

HSRS Remote Monitoring

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Receive alert notification including text message and/or e-mail when a HSRS door/window violation occurs.



[Wi-Fi Dry-Contact Sensor](#)

While the HSRS does not currently provide a remote monitoring option, a cost-effective DIY add-on solution is available. Receive instant alert texts and/or e-mails when a door/window violation occurs, resulting in HVAC shut-off. The following third-party hardware is required:

- Wi-Fi Dry Contact Sensor (plus two AA batteries)
- USB programming cable (included with sensor)
- Secondary relay (for isolation)

You will also need (free of charge):

- iMonnit basic account (<https://www.imonnit.com>)
- Wi-Fi Sensor Programming Utility (<https://www.monnit.com/support/downloads>)

The Wi-Fi Dry Contact Sensor is a specialized device that works with your existing WiFi network. Distributed by [Monnit](#), [Spot-Protect](#), and others, it interfaces to a set of dry contacts (such as the HSRS onboard relay).

The Monnit MoWi Dry Contact Sensor and compatible variations can be purchased from multiple sources as listed below:

WiFi Dry Contact Sensors

Product:	Part Number:	Source(s):
Monnit MoWi	MNS-2-WF-DC-CF-L01	www.Monnit.com
SpotProtect SwitchSpot	SSWIFI	www.SpotProtect.com
SpotProtect SwitchSpot	SWITCHSPOT	www.AbsoluteAutomation.com

These devices work with your existing WiFi network and permit you to remotely monitor the HSRS for a door/window violation resulting in HVAC shut-off. Using the [iMonnit Online Portal](#), you can create an account and receive free alert notifications by e-mail or SMS text message.

- iMonnit offers cloud-based monitoring for both free (basic) and paid (premier) subscribers. Premier subscriptions are available to those who prefer extended features. For most users, the basic package is sufficient and includes everything necessary for configuring & receiving free email & SMS text notifications.
- Once the sensor has been properly wired into your existing HSRS/HVAC system, it will detect HVAC shut-off and promptly issue notification to iMonnit servers. (Sensor wiring is detailed in a subsequent section and includes schematic diagram.)

Hint: You should postpone wiring integration of your dry contact sensor until completing all [setup instructions](#) AND confirming the device works as prescribed in the [testing section](#).

The following list summarizes key considerations pertaining to the dry contact sensor and iMonnit system:

- The sensor is powered by two (2) AA alkaline batteries (included), providing up to 4 years of worry-free operation.
- Monnit provides a Windows application (free download) for setting up your sensor. (Requires USB programming cable – included with your sensor.) The [Wi-Fi sensor setup programming utility](#) configures the sensor to operate on your WiFi network.

*Hint: Complete the setup procedure as outlined in the [instructions](#) below. Confirm proper dry contact behavior **prior** to wiring the device into your HSRS/HVAC system.*

Instructions:

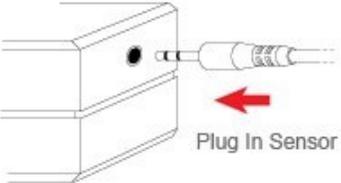
This section provides step-by-step instruction for configuring the dry contact sensor and creating your free iMonnit account. (A schematic diagram is also included for wiring guidance.) While the procedure as a whole may seem daunting, it is actually quite straightforward, requiring only a moderate level of time & effort.

Disclaimer: This instruction, including related images & diagrams, is provided for the purpose of demonstrating a typical installation. We accept no liability or responsibility for possible errors, omissions, or ambiguities. A competent level of expertise with electrical wiring (low voltage) and familiarity with HVAC systems are required. You assume full responsibility for a proper install and to verify all wiring.

- Use the link below to download and install the [Wi-Fi sensor setup programming utility](http://www.monnit.com/support/downloads):
<http://www.monnit.com/support/downloads>
- Invoke the setup utility and follow on-screen instructions:

Configure Your Wi-Fi Sensors

1. Install USB cable driver [Download Driver](#)
2. Insert batteries
3. Plug the USB cable into a sensor



4. Enter Wi-Fi network credentials

Wireless Network SSID:

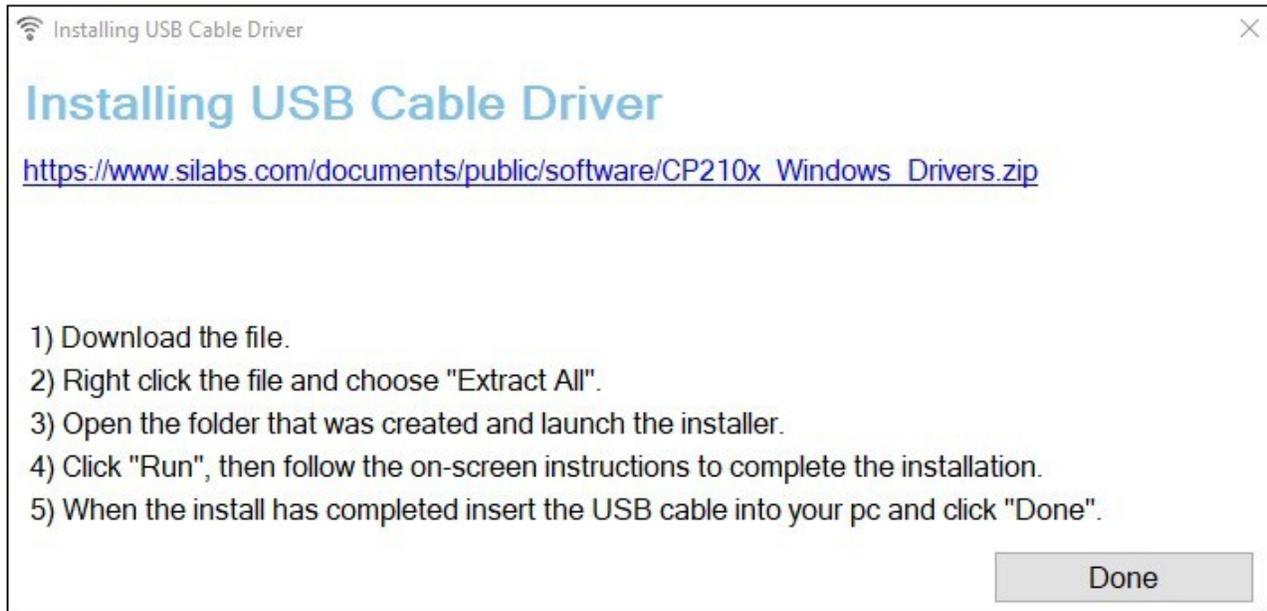
Security Type:

Key / Passphrase:

Show Key:

- Begin by installing the USB cable driver. Use the “Download Driver” link to download the driver. (The link is shown to the right of step 1 above.)

