

206 AC Plug-in Natural Gas Alarm



Complies with EN 50194 and UL 1484

Cautions



ELECTRICAL HAZARD: Disconnect power from equipment prior to making any internal adjustments. Service should only be performed by qualified personnel.



PRODUCT LIMITATIONS: Caution! This device will only indicate the presence of natural gas at the sensor. Natural gas alarms do not detect smoke, heat or flame, and should not be covered with a guard or similar obstructing item.

This gas alarm is intended for use in ordinary indoor locations of family dwellings. It is not designed to measure compliance with Occupational Safety and Health Administration (OSHA) commercial or industrial standards.

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

This gas alarm may not be effective where natural gas is prevented from reaching the device (eg where intermediate doors are closed).



SLEEPING OCCUPANTS: Studies have shown that gas alarms may not awaken all sleeping occupants, and 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: It is important to read, understand and follow the instructions in this manual. Failure to properly install, test and maintain the gas alarm may cause it to fail, resulting in loss of life.

Features

Numens 206-series AC plug-in natural gas alarms monitor levels of natural gas (CH₄) in residential dwellings, and provide spoken voice warning messages when hazardous levels of gas exist.

Models are available with wireless interconnection to create a local network of devices. When configured as a network signals released by the primary device are replicated by interconnected devices.

Models are available that include Wi-Fi connection to an internet access point as part of a smart-home solution.

Some models include both wireless interconnection and Wi-Fi connection.

Numens 206-series AC plug-in natural gas alarm range provides home owners and installers with an easy-to-install, intelligent solution for life safety and property protection applications

Gas Alarm Signal

When hazardous levels (> 5% LEL) of natural gas are detected, the following indicators will be activated.

Primary Device

- Red LED Alarm indicator
- Audible voice alarm
- Gas concentration level (% LEL) displayed

Replica Device

- Audible sounder
- "A – A" displayed

Smart Life – Smart Living Application (internet connected devices only)

- Alert message

The Alarm condition will automatically reset when gas levels fall below the 5% LEL alarm detection threshold.

Temperature Alarm Signal

When high temperature (> 70°C) is detected, the following indicators will be activated.

Primary Device

- Red LED Alarm indicator
- Audible voice alarm
- Alarm temperature (°C) displayed

Replica Device

- Audible sounder
- "A – A" displayed

Smart Life – Smart Living Application (internet connected devices only)

- Alert message

The Alarm condition will automatically reset when temperature levels fall below 70°C alarm response threshold.

TEST Button

A Test button, located on the front of the gas alarm, provides both test and hush functions.

Test

Pressing the TEST button for 1 s (or tapping the Test button on the *Smart Life – Smart Living* application) when the gas alarm is normal will start the Alarm test.

Pressing the TEST button for 1 s (or tapping the Test button on the *Smart Life – Smart Living* application) during the Alarm test will stop the test and resume normal operation.

Primary Device

- The digital display will show the gas concentration rising from 0% LEL to 15% LEL
- At < 10% LEL, the test warning message will broadcast
- At 10% LEL to 15% LEL, the Alarm message will broadcast

Replica Device

- The digital display will show []
- The audible sounder will operate

Smart Life – Smart Living Application (internet connected devices only)

- Test message

Hush

Pressing the TEST button during the Alarm condition will silence the alarm signals for 9 min. The Alarm condition (gas concentration level or temperature) will flash in the digital display every second.

Pressing the TEST button during the Fault condition will silence the fault signals for 10 h. The display will show F_1.

When connected to the *Smart Life – Smart Living* application, the Alarm will be silenced on the application device.

The Hush feature should only be used after the source of the alarm is known.

The Hush feature allows time for the gas to clear or the temperature to dissipate. During the hush time, the red Alarm LED will be on and the digital display will show the gas concentration level. After the Hush time has expired, the gas alarm will return to normal sensitivity. If gas or high temperature is still present in the unit, the alarm will re-activate.

The Hush feature can be used repeatedly.

Fault Signal

The gas alarm undertakes self-diagnostic checks every 1 s. If an internal fault condition is detected, the yellow Fault LED will be on steady and the audible voice sounder will broadcast a warning message every minute.

