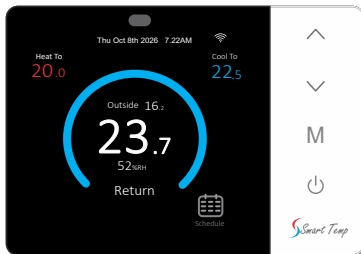




# SMT-455 Voyager

Universal Wi-Fi Thermostat



## Quick Start Guide

Ver 1.34

*Great care has been taken in the preparation of this document. However, due to continual product improvements and revisions, the information contained in this manual may not be completely up to date.*

*Smart Temp accepts no liability for any errors or omissions in this document.*

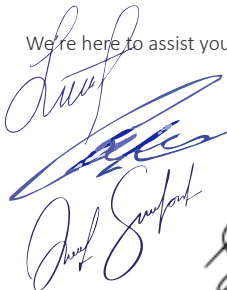
*It is the responsibility of the installer and/or owner to ensure that this product is suitable for the intended application and is installed and operated in accordance with all applicable regulations and instructions.*

## Welcome and Thank You for Choosing the Smart Temp SMT-455 Voyager Thermostat!

Thank you for choosing the Smart Temp SMT-455 Voyager thermostat. Engineered for precision and reliability, this advanced device is designed to provide you with years of seamless climate control.

To help you get started and make the most of your new thermostat, please take a moment to read through this quick start guide. It will guide you through the setup process and help you maximize the benefits that your Voyager thermostat can provide. For more detailed information, you can access the full manual at [www.smarttemp.com.au](http://www.smarttemp.com.au) or scan the QR code below.

We're here to assist you—please share your feedback or reach out for support by emailing us at [voyager@smarttemp.com.au](mailto:voyager@smarttemp.com.au)

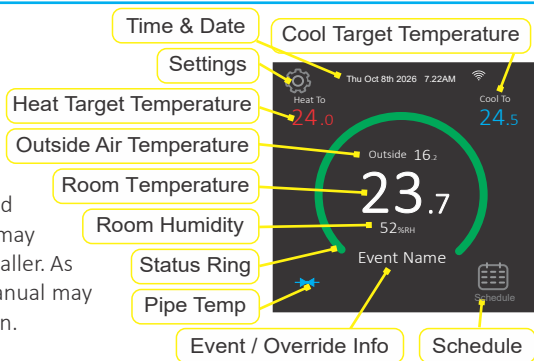
A collection of handwritten signatures in blue ink, including a large signature at the top and another below it.A collection of handwritten signatures in black ink, including a large signature at the top and another below it.A collection of handwritten signatures in green and red ink, including a large signature at the top and another below it.

More Info Here

## Home Screen

The Home Screen of the SMT-455 Voyager thermostat has been designed to be user-friendly and intuitive, as it serves as the primary interface for most daily interactions with the thermostat.

Please note that the features and functions available on your thermostat may vary based on customization by your installer. As a result, some options shown in this manual may not exactly match your specific installation.



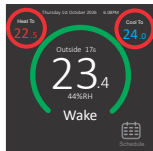
The Home Screen has been designed to be intuitive so little explanation is provided on the Home Screen functions. The exception may be the “Status Ring” that changes colour to indicate the current operation. Grey when OFF, Red when Heating, Blue when cooling and Green when on but at temperature. In simple stand by, the room temperature display also follows these rules.

If you require additional assistance, please email [support@smartemp.com.au](mailto:support@smartemp.com.au) with details of your inquiry and our friendly team will respond promptly.

## Display Options

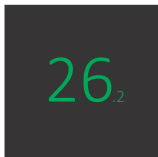
Your SMT-455 can be configured to display information in different ways. If the display is not touched for several minutes, the thermostat will enter standby mode. In standby mode, the backlight may dim or turn off and the thermostat will revert to either Standard or Simple Display mode.

