This smoke alarm is designed to give audible warning of a developing fire. However, many fires are fast-burning, explosive, or intentional. Others are caused by carelessness or safety hazards. Smoke may not reach the smoke alarm QUICKLY ENOUGH to ensure safe escape.
- Smoke alarms have limitations. This smoke alarm is not foolproof and is not warranted to protect lives or property from fire. Smoke alarms are not a substitute for insurance. Homeowners and renters are responsible for insuring their own lives and property. In addition, it possible for the smoke alarm to fail at any time. For this reason, you must test the smoke alarm weekly and replace every 10 years.

Note: For best protection, we recommend that you install a smoke alarm in every room.

SMOKE ALARM PLACEMENT

Typical single-story home

Install a smoke alarm on the ceiling of wall inside each bedroom and in the hallway outside each separate sleeping area. If a bedroom area hallway is more than 30 feet long, install a smoke alarm at each end. If there is a basement: Install a smoke alarm on the basement ceiling at the bottom of the stairwell.



Typical Multi-story or split level home

Install a smoke alarm on the ceiling of wall inside each bedroom and in the hallway outside each separate sleeping area. If a bedroom area hallway is more than 30 feet long, install a smoke alarm at each end. And please install a smoke alarm on the top of a first-to-second floor stairwell.



KEY:

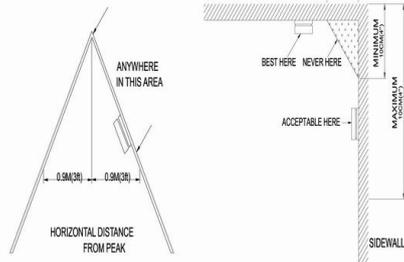
- Minimum required smoke alarm locations
- Recommended additional smoke alarm locations

△ Smoke alarms with silence features recommended for additional protection

IMPORTANT SMOKE ALARM PLACEMENT AND EXCEPTION INFORMATION

- Install a smoke alarm as close to the center of the ceiling as possible. If this is not practical, mount no closer than 4 inches from a wall or corner. Also, if local codes allow, install smoke alarms on walls, between 4 and 12 inches from ceiling/wall intersections.
- Install a minimum of two smoke alarms in every home, no matter how small the home.
- Install a smoke alarm in each room that is divided by a partial wall (either coming down from the ceiling at least 8 inches, or coming up from the floor).
- Install a smoke alarm in live-in attics or attics which house electrical equipment like furnaces, air conditioners, or heaters.

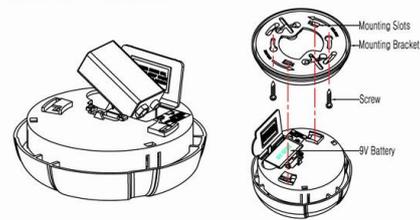
DO NOT INSTALL SMOKE ALARMS



- Near appliances or areas where normal combustion regularly occurs (kitchens, near furnaces, hot water heaters). Use specialized smoke alarm with unwanted alarm control for this areas.
- In areas with high humidity like bathrooms or areas near dishwashers or washing machines. Install at least 10 feet away from these areas.
- Near air returns or heating and cooling supply vents. Install at least 3 feet away from these areas. The air could blow smoke away from the detector, interrupting its alarm.
- In rooms where temperatures may fall below 5°C or rise above 45°C.
- In extremely dusty, dirty, or insect-infested areas where loose particles interfere with smoke alarm operation.

WARNING: Incorrect orientation will result in a decrease in operational effectiveness.

HOW TO INSTALL THIS SMOKE ALARM



DANGER: ELECTRICAL SHOCK HAZARD.

Turn off power at the main fuse box or circuit breaker by removing the fuse or switching the circuit breaker to the OFF position.

WARNING: This smoke alarm is mains powered and requires wiring by a qualified electrician in accordance with the current IEE Regulations for Electrical Installations (BS7671).

The circuit used to power the smoke alarm must be a dedicated permanent supply that cannot be switched off accidentally by the normal user. Before installing ensure the electrical supply is isolated.