Interconnection (where fitted)

Interconnectable gas alarms (Models 206-006 and 206-008) 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 gas or high temperature is detected in one unit, the sounders in all interconnected replica units will activate. The digital display will show **A – A** on replica that have not detected an alarm. This allows the home owner to quickly locate the cause of the alarm.

When a unit is tested, the sounders in all replica units will activate and the digital display will show []. After releasing the Test 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.

Wi-Fi Operation (where fitted)

Wi-Fi enabled models can be configured to connect to *Smart Life – Smart Living* application using a Wi-Fi enabled internet access point. When connected to the *Smart Life – Smart Living* application, control and indications, alerts and control are mirrored on the application.

Smart Life – Smart Living Application Functions

Detection Status: Shows device status (Normal, Gas sensor warming up, Gas leak alarm, and high temperature alarm).

Gas Leak Value: Shows the gas value currently measured by the device.

Test: Device enters Test condition.

Note: Fault and Alarm conditions continue to work in Test.

Test Result: Shows the test results.

Hush: Temporarily silences the voice alarm.

Auto-Lock Screen: Selects automatic screen lock time as OFF, 30 s, 1 min, 1.5 min, 2 min, 3 min, 4 min, or 5 min.

The following tables provides a summary of conditions and indications.

Primary unit indications

Condition	LED Indication	Digital Display	Audio Indication
Start-up	Alarm, Fault and Power on for 1 s, then Power, flash for 10 min.	Segments on for 1 s	Welcome message
Normal	Power, on steady	Gas concentration level (% LEL)	Off
Gas Alarm	Alarm, on steady Power, on steady	Gas concentration level (% LEL)	Voice alarm message
Gas Alarm Hush	Alarm, on steady Power, on steady	Gas concentration level flashes every 1 s	Off
Temperature Alarm	Alarm, on steady Power, on steady	Temperature (°C)	Voice alarm message
Temperature Alarm Hush	Alarm, on steady Power, on steady	Temperature flashes every 1 s	Off
Test	Alarm, on steady Power, on steady	Gas concentration level 0% LEL to 15% LEL	Voice alarm messages
Fault	Fault, on steady Power, on steady	F01	Voice fault message every 1 min
Fault Hush	Fault, on steady Power, on steady	F_1	Voice fault message, then silence for 10 h
Wi-Fi Mode b1 ^a	Wi-Fi on Power, on steady	b1	Off
Wi-Fi Mode b2 ^a	Wi-Fi on Power, on steady	b2	Off

^a Wi-Fi enabled models only.

Interconnected replica unit indications (where installed)

Condition	LED Indication	Digital Display	Audio Indication
Gas Alarm	Power, on steady Alarm, 1 s flash	A – A	3 beeps (0.5 s on, 0.5 s off), 1 s silence (repeating)
Temperature Alarm	Power, on steady Alarm, 1 s flash	A – A	3 beeps (0.5 s on, 0.5 s off), 1 s silence (repeating)
Test	Power, on steady	[[3 beeps (0.5 s on, 0.5 s off), 3 s silence (repeating)

Specifications (cont.)

Voice message	<i>Danger! A significant gas leakage is detected. To prevent an explosion, do not turn on an electrical equipment, including lights. Evacuate the area immediately and call the fire service.</i>
Audio output	≥ 85 dB @ 3 m
Gas Alarm Hush	
Alarm condition indicator	Red LED
Digital display	Gas concentration level flashes every 1 s
Hush time	9 min
Auto reset time	< 30 s
Temperature Alarm Condition	
Alarm response threshold	> 70°C
Alarm condition indicator	Red LED on steady
Digital display	Temperature (°C)
Voice message	<i>Attention! High temperature is detected. Evacuate the area immediately and call the fire service.</i>
Audio output	≥ 85 dB @ 3 m
Temperature Alarm Hush	
Hush time	9 min
Auto reset time	< 30 s
Test Condition	
Digital display	0% LEL to 15% LEL
Voice message	< 10% LEL: <i>Your alarm is being tested. Your alarm will sound. Gas is detected. Close any sources of gas immediately. Ventilate the area and contact your service provider.</i> 10% LEL to 15% LEL: <i>Danger! A significant gas leakage is detected. To prevent an explosion, do not turn on an electrical equipment, including lights.</i>
Audio output	≥ 85 dB @ 3 m
Fault Condition	
Fault condition indicator	Yellow LED
Digital display	F01
Voice message	<i>The sensor is faulty. Please repair or replace.</i>
Fault Condition Hush	
Hush time	10 h
Digital display	F_1
Wireless Interconnection ^a	
Interconnection	No device number limit.
Radio range (typ.)	500 m in free air
Wi-Fi ^b	
Network standard	IEEE 802.11b/g/n
Security	WPA/WPA2
Encryption	WEP/TKIP/AES
Radio range (typ.)	70 m in free air
Environmental	
Operating temperature	(-10 ~ +55) °C
Operating humidity	(0 ~ 95) % RH, non-condensing

