



600-1053-3 Concord 4 GSM Module Installation Sheet

Description

Model numbers:

600-1053-3
 600-1053-3-AT 600-1053-3-ZWAVE-AT
 600-1053-3-TM 600-1053-3-ZWAVE-TM

The module interfaces with the Concord panel data bus and is powered by the panel battery or an auxiliary 12 VDC power supply. The module can be used on Concord 4.0 and higher. Status LEDs indicate bus and paging network communications. A supervised zone input allows you to connect a hard-wired contact.

Figure 1 below shows the location of the main module components and Table 1 describes the component functions.

Figure 1: Components

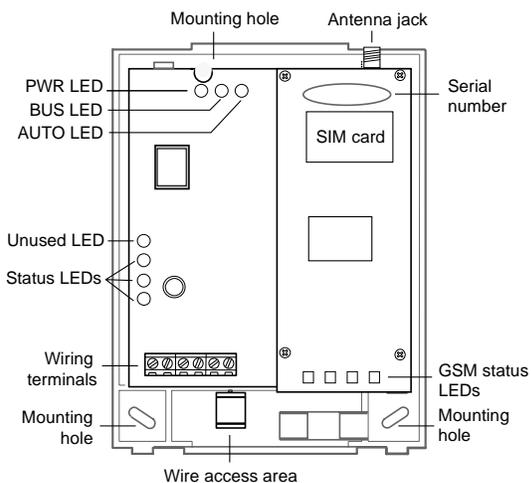


Table 1: Components

Component	Function
PWR LED	Indicates module power status.
BUS LED	Indicates data bus activity between the panel and module.
AUTO LED	Indicates module/data transceiver communication.
Status LEDs	Indicates communication status with GSM network.
Wiring terminals	Provides panel and zone wiring connections.
Antenna jack	Antenna connection for wireless data transceiver.
GSM status LEDs	Indicates communication with the GSM network, report errors, and signal strength.
Serial number	A 15-digit number. Only the last 10 digits are used for account activation.

Use the following tips to ensure success with the Alarm.com Concord GSM module:

- Make sure you create the customer account on the Alarm.com dealer website at least 24 hours before installation.
- Make sure you turn off the Access Code Lock feature.
- Use the LEDs on the module to check the signal strength before you permanently mount the module.
- Power the module off the battery, not off the panel.
- Do a manual phone test to initiate communication (see "Power up" on page 3).

Account creation

Alarm.com recommends creating the customer account 24 hours prior to installation to ensure that the GSM radio is activated. If you are not currently an Alarm.com dealer, please visit the Alarm.com website (www.alarm.com) and submit an information request, or email info@alarm.com.

Installation

Before you install the system, the module must be activated. The account creation process automatically activates the module within 24 hours.

The module draws a maximum of 65 mA (continuous) from the panel in power save mode, and 100 mA (continuous) from the panel in idle and connected modes. Do not exceed the panel total output power when using panel power for bus devices and hardwired sensors (refer to the panel documentation).

Use four-conductor, 22 or 18 gauge stranded wire to connect the module to the panel. Table 2 below shows the maximum wire length for each gauge.

Table 2: Maximum wire length

Gauge	Maximum wire length to panel
22 gauge	40 ft. (12.2 m)
18 gauge	90 ft. (27.4 m)

You will need the following tools and supplies to install the module:

- Small blade and Phillips screwdrivers
- Drill and bits for screws and/or anchors
- Wire cutter/stripper
- Four-conductor, 22-gauge or larger stranded wire

- Wall anchors (four included)
- 2-Kohm EOL resistor (included)

Use the following guidelines to choose a location for the module:

- Check the signal strength before choosing a location. Do a walking signal strength test by powering the module off the battery directly (connect the GND and +12V terminals). After 2 minutes, GSM status LED 4 will flash between one and five times, equivalent to the number of bars on a cell phone. We recommend a signal level of two or higher.
- Do not mount the module within 6 ft (1.8 m) of panel.
- Avoid mounting the module in areas with excessive metal or electrical wiring, such as furnace or utility rooms.
- Locate the module near an outside wall, preferably on an upper level.
- Leave 12 to 18 in. (30 to 45 cm) of open space above the module for the antenna.
- For homes or businesses located in canyons or with hills nearby, it is necessary to place the antenna higher in the building.

Caution: You must be free of static electricity before handling electronic components. Touch a grounded metal surface before touching the circuit board.

To mount the module:

1. Press down on the top of the enclosure cover, remove it, and set it aside.
2. Screw the antenna onto the antenna jack (see Figure 1 on page 1).
3. Place the backplate on the wall at the desired mounting location, check for level, and mark the three mounting holes and the wire access area (see Figure 1 on page 1). Be sure to leave at least 12 to 18 in. (30 to 45 cm) above the backplate for the antenna.
4. Set the backplate aside and drill holes at the mounting and wire access area locations.
5. Use wall anchors where studs are not present and secure the backplate to the wall with the enclosed screws.