- Perform on-screen instructions as shown below to download and install the driver:

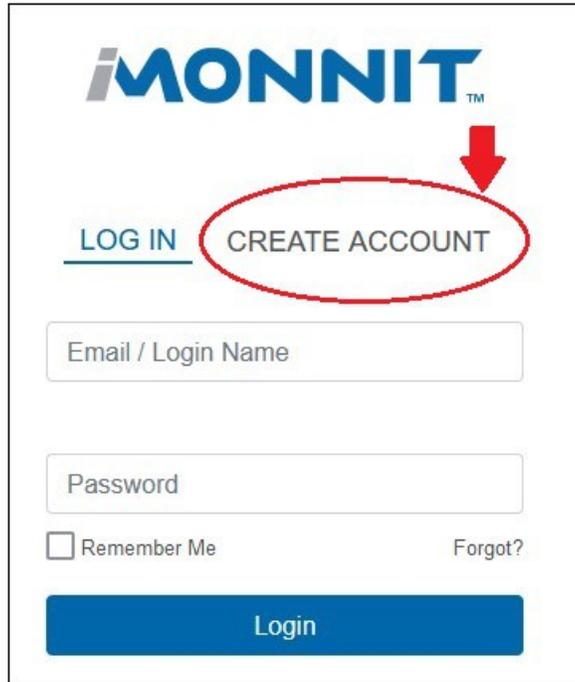


- Following successful driver install, complete remaining configuration steps shown below, including battery insertion, cable plug-in, and wi-fi network credentials. (Your network's SSID and key/passphrase will be needed for the fields shown. The SSID drop-down field provides an automatic search for available/nearby networks.)



- Close the setup utility.

- In your web browser, open the [iMonnit Online Portal](http://www.imonnit.com) :
<http://www.imonnit.com>



iMONNIT™

[LOG IN](#) [CREATE ACCOUNT](#)

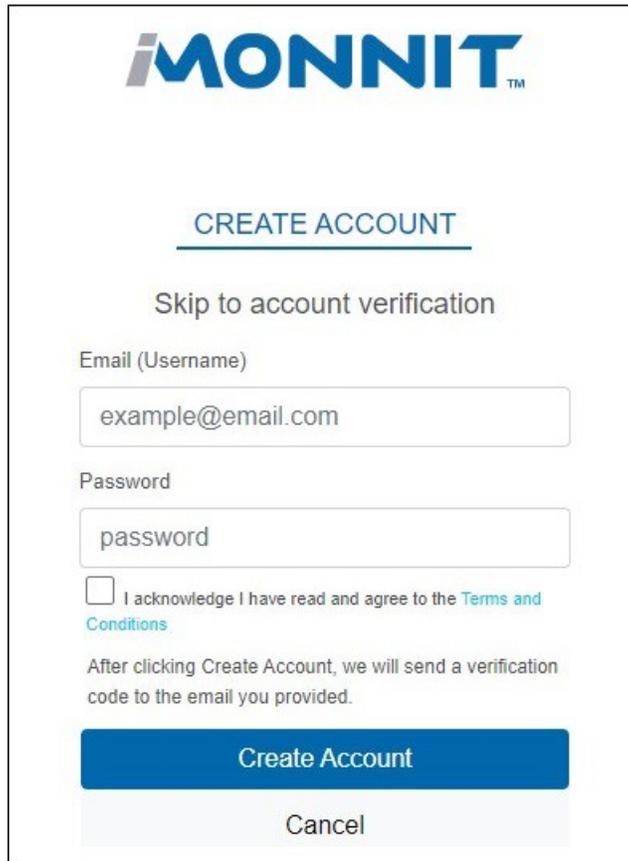
Email / Login Name

Password

Remember Me [Forgot?](#)

Login

- Create a free (basic) account:



iMONNIT™

[CREATE ACCOUNT](#)

[Skip to account verification](#)

Email (Username)

example@email.com

Password

password

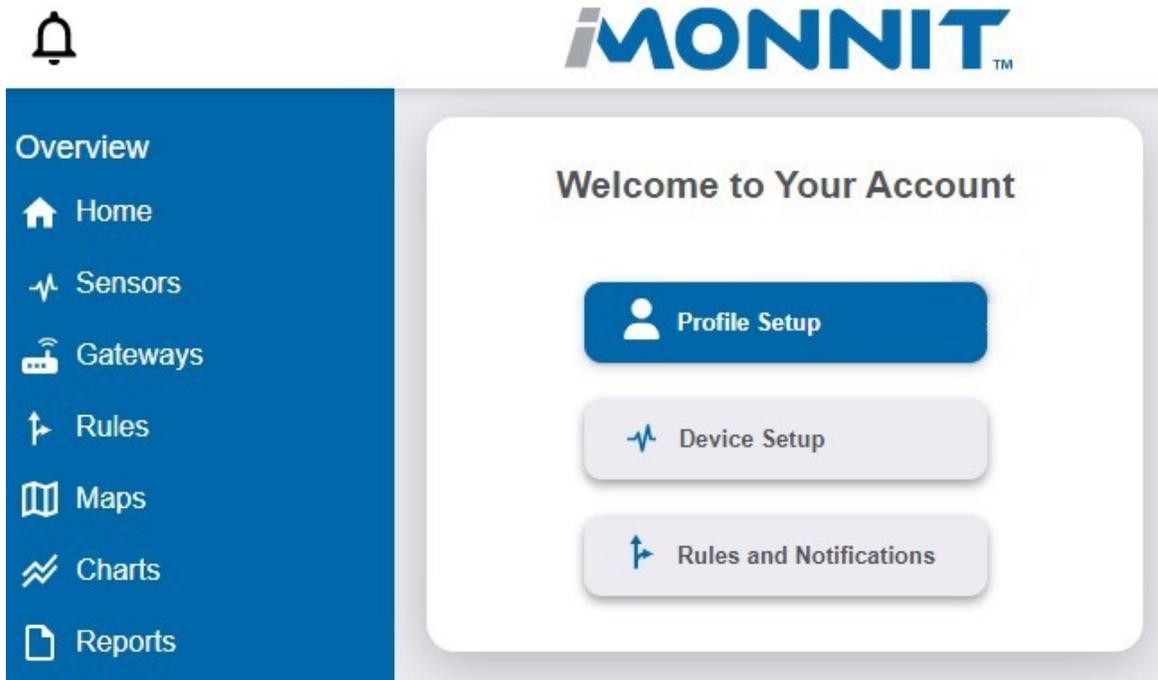
I acknowledge I have read and agree to the [Terms and Conditions](#)

After clicking Create Account, we will send a verification code to the email you provided.

Create Account

Cancel

- After creating the account, you will be presented a welcome screen with three selections:



- Select "Profile Setup".

