NBIoT Smoke, Carbon Monoxide and Heat Combination Detector Installation Guide

ATTENTION: This manual should be read prior to use and retained for further information.

1. GENERAL INFORMATION

The NBIoT Smoke, Carbon Monoxide and Heat Combination Detector is a 2xCR123A battery powered narrowband internet of things (NBIoT) detector intended for use with a smartphone application or compatible wireless alarm system. The detector consists of a photoelectric smoke sensor, thermistor heat sensor and electrochemical carbon monoxide sensor coupled to a wireless transmitter, which communicates with the cloud and user application. When fire or carbon monoxide is detected, the detector sounds a loud local alarm and the built-in transmitter sends a signal to the DM server. The NBIoT Smoke, Carbon Monoxide and Heat Combination Detector contains an integrated fixed 41°F (5°C) temperature freeze sensor that will send a warning signal based on temperature detected. This detector is designed to provide protection with 70ft (21m) spacing capability. The detector can send alarm, tamper and battery condition messages to the cloud and user application.

The detector has an operational life of 10 years. After 10 years of operation the detector will provide audio visual trouble indication and must be replaced.

WARNING: This product is intended for use in ordinary indoor residential areas. It is not designed to measure compliance with Occupational Safety & Health Administration (OSHA) commercial and industrial standards.

2. DETECTOR OVERVIEW

2.1 DETECTOR FRONT

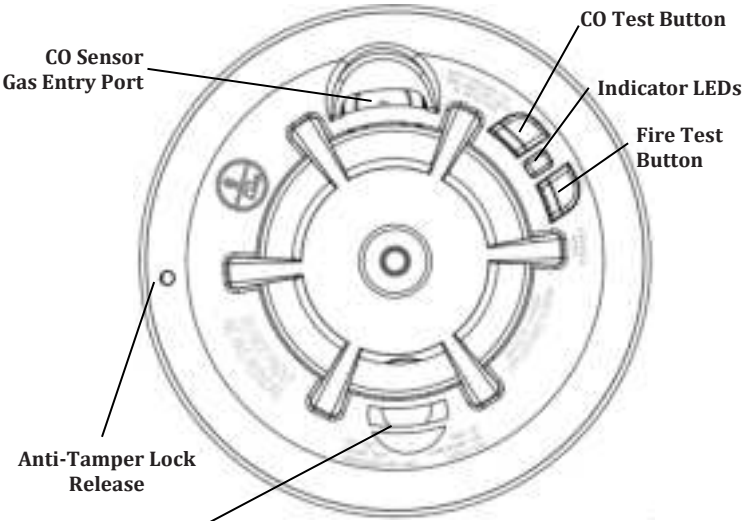

Figure 1 - Detector Front

2.2 DETECTOR BACK

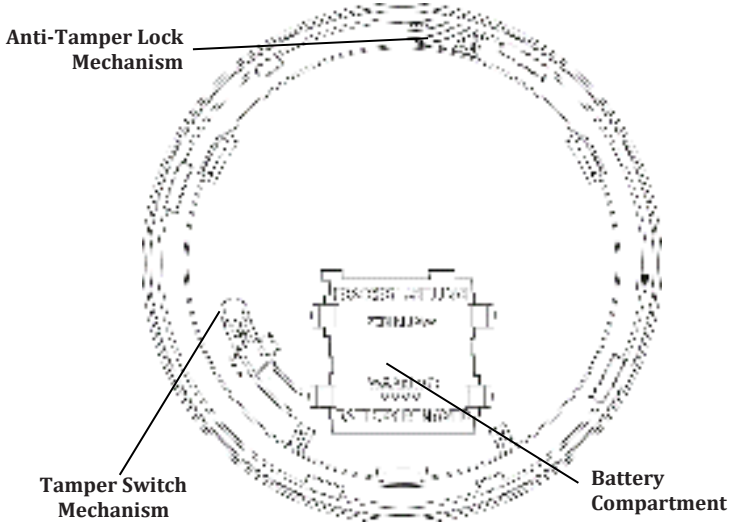

Figure 2 - Detector Back

2.3 DETECTOR MOUNTING BASE

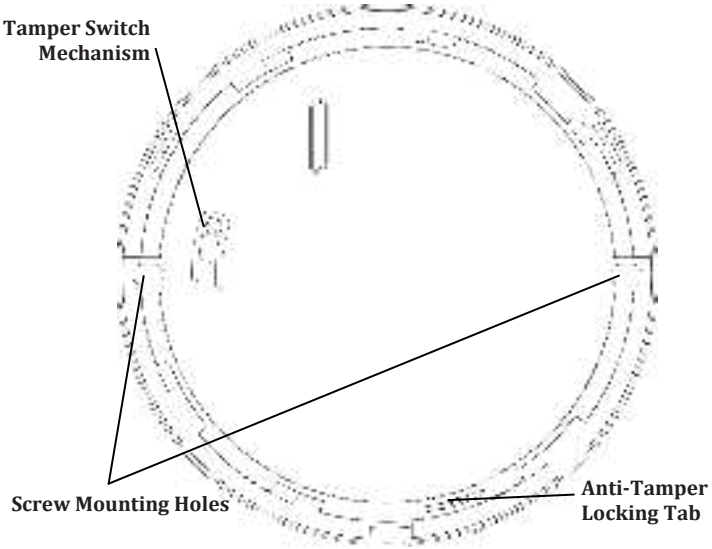

Figure 3 - Mounting Base

3. CONTENTS OF BOX

- NBIoT Smoke, Carbon Monoxide and Heat Combination Detector with mounting base
- Installation guide
- Pack of screws and anchors
- Labels or decals as appropriate
- 2 CR123A Panasonic batteries

4. ENROLLING THE DEVICE

1. Download the **AlarmInstall** mobile application from Google Play or the App Store.
2. Remove the battery pull-tab to power on the device and begin the auto-enrollment process (See Figure 4). If the battery pull-tab is not available or if the device does not automatically enroll, remove and re-insert the batteries (See Section 7.2).
3. Leave the battery cover open.
4. Follow the instructions in the mobile application to enroll and register the device.

Note: You can find your 15-digit IMEI number and PIN code printed on the box of the device when prompted by the application.

Note: Only install the device in locations with Excellent or Good Link Quality. Use the LinkQualityTest mobile application to measure and verify the signal strength.

5. CONFIGURING THE DEVICE

NOTE: In order to send event notifications to the server or perform upgrades the device needs to be successfully connected to a DM server. The NBIoT device credentials configure automatically or manually. To manually configure the device, complete the following steps:

1. Power on the device and keep the mounting base Tamper open
2. Open the BLE application and pair the device.
3. In the BLE application, configure the following:
    - The server target and address to connect to
    - The specific endpoint name, identity, and secret key for the device to connect to the server

NOTE: If the device repeatedly fails to connect to the network, check the network quality in your location. If the device repeatedly fails to connect to the server, check that you are using the correct credentials which are configured on the server for this device.

