Silver 724 Touchscreen Comfort Control

NEXIA™

American Standard®
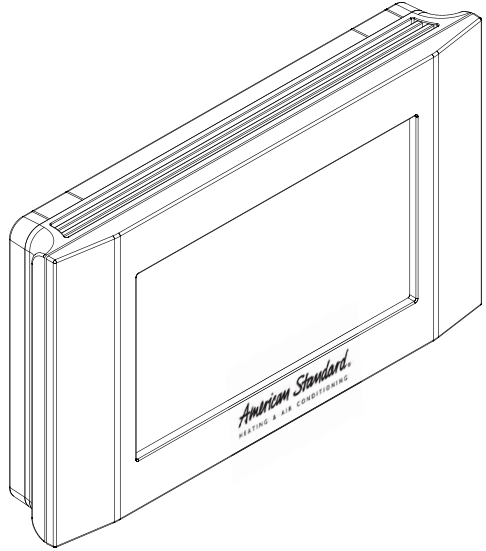HEATING & AIR CONDITIONING

Model ACONT724AS42DA

User Guide and Installation Instructions

Nexia Smart Home
Comfort System
Customer Service:
(877) 288-7707

**For HVAC related
issues, contact your
servicing dealer**

➔ **NOTE:** A 24 Volt
common and hot
wire **MUST** be
connected to
the Silver 724 for
operation.

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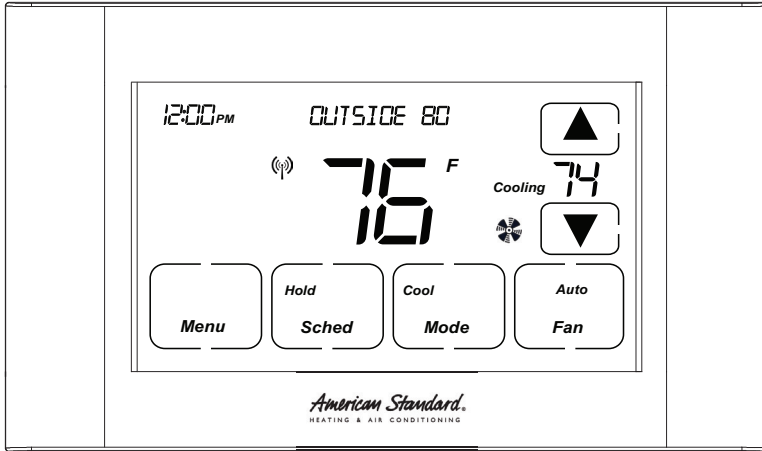
Silver 724 Features

- WiFi comfort control
- Remote access via smartphone, tablet, or P.C.
  (requires a Nexia™ Smart Home Comfort System account)
- Interactive 4.3" black & white touchscreen
- 7 Day programmable, 4 schedules/day
- Built in humidity sensor with RH display
- Filter, maintenance, humidifier service reminders
- Remote temperature sensing option (1 indoor/1 outdoor)
- Auxiliary & compressor heat lockouts
- Dehumidification (over cooling)
- Enhanced dehumidification (cooling)
- Adjustable variable speed fan settings (pwm)
- Energy Savings Mode (ESM)
- Screen lock
- Upgradable firmware (requires a Nexia™ Smart Home Comfort System account)
- Service test modes
- Humidifier control

Silver 724 Product Specifications

Specification	Description
Product Model:	ACONT724AS42DA
Product:	Silver 724 HVAC System comfort control. WiFi communications enabled.
Size:	5.75" wide x 3.5" height x 1" depth
Display:	Fixed Segment LCD, 4" x 2.25", with 17 character alpha numeric display
Touchscreen:	Yes
Backlight:	Yes, White, Controllable, on, off, timeout
Power:	24VAC from HVAC System
HVAC System Type:	Standard (gas/electric), Heat Pump, or Dual Fuel
Heat/Cool Stages:	Up to four stages of heat/two stages cool
PWM Output (BK)	Variable speed motor control
Heat Pump Switchover valve:	Selectable change over with cool or with heat
Auxiliary Contact	Humidifier, Ventilation or Dehumidifier control
Communications:	WiFi
Memory:	Non-volatile
Date/Time:	12 hour super capacitor backup Time is automatically updated if the control is connected to Nexia Smart Home Comfort System

Operation

The Silver 724 Comfort Control provides typical operation of a forced air heating and cooling HVAC system. It also features WiFi capability for remote control and Nexia Smart Home Comfort System connectivity.

Normally, the Comfort Control displays the Home Screen as shown above.

Item	Description	Notes
Clock Display	The current time is displayed in the upper left corner of the main screen. The time will blink when the clock has not been set.	See *TIME/DATE* for more information. If the control is connected to Nexia Smart Home Comfort System the clock will be updated by the Nexia portal.
Dynamic Labels and Function Control Buttons	The buttons are defined by the dynamic labels in each button. As you navigate through menus, the labels for the buttons will change.	
Setpoint Display and Setpoint Up/Down Buttons	The current heat or cool setpoint is displayed. These setpoints may be set using Nexia Smart Home Comfort System, the Control's internal schedule, or by pressing the Setpoint Up/Down buttons. Pressing the setpoint button changes the setpoint screen. The current mode is displayed at the top of the screen. Adjust the setpoint by pressing the up or down arrows. To change setpoint mode press the MODE button.	The setpoints will push each other if they are adjusted to within the minimum heat/cool separation setting. This is normally 3 degrees.
Temperature Display	The Comfort Control displays the current temperature as sensed by the internal temperature sensor.	The internal temperature sensor can be adjusted as necessary.
Menu Button	Button used to access other Comfort Control menus	
System Mode Button	Button used to change the system mode	Off: System off Heating: Heating only Cooling: Cooling only Auto: Heating/Cooling as necessary EM Heat: Heat Pump Emergency Heat, Compressor Disabled, Indoor Heat only
Fan Mode Button	Button used to change the fan mode	Auto: Fan on when cooling/heating is necessary On: Fan constantly on Circ: Fan on for a user-selected number of minutes per hour
Schedule Mode Button	Button used to change the schedule mode The default mode is **HOLD** which disables scheduling.	Hold: System maintains the current temperature setpoints. Schedules are disregarded. Run: Run the system schedule Energy Saving Mode (ESM): Run schedule using the ESM Setpoints Manual setpoint changes while in **Run Schedule** mode will only last until the next schedule period.

SILVER 724 USER GUIDE

MENU OPTIONS

The following is a guide of the menu options available by pressing the *Menu* button. Certain menu selections, which are marked by an asterisk (*), may or may not be present depending on other menu settings.

HUMIDITY *

* Only appears as a menu item if Dehumidify is set to Yes, Aux Relay is set to Dehumidifier, or Aux Relay is set to Humidity.

HUMIDITY		
Setting	**Range**	**Description**
Cooling RH Target*	30% to 60% [50%]	Select the desired indoor relative humidity during cooling mode. Dehumidification must be enabled in the Installer Settings for this option to be available.
Heating RH Target*	10% to 45% [40%]	Select the desired indoor relative humidity during heating mode. Humidification must be enabled in the Installer Settings for this option to be available.
*Once all selections have been made, press the **Done** button to exit and return to menu. Press **Next** to navigate to the next setting.*		

USER SETTINGS

User Settings allow the user to customize various settings on the SIlver 724 control. To access User Settings simply press the *Menu* button once and "User Settings" will be displayed. To enter the User Settings menu, press the *Select* button, then use the *Next* button to navigate through the options below. The default setting will be shown in brackets. After each selection press the *Done* button to save changes. Certain menu selections, which are marked by an asterisk (*), may or may not be present depending on other menu settings.

THERMOSTAT		
Setting	**Range / Sub Setting**	**Description / Range of Sub Settings**
Temperature Scale	[Fahrenheit], Celsius	Select the temperature display scale
Max Heat Setpoint	55 - [90] Degrees	Select the highest heating setpoint allowed
Min Cooling Setpoint	[60] - 99 Degrees	Select the lowest cooling setpoint allowed
Time/Date*	Set Hour	1 - 12 AM, 1 - 12 PM [12PM]
	Set Minutes	0 - 59 [0]
	Day of Week	[Sun], Mon, Tue, Wed, Thr, Fri, Sat
	Year	[2013] - 2113
	Month	[Jan], Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec
	Date	[1] - 31
	DST Enable	[Yes], No
Continuous Fan Airflow*	35% - 100% [50%]	Select the desired fan speed when the Fan Mode selected is Continuous (variable speed blower required). Only available if ID Fan Type = Variable.
Fan Circulate On Time	[10] - 55 minutes	Select the desired amount of time the fan will cycle per hour when the Fan Mode selected is Circ
*Once all selections have been made, press the **Done** button to exit and return to menu. Press **Next** to navigate to the next setting.*		

11-HD16D1-1E-EN

USER SETTINGS continued

The following is a guide of the menu options available by pressing the *Menu* button. Certain menu selections, which are marked by an asterisk (*), may or may not be present depending on other menu settings.

SCHEDULES		
Setting	**Range / Sub Settings**	**Description / Range of Sub Settings**
ESM Heat Setpoint*	55 - 90 degrees [62]	Select the desired Heating Setpoint when ESM (Energy Savings Mode) is selected
ESM Cooling Setpoint*	60 - 99 degrees [85]	Select the desired Cooling Setpoint when ESM is selected
Edit Schedule*	Select Day (use Back/Next) Wake Period	This section is done for each day Set Time [6:00 am] Heat Setpoint 60˚- 90˚ [70] Cool Setpoint 60˚- 90˚ [78]
	Day Period	Set Time [8:00 am] Heat Setpoint 60˚- 90˚ [62] Cool Setpoint 60˚- 90˚ [85]
	Eve Period	Set Time [6:00 pm] Heat Setpoint 60˚- 90˚ [70] Cool Setpoint 60˚- 90˚ [78]
	Night Period	Set Time [10:00 pm] Heat Setpoint 60˚- 90˚ [62] Cool Setpoint 60˚- 90˚ [78]
Copy Schedule*	Copy from (use Back/Next) Select day to copy Copy (day selected) To	Copy selected day to current schedule period.
Smart Recovery*	Yes, [No]	
*Once all selections have been made, press the **Done** button to exit and return to menu. Press **Next** to navigate to the next setting.*		

DISPLAY		
Setting	**Range**	**Description**
Backlight On	0 - [100] percent	Select the screen brightness level when the backlight is lit
Backlight Off	[0] - 100 percent	Select the screen brightness level when the backlight timeout expires
Display Lock	[Unlocked], Display lock	Select security level • Unlocked - Enables selection of all menus and settings • Display Lock - Disables selection of all menus and settings *Note: When Display Lock is selected a lock icon will appear next to the up arrow.* *Note: To disable Display Lock, press and hold the **Menu** button 5 seconds until the lock icon disappears.*
*Once all selections have been made, press the **Done** button to exit and return to menu. Press **Next** to navigate to the next setting.*		

CALIBRATE SENSORS		
Setting	**Range**	**Description**
Sensor Cal	+/- 7 degrees (F or C) [0 deg]	Calibrate the internal temperature sensor (1˚ in F = 2˚ in C)
Remote Sensor Cal*	+/- 7 degrees (F or C) [0 deg]	Calibrate an attached remote sensor
ODT Sensor Cal*	+/- 7 degrees (F or C) [0 deg]	Calibrate an attached outdoor sensor
RH Cal	+/- 7 % [0 %]	Calibrate the internal humidity sensor
*Once all selections have been made, press the **Done** button to exit and return to menu. Press **Next** to navigate to the next setting.*		

WIFI

Even though open networks (no password) and WEP WiFi encryption are supported, it is recommended to use a more secure network encryption such as WPA2 or later.

WIFI		
Setting	**Range**	**Description**
Network	Join a Network OR leave network	Network connection action required: Yes, No
Status	WiFi not configured OR Nexia enrolled	Status of Network connection
Connection Result	WiFi not configured OR Success	Status of WiFi connection
Info	SPWF FW	Firmware version displayed
	SSID	Not Available **OR** Network Name displayed
	IP	Not Available **OR** IP Address displayed
	Mask	Not Available **OR** Mask displayed
	GW	Not Available **OR** Gateway IP address displayed
	DNS	Not Available **OR** DNS IP address displayed
	MAC	Not Available **OR** MAC address displayed
Retries	Retries (X)	Number of connection retries
Connection Time	Disconnected OR X hours	Connection hours
RSSI	RSSI – xx DBM	Connection signal strength
*Once all selections have been made, press the **Done** button to exit and return to menu. Press **Next** to navigate to the next setting.*		

NEXIA

NEXIA		
Setting	**Range**	**Description**
Status	WiFi Not Configured Enrolled	WiFi connection status
Info	URL (XXXX) Port (XXXXX) Nexia Pin (XXXX)	Nexia connection info
Enroll OR Unenroll	Enroll, Unenroll	Join OR leave a Nexia connection
*Once all selections have been made, press the **Done** button to exit and return to menu. Press **Next** to navigate to the next setting.*		

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SILVER 724 USER GUIDE

The following is a guide of the menu options available on screen accessed by pressing the *Menu* button. Certain menu selections, which are marked by an asterisk (*), may or may not be present depending on other menu settings.