Specifications (cont.)

Storage temperature	(-25 ~ +80) °C
Storage humidity	(0 ~ 98) % RH, non-condensing
Miscellaneous	
Dimensions (h × w × d) (excl. plug)	(90 × 90 × 35) mm
^a Models 206-006 and 206-008	
^b Models 206-007 and 206-008	

Compliance

Numens 206 natural gas alarms have the following compliance.

UL 1484 ^a	<i>Residential gas detectors</i>
EN 50194 ^a	<i>Electrical apparatus for the detection of combustible gases in domestic premises. Test methods and performance requirements</i>
^a Third-party conformance assessment has not been undertaken	

Installation Preparation

Installation Location

Use the following guidelines to select a suitable installation location.

- The unit(s) should be located adjacent to gas sources, such as storage bottles and piping.
- Gas alarms may be installed on the ceiling or wall. Wall mounted alarms should be located 1.5 m (5 feet) from the floor.
- Locate the gas alarm in an environment of between (-10 ~ +50) °C [(14 ~ 122) °F], and (0 ~ 95) % relative humidity (non-condensing).

Where **Not** to Install Your Gas Alarm

Do not install gas alarms in the following locations.

- Within 1.5 m (5 feet) from outside doors and windows.
- Within 1.5 m (5 feet) of open flame appliances, such as furnaces, stoves and fire places.
- Within 1.5 m (5 feet) of cooking appliances.
- Within 1.5 m (5 feet) of air-conditioners, heating registers and other ventilation sources that may interfere with gas entering the detector.
- Where furniture or draperies may obstruct the airflow.

Configuration Preparation

Wi-Fi Models

- Download the smart phone application by scanning the QR Code or searching for *Smart Life – Smart Living* in the Apple App Store for iPhones, or Google Play for Android phones.
- Launch the app and log in. New users will need to register a new account.

Specifications

Power	
Power source	AC (100 ~ 240) V / 50/60 Hz
Start-up time	≤ 10 min
Voice message	<i>Welcome to this Numens product.</i>
Quiescent power consumption	< 1.2 W
Quiescent condition indicator	Green LED
Digital display	Gas % LEL
Gas Alarm Condition	
Gas detected	Natural gas CH ₄
Alarm response threshold	(0.05 ±0.02) LEL CH ₄
Alarm condition indicator	Red LED on steady
Digital display	Gas concentration level (% LEL)



iOS / Android App



Smart Life – Smart Living

Installation and Test

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

All Models

1. Connect the AC mains plug (supplied) to the rear of the gas alarm.

Description	Regions	Part Number
Mains plug interface, Type A	Canada USA	262-001
Mains plug interface, Type C	Europe, Middle East	262-002
Mains plug interface, Type G	UK, Singapore	262-003
Mains plug interface, Type I	A/NZ, China	262-004

^a Refer IEC world plugs https://www.iec.ch/worldplugs/list_bytype.htm

2. Plug the gas alarm into a mains outlet and turn on the power. Alarm, Fault and Power indicators, and segments in the digital display will be on for 1 s, then the Power indicator will flash during start-up.
3. Wait for 10 min for the Power indicator to be steady on.

Wireless Interconnection Function (where fitted)

There is no limit to the number of units that can be interconnected as replicas 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 gas or excessive temperature 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. Enter Group mode by pressing the TEST button 5 times within 5 s. The display will show **P 0**. Group mode configuration will last 50 s (unless cancelled earlier).
2. Add a unit to the Group by pressing the TEST button twice on the replica unit. The display will show **J 0**. Following connection to the Group, the replica display will show **[]** for 1 s, then resume normal operation.
3. Repeat Step 2 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.