6. OPERATION

The NBIoT Smoke, Carbon Monoxide and Heat Combination Detector contains a sounder which generates ANSI S3.41 Temporal-3 pattern when fire is detected or ANSI S3.42 Temporal-4 pattern when Carbon Monoxide is detected. During an alarm condition, pressing either of the FIRE or CO test/hush buttons will silence the sounder for a short period (see LED and sounder operating modes table).

A multi-color LED indicator provides visual indication for the detector operating modes and states. In general, RED is used to indicate ALARM conditions, YELLOW is used to indicate FAULT conditions and GREEN is used for normal operation (see Detector Status LED & Sounder operating modes table).

6.1 DETECTOR STATUS LED & SOUNDER OPERATING MODES

Status	Description	LEDs	Sounder
Smoke Alarm	Smoke has been detected	3 RED flashes in time with sounder	Temporal-3 BEEP-BEEP-BEEP-pause (press either button to hush for 7 minutes)
Heat Alarm	Heat has been detected	3 RED flashes in time with sounder	Temporal-3 BEEP-BEEP-BEEP-pause
CO Alarm	Carbon Monoxide has been detected	4 RED flashes in time with sounder	Temporal-4 PIP-PIP-PIP-PIP-long pause (press either button to hush for 5 minutes)
CO Alarm Extended	The CO level remains above the alarm threshold after 4 minutes	4 RED flashes every 6 seconds	Temporal-4 PIP-PIP-PIP-PIP-long pause (press either button to hush for 5 minutes)
CO GO/NO-GO Test	Test mode for checking Carbon Monoxide functionality with test gas	1 GREEN flash followed by 1 BLUE flash every 12 seconds	None
General Fault	A sensor has failed or some other fault has occurred	1 YELLOW flash every 4 seconds	Chirp every 48 seconds
CO Fault	The CO cell has reached the end of its useable life or a fault has occurred with the CO detection portion of the detector	2 YELLOW flashes every 8 seconds	Chirp every 48 seconds
End Of Life	The detector has been operational for 10 years and must be replaced	5 YELLOW flashes every 12 seconds	Chirp every 48 seconds
Sensitivity Drift/Dirty Fault	The detector may no longer alarm within the smoke sensitivity limits on the back of the device and must be cleaned	1 YELLOW flash every 8 seconds	Chirp every 48 seconds
Low Battery	The batteries are low and must be replaced	1 YELLOW flash every 12 seconds	Chirp every 48 seconds (press either button to silence for 12 hours)
Fire Test	Fire test button pressed and held to initiate test	3 RED flashes in time with sounder	Temporal-3 BEEP-BEEP-BEEP-pause

CO Test	CO test button pressed and held to initiate test	4 RED flashes in time with sounder	Temporal-4 PIP-PIP-PIP-PIP-long pause

Tamper	The detector has been removed from the base	1 YELLOW flash followed by 1 GREEN flash every 12 seconds	None
Power Up	The detector has had batteries installed and is powered up	1 RED flash followed by 1 YELLOW flash followed by 1 GREEN flash	A single chirp
Normal Operation	The detector is operating normally with no fault or alarm conditions	1 GREEN flash every 12 seconds	None

Table 1 - Detector Status LED & Sounder Operating Modes

6.2 DETECTOR DIRTY FEATURE

When the detector has been contaminated and may no longer be within the marked sensitivity limits the detector will chirp every 48 seconds and flash the YELLOW LED once every 8 seconds. Refer to Section 11.1 for cleaning your detector.

6.3 DETECTOR END OF LIFE

When the detector has reached the end of its 10 year operating life it will chirp every 48 seconds and flash the YELLOW LED 5 times every 12 seconds. The detector must be replaced.

6.4 LOW BATTERY DETECTION

The detector regularly checks the battery condition. If a low battery is detected the detector will chirp every 48 seconds and flash the YELLOW LED once every 8 seconds. The chirp may be silenced for 12 hours by pressing either button (See Section 2.1 Figure 1). The batteries must be replaced using 2 Panasonic CR123A batteries.

7. BATTERY INSTALLATION AND REPLACEMENT

7.1 FIRST DETECTOR USE

The detector ships with batteries installed and a pull tab to prevent electrical contact while in transit. Remove the pull tab before installing the detector.

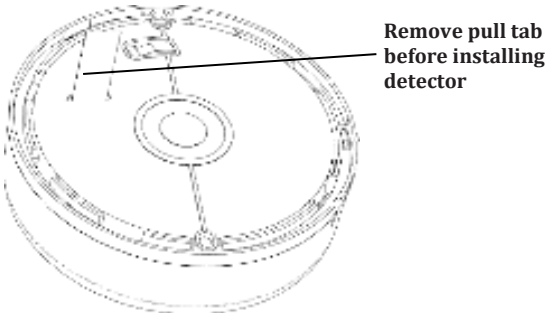

Figure 4 - Pull Tab

7.2 BATTERY REPLACEMENT

To replace the batteries, remove the detector from the mounting base. Remove the batteries from the detector, a flat bladed screwdriver may be used to help remove the batteries, but care must be taken to ensure the batteries are not damaged. Wait a minimum 20 seconds for the detector to power down completely. Install 2 new Panasonic CR123A batteries, taking care to follow the battery polarity indication on the detector next to the battery compartment. The detector should flash RED, YELLOW, GREEN and chirp 8 seconds after the batteries are installed. Return the detector to the mounting base, the detector should flash GREEN every 12 seconds to indicate normal operation. Test the detector as described in Section 9 FIELD SERVICE TESTS of this installation guide.

WARNING: CONSTANT EXPOSURES TO HIGH OR LOW TEMPERATURES OR HIGH HUMIDITY MAY REDUCE BATTERY LIFE

8. MOUNTING THE DETECTOR

8.1 RECOMMENDED LOCATIONS FOR SMOKE HEAT DETECTORS

According to National Fire Protection Association (NFPA) the major threat from fire in a dwelling unit occurs at night when everyone is asleep. The principal threat to persons in sleeping areas comes from fires in the remainder of the unit; therefore, a smoke detector(s) is best located between the bedroom areas and the rest of the unit. In units with only one bedroom area on one floor, the smoke detector(s) should be located as shown in Figure 5. In dwelling units with more than one bedroom area or with bedrooms on more than one floor, more than one smoke detector is required, as shown in Figure 6.