SERVICE

Press and hold *Service* button for 5 seconds until service menu is displayed

INSTALLER SETTINGS		
Setting	**Sub Settings**	**Range**
Equipment Type	ODU Type (Outdoor Unit)	None, [AC], HP
	ODU Stages	[1 Stage], 2 Stages
	Compressor Type*	[1 Comp - 2 Stage], 2 Comp - 2 Stage
	IDU Type	[Gas / Oil], Electric, Hydronic
	Hydronic Type*	[Hydro Air], Wet Heat
	ID Heat Stages	[1 Stage], 2 Stages
	ID Fan Type	[Non-Variable], Variable
	SOV Operation*	[with Cool], With Heat
Sensor Settings	Remote Sensor	[None], Replace Indoor, Average
	ODT Sensor	[None], Outdoor
Accessories	Aux Relay	[None], Humidity, Ventilation, Dehumidifier
	Control Option*	[With Active Heat], Without Active Heat
	Vent Run Time*	[Off], 5 - 60 min in 5 min increments
Comfort Settings	Control Response	[Normal], Less Aggressive, More Aggressive (see page 9 for definitions)
	Dehumidify*	[Yes], No
	Overcooling Limit*	[Off], 1 deg, 2 deg, 3 deg
	Smart Cont Fan*	[No], Yes
Airflow Settings	One of the following groups will be displayed	
Fan type = Non Variable	On Delay Cooling	[0], 5-90 Sec in 5 sec increments
	Off Delay Cooling	[0], 5-90 Sec in 5 sec increments
	On Delay Heating*	[0], 5-90 Sec in 5 sec increments
	Off Delay Heating*	[0], 5-90 Sec in 5 sec increments
Fan type = Variable	On Delay Cooling	Disabled, [Enhanced Mode], 30 sec delay
	Off Delay Cooling	Disabled, [1.5 Min at 100%], 45 sec delay
	On Delay Heating*	Disabled, [Enhanced Mode], 30 sec delay
	Off Delay Heating*	Disabled, [1.5 Min at 100%], 45 sec delay
Hydronic Type = Hydro Air	On Delay Heat	[0], 5-90 Sec in 5 sec increments
	Off Delay Heat	[0], 5-90 Sec in 5 Sec increments
Lockouts*	Aux Heat	[No], Yes
	Aux Lockout ODT*	30 - 70 Deg [50 Deg]
	Comp Heat	[No], Yes
	Comp Lockout ODT*	5 - 70 Deg, [40 Deg]
*Once all selections have been made, press the **Done** button to exit and return to menu. Press **Next** to navigate to the next setting.*		

SERVICE continued

The following is a guide of the menu options available on screen accessed by pressing the *Menu* button. Certain menu selections, which are marked by an asterisk (*), may or may not be present depending on other menu settings.

TEST MODE   (stays on for 30 minutes)

Test Mode	Settings	Description
Blower (Non-VS)	Blower On	Energize "G" circuit
Blower (VS)	50%, 100%	Energize "G" and "BK" circuit
Cooling	Single Stage, 1st Stage, 2nd Stage	Energize selected "Y1" or "Y2", "O" and "G" circuit (BK also for VS indoor unit)
Comp Heating*	Single Stage, 1st Stage, 2nd Stage	Energize selected "Y1" or "Y2" and "G" circuit ("BK" also for VS indoor unit)
Indoor Heating	Single Stage, 1st Stage, 2nd Stage	Energize selected "W1" or "W2" ("G" circuit also for electric heat)
Aux Relay	Relay On	Close normally open dry contacts
*Once testing is complete, press the **Done** button to exit and return to menu.*		

REMINDERS

Setting	Range	Description
Filtration Enable	[No], Yes	Filter change reminder
Filter Period*	[Monthly], Quarterly, Bi-Annually, Annually	Filter change reminder period
Start Month*	[Jan], Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	Period start month
System Maint Enable	[No], Yes	System Maintenance reminder
Maint Period*	[Bi-Annually], Annually	Maintenance reminder period
First Maint Month*	Jan, Feb, [Mar], Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	Period start month
Second Maint Month*	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, [Sep], Oct, Nov, Dec	2nd period start month
Humidifier Enable	[Yes], No	
Start Month	[Jan], Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	
*Once all selections have been made, press the **Done** button to exit and return to menu. Press **Next** to navigate to the next setting.*		

RESTORE DEFAULTS

Setting	Action	Description
Restore HVAC Defaults	Yes, No	Resets all HVAC settings to Default Settings
Restore Factory Defaults	Press and Hold "**Yes**"	Press and hold "**Yes**" button until "Factory" is displayed Resets HVAC and WiFi defaults

ABOUT

Setting	Range	Description
Version	XXXXXX	Firmware version number
Device ID (SIN)	XXXXXX	Unit serial number
ODU Type	None, AC, HP	Outdoor unit type setting
IDU Type	Electric, Gas/Oil, Hydronic	Indoor unit type setting
SOV	W/Cool, W/Heat	Switchover value type setting (HP only)
*Once all selections have been made, press the **Done** button to exit and return to menu. Press **Next** to navigate to the next setting.*		

CLEAN SCREEN

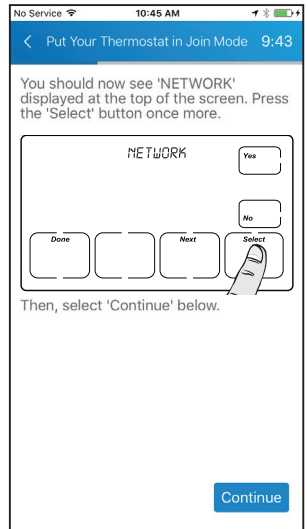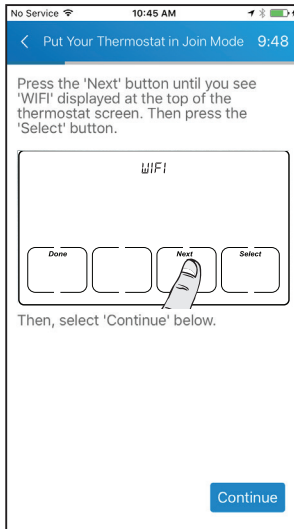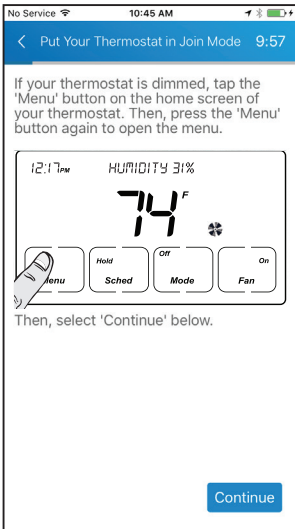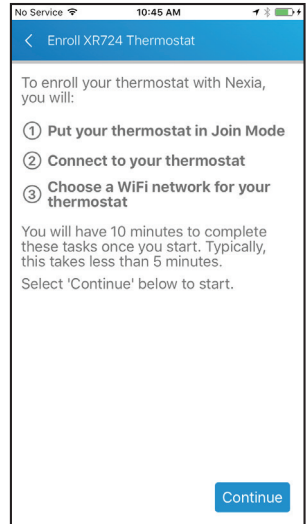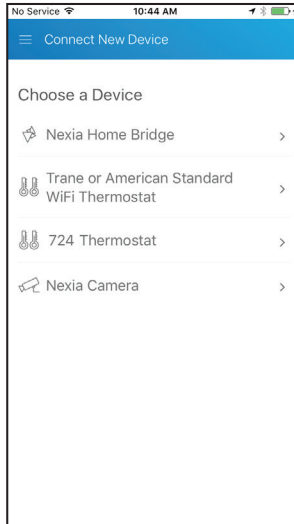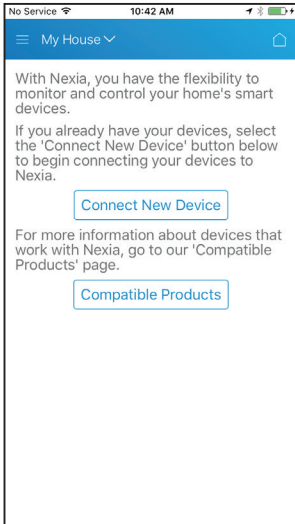| Setting	Range	Description
Clean Screen	Yes, No	30 sec countdown
*Once all selections have been made, press the **Done** button to exit and return to menu. Press **Next** to navigate to the next setting.*		

Silver 724 Control Response Profiles

From Installer Settings / Comfort Settings *(numbers are in degrees, F or C)*

Cooling	Normal	Less Aggressive	More Aggressive
Cooling Delta Stage 1 ON	0.5	1	0.5
Cooling Delta Stage 2 ON	1.5	2	1
Cooling Delta Stage 1 OFF	-0.5	0	-1.0
Cooling Delta Stage 2 OFF	-0.5	0	-1.0
Heating - HP	**Normal**	**Less Aggressive**	**More Aggressive**
Comp Heat Delta Stage 1 ON	0.5	1	0.5
Comp Heat Delta Stage 2 ON	1.5	2	1.0
Indoor Heat Delta Stage 1 ON	2.5	3	1.5
Indoor Heat Delta Stage 2 ON	3.5	4	2.0
Comp Heat Delta Stage 1 OFF	0	0	0
Comp Heat Delta Stage 2 OFF	0	0	0
Indoor Heat Delta Stage 1 OFF	0	0	0
Indoor Heat Delta Stage 2 OFF	0	0	0
Heating - Gas	**Normal**	**Less Aggressive**	**More Aggressive**
Indoor Heat Delta Stage 1 ON	0.5	1	0.5
Indoor Heat Delta Stage 2 ON	1.5	2	1.0
Indoor Heat Delta Stage 1 OFF	0	0	0
Indoor Heat Delta Stage 2 OFF	0	0	0
Timers	**Normal**	**Less Aggressive**	**More Aggressive**
Heat Stage UP Timer	15 min	20 min	10 min
Cool Stage UP Timer	15 min	20 min	10 min

Silver 724 NEXIA Enrollment

The Silver 724 uses the Nexia mobile app to enroll into Nexia. To enroll download the Nexia app from the Google Play™ Store or App Store®, then launch the app. Once in the app, click **Connect New Device, select 724 thermostat** then follow installation wizard prompts.

Silver 724 NEXIA Enrollment continued

Even though open networks (no password) and WEP WiFi encryption are supported, it is recommended to use a more secure network encryption such as WPA2 or later.

No Service 10:45 AM
‹ Put Your Thermostat in Join Mode 9:38

'JOIN A NETWORK' should now be displayed at the top of your thermostat screen. Press the 'Yes' button.

JOIN A NETWORK   Yes
                 No
Done

Then, select 'Continue' below.

Continue

No Service 10:45 AM
‹ Put Your Thermostat in Join Mode 9:30

Wait until the message at the top of your thermostat screen changes from 'WAIT' to ' 724'.
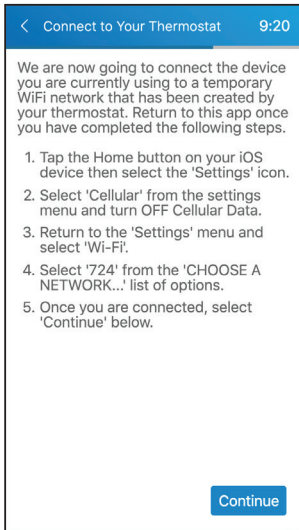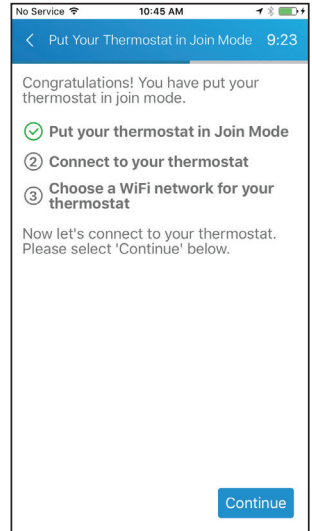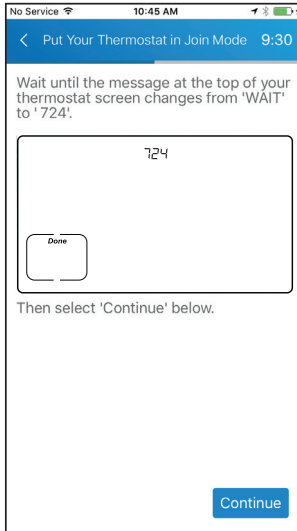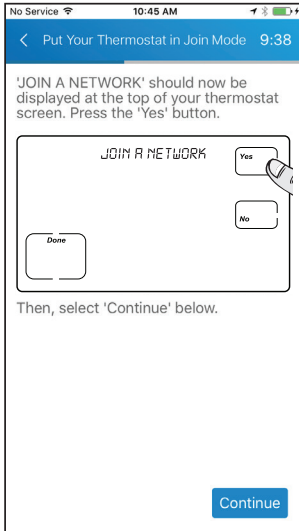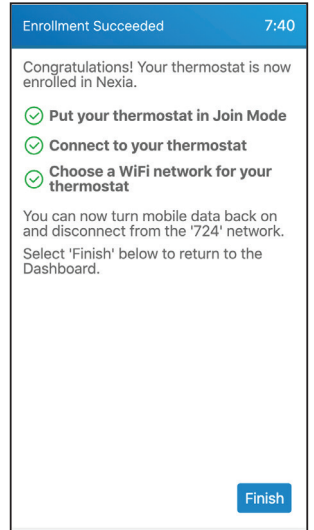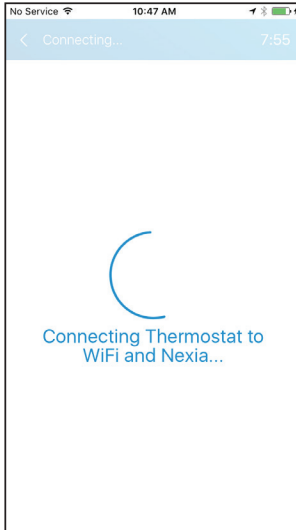
724
Done

Then select 'Continue' below.