Standard Display shows Room temperature, Set temperature, Time, Wi-Fi status etc while Simple Display shows Room temperature only.



Standard Display

In both display modes, the screen colour provides a visual indication of the thermostat's operating status.



Simple Display

**Grey** – Thermostat is OFF.

**Green** – Room is at the set temp.

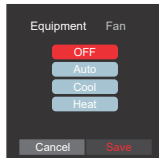
**Red** – Heating is operating.

**Blue** – Cooling is operating.

## Selecting Modes

**M** You are able to select how the SMT-455 controls the HVAC equipment by pressing the Equipment Mode Icon on the right of the display.

Tapping this “M” Icon will open the MODE selection window shown right. In this window you can select all available modes and, by tapping the text “Fan” at the top, you are able to adjust fan mode and speeds (*if enabled by your installer*). Not all modes may be available in your system.



Select the equipment mode you require. It will be highlighted to confirm that it is active.

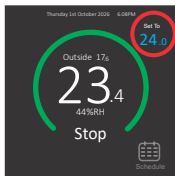
Select the Fan Speed and Mode you require. It will be highlighted to confirm that it is active.

## Changing Setpoints

Your SMT-455 "Voyager" thermostat can be configured by your installer to operate with either a single setpoint or separate heating and cooling setpoints. Single Setpoint mode is the simplest to use. You select a single desired room temperature, and the SMT-455 will automatically heat or cool as required to maintain that temperature within approximately  $\pm 1.5^{\circ}\text{C}$ . (Note: Single Setpoint mode is not available when the thermostat is configured for Residential Programmable mode).

### Single Setpoint Mode

To change the setpoint, tap the up or down button or tap the "Set To" on the display and drag the slider to your new preferred value.



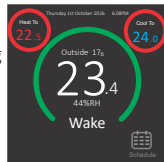
Press "Save" to store your new set temperature. (You may be prompted to select an override period)

### 2 Setpoint Mode

The SMT-455 offers both a heating and separate cooling mode. Each mode has its own "set point" or temperature that the SMT-455 will control the air conditioning system to maintain.

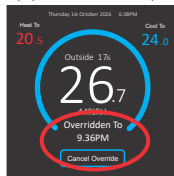
#### To Change Set points.

Tap either the Heating or Cooling "Set To" temperature on the top left or right of the display. Use the Up or Down button on the right hand side of the display or use the slider to adjust the selected set point.



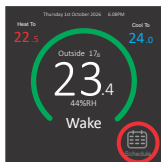
#### Override.

Depending on how your SMT-455 Voyager is setup by your installer, you may be prompted to enter a auto off timer period or, if your Voyager is using a time clock schedule, how long the override period will last until it returns to the pre-programmed set to temperature.

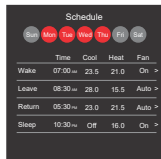


## Schedule - Residential Use

The SMT-455 is fitted with a time clock that can be used to automatically adjust the “Set To” temperature at various times of the day.



With the thermostat in Heat, Cool or Auto mode tap the Schedule Icon (if displayed) in the lower right corner.



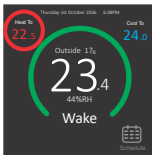
In residential programmable mode simply select the day(s) you wish to edit. Then select the Time, the Heat or Cool Set temperature (or the Fan mode if shown) then adjust the selected values with the Up / Down buttons.

These values will then be stored and used.

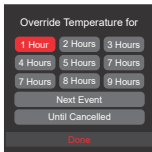
The SMT-455 display will show the current active temperature that it is controlling too, as well as the event name or override period.

### Temperature Override.

Even though your SMT-455 has a schedule, its able to be overridden when necessary.



Simply tap the temperature you wish to override and use the Up/down button or slider to select your new desired set temperature. A window will appear, prompting you to select the duration for which the override should remain active before reverting to the pre-programmed value.



