



# Honeywell 32002181-001 Zero Calibration and Service Kit Instruction Manual

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# Honeywell

Honeywell 32002181-001 Zero Calibration and Service Kit



## Product Information

### Specifications:

- Dimensions (length x depth x height): 7-1/2 in. x 4-1/2 in. x 7-1/2 in. (19 cm x 14 cm x 19 cm)
- Tube Length: 122 in. (3.1m)
- Pump: Approximate Flow: 63 cfm (0.5 L/min.)
- Power Supply: Plug-In Transformer: Primary: 120 Vac. Secondary: 12 Vdc, 6W. Current Consumption (not including battery recharge): 150 mA
- Internal Battery: 12V, 3 Ah lead acid
- Absorber: 125 mL soda lime pellets. Approximately 36 hours (continuous use)
- Accessories: 32002183-001 STRATEGY Configuration Software

### Product Usage Instructions:

#### Installation:

Before using this product, please follow these steps:

1. Read the instructions carefully to avoid damaging the product or causing a hazardous condition.
2. Check the ratings given in the instructions and on the product to ensure it is suitable for your application.
3. Only trained and experienced service technicians should install the product.
4. After installation is complete, check the product's operation as provided in the instructions.

### **Battery:**

The battery included with the product needs a fuse to be installed before it can power the device. Follow these steps to install the fuse:

1. Remove the fuse cap from the face of the unit by simultaneously pressing down and turning the cap 1/4 turn counterclockwise.
2. Press the fuse into the cap.
3. Replace the fuse cap into the fuse holder by simultaneously pressing down and turning the cap 1/4 turn clockwise.

For extended battery life, observe and practice the following:

- Avoid overcharging or deep discharging the battery.
- Charge the battery regularly to maintain optimal performance.
- Store the product in a cool and dry place when not in use.

### **Soda Lime Pellets:**

The Calibration Kit pumps air through the soda lime pellet bottle to create CO<sub>2</sub>-free calibration gas. The small plastic bottle in the pump housing is empty when shipped from the factory. Follow these steps to fill it with soda lime pellets:

1. Wear eye and face protection, gloves, protective clothing, and a particle mask.
2. In case of eye contact, rinse the eye immediately with water for at least 15 continuous minutes holding the eyelid wide open. Seek immediate medical attention from an eye specialist.
3. In case of skin contact, wash the area with plenty of water and seek immediate medical attention.
4. In case of dust inhalation, move to an area with fresh air and seek immediate medical attention.

Please read and follow the regulations of the Material Safety Data Sheet for soda lime pellets.

### **Pellet Installation and Replacement:**

The pellets are included in a separate one-litre container. Use the following procedure to fill the bottle:

1. Open the one-litre container of soda lime pellets.
2. Carefully pour the pellets into the empty plastic bottle in the pump housing.
3. Ensure that the bottle is securely closed to prevent any leaks.

### **FAQ:**

- **Q:** What is the purpose of the Zero Calibration and Service Kit?
- **A:** The Zero Calibration and Service Kit is used to calibrate the C7242 Sensor and Controller by providing a calibration gas free of carbon dioxide (CO<sub>2</sub>).
- **Q:** How long does the battery last?
- **A:** The internal battery has a capacity of 12V, 3 Ah and can last for an extended period depending on usage frequency.
- **Q:** How long can the soda lime pellets be used continuously?
- **A:** The absorber contains 125 mL of soda lime pellets and can be used continuously for approximately 36 hours.

## APPLICATION

The 32002181-001 Zero Calibration and Service Kit provides the necessary equipment to calibrate the C7242 Sensor and Controller. The kit produces a calibration gas, free of carbon dioxide (CO<sub>2</sub>), through chemical absorption. Use the kit when calibrating the zero point of any C7242 Sensor. The kit includes a pump bag unit (with internal battery and fuse), a plug-in transformer, tubing for sensor connection, and a one-litre container of soda lime pellets.