Continue

No Service 10:45 AM
‹ Put Your Thermostat in Join Mode 9:23

Congratulations! You have put your thermostat in join mode.

✓ Put your thermostat in Join Mode

② Connect to your thermostat

③ Choose a WiFi network for your thermostat

Now let's connect to your thermostat. Please select 'Continue' below.

Continue

‹ Connect to Your Thermostat 9:20

We are now going to connect the device you are currently using to a temporary WiFi network that has been created by your thermostat. Return to this app once you have completed the following steps.

1. Tap the Home button on your iOS device then select the 'Settings' icon.
2. Select 'Cellular' from the settings menu and turn OFF Cellular Data.
3. Return to the 'Settings' menu and select 'Wi-Fi'.
4. Select '724' from the 'CHOOSE A NETWORK...' list of options.
5. Once you are connected, select 'Continue' below.

Continue

No Service 10:46 AM
‹ Settings Wi-Fi

Wi-Fi ⬤

✓ 724
Security Recommendation

PERSONAL HOTSPOTS

White iPhone 6 ●○○○○ LTE

CHOOSE A NETWORK...

acus_11 5GHz 🔒 🔐 ⓘ
acus11 🔒 🔐 ⓘ
asus-support 🔒 🔐 ⓘ
asus-support_5G 🔒 🔐 ⓘ
asus-support_5G-2 🔒 🔐 ⓘ
boom 🔒 🔐 ⓘ
boom5 🔒 🔐 ⓘ

No Service 10:46 AM
‹ Connect to Your Thermostat 8:32

Your thermostat will now display a connection key on its screen.

You will need to enter this connection key into your device.

C759557516
Done

Select 'Continue' below to enter the key.

Continue

Silver 724 NEXIA Enrollment continued

No Service	10:46 AM	
‹ Connect to Your Thermostat		8:29

Enter Connection Key

○○○○○○○○○○○○

0	1	2	3
4	5	6	7
8	9	A	B
C	D	E	F
			⌫

No Service	10:46 AM	
‹ Connect to Your Thermostat		8:14

Congratulations! Your mobile device is now connected to your thermostat.

⊘ **Put your thermostat in Join Mode**

⊘ **Connect to your thermostat**

③ **Choose a WiFi network for your thermostat**

Please select 'Continue' below to set up your thermostat's WiFi connection.

[Continue]

No Service	10:46 AM	
‹ Choose a WiFi Network For Your ...		8:10

Please choose a WiFi network for your thermostat to connect to:

secure1120-edge-I

acus11

StnExternal

nexia_test_1

StnInternal

StnGuest

myhomenet

asus-support

boom

pluto5

No Service	10:47 AM	
‹ Choose a WiFi Network For Your...		8:05

Please choose a WiFi network for your thermostat to connect to:

secure1120-edge-I

acus11

Please enter the WiFi password for myhomenet

[Password] 👁

[Connect] [Cancel]

nexia_24

asus-support

boom

pluto5

No Service	10:47 AM	
‹ Connecting...		7:55

Connecting Thermostat to WiFi and Nexia...

Enrollment Succeeded		7:40

Congratulations! Your thermostat is now enrolled in Nexia.

⊘ **Put your thermostat in Join Mode**

⊘ **Connect to your thermostat**

⊘ **Choose a WiFi network for your thermostat**

You can now turn mobile data back on and disconnect from the '724' network.

Select 'Finish' below to return to the Dashboard.

[Finish]

Silver 724 NEXIA Enrollment continued

Silver 724 Nexia WiFi Reconfiguration

PRESS

PRESS

Silver 724 Nexia WiFi Reconfiguration continued

Panel 1

No Service | 11:25 AM

‹ Disconnect Thermostat from Network

If your thermostat is dimmed, tap the 'Menu' button on the home screen of your thermostat. Then, press the 'Menu' button again to open the menu.

12:17PM   HUMIDITY 31%

74 F

Menu | Hold | Sched | Off | Mode | Fan | On

Then, select 'Continue' below.

Continue

Panel 2

No Service | 11:25 AM

‹ Disconnect Thermostat from Network

Press the 'Next' button until you see 'WIFI' displayed at the top of the thermostat screen. Then press the 'Select' button.

WIFI

Done | Next | Select

Then, select 'Continue' below.

Continue

Panel 3

No Service | 11:25 AM

‹ Disconnect Thermostat from Network

You should now see 'NETWORK' displayed at the top of the screen. Press the 'Select' button once more.

NETWORK

Done | Next | Select

Then, select 'Continue' below.

Continue

Panel 4

No Service | 11:25 AM

‹ Disconnect Thermostat from Network

'Leave Network' should now be displayed along the top of your thermostat screen. Press the 'Yes' button.

LEAVE NETWORK | Yes

No

Done

Then, select 'Continue' below.

If 'Leave Network' is not displayed, skip this step.

Continue

Panel 5

No Service | 11:25 AM

‹ Disconnect Thermostat from Network

Congratulations! You have disconnected your thermostat from the network.

✓ **Disconnect your thermostat from the current network**

② **Put your thermostat in Join Mode**

③ **Connect to your thermostat**

④ **Choose a WiFi network for your thermostat**

Please select 'Continue' below to put your thermostat into Join Mode.

Continue

Panel 6

No Service | 11:25 AM

‹ Put Your Thermostat in Join Mode

You should now see 'NETWORK' displayed at the top of the screen. Press the 'Select' button once more.

NETWORK

Done | Next | Select
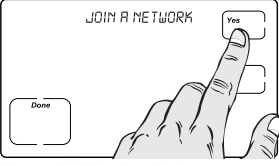
Then, select 'Continue' below.

If 'Leave Network' was not displayed in a previous step, skip this step.

Continue

Silver 724 Nexia WiFi Reconfiguration continued

No Service 📶   11:26 AM   ⚡ ✳ 🔋

<   Put Your Thermostat in Join Mode

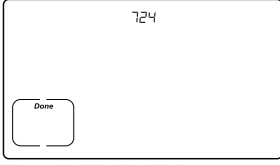'JOIN A NETWORK' should now be displayed at the top of your thermostat screen. Press the 'Yes' button.

JOIN A NETWORK   [Yes]

[Done]

Then, select 'Continue' below.

[Continue]

No Service 📶   11:26 AM   ⚡ ✳ 🔋

<   Put Your Thermostat in Join Mode

Wait until the message at the top of your thermostat screen changes from 'WAIT' to '724'.

724

[Done]

Then select 'Continue' below.

[Continue]

No Service 📶   11:26 AM   ⚡ ✳ 🔋

<   Put Your Thermostat in Join Mode

Congratulations! You have put your thermostat in join mode.

⊘   **Disconnect your thermostat from the current network**

⊘   **Put your thermostat in Join Mode**

③   **Connect to your thermostat**

④   **Choose a WiFi network for your thermostat**

Please select 'Continue' below to connect to your thermostat.

[Continue]

<   Connect to Your Thermostat

We are now going to connect the device you are currently using to a temporary WiFi network that has been created by your thermostat. Return to this app once you have completed the following steps.

1. Tap the Home button on your iOS device then select the 'Settings' icon.
2. Select 'Cellular' from the settings menu and turn OFF Cellular Data.
3. Return to the 'Settings' menu and select 'Wi-Fi'.
4. Select '724' from the 'CHOOSE A NETWORK...' list of options.
5. Once you are connected, select 'Continue' below.

[Continue]

No Service 📶   11:26 AM   ⚡ ✳ 🔋

< Settings   **Wi-Fi**

Wi-Fi   🟢

⟳ 724   📶 ⓘ

PERSONAL HOTSPOTS

White iPhone 6   ●○○○○ LTE 🔋

CHOOSE A NETWORK... ⟳

asus-support_5G   🔒 📶 ⓘ

boom   🔒 📶 ⓘ

myhomenet   🔒 📶 ⓘ

nexia_test_1   🔒 📶 ⓘ

nexia_test_1 5GHz   🔒 📶 ⓘ

secure1120-edge-l   🔒 📶 ⓘ

StnExternal   🔒 📶 ⓘ

StnGuest   📶 ⓘ

No Service 📶   11:26 AM   ⚡ ✳ 🔋

<   Connect to Your Thermostat

Your thermostat will now display a connection key on its screen.

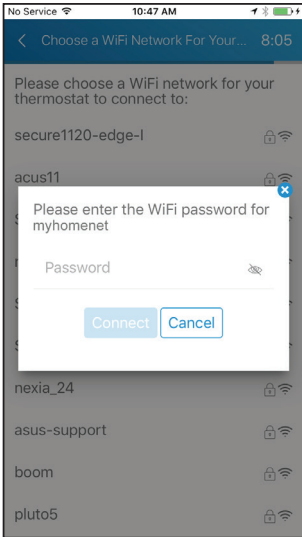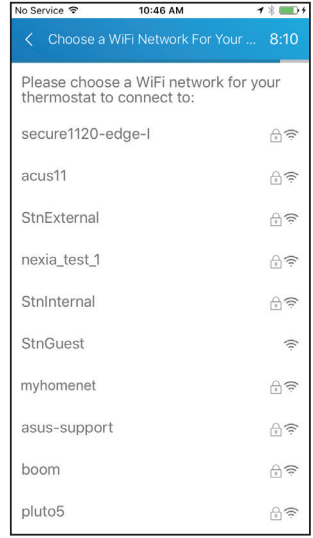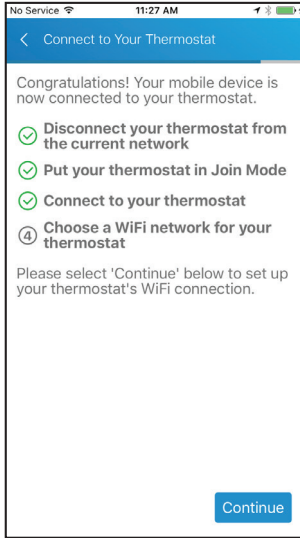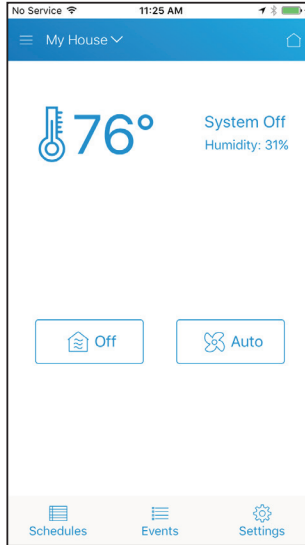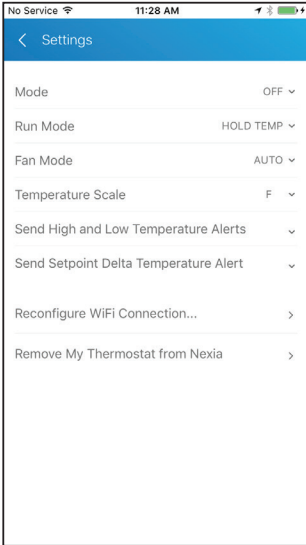You will need to enter this connection key into your device.

C759557516

[Done]

Select 'Continue' below to enter the key.

[Continue]

Silver 724 Nexia WiFi Reconfiguration continued

Screen 1

No Service 11:26 AM

< Connect to Your Thermostat

Enter Connection Key

○○○○○○○○○○○

0	1	2	3
4	5	6	7
8	9	A	B
C	D	E	F
			⌫

Screen 2

No Service 11:27 AM

< Connect to Your Thermostat

Congratulations! Your mobile device is now connected to your thermostat.

⊘ **Disconnect your thermostat from the current network**

⊘ **Put your thermostat in Join Mode**

⊘ **Connect to your thermostat**

④ **Choose a WiFi network for your thermostat**

Please select 'Continue' below to set up your thermostat's WiFi connection.

Continue

Screen 3

No Service 10:46 AM

< Choose a WiFi Network For Your ... 8:10

Please choose a WiFi network for your thermostat to connect to:

secure1120-edge-I 🔒📶

acus11 🔒📶

StnExternal 🔒📶

nexia_test_1 🔒📶

StnInternal 🔒📶

StnGuest 📶

myhomenet 🔒📶

asus-support 🔒📶

boom 🔒📶

pluto5 🔒📶

Screen 4

No Service 10:47 AM

< Choose a WiFi Network For Your... 8:05

Please choose a WiFi network for your thermostat to connect to:

secure1120-edge-I 🔒📶

acus11 🔒📶

✕
Please enter the WiFi password for myhomenet

Password 👁

Connect Cancel

nexia_24 🔒📶

asus-support 🔒📶

boom 🔒📶

pluto5 🔒📶

Screen 5

No Service 11:27 AM

< Connecting...

◯

Connecting thermostat to new network...

Screen 6

WiFi Successfully Reconfigured

Congratulations! Your thermostat is now connected to myhomenet.

⊘ **Disconnect your thermostat from the current network**

⊘ **Put your thermostat in Join Mode**

⊘ **Connect to your thermostat**

⊘ **Choose a WiFi network for your thermostat**

You can now turn mobile data back on and disconnect from the '724' network. Select 'Finish' below.

