



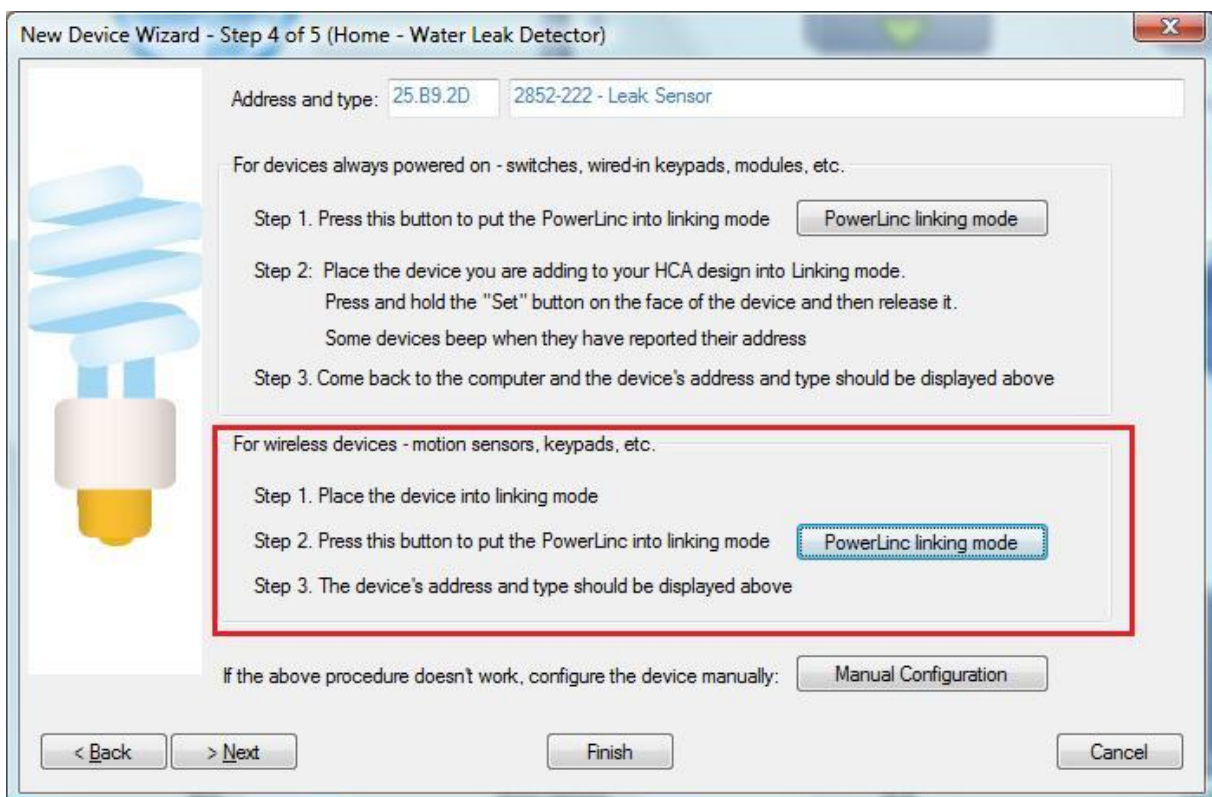
HCA Tech Note 205

Working with the Insteon Water Leak Detector

<http://www.smarthome.com/insteon-2852-222-water-leak-sensor.html>

Using the Water Leak Detector with HCA starts by adding it to your design. You need to be able to access the "Set" button on it to establish a link to it. The set button is on the top of the device.

In the Add Wizard on step 3 choose "Insteon" as the manufacturer and then press the Next button. In step 4 before pressing the dialog button to put the PowerLinc into linking mode, place the device into linking mode by pressing and holding its set button until it enters linking mode. Then press the PowerLinc button in the dialog to complete the link.



Insteon devices send commands that HCA receives. These commands are things like On, Off, Fade Start, Fade Stop, Status, etc. The message, in addition to the command, contains what is called the "group number". A group number is just a method by which the message identifies the source of the command from the possible subunits of the device. For a keypad, the group numbers are used to identify which button pressed. For other devices, the group numbers identify a specific sub-unit. In the case of this device there are several different groups. You just have to know – using the table below – what group does what.



