

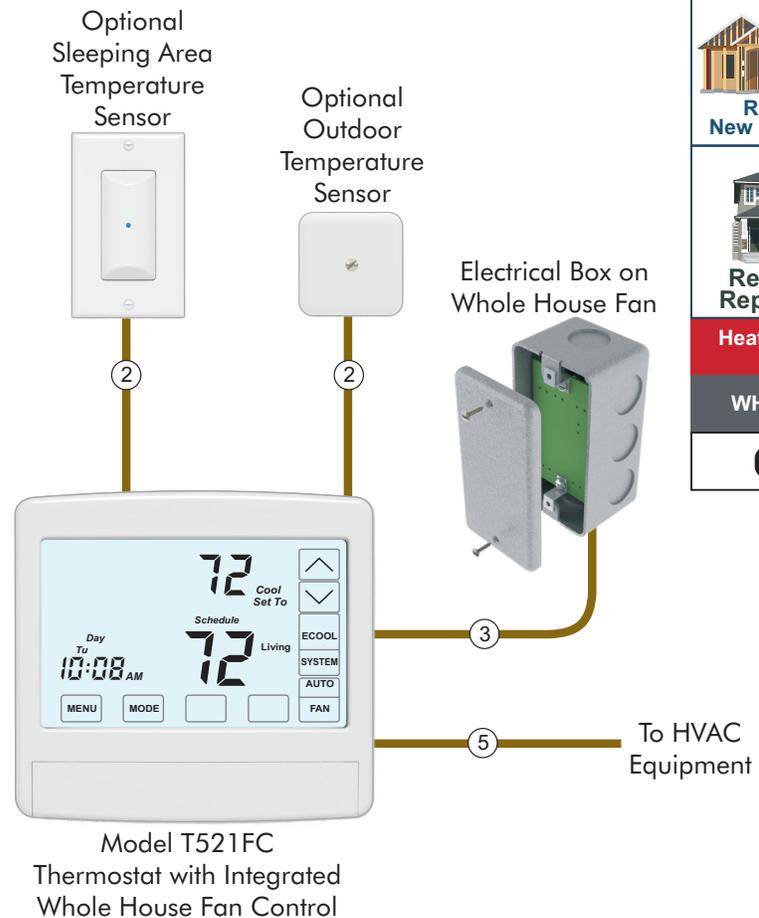
Integrated Control

Programmable, Touch Thermostat with Integrated Whole House Fan Control

The T521FC is a touch, programmable thermostat that provides integrated control of heating, compressor cooling and econo cooling using a whole house fan (WHF) and outdoor air.

For improved energy efficiency the WHF can be controlled by temperature the same as compressor cooling. The T521FC uses optional wired sensors. A wireless version is also available for installations where adding the WHF relay wires and temperature sensor wires is difficult.

These thermostats are also available in WiFi versions that allow the homeowner to control comfort and WHF operation using an App.



Features

- Controls gas/electric equipment with two stage heat and single stage cool or single stage heat and two stage cool.
- Controls single or two-speed WHFs with single or two-speed PSC or ECM motors.
- Controls variable speed WHFs with ECM motors using PWM with speed ramping for quiet operation.
- Uses built-in timer or temperature to control WHF.
- Temperature control improves energy savings by only operating the WHF when needed.
- Prevents compressor cooling when WHF cooling is selected.
- Stages fan speed when multi-speed or variable speed fans are used.
- Low cost, universal fan control board installs in electrical box on the WHF.
- PWM control of variable ECM motors connect directly to the motor.
- Optional sleeping area temperature sensor controls heating, cooling and WHF operation at night using the sleeping area temperature.
- Use one or two temperature sensors in the sleeping area.
- Optionally use the outdoor temperature sensor to inhibit WHF operation when the outdoor temperature is too warm.
- Optionally average the sleeping and living area temperatures during the daytime.
- Lower material cost than a builder model thermostat and external timer and easier to install.
- Easy, plug-in upgrade to WiFi thermostat - no wiring changes.
- Meets Title24 and HERS credit for Whole House Fan with added energy savings.

Pat. Pend.