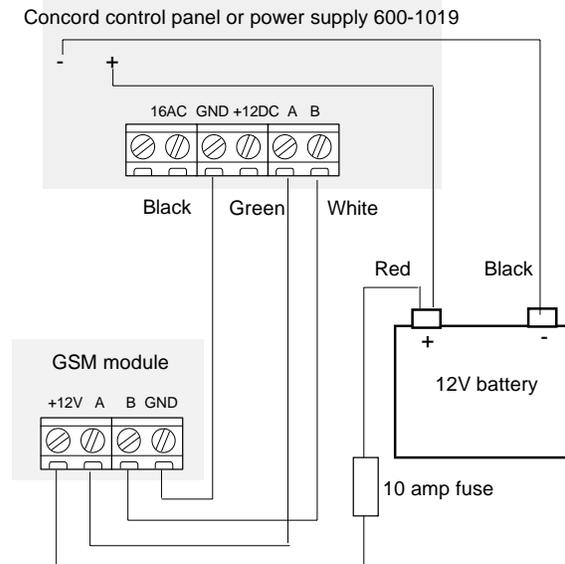
Wiring

Caution: To prevent damaging the panel or module, you must remove panel AC power and disconnect the backup battery before making or changing wiring connections.

To wire the module:

1. Remove AC panel power and disconnect the backup battery.
2. Wire the module to the panel bus and to the battery terminals for power. (The module can also be powered off the SuperBus 2000 two-amp power supply (600-1019), but should not be powered directly off the panel.)
3. You can connect an input device to the module ZI and ZCOM terminals if required.

Figure 2: Wiring connections



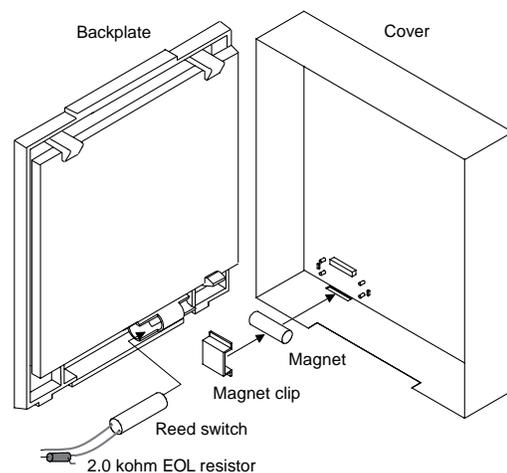
Case tamper switch

If the module is easily accessible, you can add case tamper detection to activate an alarm or trouble (depending on panel programming) when the cover is removed.

To install the tamper switch:

1. Slide the reed switch into the plastic holder on the module backplate.
2. Connect a UL-Listed reed switch (with 2 Kohm EOL resistor 01-022) to the module zone input or to any unused hardwired input on the panel.
3. Insert the magnet into the nibs on the top cover and press the magnet clip down over the magnet until it clicks into place into the cover.

Figure 3: Case tamper switch



Power up

You will need to power up the module and panel to start communication between them.

To power up:

1. Verify that all wiring between the panel and module is correct.
2. Connect the backup battery and restore AC power to the panel.

Whenever any module is added or changed, you must remove panel power and reapply it for the panel and module to communicate successfully.
3. Enter installer program mode and turn off the Access Code Lock feature (in the Security menu).

This must be set to off for the system to communicate with Alarm.com. The module PWR LED should turn on. After a few seconds, the module BUS and AUTO LEDs should flash to indicate successful communication with the panel.
4. Verify that GSM status LED 1 is not flashing any errors and that LED 4 is at flashing at least a level of two.

Otherwise, relocate the module. If LED 1 and LED 4 are not flashing at all, and LED 2 and LED 3 are flashing together, the module is in power save mode and the battery needs to be changed.
5. Do an installer GSM manual phone test (at system touchpad, enter 8, installer code, 3). Disarm the panel by entering 1 <installer code> within 10 seconds of starting the phone test.

Before doing the manual phone test, the bottom red status LED should be on and the yellow status LED should be flashing. The yellow LED will stay on solid once the manual phone test is completed.

Do not press any system touchpad buttons during the 5 to 8 minutes, or the time will not set. During this time, the keypad will go in and out of programming mode and will beep several times.

Status LEDs

The status LEDs located on the left side of the module indicate the current signal and the status of the wireless gateway module. The bottom red LED indicates if the module is in range and if it is registered. The yellow and green LEDs indicate the message status. The top LED is not used.

Red LED

- On when the module is in range and registered with the network.
- Off when the module is out of range and not registered with the network.
- Blinks when the module is registered with the network, but out of range.

Yellow LED

- On after the first message has been sent by the module and received by Alarm.com.
- Off until a message has been sent by the module.
- Blinks when the first message is being sent by the module.

Green LED

- Off as soon as Alarm.com receives the message from the module (off most of the time).
- Blinks when the message is being sent by the module.

Table 3 below describes status LED condition patterns.

Table 3: Status LED condition patterns

Number	Red LED	Yellow LED	Green LED	Module condition
1	Off	Off	Off	Not powered up/not working.
2	On	Off	Off	In range, first message not sent, currently sending message.
3	On	On	Off	In range, first message sent, not currently sending message.
4	On	On	Blinks	In range, first message sent, currently sending message.
5	On	Blinks	Blinks	In range, sending first message, currently sending message.
6	Blinks	On	Blinks	Out of range, first message sent, currently sending message.
7	Blinks	On	Off	Out of range, first message sent, not currently sending message.
8	Blinks	Blinks	Blinks	Out of range, sending first message, currently sending message.