The thermostat will then display the time of the day when the override will expire and also give you the option to cancel the override immediately should you wish.



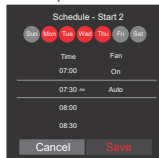
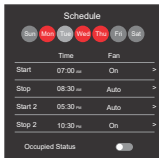
## Schedule - Commercial Use

To conserve energy, commercial buildings often include special control functions that help prevent unintentional energy consumption. These functions may limit the user's ability to adjust how the SMT-455 controls the air conditioning system.

### Programming the Schedules

The SMT-455 will permit you to define the time of the day, for each day of the week that the building will be occupied. It will allow you to set the desired temperature you wish to maintain while the building is occupied (within control limits) however only an authorised person will be able to set the temperatures that are maintained when the building is unoccupied.

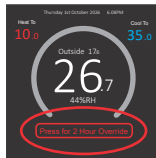
Tap the Schedule icon to open the schedule window. Select the day (or days) you wish to edit. Select the start and or stop time



(or Occupied / Unoccupied icon) to set the time the building is occupied.

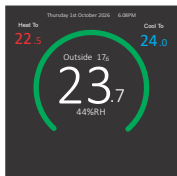
When the start time is reached, the SMT-455 will use the user adjustable set temperature. When the stop time is reached the SMT-455 will use the authorised person set temperature. (This “Stop” temperature cannot be adjusted by the user).

### After Hours Run Function.



During the “Stop” event you are unable to make adjustments to the comfort settings. Pressing the “After Hours” run button will start a countdown time (typically set to 2 hours by default) where the SMT-455 behaves as it would if it were in the Start event. You will be able to adjust comfort levels, fan modes as you would normally. The SMT-455 will resume “Stop” event settings automatically when the timer expires or the timer is cancelled manually.

## Manual Mode



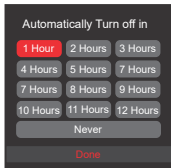
The SMT-455 can be configured by your installer to operate as a simple, easy-to-use manual thermostat.

In this mode, you simply select the desired operating

mode (Heat, Cool, or Auto) and then set your target temperature. The SMT-455 will then maintain these settings continuously until they are manually changed.

Whenever the heating or cooling setpoint is changed, the SMT-455 displays a screen that allows you to set an Auto-Off Timer.

You can either specify a duration in hours or have the SMT-455 continue operating at the new set temperature indefinitely, until the setpoint is changed again in the future.



## Alternate Control

The SMT-455 thermostat can be controlled in several different ways. While the touchscreen and front panel buttons provide the most direct method of operation, many functions can also be controlled via Wi-Fi or by a Building Automation System (BAS).

The SMT-455 is compatible with Google Assistant, Amazon Alexa, and Home Assistant. For example, you can use voice commands such as: "Hey Google, set my thermostat heating temperature to 22 degrees." "Hey Google, turn my thermostat off."

For building integration, the SMT-455 supports Modbus RTU and BACnet MS/TP communications over an RS-485 network. It also supports MQTT over Wi-Fi for integration with automation systems.

The configuration of these communication methods is beyond the scope of this Quick Start Guide. For detailed information contact Smart Temp or your authorised distributor.

## Wi-Fi

The SMT-455 is fitted with a Bluetooth and Wifi Radio. These devices permit you to easily pair your SMT-455 to your home or office Wi-Fi network so that you can remotely control most functions of the thermostat from anywhere in the world where you have access to the internet.

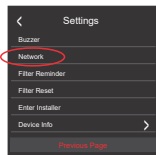
The SMT-455 uses the very reliable and secure TUYA network, permitting you to group the SMT-455 onto the same App that any of your other TUYA devices use. If you don't have any other TUYA devices we suggest the Smart Life app works best.



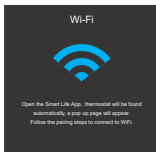
### Pairing

If you have your TUYA app open and running when you first power your SMT-455, the App will pop up with an alert indicating that it has found a new device and request that you pair. Simply agree and follow the app prompts.

