NUMENS
Professional Safety Products

Deltronic

205 DC Smoke Alarm

User Manual

LPCB

2831
CPR-F2671
CPR-F2672
CPR-F2673
CPR-F2674
CPR-F2838
CPR-F2839

ACTIVFIRE LISTED

afp-3618
afp-3619
afp-3620
afp-3621

Complies with EN 14604:2005/AC:2008,
VdS 3131:2010，AS 3786:2014

Cautions

PRODUCT LIMITATIONS: Caution! This device does not detect heat, gas or flame, and should not be covered with a guard or similar obstructing item.

This device may not alert people who are hearing impaired. It is strongly recommended that the special-purpose smoke alarms using visual or vibrating alerting devices, should be installed for these occupants.

This device may not be effective in fires where smoke is prevented from reaching the device (eg where intermediate doors are closed), where the fire grows so rapidly that the egress path is blocked (even when correctly located), and where the fire is intimate to a person (eg where a victim's clothes catch fire).

SLEEPING OCCUPANTS: Studies have shown that smoke alarms may not awaken all sleeping occupants. It is the responsibility of individuals in the household that are capable of assisting others to provide assistance to those who may not be awakened by the alarm sound, or to those who may be incapable of safely evacuating the area unassisted.

INSTALLATION LIMITATIONS: This product is designed for use in a single residential unit, such as a family home or apartment. Smoke alarms located outside the dwelling may not provide adequate warning to occupants. This product is not designed for use in non-residential buildings. Non-residential buildings require special fire detection and alarm systems. This product alone is not a suitable substitute for a fire detection system installed in places of work or where people sleep on a temporary basis, such as hotels or motels, dormitories, hospitals, nursing homes or group homes of any kind, even if they were once dwellings. Please refer to local regulations for fire detection and alarm system requirements.

Features

Numens 205 DC smoke alarms provide battery powered smoke detection, together with alarm functions within a single unit. The technology provides early detection of fire and high immunity against unwanted alarms.

Numens 205 DC smoke alarms are powered by a long-life lithium-ion battery, and do not require a mains supply. Models are available with either user-replaceable batteries or non-replaceable batteries.

Interconnectable 205 DC smoke alarms use a wireless transmission path. Configuration into a closed group ensures that other units within radio signal range are not affected by a test or fire alarm occurring within the configured group.

Numens 205 DC smoke alarms are suitable for general residential applications, and provides home owners and installers with an easy-to-install, long-life solution for life safety and property protection applications.

Normal Operation

When operating normally, a red LED adjacent to the Test/Hush button will flash every 40 s.

Alarm Condition

When smoke is detected, an internal sounder will activate to alert occupants, and the red LED will flash every 1 s. The sounder is a loud, pulsating alarm.

Fault Conditions

Battery Low

When the battery is depleted, the smoke alarm will emit a short audible signal every 40 s, synchronized with a single flash of the red LED indicator. The Battery Low indication will operate for at least 30 days.

Model 205-015

The battery for Model 205-015 is not user-replaceable and will last up to 10 years under normal conditions. When the Low Battery signal is given, replace the smoke alarm without delay.

Model 205-005

The battery for Models 205-005 (wireless interconnection) is replaceable by the user and will last up to 5 years under normal conditions. When the Low Battery signal is given, replace the battery without delay.

Smoke Chamber Fault

When a fault is detected in the smoke sensing chamber, the smoke alarm will emit a short audible signal every 40 s sounder, and a single flash of the red LED indicator midway between the audible indications.

Test/Hush Button

Test

When in the Normal condition, pressing and holding the Test/Hush button for 5 s will activate the smoke alarm to check its operation. The alarm will sound, and the red LED will flash every 1 s. Releasing the Test/Hush button will cancel the alarm test.

For interconnected smoke alarms (Models 205-005 and 205-015), a test on one unit will operate all interconnected units. After releasing the Test/Hush button, it may take up to 10 s for the interconnected units to silence.

Hush (Alarm Condition)

When in the Alarm condition, pressing the Test/Hush button reduces the sensitivity of the smoke alarm for 9 min and silences the alarm sounder. The hush feature allows time for the smoke to dissipate. During the hush time, the red LED will continue to flash every 1 s on the unit in fire alarm, and every 6 s on any interconnected units.