Finish

Silver 724 Nexia WiFi Reconfiguration continued

No Service 🗑	11:28 AM	⏱ ∦ ▰▰
‹ Settings		

Mode	OFF ⌄
Run Mode	HOLD TEMP ⌄
Fan Mode	AUTO ⌄
Temperature Scale	F ⌄
Send High and Low Temperature Alerts	⌄
Send Setpoint Delta Temperature Alert	⌄
Reconfigure WiFi Connection...	›
Remove My Thermostat from Nexia	›

No Service 🗑	11:25 AM	⏱ ∦ ▰▰
☰ My House ⌄		⌂

🌡 76°

System Off
Humidity: 31%

⌂ Off   ❄ Auto

Schedules   Events   Settings
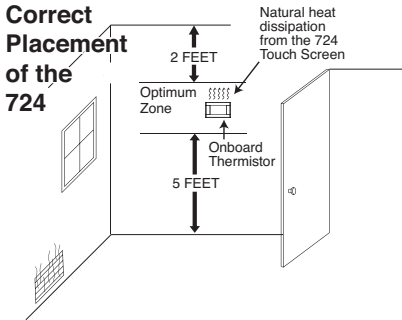
INSTALLATION AND WIRING

⚠ 🔲 MERCURY NOTICE

When this Comfort Control is replacing an old thermostat that contains mercury in a sealed tube, do not dispose of your old thermostat in the trash. Dispose of properly. Contact your local waste management authority for instructions regarding recycling and proper disposal of the old thermostat.

A listing of heating, ventilating and air conditioning wholesalers that participate in the Thermostat Recycling Corporation's recycling program are available at www.thermostat-recyle.org.

PHYSICAL LOCATION

Temperature Sensing Considerations

The Silver 724 Control is designed for installation in climate controlled living spaces. It is recommended to place the unit in central locations with good circulation. Avoid exterior walls and areas near windows, doors, vents or concealed pipes
or chimneys.

Correct Placement of the 724

Natural heat dissipation from the 724 Touch Screen

2 FEET

Optimum Zone

Onboard Thermistor

5 FEET

Incorrect Placement of the 724

Ceiling Fan

Heat from the 724 screen may be trapped within the body of the 724 control by an external top-down airflow source, such as a ceiling fan.

The onboard thermistor may be biased by this heat causing the displayed indoor temperature to be elevated.

1

⚠️ CAUTION: ELECTRICAL HAZARD

**CAUTION: Before proceeding with installation, verify system power has been removed.**

Separate the face of the new Comfort Control from the wall plate.

➔ **NOTE:** It is not recommended that this WiFi Comfort Control be mounted onto metal structures. Metal may adversely affect the radio frequency (RF) communication between the Comfort Control and the WiFi network .
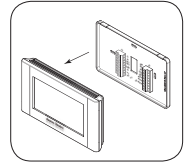
2

Mark two mounting holes using new wall plate.
- Pull wires through hole in center of wall plate.
- Locate the new wall plate over existing opening.
- Mark two holes with pencil.
- Use a level to verify that the two hole locations are level.
- Correct hole locations as needed.
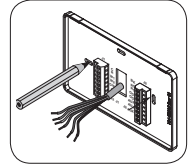
3

Install new wall plate.
- Pull wires through hole in center of wall plate.
- Locate the new wall plate over existing opening.
- Attach wall plate to wall using two screws provided. Do not overtighten.
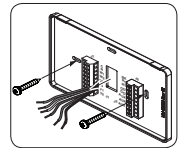
4

Attach all wires securely to the new Comfort Control.
(See the Field Wiring Diagrams on the following pages.)
Note: A wire must be connected to "C" to power the Comfort Control.
- Use the information from the Field Wiring Diagrams to match the wires to the correct terminals.
- Use 1/8" blade screwdriver to secure wires in terminals.
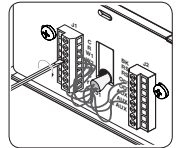
⚠️ CAUTION: EQUIPMENT DAMAGE HAZARD

Improper wiring can lead to equipment damage. Use the field wiring diagrams to ensure the Comfort Control is wired properly. After wires are secure, bare wires MUST NOT touch each other. See the Field

Connection Wiring Diagrams on the following pages for specific system applications.

5

Attach the Comfort Control face to the wall plate.
a. Carefully align the face plate to the wall plate while aligning pins into wire terminals.
b. Once Comfort Control face is properly aligned, apply pressure at top and bottom of
Comfort Control face until it is secure.
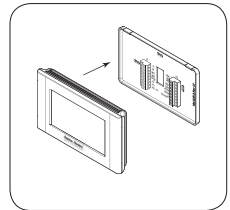
6

Turn power to heating and cooling system back on.
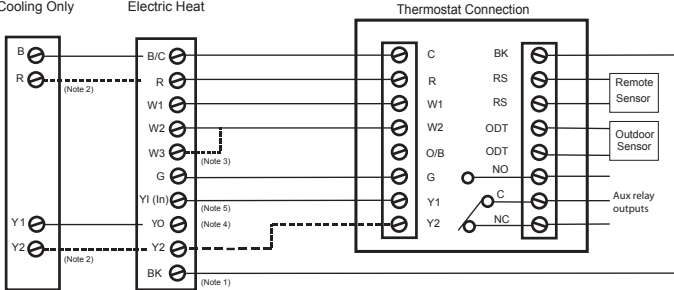The Comfort Control display should turn on and begin displaying information.
Proceed to Installer's Setup to configure system settings.

Field Wiring Diagrams

Heat/Cool Wiring Diagrams

Heat/Cool Diagram 1: 1 or 2 Stage Cooling w/TAM7 Model Variable Speed Air Handler or TAM9 24V mode

One or Two Stage Cooling Only | VS Air Handler & Electric Heat | Thermostat Connection

B	B/C	C	BK
R	R (Note 2)	R	RS	Remote Sensor
	W1	W1	RS
	W2	W2	ODT	Outdoor Sensor
	W3 (Note 3)	O/B	ODT
	G	G	NO
	YI (In) (Note 5)	Y1	C	Aux relay outputs
Y1	YO (Note 4)	Y2	NC
Y2 (Note 2)	Y2		
	BK (Note 1)		

Notes:
1. Cut/remove the factory installed "BK" jumper at the indoor unit
2. "Y2" & "R" connections at outdoor are only required for two stage units
3. Jumper "W2" to "W3" if three stages of indoor heat are available
4. "YI" and "YO" connections must be made as shown for freeze protection and internally mounted condensate overflow circuits to work properly
5. If third party condensate overflow switches are installed, they should be wired between "Y1" of the thermostat and "YI" of the airflow control board
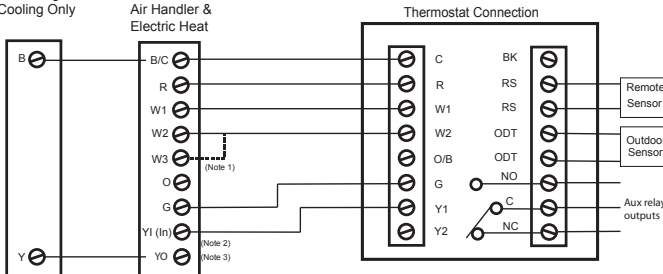
Remote Temperature Sensor Connections and Operation:
Sensor Options in the Installer Settings/Sensor Settings menu
Remote Sensor (connect to the RS terminals)
- None
- Replaces internal sensor
- Average with internal sensor
Outdoor Temp Sensor (connect to the ODT terminals)
- None
- Outdoor
Caution: Do not run sensor wires in the same bundle with HVAC wires. Keep away from high voltage wiring to avoid interference.

Heat/Cool Diagram 2: 1 Stage Cooling w/GAM5A & TAM4 Model Air Handler

One Stage Cooling Only | Non-VS Air Handler & Electric Heat | Thermostat Connection

| B | B/C | C | BK |
	R	R	RS	Remote Sensor
	W1	W1	RS
	W2	W2	ODT	Outdoor Sensor
	W3 (Note 1)	O/B	ODT
	O	G	NO
	G	Y1	C	Aux relay outputs
	YI (In) (Note 2)	Y2	NC
Y	YO (Note 3)		

Notes:
1. Jumper "W2" to "W3" if three stages of indoor heat are available
2. "YI" and "YO" connections must be made as shown for freeze protection and internally mounted condensate overflow circuits to work properly
3. If third party condensate overflow switches are installed, they should be wired between "Y" of the thermostat and "YI" of the airflow control board

Remote Temperature Sensor Connections and Operation:
Sensor Options in the Installer Settings/Sensor Settings menu
Remote Sensor (connect to the RS terminals)
- None
- Replaces internal sensor
- Average with internal sensor
Outdoor Temp Sensor (connect to the ODT terminals)
- None
- Outdoor
Caution: Do not run sensor wires in the same bundle with HVAC wires. Keep away from high voltage wiring to avoid interference.

Heat/Cool Wiring Diagrams

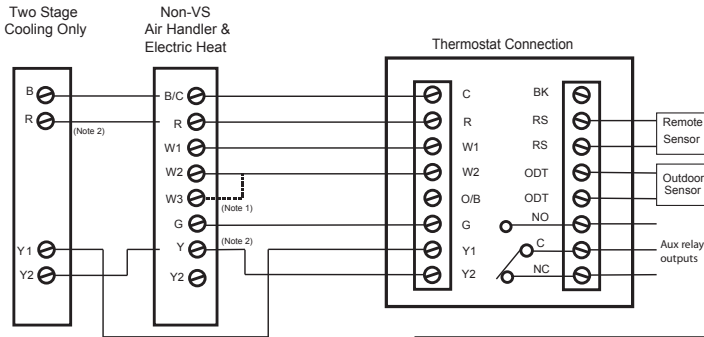### Heat/Cool Diagram 3: 1 Stage Cooling w/GAM5B Model Air Handler
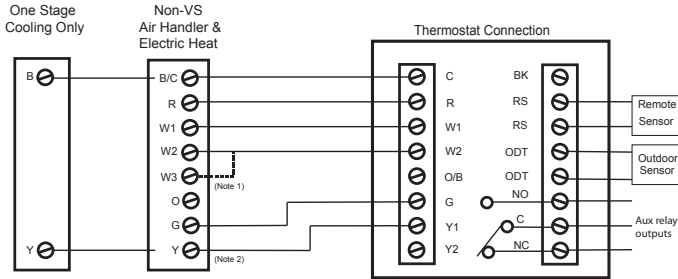
Notes:
1. Jumper "W2" to "W3" if three stages of indoor heat are available
2. "Y" terminal must be connected at indoor unit for cooling airflow.

Remote Temperature Sensor Connections and Operation:

Sensor Options in the Installer Settings/Sensor Settings menu
Remote Sensor (connect to the RS terminals)
- None
- Replaces internal sensor
- Average with internal sensor
Outdoor Temp Sensor (connect to the ODT terminals)
- None
- Outdoor
Caution: Do not run sensor wires in the same bundle with HVAC wires. Keep away from high voltage wiring to avoid interference.

Heat/Cool Diagram 4: 2 Stage Cooling w/GAM5B Model Air Handler

Notes:
1. Jumper "W2" to "W3" if three stages of indoor heat are available
2. "Y" must be connected at indoor unit for cooling airflow

Remote Temperature Sensor Connections and Operation:

Sensor Options in the Installer Settings/Sensor Settings menu
Remote Sensor (connect to the RS terminals)
- None
- Replaces internal sensor
- Average with internal sensor
Outdoor Temp Sensor (connect to the ODT terminals)
- None
- Outdoor
Caution: Do not run sensor wires in the same bundle with HVAC wires. Keep away from high voltage wiring to avoid interference.

Heat/Cool Wiring Diagrams

Heat/Cool Diagram 5: 1 Stage Cooling w/GAF2-S Model Air Handler

Remote Temperature Sensor Connections and Operation:

Sensor Options in the Installer Settings/Sensor Settings menu
Remote Sensor (connect to the RS terminals)
- None
- Replaces internal sensor
- Average with internal sensor
Outdoor Temp Sensor (connect to the ODT terminals)
- None
- Outdoor
Caution: Do not run sensor wires in the same bundle with HVAC wires. Keep away from high voltage wiring to avoid interference.

Heat/Cool Diagram 6: 1 Stage cooling w/GAF2-36M Model Air Handler
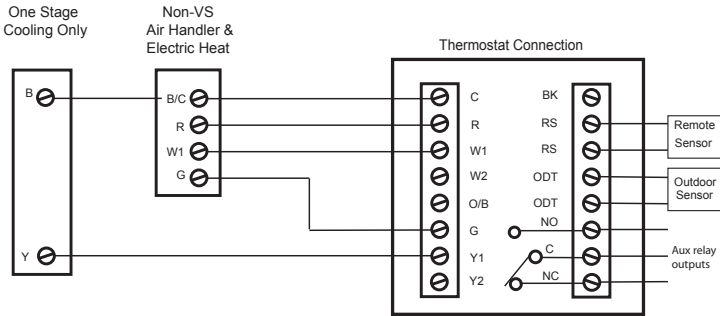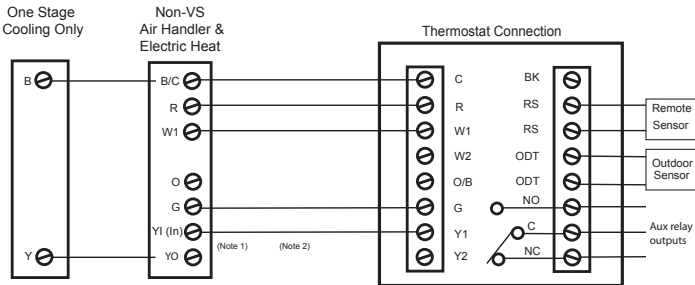

Notes:
1. "YI" and "YO" connections must be made as shown for freeze protection and internally mounted condensate overflow circuits to work properly
2. If third party condensate overflow switches are installed, they should be wired between "Y1" of the thermostat and "YI" of the airflow control board

Remote Temperature Sensor Connections and Operation:

Sensor Options in the Installer Settings/Sensor Settings menu
Remote Sensor (connect to the RS terminals)
- None
- Replaces internal sensor
- Average with internal sensor
Outdoor Temp Sensor (connect to the ODT terminals)
- None
- Outdoor
Caution: Do not run sensor wires in the same bundle with HVAC wires. Keep away from high voltage wiring to avoid interference.

