

ADEMCO 5821 Flood Detector with Temperature Sensing Option Installation Instructions

GENERAL INFORMATION

The ADEMCO 5821 Flood Detector & Temperature Sensor is a wireless transmitter used with Honeywell's alarm systems that support 5800 series devices. The 5821 can be configured to operate,

- as a stand-alone temperature sensor and/or,
- as either a Flood Detector **or** Remote Temperature Sensor.

The 5821 in **combination with the FP280 or ADEMCO 470PB probe can be used to sense floods** in basements and other areas where there is a possibility of flooding. The 5821 will send an alarm when the preset temperature limit is exceeded or when a flood is detected. Temperature monitoring and flood detection is dependent on the operating mode selected. Refer to Table 1 for applicable operating modes.

The 5821 in **combination with the ADEMCO T280R temperature probe** is ideal for monitoring refrigerators and freezers in restaurants, kitchens and warehouses where food storage is a concern.

A separate 5821 is required for each external probe being used.

- Flood detection is monitored remotely using the FP280 or ADEMCO 470PB probe with the supplied resistor.
- Room temperature is monitored at the device using the 5821's internal sensor.
- Refrigerator or Freezer temperature is monitored remotely using the ADEMCO T280R temperature probe.

In refrigerator or freezer applications, when the temperature increases past the high threshold limit and a delay of greater than 30 minutes passes, an alarm is triggered. This preset delay offers greater reliability against false alarms, especially due to open refrigerator or freezer doors.

TAMPER SUPERVISION

The 5821 tamper supervision feature (Loop 4) causes a trouble signal to be sent to the control if the unit's cover is removed from the base or if an external probe is used and the wire is cut (open) or the probe is shorted. The tamper switch is also used to program the unit's serial number and loop assignments to the control panel.

Wireless Transmission Path Test

Before permanently installing the detector, determine that there is good signal reception from the proposed location. Perform the test procedure described in TESTING THE DETECTOR section. Once confirmed, mount the detector.

MOUNTING THE DETECTOR

- Mount the 5821 in any direction, on a wall or ceiling, within the protection area.
- We recommend that the mounting plate be used.
- Avoid mounting the detector near heat generating devices (e.g. ovens, heat vents, furnaces, boilers) or to a metal cabinet or surface.

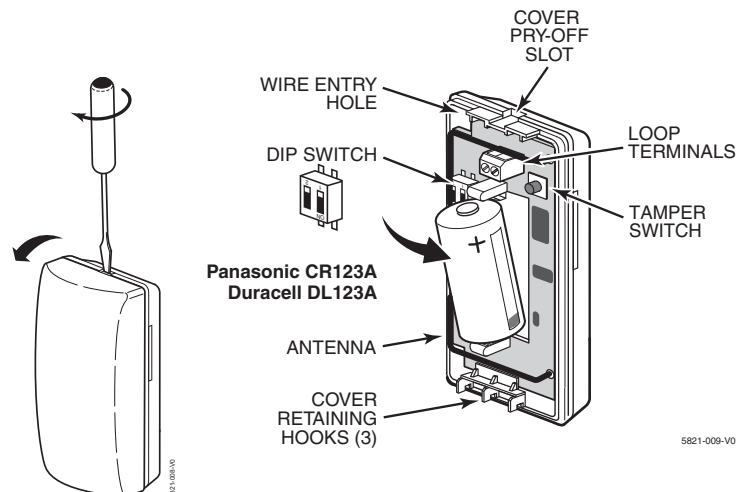
When used in-conjunction with:

- **FP280 flood sensor probe**, with built-in wire approx. 16 feet long (5 meters) ready to tie into 5821 device.
- **ADEMCO 470PB flood sensor probe**, use no more than 48 inches of wire from the 5821 to the flood sensor and connect the termination resistor across the probes terminals.
- **ADEMCO T280R temperature probe**, use the shortest wire possible (less than 96 inches) to improve the signal integrity.

