SAV-T100-01P-SERIES-A1 Heating and Cooling Fan-Coil Thermostat Operations and Installation Guide

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TABLE OF CONTENTS

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1. INTRODUCTION

The SAV-T100-01P-SERIES-A1 is a precision-engineered thermostat designed for fan coil unit (FCU) HVAC systems, providing reliable heating and cooling control. The system supports external temperature sensing via a remote sensor and functions independently or as part of a home or commercial automation environment.

Its sleek black housing is ideal for AV enclosures, blending with modern interior designs. The backlit LCD and intuitive three-button interface offer real-time display of indoor temperature, system mode, fan status, and user settings. Features like automatic mode changeover, adjustable anticipators, and continuous fan operation enhance user comfort.

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2. KEY FEATURES

- DIN-Rail mountable for AV enclosure integration (Rail brackets included)
- RS232 serial communication for automation system integration (TX-RX, RX-TX, GND)
- Compatible with multiple remote sensors (future use)
- Backlit LCD display
- Three front-facing buttons for local control and setup
- Elegant black finish

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3. INSTALLATION GUIDELINES

BEFORE INSTALLATION

- Only qualified HVAC or AV integration professionals should perform installation.
- Turn off all HVAC system power before installation.

LOCATION CONSIDERATIONS

- Avoid direct sunlight, drafts, windows, and heat sources.
- Recommended for placement in AV Enclosure or server equipment rack.

MOUNTING INSTRUCTIONS

DIN-Rail Mounting (Preferred Method)

1. Use the optional available DIN-Rail mounting brackets.
2. Position the thermostat securely inside the AV enclosure on the DIN rail.
3. Ensure the LCD screen is not under pressure during installation.

Flat Surface Placement (Alternative Method)

- Mount securely to a clean, flat surface using suitable fasteners.

Rack Mounting (1 RU Option)

- Mount within a 2RU space in a server rack.
- Install from bottom to top if rack is partially filled, placing heavier units lower.

INSTALLATION STEPS

1. Turn off HVAC power.
2. Do not separate front and rear plates; access all connections externally.
3. Mount unit using DIN-Rail brackets inside AV enclosure.
4. Connect all wiring, including HVAC controls and RS232 automation links, and 24VAC from and to the HVAC unit.
5. Verify all wires are seated correctly and not pinched.
6. Restore HVAC system power.

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4. WIRING GUIDE

Ensure all control and sensor wires are routed to the enclosure and match the provided wiring diagram. Use a miniature flathead screwdriver to secure wires into terminal blocks. Only power the unit once all connections have been validated.

Typical RS232 Connections:

- TX (Thermostat) to RX (Controller)
- RX (Thermostat) to TX (Controller)
- GND to GND

Contact Simple AV Technical Support for non-standard configurations.

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5. THERMOSTAT SETUP

A trained technician should perform the initial setup using the LCD and button interface. The default settings typically suffice for basic HVAC operation.

NAVIGATION AND MODES

- **MODE button**: Press to cycle through OFF, HEAT, COOL, AUTO, and FAN mode.
- **Up/Down buttons**: Adjust temperature setpoints or scroll through settings.
- **Setup Access**: Hold MODE for 15 seconds to enter setup mode.

CONFIGURABLE OPTIONS

- Temperature Compensation
- Hysteresis (Temperature range buffer)

After adjustments, exit setup mode to resume normal operation.

SUPPORT For additional help or advanced integration support, contact Simple AV Solutions Ltd.

Note: This product is intended to be installed in an AV enclosure on a DIN rail using the optional provided brackets. For optimal results, follow all installation and wiring instructions precisely.

6. TYPICAL USE OF THERMOSTAT

The SAV-T100-01P-Series-A1 Thermostat is designed for intuitive operation in a variety of HVAC environments. This chapter outlines the typical usage patterns and explains the primary user interface features, including **Mode Selection** and **Temperature Setpoint Adjustment**.

6.1 Mode Button Functions

The **Mode** button allows the user to cycle through the available system modes. Each press advances to the next mode in the following sequence:

- **OFF**
  The system is completely turned off. No heating, cooling, or fan operation occurs. This mode is typically used when no climate control is desired, such as when a room is unoccupied.
- **AUTO**
  The thermostat automatically switches between heating and cooling modes based on the current room temperature and the user-defined setpoint. This is the recommended setting for year-round comfort with minimal manual adjustments.
- **HEAT**
  The system operates in heating mode only. If the room temperature falls below the setpoint, the heating equipment will be activated until the desired temperature is reached.
- **COOL**
  The system operates in cooling mode only. If the room temperature rises above the setpoint, the cooling equipment will be engaged to lower the temperature accordingly.
- **FAN ONLY**
  Only the fan is active. No heating or cooling is provided. This mode is often used for air circulation or ventilation purposes without temperature control.