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When you create a trigger in HCA you specify the device, the group, and the command. When a message is received that matches all three of these then the trigger happens and the program starts.

The Hidden Door Sensor makes these transmissions:

Group 1: Button pressed when in "dry" state

Group 2: Button pressed when in "wet" state or detected "wet"

Group 3: (Not used)

Group 4: Periodic notification so you know it is alive. Reports approximately once a day.

Unlike some of the other wireless sensors no additional linking is needed to have HCA receive the group 1, 2, and 4 messages.

Insteon Input → HCA Device initiates the linking and once complete the device sends commands that HCA can use as program triggers

When you link an Insteon input - like a keypad button - to a device, the device is controlled when the input transmits. In this same way, you can link an input to HCA. When the input transmits, HCA receives the Insteon message and you can use the receipt of the message as a trigger for a program.

To link an input to HCA, press the button on the right you want to link and follow any directions

No additional linking is needed. The link created when this device was added allows access to all its transmitted groups.

Once added to the design you can create program triggers for the events you want to handle. For example this program triggers on the dry and wet messages.

Name	Notes	Triggers	Visual Programmer	Advanced	Restart	Icon	Display	Log	Schedule	References	
Start the program on any of these triggers:											
Trigger								Edit	Delete		
▶ When Home - Leak Detector sends On by group 1								Edit	Delete		
▶ When Home - Leak Detector sends On by group 2								Edit	Delete		

Two important points:



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If the device detects "wet" it sends the group 2 message every few minutes and does not stop until you press the "set" button. If you create a program that, for example, sends you a SMS message upon receipt of a Group 2 message you will receive many of these messages until you reset the device. A better implementation is to have the program start off by testing a flag to see if the "wet" message was already delivered and if so the program can terminate. If not, it can send the SMS message and set the flag. Create a second program that triggers on the "dry" message to clear the flag.

HCA records the state of each group – on or off – as part of the runtime state of devices and you can test their state using the Visual Programmer Test element. This is useful for devices like keypads to see if the button is on or off. But testing of the state of group 1 or 2 doesn't yield useful data. If the device detects a "wet" condition then group 2 will be "on". Once you reset the detector group 2 will still be "on" as the reset sends a ON to group 1 and not an OFF to group 2.

You can configure the Overdue Device Alert to watch for the group 4 messages and raise an alert if the device isn't heard from over two days. Configuring the overdue time of two days handles the possibilities of a missed message.



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The screenshot shows the 'Alert Frequency' configuration window. At the top, it is titled 'Alert Frequency' and has a close button. Below the title bar, there is a text field for 'Configuration for alert:' containing 'Category 1 devices overdue'. A checkbox labeled 'Disable this Alert' is present and unchecked. Under the heading 'When this alert occurs:', there are four rows of configuration options: 1. '... Create an alert log entry' with a dropdown menu set to 'Each Time'. 2. '... and show the troubleshooter alert level Yellow after' followed by a spinner box set to '1', 'occurrences then Red after' followed by a spinner box set to '2', and 'occurrences'. 3. '... and start this program' with a dropdown menu set to '(none)'. 4. '... and clear the alert count' with a dropdown menu set to 'Never'. Below these options is a 'Device Selection' section with two list boxes. The left list box contains: 'Home - Box', 'Home - Door Sensor', 'Home - KL8', 'Home - Mini 2' (highlighted), 'Home - Mini Remote', 'Home - Open Close Sensor', and 'Home - Thermostat'. The right list box contains: 'Home - Leak Detector' (highlighted). Between the list boxes are four arrow buttons: '-->', '<--', '>>', and '<<'. At the bottom of the window, there is a time field 'Alert if no reception in:' with spinner boxes for '2' days, '0' hours, and '0' minutes. At the very bottom are 'OK' and 'Cancel' buttons.

You can also use the Visual Scene Editor (VSE) with this sensor. Using the VSE you can build scenes that are controlled by the sensor and control Insteon receivers (switches, KeypadLinc LEDs, output devices). When using the HCA VSE, the programming pauses when the scene contains a wireless device to give you time to place it into linking mode so its receiver is on and can then receive the programming commands.