If you wish to pair the SMT-455 at a later date you can force the SMT-455 into pairing mode. With the Mode set to Off, press the setting Icon. Make sure your App is open and you are logged in and it is paired to your wifi network.



Tap the Network button to enter the Network Menu. As well as providing information on the network, you are also able to force the SMT-455 into pairing mode.



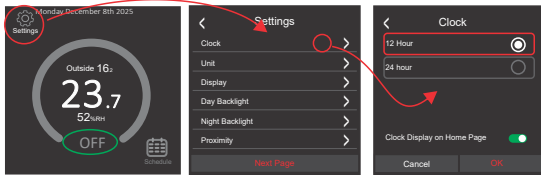
Press the reset network button to begin the pairing process from the beginning.

Remember to have your app open before you start the pairing process.

## User Settings Menu

When the SMT-455 is OFF, a settings ICON is shown in the top left hand corner of the display. This menu permits you to adjust how your SMT-455 functions.

The arrow to the right indicates that there are further options that can be adjusted .



- Clock.**  
12/24Hour selection.  
Set display on main screen.
- Unit.**  
Sets Deg C or F units.
- Display.**  
Normal Display Mode (shows all info).  
Basic Display mode (only shows Room Temp).
- Day (and Night) backlight level.**  
Sets Active (when touched) backlight level.  
Sets Standby ( not touched) backlight Level.
- Proximity.**  
Defines what should light up when moment is detected.
- Buzzer.**  
Permits the audible beeper to be turned On or Off.
- Network.**  
Shows network name.  
Permits network reset (PIN Protected).  
Permits the WiFi to be disabled.
- Filter Reminder.**  
Defines run hours before filter reminder is shown.
- Reset Filter.**  
Permits a Filter Reminder to be reset.
- Enter Installer.**  
PIN protected menu to installer settings.  
**Do Not enter this menu unless you are aware of the consequences of making changes.**
- Device Info.**  
Provides firmware and other thermostat information.

## Additional User Tips

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Your SMT-455 has several additional capability that work across all modes.

### Additional Display Information.

At times, your heating and cooling may not start as expected. The SMT-455 has safety delays built in to prevent damage from starting and stopping your Air Conditioning System too rapidly. A hourglass Icon will be shown on the display when ever this delay is in progress.

A Door or Window icon will be shown if your SMT-455 is monitoring the status of doors and windows. The Air Conditioning system will shut down if a door or window is left open for too long to prevent energy wastage.

A Red Triangle will be shown when a system error is detected. Touch the Red Triangle to view the full error message.

### Keyboard Lock

Many of the buttons or functions of the SMT-455 may be locked or have limits imposed. If these need to be overridden, press and hold the top of the display (where the time and date is shown) for a few seconds, a PIN prompt will be shown. Enter the PIN correctly and the functions will be available for the next 5 Minutes. Incorrect PIN will be ignored. Default PIN is 0021 however this may have been changed by the owner / installer.

### Outside Air Temperature

The SMT-455 will display the outside air temperature. It gets this information from either a hard wired temperature sensor (most accurate) or from the local weather service if connected to Wi-Fi.

### Timer Mode.

A countdown timer may be set on your SMT-455. This timer will automatically turn the SMT-455 OFF when this timer expires. An icon will be shown when the timer is active


## Installer Section

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### Important Notice: Installer Menu Access

The SMT-455 Voyager Thermostat includes a PIN-protected Installer Menu, ensuring secure access to critical system settings.

This menu allows for adjustments that directly affect the thermostat's control over the connected heating and cooling system.

 Caution: Modifying these settings can significantly impact system performance and functionality. Do not access this menu or make changes unless you fully understand their consequences.

Incorrect adjustments may result in system damage and could void both your SMT-455 thermostat and HVAC system warranties.