- Populate required fields:

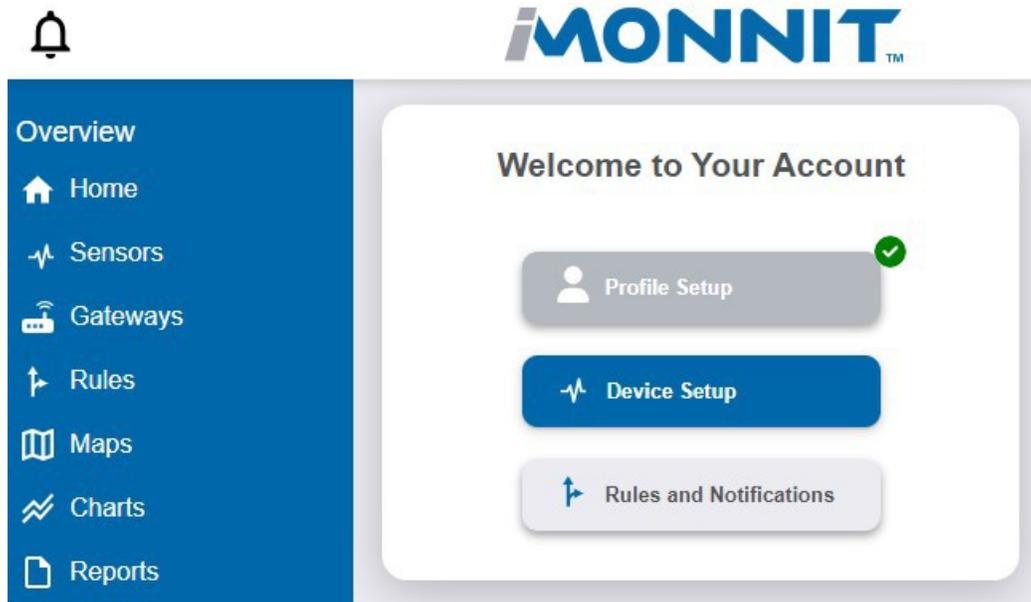
The screenshot shows a 'New User' form with a blue sidebar on the left. The sidebar contains the following menu items: Overview, Home, Sensors, Gateways, Rules, Maps, Charts, Reports, Account, Users, Networks, Credits, API, Settings, and Log Out. The main form area is titled 'New User' and contains the following sections:

- User Details:** Includes input fields for 'Email / Login', 'First Name', and 'Last Name'. The 'Email / Login' field has a blue paper plane icon on the right.
- SMS (Optional for Notifications):** Includes a toggle for 'External Provider' (set to 'Direct Delivery'), a dropdown for 'SMS Provider', and an input field for 'SMS Number' with a blue paper plane icon on the right.
- Automated Call (Optional for Notifications):** Includes an input field for 'Voice Number' with a country code dropdown (currently showing 'US').

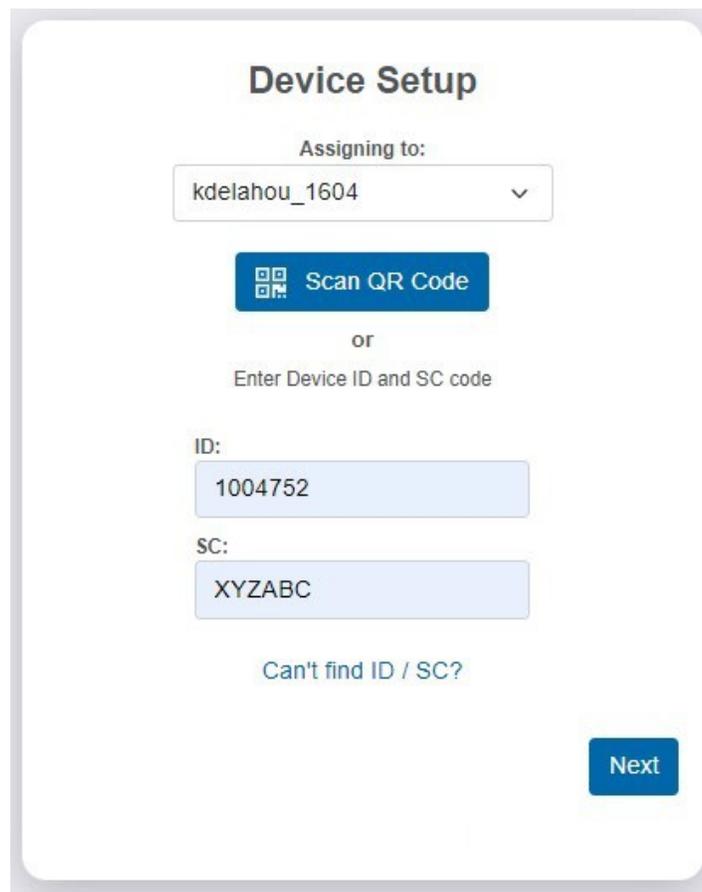
A blue 'Save Changes' button is located at the bottom of the form.

- Save your changes.

- Select "Device Setup":



- Enter your dry contact sensor's ID and security code (printed on device sticker):



- Choose "Next" to store your entries and proceed to the next screen.

- Configure field settings as shown below. (Sensor name and network SSID will be unique for your particular application.)

Dry Contact Settings ?

Sensor Name: Dry Contact - 1004752

How will you use your sensor?: Normally Open

Heartbeat Interval (Minutes): 120

Enter aware state when loop is: Closed

Data Logging: Disabled Enabled

Wi-Fi Configuration: [Clear Wi-Fi Settings](#)

Always Flash LED: Off On

Sensor IP Address: Static Dynamic

Primary Wi-Fi Network

SSID: KD_GUEST

Security Type: WPA

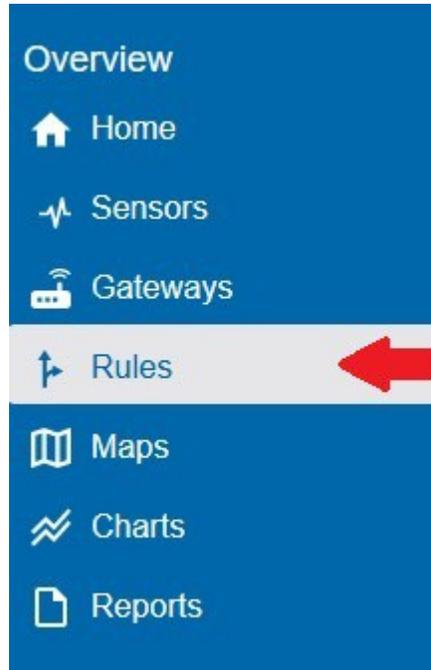
Security Key: [Modify security key](#)

[Add additional Wi-Fi Networks](#)

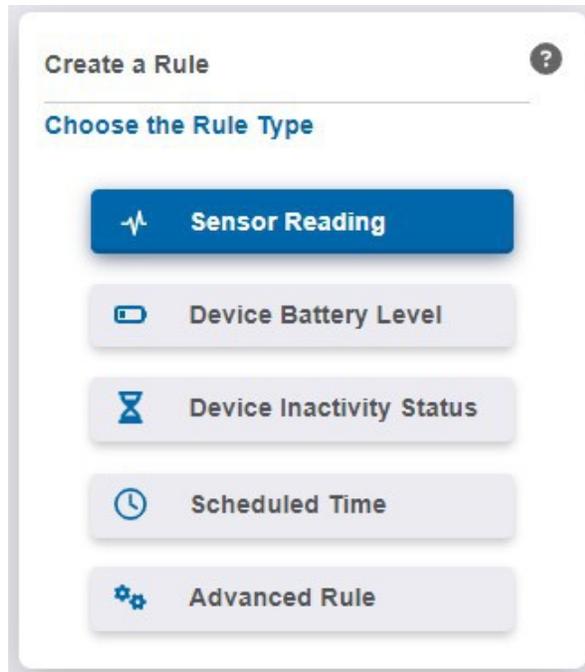
[Save](#)

- Note the setting titled, "Always Flash LED". When enabled, the indicator will flash briefly when a state change occurs, i.e., HVAC shut-off or reactivate. This can be quite useful as a troubleshooting or testing aid. Optionally, you may disable the setting to preserve battery life.
- Choose "Save" to store the settings and proceed.