4. When all units are added to the Group, press and release the TEST 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 button 8 times within 5 s on the replica unit. The display will show **--** for 1 s and cancel interconnection.

Wi-Fi Models

1. Plug the gas alarm into a mains outlet and turn on the power. Alarm, Fault and Power indicators, and segments in the digital display will be on for 1 s, then the Power indicator will flash during start-up.
2. Wait for 10 min for the Power indicator to be steady on.

There are two ways to connect the Wi-Fi gas alarm to the *Smart Life – Smart Living* application: **EZ Mode** (where the Wi-Fi indicator flashes quickly) or **AP Mode** (where the LED indicator flashes slowly).

Configuration

1. To enter configuration mode, press the MORE button 5 times in quick succession. The digital display will show **b1** (default mode).
Note: Pressing the MORE button will switch between **EZ Mode** (b1) and **AP Mode** (b2).
2. Open the *Smart Life – Smart Living* application on your smart phone.
3. Tap *Add Device*.
4. Select device type *Sensor*.

EZ Mode (default mode)

1. Tap *Confirm indicator rapidly blink*.
2. Search for the Wi-Fi hotspot and enter the hotspot password. Observe that the device is connecting to the application.
3. Tap *Done* when the device is connected. The LED indicator will turn on constantly.
4. Press and hold the MORE button for 3 s to exit configuration.

AP Mode

1. Select *AP Mode*.
2. Tap *Confirm indicator slowly blink*.
3. Search for the Wi-Fi hotspot and enter the hotspot password.
4. Open Wi-Fi settings and connect to hotspot Smartlife-xxxx.
5. Press and hold the MORE button for 3 s to exit configuration.

Change Device Name

1. Tap Device List to see a list of connected devices.
2. Tap *Modify Device Name* and enter a new name for your 206 natural gas gas alarm.

Share Devices

1. In *Profile*, tap *Device Sharing*.
2. Tap *Add*.
3. Select the device to share.
4. Enter the telephone number or email address of the person you want to share with.
5. Tap *Confirm*.

Test the Gas Alarm



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

After installation, test the alarm(s) as follows.

Primary Unit

1. Press and hold the TEST button for 1 s.
2. Check the digital displays shows the gas concentration level rising from 0% LEL to 10% LEL.
3. Check that the **Warning** voice message is clearly audible.

4. Check the digital displays shows the gas concentration level rising from 10% LEL to 15% LEL.
5. Check that the **Danger** voice message is clearly audible.
6. Press and hold the TEST button for 1 s to complete the test, silence the alarm and resume normal operation.

Replica Units

1. Press and hold the TEST button for 1 s on the primary unit.
 2. Check the sounder on replica units operate: 3 beeps (0.5 s on, 0.5 s off), 3 s silence (repeating).
 3. Press and hold the TEST button for 1 s to complete the test, silence the alarm and resume normal operation.
- NOTE: It may take up to 10 s for the interconnected units to silence.
4. Repeat Steps 1 ~ 3 for each replica unit.

Normal Operation

Normal Condition

Once installed and tested, your gas alarm will immediately start monitoring for natural gas, and should provide years of service. The green Power indicator will be active.

Alarm Condition

WARNING: This alarm indicates the presence of natural gas gas, which has an explosion risk. Every alarm should be taken seriously

If alarm signal sounds, take the following actions.

1. Avoid igniting any flame sources.
2. Operate the TEST button.
3. Call your emergency services (_____) Fire Dept. or 911.
4. Immediately move to fresh air (outdoors or by an open door/window).
5. Account for all building occupants.
6. Do not re-enter the premises until emergency services responders have arrived, the premises have aired out, and the alarm remains in its normal operation.
7. If your alarm re-activates within 24 h, repeat the above steps and call a qualified appliance technician (_____) to investigate sources of natural gas gas, and inspect for proper operation of this equipment. If problems are identified during this inspection have the equipment serviced immediately.

NOTE: For any equipment not inspected by the technician, consult the manufacturer's instructions, or contact the manufacturers directly for more information about safety and this equipment.

To prevent false alarms, be sure there is adequate ventilation when using household cleaning solutions or similar contaminants.

The detector automatically resets to normal operation when gas dissipates.

