# White-Rodgers
# 90 Series™

# Single Stage

## Single Stage Thermostat

- Digital 7 Day, 5/1/1 Day, 5/2 Day Programmable and Non-Programmable
- Power Stealing

**±1° ACCURACY** OPTIMUM COMFORT AND PERFORMANCE

**energy ENERGY STAR**

## 1F97-391*
*Single Stage/Humidifier Control*
**7 Day Programming**

## 1F97-371
*Single Stage*
**7 Day Programmable**

## 1F90-371
*Single Stage*
**5/1/1 or 5/2 Day Programmable**

## 1F96-344
*Single Stage*
**Non-Programmable**

*with
**Humidifier**
control

# The Thermostat That Provides Maximum Control, Comfort and Convenience.

**The 90 Series controls the humidifier, providing increased home comfort and greater energy savings. It offers more control and convenience features, plus the ease-of-use 90 Series thermostats are known for.  And it's all backed by the White-Rodgers reputation for quality.**

**The Most Accuracy and Control.** If you are looking for the ultimate in temperature control accuracy, you will find it in the 90 Series. Designed to control the temperature within +/— one degree, it provides the most comfort and energy savings available.  And a reliable permanent memory retains your programmed settings in the event of a power failure. You can be assured that your settings will only change when you decide to change them. Additionally, 90 Series offers automatic changeover between heating and cooling programs, providing

comfort in any condition. Plus, it comes with an optional programmable blower control feature which provides more even temperature distribution and air circulation, or enables the operation of an air purification system.

**The Most Comfort and Convenience.**
Our programmable models deliver perfect comfort by automatically changing to the temperature you selected for various times of the day... wake-up, daytime, evening hours and while you sleep.

**Maximum Energy Savings.** You can program heating and cooling times to cut energy use, not comfort.  Save as much as 33% in energy costs, depending on your home's location, climate and program selections. And with the Energy Management Recovery feature, your thermostat will select the optimal start time for the most efficient temperature recovery possible.

# White ▾
# Rodgers

## EMERSON™
### Climate Technologies

# White-Rodgers
# 90 Series™  Single Stage Thermostat

**1F97-391** — *5 Day Programming*

**1F97-371** — *5/1/1 or 5/2 Day Programming*

**1F90-371** — *5/1/1 or 5/2 Day Programming*

**1F96-344** — *Non-Programmable*

## Programming

Choice of 7 or 5/1/1 day programmable or non-programmable

4 time and 4 temperature settings per program (heat & cool)

Energy savings up to 33%

Patented pre-programmed software simplifies time and temperature programming

## Display

Blue luminescent display

## Comfort & Convenience

Humidifier Control *(1F97-391)*

Permanent program retention

Vacation programming

Air filter change indicator

Occupied/Unoccupied setpoints *(1F96-344)*

Optional continuous occupied fan *(1F96-344)*

Daylight Savings Time quick-change button

Temporary temperature override from 15 minutes to 19 hours or indefinite setpoint hold

Display temperature recalibration (+/- 5)

## Performance

Automatic Heat/Cool System Changeover

Selectable Energy Management Recovery *(1F90-371, 1F97-371, 1F97-391)*

Built-in system and thermostat diagnostics
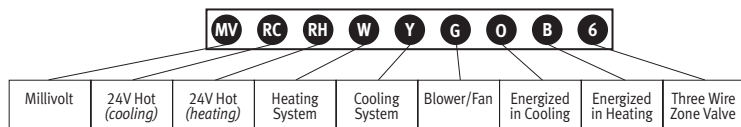
Digital-signal remote sensors *(optional)*

Meets ENERGY STAR® specifications *(1F90-371, 1F97-371, 1F97-391)*

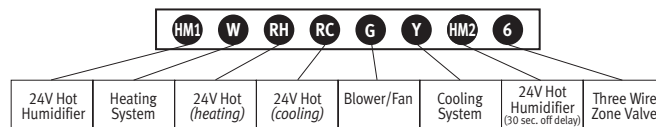Meets California Building Code, Title 24 *(1F90-371, 1F97-371, 1F97-391)*

Compressor lockout protection

Electric heat option

## Terminal Designations (1F97-371, 1F90-371, 1F96-344)

| MV | RC | RH | W | Y | G | O | B | 6 |
|---|---|---|---|---|---|---|---|---|
| Millivolt | 24V Hot *(cooling)* | 24V Hot *(heating)* | Heating System | Cooling System | Blower/Fan | Energized in Cooling | Energized in Heating | Three Wire Zone Valve |