Heat/Cool Wiring Diagrams

Heat/Cool Diagram 7: 1 Stage Cooling w/GAT2 & GAM2 Model Air Handlers

One Stage
Cooling Only

Non-VS
Air Handler &
Electric Heat

Thermostat Connection

B/C	C	BK
R	R	RS
W1	W1	RS
W2	W2	ODT
W3 (Note 1)	O/B	ODT
G	G	NO
	Y1	C
Y	Y2	NC

Remote Sensor

Outdoor Sensor

Aux relay outputs

Notes:
1. Jumper "W2" to "W3" if three stages of indoor heat are available

Remote Temperature Sensor Connections and Operation:

Sensor Options in the Installer Settings/Sensor Settings menu
Remote Sensor (connect to the RS terminals)
- None
- Replaces internal sensor
- Average with internal sensor
  Outdoor Temp Sensor (connect to the ODT terminals)
- None
- Outdoor
Caution: Do not run sensor wires in the same bundle with HVAC wires. Keep away from high voltage wiring to avoid interference.

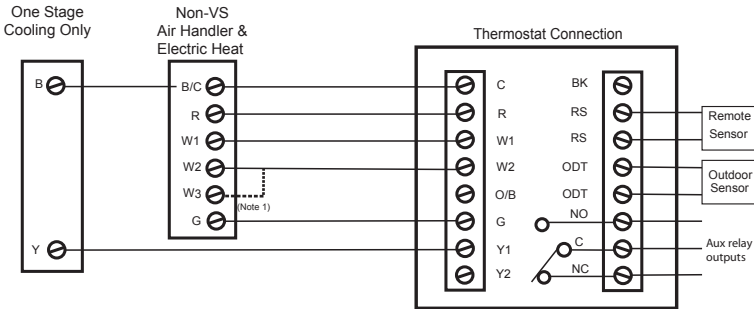### Heat/Cool Diagram 8: 1 Stage Cooling w/TEM3 Model Air Handler

One Stage
Cooling Only

Non-VS
Air Handler &
Electric Heat

Thermostat Connection

B/C	C	BK
R	R	RS
W1	W1	RS
W2	W2	ODT
W3 (Note 1)	O/B	ODT
G	G	NO
	Y1	C
Y	Y2	NC

Remote Sensor

Outdoor Sensor

Aux relay outputs

Notes:
1. Jumper "W2" to "W3" if three stages of indoor heat are available

Remote Temperature Sensor Connections and Operation:

Sensor Options in the Installer Settings/Sensor Settings menu
Remote Sensor (connect to the RS terminals)
- None
- Replaces internal sensor
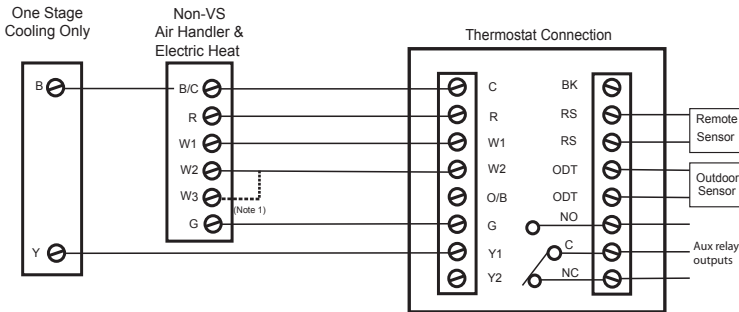- Average with internal sensor
Outdoor Temp Sensor (connect to the ODT terminals)
- None
- Outdoor
Caution: Do not run sensor wires in the same bundle with HVAC wires. Keep away from high voltage wiring to avoid interference.

Heat/Cool Wiring Diagrams

Heat/Cool Diagram 9: 1 or 2 Stage Cooling w/TEM8, TEM6 Variable Speed Air Handler

Notes:
1. Cut/remove the factory installed "BK" jumper at the indoor unit
2. "Y2" & "R" connections at outdoor are only required for two stage units
3. Jumper "W2" to "W3" if three stages of indoor heat are available
4. For non-Trane/American Standard Indoor units "BK" is not connected and "Y1"/"Y2" must be connected at indoor unit.

Remote Temperature Sensor Connections and Operation:

Sensor Options in the Installer Settings/Sensor Settings menu
Remote Sensor (connect to the RS terminals)
- None
- Replaces internal sensor
- Average with internal sensor
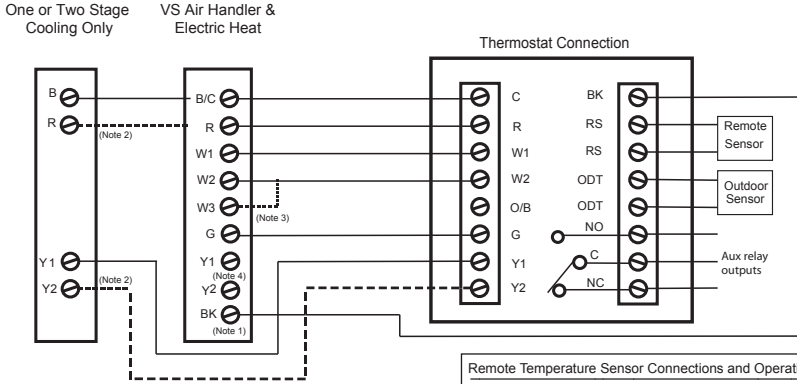Outdoor Temp Sensor (connect to the ODT terminals)
- None
- Outdoor
Caution: Do not run sensor wires in the same bundle with HVAC wires. Keep away from high voltage wiring to avoid interference.

Heat/Cool Diagram 10: 1 Stage Cooling w/non-Variable Speed Air Handler (Excludes Hyperion/Forefront/TEM3 Air Handlers)

Notes:
1. Jumper "W2" to "W3" if three stages of indoor heat are available

Remote Temperature Sensor Connections and Operation:

Sensor Options in the Installer Settings/Sensor Settings menu
Remote Sensor (connect to the RS terminals)
- None
- Replaces internal sensor
- Average with internal sensor
Outdoor Temp Sensor (connect to the ODT terminals)
- None
- Outdoor
Caution: Do not run sensor wires in the same bundle with HVAC wires. Keep away from high voltage wiring to avoid interference.

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Heat/Cool Wiring Diagrams

Heat/Cool Diagram 11: 1 Stage Cooling w/non-Variable Speed Gas Furnace

One Stage Cooling Only

One or Two Stage Gas Furnace

Thermostat Connection

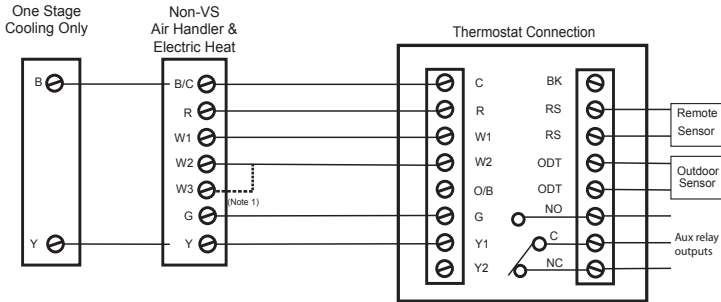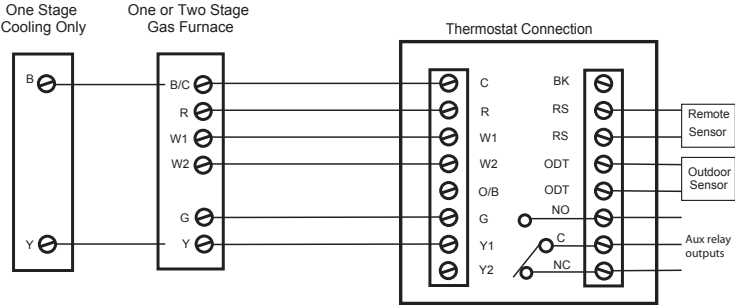| B | B/C | C | BK |
	R	R	RS
	W1	W1	RS	Remote Sensor
	W2	W2	ODT
		O/B	ODT	Outdoor Sensor
	G	G	NO
Y	Y	Y1	C	Aux relay outputs
		Y2	NC

Remote Temperature Sensor Connections and Operation:

Sensor Options in the Installer Settings/Sensor Settings menu
Remote Sensor (connect to the RS terminals)
- None
- Replaces internal sensor
- Average with internal sensor
Outdoor Temp Sensor (connect to the ODT terminals)
- None
- Outdoor
Caution: Do not run sensor wires in the same bundle with HVAC wires. Keep away from high voltage wiring to avoid interference.

Heat/Cool Diagram 12: 1 or 2 Stage Cooling w/Variable Speed Gas Furnace

One or Two stage Cooling Only

Two Stage VS Gas Furnace

Thermostat Connection

B	B/C	C	BK
R (Note 2)	R	R	RS
	W1	W1	RS	Remote Sensor
	W2	W2	ODT
		O/B	ODT	Outdoor Sensor
	G	G	NO
Y1	Y1 (Note 3)	Y1	C	Aux relay outputs
Y2 (Note 2)	Y2	Y2	NC
	BK (Note 1)		

Notes:
1. Cut/remove the factory installed "BK" jumper at the indoor unit
2. "Y2" & "R" connections at outdoor are only required for two stage units
3. For non-Trane/American Standard Indoor units "BK" is not connected and "Y1"/"Y2" must be connected at indoor unit.

Remote Temperature Sensor Connections and Operation:

Sensor Options in the Installer Settings/Sensor Settings menu
Remote Sensor (connect to the RS terminals)
- None
- Replaces internal sensor
- Average with internal sensor
Outdoor Temp Sensor (connect to the ODT terminals)
- None
- Outdoor
Caution: Do not run sensor wires in the same bundle with HVAC wires. Keep away from high voltage wiring to avoid interference.
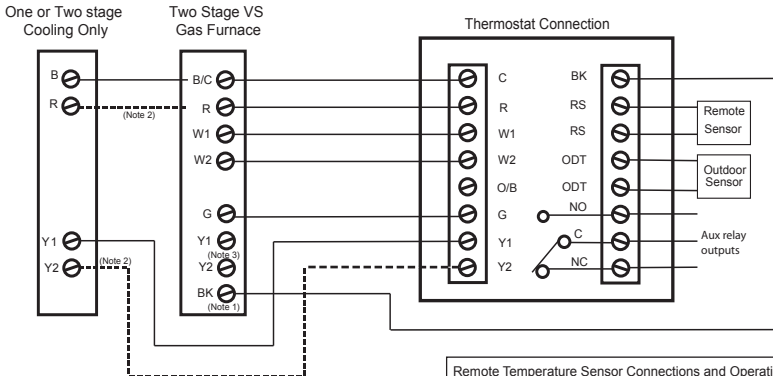
Heat/Cool Wiring Diagrams

Heat/Cool Diagram 13: 1 Stage Cooling w/non-Variable Speed Oil Furnace

Notes:
1. BT (Bonnet Thermostat) model THT1248
   required for dual fuel, oil furnace applications.
2. Field supplied relay (R1) required for oil burner primary

Remote Temperature Sensor Connections and Operation:

Sensor Options in the Installer Settings/Sensor Settings menu
Remote Sensor (connect to the RS terminals)
- None
- Replaces internal sensor
- Average with internal sensor
Outdoor Sensor (connect to the ODT terminals)
- None
- Outdoor
Caution: Do not run sensor wires in the same bundle with HVAC wires. Keep away from high voltage wiring to avoid interference.

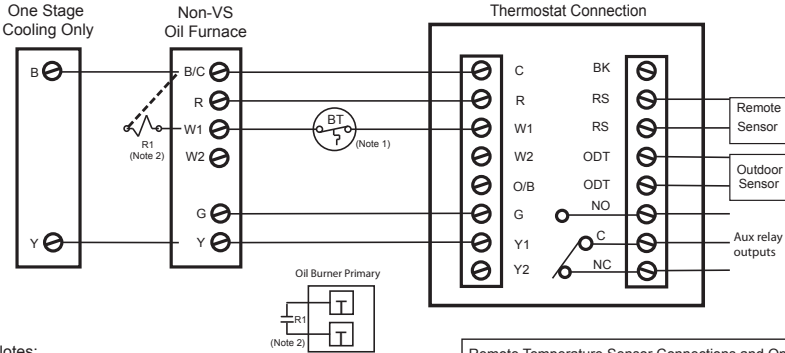### Heat/Cool Diagram 14: 1 or 2 Stage Cooling w/Variable Speed Oil Furnace

Notes:
1. Cut/remove the factory installed "BK" jumper at the indoor unit
2. "Y2" & "R" connections at outdoor unit are only required for 2 stage systems
3. For non-Trane/American Standard Indoor units "BK" is not connected and "Y1"/"Y2" must be connected at indoor unit.
4. BT (Bonnet Thermostat) model THT1248) required for dual fuel, oil furnace applications
5. Field supplied relay (R1) required for oil burner primary

Remote Temperature Sensor Connections and Operation:

Sensor Options in the Installer Settings/Sensor Settings menu
Remote Sensor (connect to the RS terminals)
- None
- Replaces internal sensor
- Average with internal sensor
Outdoor Temp Sensor (connect to the ODT terminals)
- None
- Outdoor
Caution: Do not run sensor wires in the same bundle with HVAC wires. Keep away from high voltage wiring to avoid interference.