The hush feature should only be used after the cause of the alarm is known (such as an unwanted alarm from cooking fumes).

After the hush time has expired, the smoke alarm will automatically return to normal sensitivity. If smoke is still present in the unit, the alarm sounder will re-activate. The hush feature can be used repeatedly.

Hush (Battery Low)

When the smoke alarm signals that the battery is depleted, pressing the Test/Hush button silences the audible signal for 10 hours. During the hush time, the red LED will flash every 20 s.

After the hush time has expired, the smoke alarm will automatically return to normal. If the battery has not been changed, the low battery signal will re-activate. The hush feature can be used repeatedly.

Hush (Smoke Chamber Fault Condition)

When the smoke alarm signals a smoke chamber fault, pressing the Test/Hush button silences the fault condition for 10 hours. During the hush time, the red LED will flash every 20 s.

After the hush time has expired, the smoke alarm will automatically return to normal. If the smoke chamber fault is still present, the fault signal will re-activate. The hush feature can be used repeatedly.

Interconnection (Model 205-002 & 205-015)

Interconnectable smoke alarms (Models 205-005 and 205-015) use a wireless transmission path to connect units together.

Individual units must first be configured into a closed Group so that sounders on all units in the group will activate during an Alarm condition, Alarm Hush, or a Test.

When smoke is detected in one unit, the sounders in all interconnected units will activate. The LED indicator on units that have not detected smoke will flash every 6 s. This allows the home owner to quickly locate the cause of the alarm.

When a unit is tested, the sounders in all interconnected units will activate and the LED indicator will flash every 40 s. After releasing the Test/Hush button, it may take up to 10 s for the interconnected units to silence.

The maximum transmission path between each interconnected unit is 500 m. There is no limit to the number of units that can be interconnected using the wireless interconnection function.

WARNING: Wireless interconnection signalling may not operate in the low battery condition.

Understanding Indicator and Alarm Signals

205 DC smoke alarms produce the following indicator and alarm signals, depending on the status condition.

Primary Smoke Alarm

LED	Audible Signal	Status Condition
Flash every 40 s	—	Normal
Flash every 1 s	0.5 s on / 0.5 s off	Fire alarm
Flash every 1 s	—	Hush after fire alarm
Flash every 1 s	0.5 s on / 0.5 s off	Test
Flash every 40 s	Short beep at the same time of LED flash	Low battery
Flash every 20 s	—	Hush after low battery fault
Flash every 40 s	Short beep midway between LED flashes	Smoke chamber fault
Flash every 20 s	—	Hush after smoke chamber fault

Interconnected Units

When configured as a group, interconnected units produce the following additional indicator and alarm signal when the primary unit is operated.

LED	Audible Signal	Status Condition
Flash every 6 s	—	Hush after fire alarm, activated from another device
Flash every 40 s	0.5 s on / 0.5 s off	Test activated from another device

Specifications

Power	
Quiescent condition indicator	Flashing red LED every 40 s
Expected battery life	205-015: 10 years 205-005: 5 years
Low battery indication	Short audible signal every 40 s, synchronized with a single flash of the red LED, for 30 days
Low battery hush indication	Flashing red LED every 20 s
Low battery hush time	10 h
Alarm Condition	
Sounder output level	≥ 85 dB @ 3 m
Alarm sounder	0.5 s on / 0.5 s off
Alarm LED indicator	Flashing red every 1 s
Alarm hush indication	Flashing red LED every 1 s **Interconnected units**: Flashing red LED every 6 s
Alarm hush time	9 min
Test Condition	
Test sounder	0.5 s on / 0.5 s off
Test LED indicator	Flashing red every 1 s **Interconnected units**: Flashing red every 40 s
Fault Condition	
Smoke chamber fault indication	Short audible signal every 40 s and a single flash of the red LED midway between the audible indications
Fault hush indicator	Flashing red LED every 20 s
Fault hush time	10 h
Wireless Interconnection	
Interconnection (Models 205-002, 205-005, 205-014 and 205-015)	No device number limit 500 m between all devices in free air
Environmental	
Operating temperature	(0 ~ +55) °C
Operating humidity	(10 ~ 95) % RH, non-condensing

Compliance

205 smoke alarms comply with the following standards.