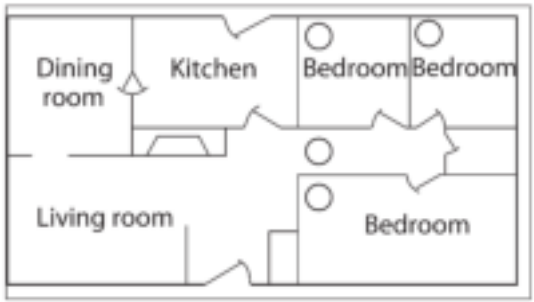

Figure 5 - Location of the detectors in units with only one bedroom area on one floor

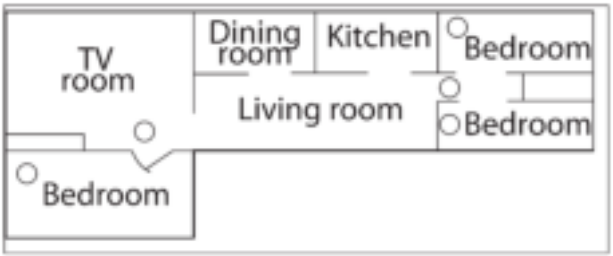

Figure 6 - Location of the detectors in dwelling units with more than one bedroom area or with bedrooms on more than one floor

Figure 7 - Detector located on each story

In addition to smoke detectors outside of the sleeping areas, the device should be installed on each additional story of the dwelling unit, including the basement. These installations are shown in Figure 7. The living area smoke detector should be installed in the living room or near the stairway to the upper level, or in both locations. The basement smoke detector should be installed in close proximity to the stairway leading to the floor above. Where installed on an open-joisted ceiling, the detector should be placed on the bottom of the joists. The detector should be positioned relative to the stairway so as to intercept smoke coming from a fire in the basement before the smoke enters the stairway.

Smoke detectors are optional where a door is not provided between living room and recreation room (Figure 8). The smoke from a fire generally rises to the ceiling, spreads out across the ceiling surface, and begins to bank down from the ceiling. The corner where the ceiling and wall meet is an air space into which the smoke could have difficulty penetrating. In most fires, this dead air space measures about 0.1m (4in.) along the ceiling from the corner and about 0.1m (4in.) down the wall. Detectors should not be placed in this dead air space, see Figure 9, Figure 10 and Figure 11.

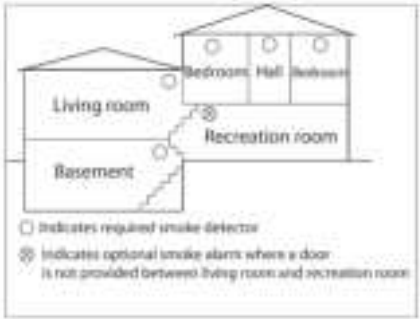

Figure 8 - Split level arrangement

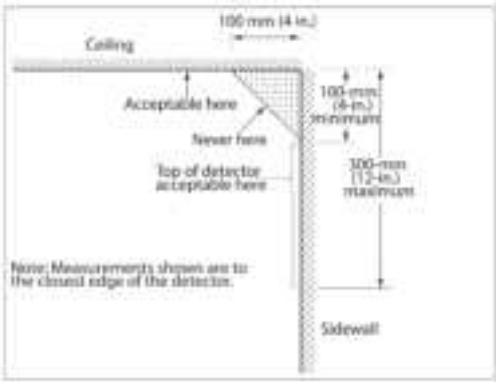

Figure 9 - Example of proper mounting for detectors

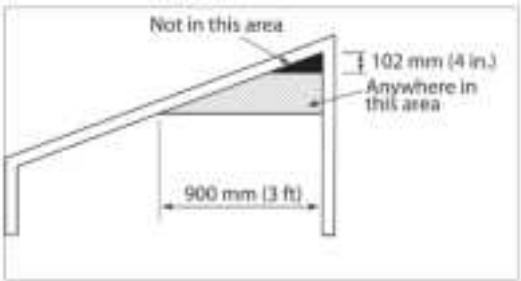

Figure 10 - Example of proper mounting for detectors with sloped ceilings

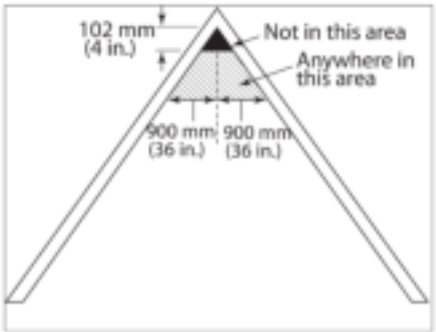

Figure 11 - Example of proper mounting for detectors with peaked ceilings

Where NOT to install the alarm:

- In locations with Poor Link Quality. See Section 4, Enrolling the device.
- Directly above a sink, cooker, stove or oven
- Do not locate detector within 5 feet (1.5 m) of any cooking appliance
- Next to a door or window that would be affected by drafts i.e. extractor fan or air vent
- Outside
- Do not install in any environment that does not comply with the detector's environmental specifications
- In or below a cupboard
- Where air flow would be obstructed by curtains or furniture
- Where dirt or dust could collect and block the sensor
- Where it could be knocked, damaged, or inadvertently removed

This detector shall not be installed in location where the normal ambient temperature is below 40°F (4.4°C) or where it exceeds 100°F (37.8°C).

THIS EQUIPMENT SHOULD BE INSTALLED IN ACCORDANCE WITH NFPA 72: NATIONAL FIRE ALARM AND SIGNALING CODE.

8.2 RECOMMENDED LOCATIONS FOR CARBON MONOXIDE DETECTORS

Ceiling Mounted - position at least 4" (10 cm) from any wall.

Wall Mounted - position at least 4" (10 cm) from ceiling, but not lower than 12" (30 cm).

Where to install, ideally:

- Within 10 feet (3m) of a sleeping area
- Inside the bedroom if it contains a fuel burning appliance
- On every floor of the building
- Ideally, install in any room that contains a fuel burning appliance
- If the appliance or the room is not normally used, such as the boiler room, the detector should be placed just outside the room so the alarm can be heard more easily

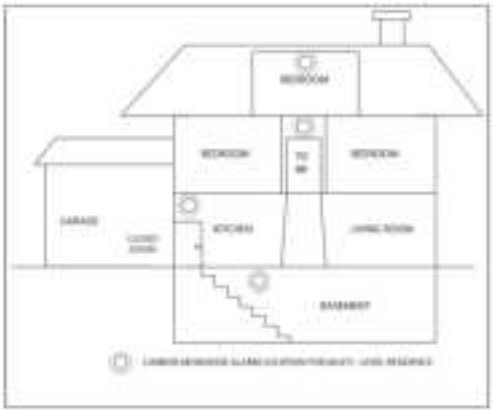

Figure 12 - CO Detector location diagram

Where NOT to install, ideally:

- Directly above a sink, cooker, stove or oven
- Do not locate detector within 5 feet (1.5m) of any cooking appliance
- Next to a door or window that would be affected by drafts i.e. extractor fan or air vent
- Outside
- Do not install in any environment that does not comply with the detector's environmental specifications
- In or below a cupboard
- Where air flow would be obstructed by curtains or furniture
- Where dirt or dust could collect and block the sensor
- Where it could be knocked, damaged, or inadvertently removed

8.3 MOUNTING PROCEDURE

NOTE: The NBIoT Smoke, Carbon Monoxide and Heat Combination Detector should only be installed by a competent technician or installer.

