Product Overview

The Otis Instruments, Inc. GenII WireFree OI-6900 ambient air gas sensor assembly is a WireFree gas sensor assembly that uses an electro-chemical sensor element to detect a variety of gases. The device comes standard with a 102 x 64 graphical LCD screen, Otis Instruments standard three-button interface, Otis-blue custom explosion-proof enclosure, non-intrusive magnetic switches, and radio (900MHz or 2.4GHz).

The OI-6900 is designed to be self-contained and to last from 6-12 months on a single battery (time varies depending of amount of gas detected). The device has been designed to reject EMI and other forms of interference in order to avoid false gas readings.

The OI-6900's key feature is non-intrusive calibration and configuration. With all adjustments made at the sensor assembly, one-man non-intrusive calibration is quick, easy, and allows the sensor housing and enclosure to remain Class I, Division 1, Group C and D certified while in the field. Non-intrusive calibration is made possible by using an Otis Instruments, Inc. distributed magnet to activate the MENU, ADD, and SUB buttons.

The device is self-contained and battery operated. The sensor functions by transmission of radio wave messages to the OI-7010 (or any Otis receiving controller) every minute when there is no gas present, and every five seconds when gas is present (and above the background gas level setting).

The device is field adjustable for background gas, and addressable to eliminate interference with other systems. Since each system's address is field adjustable, any OI-6900 sensor may be used as a replacement.

Features such as auto-setting Null, relay/alarm tests and battery voltage indication make this device a truly remarkable gas detection system.
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Introduction

This document is an Operation Manual containing diagrams and step-by-step instruction for proper operation of the Otis Instruments, Inc. WireFree Model OI-6900 Sensor Assembly. This document should be read before initial operation of the product.

Should a question arise during the use of the product, this document will serve as a first reference for consultation. If further questions arise, or if the device is not working properly, please contact the sales representative of this product.
Warnings

CAUTION: THE INTERNAL COMPONENTS CAN BE STATIC SENSITIVE. USE CAUTION WHEN OPENING THE ENCLOSURE AND HANDLING INTERNAL COMPONENTS.

- Do not open the enclosure when the device is energized.

- Do not open the enclosure if an explosive gas atmosphere may be present.

- The Otis Instruments WireFree OI-6900 Sensor Assembly is Class I Division I, Groups C&D Certified. The assembly is able to maintain its certification at all times while in the field, simply by using the non-intrusive calibration method which requires the use of an Otis Instruments, Inc. distributed magnet. However, if the Moore lid is removed, for whatever reason, the OI-6900 certification is not valid. To avoid invalidating the certification, once the device is put in the field, always use the Otis Instruments, Inc. distributed magnet to ensure non-intrusive calibration.

- Strong magnetic fields may interfere with the non-intrusive magnetic switches. A strong magnetic field may momentarily active a switch, or permanently disable the switch to the “on” or “off” position.

- Do not cover the hole in the calibration cup, as this will cause the calibration to be inaccurate.
Complete System Diagram
The following diagrams should be consulted for identification of the system and all parts that may be referred to in this Operation Manual.

**Complete System (External)**

![Complete System Diagram](image_url)
Power On (from Power Off Mode)

Powering on the device activates its functions. When powered on, the device is fully functional and access to system and settings menus is allowed.

1. Locate ADD on the Front Panel.

2. Touch an Otis Instruments, Inc. distributed magnet to the left side of the device to activate ADD (and turn on the device).

NOTE: When the magnet touches the device and a connection has been made a trapezoid will appear.
3. The device will then count down from 60 to 0.

- From 60 to 30, the Display Screen will show the Otis Instruments, Inc. logo.
- From 30 to 0, the Display Screen should resemble the following illustration:

4. When “0” is displayed, the device is in Normal Operating Mode and ready to operate.

**NOTE:** If the device is in Fault (in this example, Fault 14), the Display Screen will resemble the above illustrations:

For additional information regarding system faults, see the OI-6900 Troubleshooting Guide on page 44.
Power Off

Powering off the device shuts down the sensor assembly. When powered off, the device is no longer transmitting signals so the receiving controller will display “Fault 9” for that sensor channel.

1. Locate **SUB** on the Front Panel.

2. Touch and hold an Otis Instruments, Inc. distributed magnet against the right side of the device for four seconds to activate the **SUB** button (which turns the device off).

