

# Halo

## SMT-850

7" Colour Touch Screen Thermostat  
With Zone Control

*Making Life Comfortable*

### General Description

#### Smart Temp Halo SMT-850 Thermostat

Smart Temp has a well-earned reputation for designing innovative, high-quality control solutions that meet today's evolving comfort needs. The SMT-850 "Halo" thermostat lives up to this standard.

#### Advanced Control Flexibility

The Halo offers exceptional flexibility with 10 relays (5 with customizable functions) that can control:

- 4-Stage Heat Pumps with multi fan speeds, or
- 4 separate stages of heating and cooling with fan control.

The Halo also includes 3 separate 0-10V outputs, useful for applications such as:

- Valve control
- Inverter capacity management
- 3-way valves
- CO2 management control signals etc

In addition, the Halo provides 4 digital or analog inputs, which can be set up as remote or outdoor air sensors, alarm inputs, or overrides.

#### Simplified Wiring

When hardwiring is difficult, the Halo supports optional LoRa remote sensors, relays, and digital inputs. Simply assign a function (relay, sensor, etc.) to the LoRa device, and the Halo will control it as seamlessly as a hardwired connection.

#### Enhanced User Experience

Say goodbye to user complaints. The Halo can operate in various installer-defined modes:

Commercial Mode: Ideal for business settings that require scheduling. In this mode, you can easily program 365 days start-stop schedules, with a built-in after-hours run timer to ensure compliance with the 1668 BCA standard. The Halo can even control outside air economy cycle when a outside air sensor is fitted.

Residential Mode: Home users will appreciate the easy setback programming, allowing up to 6 daily events with adjustable override timers.

Manual Mode: Prefer a simpler setup? Set the Halo to manual mode and enjoy straightforward, set-and-forget temperature control.

The Smart Temp Halo SMT-850: Precision control, simple operation, and adaptable comfort for any setting.



### Condensed Features

Full Wi-Fi Control with a free mobile app

ModBus RTU & IP and BACnet MSTP & IP

LoRa Wireless Sensors and Relays (optional)

Heat Pump, Heat Add-On- Cool and 0-10V Valve Control

Inverter AC Compatibility with support for all major brands

Control up to 4 Temperature controlled zones

Single Fan, Multi Speed Fan or DC Fan Control

Up to 4 Compressor Stages (with Lead lag)

Up to 4 Stages of Heat and 4 Stages of Cool

Customisable 7" Colour "Capacitive" Touch Screen

Commercial / Residential Scheduling or Manual

Rh Monitoring with Control Outputs

NDIR CO2 with Control Outputs (optional)

Light Sensor for Automatic Backlight Control

Simple to Navigate Installer Options Menu

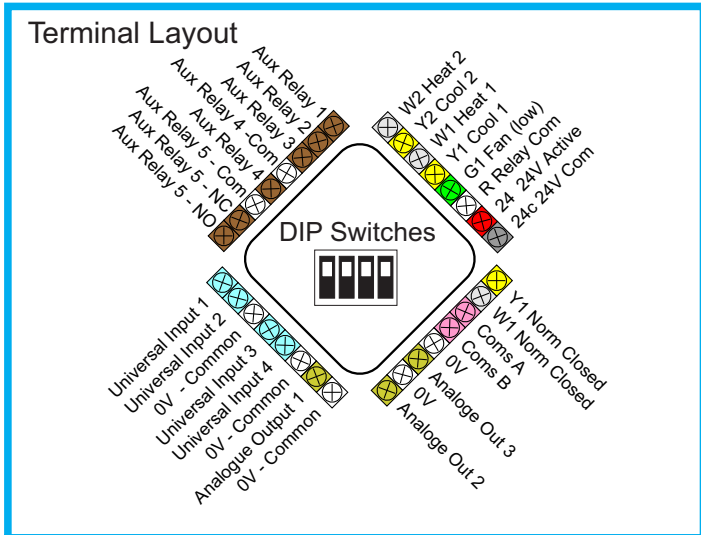
Full Local Product Support

Designed and Built by Smart Temp Australia

Comprehensive 3 Year Warranty RTB



# Typical Wiring (Full System)



24C	Power Common
24	24VAC power (12 ~30V AC or DC)
R	Relay common for main 5 relays
G(1)	Fan (Fan low)
Y1	Compressor 1 / Cool 1
Y1 Norm Closed	Compressor 1 / Cool 1 Norm Closed
W1 (O/B)	Reversing Valve / Heat 1
W1 Norm Closed	Heat 1 Normally Closed
Y2	Compressor 2 / Cool 2
W2	Aux / Emer Heat / Heat 2
Aux Relay 1 to 5	These relays have assignable function
Universal Input 1 to 4	These inputs have assignable functions
Analogue Output 1 to 3	These outputs have assignable Functions
Communication A	RS-485 Coms A
Communication B	RS-485 Coms B

## Just More Clever Features

The Halo offers an extensive range of Inputs and Outputs, along with advanced AI and control options integrated into its software. This makes it versatile enough to manage a wide array of HVAC systems with ease. In commercial settings, the Halo meets BCA 1668 compliance standards, and it's equally powerful in residential applications. For simplicity, the Manual mode is ideal for hotel environments or users who prefer straightforward settings.

A small example of the Halo control capabilities is shown below. for more information please see the full manual available for download at [www.smarttemp.com.au](http://www.smarttemp.com.au)

# Installer Menu

The SMT-850 Halo features a PIN-protected installer menu, allowing qualified personnel to adjust its functions, user interactions, and control over connected HVAC systems and devices. Given the potential impact on performance, only individuals with a solid understanding of HVAC controls should make changes in this menu.

A brief overview of some installer options is provided below. While the installer menu offers a wide range of settings, the default configurations are ideal for most applications. If adjustments are needed, the menu is intuitively designed for easy navigation and customization.

### Menu Settings include (See full manual for all settings)

- Security Settings
  - 7 levels of button lock
  - Temperature limits
  - Installer PIN
- Equipment Control Options
  - Number of stages
  - Timers (Run / anti-cycle)
  - Lead Lag
  - High / Low Balance point settings etc
- Fan Control
  - Fan purge
  - DC fan settings
  - Smart / Summer fan
- User Control Options
  - Residential commercial programmable mode / manual mode
  - Display settings
  - Temperature / time format
  - Sensor calibrations
- IO Options
  - Relays - Zone dampers / Comp stages / Alarms / Economy
  - Inputs - Sensors / Occupancy / Faults /Force On-Off
- 0-10v Outputs
  - Valve control
  - DC fan control
  - Economy Damper Control
  - Inverter Capacity control
  - CO2 / Temp / RH outputs
- Advanced
  - Economy Settings
  - Zone Control settings
  - Data Logging settings
- Expanded
  - LoRa device settings (Relays, Sensors, inputs, 0-10V outputs)
- Communications
  - Modbus / BACnet / Temperzone / Intesis / ST interfac protocols
  - Coms speedd / Address / parity etc
- Save Settings
  - Backup and restore settings or all
  - Forced firmware update