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Heat/Cool Wiring Diagrams

Heat/Cool Diagram 15: Package Single or Multi-Stage Gas/Electric with Variable Speed Blower

Package Unit

Thermostat Connection

Package Unit	Thermostat		
B/C	C	BK	
R	R	RS	
W1	W1	RS	Remote Sensor
W2	W2	ODT	
O	O/B	ODT	Outdoor Sensor
G	G	NO	
Y1	Y1	C	Aux relay outputs
Y2	Y2	NC	
BK (Note 1) (Note 2)			

Notes:
1. Cut/remove the factory installed "BK" jumper on the ECM fan control board
2. For non-Trane/American Standard Indoor units "BK" is not connected

Remote Temperature Sensor Connections and Operation:

Sensor Options in the Installer Settings/Sensor Settings menu
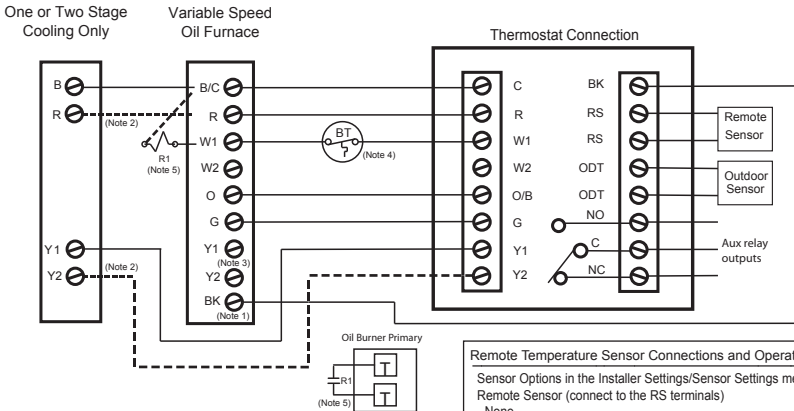Remote Sensor (connect to the RS terminals)
- None
- Replaces internal sensor
- Average with internal sensor
Outdoor Temp Sensor (connect to the ODT terminals)
- None
- Outdoor
Caution: Do not run sensor wires in the same bundle with HVAC wires. Keep away from high voltage wiring to avoid interference.

Heat/Cool Diagram 16: Package Single Stage Gas/Electric with non-Variable Speed Blower
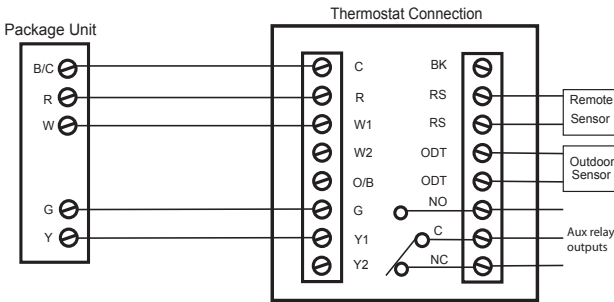
Thermostat Connection

Package Unit

Package Unit	Thermostat		
B/C	C	BK	
R	R	RS	
W	W1	RS	Remote Sensor
	W2	ODT	
	O/B	ODT	Outdoor Sensor
G	G	NO	
Y	Y1	C	Aux relay outputs
	Y2	NC	

Remote Temperature Sensor Connections and Operation:

Sensor Options in the Installer Settings/Sensor Settings menu
Remote Sensor (connect to the RS terminals)
- None
- Replaces internal sensor
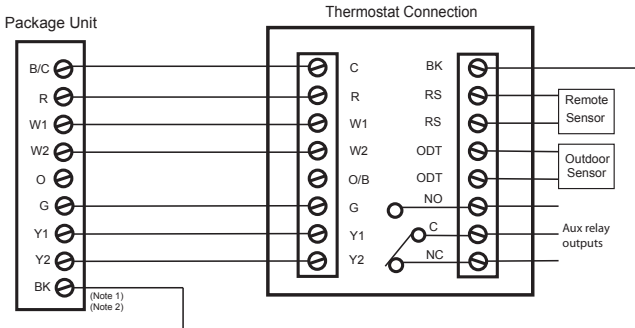- Average with internal sensor
Outdoor Temp Sensor (connect to the ODT terminals)
- None
- Outdoor
Caution: Do not run sensor wires in the same bundle with HVAC wires. Keep away from high voltage wiring to avoid interference.

Heat Pump Wiring Diagrams

Heat Pump Diagram 1: 1 or 2 Stage Heat Pump w/TAM7 Model Variable Speed Air Handler

Notes:
1. Cut/remove the factory installed "BK" jumper at the indoor unit
2. Jumper "W2" to "W3" if three stages of indoor heat are available
3. "YI" and "YO" connections must be made as show for freeze protection and internally mounted condensate overflow circuits to work properly
4. If 3rd party condensate overflow switches are installed, they should be wired between "Y1" of the thermostat and "YI" of the airflow control board

Remote Temperature Sensor Connections and Operation:

Sensor Options in the Installer Settings/Sensor Settings menu
Remote Sensor (connect to the RS terminals)
- None
- Replaces internal sensor
- Average with internal sensor
Outdoor Temp Sensor (connect to the ODT terminals)
- None
- Outdoor
Caution: Do not run sensor wires in the same bundle with HVAC wires. Keep away from high voltage wiring to avoid interference.

Heat Pump Diagram 2: 1 Stage Heat Pump w/GAM5A & TAM4 Model Air Handler

Notes:
1. Jumper "W2" to "W3" if three stages of indoor heat are available
2. "YI" and "YO" connections must be made as shown for freeze protection and internally mounted condensate overflow circuits to work properly.
3. If 3rd party condensate overflow switches are installed, they should be wired between "Y" of the thermostat and "YI" of the airflow control board.
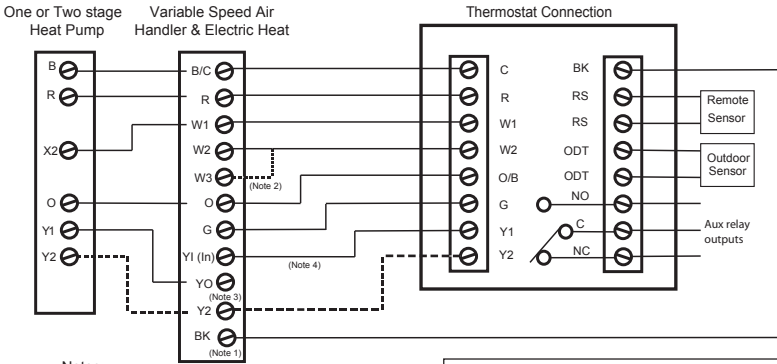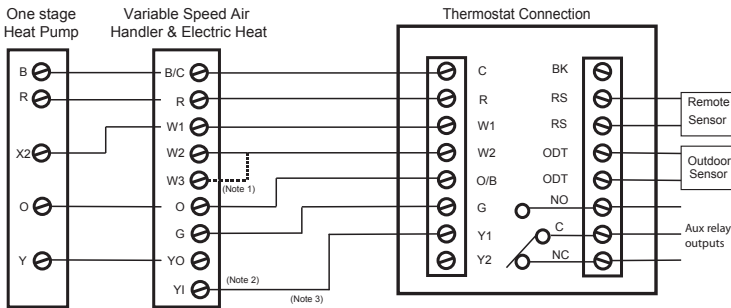
Remote Temperature Sensor Connections and Operation:

Sensor Options in the Installer Settings/Sensor Settings menu
Remote Sensor (connect to the RS terminals)
- None
- Replaces internal sensor
- Average with internal sensor
Outdoor Temp Sensor (connect to the ODT terminals)
- None
- Outdoor
Caution: Do not run sensor wires in the same bundle with HVAC wires. Keep away from high voltage wiring to avoid interference.

Heat Pump Wiring Diagrams

Heat Pump Diagram 3: 1 Stage Heat Pump w/GAM5B Model Air Handler

Notes:
1. Jumper "W2" to "W3" if three stages of indoor heat are available
2. "Y" terminal must be connected at indoor unit for cooling airflow

Remote Temperature Sensor Connections and Operation:

Sensor Options in the Installer Settings/Sensor Settings menu
Remote Sensor (connect to the RS terminals)
- None
- Replaces internal sensor
- Average with internal sensor
Outdoor Temp Sensor (connect to the ODT terminals)
- None
- Outdoor
Caution: Do not run sensor wires in the same bundle with HVAC wires. Keep away from high voltage wiring to avoid interference.

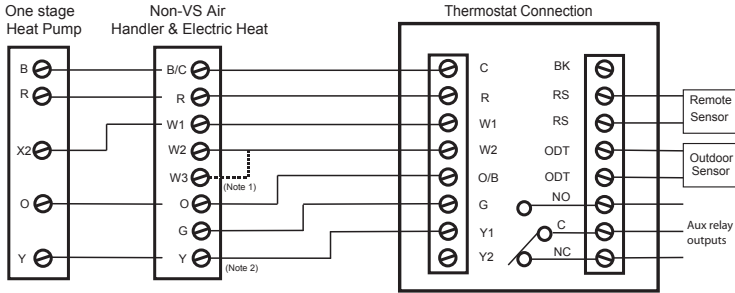### Heat Pump Diagram 4: 2 Stage Heat Pump w/GAM5B Model Air Handler

Notes:
1. Jumper "W2" to "W3" if three stages of indoor heat are available
2. "Y2" terminal must be connected at indoor unit for cooling airflow

Remote Temperature Sensor Connections and Operation:

Sensor Options in the Installer Settings/Sensor Settings menu
Remote Sensor (connect to the RS terminals)
- None
- Replaces internal sensor
- Average with internal sensor
Outdoor Temp Sensor (connect to the ODT terminals)
- None
- Outdoor
Caution: Do not run sensor wires in the same bundle with HVAC wires. Keep away from high voltage wiring to avoid interference.

Heat Pump Wiring Diagrams

Heat Pump Diagram 5: 1 Stage Heat Pump w/GAF2-S Model Air Handler


```
One stage          Non-VS Air Handler                Thermostat Connection
Heat Pump          & Electric Heat

B                  B/C                        C          BK
R                  R                          R          RS          Remote
X2                 W1                         W1         RS          Sensor
O                                             W2         ODT
Y                                             O/B        ODT         Outdoor
                                                                     Sensor
                   G                          G          NO
                                              Y1         C           Aux relay
                                              Y2         NC          outputs
```

Remote Temperature Sensor Connections and Operation:

Sensor Options in the Installer Settings/Sensor Settings menu
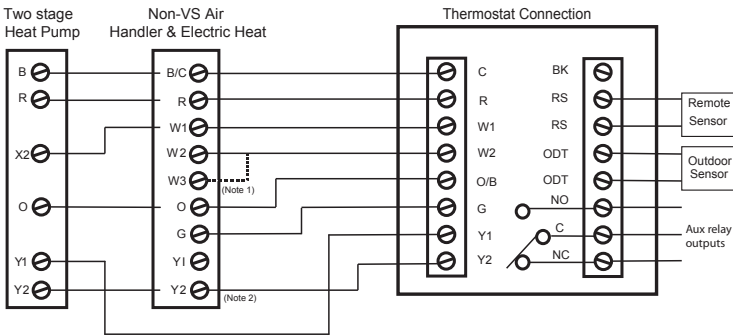Remote Sensor (connect to the RS terminals)
- None
- Replaces internal sensor
- Average with internal sensor
Outdoor Temp Sensor (connect to the ODT terminals)
- None
- Outdoor
Caution: Do not run sensor wires in the same bundle with HVAC wires. Keep away from high voltage wiring to avoid interference.

Heat Pump Diagram 6: 1 Stage Heat Pump w/GAF2-36M Model Air Handler


```
One stage          Non-VS Air Handler                Thermostat Connection
Heat Pump          & Electric Heat

B                  B/C                        C          BK
R                  R                          R          RS          Remote
X2                 W1                         W1         RS          Sensor
O                  O                          W2         ODT
                   O                          O/B        ODT         Outdoor
                   G                          G          NO          Sensor
                   YI  (Note 1)   (Note 2)    Y1         C           Aux relay
Y                  YO                         Y2         NC          outputs
```

Remote Temperature Sensor Connections and Operation:

Sensor Options in the Installer Settings/Sensor Settings menu
Remote Sensor (connect to the RS terminals)
- None
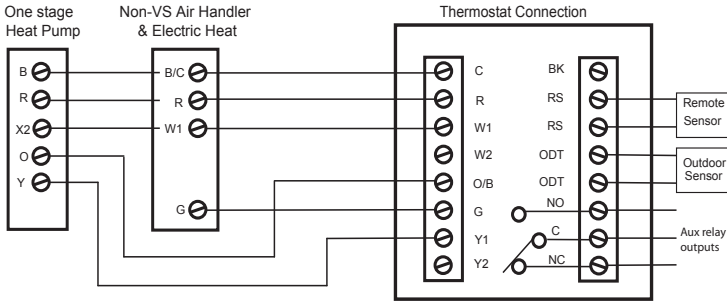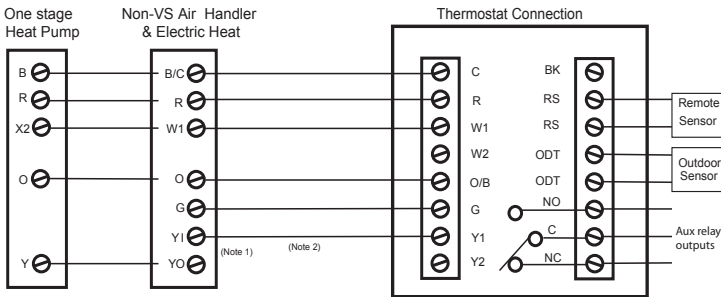- Replaces internal sensor
- Average with internal sensor
Outdoor Temp Sensor (connect to the ODT terminals)
- None
- Outdoor
Caution: Do not run sensor wires in the same bundle with HVAC wires. Keep away from high voltage wiring to avoid interference.