GSM status LEDs

The GSM status LEDs are four small LEDs located on the lower right side of the module.

Figure 4: GSM status LEDs



LED 1 (red). Flashes 1 to 8 times in an 8-second interval to indicate specific error conditions. The number of flashes indicates the error number. If there are two or more errors at the same time, the errors will flash one after the other. The LED will stay off for at least 4 seconds between errors.

Table 4: LED 1 errors

Flashes	Error
1 flash	Module cannot communicate with the panel. Check wiring between the panel and the module. Make sure the bus wires are not swapped.
2 flashes	The SIM card is missing. The SIM cardholder can be found in the gateway just below the antenna.

Flashes	Error
3 flashes	This is a common error if the module takes more than 10 seconds to register with the GSM network. It is normal for this error to show up for approximately 30 seconds while the module registers with the GSM network (at power up, for example). If it persists, the module is unable to register with the GSM network. Check LED 4 for signal level. If the signal level is too low, change the module's location or use a higher gain antenna. If the signal is good, the module may be roaming on a GSM network that doesn't partner with our ATT-Cingular. If the module had been communicating in the past, there may be new interference from some other device or building.
4 flashes	The module is registered on the GSM network, but cannot connect with Alarm.com. Contact Alarm.com technical support.
5 flashes	The radio portion of the module is not working correctly.
6 flashes	This is an error only if it persists for more than a minute. Otherwise, it is just an indication that the module is fixing an unusual condition regarding communication with the GSM network.
7 flashes	Access Code Lock is on. The module cannot do certain operations with the panel. This option should be turned off at the panel (System Programming – 0003).
8 flashes	Contact Alarm.com technical support.

LED 2 (yellow). Flashes with every communication between the module and the panel. Normal pattern calls for a series of quick flashes every 2 seconds in idle mode or every 4 seconds in power save mode.

LED 3 (green). Flashes with every communication between the module and its radio unit in idle mode, and with every communication with Alarm.com in connected mode. In power save mode, this LED flashes in unison with LED 2.

LED 4 (green). Indicates GSM signal level as a number of flashes (1 to 5). The signal level is updated every 8 seconds. No flashes indicate one of the following:

- The module is in power save mode or in connected mode.
- The module is just powering up, or has just exited power save mode.
- There is no GSM tower coverage in the area.

In connected mode, the LED toggles on and off.

Module modes

The module modes (states) include:

Idle mode. AC power is up, the battery level is greater than 11.5 volts, and the module is currently not connected to Alarm.com servers. This is normal for the module and the most common state.

- LED 1 flashes errors, if any.
- LED 2 indicates communication with panel.
- LED 3 indicates communication with radio unit.
- LED 4 indicates the signal level (1 to 5 bars).

Power save mode. The module just powered up, AC power is down, or battery level is less than 11.5 volts. The radio part of the module draws 10 mA in power save mode. It is fully functional and will go into connected mode as soon as a signal needs to be sent. Doing a manual phone test will switch the module into idle mode and update the signal level reading.

- LED 1 is inactive.
- LED 2 indicates communication with panel.
- LED 3 flashes in unison with LED 2.
- LED 4 is inactive.

Connected mode. The module is connected to Alarm.com servers and reported an alarm or other condition. The module stays in connected mode for at least 6 minutes after the last message is exchanged. Entering the panel's Installer Programming mode will cause the module to go into idle mode.

- LED 1 flashes errors, if any.
- LED 2 indicates communication with panel.
- LED 3 indicates communication with Alarm.com.
- LED 4 alternates 2 seconds on, then 2 seconds off.

Sensors 94, 95, and 96

If sensors 94, 95, and 96 are not learned in, after doing a manual phone test, the text for these sensors will display important information for troubleshooting purposes. Alarm.com technical support staff may request this information during service calls.

- Sensor 96 text displays the SIM card number.
- Sensor 95 text displays the type of central station reports enabled.
- Sensor 96 text displays the serial number.

Troubleshooting

Check GSM status LED 1 to see if it is flashing any errors. See Table 4 on page 3 for descriptions of the errors indicated.

- *The power LED (the green LED at the top of the module) is not on.*

Turn off the panel power and verify that all wiring is correct.

- *Module status LEDs (on the left side of the module) do not turn on immediately after initial power up.*

You must wait 5 to 8 minutes after power up for the module to communicate with Alarm.com.

Access Code Lock feature (in panel memory) must be turned off for correct operation.

- *Touchpads/sirens are beeping even though the system is not armed.*

Press the touchpad Status button and the panel reports the status issue and stops beeping.

- *The status LEDs (on the left side of the module) are all off.*

Verify that there is GSM coverage in the location.

Do a walking signal test. Ensure that the module is correctly powered off the battery.

If the wireless gateway module is powered down for a short period, buffered messages may be received from the GSM network when module power is restored.

The GSM module does support reporting of all touchpad panics, but will not send touchpad numbers along with the cancel report. This module does not support the keypad tamper feature at this time.

