Comfort365

Models C365W21 and C365W21WF

RevB Dec 2015

Comfort365 Touch Programmable Wireless Thermostat with Airflow Control

Automatically Controls Airflow in Two-Story Homes or Condos and Provides Upstairs and Downstairs Comfort in All Seasons without the Use of a Zoning Panel

Wireless solution for replacement.

Pat. Pend.

Made in the USA

- Thermostat controls heating and cooling calls the same as any programmable thermostat.
- Automatically or manually control airflow to the upstairs and downstairs of a 2-story home.
- Directs more airflow to the upstairs during the cooling season and more airflow downstairs during the heating season.
- Modulating dampers are installed to direct airflow so that upstairs and downstairs are heated or cooled at the same rate.
- An inexpensive temperature sensor upstairs allows the thermostat to monitor upstairs and downstairs temperatures to control airflow.
- No bypass required and equipment operates at its rated airflow and return temperature.
- Save energy using the Night feature that uses the upstairs temperature sensor to control heating and cooling calls and directs more airflow upstairs while sleeping.
- Saves energy during the cooling season by eliminating overcooling the downstairs to make the upstairs comfortable.
- Saves energy during the heating season by eliminating overheating the upstairs to make the downstairs comfortable.
- No supply air sensor required.
- No zoning panel required.
- Save 23% or more over zoning systems without bypass, 41% or more over zoning systems with bypass and/or WiFi.
- Use existing thermostat wiring.
- Wireless control of dampers eliminates wiring from thermostat to dampers. Dampers powered by R and C at the equipment.
- Wireless upstairs temperature sensor eliminates wiring to the thermostat. Sensor powered by 2 AA batteries.
- Easily upgrade the non-WiFi model to WiFi by unplugging the non-WiFi model from the subbase and plugging in the WiFi model.