Notes:
1. "YI" and "YO" connections must be made as shown for freeze protection and internally mounted condensate overflow circuits to work properly
2. If 3rd party condensate overflow switches are installed, they should be wired between "Y" of the thermostat and "YI" of the airflow control board

Heat Pump Wiring Diagrams

Heat Pump Diagram 7: 1 Stage Heat Pump w/GAT2 & GAM2 Model Air Handler

One stage Heat Pump | Non-VS Air Handler & Electric Heat | Thermostat Connection

B — B/C — C — BK — Remote Sensor
R — R — R — RS
X2 — W1 — W1 — RS
— W2 — W2 — ODT — Outdoor Sensor
O — W3 (Note 1) — O/B — ODT
Y — G — G — NO — Aux relay outputs
— Y1 — C
— Y2 — NC

Notes:
1. Jumper "W2" to "W3" if three stages of indoor heat are available

Remote Temperature Sensor Connections and Operation:
Sensor Options in the Installer Settings/Sensor Settings menu
Remote Sensor (connect to the RS terminals)
- None
- Replaces internal sensor
- Average with internal sensor
Outdoor Temp Sensor (connect to the ODT terminals)
- None
- Outdoor
Caution: Do not run sensor wires in the same bundle with HVAC wires. Keep away from high voltage wiring to avoid interference.

Heat Pump Diagram 8: 1 Stage Heat Pump w/TEM3 Model Air Handler

One stage Heat Pump | Non-VS Air Handler & Electric Heat | Thermostat Connection

B — B/C — C — BK — Remote Sensor
R — R — R — RS
X2 — W1 — W1 — RS
— W2 — W2 — ODT — Outdoor Sensor
O — W3 (Note 1) — O/B — ODT
Y — G — G — NO — Aux relay outputs
— Y1 — C
— Y2 — NC

Notes:
1. Jumper "W2" to "W3" if three stages of indoor heat are available

Remote Temperature Sensor Connections and Operation:
Sensor Options in the Installer Settings/Sensor Settings menu
Remote Sensor (connect to the RS terminals)
- None
- Replaces internal sensor
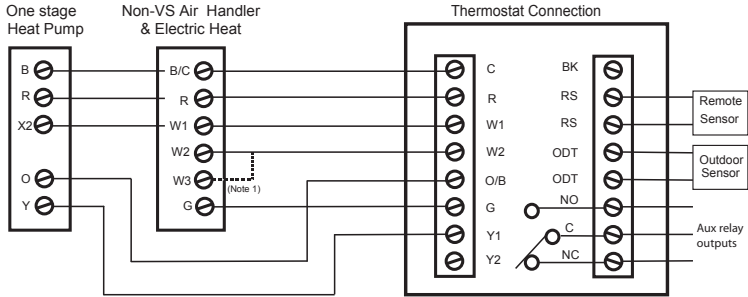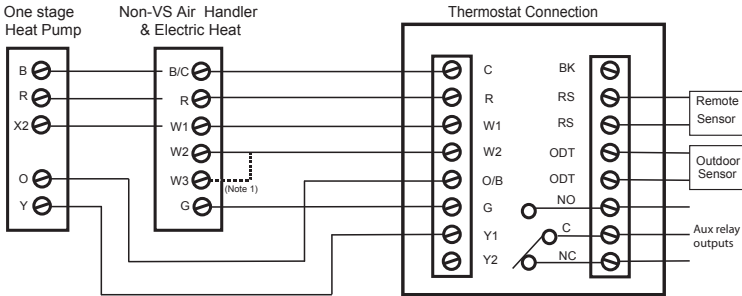- Average with internal sensor
Outdoor Temp Sensor (connect to the ODT terminals)
- None
- Outdoor
Caution: Do not run sensor wires in the same bundle with HVAC wires. Keep away from high voltage wiring to avoid interference.

Heat Pump Wiring Diagrams

Heat Pump Diagram 9: 1 or 2 Stage Heat Pump w/TEM8, TEM6 Variable Speed Air Handler

Notes:
1. Cut/remove the factory installed "BK" jumper at the indoor unit
2. Jumper "W2" to "W3" if three stages of indoor heat are available
3. For non-Trane/American Standard indoor units "BK" is not connected and the "Y1"/"Y2" must be connected at indoor unit

Remote Temperature Sensor Connections and Operation:

Sensor Options in the Installer Settings/Sensor Settings menu
Remote Sensor (connect to the RS terminals)
- None
- Replaces internal sensor
- Average with internal sensor
Outdoor Temp Sensor (connect to the ODT terminals)
- None
- Outdoor
Caution: Do not run sensor wires in the same bundle with HVAC wires. Keep away from high voltage wiring to avoid interference.

Heat Pump Diagram 10: 1 Stage Heat Pump w/non-Variable Speed Air Handler (Excludes Hyperion/Forefront/TEM3 Air Handlers)

Notes:
1. Jumper "W2" to "W3" if three stages of indoor heat are available.

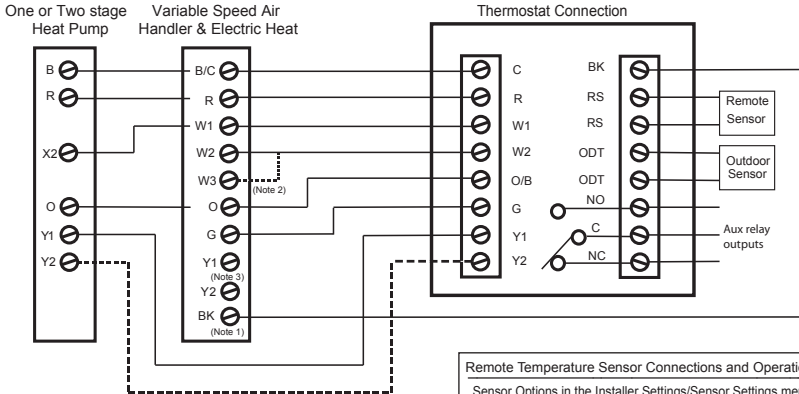Remote Temperature Sensor Connections and Operation:

Sensor Options in the Installer Settings/Sensor Settings menu
Remote Sensor (connect to the RS terminals)
- None
- Replaces internal sensor
- Average with internal sensor
Outdoor Temp Sensor (connect to the ODT terminals)
- None
- Outdoor
Caution: Do not run sensor wires in the same bundle with HVAC wires. Keep away from high voltage wiring to avoid interference.

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Heat Pump Wiring Diagrams

Heat Pump Diagram 11: Package Single or Multi-stage Heat Pump with Variable Speed Blower

Package Unit

Thermostat Connection

Package Unit	Thermostat		
B/C	C	BK	
R	R	RS	Remote Sensor
W1	W1	RS	
W2/X2	W2	ODT	Outdoor Sensor
O	O/B	ODT	
G	G	NO	
Y1	Y1	C	Aux relay outputs
Y2	Y2	NC	
BK	(Note 1) (Note 2)		

Notes:
1. Cut/remove the factory installed "BK" jumper on the ECM fan control board
2. For non-Trane/American Standard indoor units "BK" is not connected

Remote Temperature Sensor Connections and Operation:

Sensor Options in the Installer Settings/Sensor Settings menu
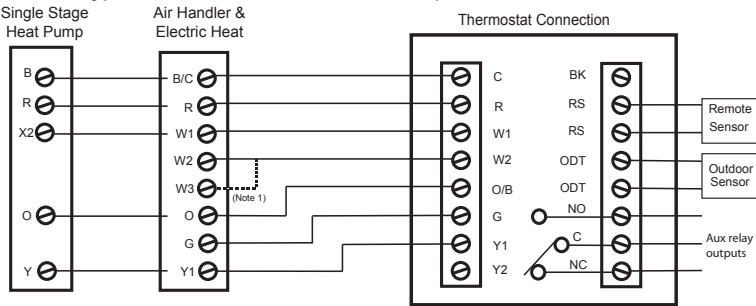Remote Sensor (connect to the RS terminals)
- None
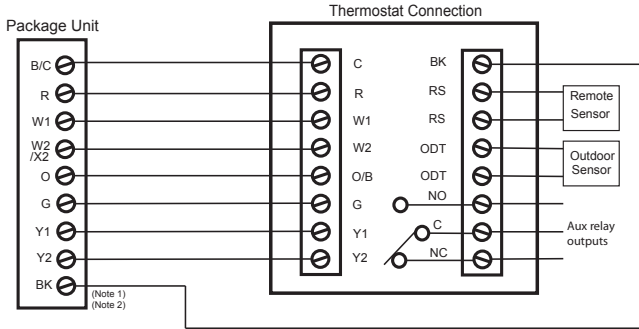- Replaces internal sensor
- Average with internal sensor
Outdoor Temp Sensor (connect to the ODT terminals)
- None
- Outdoor
Caution: Do not run sensor wires in the same bundle with HVAC wires. Keep away from high voltage wiring to avoid interference.

Heat Pump Diagram 12: Package Heat Pump with non-Variable Speed Blower

Package Unit

Thermostat Connection

Package Unit	Thermostat		
B/C	C	BK	
R	R	RS	Remote Sensor
W1	W1	RS	
W2/X2	W2	ODT	Outdoor Sensor
O	O/B	ODT	
G	G	NO	
Y	Y1	C	Aux relay outputs
	Y2	NC	

Remote Temperature Sensor Connections and Operation:

Sensor Options in the Installer Settings/Sensor Settings menu
Remote Sensor (connect to the RS terminals)
- None
- Replaces internal sensor
- Average with internal sensor
Outdoor Temp Sensor (connect to the ODT terminals)
- None
- Outdoor
Caution: Do not run sensor wires in the same bundle with HVAC wires. Keep away from high voltage wiring to avoid interference.

Dual Fuel Wiring Diagrams

Dual Fuel Diagram 1: 1 or 2 Stage Heat Pump w/Variable Speed Gas Furnace

Notes:
1. Cut/remove the factory installed "BK" jumper at the indoor unit
2. For non-Trane/American Standard Indoor units "BK" is not connected and "Y1"/"Y2" must be connected at indoor unit.
3. Outdoor Sensor required for dual fuel restricted mode.

Remote Temperature Sensor Connections and Operation:
Sensor Options in the Installer Settings/Sensor Settings menu
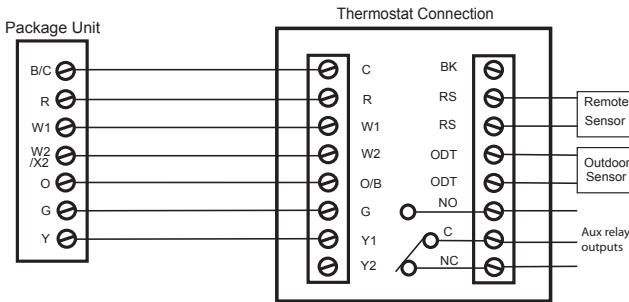Remote Sensor (connect to the RS terminals)
- None
- Replaces internal sensor
- Average with internal sensor
Outdoor Temp Sensor (connect to the ODT terminals)
- None
- Outdoor
Caution: Do not run sensor wires in the same bundle with HVAC wires. Keep away from high voltage wiring to avoid interference.

Dual Fuel Diagram 2: 1 Stage Heat Pump w/non-Variable Speed Gas Furnace

Note:
1. Outdoor Sensor required for dual fuel restricted mode.

Remote Temperature Sensor Connections and Operation:
Sensor Options in the Installer Settings/Sensor Settings menu
Remote Sensor (connect to the RS terminals)
- None
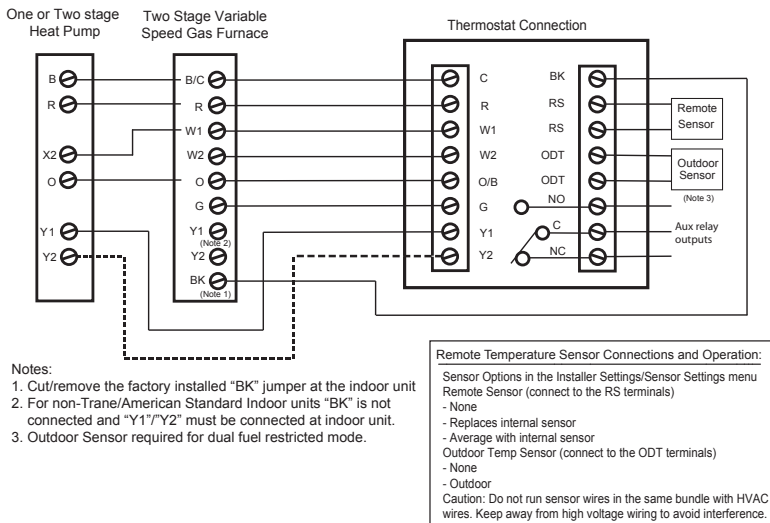- Replaces internal sensor
- Average with internal sensor
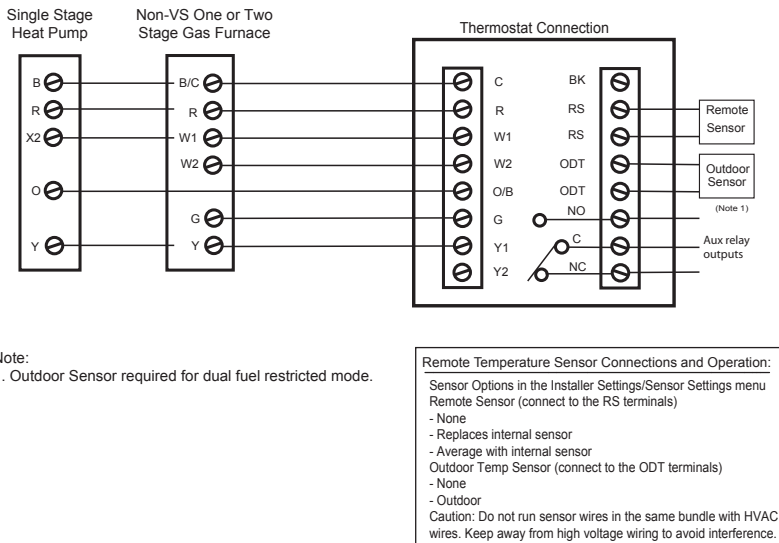Outdoor Temp Sensor (connect to the ODT terminals)
- None
- Outdoor
Caution: Do not run sensor wires in the same bundle with HVAC wires. Keep away from high voltage wiring to avoid interference.