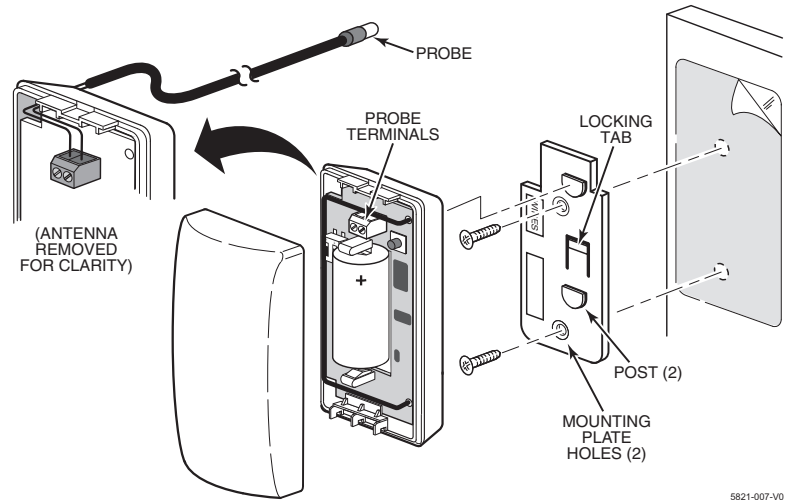
IMPORTANT: DO NOT remove the circuit board from the back case plastic.

External Probe Wiring Connections (If used)

1. With the battery not inserted, connect the wires to the unit's sensor terminals; see below.
2. Install the battery.



Disengage mounting plate by inserting a screwdriver into the locking tab release window and press against locking tab, while sliding the mounting plate upward until free.



5821-007-V0

TESTING THE DETECTOR

Do the following to determine a good RF transmission path and again after installation is completed. To test,

1. Activate the control panel's test mode.
2. Activate the detector by removing and replacing the cover. The system's keypads should beep and each zone the 5821 is programmed for will be displayed.
3. Exit the control's test mode [**User Code + OFF**].

MAINTAINING PROPER OPERATION

To maintain the detector in proper working condition, it is important that you observe the following:

- Replace the battery when a low battery condition is reported.
- Units should never be relocated without the advice or assistance of the alarm service company.

SETTING THE OPERATING MODE

Table 1 provides a list of the various operating modes of the 5821 with the respective Loop and DIP Switch settings for each. Note that Cold Temp Sensing can be used in combination with any of the other operating modes. To use the transmitter to monitor two different conditions, you must program each loop used on the 5821 as its own zone, and you must set the DIP Switches as shown for the combination functions in Table 1.

TABLE 1: OPERATING MODE SETTINGS

Sensing	Probe [†] to Term. Block	Loop No.	DIP 1	DIP 2
Flood Sensing				
Flood	FP280 or 470PB ^{††}	3	---	ON
Cold & Flood	FP280 or 470PB ^{††}	1 - Cold 3 - Flood	---	ON
Temperature				
Cold	---	1	---	---
Hot	---	2	---	---
Warm	---	2	ON	---
Freezer	T280R	2	---	ON
Refrigerator	T280R	2	ON	ON
Cold & Hot	---	1 - Cold 2 - Hot	---	---
Cold & Warm	---	1 - Cold 2 - Warm	ON	---
Cold & Freezer	T280R	1 - Cold 2 - Freezer	---	ON
Cold & Refrigerator	T280R	1 - Cold 2 - Refrigerator	ON	ON

[†] When the 5821 is used with either external probe, an open-circuit or a short-circuit of the probe's wiring results in an alarm on that loop, and a trouble condition on all other programmed loops.

^{††} Shunted by 2.2MΩ resistor. Use a maximum wire length of 48 inches between the 5821 and the 470PB probe.

Table 2: Fault and Restore Thresholds

Mode	Fault Occurs When Temperature Goes...	For More Than...	Restore When Temperature Goes...	For More Than...
Flood	probe contacts water	3 minutes	no contact with water	3 minutes.
Temperature				
Cold	below 45°F (7°C)	10 minutes	above 48°F (9°C)	4 minutes
Hot	above 95°F (35°C)		below 92°F (33°C)	
Warm	above 75°F (24°C)		below 72°F (22°C)	
Freezer	above 10°F (-12°C)	30 minutes	drops below 7°F (-14°C)	
Refrigerator	above 42°F (6°C)		below 39°F (4°C)	

IMPORTANT:

This detector should be used for property protection. Reliance should not be placed on this detector for life safety. When life safety is involved, smoke detectors **MUST** also be used. The flood probe must not be painted.

