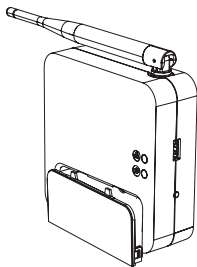




## Field Replacement Guide for Comfort Sync A3 Smart Hub

508045-01, 1/2020



### **! WARNING**

Improper installation, adjustment, alteration, service or maintenance can cause property damage, personal injury or loss of life.

Installation and service must be performed by a licensed professional HVAC installer (or equivalent) or a service agency.

#### General

This Smart Hub replacement kit is used to replace any previous version of the Comfort Sync A3 thermostat smart hub component.

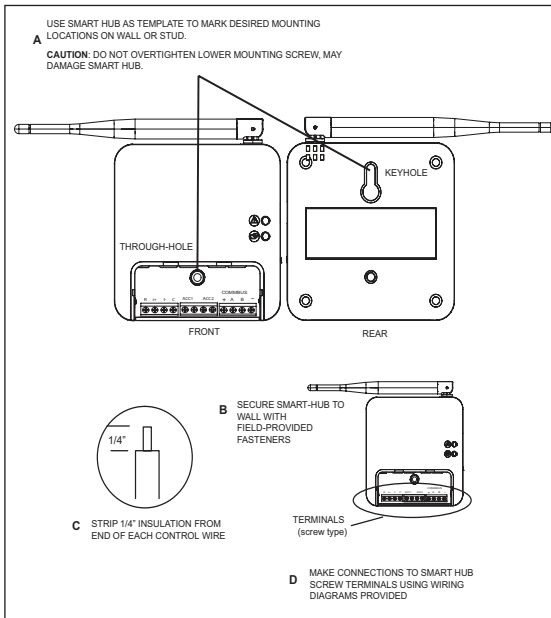
- Read this entire document, noting which procedures pertain to your specific equipment and system requirements.
- Make sure that all wiring conforms to local and national building and electrical codes and ordinances.
- Do not install on voltages higher than 30VAC.
- Do not exceed 300 feet (91 meters) run when using 18 or 22 AWG thermostat wire.
- Do not allow load from any thermostat connection to be more than 1 AMP.

## Removing Old Smart Hub

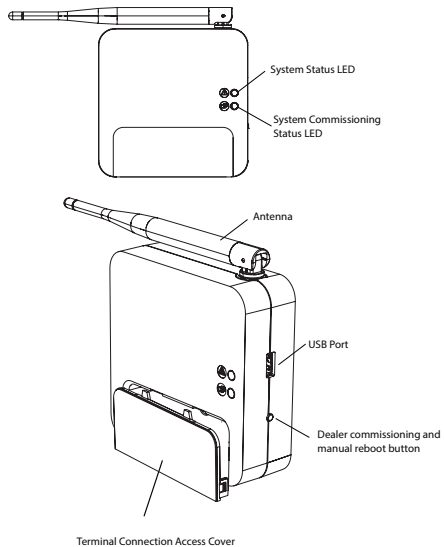
1. Make note of homeowner account information and home Wi-Fi access information.
2. Go to the homeowner web portal and remove the original system from the account.
3. Disconnect power to the entire system.
4. Remove the access cover from Smart Hub.
5. Take a picture or make a drawing showing the control wires and what terminals they are connected to.
6. Disconnect control wiring.
7. Remove all the screws securing the Smart Hub to wall.
8. Lift up and out to remove Smart Hub from the key hole.
9. Discard old Smart Hub.

## Installing New Smart Hub



1. Remove new Smart Hub from shipping container.
2. Remove the access cover from the Smart Hub.
3. Mount the Smart Hub on the wall with key hole support (see "Installation Considerations" on page 7).
4. Use the through-hole screw previously removed to secure the Smart Hub.
5. Reconnect all wiring that was documented during the removal of the old Smart Hub.
6. Replace the access cover.
7. Unfold the antenna and position as noted during removal of the original Smart Hub.
8. Restore power to system.



## Smart Hub LED Indicators, Terminals and External Components



**Table 1. System and Commissioning Status Indicators**

	<b>System Status Indicators</b>	
<b>LED Color</b>	<b>System Status</b>	<b>Description</b>
<b>Green</b>	System is normal	No system errors (Default state)
<b>Red</b>	HVAC Error	System has critical alert which needs installer attention.
<b>Cyan</b>	Alerts	Indoor unit is not connected or unable to communicate.
<b>Magenta</b>	Thermostat Error	HD display not connected.
<b>Amber</b>	Wi-Fi	Either Wi-Fi is not connect, no Wi-Fi is within range, or Wi-Fi hardware error.
	<b>Commissioning Status Indicators</b>	
<b>Blue</b>	System is normal	No mobile device is directly connected using Wi-Fi to the Smart Hub.
<b>Green</b>	LED is blinking	Commissioning button has been activated and Smart Hub is awaiting for a connection with a mobile device.
<b>Green</b>	LED is solid	Mobile device is connected to the Smart Hub.
<b>NOTE:</b>	<i>When multiple errors are present the Smart Hub will display each condition for one second on and one second off. Then it will display the next color error code indicator and continue this sequence until all active errors have been displayed. Then all active errors are repeated continuously. Display priority for these conditions are HVAC, Alerts, Thermostat and then Wi-Fi errors.</i>	

**Table 2. Smart Hub Terminal Designations, Order and Wiring Requirements**

<b>Terminal Designation</b>	<b>Description</b>	<b>Thermostat Wiring</b>
<b>R</b>	24VAC input	18AWG unshielded
<b>I+</b>	RS-BUS I+	22AWG shielded (recommended) (2-pair conductor only)
<b>I-</b>	RS-BUS I-	
<b>C</b>	24VAC return	18AWG unshielded
<b>ACC1</b>	Accessory 1 and 2 (typically can be used for 1 or 2 speed ventilators and fresh air damper)	18AWG unshielded
<b>ACC2</b>		
<b>12+</b>	12VDC output	18AWG unshielded
<b>A</b>	Communications bus A	22AWG shielded (recommended) (2-pair conductor only)
<b>B</b>	Communications bus B	
<b>12-</b>	12VDC return	18AWG unshielded

# IMPORTANT

Use 2-pair, 18AWG unshielded thermostat cable (field-provided) for power terminals (R, C, 12+ AND 12-). Recommend using 2-pair 22AWG shielded thermostat cable for communications terminals (I+, I-, A and B) which will help eliminate any noise interference.

## Installation Considerations

Things to consider when installing the Smart Hub:

- Install the Smart Hub near the indoor unit such that there is a direct path to the approximate location of the home Wi-Fi access point (the signal is not blocked by the indoor unit or duct work, for example).
- The Smart Hub can be attached to a vertical surface such as a wall stud or roof truss web, or to a horizontal surface such as a floor or ceiling joist, or a roof rafter.
- The Smart Hub antenna should be positioned such that they are roughly vertical, no matter the orientation of the Smart Hub, itself.
- Do not install the Smart Hub on the indoor unit, duct work, or other equipment that could induce vibration in the Smart Hub.
- Do not install the Smart Hub on or near large metal objects. This could adversely affect the range and directional coverage of the Smart Hub Wi-Fi signal.
- If the Smart Hub MUST be installed on a metal object, orientate the antenna perpendicular to the metal surface.
- In all cases, the Smart Hub antenna orientation may need to be adjusted to obtain best Wi-Fi results.