   **NOTE:** When the magnet touches the device and a connection is made, a trapezoid will appear on the display screen.
3. When powering off, the display screen will switch from showing “0” to “OFF”. The display will continue to show “OFF” (when power is being supplied to the unit) until the device is powered on.
Normal Operating Mode

When powered on, the device will enter and remain in Normal Operating Mode until commanded otherwise. The presence of gas will affect the transmission of signals to the receiving controller in the following ways.

- When the device is in Normal Operating Mode, and there is no gas present, the sensor will send a message to the receiving controller every minute (approximately) to indicate that the system is in working order.

- When gas is present, and above the Background Gas Level, the device will report to the receiving controller every six seconds.

- When the gas level falls below the Background Gas Level the device will return to reporting every minute (approx.).
Basic Menu Mode
The Basic Menu Mode should be used to set the basic settings of the OI-6900 before initial use, and/or to adjust the basic settings to accommodate use. Basic Menu Mode options include: Null, Calibration, and Setting Radio Address.

Calibration
System calibration is necessary for the device to accurately sense gas and to send messages to the transmission controller in relation to gas presence in parts per million. Each time a sensor is replaced the device must be re-calibrated.

The Model OI-6900 is equipped with a dual set of switches for *MENU, ADD* and *SUB*. The manual and magnet switches are located on the Front Panel. Manual switching may be used in calibration when the Moore explosion-proof enclosure lid is removed. The magnet switches, for non-intrusive calibration, are activated by an Otis Instruments, Inc. distributed magnet.

*NOTE:* Do not cover the hole in the calibration cup, as this will cause the calibration to be inaccurate.

*NOTE:* Calibration must be performed using a 0.25 LPM (liters per minute) flow regulator (OI-556-R) and a calibration cup (OI-410).

*NOTE:* If the OI-6900 times out of Calibration Mode when set to Auto Cal, it will start at the initial screen when returning to Calibration Mode (instead of the screen that was last displayed).

Nulling the Sensor

*NOTE:* When using an O2 sensor, the nulled reading will be 20.9.

1. Touch an Otis Instruments, Inc. distributed magnet against the top side of the device to active *MENU* and enter Setup Mode.
2. Touch the magnet to \textit{MENU} once.
3. The display screen should resemble the following illustration:

\begin{center}
\includegraphics[width=\textwidth]{nulling_sensor.png}
\end{center}

\textit{NOTE: A message will be sent to the receiving controller indicating that the sensor is in Null Mode.}

4. As the Display Screen instructs, press \textit{ADD} to auto null.
5. The Display Screen will then show:
Nulling the Sensor cont...

6. Press ADD for “yes” or SUB for “no”.

   NOTE: If too much time elapses between when ADD is pressed and when the question regarding clean air is answered, the device will default back to the primary Null screen. If this occurs, simply press ADD again.

7. The Display Screen should resemble the following illustration (as the device counts down from 6 to 0):

   ![Display Screen Illustration]

8. Once the device has been Nulled, the Display Screen should resemble the following illustration:

   ![Nulled Display Screen Illustration]

9. Once the Null is set, proceed to the next step.
Calibration (Auto Cal)

NOTE: When using the Auto Cal method, the calibration gas should be less than full scale of the sensor.

1. After the Null has been set (see above), touch an Otis Instruments, Inc. distributed magnet to the top side of the device to activate the MENU button.

2. The display screen should resemble the following illustration:

3. Touch the magnet to ADD (“Yes”) for the device to calibrate, or SUB (“No”) to return to Normal Operating Mode.
4. The display screen should resemble the following illustration:

![Calibration Illustration](image)

5. Touch the magnet to *ADD* (“Yes”) for the device to begin Auto Cal, or *SUB* (“No”) to return to Normal Operating Mode.

*NOTE: If “Yes” is chosen, the device will be calibrated. To stop calibration after this point, the battery must be unplugged.*

6. The display screen should resemble the following illustration:

![Calibration Illustration](image)
7. The %LEL displayed on the screen should match that of the calibration bottle. Touch the magnet to *ADD* to increase the reading displayed on the screen by 1% LEL, or *SUB* to decrease.

8. Once the %LEL displayed on the screen matches that of the calibration bottle, touch the magnet to *MENU*.

9. The display screen should resemble the following illustration:

10. Unscrew and remove the sensor rainguard from the sensor housing.
11. Replace the sensor rainguard with an Otis OI-410 Calibration Cup.
12. Apply a known calibration gas to the OI-410 Calibration Cup that is attached to the sensor housing.
13. Touch the magnet to MENU.
14. The display screen should resemble the following illustration, counting down to begin Auto Cal.