For assistance, consult a qualified HVAC professional.

## Mounting

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### Removing the Base

To remove the SMT-455 from the base, place a flat blade screwdriver into the 2 slots on the bottom of the base and gently twist and the base will detach from the thermostat body.



### Location

The SMT-455 should be placed at about 1.5 meter above the floor in a location that is typical of the temperature in the space to be controlled. Do not place the SMT-455 in direct sunlight, behind doors or in other areas where the temperature may be effected by external influences. If a suitable place to mount the SMT-455 cannot be found, consider using a remote temperature sensor (wired or BLE).

### DIP Switches

Before you place the thermostat back onto its base make sure you have set the 4 DIP switches to match the requirements of the system you are controlling.

### Wiring

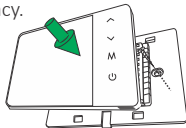
All wiring needs to enter the SMT-455 through the large hole in the centre of the base plate. Excessive wiring should be placed back into the wall cavity to prevent fouling.

Block the hole with tape or similar to prevent drafts entering the back of the SMT-455 that may effect the temperature sensor accuracy.

### Re-installing the Thermostat

A small spirit level is built into base to aid in levelling .

Use the mounting hardware that is provided to attach the thermostat to the wall. The thermostat body should be pushed squarely onto the base until it attaches itself. Do not twist or “pivot” the thermostat as you place it onto its base. It is important that the SMT-455 is pushed on to the base flat so the pins in the SMT-455 body align with the terminals in the base.



# Installer Menu Tree

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The SMT-455 “Voyager” thermostat features a comprehensive Installer Options Menu, allowing the unit’s performance to be tailored to suit a wide range of applications.

Clear text labels and logically structured function descriptions make configuring the SMT-455 a simple and intuitive process.

The table on this page outlines the available menu categories and their contents.

Where required, refer to this manual or the complete SMT-455 User and Installer Manual, available from the Smart Temp website. [www.smarttemp.com.au](http://www.smarttemp.com.au)

## Security Options

- Pin
- Buttons Shown
- Low Cool Limit
- Hi Heat Limit

## Equipment Control

- Differential
- Dead Band
- Anticycle Timer
- Stage Delays
- Upstage Period
- Stepped Downstage
- Optimised Start
- High Balance Point
- Low Balance Point
- Antifreeze
- Outside Economy
- Temp Calibration
- RH Calibration

## Fan Control

- Programmable Fan
- Summer Fan
- Occupied Fan
- Fan run in Fault
- Heat fan purge
- Cool Fan purge

## User Options

- Thermostat Mode
- Permitted Mode
- Setpoint
- Commercial Set points
- Daily Events
- Display
- Timer
- Unoccupied Options

## IO Options

- Universal Input 1 (to 3)
- Universal Output (1 to 3)

## Communications

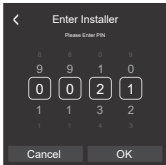
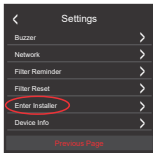
- Factory reset

# Installer Menu



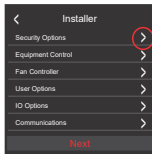
To enter the installer menu, ensure the SMT-455 Mode is OFF, then tap the Setting Icons in the top left (if shown)

Using the “Next” button at the bottom of the page, navigate till you see the “Enter Installer” option, then select this.



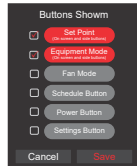
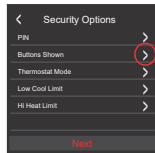
Enter the PIN 0021 by selecting the Digit and dragging it up or down to select 0021 (or your previously modified PIN) then press OK to enter the Installer menu.

If you enter the wrong PIN you will be ejected from this menu. Five failed attempts will lock the thermostat for 15 minutes.



The example left shows the first page of the installer options menu. The “>” Arrow to the right shows there is a sub menu with more options.