Whole House Fan Control

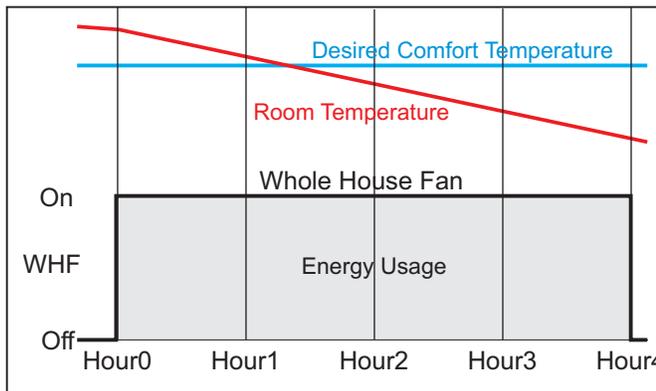
Whole house fans provide energy savings by using outdoor air to cool the home rather than compressor cooling and improve the HERS rating. Most installations use a timer to control the fan. The T521FC provides a built-in timer to control the fan but also provides temperature control that can lower energy usage, improve comfort and extend the HERS benefit.

Timer vs Temperature Control

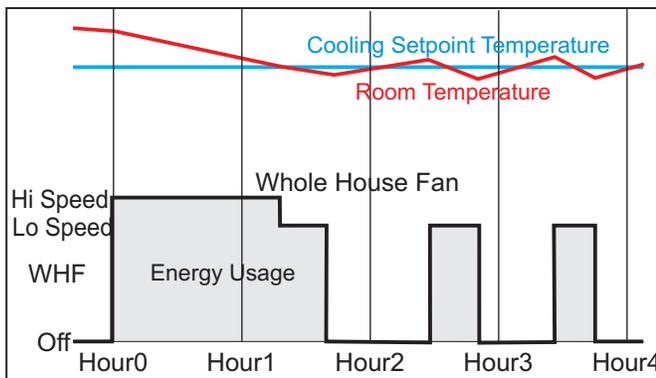
When the WHF is timer controlled, the fan operates at the preset speed for the entire

interval or the homeowner must get out of bed to turn the timer off. With temperature and speed control the WHF is only operated when the outdoor temperature is low enough to provide cooling and will only operate if the room temperature is above the cooling setpoint. The speed is determined by the differential between cooling setpoint and room temperature to provide two-stage WHF cooling. The T521FC insures that compressor cooling and WHF cooling never occur at the same time.

Whole House Fan Operation Using Timer



Whole House Fan Operation Using Temperature and Speed Control



Ordering Information

Model T521FC

Programmable touch thermostat for multi-stage GE and HP equipment and whole house fan control.

Model T521FCWF

Programmable touch thermostat for multi-stage GE and HP equipment and whole house fan control with WiFi App.

Model T510W

Temperature sensor for sleeping area when one sensor is used.

Model T520W

Temperature sensor for sleeping area when two sensors are used.

Model TS3

Temperature sensor for outdoor temperature.

Model RLY24

Fan control board for installation in electrical box on the fan for single speed WHFs.

Model FC2T

Fan control board for installation in electrical box on the fan for 2-speed WHFs or variable speed WHFs using ECM motors and PWM speed control.

Specifications

Compatible HVAC Equipment

T521FC GE or HP, 2H/1C or 1H/2C.
T521FCWF GE or HP, 2H/1C or 1H/2C.

Compatible Whole House Fans

PSC fans with 1 or 2 speeds. ECM fans with 1 or 2 speeds or variable speed with PWM input.

System Modes

Off, Heat, Cool, ECool and Auto.

Thermostat Modes

Hold, Schedule and Vacant.

Fan Modes

Auto and On(Continuous).

Program Schedules

Morning, Day, Evening and Night.

Program Format

5/2- Weekdays and Weekend.

Whole House Fan Control

Temperature or internal Timer.

Timer Control Range

1 to 8 hours. Timer starts when ECool mode is selected.

Temperature Control

Uses the indoor temperature and cooling setpoint temperatures to activate the whole house fan.

Outdoor Temperature Sensor

An optional outdoor temperature sensor can be used to inhibit whole house fan operation.

Bedroom Temperature Sensors

Optionally, one or two temperature sensors can be used in the sleeping space to control heating, cooling and whole house fan operation at night.

Temperature Averaging

The thermostat and sleeping space temperature sensors can be averaged to control heating and cooling during the day.

eControls

26072 Merit Circle #110,
Laguna Hills, CA 92653
949-916-0945, www.eControlsUSA.com