15. Once Auto Cal is complete, the OI-6900 will display thecaled “Reading: ___”.
16. Unscrew the OI-410 Calibration Cup.
17. Reattach (screw on) the sensor rainguard to the sensor housing.
18. Once Calibration is complete, proceed to the next step.
**Calibration (Manual Cal)**

1. After the Null has been set (see above), touch an Otis Instruments, Inc. distributed magnet to the top side of the device to activate the *MENU* button.

2. The display screen should resemble the following illustration:
3. Unscrew and remove the sensor rainguard from the sensor housing.

4. Replace the sensor rainguard with an Otis OI-410 Calibration Cup.
5. Apply a known calibration gas to the OI-410 Calibration Cup that is attached to the sensor housing.
6. The sensor's detection of gas will begin to climb in value as shown on the display screen.
7. Watch the display screen until the number displayed stops increasing (or after approximately 90 seconds).
8. Touch the magnet to *ADD* (increase) or *SUB* (decrease) to manipulate the reading on the display screen to match that of the calibration gas.

![Diagram of the device showing the ADD and SUB buttons.]

EXAMPLE: If the calibration gas is 25 PPM and the number on the display screen is 22 PPM, touch the magnet to *ADD* approximately three times.

9. The device is now calibrated.
10. Unscrew the OI-410 Calibration Cup.
11. Reattach (screw on) the sensor rain guard to the sensor housing.
12. Once Calibration is complete, proceed to the next step.
Setting Radio Address

To ensure proper communication with the receiving monitor, set the Sensor Address to match the one assigned to this Sensor Assembly at the monitor.

1. After Calibration is complete (see above), touch an Otis Instruments, Inc. distributed magnet to the top side of the device to activate the \textit{MENU} button.

2. The display screen should resemble the following illustration:
3. Press *ADD* to increase, or *SUB* to decrease, the Radio Address setting.

4. Once the Radio Address is set, touch an Otis Instruments, Inc. distributed magnet to the top side of the device to activate the *MENU* button (to exit Basic Menu Mode).

5. The device is now in Normal Operating Mode. The Display Screen should resemble the following illustration:

   ![Display Screen Illustration]

   *NOTE*: When using an O2 sensor and exiting Menu Mode the reading will start at “20.9” (instead of “0”) and then change to the whatever the unit is actually reading.
Advanced Menu Mode
The Advanced Menu Mode allows the user to: Test Relays/Alarms, set the Network ID, view Diagnostics, view Unit Info, Set Background, Set LCD Contrast, and opt to (or not to) return the unit to Factory Default Settings.

Relays/Alarms Test Setting
The relays/alarms test should be completed periodically to ensure full functionality of the relays/alarms, and accurate transmission of radio waves from the device to the transmission controller.

NOTE: The relay test value will always start at 0. If the OI-6900 times out of Relay Test Mode, it will immediately send a reading to clear the value it previously sent in Relay Test Mode.

1. While the device is in Normal Operating Mode, Touch and hold an Otis Instruments, Inc. distributed magnet against the top side of the device for approximately six seconds to active MENU and enter the Advanced Menu Mode.

2. The Display Screen should resemble the following illustration:
3. Touch the magnet to *ADD* to increase the reading by 5 PPM (or %). Continue touching the magnet to *ADD* until the increasing number reaches the pre-set level to trigger the relay/alarms.

4. Once the Relay/Alarm Test is complete, continue to the next step.

**Setting Network ID**

To ensure proper communication with the receiving monitor, set the Network ID to match the one assigned to the monitor.

1. After the Relay/Alarms Test is complete (see above), touch an Otis Instruments, Inc. distributed magnet to the top side of the device to activate the *MENU* button.

2. The display screen should resemble the following illustration:
3. Touch the magnet to ADD (increase) or SUB (decrease) until the desired Network ID is displayed—this value will be a number from 1-78.

**NOTE:** To ensure proper communication with the receiving monitor, set the Network ID to match the one assigned to the monitor.

4. Once the Network ID is set, continue to the next step.

**Diagnostics**

The diagnostics screen allows the user to view the Radio Status, Battery Voltage (Power), and Sensor Voltage.

1. After the Network ID is set (see above), touch an Otis Instruments, Inc. distributed magnet to the top side of the device to activate the *MENU* button.
2. The display screen should resemble the following illustration:
3. Once the Diagnostics have been viewed, continue to the next step.

**Last Setup Times**

The Last Setup Times screen shows the user that last time the sensor assembly was nulled/caled.