Z-Wave devices

Required items for installation

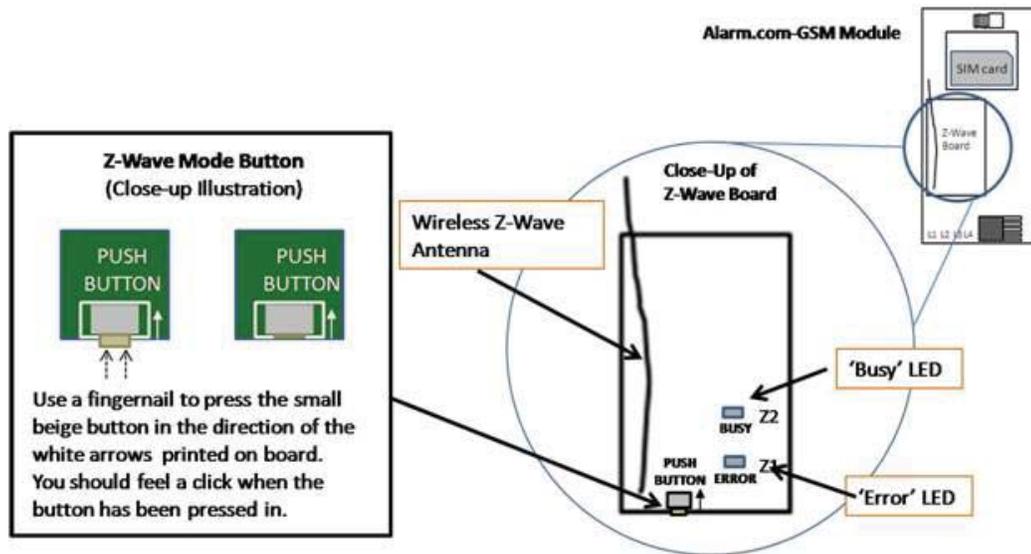
- Concord panel (software versions 4.0 and higher)
- Alarm.com Z-Wave-enabled GSM Module for Concord (600-1053-3-ZWAVE-TM or 600-1053-3-ZWAVE-AT)
- Z-Wave peripherals to be installed

Account creation and system setup

1. Create a new account on the Alarm.com Dealer Site (or swap the module into an existing customer account). Add the appropriate emPower services (Lights, Thermostats, and/or Locks) on the service plan page. (Note that "Light Automation" refers to X10 and is not compatible with emPower.)
2. Install the Alarm.com Z-Wave-enabled GSM Module and gateway, connecting it to the Concord panel.
3. Perform a GSM test at the panel to initiate communication between the module and Alarm.com.

Make sure to install the Alarm.com module and gateway outside the metal can. If it is inside the can, this will negatively impact Z-Wave signal transmission.

Figure 5: Z-Wave module overview



Adding z-Wave devices

Make sure the Concord panel is connected to AC power when enrolling Z-Wave devices.

When adding devices, first add the devices closest to the Alarm.com system, and then move outwards.

Devices must be within 6 ft of the Alarm.com module when adding it to the network. Install each of the Z-Wave peripherals in their desired locations, following the manufacturer's instructions. Then follow the instructions to add (include) each device into the Alarm.com module's network. If a device will not be within 6 ft. of the Alarm.com module in its permanent installation location, include it in the network before installation or use a controller (controllers are not available for locks, see below).

If installing a portable Z-Wave controller, first add the controller to the Alarm.com Z-Wave network using the Concord panel, and then use the portable controller to add the remaining devices to the network while the devices are in their permanent locations. (Locks cannot be added to the controller, and will need to be added by the Alarm.com module.) Devices must be within 6 ft. of the controller if a controller is being used to learn in devices.

Add a Z-Wave device to the Alarm.com module's network (Device Inclusion)

1. Put the Alarm.com module into Z-Wave Add mode.

On the Alarm.com module, press and hold down the Z-Wave Mode button for a few seconds, until the Busy LED begins flashing a 4-blink pattern to indicate Z-Wave Add mode. (See Figure 5 on page 5) for illustration of how to press the button.)

Or,

Use a portable Z-Wave controller to add devices to the network. (See the section on Controllers for details).

2. Press buttons on the Z-Wave device to add.

Once the module (or controller) is in Z-Wave Add mode, press the appropriate buttons on the Z-Wave device to add it to the network. See Device-specific instructions (or the instructions that came with the device) for more information.

3. Confirm the Z-Wave device is added successfully.

Once the device has been added successfully, the panel will beep, and the orange Busy LED on the Alarm.com module's Z-Wave board will become solid and stay solid for 1 minute (allow up to 5 seconds for confirmation once the device has been triggered).

To add another device, repeat the steps above. (You do not need to wait for the solid light to go away before holding down the Alarm.com Z-Wave button to enter Add mode again.)

See "Z-Wave Troubleshooting" on page 9 for more information on interpreting the Z-Wave LEDs on the module.

Checking the Devices list with Alarm.com

Once you've added the devices, the customer website will automatically update the Devices list (under the emPower tab) within about 2 minutes of the last device being added. (To manually trigger the update sooner, you can perform a GSM phone test at the panel.) You can also view the Z-Wave devices through the Alarm.com Dealer website by pulling up the customer

account and clicking on the emPower Devices link in the left-hand navigation.