- From back of smoke alarm, remove the mounting plate by turning it counterclockwise. (To later engage tamper-resist feature, twist out and set aside one of the pins molded into plate. Both pins are exactly the same.)
- Gently pull household wires through center hole of plate.
- Secure plate to ceiling or wall with mounting screws.
- With a small wire connector, connect brown wire from connector plug to brown household wire.
- Connect blue wire from connector plug to blue household wire.
- If interconnection is desired, connect yellow wire from connector to interconnect wire between smoke alarms. See section INTERCONNECTING THE SMOKE ALARM.

NOTE: If this will be used as a single-station smoke alarm, cover yellow wire with electrical tape and tuck it into junction box.

- Lift open battery pocket door.
- Connect new 9-volt battery to battery connector inside battery pocket.

Be sure battery is securely connected. Smoke alarm may beep briefly when battery is installed.

- Close battery pocket door, snapping it into place.
- Attach connector plug to pins on back of smoke alarm. Plug will only fit one way and will snap into place.
- Gently tug connector to be sure it is attached securely.



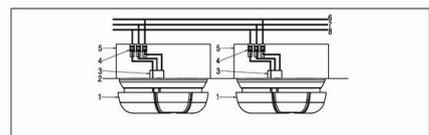
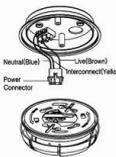
Position smoke alarm to mounting plate and turn clockwise to lock into place. To engage tamper-resist feature, insert pin into notch on edge of smoke alarm after alarm is properly positioned in base.

NOTE: Smoke alarm will not mount to plate if battery is not installed.

- Turn on power at main fuse box or circuit breaker.
- Push test button to test smoke alarm. See TESTING THE SMOKE ALARM

INTERCONNECTING SMOKE ALARMS

For interconnecting line, only use #14-#18 AWG minimum solid or stranded wire. When being interconnected, maximum wire length between any two is 1500 feet for #18 AWG or 4000 feet for #14 AWG (20 OHMS loop resistance). This smoke alarm can be interconnected with as many as 40 other DC or AC smoke alarms and/or heat alarms. Do not connect to any other type or model smoke alarms except the ones we specify. And this smoke alarm is powered by 220-240V AC 50Hz and with 9V DC Battery back-up.



1 Smoke alarm	3 Power connector	5 Junction box	7 Interconnect (Yellow) wire
2 Ceiling or wall	4 Terminal	6 Live(Brown) AC wire	8 Neutral(Blue) AC wire

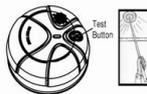
OPERATING YOUR SMOKE ALARM

Once the smoke alarm has been installed a small GREEN indicator light (LED) should be visible through the alarm grill indicating that AC supply is healthy. A RED indicator light (LED) should also flash approximately once a minute to indicate the battery is healthy and the unit is operating properly.

If smoke is detected, the unit will emit a loud pulsating alarm and a RED indicator light (LED) will be flashing quickly until the air is clear.

TESTING THE SMOKE ALARM

- Test each smoke alarm to be sure it is installed correctly and operating properly.
- The push-to-test button accurately tests functions. Do not use an open flame to test this smoke alarm. You may ignite and damage the smoke alarm or your home.
- Test smoke alarms weekly and upon returning from vacation or when no one has been in the household for several days.
- Stand at arm's length from the smoke alarm when testing.



DANGER: If alarm horn sounds, and smoke alarm is not being tested, the smoke alarm is sensing smoke.

THE SOUND OF THE ALARM HORN REQUIRES YOUR IMMEDIATE ATTENTION AND ACTION.

MAINTENANCE AND CLEANING

In addition to weekly testing, this smoke alarm requires yearly battery replacement and periodic cleaning to remove dust, dirt, and debris.

BATTERY REPLACEMENT

Always turn off the AC supply to the smoke alarm before replacing the battery. Replace battery at least once a year or immediately when the low battery signal sounds once a minute, even though the smoke alarm is receiving AC power. Batteries should be replaced regularly as necessary.