NOTE: The NBIoT Smoke, Carbon Monoxide and Heat Combination Detector must not be used with a guard.

NOTE: DO NOT attach the detector to removable ceiling panels.

NOTE: Two warning labels are provided with the detector. One should be mounted near the CO detector and the other near a source of fresh air where members of the household will gather if the alarm signal sounds.

CAUTION: Airborne dust particles can enter the detector, remove the detector before beginning construction work or other dust producing activity. Immediately replace detector when dust producing activity has ceased.

WARNING: DO NOT PAINT Detector

Once a suitable location has been identified install the mounting base on the ceiling or wall (if local ordinances permit) using the two screws and anchors provided (Figure 13). Remove the battery pull tab (Section 5.1) and ensure the detector powers up

(Section 5.2). Fit the detector on the mounting base (Figure 14) and turn clockwise until the detector clicks into place and the alignment notches are aligned (Figure 15). Test the detector as described in Section 9 FIELD SERVICE TESTS of this installation guide.

Figure 13 - Installing the base

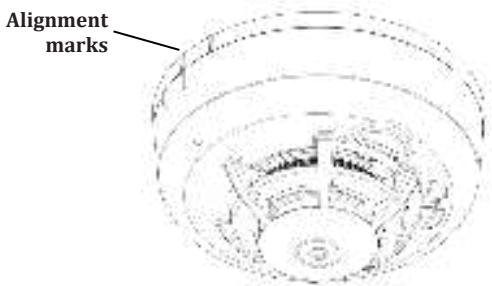

Figure 14 - Detector aligned to base prior to completing installation

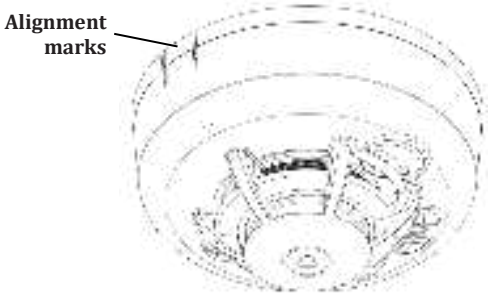

Figure 15 - Detector fully aligned and installed on mounting base

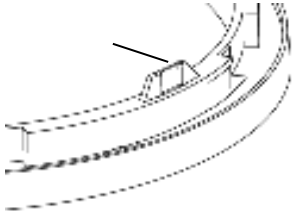

Figure 16 - Anti-Tamper locking tab

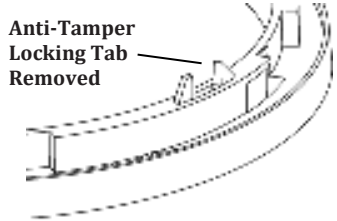

Figure 17 - Anti-Tamper locking tab removed

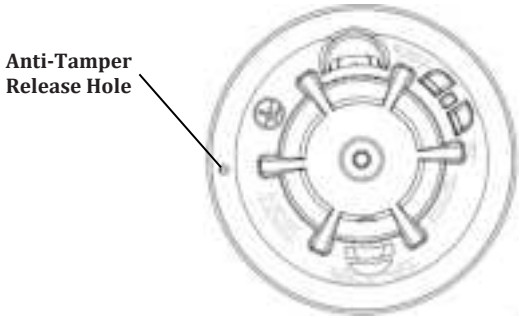

Figure 18 - Anti-Tamper release hole location

9. TAMPER PROTECTION

The NBIoT Smoke, Carbon Monoxide and Heat Combination Detector has a built-in tamper switch which will cause a tamper signal to be transmitted to the DM server if the detector is removed from the mounting base. The detector also includes an anti-tamper feature which prevents the detector being removed from the mounting base. To enable the anti-tamper feature, cut the anti-tamper tab on the mounting base (Figure 16 and Figure 17) and install the detector on the mounting base. When the anti-tamper feature has been enabled, to remove the detector from the mounting base, a small screwdriver must be inserted in the anti-tamper release hole (Figure 18) to press on the release lever whilst turning the detector counterclockwise.

10. FIELD SERVICE TESTS

NOTE: Before testing, notify the central station that the detector system is undergoing maintenance in order to prevent unwanted alarms. Testing the detector will activate an alarm and send a signal to the DM server. The test functions cannot be used if the

detector has a trouble or end-of-life condition. Detectors must be tested after installation and following periodic maintenance.
The detector has two test buttons, one for smoke testing and one for CO testing . (See Section 2.1)
).

10.1 SENSITIVITY CHECK

Examine the detector and observe the LED, if the LED is blinking GREEN once every 12 seconds the detector is operating normally and sensitivity is within the marked sensitivity range on the back of the detector. If the LED is blinking YELLOW every 8 seconds and beeping every 48 seconds it may no longer be within the marked sensitivity range and should be cleaned. Refer to Section 11.1 for cleaning your detector.

10.2 SMOKE ALARM TEST

Press and hold the fire test button (See Section 2.1) for 2 seconds, the detector will sound Temporal-3 and the LED will blink RED along with the sounder.
Continue to press and hold the fire test button for up to 12 seconds to ensure the smoke alarm signal is sent to the DM server. Verify the signal was received at the DM server.

10.3 SMOKE ALARM FUNCTIONAL TEST

Using SDi SOLO A10, SDi Smoke Centurion or SDi Smoke Sabre canned smoke products, according to the labeled instructions, spray canned smoke at the detector. The detector will sound Temporal-3, the LED will blink RED along with the sounder and the smoke alarm signal will be sent to the DM server. Verify the signal was received at the DM server.

10.4 HEAT ALARM FUNCTIONAL TEST

Using a hair dryer of 1000-1500 Watts at a distance of approximately 12 inches from the detector, direct hot air at the detector. The detector will sound Temporal-3, the LED will blink RED along with the sounder and the heat alarm signal will be sent to the DM server.

10.5 CO ALARM TEST

Press and hold the CO test button (See Section 2.1) for 2 seconds, the detector will sound Temporal-4 and the LED will blink RED along with the sounder.
Continue to press and hold the CO test button for up to 12 seconds to ensure the CO alarm signal will be sent to the DM server. Verify the signal was received at the DM server.