Testing device communication with Alarm.com

Once the Z-Wave devices have been installed in their permanent locations and are displayed in the device list on Alarm.com, we recommend sending a remote command to each device (e.g., turn on a light; adjust the target temperature at a thermostat) to verify that it is successfully communicating with the Alarm.com module.

If you are onsite at the customer location and do not have access to the website, you can also check communication using the Z-Wave Busy LED. When the Alarm.com module is in Normal mode (i.e. not in Add/Delete mode), its Busy LED is by default off, but issues a single flash whenever it receives a message from a device in its own Z-Wave network. If a device is next to the panel, you can use this feature to test whether or not the device is currently installed on the Alarm.com Z-Wave network, and whether or not it is communicating properly.

To check communication between a Z-Wave device and the Alarm.com module:

1. Ensure that the Z-Wave device is powered on, and then press the same button you would use if you were trying to add it to a network (check the device's installation instructions if you are unsure which button to press).
2. The Busy LED on the module will issue a quick single flash to indicate it has heard the signal from the device. If the Busy LED does not flash when the device's button is pressed, this is most likely because of one of the following: a) the device is not in the Alarm.com module's Z-Wave network; b) it is out of direct communication range from the Alarm.com module; or c) the device is not powered on or working properly.

Deleting a Z-Wave device (Device Exclusion)

You can enter Delete mode to:

- Delete a Z-Wave device from the Alarm.com module's Z-Wave network if you no longer want the device in the network (e.g., if it is no longer in use).
- Delete a Z-Wave device from a different network so that it can then be added into the Alarm.com network. (A given Z-Wave device and only be assigned to one Z-Wave network at a time. If it is already assigned to one network, it needs to be deleted from one network before it can be added to another network.)

Whether you are deleting a device from the Alarm.com module's Z-Wave network or another Z-Wave network, the steps are the same.

1. Put the Alarm.com module into Z-Wave Add mode.

On the Alarm.com module, press and hold down the Z-Wave Mode button to enter Add mode (4-blink pattern on the Busy LED). Once in Add mode, press and hold down the Z-Wave Mode button again until the Busy LED begins flashing a 2-blink pattern to indicate Z-Wave Delete mode. (See Figure 5 on page 5 for illustration of how to press the button.)

2. Press buttons on the Z-Wave device to delete.

Once the module (or controller) is in Z-Wave Delete mode, press the appropriate buttons on the Z-Wave device to add it

to the network. See Device-specific instructions (or the instructions that came with the device) for more information.

3. Confirm the Z-Wave device was deleted successfully.
4. Once the device has been deleted successfully, the panel will beep, and the orange Busy LED on the Alarm.com module's Z-Wave board will become solid and stay solid for 1 minute (allow up to 5 seconds for confirmation once the device has been triggered).

If a device is not longer functioning, you can also delete it through the Device Automation page on the Alarm.com Dealer website. Send a remote command to the device and wait a few minutes for the command to register as failed. The failed device will have a remote node link next to it.

emPower on the Alarm.com Dealer website

Through the Alarm.com Dealer Website you can modify the emPower service plan, view the Z-Wave device list, and order emPower modules and devices. To add or remove emPower features from your customer's service plan, go to the customer's service plan page and check the features (lights, locks, thermostat, or the energy package - lights and thermostat) that you would like to add/remove. To view a list of your customer's Z-Wave devices, pull up their account and click the "emPower Devices" link.

Device-specific instructions

Controllers

Advanced Remote Controller

Note: if a controller will be used with the system, Alarm.com recommends adding it before the rest of the Z-Wave devices. Refer to the instructions that came with your controller for more information on controller features and operation.

To add the controller to the security panel (system):

1. Enter your panel into Add mode.
2. With the controller close to your panel, press and hold the Setup button on the controller until the controller screen displays "Lights Setup".
3. Use the arrow buttons to scroll until you see "Transfer" on the controller screen. Press the OK button.
4. The controller screen should now display "Primary". Use the arrow buttons to scroll until you see "Receive".
5. Press the OK button. The controller screen should display "Receiving".
6. The controller screen will briefly display "Success" after the controller has been successfully included into the panel.

To add a light module to the system using the controller:

1. Press and hold the Setup button on the controller until the screen displays "Light Setup". Press the OK button.
2. The controller screen should now display "Add". Press the OK button.
3. The controller screen should now display "To Network".
4. Use the arrow buttons to scroll until you see "To a Key" and then press the OK button.

5. Press a number key 1 to 9 or Setup (Shift) and a number key for numbers 10 to 18.
6. Press the OK button and the screen should now display "Setup Waiting".
7. Double-click the button on the light module. The controller screen will briefly display "Success" to confirm you have added the device to the controller key and system network.

Note: To add a light module using the controller without adding it to a specific number key on the controller, skip steps 4 and 5.

To add a thermostat to the system using the controller:

1. Press and hold the Setup button on the controller until the screen displays "Light Setup".
2. Use the arrow buttons to scroll until the screen displays "Thermostat". Press the OK button.
3. The screen should now display "Add". Press the OK button.
4. The screen should now display "Setup Waiting". Follow the device-specific directions for the thermostat you are adding to the system to trigger it. The controller screen will display "Success" to confirm you have successfully added it to the system network.