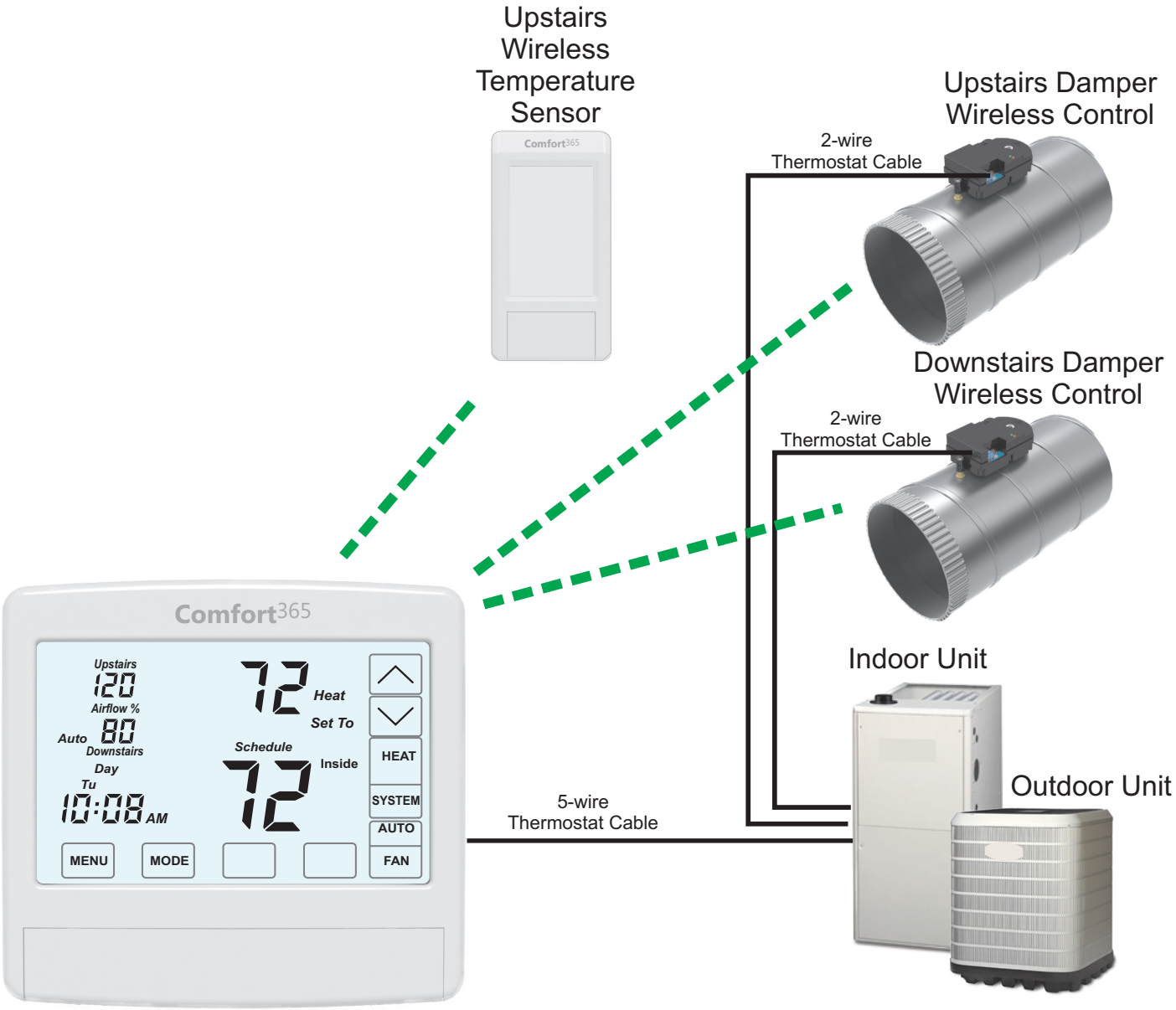
Wireless Solution for Replacement

The thermostat is installed downstairs and a wireless temperature sensor is installed upstairs. Dampers are installed to control the airflow to the upstairs and downstairs and are wirelessly controlled by the thermostat. The thermostat uses the existing wiring to the equipment.

Thermostat monitors the upstairs and downstairs temperatures during calls and adjusts the damper positions and airflow as required to provide uniform heating and cooling. If the nighttime airflow option has been selected, the thermostat will use the upstairs temperature sensor to control heating and cooling calls and sets the dampers for the preset nighttime airflow.

The dampers use only 2.8VA and are powered from the R and C terminals at the equipment. The thermostat uses two AA batteries for maintaining the time and settings when 24VAC power is lost. The wireless sensor is powered by 2 AA batteries.

The non-WiFi model can be easily upgraded to WiFi by unplugging the non-WiFi model from the subbase and plugging in the WiFi model.



Technical Specifications

Program Periods
Four program periods each day. Morning, Day, Evening and Night.

Program per Week
Programs for weekdays and weekends (5/2).

Thermostat Modes
Schedule, Hold and Vacant.

Equipment Control
Off, heating only, cooling only and automatic heating and cooling.

Airflow Control
Automatic or manual control.

Allowable Upstairs/Downstairs Temperature Differential
Factory set at 1ºF. Installer adjustable from 0 to 5ºF.

Maximum Airflow Limits
Airflow limits can be tested and set by the installer. Factory set limits are;

Maximum upstairs airflow in heating	150%
Maximum downstairs airflow in heating	150%
Maximum upstairs airflow in cooling	140%
Maximum downstairs airflow in cooling	140%

LCD Display
Clear, 9 square inch, FSTN LCD with white backlight and touch panel.

Low Level Night Backlight
When the thermostat keys are not being used, the LCD backlight goes to a low light level.

Airflow Display
Displays the upstairs and downstairs airflow and the airflow control mode.

Temperature Display
Both the downstairs (Inside) and upstairs (Inside2) temperatures can be displayed.

Manual Airflow Override
In Automatic mode, the Up/Down keys can be used to change the airflow upstairs and downstairs for a 3 hour period. Returns to Automatic control after 3 hours.

Energy Saving Nightime Airflow Option
Turn the energy saving nightime option on and set the upstairs airflow in heating and in cooling to provide comfort and energy savings while sleeping.