1. After the Diagnostics have been viewed, touch the magnet to the top side of the device to activate the *MENU* button.
2. The display screen will show:
3. Once the Last Setup Times have been viewed, continue to the next step.

**Unit Info**

The Unit Info screen allows the user to view the date and serial number of the unit.

1. After the Last Setup Times have been viewed (see above), touch an Otis Instruments, Inc. distributed magnet to the top side of the device to activate the *MENU* button.
2. The display screen should resemble the following illustration:
3. Once the Unit Info has been viewed, continue to the next step.

**Background Gas Setting**

NOTE: When using an O2 sensor, two background setting modes will be available—Low and High. When in these modes, the Background Low will be called “BackgroundL”; the Background High will be called “BackgroundH”. When the background reading is below the Background Low setting—or above Background High setting—the unit will transmit every five seconds.

1. After the Unit Info has been viewed (see above), touch an Otis Instruments, Inc. distributed magnet to the top side of the device to activate the *MENU* button.

2. The display screen should resemble the following illustration:

![Display Screen Illustration](image)

3. Touch the magnet to *ADD* (increase) or *SUB* (decrease) to adjust the Background Gas Setting.

   NOTE: The minimum background level that can be set is 0.01. The maximum background level that can be set is 10% of full scale.

4. Once the Background Gas Setting has been set, continue to the next step.
**Calibration Method Setting**

1. After the Background Gas Setting has been selected (see above), touch an Otis Instruments, Inc. distributed magnet to the top side of the device to activate the *MENU* button.

2. The display screen should resemble the following illustration:

3. Touch the magnet to *SUB* to choose Auto Cal as the Calibration Method.

4. Once the Calibration Method has been set, continue to the next step.

**Setting LCD Contrast**

1. After the Calibration Method Setting has been set (see above), touch an Otis Instruments, Inc. distributed magnet to the top side of the device to activate *MENU*.

2. The display screen should resemble the following illustration:
3. Touch the magnet to ADD (increase) or SUB (decrease) until the contrast is at the desired setting.

4. Once the Contrast has been set, continue to the next step.

**Restore to Factory Default**

1. After the Contrast has been set (see above), touch an Otis Instruments, Inc. distributed magnet to the top side of the device to activate MENU.

2. The display screen should resemble the following illustration:
3. Touch the magnet to *ADD* for “Yes” or *SUB* for “No”. Factory Default Settings are:

- Background Gas set at 4% of full scale
- Network ID set at 5
- Sensor Radio Address set at 1

![Diagram](image)

4. If “No” is selected, the device will return to Normal Operating Mode. If “Yes” is selected, the display screen should resemble the following illustration:

![Diagram](image)

5. Touch the magnet to *ADD* for “Yes” or *SUB* for “No”.

![Diagram](image)
6. The device is now in Normal Operating Mode.

NOTE: If the OI-6900 was reset to factory default, repeat the configuration steps, as well as re-null and re-calibrate the device.
Battery Replacement

To ensure full-functionality, the battery should be replaced if the voltage is less than 3.0. To check the battery voltage, refer to the Advanced Menu Section of this Operation Manual.

**CAUTION: THE INTERNAL COMPONENTS CAN BE STATIC SENSITIVE. USE CAUTION WHEN OPENING THE ENCLOSURE AND HANDLING INTERNAL COMPONENTS.**

*NOTE: Replacement of the battery should be done in a non-classified environment, where no explosive gas is present.*

The device uses an Otis size “D” Lithium 19AH battery with connector. New batteries should only be obtained from Otis Instruments, Inc. or an affiliated distributor.

1. Power off the device by touching and holding an Otis Instruments, Inc. distributed magnet against the right side of the device for four seconds to activate SUB.

2. Unscrew, remove, and set aside the explosion-proof Moore lid.

![Diagram of the device showing the explosion-proof lid](image-url)
3. Using only your fingers, pull straight up on the Front Panel Thumb-Screws until the unit is removed from the standing eyelets.

   **NOTE:** Do not use any metal object to help remove the Front Panel.

   **NOTE:** Do not remove any connecting wires.

4. Gently lay the Front Panel to the side of the device so that inside of the Moore enclosure is visible.

5. Remove the battery from the two Battery Mounts.

6. Locate the Battery-Wire Socket.
7. Squeeze the top and bottom of the Battery-Wire Plug, located in the Battery-Wire Socket on the Circuit Board.
8. Pull the Battery-Wire Plug straight out of the Battery-Wire Socket.