In the example right, the security options menu has been selected, again there is another sub menu, such as buttons shown.

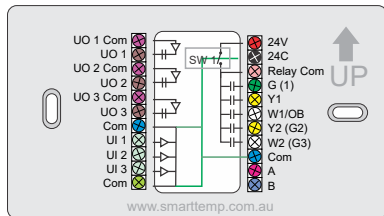


Once you arrive at your desired option, you can simply click (or slide) to select the value you require and select “Save” to confirm your selection.

*Note - If you hide buttons, you can press and hold the top of the display (where the date is shown) and a PIN prompt will appear. Enter the PIN to unlock the buttons for 5 minutes.*

*(Default PIN is 0021)*

## Terminal Layout



The base contains all the terminals needed to connect the SMT-455 to HVAC equipment and any ancillary devices that it controls.

We use 5mm cage screw terminals to accommodate stranded wires and to allow multiple wires to be connected to a single terminal.

When connecting wires, ensure you first loosen the terminal screw before inserting the wire into the terminal block. Once inserted, tighten the screw firmly then gently tug the wire to confirm it is securely held.

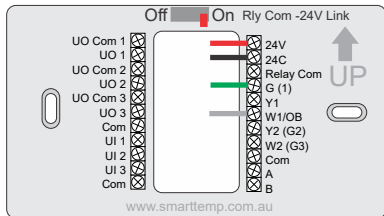
24V	Power Input
24C	Power Common
Relay Com	Power to main 5 Relays
G (1)	Fan (Fan Low)
Y1	Compressor 1 / Cool 1
W1	Reversing Valve / Heat 1
Y2 (G2)	Comp 2/ Cool 2/ Fan Med
W2 (G3)	Rev Valve / Heat 2
Com	Data Ground
A	Data A
B	Data B
UO 1-3 Com	Universal Output Common
UO 1-3	Universal Output
Com	Universal Input Common
UI 1-3	Universal Input

All "Com" terminals are tied to 24C



# Wiring Examples - Gas Heating Mode

## Gas Heater - 1 Stage

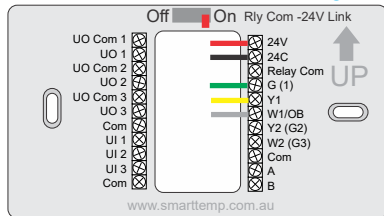


- 24V Power- Active
- 24 V Power- Common
- W1/OB Heat
- G(1) Fan (Optional)

No Installer options  
changes required

- DIP 1 Off
- DIP 2 Off
- DIP 3 Off
- DIP 4 Off

## Gas Heater & Add On Cooling



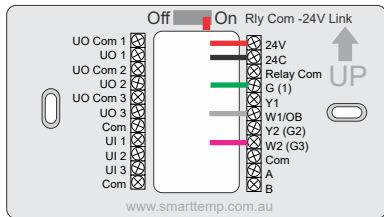
- 24V Power- Active
- 24 V Power- Common
- G(1) Fan
- Y1 Cool
- W1 Heat

No Installer options  
changes required

- DIP 1 Off
- DIP 2 Off
- DIP 3 Off
- DIP 4 Off

# Wiring Examples - Gas Heating Mode

## Gas Heater - 2 Stage



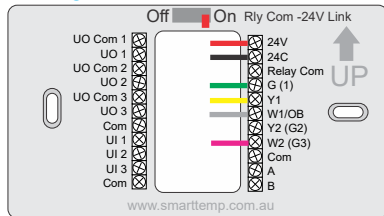
Switch 1 Leave ON

- 24V Power- Active
- 24 V Power- Common
- W1/OB Heat Stage 1
- W2 (G3) Heat Stage 2
- G(1)Fan (Optional)