## Terminal Designations (1F97-391)

| HM1 | W | RH | RC | G | Y | HM2 | 6 |
|---|---|---|---|---|---|---|---|
| 24V Hot Humidifier | Heating System | 24V Hot *(heating)* | 24V Hot *(cooling)* | Blower/Fan | Cooling System | 24V Hot Humidifier (30 sec. off delay) | Three Wire Zone Valve |

## Dimensions

6.9"W x 4.1"H x 1.3"D

## Electrical Specifications

*Rating*
0 to 30 VAC, 50/60 Hz or DC

0.05 to 1.5 Amps (load per terminal)

1.5 Amps maximum load (all terminals combined)

*Standard Systems*
Single Stage gas, oil, electric

Single Stage heat pump

## Humidity Specifications (1F97-391)

Humidity Sensing Range 10% to 80% RH

Humidity Setpoint Range 10% to 45% RH

## Thermal Specifications

Setpoint Temperature Range: 45° to 99°F (7° to 37°C)

Rated Differential: 0.5° to 1.5°F with adjustable anticipation

Operating Ambient Temperature: 32° to 105°F (0° to 40°C)

Operating Humidity Range: 90% non-condensing maximum

Shipping Temperature Range: -4° to 131°F (-20° to 55°C)

## Accessories

Remote Sensor
Indoor F145-1328

Wall Plate F61-2300 (7.5"W x 5.5"H)

Thermostat Guard  F29-0231
*(For additional guard options refer to White-Rodgers catalog.)*

## For Additional Information

Visit www.white-rodgers.com

## Application Guide

| Single Stage | Multi-Stage | Heat Pump | Model | Programs | | Applications | | | | | Selectable Performance Features | | | | | | | | | | | | Comfort and Convenience Features | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Stages Heat/Cool by System | | | Model Number | Program Options | Periods Per Day Options | Gas/Oil/Electric | 3 Wire Zone | Millivolt | Humidity Control (H) Humidify (D) Dehumidify | Power Source | Auto Changeover | Heat Only or Cool Only Option | Programmable Fan | Comfort Circulating Fan | Energy Mgt. Recovery | Energy Star | Dual Fuel Option | Keypad Lockout | Setpoint Temp. Lmts. Adj. | Program Override (AV) Adjust. Vari. (V) Variable (P) Current Prog. | Indoor Remote Sensor | Outdoor Remote Sensor | User Interface (T) Touchscreen/ (B) Button | Display Size (Square Inches) | Lighted Display | Audible Feedback | Alkaline Battery Life** (Years) | Cool Savings™ | Daylight Sav. Adj. (A)Audio/(B)Button | Furnace Lockout Ignit. Mod. Reset | Memory Back-up (P) Permanent (B) Battery | Display Temp. Recalibration | warranty (Years) |
| 1/1 | 1/1 | | 1F97-391 | 7-day | 4 | ✓ | ✓ | | H | PS | ✓ | ✓ | ✓ | | ✓ | ✓ | | ✓ | | AV | ✓ | | B | 2.3 | ✓ | ✓ | 3 | | B | | P | ✓ | 1 |
| 1/1 | 1/1 | | 1F97-371 | 7-day | 4 | ✓ | ✓ | ✓ | | PS | ✓ | ✓ | ✓ | | ✓ | ✓ | | ✓ | | AV | ✓ | | B | 2.3 | ✓ | ✓ | 3 | | B | | P | ✓ | 1 |
| 1/1 | 1/1 | | 1F90-371 | 5+1+1, 5+2 | 4 | ✓ | ✓ | ✓ | | PS | ✓ | ✓ | ✓ | | ✓ | ✓ | | ✓ | | AV | ✓ | | B | 2.3 | ✓ | ✓ | 3 | | B | | P | ✓ | 1 |
| 1/1 | 1/1 | | 1F96-344 | Ø | Ø | ✓ | ✓ | ✓ | | PS | ✓ | ✓ | ✓ | | | | | | | | ✓ | | B | 2.3 | ✓ | ✓ | 3 | | | | P | ✓ | 1 |

PS = Power Stealing with Battery Back-up    ** Recommended Battery Change Interval is Once Per Year

## White Rodgers

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**www.white-rodgers.com**

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EMERSON Climate Technologies™

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