10.6 CO ALARM FUNCTIONAL TEST

After pressing and holding the CO test button for 12 seconds as in the previous step, the detector will enter a CO GO/NO-GO test mode and the LED will blink GREEN and BLUE for 2 minutes. While the detector is in the CO GO/NO-GO test mode, using SDi SOLO C6 CO test gas, spray a small amount of CO test gas directly into the gas entry port (See Section 2.1). The detector will sound Temporal-4, the LED will blink RED along with the sounder and the CO alarm signal will be sent to the DM server. Verify the signal was received at the DM server. The CO test will automatically clear after testing, or after 2 minutes if no CO test gas was used.

10.7 POST TESTING

If the detector fails to activate in any of the tests it should be cleaned, as outlined in Section 10.1 of this manual, and the test should be repeated. If the detector still fails to activate, return for servicing.
Once testing is complete, ensure the detector returns to normal operation mode with the LED blinking GREEN every 12 seconds. If the detector is not in normal operation, refer to Section 4.1 Table - Detector Status LED & Sounder Operating Modes to determine the detector state.

11. MAINTENANCE

TEST ONCE A WEEK
WARNING: USE ONLY BATTERIES SPECIFIED. USE OF DIFFERENT BATTERIES MAY HAVE A DETRIMENTAL EFFECT ON THE DETECTOR.
YOUR DETECTOR SHOULD BE CLEANED AT LEAST ONCE A YEAR.

11.1 CLEANING

Remove the detector from the mounting base. Use a vacuum cleaner to vacuum through the openings around the perimeter of the detector, or alternatively, use compressed air to blow through the openings around the perimeter of the detector. Wipe the detector clean with a damp cloth. Return the detector to the mounting base.

12. FIRE DETECTION

WARNING: PLEASE READ CAREFULLY AND THOROUGHLY

- NFPA 72 states: Fire-warning equipment for residential occupancies are capable of protecting about half of the occupants in potentially fatal fires. Victims are often intimate with the fire, too old or too young, or physically or mentally impaired such that they cannot escape even when warned early enough that escape should be possible. For these people, other strategies such as protection-in-place or assisted escape or rescue would be necessary.
- A battery powered alarm must have a battery of the specified type, in good condition and installed properly.
- Smoke alarms must be tested regularly to make sure the batteries and the alarm circuits are in good operating condition.
- Smoke alarms cannot provide an alarm if smoke does not reach the detector. Therefore, smoke alarms may not sense fires starting in chimneys, walls, on roofs, on the other side of a closed door or on a different floor.
- If the alarm is located outside the sleeping room or on a different floor, it may not wake up a sound sleeper.
- Studies have shown that smoke and heat alarms may not awaken all sleeping individuals, and that 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 those who may be incapable of safely evacuating the area unassisted.
- The use of alcohol or drugs may also impair one's ability to hear the smoke alarm. For maximum protection, a smoke alarm should be installed in each sleeping area on every level of a home.
- Although smoke alarms can help save lives by providing an early warning of a fire, they are not a substitute for an insurance policy. Homeowners and renters should have adequate insurance to protect their properties.

FAMILY ESCAPE PLAN

According to National Fire Protection Association (NFPA) there often is very little time between the detection of a fire and the time it becomes deadly. This interval can be as little as 1 or 2 minutes. Planning and practicing for fire conditions with a focus on rapid exit from the residence are important. Drills should be held so that all family members know the action to be taken.

SAFETY TIPS

- Make a home escape plan. Draw a map of your home showing all doors and windows. Discuss the plan with everyone in your home.
- Know at least two ways out of every room, if possible. Make sure all doors and windows leading outside open easily.
- Have an outside meeting place (like a tree, light pole or mailbox) a safe distance from the home where everyone should meet.
- Practice your home fire drill at night and during the day with everyone in your home, twice a year.
- Practice using different ways out.
- Teach children how to escape on their own in case you can't help them.
- Close doors behind you as you leave.

IF THE ALARM SOUNDS

- If the smoke alarm sounds, get out and stay out. Never go back inside for people or pets.
- If you have to escape through smoke, get low and go under the smoke to your way out.

- Call the fire department from outside your home. FOR MORE SAFETY INFORMATION SEE THE WEBSITE: www.nfpa.org/education.

13. CARBON MONOXIDE GAS AND ITS DETECTION

CAUTION: This carbon monoxide detector is designed for indoor use only. Do not expose to rain or moisture. Do not knock or drop the detector. Do not open or tamper with the detector as this could cause malfunction. The detector will not protect against the risk of carbon monoxide poisoning if not properly installed.

CAUTION: This device will only indicate the presence of carbon monoxide gas at the sensor. Carbon monoxide gas may be present in other areas. This carbon monoxide alarming device is designed to detect carbon monoxide gas from ANY source of combustion. It is NOT designed to detect smoke, fire or other gases unless the product has been investigated and determined to comply with applicable requirements.

This device should not be installed as a substitute for proper installation, use, and maintenance of fuel burning appliances, including appropriate ventilation and exhaust systems. Carbon monoxide gas is a highly poisonous gas which is released when fuels are burned. It is invisible, has no smell and is therefore impossible to detect with the human senses. Under normal conditions in a room where fuel burning appliances are well maintained and correctly ventilated, the amount of carbon monoxide released into the room by appliances should not be dangerous.

Conditions that can result in transient CO situations:

1. Excessive spillage or reverse venting of fuel-burning appliances caused by
   - outdoor ambient conditions, such as wind direction and/or velocity, including high gusts of wind, and insufficient draft in the vent pipes,
   - negative pressure differential resulting from the use of exhaust fans,
   - simultaneous operation of several fuel-burning appliances competing for limited internal air,
   - loose vent pipe connections from fuel-fired appliances,
   - obstructions, or unconventional vent pipe designs that can amplify the above situations,
   - poorly designed or maintained chimneys and/or vents,
2. Extended operation of unvented fuel-burning devices (range, oven, fireplace, etc.),
3. Temperature inversions that can trap exhaust gases near the ground,
4. Car idling in an open or closed attached garage, or near a home.

The following symptoms are related to CARBON MONOXIDE POISONING and are to be discussed with All members of the household:

1. **Mild Exposure:** Slight headache, nausea, vomiting, fatigue (often described as "Flulike" symptoms).
2. **Medium Exposure:** Severe throbbing headache, drowsiness, confusion, fast heart rate.
3. **Extreme Exposure:** Unconsciousness, convulsions, cardiorespiratory failure, death.
4. Many cases of reported CARBON MONOXIDE POISONING indicate that while victims are aware they are not well, they become so disoriented they are unable to save themselves by either exiting the building or calling for assistance. Young children and household pets are typically the first affected.