No Installer options  
changes required

DIP 1 Off  
DIP 2 Off  
DIP 3 Off  
DIP 4 Off

## 2 Stage Gas Heater & Add On Cooling



Switch 1 Leave ON

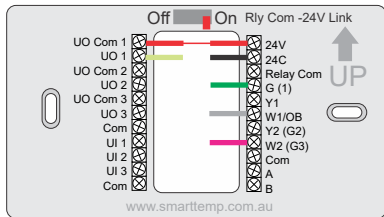
- 24V Power- Active
- 24 V Power- Common
- G (1) Fan
- Y1 Cool
- W1/OB Heat Stage 1
- W2 (G2) Heat Stage 2

No Installer options  
changes required

DIP 1 Off  
DIP 2 Off  
DIP 3 Off  
DIP 4 Off

# Wiring Examples - Gas Heating Mode

## Gas Heater - 3 Stage



Switch 1 Leave ON

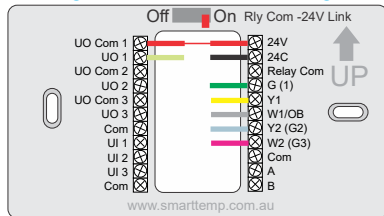
- 24V Power- Active
- 24 V Power- Common
- W1/OB Heat Stage 1
- W2 (G3) Heat Stage 2
- UO1 Heat Stage 3
- G (1) Fan (Optional)

Link 24V and UO1 Com  
Select IO Option  
UO 1 = Heat 3

DIP 1 Off  
DIP 2 Off  
DIP 3 Off  
DIP 4 Off

**Installer options  
changes required**

## 3 Stage Gas Heater & 2 Stage Add On Cooling



Switch 1 Leave ON

- 24V Power- Active
- 24 V Power- Common
- G(1) Fan
- Y1 Cool Stage 1
- Y2 (G2) Cool Stage 2
- W1/OB Heat Stage 1
- W2(G3) Heat Stage 2
- U)1 Heat Stage 3

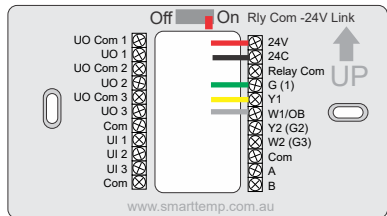
Link 24V and UO1 Com  
Select IO Option  
UO 1 = Heat 3

DIP 1 Off  
DIP 2 Off  
DIP 3 Off  
DIP 4 Off

**Installer options  
changes required**

# Wiring Examples - Heat Pump Mode

## Heat Pump 1 Stage - 1 Fan Speed



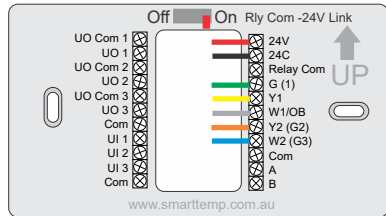
Switch 1 Leave ON

- 24V Power- Active
- 24 V Power- Common
- G(1)Fan
- Y1 Compressor
- W1/OB Reversing Valve

- DIP 1 Off
- DIP 2 On
- DIP 3 Off For RV Cool  
ON for RV Heat
- DIP 4 Off

**No Installer options  
changes required**

## Heat Pump 1 Stage - 3 Fan Speed



Switch 1 Leave ON

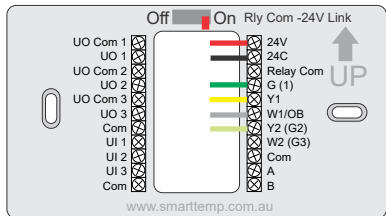
- 24V Power- Active
- 24 V Power- Common
- G (1) Fan (Low)
- Y1 Compressor
- W1/OB Heat
- Y2 (G2) Fan (Medium)
- W2 (G3) Fan (High)