- Next, you will create rules to define what action(s) are to be taken when a trigger event occurs (e.g., HVAC shut-off). Select the “Rules” tab at the left of the display:



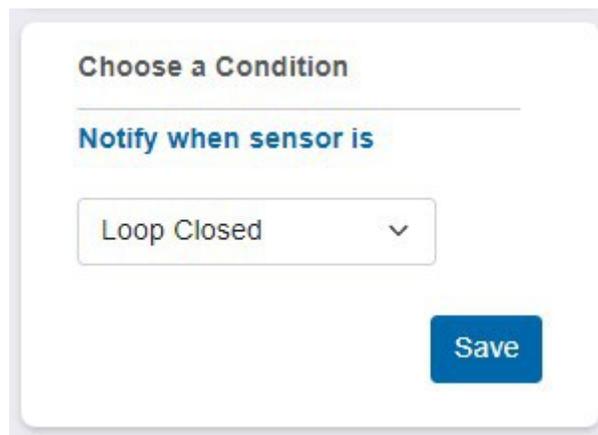
- Choose “Sensor Reading”:



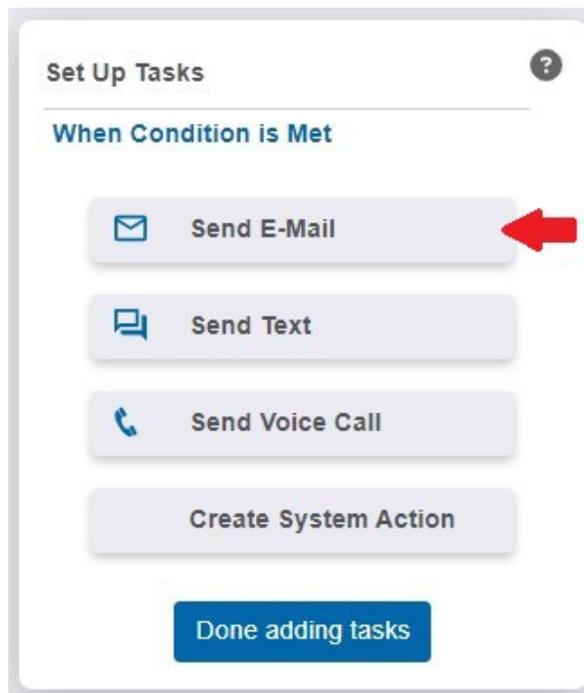
- Then select the dry contact sensor:



- Select the "Loop Closed" condition, then save your selection:



- Next, define an e-mail notification. (You may also choose other notification(s) as listed, including text message.)

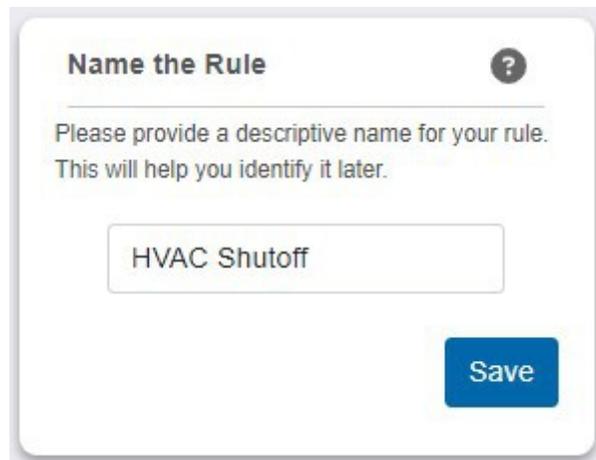


- Configure the e-mail, defining a recipient, subject, and message content. Then preview and save your settings.



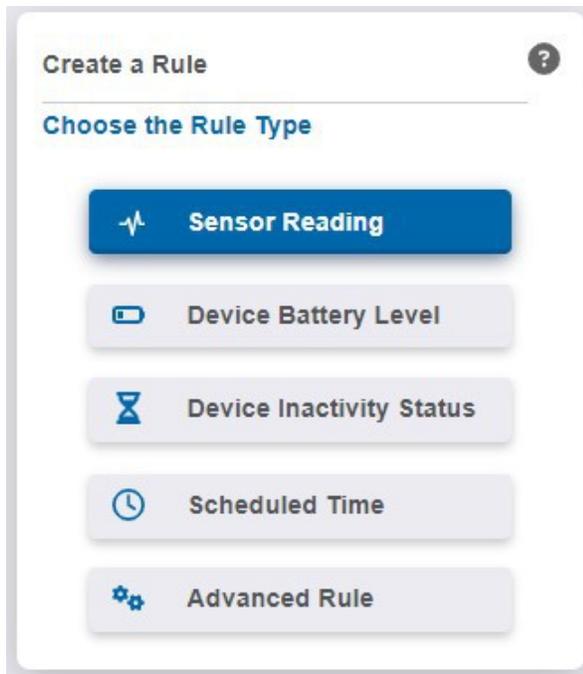
The screenshot shows an email configuration window. At the top, there is a 'To:' field with a plus sign and a person icon. Below it is a subject line field containing the text 'HVAC shutoff occurred!' and a 'Merge Fields' button. A rich text editor follows, with a toolbar containing icons for bold (B), underline (U), italic (I), font color, size, bulleted list, and link. The main text area contains the message body: 'HVAC shutoff occurred due to HSRS door/window violation!'. At the bottom right, there is a 'Message Preview' label and a blue 'Save' button.

- Define a name for this rule:



The screenshot shows a dialog box titled 'Name the Rule' with a help icon (question mark) in the top right corner. The text inside reads: 'Please provide a descriptive name for your rule. This will help you identify it later.' Below the text is a text input field containing the text 'HVAC Shutoff'. A blue 'Save' button is located at the bottom right of the dialog box.

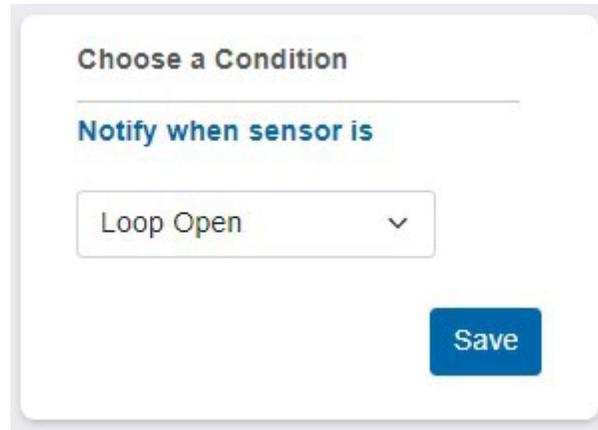
- Next, using similar steps as before, create a second rule:



- Choose "Sensor Reading" from the menu. Then select the dry contact sensor:

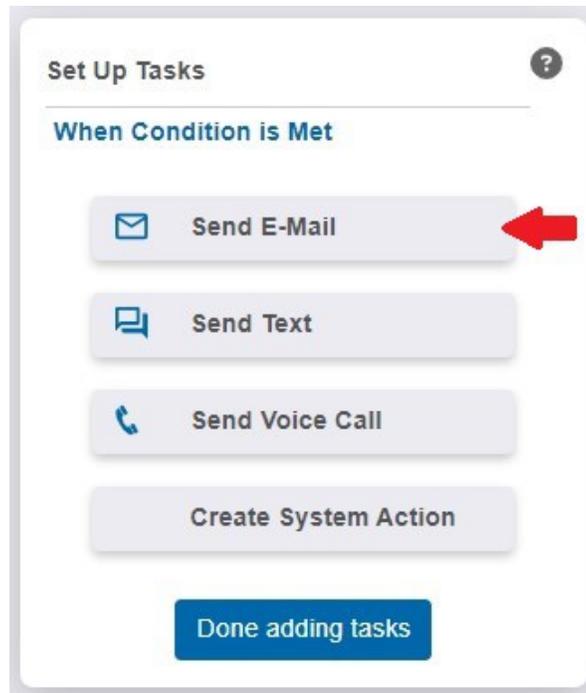


- Select the "Loop Open" condition, then save your selection:



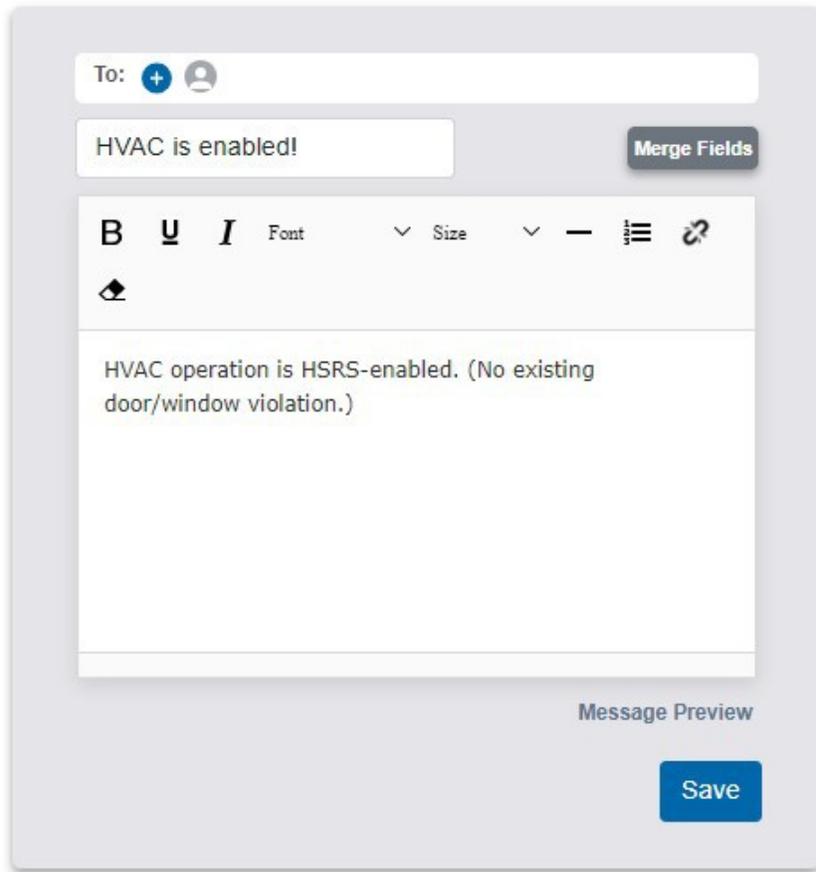
The screenshot shows a dialog box titled "Choose a Condition". Below the title is a text input field containing "Notify when sensor is". Underneath this is a dropdown menu with "Loop Open" selected and a downward arrow. At the bottom right of the dialog is a blue "Save" button.

- Now, define trigger notification(s):



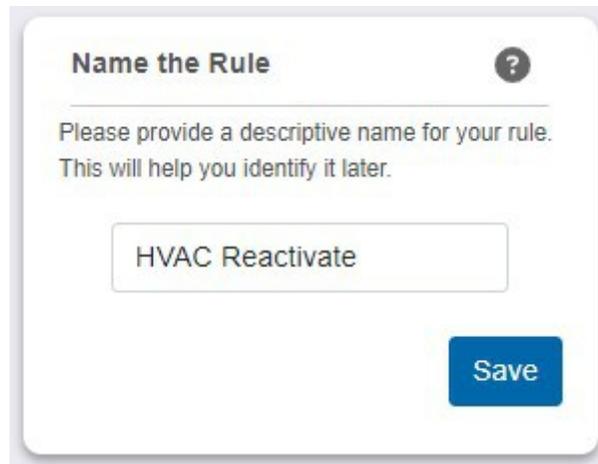
The screenshot shows a dialog box titled "Set Up Tasks" with a help icon in the top right corner. Below the title is a text input field containing "When Condition is Met". Below this are four task options, each in a light gray rounded rectangle: "Send E-Mail" (with an envelope icon), "Send Text" (with a speech bubble icon), "Send Voice Call" (with a telephone handset icon), and "Create System Action". A red arrow points to the "Send E-Mail" option. At the bottom of the dialog is a blue "Done adding tasks" button.

- Configure the e-mail, defining a recipient, subject, and message content. Then preview and save your settings.



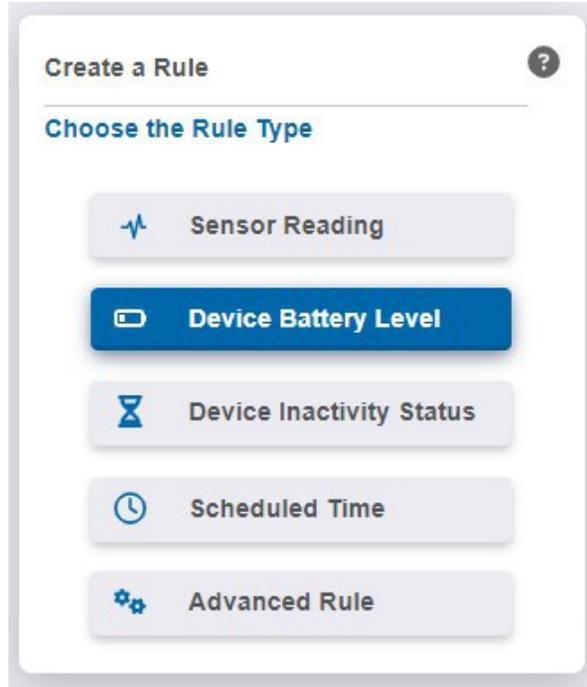
The screenshot shows an email configuration window. At the top, there is a 'To:' field with a plus sign and a person icon. Below it is a subject line field containing the text 'HVAC is enabled!' and a 'Merge Fields' button. A rich text editor follows, with a toolbar containing bold (B), underline (U), italic (I), font, size, and list icons. The main text area contains the message: 'HVAC operation is HSRS-enabled. (No existing door/window violation.)'. At the bottom right, there is a 'Message Preview' label and a blue 'Save' button.

- Provide a name for this rule:



The screenshot shows a dialog box titled 'Name the Rule' with a help icon (question mark). The text inside reads: 'Please provide a descriptive name for your rule. This will help you identify it later.' Below the text is a text input field containing the name 'HVAC Reactivate'. A blue 'Save' button is located at the bottom right of the dialog.