WARNING: IMPORTANT INFORMATION FOR THE USER

Individuals with medical problems may consider using warning devices which provide audible and visual signals for carbon monoxide concentrations under 30 ppm.

WARNING

Actuation of your CO alarm indicates the presence of carbon monoxide (CO) which can KILL YOU.

If alarm signal sounds:

1. Operate reset/silence button.

2. Call your emergency services (fire department or 911).

3. Immediately move to fresh air - outdoors or by an open door/window. Do a

head count to check that all persons are accounted for. Do not reenter the premises nor move away from the open door/window until the emergency services responders have arrived, the premises have been aired out, and your alarm remains in its normal condition.

4. After following steps 1 - 3, if your alarm reactivates within a 24 hour period, repeat steps 1 - 3 and call a qualified appliance technician (Telephone Number) to investigate for sources of CO from fuel burning equipment and appliances, and inspect for proper operation of this equipment. If problems are identified during this inspection have the equipment serviced immediately. Note any combustion equipment not inspected by the technician and consult the manufacturers' instructions, or contact the manufacturers directly, for more information about CO safety and this equipment. Make sure that motor vehicles are not, and have not been, operating in an attached garage or adjacent to the residence.

The premises should be well ventilated when household cleaning supplies or similar contaminants are used.

DETECTOR REPLACEMENT

This detector is manufactured with a long-life carbon monoxide sensor. Over time the sensor may lose sensitivity and may need to be replaced with a new carbon monoxide detector. The detector's lifespan is 10 years from the date of manufacture.

NOTE: When the detector is removed from its base, a tamper message is sent to the central station.

The detector will also cause a trouble condition once it has reached the end of its useful life. If this occurs, it is time to replace the detector.

NOTE: Before replacing the detector, notify the proper authorities that maintenance is being performed and the system will be temporarily out of service. Disable the zone or system undergoing maintenance to prevent any unwanted alarms. Dispose of the detector in accordance with any local regulations.

NOTE: The replacement date that appears on the device is the date beyond which the device may no longer detect carbon monoxide accurately and should be immediately replaced.

CAUTION

It should be noted the installation, operation, testing and maintenance of a carbon monoxide detector is different to smoke detectors. Per NFPA 720 section 5.3.7.2 a CO detector shall not be connected to a zone that signals a fire condition (i.e. smoke detectors zones). Therefore, the carbon monoxide alarm signal must be programmed as a non-fire zone. See the control's installation instructions for the appropriate carbon monoxide zone type to be programmed.

CAUTION

This product uses a lithium battery. Improper handling may result in HEAT, EXPLOSION or FIRE causing personal injury. Do not recharge batteries. Follow the battery manufacturer's safety instructions. Dispose of used batteries in accordance with the regulations in your area. Never paint the unit. Paint may prevent CO gas from entering the unit.

14. SPECIFICATIONS

- Transmitter Frequency (MHz):
  - 4G Bands: B1, B2, B3, B4, B5, B8, B12, B13, B18, B19, B20, B25, B26, B27, B28, B66, B71, B85
  - BLE: 2.4 to 2.5 GHz
- SIM card type: Industrial grade IoT/M2M Nano SIM (4FF)
- Maximum Tx power:
  - LTE dBm (Power Class 5)
  - BLE: 5dBm
- Communication Protocol: LwM2M
- Dimensions: Ø 5'' x 2.75'' high (Ø 125mm x 70mm high)
- Weight (including battery): 10.5 oz (300 g)

- Color: White
- Audible Signal (ANSI Temporal 3/Temporal 4): 85dBA min. in alarm (at 10ft / 3m)
- Sensitivity: 2.64 to 3.50%/foot obscuration
- Operating Temperature: 40°F to 100°F (4.4°C to 37.8°C)
- Operating Humidity: 15% to 90% RH Non-Condensing
- Supplementary heat rating: 135°F
- Supplementary heat spacing rating: 70ft
- Battery (included): 2 Panasonic CR123A
- Regulatory Listing: UL listed to UL 268 with supplementary heat detection, UL 2075, ULC S531 with supplementary heat detection and ULC S588 standards
- Warranty: Two (2) years
- Included Accessories: Mounting Hardware Package

15. COMPATIBLE RF EQUIPMENT

In typical single level and multilevel dwelling units and apartment buildings having similar smoke alarm systems there is a possibility that signals sent by wireless sensors may be blocked or reflected by metal before they reach the alarm DM server, even if the signal path has been recently checked during a weekly test. Blockage can occur if a metal object has been moved into the sensor's signal path.

16. COMPLIANCE WITH STANDARDS

USA: FCC -CFR 47 part 15, part 22/24
Canada: ISED-RSS-247

FCC and ISED Compliance Statement

This device complies with FCC Rules Part 15 and with ISED Canada license-exempt RSS standard(s). Operation is subject to two conditions:
(1)This device may not cause harmful interference, and (2) this device must accept any interference that may be received or that may cause undesired operation.
Le présent appareil est conforme aux CNR d'ISED Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

(1)l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.
To comply with FCC Section 1.1310 for human exposure to radio frequency electromagnetic fields and ISED Canada requirements, implement the following instruction:
A distance of at least 20cm. between the equipment and all persons should be maintained during the operation of the equipment.
Le dispositif doit être placé à une distance d'au moins 20 cm à partir de toutes les personnes au cours de son fonctionnement normal. Les antennes utilisées pour ce produit ne doivent pas être situés ou exploités conjointement avec une autre antenne ou transmetteur.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there
is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

- Consult the dealer or an experienced radio/TV technician for help.

This Class B digital apparatus complies with Canadian ICES-003.
Cet appareil numerique de la classe B est conforme a la norme NMB-003 du Canada.

WARNING: Changes or modifications to this equipment not expressly approved by the party responsible for compliance (DSC.) could void the user's authority to operate the equipment.

Safety Instructions

Read the safety information before you install the equipment.
The detector shall be installed and used within an environment that provides the pollution degree max 2 and over voltages category II in non-hazardous locations, indoor only. The equipment is designed to be installed by SERVICE PERSONS only; (SERVICE PERSON is defined as a person having the appropriate technical training and experience necessary to be aware of hazards to which that person may be exposed in performing a task and of measures to minimize the risks to that person or other persons).