EN 14604:2005/AC:2008	*Smoke alarm devices*
VdS 3131:2010[a]	*VdS Guideline for Smoke Alarm Devices. Additional Requirements. Requirements and Test Methods*
CE	*Conformité Européenne*
AS 3786-2014	*Smoke alarms using scattered light, transmitted light or ionization*

[a] Third-party conformance assessment has not been undertaken.

Installation Preparation

Equipment

Before commencing installation, ensure all equipment and tools to mount and test the device are available, such as drills, mounting screws (supplied), cables and ladders.

Location Selection in Homes and Apartments

WARNING: Location and number of smoke alarms may be specified in relevant regulations. Where these do not exist, the requirements of NFPA 72 can be used. For your information, the National Fire Alarm Code, NFPA, reads as follows.

11.5.1 *Required Detection.
*Where required by applicable laws, codes, or standards for a specific type of occupancy, approved single- and multiple-station smoke alarms shall be installed as follows:
(1) *In all sleeping rooms and guest rooms
(2) *Outside of each separate dwelling unit sleeping area, within 6.4 m (21 ft) of any door to a sleeping room, the distance measured along a path of travel
(3) On every level of a dwelling unit, including basements
(4) On every level of a residential board and care occupancy (small facility), including basements and excluding crawl spaces and unfinished attics
(5) *In the living area(s) of a guest suite
(6) In the living area(s) of a residential board and care occupancy

For complete coverage, smoke alarms should be installed in all rooms, halls, storage areas, basements, and attics in the dwelling. The minimum coverage is one smoke alarm on each floor and one outside each sleeping area. Please use the following location guide.

Single Storey Dwellings

Install a smoke alarm in the hallway outside every separate bedroom area, as shown in Fig. 1 a). Two smoke alarms should be installed in dwellings with two bedroom areas, as shown in Fig. 1 b).

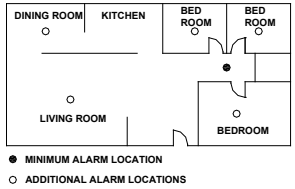

Fig. 1 a) – Single bedroom area

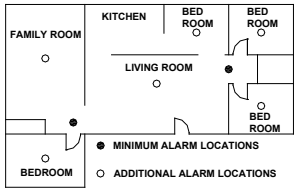

Fig. 1 b) – Multiple bedroom areas

Multi-Storey Dwellings

Install a smoke alarm on every floor of a multi-floor dwelling, as shown in Fig. 2.

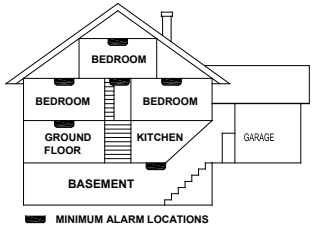

Fig. 2 – Multi-storey dwelling

Enhanced Safety

To improve early detection performance and safe evacuation, consider installing additional smoke alarms as follows.

- At least of two smoke alarms.
- Inside every bedroom.
- At both ends of a bedroom hallway if the hallway is more than 12 m.
- Inside every room where one sleeps with the door partly or completely closed, since smoke could be blocked by the closed door, and a hallway alarm may not wake up the sleeper if the door is closed.
- At the bottom of the basement stairwell.
- Second-floor, at the top of the first-to-second floor stairwell.
- In your living room, dining room, family room, attic, utility and storage rooms.

Be sure no door or other obstruction blocks the smoke path to the smoke alarm.

Installation Location

Install smoke alarms as close to the centre of the ceiling as possible, away from light fittings and air-conditioning ducts. If this is not practical, mount the smoke alarm on the ceiling, no closer than 50 cm from any wall or corner (see Fig. 3).

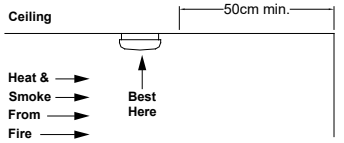

Fig. 3 – Smoke alarm location from walls

If some of your rooms have sloped, peaked, or gabled ceilings, try to mount smoke alarms 0.9 m measured horizontally from the highest point of the ceiling.

Where *Not* to Install Your Smoke alarm

Nuisance alarms occur when smoke alarms are installed where they will not work properly. To avoid nuisance alarms, do not install smoke alarms in the following situations.