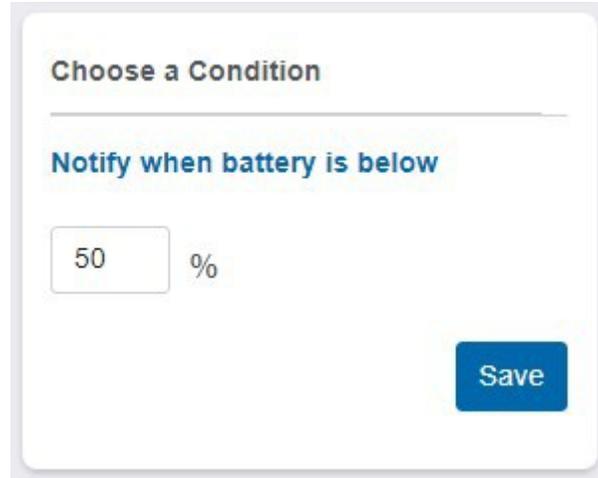
- Optionally, we can create another rule to be notified when batteries are low:



- Choose "Device Battery Level" from the menu. Then select the dry contact sensor:

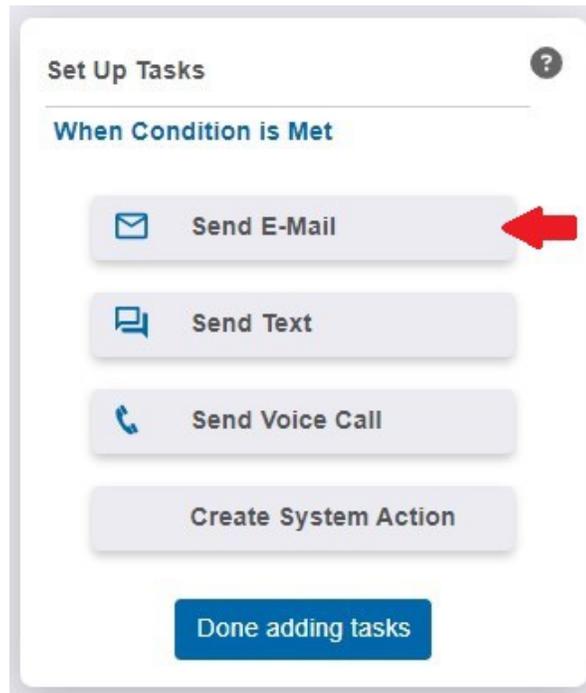


- Define the threshold at which notification is to occur:



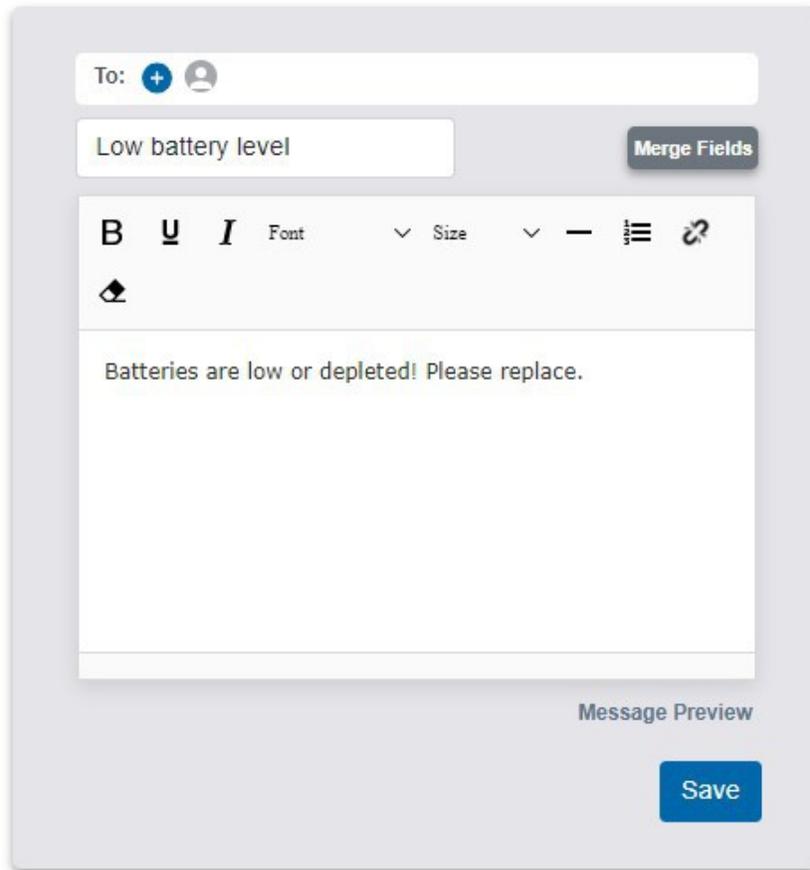
The screenshot shows a dialog box titled "Choose a Condition". Below the title is a horizontal line. Underneath, the text "Notify when battery is below" is displayed in blue. Below this text is a text input field containing the number "50", followed by a percentage symbol "%". In the bottom right corner of the dialog box, there is a blue button labeled "Save".

- Define trigger notification(s):



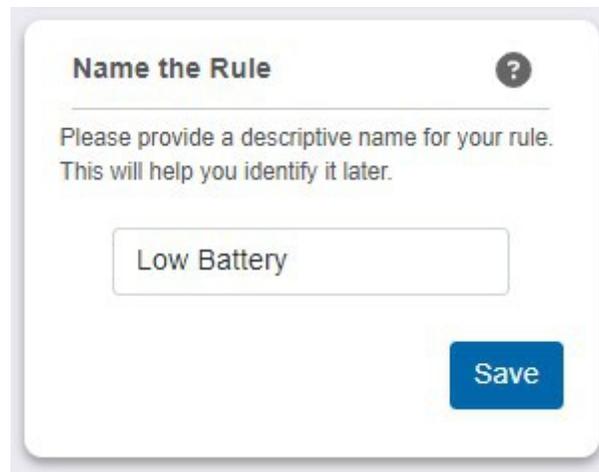
The screenshot shows a dialog box titled "Set Up Tasks" with a question mark icon in the top right corner. Below the title is a horizontal line. Underneath, the text "When Condition is Met" is displayed in blue. Below this text are four task options, each in a light gray rounded rectangle: "Send E-Mail" (with an envelope icon), "Send Text" (with a speech bubble icon), "Send Voice Call" (with a telephone handset icon), and "Create System Action". A red arrow points to the "Send E-Mail" option. At the bottom of the dialog box is a blue button labeled "Done adding tasks".

- Configure the e-mail, defining a recipient, subject, and message content. Then preview and save your settings.