W.E.E.E Product recycling declaration

	For information regarding the recycling of this product you must contact the company from which you originally purchased it. If you are discarding this product and not returning it for repair then you must ensure that it is returned as identified by your supplier. This product is not to be thrown away with everyday waste. Directive 2012/19/EU

17. LIMITED WARRANTY

Digital Security Controls ("DSC"), a division of Tyco Safety Products Canada Ltd, a part of the Johnson Controls group of companies ("JCI"), warrants the original purchaser that for a period of twelve months from the date of purchase, the product shall be free of defects in materials and workmanship under normal use. During the warranty period, JCI shall, at its option, repair or replace any defective product upon return of the product to its factory, at no charge for labor and materials. Any replacement and/or repaired parts are warranted for the remainder of the original warranty or ninety (90) days, whichever is longer. The original purchaser must promptly notify JCI in writing that there is defect in material or workmanship, such written notice to be received in all events prior to expiration of the warranty period. There is absolutely no warranty on software and all software products are sold as a user license under the terms of the software license agreement included with the product. The Customer assumes all responsibility for the proper selection, installation, operation and maintenance of any products purchased from JCI . Custom products are only warranted to the extent that they do not function upon delivery. In such cases, JCI can replace or credit at its option.

International Warranty

The warranty for international customers is the same as for any customer within Canada and the United States, with the exception that JCI shall not be responsible for any customs fees, taxes, or VAT that may be due.

Warranty Procedure

To obtain service under this warranty, please return the item(s) in question to the point of purchase. All authorized distributors and dealers have a warranty program. Anyone returning goods to JCI must first obtain an authorization number. JCI will not accept any shipment whatsoever for which prior authorization has not been obtained.

Conditions to Void Warranty

This warranty applies only to defects in parts and workmanship relating to normal use. It does not cover:

- damage incurred in shipping or handling;
- damage caused by disaster such as fire, flood, wind, earthquake or lightning;

- damage due to causes beyond the control of JCI such as excessive voltage, mechanical shock or water damage;
- damage caused by unauthorized attachment, alterations, modifications or foreign objects;
- damage caused by peripherals (unless such peripherals were supplied by JCI.);
- defects caused by failure to provide a suitable installation environment for the products;
- damage caused by use of the products for purposes other than those for which it was designed;
- damage from improper maintenance;
- damage arising out of any other abuse, mishandling or improper application of the products.

Items Not Covered by Warranty

In addition to the items which void the Warranty, the following items shall not be covered by Warranty: (i) freight cost to the repair centre; (ii) products which are not identified with JCI's product label and lot number or serial number; (iii) products disassembled or repaired in such a manner as to adversely affect performance or prevent adequate inspection or testing to verify any warranty claim. Access cards or tags returned for replacement under warranty will be credited or replaced at JCI's option. Products not covered by this warranty, or otherwise out of warranty due to age, misuse, or damage shall be evaluated, and a repair estimate shall be provided. No repair work will be performed until a valid purchase order is received from the Customer and a Return Merchandise Authorization number (RMA) is issued by JCI's Customer Service.

JCI's liability for failure to repair the product under this warranty after a reasonable number of attempts will be limited to a replacement of the product, as the exclusive remedy for breach of warranty. Under no circumstances shall JCI be liable for any special, incidental, or consequential damages based upon breach of warranty, breach of contract, negligence, strict liability, or any other legal theory. Such damages include, but are not limited to, loss of profits, loss of the product or any associated equipment, cost of capital, cost of substitute or replacement equipment, facilities or services, down time, purchaser's time, the claims of third parties, including customers, and injury to property. The laws of some jurisdictions limit or do not allow the disclaimer of consequential damages. If the laws of such a jurisdiction apply to any claim by or against JCI, the limitations and disclaimers contained here shall be to the greatest extent permitted by law. Some states do not allow the exclusion or limitation of incidental or consequential damages, so that the above may not apply to you.

Disclaimer of Warranties

This warranty contains the entire warranty and shall be in lieu of any and all other warranties, whether expressed or implied (including all implied warranties of merchantability or fitness for a particular purpose) and of all other obligations or liabilities on the part of JCI. JCI neither assumes responsibility for, nor authorizes any other person purporting to act on its behalf to modify or to change this warranty, nor to assume for it any other warranty or liability concerning this product. This disclaimer of warranties and limited warranty are governed by the laws of the province of Ontario, Canada.

JCI recommends that the entire system be completely tested on a regular basis. However, despite frequent testing, and due to, but not limited to, criminal tampering or electrical disruption, it is possible for this product to fail to perform as expected.

Out of Warranty Repairs

JCI will at its option repair or replace out-of-warranty products which are returned to its factory according to the following conditions. Anyone returning goods to JCI must first obtain an authorization number. JCI will not accept any shipment whatsoever for which prior authorization has not been obtained. Products which JCI determines to be repairable will be repaired and returned. A set fee which JCI has pre-determined, and which may be revised from time to time, will be charged for each unit repaired. Products which JCI determines not to be repairable will be replaced by the nearest equivalent product available at that time. The current market price of the replacement product will be charged for each replacement unit.

END-USER LICENSE AGREEMENT IMPORTANT - READ CAREFULLY

DSC Software purchased with or without Products and Components is copyrighted and is purchased under the following license terms:

- This End-User License Agreement ("EULA") is a legal agreement between You (the company, individual or entity who acquired the Software and any related Hardware) and Digital Security Controls, a division of Tyco Safety Products Canada Ltd., a part of Johnson Controls group of companies ("JCI"), the manufacturer of the integrated security systems and the developer of the software and any related products or components ("HARDWARE") which You acquired.
- If the JCI software product ("SOFTWARE PRODUCT" or "SOFTWARE") is intended to be accompanied by HARDWARE, and is NOT accompanied by new HARDWARE, You may not use, copy or install the SOFTWARE PRODUCT. The SOFTWARE PRODUCT includes computer software, and may include associated media, printed materials, and "online" or electronic documentation.
- Any software provided along with the SOFTWARE PRODUCT that is associated with a separate end-user license agreement is licensed to You under the terms of that license agreement.
- By installing, copying, downloading, storing, accessing or otherwise using the SOFTWARE PRODUCT, You agree unconditionally to be bound by the terms of this EULA, even if this EULA is deemed to be a modification of any previous arrangement or contract. If You do not agree to the terms of this EULA, DSC is unwilling to license the SOFTWARE PRODUCT to You, and You have no right to use it.

SOFTWARE PRODUCT LICENSE

The SOFTWARE PRODUCT is protected by copyright laws and international copyright treaties, as well as other intellectual property laws and treaties. The SOFTWARE PRODUCT is licensed, not sold.

1. GRANT OF LICENSE This EULA grants You the following rights:

Software Installation and Use - For each license You acquire, You may have only one copy of the SOFTWARE PRODUCT installed.

Storage/Network Use - The SOFTWARE PRODUCT may not be installed, accessed, displayed, run, shared or used concurrently on or from different computers, including a workstation, terminal or other digital electronic device ("Device"). In other words, if You have several workstations, You will have to acquire a license for each workstation where the SOFTWARE will be used.