- In or near areas where combustion particles are present, such as kitchens with few windows or poor ventilation, garages where there may be vehicle exhaust, near furnaces, combustion heaters, and space heaters. Combustion particles are the by-products of something that is burning, which the smoke alarm may detect.
- Within 6 m of kitchens where combustion particles are normally present. If a 6 m distance is not possible (eg in a mobile home), try to install the smoke alarm as far away from the combustion particles as possible, preferably on the wall. Ensure the area is well ventilated.
- In dead-air areas, where ventilation systems cause air-flow that would not pass through the smoke sensing chamber. Avoid also air-flow from areas where normal combustion particles are expected, such as kitchens. Fig. 4, which indicates the correct and incorrect smoke alarm locations.

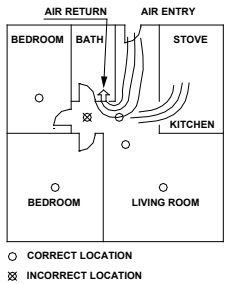

Fig. 4 – Dead-air areas

- In damp or very humid areas, or within 3 m of bathrooms with showers. Moisture in humid air can enter the sensing chamber, then condense into droplets upon cooling, which can cause nuisance alarms.
- In very cold or very hot areas, including unheated buildings or outdoor rooms. If the temperature rises above or falls below the operating range of smoke alarm, it may not function properly. The temperature range for your smoke alarm is (0 ~ 55) °C.
- In very dusty or dirty areas. Dirt and dust can build up on the smoke sensing chamber, to make it overly sensitive. Additionally, dust or dirt can block openings to the sensing chamber and limit the smoke alarm from sensing smoke.
- Near fresh air vents or high draft areas like air conditioners, heaters or fans, fresh air vents and drafts, which can drive smoke away from smoke alarms.
- In dead air spaces, which are often at the top of a peaked roof or in apex of ceilings and walls. Dead air may prevent smoke from reaching a smoke alarm. See Fig. 3 for the recommended location.
- In insect-infested areas. If insects enter the smoke sensing chamber, they may cause a nuisance alarm. Where insects are a problem, get rid of them before installing the smoke alarm.
- Near fluorescent lights. Electrical “noise” from fluorescent lights may cause nuisance alarms. Do not install smoke alarms within 1.5 m of such lights.

In the above locations, a Numens 205 DC heat alarm could be installed for additional protection.

Installation and Test

Please read the previous section **Installation Preparation**, before commencing installation.

Install the Smoke Alarm

WARNING: To avoid the electrical shock hazard, turn off power to the area where you plan to install the device at the fuse box or circuit breaker box.

1. At the place where you are going to install the unit, draw a 75 mm horizontal line.
2. Remove the unit from its base by rotating it counter-clockwise.
3. Place the base on the ceiling so that mounting-hole slots are aligned on the line. In each of keyhole slots, draw a mark to locate the mounting plugs.
4. Remove the base from the ceiling.
5. Drill two 5 mm holes at the marks and insert the plastic mounting plugs (supplied).
6. Attach the base to the ceiling with the screws supplied (see Fig. 5).

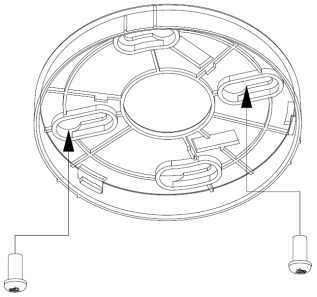

Fig. 5 – Fixing base

7. Align the unit with the base rotate it clockwise to lock it into place (see Fig. 6).

Note: Fitting the unit to its base internally connects the battery power to the unit.

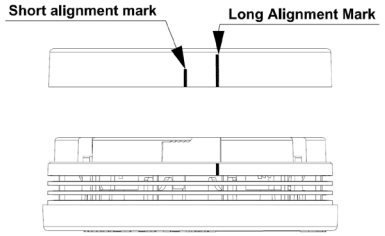

Fig. 6 – Fitting the smoke alarm to the base

Activate the Smoke Alarm

1. To activate your smoke alarm, press and hold the Test/Hush button for 3 s until the LED flashes rapidly.
2. Once the LED starts flashing, release the Test/Hush button within 3 s. The unit will emit a short beep to indicate that it is activated.