WARNING: Do not use any other type of battery, except as specified in this manual. Do not use rechargeable batteries.

CAUTION: Explosion will happen if battery is incorrectly replaced.

You'd better use good battery to make the alarm work long. The battery should only be replaced by a qualified electrician or similarly qualified person.

- Turn off AC power supply to the smoke alarm.
- Turn smoke alarm counterclockwise to detach it from the mounting plate.
- Gently pull down smoke alarm.
- Remove battery from the compartment.
- Insert a new 9-volt battery to connector. NOTE POLARITY OF CONNECTIONS. Ensure the metal tab is fully depressed when the battery has been fitted.
- Using the Push-to-Test button, test the smoke alarm to verify 9V DC battery back-up.
- Reattach the smoke alarm to the mounting plate by turning smoke alarm clockwise until it snaps into place.
- Turn on power supply and test smoke alarm using push-to-test button.

See *TESTING THE SMOKE ALARM*

CHOOSING A REPLACEMENT BATTERY:

The unit requires one standard 9V battery. The following batteries are acceptable as replacements: Golden Power #6F22; Megaton #6F22; New Leader #6F22; Gold Peak #1604; Eveready #522, #1222; Golden Power G6F22; Golden Power G1.6F22A.

CLEANING

Clean the smoke alarm at least once a month to remove dust, dirt, or debris. Using the soft brush or wand attachment to a vacuum cleaner, vacuum all sides and cover of smoke alarm. Be sure all the vents are free of debris. If necessary, use a damp cloth to clean smoke alarm cover.

IMPORTANT: Do not attempt to remove the cover to clean inside the smoke alarm. This will void your warranty.

PRACTICE FIRE SAFETY

If the smoke alarm sounds its alarm horn, and you have not pushed the test button, it is warning of a dangerous situation. Your immediate response is necessary. To prepare for such occurrences, develop family escape plans, discuss them with all household members, and practice them regularly.

- Expose everyone to the sound of a smoke alarm and explain what the sound means.
- Determine two exits from each room and an escape route to the outside from each exit.
- Teach all household members to touch the door and use an alternate exit if the door is hot. Instruct them not to open the door if the door is hot.
- Teach household members to crawl along the floor or stay below dangerous smoke, fumes and gases.
- Determine a safe meeting place for all members outside the building.

WHAT TO DO IN CASE OF FIRE

- Do not panic, stay calm.
 - Leave the building as quickly as possible. Touch doors to feel if they are hot before opening them.
 - Use an alternate exit if necessary. Crawl along the floor, and do not stop to collect anything.
 - Meet at a pre-arranged meeting place outside the building.
 - Call the fire department from outside the building.
 - Do not go back inside a burning building. Wait for the fire department to arrive.
- These guidelines will assist you in the event of a fire. However, to reduce the chance that fires will start, practice fire safety rules and prevent hazardous situations.

TROUBLESHOOTING

WARNING: DO NOT disconnect battery to quiet an unwanted alarm. This will remove your protection. Fan the air or open a window to remove smoke or dust.

PROBLEM	SOLUTION
Smoke alarm does not sound when tested.	1 Remove smoke alarm from mounting plate and check that battery is properly attached to connector. 2 Clean smoke alarm.
NOTE: Push test button for at least five seconds while testing!	
Smoke alarm beeps about once a minute.	Replace battery. See battery replacement in the maintenance and cleaning section.
Smoke alarm sound unwanted alarms intermittently or when residents are cooking, taking showers, etc.	1 Clean smoke alarm. See cleaning in the maintenance and cleaning section 2 Move smoke alarm to a new location. See SMOKE ALARM PLACEMENT
The alarm sounds different than I'm used to. It starts and stops.	The alarm is operating correctly. This alarm features the internationally recognized horn signal for evacuation. The horn pattern is 3 short beeps followed by a 2 second pause and then repeats.