To remove a light module from the system network using the controller:

1. Press and hold the Setup button on the controller until the screen displays "Light Setup". Press the OK button.
2. The controller screen should now display "Add". Use the arrow buttons to scroll until you see "Delete". Press the OK button.
3. Double-click the button on the light module. The controller screen will briefly display "Success" to confirm you have removed the device from the controller key and system network.

To remove the thermostat from the system network using the controller:

1. Press and hold the Setup button on the controller until the screen displays "Light Setup". Press the OK button.
2. Use the arrow buttons to scroll until the screen displays "Thermostat". Press the OK button.
3. The controller screen should now display "Add". Use the arrow buttons to scroll until you see "Delete". Press the OK button. The screen should now display "Setup Waiting".
4. Follow the device-specific directions for the thermostat that you are removing from the system to trigger it. The controller screen will briefly display "Success" to confirm you have removed it from the system network.

To delete the controller from the security panel (system):

1. Enter your panel into Delete mode.
2. Follow steps 2 to 5 in the instructions for "To add the controller to the security panel (system):" above.
3. The controller screen will briefly display "Success" after the controller has been successfully deleted from the panel.

Lights and appliances

Plug-in Lamp Module or Plug-in Fluorescent Light/Appliance Module

1. Plug in the device.
2. Enter Add mode on the security panel.
3. To add the device, double-click the button in the middle of the light or appliance module. (If there is no beep at the panel confirming successful enrollment of the device, try pressing the button again.)

Tips

- Lamp modules cannot be used with compact fluorescent bulbs (CFBs). Use appliance modules instead.
- Make sure the lamp to be controlled is plugged into the Z-Wave side of the module (indicated by the Z-Wave logo).
- We recommend using a non-switched outlet for the module. If using an outlet controlled by a switch, make sure the outlet is switched on before sending light commands.
- Keep lamps switch on to allow control through the Z-Wave module, Alarm.com website, and mobile applications.
- Control dimming of lamp modules by pressing and holding the button on the module, or through the Alarm.com website

In-Wall Dimmer Light Switch or In-Wall On/Off Light Switch

1. Follow the provided directions to install the device and ensure that it functions properly with manual on/off control.
2. Enter Add mode on the security panel.
3. To add the device, turn on and turn off the light switch. (If there is no beep at the panel confirming successful enrollment of the device, try turning the device on and off again.)

Tips

- Dimmer switches and on/off switches cannot be interchanged. Use the appropriate type of switch.
- If it is not practical to move the security panel 3 to 6 ft. to the device, consider investing in a controller for installations.

In-Wall Outlet Receptacle

1. Follow the provided directions to install the device and ensure that it functions properly with manual control.
2. Enter Add mode on the security panel.
3. To add the device, double-click the button in the middle of the outlet. (If there is no beep at the panel confirming successful enrollment of the device, try double-clicking the button again.)

Tips

- If it is not practical to move the security panel 3 to 6 ft. to the device, consider investing in a controller for installations.
- We recommend using a non-switched outlet for the Z-Wave outlet. If using a switch outlet, make sure the outlet is switched on before sending commands.
- Only the lower outlet is controlled by Z-Wave. Ensure you are plugging devices into the lower outlet while testing if the outlet works for Z-Wave control. The opposite is true if the device is installed upside down.

Locks

Note: If the security panel cannot be taken to within 6 ft. of the lock installation location, add the lock to the system first as directed beginning in step 2. (You will need to connect the battery pack to the keypad before attempting to perform these steps.)

Tips

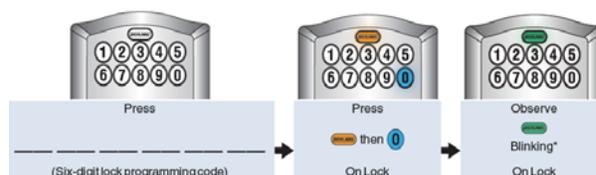
- Before removing old locks or beginning installation, check the layout of the door to make sure the new lock will not conflict with existing hardware.
- Contact a locksmith if you experience difficulties removing old hardware or installing the new lock.
- Send user codes to the lock (via the customer website - see step 4) before leaving the property. Alarm.com does not recommend programming codes locally via the lock keypad - all codes should be programmed through the Alarm.com interface.
- Ask your customer to save the programming code that comes with the lock (Schlage only). This will be convenient to have if they ever have issues in the future.

Schlage lever lock or Schlage deadbolt

1. Follow the instructions included with the lock. When prompted to continue setup online, do the following steps to program the lock into the Concord panel.
2. Enter Add mode on the security panel.
3. On the lock keypad, enter the six-digit programming code (given by Schlage), then press the Schlage button, followed by 0. The Schlage button will flash green (Figure 6 below).

Note: Wait until the light flashes green before disrupting the lock or panel. Failure to do so will result in lock malfunctions.

Figure 6: Schlage lock



4. Login online to the customer account at www.alarm.com to select which user codes are allowed to use this lock. To do this, go to the emPower then Locks tab. On the User Code table, you will see a column labeled Lock Access. Check the box of the lock you want to allow each user code to access.