9. Place the new battery's plug in the socket.
10. Slide the new battery into the Battery Mounts.
11. Replace the unit back in the Moore enclosure by matching each mounting post to its corresponding eyelet inside the enclosure.

12. Verify that each mounting post is properly fitted in its corresponding eyelet inside the Moore enclosure.
13. Verify that the sealing ring (located on the threads of the open Moore enclosure) is still in place.
14. Place the Moore enclosure lid on top of the Moore enclosure base.
15. Rotate the lid until it is tightly screwed in place (approximately 20 rotations).

16. Power on the device and check the battery voltage to ensure that the new battery is fully functional and at 3.6 volts. For instructions on how to check the battery voltage, see the Advanced Menu Section of this Operation Manual.
Sensor Replacement

The device's sensor detects gas in parts per million. The sensor must be fully functional in order to alert the user of the presence of toxic gas at a dangerous level. Failed alarm tests could be an indicator of the device needing sensor replacement.

CAUTION: THE INTERNAL COMPONENTS CAN BE STATIC SENSITIVE. USE CAUTION WHEN OPENING THE ENCLOSURE AND HANDLING INTERNAL COMPONENTS.

1. Power off the device by touching and holding an Otis Instruments, Inc. distributed magnet against the right side of the device for four seconds to activate \textit{SUB}.

2. Unscrew and remove the sensor housing cap.
3. With the sensor housing cap removed, the visible sensor will resemble the following illustration:

4. Using the thumb and forefinger, slide the sensor out of the device.

   **NOTE:** Do not use any metal object to remove the sensor.

   **NOTE:** Be careful to not remove the sensor board when removing the sensor.

5. Slide the new sensor into device, matching the sensor prongs to the corresponding eyelets inside.

6. Screw the sensor housing cap back in place.

   **NOTE:** Once the sensor has been changed the device must be re-calibrated (see page 18).
**Antenna Replacement**

The antenna is used to aid in sending clear and reliable radio signals to the transmission controller. If necessary, the current antenna can be replaced by an appropriate Otis Instruments, Inc. approved 2.4 GHz or 900 MHz antenna.

1. Power off the device by touching and holding an Otis Instruments, Inc. distributed magnet against the right side of the device for four seconds to activate SUB (which turns off device).

2. Locate the Antenna and Antenna Fitting.

3. Unscrew the current Antenna from the Antenna Fitting.
3. Screw the new Antenna onto the Antenna Fitting.

4. Power on the device by touching the magnet to ADD.

NOTE: When the magnet touches the device and a connection has been made a trapezoid will appear.
Appendix A: O2 Sensor Information
O2 Sensor Information
OI-6900 Sensor Assemblies for sensing O2 gas will perform differently than other OI-6900 Sensor Assemblies. The following items are variance that OI-6900 Sensor Assemblies for sensing O2 gas will have from other OI-6900 Sensor Assemblies.

Null
When Nulled, the reading will be 20.9.

Background Gas Setting
Two background setting modes will be available—Low and High. When in these modes, the Background Low will be called “BackgroundL”; the Background High will be called “BackgroundH”.

When the background reading is below the Background Low setting—or above Background High setting—the unit will transmit every five seconds.

Exiting Menu Mode
When using an O2 sensor and exiting Menu Mode the reading will start at “20.9” (instead of “0”) and then change to the whatever the unit is actually reading.

Response Time
When sent out with a flame arrestor, the unit is slower to respond than GenI O2. This is because a different flame arrestor (than GenI) is being used.

O2 Percentile Range
The unit is designed for detecting O2 levels ranging from 10-25%.
Appendix B: OI-6900 Troubleshooting Guide
Fault 4 (F4)

Reason: The top card is losing communication to the analog sensor board.

Indication: On OI-6000-X units, F4 means that the Analog to Digital Conversion (ADC) on the analog sensor board is not communicating to the digital sensor board.

Solution: Check the orientation of the analog sensor board and/or try a new analog sensor board.

Indication: On the OI-6900-X and OI-6975-X units F4 means the top card is not communicating with the analog sensor board.

Solution: Check the connections from the top card all the way to the analog sensor board. If that does not fix the fault, try replacing the analog sensor board and/or the sensor housing.

Indication: When the sensor element is a Low Power IR sensor the sensor element itself could be the issue. Also, there might not be an issue because sometimes sensor assemblies will show F4 for a few seconds after boot up. This is normal and is due to the boot up of the sensor element itself.