Upstairs Temperature Sensor
Use one or two temperature sensors upstairs. When two sensors are used, the two temperatures are averaged.

Radio
ISM band, 915MHz with 100-foot range in a residence.

Installer Options

Compressor Stages
Select 0 or 1. Factory set to 1.

Heating Stages
Select 0 or 1. Factory set to 1.

Indoor Fan Operation
Select Gas or Electric. Factory set to Gas.

Compressor Minimum Off Time
Set 0 to 9 minutes. Factory set to 2 minutes.

Gas Heating Minimum Off Time
Set 0 to 9 minutes. Factory set to 0 minutes.

Minimum Run Time
Set 0 to 9 minutes. Factory set to 2 minutes.

On-Off Temperature Differential
Select 1, 1.5 or 2º. Factory set to 1º.

Smart SetBack Recovery
Select On or Off. Factory set to Off.

Vacant Heating Setpoint
Set 44 to 75º. Factory set to 50º.

Vacant Cooling Setpoint
Set 74 to 95º. Factory set to 90º.

Calibrate Indoor Temperature Sensors.
Set =5 to -5º. Factory set to 0º.

Night Level Backlight.
Select On or Off. Factory set to On.

Airflow Control.
Select On or Off. Factory set to On.

Enable Manual Airflow Control.
Select On or Off. Factory set to Off.

Maximum Upstairs Airflow in Heating.
Select 100 to 160%. Factory set to 150%.

Maximum Upstairs Airflow in Cooling.
Select 100 to 160%. Factory set to 140%.

Maximum Downstairs Airflow in Heating.
Select 100 to 160%. Factory set to 150%.

Maximum Downstairs Airflow in Cooling.
Select 100 to 160%. Factory set to 140%.

Maximum Upstairs/Downstairs Temperature Differential
Select 0 to 5º. Factory set to 1º.

Specs and Ordering Information

Test Options

The installer can test the indoor fan, heating and cooling operation. During the heating and cooling tests, the upstairs and downstairs airflow can be adusted using the Up and Down keys to determine the maximum allowable airflow that does not cause excessive noise or is annoying.

These maximum allowable upstairs and downstairs, heating and cooling airflow limits can be entered using the installer options and the Comfort365 will always operate within these limits.

Wireless Thermostat

Model C365WXX

Equipment
Heat/cool or heat pump.

Power
24VAC, 6VA, 2 AA Battery Backup.

HVAC Wiring
Terminals for wiring to equipment.

Damper Wiring
No thermostat to damper wiring.

Sensor Wiring
No thermostat to sensor wiring.

Size
4.55 x 4.20 x 1.10 inches.

Thermostat, Wireless

Model #	Description
C365W21	Gas/Electric or Heat Pump Equipment. 2 Stage Heat / 1 Stage Cool.
C365W21WF	Gas/Electric or Heat Pump Equipment. 2 Stage Heat / 1 Stage Cool. WiFi Enabled.

Wireless Dampers

Positioning
Modulating.

Torque
80 inch-ounces.

Pressure Rating
1-inch static pressure.

Power
24VAC,2.8VA.

Damper Wiring
Terminals for wiring to equipment. No wiring to thermostat.

Life Tested
9 million operations.

Round Damper, Wireless
Compatible with Thermostat C365WXX

Model #	Size
R80CW-10	10” Round Damper
R80CW-12	12” Round Damper
R80CW-14	14” Round Damper
R80CW-16	16” Round Damper
R80CW-18	18” Round Damper
R80CW-20	20” Round Damper

Dampers are also available in rectangular configurations, rectangular slide-in and round slide-in configurations.

Wireless Temperature Sensor

Size
3.00” x 6.10” x 1.00”

Installation
Mounts using subbase. No wiring required, Powered by 2 AA batteries.

Temperature Sensor, Wireless
Compatible with Thermostat C365WXX

Model #	Description
TS5-WL	For single or dual sensor installations

eControls

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5-Year Warranty

All products have a 5-year warranty, limited to the repair or replacement of the product due to defective material or workmanship.