

# **INSTALLATION INSTRUCTIONS** **programmable room thermostat** **gas-fired duct furnace/make-up air units** **Model Series: “D”, “H”, “I”, & “O”**

## **WARNING**

1. Disconnect power supply before making wiring connections or working on this equipment. Follow all applicable safety procedures to prevent accidental power up. Failure to do so can result in injury or death from electrical shock or moving parts and may cause equipment damage.
2. All appliances must be wired strictly in accordance with wiring diagram furnished with the appliance. Any wiring different from the wiring diagram could result in a hazard to persons and property.
3. All wiring must be done with a wiring material having a temperature rating of at least 105°C.

## **IMPORTANT**

1. The use of this manual is specifically intended for a qualified installation and service agency. A qualified installation and service agency must perform all installation and service of these appliances.
2. Modine manuals may contain excerpts from component supplier literature adapted for Modine products. Any accompanying component supplier literature is for general information.

## **Application**

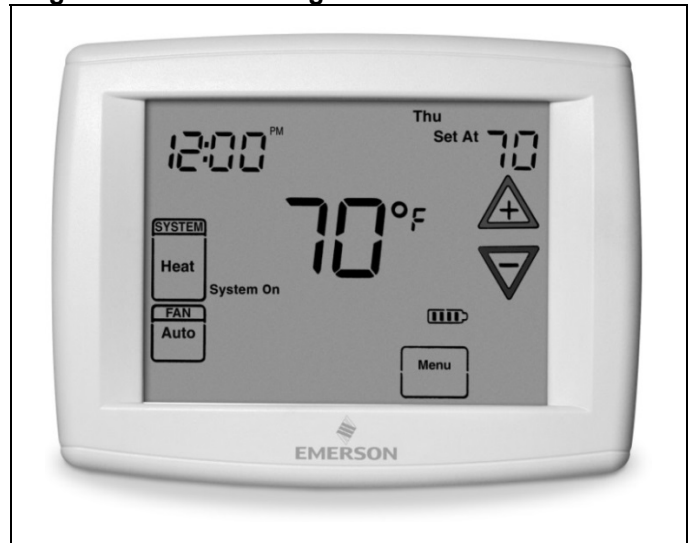
Emerson 1F95-1280 is a mercury free thermostat with damper control and automatic heat/cool changeover option that allows users to keep temperatures in a comfortable range. Seven day programming makes heating or cooling a space more efficient.

## **Features**

Room Programmable thermostat includes:

- Automatic or manual fan operation.
- Automatic or manual heat/cool switching capabilities.
- Celsius or Fahrenheit Temperature display.
- Copy Feature for fast programming.
- Temperature override (for temporary or continuous override).
- Automatic daylight savings setting.
- Total or partial (limited temperature range) keypad lockout with combination.
- Built-in Short Cycle equipment protection setting.
- Occupied/Unoccupied damper control.

**Figure 1.1 – Room Programmable Thermostat**



**Table 1.1—Specifications**

Model Number:	1F95-1280
Model Description:	Programmable room thermostat
Hardwire Power:	20-30 VAC
Battery Power:	2 AA batteries
Terminal Load:	1.5A per terminal, 2.5A max between all terminals.
Set Point Range:	45°F to 99°F (7°C to 37°C)
Dimensions:	4-9/16"H x 5-13/16"W x 1-3/16"D
Output:	4-20mA (max 500Ω)
Humidity Limits:	90% RH Non-Condensing
Temperature Limits:	32°F to 105°F (0°C to 41°C)
Rated Differentials Cool:	Fast 1.2°F ; Slow 1.7°F
Rated Differentials Heat:	Fast 0.6°F ; Slow 1.5°F

## **Contents**

- Thermostat (body and base)
- 2 “AA” Alkaline batteries
- 2 mounting screws
- 2 plastic screw anchors

# INSTALLATION – Room Programmable Thermostat

## Installation

1. Pull the thermostat body off of the thermostat base.  
**Caution:** Forcing or prying on the thermostat will cause damage to the unit.
2. Place base over hole in wall and mark mounting hole locations in the wall using the base as a template, see Figure 2.1 for mounting hole locations on base.
3. Move base out of the way. Drill mounting holes. Use plastic screw anchors (included in installation kit) as needed.
4. Fasten base to the wall using mounting holes shown in Figure 2.1 and two mounting screws (included in installation kit). Leveling is for appearance only and will not affect thermostat operation.
5. Connect wires to terminal block on base using appropriate wiring schematic; For duct furnaces, see Figure 2.2; For system units, refer to the job specific wiring diagram provided with the unit.
6. Push excess wire into wall and plug hole with a fire resistant material (such as fiberglass insulation) to prevent drafts from affecting thermostat operation.
7. Carefully line up thermostat up with the base and snap into place.