Wireless Interconnection Function (where fitted)

WARNING: Do not connect this smoke alarm to any device other than another 205-series alarm or other compatible Numens device (see datasheet). Connecting anything else may prevent this smoke alarm from working properly.

There is no limit to the number of units that can be interconnected using the wireless interconnection function.

Units must be configured into a Group for the interconnection function to operate.

When configured as a Group, the wireless function will operate automatically once smoke is detected in any unit.

NOTE: Units should be interconnected within only one family residence, otherwise nuisance alarms may occur when a unit activates or is tested in another residence.

Group Configuration

1. Activate your smoke alarm (see above).
2. Ensure there are no Battery Low fault conditions on the units to be connected as a group.
3. Enter Group mode by pressing and releasing the Test/Hush button 5 times within 5 s. The sounder will emit a short beep and the red LED will flash every 0.5 s. Group mode configuration will last 50 s (unless cancelled earlier).
4. To add a unit to the Group, press and release the Test/Hush button on the second unit twice within 2 s. The red LED will flash every 0.5 s. The sounder on the connecting unit will emit a short beep to confirm connection to the Group.
5. Repeat Step 4 to add additional units to the Group.

NOTE: Group configuration must be completed within 50 s, after which time all units will return to the normal condition.

6. When all units are added to the Group, press and release the Test/Hush button on the first unit to end the Group configuration mode.

Remove a Unit from a Group

To remove a unit from the Group, press and release the Test/Hush button 8 times within 5 s. The sounder will emit two short beeps and the red LED will flash twice to confirm removal from the Group.

Test the Smoke Alarm(s)

Stand-alone Smoke Alarms

1. Press and hold the Test/Hush button for 3 s.
2. Check the sounder operates (0.5 s on / 0.5 s off) and the red LED flashes every 1 s.
3. Release the Test/Hush button to silence the alarm and resume normal operation.

WARNING: The smoke alarm has a loud alarm signal. Use hearing protection when testing.

Interconnected Units

1. Press and hold the Test/Hush button for 3 s.
2. Check the sounder operates (0.5 s on / 0.5 s off) and the red LED flashes every 1 s.
3. On the interconnected units, check the sounder operates (0.5 s on / 0.5 s off) and the red LED flashes every 40 s.
4. Release the Test/Hush button to silence the alarm and resume normal operation.

NOTE: It may take up to 10 s for the interconnected units to silence.

5. Repeat Steps 1 ~ 4 for each unit.

Normal Operation

Once installed and activated, your smoke alarm will immediately start monitoring for smoke. If the sounder in the device operates, check for a fire and execute your safety plan.

Hush (Alarm Condition)

WARNING: Before using the hush feature, identify the smoke or heat source and be certain that safe conditions exist.

If investigation of the alarm signal is likely caused by a known nuisance source (such as cooking fumes), the Test/Hush button can be pressed to silence the sounder for 9 min.

WARNING: If the smoke density is too high, the hush function will not silence the alarm sounder.

After the Hush time has expired, the device will return to normal sensitivity. If smoke is still present, the alarm will re-activate. The hush feature can be used repeatedly.

Care and Maintenance

Weekly Tests

1. Press and hold the Test/Hush button for 3 s on the smoke alarm.
2. Check the sounder operates with a loud pulsating sound, and the red LED in the Test/Hush button flashes rapidly.

WARNING: The smoke alarm has a loud alarm signal. Use hearing protection when testing.

3. Where installed, check the activation of interconnected units (see above).

WARNING: Never use a naked flame of any kind to test your smoke alarm. You may set fire to and damage the device, as well as your home. The built-in Test feature accurately tests all alarm functions.

If the unit fails to operate correctly, contact your supplier or Numens (see below).

Annual Maintenance

Vacuum or carefully clean the smoke alarm with a dry or damp soft cloth and ensure the sensor openings are free from dust and lint. Do not use solvents.

DO NOT PAINT this product.

Battery Replacement

The battery for model 205-015 is not user-replaceable. Once the battery is depleted, replace the smoke alarm.

For other models, remove the unit from the base and replace the battery with an approved model (see Service below).

Protection From Fire

Installing smoke alarms is only one step in protecting your family from fires. You should also reduce the chances that fires will start in your home and you must increase your chances of escaping safely if one does start. The following information will help you develop a fire safety program.