Dual Fuel Wiring Diagrams

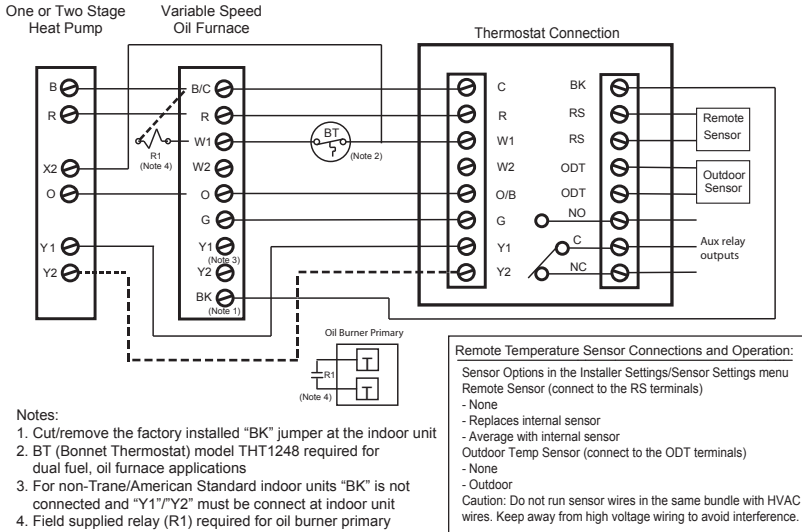### Dual Fuel Diagram 3: 1 or 2 Stage Heat Pump w/Variable Speed Oil Furnace

One or Two Stage Heat Pump   Variable Speed Oil Furnace   Thermostat Connection

Oil Burner Primary

Notes:
1. Cut/remove the factory installed "BK" jumper at the indoor unit
2. BT (Bonnet Thermostat) model THT1248 required for dual fuel, oil furnace applications
3. For non-Trane/American Standard indoor units "BK" is not connected and "Y1"/"Y2" must be connect at indoor unit
4. Field supplied relay (R1) required for oil burner primary

Remote Temperature Sensor Connections and Operation:
Sensor Options in the Installer Settings/Sensor Settings menu
Remote Sensor (connect to the RS terminals)
- None
- Replaces internal sensor
- Average with internal sensor
Outdoor Temp Sensor (connect to the ODT terminals)
- None
- Outdoor
Caution: Do not run sensor wires in the same bundle with HVAC wires. Keep away from high voltage wiring to avoid interference.

Dual Fuel Diagram 4 : 1 Stage Heat Pump w/non-Variable Speed Oil Furnace

Single Stage Heat Pump   Non-Variable Speed Oil Furnace   Thermostat Connection

Oil Burner Primary

Notes:
1. BT (Bonnet Thermostat) model THT1248 required for dual fuel, oil furnace applications
2. Field supplied relay (R1) required for oil burner primary

Remote Temperature Sensor Connections and Operation:
Sensor Options in the Installer Settings/Sensor Settings menu
Remote Sensor (connect to the RS terminals)
- None
- Replaces internal sensor
- Average with internal sensor
Outdoor Temp Sensor (connect to the ODT terminals)
- None
- Outdoor
Caution: Do not run sensor wires in the same bundle with HVAC wires. Keep away from high voltage wiring to avoid interference.

Dual Fuel Wiring Diagrams

Dual Fuel Diagram 5: Package Single or Multi-Stage Dual Fuel with Variable Speed Blower
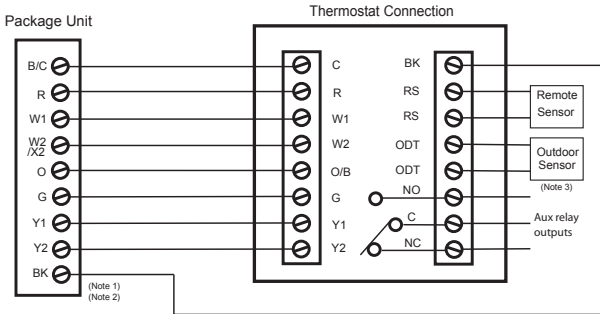
Package Unit
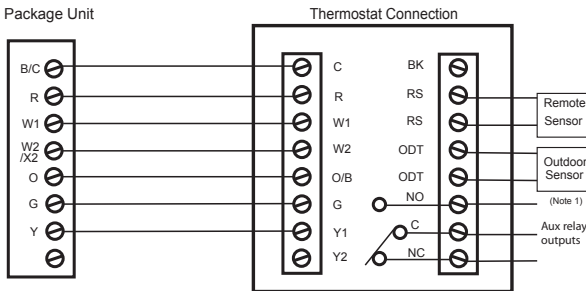
Thermostat Connection

Package Unit	Thermostat Connection	
B/C	C	BK
R	R	RS
W1	W1	RS
W2/X2	W2	ODT
O	O/B	ODT
G	G	NO
Y1	Y1	C
Y2	Y2	NC
BK		

Remote Sensor

Outdoor Sensor
(Note 3)

Aux relay outputs

(Note 1)
(Note 2)

Notes:
1. Cut/remove the factory installed "BK" jumper on the ECM fan control board
2. For non-Trane/American Standard Indoor units "BK" is not connected
3. Outdoor Sensor required for dual fuel restricted mode.

Remote Temperature Sensor Connections and Operation:

Sensor Options in the Installer Settings/Sensor Settings menu
Remote Sensor (connect to the RS terminals)
- None
- Replaces internal sensor
- Average with internal sensor
Outdoor Temp Sensor (connect to the ODT terminals)
- None
- Outdoor
Caution: Do not run sensor wires in the same bundle with HVAC wires. Keep away from high voltage wiring to avoid interference.

Dual Fuel Diagram 6: Package Single Stage Dual Fuel with Non-Variable Speed Blower

Package Unit

Thermostat Connection

Package Unit	Thermostat Connection	
B/C	C	BK
R	R	RS
W1	W1	RS
W2/X2	W2	ODT
O	O/B	ODT
G	G	NO
Y	Y1	C
	Y2	NC

Remote Sensor

Outdoor Sensor
(Note 1)

Aux relay outputs

Notes:
1. Outdoor Sensor required for dual fuel restricted mode.

Remote Temperature Sensor Connections and Operation:

Sensor Options in the Installer Settings/Sensor Settings menu
Remote Sensor (connect to the RS terminals)
- None
- Replaces internal sensor
- Average with internal sensor
Outdoor Temp Sensor (connect to the ODT terminals)
- None
- Outdoor
Caution: Do not run sensor wires in the same bundle with HVAC wires. Keep away from high voltage wiring to avoid interference.

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Optional Remote Temperature Sensor Installation

Wire specification for remote sensors: 2 conductors, 18 gauge wire. Make sure that the sensor wires are installed in a separate cable from the wiring to the HVAC system. Best results for distances of 100 feet or less. Accuracy may be affected for distances up to a maximum of 200 feet. Shielded cable is recommended for distances over 100 feet and less than 200 feet.

⚠️ **CAUTION: Keep this wiring at least one foot away from large inductive loads such as electronic air cleaners, motors, line starters, lighting ballasts, and large distribution panels. Failure to follow these wiring practices may introduce electrical interference (noise) which can cause erratic system operation. Shielded cable is required if the above wiring guidelines cannot be met.**
Be sure to ground only one end of the shield to the Comfort Control common terminal.
Tape back the other end of the shield.

Remote Sensor Part Numbers
Remote Indoor Sensor: Use ZZSENSAL0400AA for indoor applications.
Remote Outdoor Sensor: Use BAYSEN01ATEMPA for outdoor applications.
  > **IMPORTANT:** Make sure that the sensor wires are installed in a separate cable from the Comfort Control cable.
  > **IMPORTANT:** Follow directions below for averaging. These instructions replace the averaging information found in the Installer's Guide for the ZZSENSAL0400AA.

Remote Temperature Sensor Connections and Operation:
A) Indoor sensor connected to RS.
The Remote Sensor (RS) function can be configured in the Service/Installer Settings/Sensor Settings menu. Options are:

• None
• Replaces onboard temp sensor of the Comfort Control
• Averages with onboard temp sensor

Replace - RS Sensor replaces the internal temperature sensor of the Comfort Control. This allows the Comfort Control to be installed in a location different than the area where the temperature will be measured. Use ZZSENSAL0400AA.

Average - RS Sensor averages its temperatures with the internal sensor. Use ZZSENSAL0400AA.
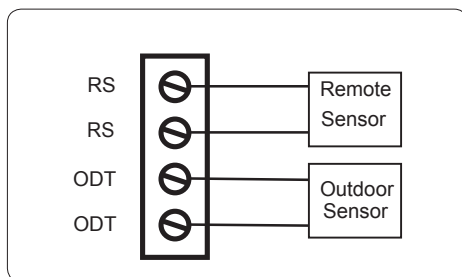
B) Outdoor sensor connected to ODT. Reports outdoor temperature to the Comfort Control.
The Outdoor Sensor (ODT) function can be configured in the Service/Installer Settings/Sensor Settings menu. Options are:

• None
• Outside

Outside - ODT (outdoor temperature sensor). If ODT sensor is selected and connected, the outdoor temp is displayed on the main screen. ODT model is BAYSEN01ATEMPA.

Troubleshooting

Troubleshooting		
Symptom	**Possible Cause**	**Action**
Display will not come on	Loss of 24VAC between R & C at the Control	1) Check wiring between R & C 2) Check transformer for 24VAC output 3) Check for broken or shorted thermostat wire
Indoor Temperature display is incorrect	1) Indoor temperature display needs calibrating (always allow 1 hour before calibrating after any power cycle) 2) Heat from the touchscreen is being trapped within the body of the control	1) Calibrate indoor temperature sensor 2) Relocate the control away from any competing air sources or redirect the air sources away from the control
Indoor humidity display is incorrect	Indoor humidity sensor needs calibrating	Calibrate humidity sensor
Room temperature overshoots the desired setpoint in cooling mode	1) The delta "Off" in cooling mode is set to a negative number 2) Cooling overshoot is enabled and the indoor RH is higher than the target cooling RH 3) Minimum compressor on time has not been met	1) Intended operation; if objectionable, change the delta "Off" to 0 degrees 2) Intended operation: if objectionable, disable cooling overshoot or raise cooling target RH 3) Intended operation; if objectionable, change Control Response settings in the Installers Settings, Comfort Settings Menu
Room temperature overshoots the desired setpoint in heating mode	Minimum compressor/indoor heat on time has not been met	Intended operation; if objectionable, change control response settings in the Installers Settings, Comfort Settings Menu
Cooling will not come on	1) System mode is not set to Cool/Auto or setpoint is set too high 2) Delta "On" for cooling is set too high 3) Minimum off time delay is being enforced 4) Cooling system may need service	1) Select the correct system mode and/or lower the setpoint 2) Change the delta "On" setting for cooling mode 3) Intended operation; if objectionable, change Control Response settings in the Installers Settings, Comfort Settings Menu 4) Check/repair system
Heating will not come on	1) System mode is not set to Heat/Auto or setpoint is set too low 2) Delta "On" for heating is set too high 3) Minimum off time delay is being enforced 4) Heating system may need service	1) Select the correct system mode and/or raise the setpoint 2) Change the delta "On" setting for heating mode 3) Intended operation; if objectionable, change Control Response settings in the Installers Settings, Comfort Settings Menu 4) Check/repair system
Heating or Cooling is being displayed, but no air coming from registers/vents	1) Fan delay time has not expired 2) System is not operating properly	1) Wait one minute for blower delay to end, then recheck register/grills 2) Check/repair system
Fan runs all the time	1) Fan mode is set to "On" or "Circ" 2) System is not operating properly	1) Intended operation; if objectionable, change fan mode to "Auto" 2) Check/repair system
Fan is set to "On" but not running	1) Smart continuous fan (SCF) is enabled and the indoor humidity is higher than the cooling target RH (SCF will be displayed on fan mode button) 2) System is not operating properly	1) Intended operation; if objectionable, disable SCF or raise cooling target humidity 2) Check/repair system

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FCC NOTICE

INFORMATION TO USER

ACONT724AS42DAB
FCC ID: VRA-SG9011203

This device complies with Part 15 of the FCC Rules. 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.

This equipment has been tested and found to comply with the limits for Class B Digital Device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures.

- Reorient or relocate the receiving antenna

- Increase the separation between the equipment and receiver

- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected

- Consult the dealer or an experienced radio/TV technician for help

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

IC Notice

IC:7420A-SG9011203

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

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