**NOTE:** Calibration eliminates altitude-induced sensor error (due to pressure changes).

## SPECIFICATIONS

- **Dimensions (length x depth x height):** 7-1/2 in. x 4-1/2 in. x 7-1/2 in. (19 cm x 14 cm x 19 cm) Pump:  
**Approximate Flow:** 63 cfm (0.5 L/min.) Tube Length: 122 in. (3.1m).
- **Power Supply:** Plug-In Transformer: Primary: 120 Vac. Secondary: 12 Vdc, 6W. Current Consumption (not including battery recharge): 150 mA.
- **Internal Battery:** 12V, 3 Ah lead acid.
- **Absorber:** 125 mL soda lime pellets. Approximately 36 hours (continuous use).
- **Storage Temperature (Cool Storage Preferable):** +32°F to +104°F (+0°C to +40°C).
- **Accessories:** 32002183-001 STRATEGY Configuration Software

## INSTALLATION

### Before Using this Product

1. Read these instructions carefully. Failure to follow them could damage the product or cause a hazardous condition.
2. Check the ratings given in the instructions and on the product to make sure the product is suitable for your application.
3. The installer must be a trained, experienced service technician.
4. After installation is complete, check out product operation as provided in these instructions.

### Battery

The battery cannot power the device until the included fuse is installed. To install the fuse:

1. Remove the fuse cap from the face of the unit by simultaneously pressing down and turning the cap 1/4 turn counterclockwise.

2. Press the fuse into the cap.
3. Replace the fuse cap into the fuse holder by simultaneously pressing down and turning the cap 1/4 turn clockwise.

For extended battery life, observe and practice the following:

- Never completely discharge the battery.
- Recharge the battery after each day of use.
- Charge for no longer than 48 hours.
- For extended storage periods, store in a cool place.
- Recharge at least once every six months regardless of usage frequency.

### **Soda Lime Pellets**

The Calibration Kit pumps air through the soda lime pellet bottle to create CO<sub>2</sub>-free calibration gas. This small plastic bottle in the pump housing is empty when shipped from the factory. Therefore, you must fill it with soda lime pellets for proper device operation.

### **WARNING**

Risk of Serious Eye Damage, Inhalation Injury, and Skin Burns. Soda lime pellets cause severe burns.

1. Wear eye and face protection, gloves, protective clothing, and a particle mask.
2. In case of eye contact, rinse eye immediately with water for at least 15 continuous minutes holding the eyelid wide open. Immediately summon an eye specialist.
3. In case of skin contact, wash the area with plenty of water. Seek immediate medical attention.
4. In case of dust inhalation, move to an area with fresh air. Seek immediate medical attention.

### **IMPORTANT**

Read and follow the regulations of the Material Safety Data Sheet for soda lime pellets.

### **Pellet Installation and Replacement**

The pellets are included in a separate one-litre container. Use the following procedure to fill the bottle:

1. Disconnect the tube from the kit and set it aside.
2. Pull out the plastic bottle through the housing opening.
3. Remove the lid from the bottle and set it aside.
4. When replacing pellets, carefully empty the bottle.
5. Carefully fill the bottle with the pellets from the one-litre container.
6. Replace the lid on the bottle.

**IMPORTANT** When replacing the bottle lid, ensure that it is sealed tightly. Free circulation of air into the bottle can render the pellets useless in 36 hours.

7. Replace the bottle into the housing.
8. Replace the tubing.

To purchase additional soda lime pellets, contact a medical equipment supplier or chemical supply house. Refer to Yellow Pages: Hospital Equipment and Supplies, or Medical Equipment and Supplies. Ask for soda lime pellets with indicator.

## **Transportation and Disposal of Soda Lime Pellets**

### **IMPORTANT**

Transportation (air, ground and marine) and disposal of soda lime pellets are regulated. Consult your local authorities and carrier before transporting or disposing of Soda Lime for information regarding compliance with applicable requirements.

### **IMPORTANT**

Do not dispose in water or sewer systems.

**NOTE:** Refer to the Material Data Safety Sheet (MSDS) enclosed with the kit for more details. Keep the MSDS with the calibration kit for further reference.

## **OPERATION**

Calibrate the C7242 using internal algorithms or a PC with the appropriate software. This document gives instructions for using the algorithms. For PC-based calibration instructions, see form 62-0149. To calibrate the C7242 manually, switch the device into Service Mode.

**NOTE:** While using the kit, pockets of air can develop in the soda lime pellets. To maximize CO<sub>2</sub> absorption, shake the entire kit before each use. This settles the soda lime pellets and eliminates the air pockets.

## **Service Mode**

Service Mode allows you to make device modifications using the pushbuttons. The LED provides important information when in Service Mode, see Table 1.

### **IMPORTANT**

Only qualified service technicians should use the pushbuttons with the device in the Service Mode.