Backup Copy - You may make back-up copies of the SOFTWARE PRODUCT, but You may only have one copy per license installed at any given time. You may use the back-up copy solely for archival purposes. Except as expressly provided in this EULA, You may not otherwise make copies of the SOFTWARE PRODUCT, including the printed materials accompanying the SOFTWARE.

2. DESCRIPTION OF OTHER RIGHTS AND LIMITATIONS

Limitations on Reverse Engineering, Decompilation and Disassembly - You may not reverse engineer, decompile, or disassemble the SOFTWARE PRODUCT, except and only to the extent that such activity is expressly permitted by applicable law notwithstanding this limitation. You may not make any changes or modifications to the Software, without the written permission of an officer of DSC. You may not remove any proprietary notices, marks or labels from the Software Product. You shall institute reasonable measures to ensure compliance with the terms and conditions of this EULA.

Separation of Components - The SOFTWARE PRODUCT is licensed as a single product. Its component parts may not be separated for use on more than one HARDWARE unit.

Single INTEGRATED PRODUCT - If You acquired this SOFTWARE with HARDWARE, then the SOFTWARE PRODUCT is licensed with the HARDWARE as a single integrated product. In this case, the SOFTWARE PRODUCT may only be used with the HARDWARE as set forth in this EULA.

Rental - You may not rent, lease or lend the SOFTWARE PRODUCT. You may not make it available to others or post it on a server or web site.

Software Product Transfer - You may transfer all of Your rights under this EULA only as part of a permanent sale or transfer of the HARDWARE, provided You retain no copies, You transfer all of the SOFTWARE PRODUCT (including all component parts, the media and printed materials, any upgrades and this EULA), and provided the recipient agrees to the terms of this EULA. If the SOFTWARE PRODUCT is an upgrade, any transfer must also include all prior versions of the SOFTWARE PRODUCT.

Termination - Without prejudice to any other rights, DSC may terminate this EULA if You fail to comply with the terms and conditions of this EULA. In such event, You must destroy all copies of the SOFTWARE PRODUCT and all of its component parts.

Trademarks - This EULA does not grant You any rights in connection with any trademarks or service marks of DSC or its suppliers.

3. COPYRIGHT - All title and intellectual property rights in and to the SOFTWARE PRODUCT (including but not limited to any images, photographs, and text incorporated into the SOFTWARE PRODUCT), the accompanying printed materials, and any copies of the SOFTWARE PRODUCT, are owned by DSC or its suppliers. You may not copy the printed materials accompanying the SOFTWARE PRODUCT. All title and intellectual property rights in and to the content which may be accessed through use of the SOFTWARE PRODUCT are the property of the respective content owner and may be protected by applicable copyright or other intellectual property laws and treaties. This EULA grants You no rights to use such content. All rights not expressly granted under this EULA are reserved by DSC and its suppliers.
4. EXPORT RESTRICTIONS - You agree that You will not export or re-export the SOFTWARE PRODUCT to any country, person, or entity subject to Canadian export restrictions.
5. CHOICE OF LAW - This Software License Agreement is governed by the laws of the Province of Ontario, Canada.
6. ARBITRATION - All disputes arising in connection with this Agreement shall be determined by final and binding arbitration in accordance with the Arbitration Act, and the parties agree to be bound by the arbitrator's decision. The place of arbitration shall be Toronto, Canada, and the installation manual of the arbitration shall be English.
7. LIMITED WARRANTY

NO WARRANTY - DSC PROVIDES THE SOFTWARE "AS IS" WITHOUT WARRANTY. DSC DOES NOT WARRANT THAT THE SOFTWARE WILL MEET YOUR REQUIREMENTS OR THAT OPERATION OF THE SOFTWARE WILL BE UNINTERRUPTED OR ERROR-FREE.

CHANGES IN OPERATING ENVIRONMENT - DSC shall not be responsible for problems caused by changes in the operating characteristics of the HARDWARE, or for problems in the interaction of the SOFTWARE PRODUCT with non-DSC SOFTWARE or HARDWARE PRODUCTS.

LIMITATION OF LIABILITY; WARRANTY REFLECTS ALLOCATION OF RISK - IN ANY EVENT, IF ANY STATUTE IMPLIES WARRANTIES OR CONDITIONS NOT STATED IN THIS LICENSE AGREEMENT, DSC'S ENTIRE LIABILITY UNDER ANY PROVISION OF THIS LICENSE AGREEMENT SHALL BE LIMITED TO THE GREATER OF THE AMOUNT ACTUALLY PAID BY YOU TO LICENSE THE SOFTWARE PRODUCT AND FIVE CANADIAN DOLLARS (CAD$5.00). BECAUSE SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OR LIMITATION OF

PERSON PURPORTING TO ACT ON ITS BEHALF TO MODIFY OR TO CHANGE THIS WARRANTY, NOR TO ASSUME FOR IT ANY OTHER WARRANTY OR LIABILITY CONCERNING THIS SOFTWARE PRODUCT.

EXCLUSIVE REMEDY AND LIMITATION OF WARRANTY - UNDER NO CIRCUMSTANCES SHALL DSC BE LIABLE FOR ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL OR INDIRECT DAMAGES BASED UPON BREACH OF WARRANTY, BREACH OF CONTRACT, NEGLIGENCE, STRICT LIABILITY, OR ANY OTHER LEGAL THEORY. SUCH DAMAGES INCLUDE, BUT ARE NOT LIMITED TO, LOSS OF PROFITS,

LIABILITY FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES, THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

DISCLAIMER OF WARRANTIES - THIS WARRANTY CONTAINS THE ENTIRE WARRANTY AND SHALL BE IN LIEU OF ANY AND ALL OTHER WARRANTIES, WHETHER EXPRESSED OR IMPLIED (INCLUDING ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE) AND OF ALL OTHER OBLIGATIONS OR LIABILITIES ON THE PART OF DSC. DSC MAKES NO OTHER WARRANTIES. DSC NEITHER ASSUMES NOR AUTHORIZES ANY OTHER

LOSS OF THE SOFTWARE PRODUCT OR ANY ASSOCIATED EQUIPMENT, COST OF CAPITAL, COST OF SUBSTITUTE OR REPLACEMENT EQUIPMENT, FACILITIES OR SERVICES, DOWN TIME, PURCHASERS TIME, THE CLAIMS OF THIRD PARTIES, INCLUDING
CUSTOMERS, AND INJURY TO PROPERTY. WARNING: DSC recommends that the entire system be completely tested on a regular basis. However, despite frequent testing, and due to, but not limited to, criminal tampering or electrical disruption, it is possible for this SOFTWARE PRODUCT to fail to perform as expected.

D-308989 NBIoT Smoke/CO/Heat Combo Rev. 0 (08/22)
EMAIL: info@dsc.com Website: www.dsc.com

D-308989