1. Install smoke alarms properly. Carefully follow all the instructions in this manual. Keep your smoke alarms clean, and test them every week.
2. Non-working smoke alarms will not alert you. Replace your smoke alarms immediately if they are not working properly.
3. Follow fire safety rules, and prevent hazardous situations:
    - Never smoke in bed.
    - Keep matches and cigarette lighters away from children.
    - Store flammable materials in proper containers. Never use them near open flames or sparks.
    - Keep electrical appliances in good condition. Do not overload electrical circuits.
    - Keep stoves, fireplaces, chimneys, and barbecue grills grease free. Make sure they are properly installed and away from any combustible materials.
    - Keep portable heaters and open flames such as candles away from combustible materials.
    - Do not allow rubbish to accumulate.
    - Keep a supply of extra batteries on hand for your smoke alarms.

Prepare and practice a family escape plan. Review the following with your children each time you have fire escape drills. This will help everyone remember them in case of a real fire emergency.

1. Don’t panic and stay calm. Your safe escape may depend on thinking clearly and remembering what you have practiced.
2. Get out of the house as quickly as possible. Follow a planned escape route. Do not stop to collect anything or to get dressed.
3. Feel the doors to see if they are hot. If they are not, open them carefully. Do not open a door if it is hot. Use an alternate escape route.
4. Stay close to the floor. Smoke and hot gases rise.
5. Cover your nose and mouth with a wet or damp cloth. Take short, shallow breaths.
6. Keep doors and windows closed. Open them only if you have to, in order to escape.
7. Meet at your planned meeting place after leaving the house.
8. Call the Fire Service as soon as possible from outside your house. Give the address and your name.
9. Never go back inside a burning building.
10. Contact your local Fire Service. They will give you more ideas about how to make your home safer from fires and how to plan your family’s escape.

Service

For service or repair, return the unit intact to the supplier or to Numens (see the address at the end of this manual), stating the reason for the return and details of any fault.

The battery for model 205-005 is replaceable by the user, and may be purchased from general hardware stores. Use only the specified battery.

Lithium: Huiderui CR123A

When replacing the battery, check that the battery is installed in accordance with the polarity markings (+, –) shown in the battery compartment. To ensure the battery is correctly fitted and the smoke alarm is functioning correctly, test the smoke alarm (see **Care and Maintenance**, above).

References

Reference	Description
31-0047	205 DC smoke alarm datasheet

Models

Model	Features
205-005	Test, hush, 5-year battery, wireless interconnection
205-015	Test, hush, 10-year battery, wireless interconnection

Disposal

This product is designed to work reliably for 10 years after the installation date. Smoke alarms and replaceable batteries should not be disposed of as land-fill. Please dispose in an environmentally friendly manner, for example at your local authority recycling centre.

WARNING: This is an important document. Retain it for the life of the device.

Limited Warranty

To protect your rights, we encourage you to keep the original of the purchase receipt as proof of purchase. No guarantee can be offered without the original the purchase receipt.

Deltronic Security AB (Deltronic) guarantees you as a buyer that the smoke alarm will come to be free from defects in material, workmanship or construction below normal use for a period of: 2 years. This guarantee is non-transferable and not valid for replaceable batteries. Our liability to you under this warranty, is limited to repairing or replacing parts that we find to be defective in materials, execution or design. This is free of charge for you, contact us or send enter the item with an error description and proof of purchase date in a letter or package with paid shipping to the address below, in the case of replaceable batteries attach these to the side. The terms of this warranty do not apply in the following circumstances: if the smoke alarm has been modified, disassembled, contaminated, damaged, neglected or otherwise misused or altered after the date of purchase or if it does not work due to incorrect placement / installation or if damage was caused by the designated instructions were not followed. We would like to draw your attention to the fact that we do not replace damage to unit or degradation in service life if the smoke alarm has been in alarm mode for a long time and / or saved property and life.

Deltronic's liability, arising from the sale of this smoke alarm or under the terms of this warranty, may under no circumstances exceed the cost of replacing the same.

Deltronic is under no circumstances responsible for damage or consequential damage that occurs due to the smoke alarm failing to warn under this or any other warranty, express or implied or for damages caused by failure to follow the instructions given. This warranty does not affect your statutory rights.

Deltronic

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