Fault 5 (F5)

Reason: Unit did not Null correctly.

Indication: On positive sensors, if the voltage is above 1 V the sensor will not null. This means there is either gas present or something is wrong with the sensor or sensor board.

NOTE: Positive sensors are all EC sensors not mentioned as a negative sensor.

NOTE: On negative sensors, the sensor assembly should never show “F5”.

Solution: If there is no gas present, replace the sensor element. If that does not work, replace the analog sensor board.

Indication: On the Low Power IR sensor, F5 means that the sensor itself did not null correctly.

Solution: Try again and see if the sensor just had an error. If that does not correct the problem, replace the sensor element. If that does not correct the problem, make sure there is not also an F4 when not trying to null.

Fault 6 (F6)

Reason: Unit did not Cal correctly with Auto Cal.

Indication: On the Low Power IR, F6 means that the sensor element did not cal correctly. This could be because there is no gas or even an internal failure.

Solution: Check to make sure there is gas and try again. If that doesn't work, replace the sensor element. If that does not correct the problem, make sure there is no F4 while in normal mode.

For other sensors in which F6 occurs when there is no gas present—or if the sensor assembly is not reading the gas—check to make sure there is gas present. Look on the diagnostic page and make sure the Sensor Voltage is different from the Null Voltage. If the voltage level does not change due to gas, replace the sensor element.
Fault 14 (F14)

Reason: The unit cannot see the Primary Monitor.

*NOTE: This fault only occurs on sensor assemblies that contain a radio.*

Solution: Refer to the solutions provided for F9. Also, make sure the Primary is “On” and that the Network I.D. on the Primary is the same as this unit. Try resetting both the sensor assembly and the Primary.
## Specifications

**Sensor Type:** Electro-chemical

**Battery Type:** 3.6 Volt Lithium-Thionyl Chloride (Li-SOCl2) w/ connector

Non-rechargeable

**Battery Life:** 1 year (normal operation)

**Battery Voltage:** 3.6 Volts DC

**Unit Address:** 1 to 255

**Background Gas Level Adjustment:** 0.01 to 10% of full scale

**Display:** Graphical LCD (102x64), transflective, sunlight readable, LED backlight

**Radio Options:**
- 2.4 GHz ISM, 100mW, 3 miles LOS
- 900 MHz (expected release: 1H 2011)

**Antennas:**
- Solid black – 900 MHz (domestic)
- Yellow tip – 2.4 GHz (international)

**Interface:**
- Three push buttons (*MENU, ADD, SUB*);
- three corresponding magnetic, non-intrusive switches; non-intrusive calibration

**Enclosure:** Otis-Blue explosion/flame-proof

**Certifications:**
- CSA certified, Class 1, Div I, Groups C and D
- Ex d IIB, Zone 1 Aex d IIb

**Warranty:**
- Hardware: One year (limited)
- Sensor: One year (varies with sensor type)
- Battery: 90 days from ship date
Warranty Statement for **WireFree Model OI-6900**

**Hardware**

Otis Instruments, Inc. (Manufacturer) warrants its products to be free of defects in workmanship and materials—under normal use and service—from the date of purchase from the manufacturer or from the product's authorized reseller. The hardware for this device is under a one-year limited warranty.

The manufacturer is not liable (under this warranty) if its testing and examination disclose that the alleged defect in the product does not exist or was caused by the purchaser's (or any third party's) misuse, neglect, or improper installation, testing or calibrations. Any unauthorized attempt to repair or modify the product, or any other cause of damage beyond the range of the intended use, including damage by fire, lightening, water damage or other hazard, voids liability of the manufacturer.

In the event that a product should fail to perform up to manufacturer specifications during the applicable warranty period, contact the product's authorized reseller or return the product directly to the manufacturer with a Return Material Authorization (RMA). This number will be assigned upon contacting our service department at 903.566.1300 or service@otisinstruments.com. The manufacturer will—at its option and expense--repair or replace the product, or deliver an equivalent product or part to the purchaser at no additional charge.

Any replaced or repaired product or part has either a 90-day warranty or the remainder of the initial warranty period (whichever is longer).

**Sensor**

The sensor contained in the device is covered under a one-year limited warranty.

**Battery**

All batteries supplied by Otis Instruments, Inc. are covered, from ship date, under a 90-day warranty.
Otis Instruments, Inc.
301 S Texas Ave.
Bryan, TX 77803

Service Department: 903.566.1300
Corporate Office: 979.776.7700

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