Tip

If you observe a red blinking light at the end of the installation keystrokes instead of green, follow these instructions:

1. Enter the panel into Delete mode (see "Deleting a Z-Wave device (Device Exclusion)" on page 6).
2. Enter the six-digit programming code on the keypad and wait for three orange lights and three beeps.
3. Press the Schlage button and then 0 on the keypad. Wait for three orange lights and three beeps.

- Wait for all lights to stop blinking. You should now be able to enroll the lock normally by repeating the steps shown above (after re-entering Add mode).

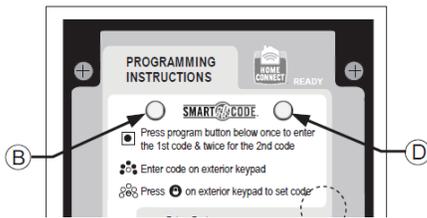
Kwikset deadbolt

- Follow all instructions provided to install the lock onto the door and doublecheck that the programmable keypad lock works.
- Enter the panel into Add mode.
- To trigger the lock to add it, press button "B" (Figure 7 below).

Note: Wait until the red light (under the paper next to button "B") stops flashing before disrupting the lock or panel. Failure to do so will result in lock malfunctions.

- Login online to the customer account at www.Alarm.com to select which user codes are allowed to use this lock. To do this, go to the emPower then Locks tab. On the User Codes table, you will see a column labeled Lock Access. Check the box of the lock you want to allow each user code to access.

Figure 7: Lock trigger button



Thermostats

Tips

- The new thermostat should be placed in the same location as the original thermostat unless an HVAC professional approves the new location.
- Learn the thermostat into your emPower network while it is powered using the power source (AC power vs. battery power) it will use during regular use after installation.

UTC Z-Wave Thermostat

- Follow the manufacturer's instructions to install the thermostat.
- Enter Add mode on your panel.
- Under the top cover of the thermostat, press the black Mate button located in the upper right hand side.

Note: The thermostat should be connected to AC before it is learned into the network.

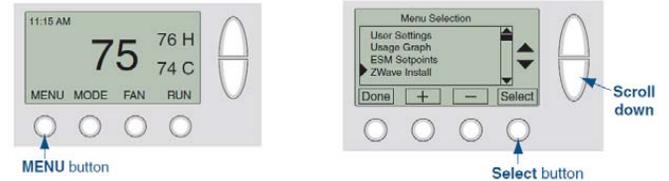
Trane Remote Energy Management Thermostat

Note: The Trane thermostat requires a 24 VAC common wire to power the thermostat. Before beginning installation, verify the HVAC system has a common wire or contact a qualified HVAC technician. If the security panel cannot be taken to within 6 ft of the thermostat installation location and you do not have a portable controller, power the thermostat temporarily using a 24

volt transformer and add the thermostat to the system as described in steps 2 and 3 before installing the thermostat.

- Follow the instructions included with the thermostat through step 19.
- Instead of step 20, enter Add mode on your panel.
- Hit the Menu button on the thermostat panel. Scroll down to Z-Wave Install and press Select (Figure 8 below). Press the Yes button to enroll the thermostat.

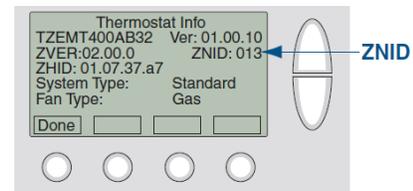
Figure 8: Trane thermostat



Tip

Verify the enrollment of the thermostat. Scroll down to Thermostat Info and press the Select button. Look at the number listed after ZNID. If the number listed is anything other than 000, the thermostat was successfully enrolled. If the number listed is 000, then the thermostat has not been successfully enrolled. Try enrollment again or verify that the thermostat is not currently part of another network.

Figure 9: Verify enrollment



Z-Wave Troubleshooting

Device not added successfully

If there is an error, or the two-minute time limit expires when adding a device, the Error light will issue a 4-blink, and the Busy light will never light up to indicate that the device was added successfully.

Try the following troubleshooting steps:

- The device may already be part of a Z-Wave network (whether or not you have learned the device into a network or not, the manufacturer may have tested the device and left it learned into another system). Try deleting (excluding) it from its network and the try adding it again. If you receive a Timeout/Error message when trying to delete the device, the issue is likely range-related.
- If the device is too far from the Alarm.com module when you are adding it, you may need to move the device closer to the panel (or vice versa) while adding it, or else use a portable controller to add it.

- Other 900 MHz wireless devices may be interfering with the Z-Wave messages. Try moving or replacing any 900 MHz headsets, cordless phones, baby monitors, wireless speaker extenders, IR remote control extenders, or similar devices.

Increasing wireless range of device network

- Expand your network in pairs:

If a device has been added successfully but does not appear to be communicating reliably with the system, it may be necessary to place another Z-Wave device (that's already on the network) between the panel and the problem device, to serve as a repeater that can relay messages between the two. We recommend expanding your network in pairs of devices. More devices allow for multiple Z-Wave communication paths, preventing any one device from becoming a bottleneck in the network.

- Expand your network using beaming devices:

Locks and battery-powered thermostats enter sleep mode to conserve battery life, and therefore can only communicate directly with the panel or with beaming devices that can send a wake-up message. In general, devices powered off of batteries do not beam, and most (but not all) devices powered off of AC power beam.