PROGRAMMING THE UNIT

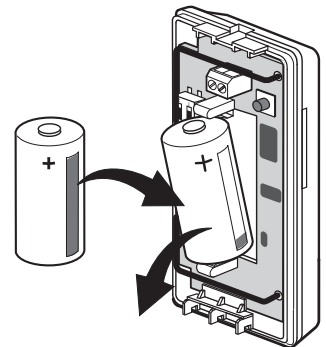
Once you have selected an operating mode and have set the DIP Switches accordingly, enroll the transmitter in the control panel. When programming, a separate zone for each loop used on the transmitter must be programmed. To program:

1. Enter the control's Zone Programming mode.
2. Enter the zone number to be programmed.
3. Enter the applicable zone type when prompted (zone types such as 24-Hr. Aux, Waterflow, etc. should be used) depending on the function of the zone and the control panel being used (see the control panel's instructions for available zone types and definitions).
4. When prompted, enter Input Type 03 (3 on some controls) – Supervised RF Transmitter.
5. When prompted for the serial number, transmit from the detector by pressing the tamper switch.
6. When the serial number is displayed, transmit from the detector again by pressing the tamper switch. The current loop number (4) will begin to flash.
7. Manually change the loop number to the desired loop number for the zone (according to the application—see Table 1).
8. When programming for this zone is complete, program other zones for the transmitter as necessary (each loop requires its own zone).
9. Exit Programming mode when programming is complete, and test the detector. Refer to the Testing section.

REPLACING THE BATTERY

1. After removing the battery; wait at least 30 seconds before installing the new one.

**Panasonic CR123A
Duracell DL123A**



SPECIFICATIONS

Power: 3V lithium battery
(Duracell DL123A, Panasonic CR123A)

CAUTION: Risk of fire, explosion, and burns. Do not recharge, disassemble, heat above 212°F (100°C) or incinerate. Dispose of used batteries properly. Keep away from children.

Operating Temperature: 14°F (-10°C) to
104°F (+40°C)

Operating Voltage: 3.2VDC

Dimensions: 3.1" length, 1.6" wide, 1.0" depth

Sensor Parameters:

Cold Temperature (Freeze) Detector: 45°F (7°C)

Warm Temperature Detector: 75°F (24°C)

Hot Temperature Detector: 95°F (35°C)

Refrigerator Failure Detector: 42°F (6°C)

Freezer Failure Detector: 10°F (-12°C)

Hysteresis +++ : 3°F (-16°C)

Flood Sensor: ¼ inch of water covering the probe

Response Time Tolerance ++++ : +50%, -20%

Temperature Measurement Accuracy (internal temp. sensor or external temp. probe): ±3°F (-16°C)

+++ Hysteresis is the temperature difference between "fault" and "restore" points.

++++The Response Time Tolerance is the time duration necessary for the device to respond to a "fault" or "restore" condition. This time does not take into account the time necessary for the probe and circuitry to equalize to the ambient temperature. This feature prevents false alarms due to open doors and other transitory conditions.

TO THE INSTALLER

Regular maintenance and inspection (at least annually) by the installer and frequent testing by the user are vital to continuous satisfactory operation of any alarm system.

The installer should assume the responsibility of developing and offering a regular maintenance program to the user as well as acquainting the user with the proper operation and limitations of the alarm system and its components parts.

Recommendations must be included for a specific program of frequent testing (at least weekly) to ensure the system's proper operation at all times.

FCC / IC STATEMENT

This device complies with Part 15 of the FCC rules and RSS-210 of Industry Canada. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Unauthorized changes or modifications could void the user's authority to operate the equipment.

Cet appareil est conforme à la partie 15 des règles de la FCC & de RSS-210 des Industries Canada. Son fonctionnement est soumis aux conditions suivantes: (1) Cet appareil ne doit pas causer d'interférences nuisibles. (2) Cet appareil doit accepter toute interférence reçue y compris les interférences causant une réception indésirable.

SUPPORT & WARRANTY

For the latest documentation and online support information, please go to:
<https://mywebtech.honeywell.com/>

For the latest warranty information, please go to:
www.honeywell.com/security/hsc/resources/wa.



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Warranty



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