Hush

WARNING: Before using the Hush feature, identify the source of the gas and be certain that safe conditions exist.

If investigation of the alarm signal is likely caused by a known nuisance source, the TEST button can be pressed for 1 s to silence the gas detector for 9 min.

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

Fault Condition

If an internal fault condition is detected, the yellow Fault LED will be on steady and the audible voice sounder will broadcast a warning message every minute.

If investigation of the cause of the fault cannot be immediately resolved, the TEST button can be pressed for 1 s to silence the gas detector for 10 h.

After the Hush time has expired, the gas alarm will return to normal. If the fault is still present, the alert will re-activate. The Hush feature can be used repeatedly.

Care and Maintenance

Weekly Tests



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

Each week, test the alarm(s) as follows.

Primary Unit

1. Press and hold the TEST button for 1 s.
2. Check the digital displays shows the gas concentration level rising from 0% LEL to 10% LEL.
3. Check that the **Warning** voice message is clearly audible.
4. Check the digital displays shows the gas concentration level rising from 10% LEL to 15% LEL.
5. Check that the **Danger** voice message is clearly audible.
6. Press and hold the TEST button for 1 s to complete the test, silence the alarm and resume normal operation.

Replica Units

1. Press and hold the TEST button for 1 s on the primary unit.
2. Check the sounder on replica units operate: 3 beeps (0.5 s on, 0.5 s off), 3 s silence (repeating).
3. Press and hold the TEST button for 1 s to complete the test, silence the alarm and resume normal operation.

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

4. Repeat Steps 1 ~ 3 for each replica unit.

Annual Maintenance

Clean the gas alarm with a dry or damp soft cloth and ensure the sensor opening is free from dust and lint. Do not use solvents.

DO NOT PAINT this product.

Firmware Update for Wi-Fi Devices

New features may be added to the firmware embedded in your Wi-Fi enabled natural gas alarms. To check for updates to firmware:

1. Tap *Info*.
2. Tap *Check for Firmware Update*.

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.

References

Reference	Description
31-0103	206 natural gas AC plug-in gas alarm datasheet

Models

Model	Features
206-005	Gas concentration level, hush, test, temperature
206-006	Gas concentration level, hush, test, temperature, wireless interconnection
206-007	Gas concentration level, hush, test, temperature, Wi-Fi
206-008	Gas concentration level, hush, test, temperature, wireless interconnection, Wi-Fi

Disposal

This product is designed to work reliably for 5 years after the installation date.



Gas alarms should not be disposed of as land-fill. Please dispose in an environmentally friendly manner.



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

Limited Warranty

In order to protect your rights, please retain the original purchase receipt for the proof of purchase. No warranty can be offered without the original purchase receipt.

Ambest Electronics (Ningbo) Co Ltd ("Numens"), warrants the enclosed product excluding any battery(ies), to be free from defects in materials and workmanship under normal use and service for a period of 1 year from date of purchase or 18 months from the date of manufacture, whichever is the lesser period. This LIMITED WARRANTY is the sole and exclusive warranty, express or implied for Numens products. No employee, agent, dealer or other person is authorized to alter, modify, expand or reduce the terms of this warranty or to make any other warranty on behalf of Numens.

Numens' obligation of this Warranty shall be limited to the repair or replacement of any part of the product which is found to be defective in materials or workmanship under normal use and service during the Warranty Period. Products in need of repair should be returned, shipping prepaid, to Customer Service Department, Numens, 55 Yunhui Road, Yunlong Town, Yinzhou District, Ningbo, Zhejiang 315137 China.

Numens shall not be obligated to repair or replace units which are found to be in need of repair because of damage, unreasonable use, modifications, or alterations occurring after the date of purchase. The duration of any implied Warranty, including that of merchantability or fitness for any particular purpose, shall be limited to the period of 1 year commencing from the date of purchase. In no case shall Numens be liable for any consequential or incidental damages for breach of this or any other Warranty expressed or implied whatsoever, even if the loss or damage is caused by Numens' negligence or fault. Some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This Warranty gives you specific legal rights, and you may also have other rights which vary from jurisdiction to jurisdiction. Numens makes no warranty with respect to the batteries, expressed or implied, written or oral, including that of merchantability or fitness for any particular purpose.

View the complete range of products at www.numens.com



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