## Wiring

Installation of wiring must conform with local building codes, or in the absence of local codes, of the National Electric Code ANSI/NFPA 70 - Latest Edition. Unit must be electrically grounded in conformance to this code. In Canada, wiring must comply with CSA C22.1, Part 1, Electrical Code.

## Wiring Diagram Selection

- For duct furnaces (non-factory supplied blower): refer to Figure 2.2 for wiring.
- For system units (factory supplied blower): refer to the job specific unit wiring diagram provided with the unit.
- For deviations to these wiring diagrams or the job specific wiring diagrams: consult the factory.

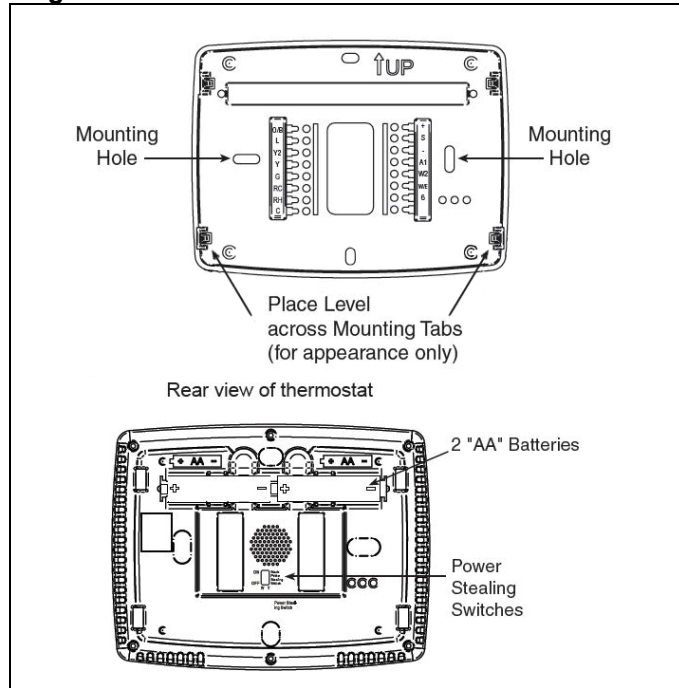
## Battery Location

(2) "AA" alkaline batteries are included in the thermostat at the factory with a battery tag to prevent power drainage. Remove the battery tag to engage the batteries.

## Power Stealing Switches

The Power Stealing Switches (see Figure 2.1) should be left in the "On" position to run the thermostat off of the 24 volt transformer with a battery backup.

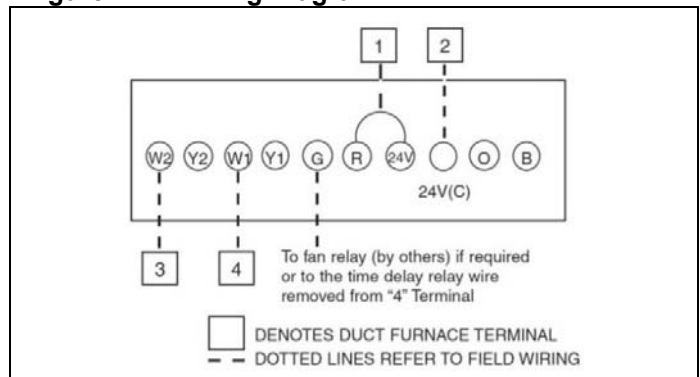
Figure 2.1 – Thermostat Base and Rear View



## Configuration Menu Settings

1. From the main screen select "Menu", hold down "Installer Config" until it enters the installer menu.
2. On the top right of the screen it shows the screen number, to change the screen use the temperature arrows on the right side of the screen. To change the settings use the arrows on the top left.
3. Confirm the following settings are selected:
  - a. SCREEN #1 – SET TO "MS2"
  - b. SCREEN #2 – SET TO "ELE"
  - c. SCREEN #37 – SET TO "OFF"
4. Save the settings and return to the main screen by using the "Run Schedule" selection in the lower right hand corner.

Figure 2.2 – Wiring Diagram



Modine Manufacturing Company has a continuous product improvement program, it reserves the right to change design and specifications without notice.