Note: Newer light/appliance modules support beaming, but some earlier versions did not. To find out if a given module is beaming-compatible, check the label. The light/appliance plug-in module supports beaming if the date code starts with 11 or the version includes the letter a or the letter b.

Lock not securely enrolled

Lock devices must complete a secure enrollment process during addition, which can take up to a minute to complete while the lock is within 6 ft. of the panel. If this process is interrupted before completing, the lock will not function properly. A warning message will display on the Alarm.com customer site and on the Dealer site that secure enrollment is not complete. The lock should be deleted

from the network and re-added, making sure to allow enough time for secure enrollment to complete before disrupting the lock or panel.

No response/no LED activity from Z-Wave board

If you are having trouble adding, deleting, or communicating with Z-Wave devices on the network and you are not seeing any activity on the Z-Wave LEDs, make sure that the Z-Wave board is securely connected to the Alarm.com GSM module. Try pressing it into the GSM module to make sure it is securely connected. Then power cycle the system and check to see if there is any activity on the Z-Wave LEDs.

No Home ID (5 flashes on Z-Wave Busy LED)

This error occurs when the Alarm.com module has not received the Z-Wave "Home ID". Usually, this occurs when the module has not yet communicated with Alarm.com since the Home ID is sent during initial communication. Perform the GSM phone test and confirm that communication between Alarm.com and the module has been initiated. If the module is already communicating with Alarm.com and this error persists, check that the Z-Wave daughterboard is securely connected to the module and power cycle the unit.

Device already in Network (4 flashes on Z-Wave Busy, steady blinking on Error light)

The device being added is already part of a Z-Wave network (whether the existing network or an old network) and cannot be added again. Clear the device by deleting (excluding) it from its network.

Note: The Alarm.com module can be used to delete devices in any network. The device will clear itself and be able to be added to another network. The device's old network will still list that device as part of its network (but the device will not be able to be controlled by that network) until the device is removed from its old network.

Table 5: Z-Wave LED status/troubleshooting lights

Error light	Busy light	Device status or error	Duration of LED pattern
	4-blink	Add mode	As long as module is in Add mode (maximum 120 seconds)
	2-blink	Delete mode	As long as module is in Delete mode (maximum 120 seconds)
	Slow on/off toggle	Replicate mode	As long as module is in Replication mode (maximum 120 seconds)
		Normal mode	N/A (this is the light's default state)
	Solid	Successful Add node/Remove node/Replication	60 seconds
5-blink		No Home ID assigned to Alarm.com module (rare)	Until GSM phone test performed
4-blink		Error with Add node/Delete node/Replication	60 seconds
4-blink	Steady blinking	Add node attempt failed because node already in network	60 seconds
3-blink		One or more nodes did not respond (may be unplugged or out of range)	60 seconds
2-blink		An ACK is not received from another node (rare)	60 seconds
1-blink		No other nodes are in the network	Until a node is added to network
Solid	Solid	Unit was just powered on	3 seconds after unit is powered on

Specifications

Compatibility	Concord panels with software versions 4.0 and higher
Voltage	12 V nominal, 65 mA (continuous) 1600 mA (instantaneous peaks) maximum (from panel or auxiliary power supply)
Inputs	One hardwired zone input
Cellular network	Quad-band GSM/GPRS
Power/data bus	One four-wire SuperBus auto addressing power/communication data bus
Indicators	One module/panel communication status LED, one module power LED, one automation LED, three wireless communication status LEDs
Dimensions (H x W x D)	5.25 x 4.125 x 1 in. (133 x 105 x 25 mm)
Case color	Belgian gray
Case material	High-impact, ABS plastic
Operating temperature	32 to 120°F (0 to 49°C)
Storage temperature	-30 to 140°F (-34 to 60°C)
Relative humidity	90% noncondensing (maximum)
Listings	FCC Part 15, PTCRB, AT&T or T-Mobile

Regulatory information

FCC

This device complies with part 15 of the FCC rules. Operation is subject to the following conditions.

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

In accordance with FCC requirements of human exposure to radiofrequency fields, the radiating element shall be installed such that a minimum separation distance of 20 cm is maintained from the general population.

600-1053-3

FCC ID: MIVGSM0308

IC: 4160A-GSM0308

600-1053-3-ZWAVE

FCC ID: YL61432005V4

IC: 9111A-1432005V4

ETL

For models: 600-1053-3, 600-1053-3-AT, 600-1053-3-TM, 600-1053-3-ZWAVE-AT, and 600-1053-3-ZWAVE-TM

A representative sample of this product was evaluated and found to comply with the applicable requirements of the standards for:

- Household Fire Warning System Units, ANSI/UL 985, 5th Ed rev 04/04
- Household Burglar-Alarm System Units, ANSI/UL 1023, 6th Ed rev 12/04
- Digital Alarm Communicator System Units, ANSI/UL 1635, 3rd Ed rev 12/04
- Residential Fire Warning System Control Units, ULC-S545, 2nd Ed dated 07/02
- Household Burglar Alarm System Units, ULC Subject C1023, 1st Ed dated 01/74

Contact information

www.utcfireandsecurity.com or www.interlogix.com

For customer support, see www.interlogix.com/customer-support

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