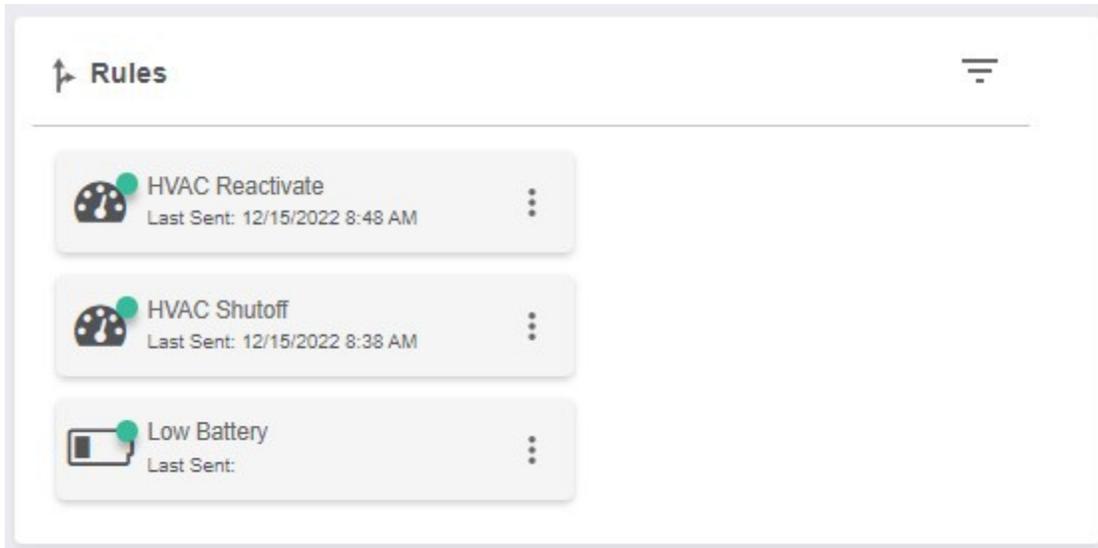
The screenshot shows an email configuration window. At the top, there is a 'To:' field with a plus sign and a person icon. Below it is a subject field containing the text 'Low battery level' and a 'Merge Fields' button. A rich text editor follows, with a toolbar containing icons for bold (B), underline (U), italic (I), font color, size, text color, bulleted list, and link. The main text area contains the message: 'Batteries are low or depleted! Please replace.' At the bottom right, there is a 'Message Preview' label and a blue 'Save' button.

- Provide a name for this rule:

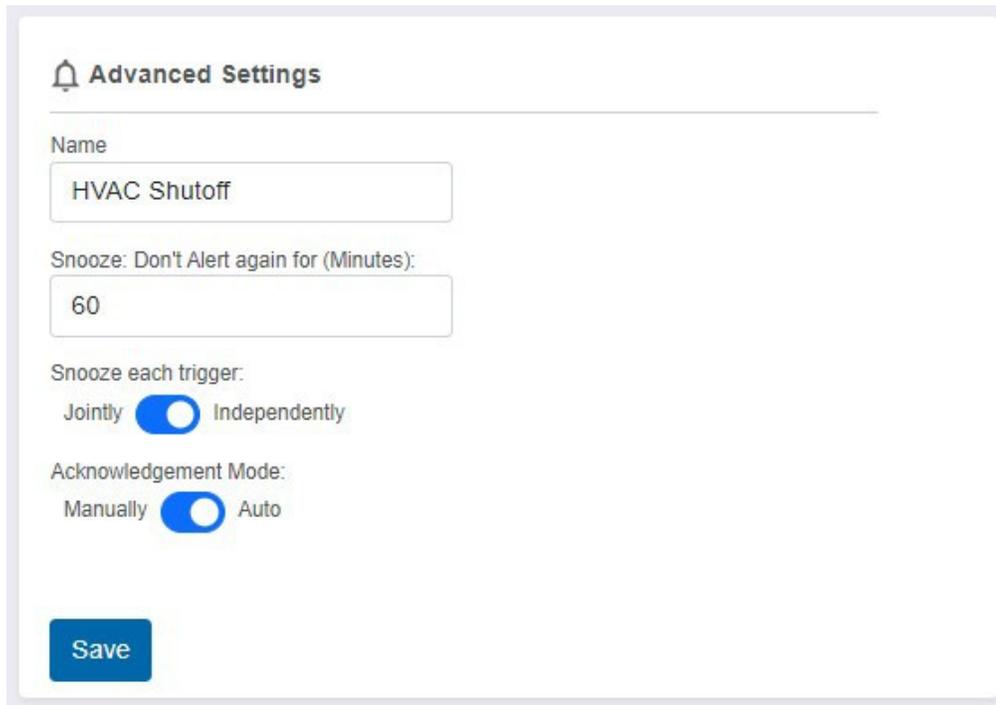


The screenshot shows a dialog box titled 'Name the Rule' with a help icon (question mark) in the top right corner. The text inside reads: 'Please provide a descriptive name for your rule. This will help you identify it later.' Below the text is a text input field containing the text 'Low Battery'. A blue 'Save' button is located at the bottom right of the dialog box.

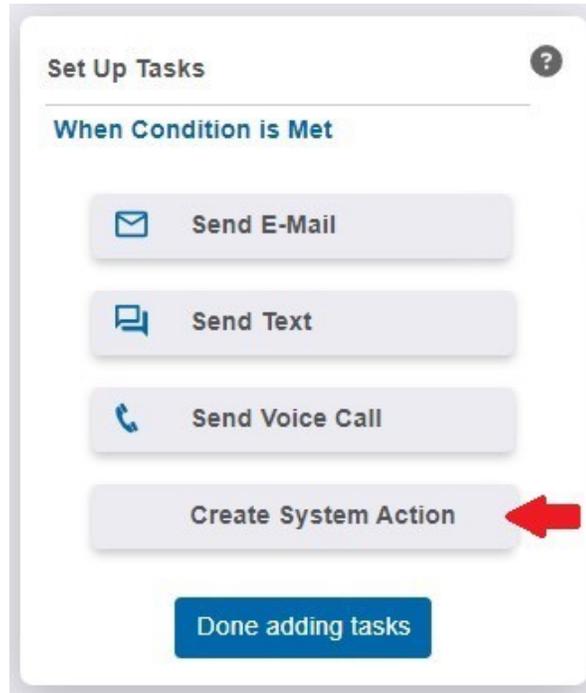
- You have now created the following sensor rules:



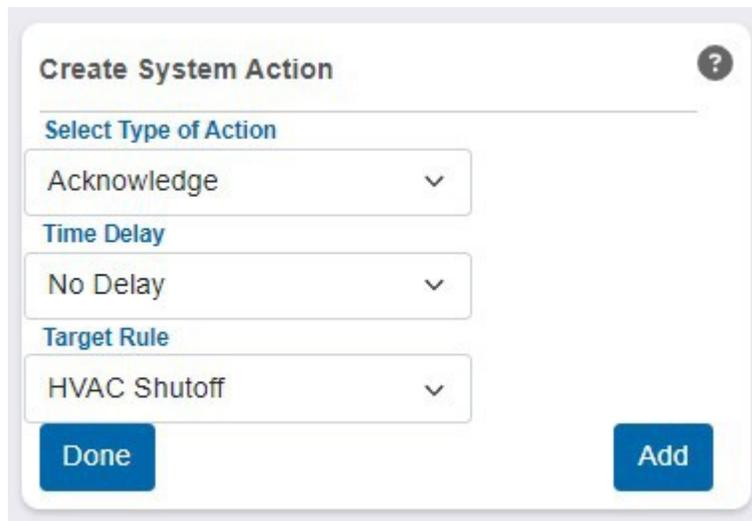
- Keep in mind that trigger notifications repeat indefinitely until acknowledged. The default snooze period is 60 minutes (found in advanced settings). This means you will receive a notification every hour. You may adjust the snooze period to a max value of 65535 (roughly 45 days). (Note: Advanced settings are accessible only to premier subscribers. However, basic subscribers will be afforded premier level access for a predetermined "trial period".)