The current mode is typically indicated on the display panel, either via text or icon, depending on the model configuration.

6.2 Adjusting the Temperature Setpoint

The **Up (▲)** and **Down (▼)** buttons allow the user to adjust the **Setpoint Temperature** — the desired target temperature the thermostat should maintain.

- Press ▲ to increase the setpoint.
- Press ▼ to decrease the setpoint.

Changes are immediately saved, and the thermostat will begin adjusting the system operation to reach and maintain the newly set temperature, depending on the active mode.

For example, in **HEAT** mode, increasing the setpoint above the current room temperature will cause the heating system to activate. In **COOL** mode, lowering the setpoint below the room temperature will trigger the cooling system.

6.3 Best Practices for Use

- Use **AUTO** mode for environments with significant daily temperature variation.
- Set reasonable temperature setpoints to optimize energy efficiency.
- Use **FAN ONLY** mode when cooling or heating is not necessary, but air movement is desired.
- Switch to **OFF** during extended periods of vacancy to save energy.

This simple and user-friendly interface allows efficient control of your HVAC system with just a few button presses, ensuring optimal comfort in all conditions.

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7 SPECIFICATIONS

Specification of SAV-T100-P001 Thermostat with optional available remote Sensor and RS232 control port.

Device Type

This Device is a Type 1.B control Device

Measurement Range

Indoor Temperature	0° to 55°C

Temperature Tolerance

Over Full Range	±0.5ºC
At Room Temperatures	±0.1/-0.4ºC

Setpoint Range

Auto Setpoint	14° to 32°C
Heat only Setpoint	14° to 32°C
Cool only Setpoint	14° to 32°C

Relay Rating

1 Amp at 30 Volts DC or 24 Volts AC (nominal) Impulse voltage (OVC I)

Power Requirements

24VAC	For connecting to isolated Class 2 / SELV power source <2 Watts (0.055Amps) at 24 Volts AC, usually supplied by heating or cooling system (HVAC) Impulse voltage (OVC I)

Buttons

MODE	Accesses user controls - system mode, fan mode, heat mode, cool mode Press and hold for 15sec. to enter setup mode.
UP	Selects user modes and increments selection in setup modes
DOWN	Selects user modes and decrements selection in setup modes

Display

Type	TFT LCD, backlit
Size	1.3 in (3.3 cm)
Resolution	128 x 64
Viewing Angle	±80° horizontal (at 0° vertical), ±80° vertical (at 0° horizontal)

Displays current indoor temperature,[1] setpoints, activity function, internal relay status, setup menus

Connections

Power	(2) 2-position terminal blocks compromising the following: **Power Connections (Required):** **24 (C):** 24V AC 55mA. 60Hz. only, common terminal supplies 24V AC power to thermostat. Coming from a remote isolated Class 2 / SELV power source **Remote Sensing Connections:** **RS:** Remote Sensor Returns – Common sensor terminal; ! Maxx. 30m Cable length
HVAC Fan Relay Cool Relay Heat Relay	(3) 3-position terminal blocks comprising the following: **HVAC Control Connections (System Dependent):** **24 (Com):** 24V AC reference terminal – Can be connected to Com by **Com, C:** Reference – Used for all system calls. **NO:** Fan – Energized to Com during call for Fan on Heat or Cool or Fan only. **NC:** Energized to Com Fan is not active. **Com,C:** Reference – Used for all system calls. **NO:** Cool Call – Energized to Com during call for cooling. **NC:** Energized to Com during cool call is off. **Com,C:** Reference – Used for all system calls. **NO:** Heat Call – Energized to Com during call for heat. **NC:** Energized to Com during heat call is off.
Network/Serial Connection	(1) 3-position terminal block; RS232 port, connects to Crestron and all other Home Automation Controller TX, Ground and RX

Enclosure

Plastic, surface-mountable to the front of a horizontally oriented 2-gang Box for (Class 2 SELV Wiring Only) or use optional brackets for Din-Rail mounting.

Dimensions

Height	3.75 in (96 mm)
Width	5.00 in (127 mm)
Depth	1.04 in (27 mm)

Weight

Unit not connected. 165Gramm

Pollution Degree

This Device is a Pollution Degree 2 Device

Simple AV Solutions Ltd.

Innovative Control for Smarter Spaces