## **NOTES**

- In Service Mode, the yellow LED remains lit and the red LED intermittently flashes.
- The number of consecutive red LED flashes indicates the operation the menu currently offers.
- The device automatically exits Service Mode after completion of the selected operation. Toggling beyond the final menu option also reverts the device to Operation Mode.
- Service Mode disables the PC connection.

**Table 1. C7242 Service Mode LED Signals.**

LED Color	Meaning	Details
Green	OK	Flashes after each successful measurement cycle.
Yellow	Maintenance	On continuously with the device in Service Mode. Flashes during menu procedure execution.
Red	Menu Indicator	Signals the action that is ready for execution. (The LCD provides more complete information.)

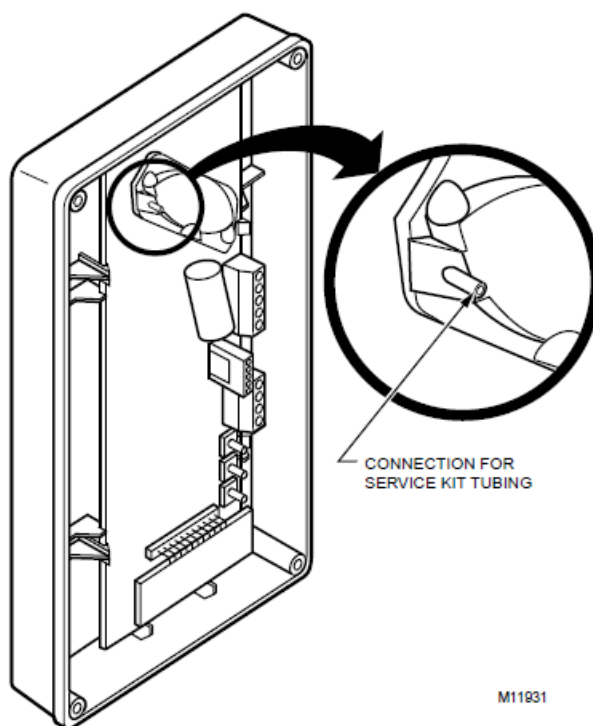
## Service Operations

The C7242 has seven service operations. This document deals only with the second (zero calibration of enabled channels) operation. For details regarding the other service operations, see form 63-2546

### C7242 Zero Calibration

This operation calibrates the CO<sub>2</sub> sensor by re-establishing the zero level. Use the following procedure:

1. Before executing this operation, flush the sample cell with zero gas.
  1. Remove any obstruction from the sensor service kit tubing connection.
  2. Connect the service kit tubing, see Fig. 1.
  3. Turn on the pump.
  4. Allow the pump to run continuously until the sensor stabilizes (at least one minute).



**Fig. 1. Service kit tubing connection.**

2. Press and hold both the plus and minus buttons for at least five seconds.
3. When the red and yellow LED light, release both buttons.
4. Press and release the plus button, then wait for the device to indicate the current operation.
5. Repeat step 4 until the device indicates operation two (by displaying OP-2 or repeating two consecutive flashes of the red LED).

**NOTE:** If you cycle past operation 2, repeat step 4 until the device returns to Operation Mode, then return to step 2.

6. With the device indicating operation two, press the minus button to execute zero calibration.

All LEDs remain lit until the operation is complete.

## CHECKOUT

When the calibration is complete, verify that the sensor operates as described in the sensor instructions. To test the soda lime pellet CO2 absorption ability:

1. Blow a short breath into the service kit air intake (tube coupling).
2. If the sensor indicates an increased CO2 level, replace the pellets. **NOTE:** Replace the pellets when blue discoloration appears

## Home and Building Control

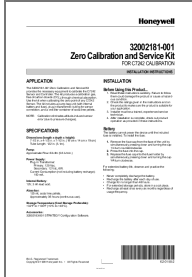
- Honeywell Inc.
- Honeywell Plaza
- P.O. Box 524
- Minneapolis, MN 55408-0524

## Home and Building Control

- Honeywell Limited-Honeywell Limitée
- 155 Gordon Baker Road
- North York, Ontario
- M2H 3N7

[www.honeywell.com](http://www.honeywell.com)

## Documents / Resources

	<p><a href="#">Honeywell 32002181-001 Zero Calibration and Service Kit</a> [pdf] Instruction Manual 32002181-001 Zero Calibration and Service Kit, 32002181-001, Zero Calibration and Service Kit, Calibration and Service Kit, Service Kit, Kit</p>
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## References

- [H Honeywell - The Future Is What We Make It](#)
- [Manual-Hub.com - Free PDF manuals!](#)



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