- If repeat notifications are undesired, you may define a system action to automatically acknowledge the trigger event:



- Create a system action for each target rule, using the "Add" button:
 - HVAC Shutoff
 - HVAC Reactivate
 - Low Battery



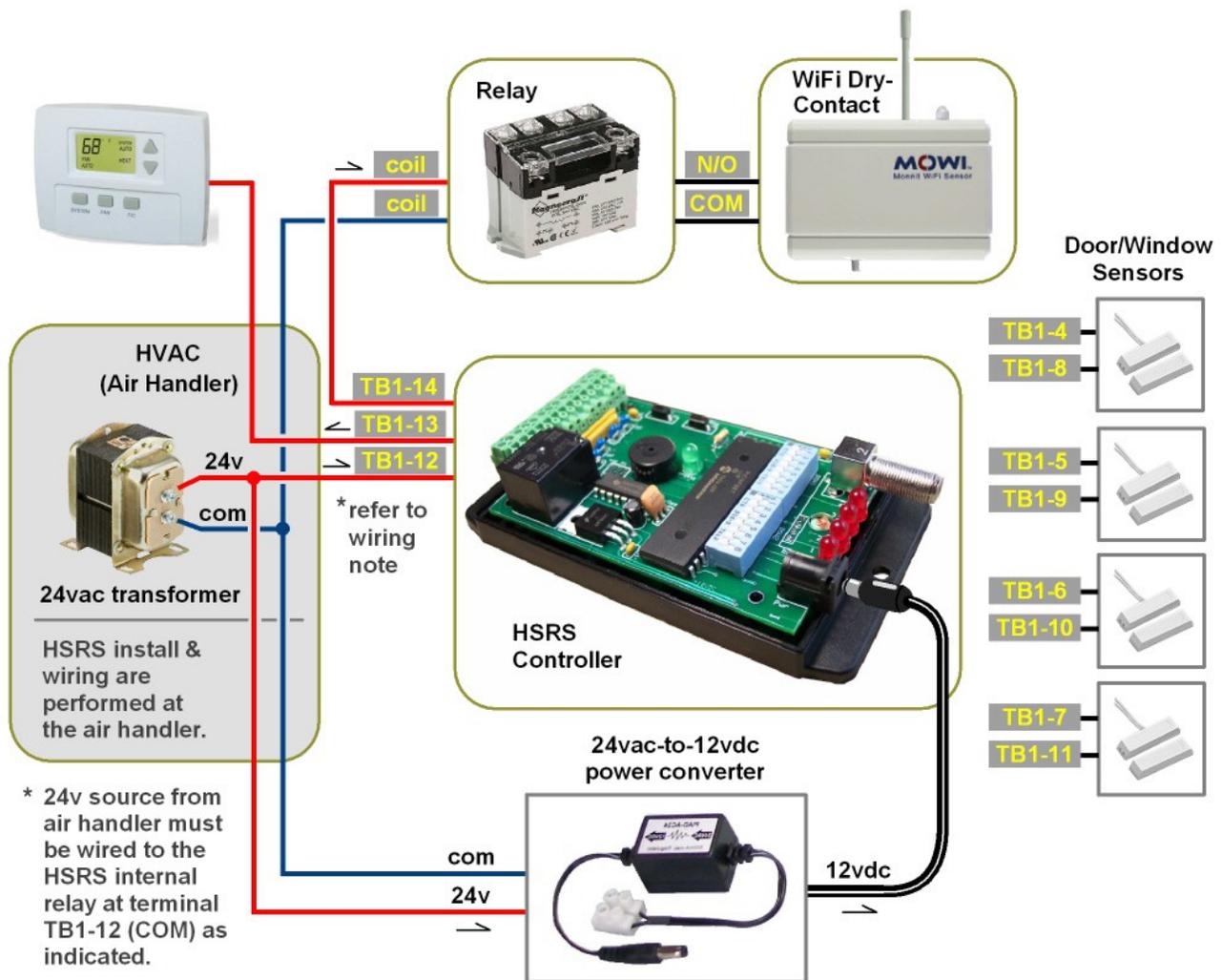
- After creating your system actions, choose "Done":

The image shows a user interface for creating system actions. On the left is a 'Create System Action' dialog box with three dropdown menus: 'Select Type of Action' (set to 'Acknowledge'), 'Time Delay' (set to 'No Delay'), and 'Target Rule' (set to 'Low Battery'). At the bottom of the dialog are two buttons: 'Done' and 'Add'. A red arrow points to the 'Done' button. On the right is a list of three created actions, each with a trash icon: 'Acknowledge HVAC Shutoff', 'Acknowledge HVAC Reactivate', and 'Acknowledge Low Battery'. Each action has 'No Delay' written below it.

Testing:

- At this point, you are now ready to test. Carefully short the dry contact sensor's exposed wire leads together (to simulate HVAC shutoff). Within moments, you should receive an e-mail message to your inbox, alerting you to the newly detected state change. Then, disconnect the leads (simulating HVAC reactivate) to generate a new e-mail message.
- Once you are satisfied that notifications are proper and consistent, you may proceed with wiring the sensor into your HVAC / HSRS system, consulting the schematic diagram below. (Note the [secondary relay](#) inserted between HSRS controller and dry contact sensor. [Click here](#) for relay details.)

Disclaimer: The wiring diagram is provided for the purpose of demonstrating a typical installation. We accept no liability or responsibility for possible errors, omissions, or ambiguities. A competent level of expertise with electrical wiring (low voltage) and familiarity with HVAC systems are required. You assume full responsibility for a proper install and to verify all wiring.



Secondary relay:

- A secondary relay, identified in the schematic as "Relay", is required for isolation between the [Dry-Contact Sensor](#) and HSRS controller. (This relay must have a 24vac coil voltage.) Normally-open contacts are recommended. The following list provides several compatible relay options:

Compatible Relays

Product:	Part Number:	Type:
Magnecraft	725BXXSC3ML-24A	DPST-NO
Omron	OMRON G7L-2A-BUBJ-CB-AC24	DPST-NO
Omron	OMRON-G7L-1A-BUBJ-CB-AC24	SPST-NO

Monnit

- Should you have questions about the MOWI [Dry-Contact Sensor](#), [Wi-Fi sensor programming utility](#), or [iMonnit Online Portal](#), contact Monnit @ 801-561-5555. You may also wish to consult iMonnit tutorial videos:
 - <https://www.youtube.com/watch?v=u8qgGsF5DNc> --using iMonnit (detailed)
 - <https://www.youtube.com/watch?v=sKjG7VEPh7I> --Wi-Fi sensor setup
 - <https://www.youtube.com/watch?v=xnRngI79ExY> --creating sensor network
 - <https://www.monnit.com/support/videos/imonnit/> --listing of available videos

Kadtronix

- For questions about the HVAC Smart Relay Switch (HSRS) or other Kadtronix products:

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