- DIP 1 On
- DIP 2 On
- DIP 3 Off For RV Cool  
ON for RV Heat
- DIP 4 Off

**No Installer options  
changes required**

# Wiring Examples - Heat Pump Mode

## Heat Pump - 2 Stage - 1 Fan Speed



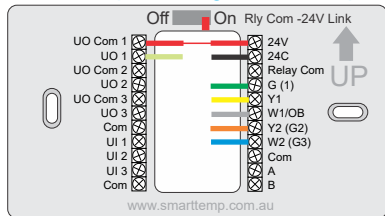
Switch 1 Leave ON

- 24V Power- Active Link 24V and UO1 Com
- 24 V Power- Common Select IO Option
- G(1) Fan UO 1 = Comp 2
- Y1 Compressor Stage 1
- W1/OB Reversing Valve
- Y2 (G2) Compressor Stage 2

**Installer options  
changes required**

- DIP 1 Off
- DIP 2 On
- DIP 3 Off For RV Cool  
ON for RV heat
- DIP 4 Off

## Heat Pump - 2 Stage - 3 Fan Speed



Switch 1 Leave ON

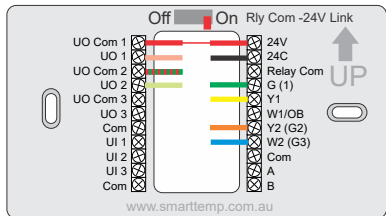
- 24V Power- Active Link 24V and UO1 Com
- 24 V Power- Common Select IO Option
- G (1) Fan (Low) UO 1 = Comp 2
- Y1 Compressor Stage 1
- W1/OB Heat
- Y2 (G2) Fan (Medium)
- W2 (G3) Fan (High)
- Uo1 Compressor Stage 2

**Installer options  
changes required**

- DIP 1 On
- DIP 2 On
- DIP 3 Off For RV Cool  
ON for RV heat
- DIP 4 Off

# Wiring Examples - Analogue Outputs

## 2 Stage Cooling with 0-10V Heating, 3 Fan Speeds



Switch 1 Leave ON

- 24V Power- Active
- 24 V Power- Common
- G (1) Fan (Low)
- Y1 Cool 1
- UO1 Cool 2
- Y2 (G2) Fan (Medium)
- W2 (G3) Fan (High)
- UO2 Heating (10V)
- UO Com 2 Heating (0V)

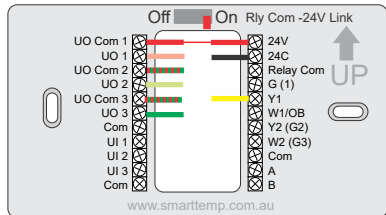
Link 24V and UO1 Com  
Select IO Option

UO 1 = Cool 2  
UO 2 = 0-10 Heat

DIP 1 On  
DIP 2 Off  
DIP 3 Off  
DIP 4 Off

**Installer options changes required**

## 2 Stage Cooling with 0-10V Heating, 0-10V Fan



Switch 1 Leave ON

- 24V Power- Active
- 24 V Power- Common
- Fan (10V)
- Fan (0V)
- Cool 1
- Cool 2
- Heating (10V)
- Heating (0V)

Link 24V and UO1 Com  
Select IO Option

UO 1 = Cool 2  
UO 2 = 0-10V Heat  
UO 3 = 0-10 Fan

DIP 1 Off  
DIP 2 Off  
DIP 3 Off  
DIP 4 Off

**Installer options changes required**



## Wiring Examples - Economy Cycle

Outside air can be used to provide fresh air ventilation or for free cooling (Economy Function) by the SMT-455 if the necessary conditions are met.

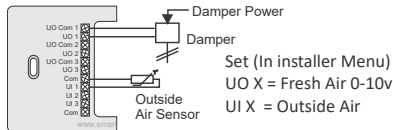
If enabled, and the SMT-455 will compare outside air temperature with indoor air temperature and the active cooling set point. When cooling mode is enabled and if the outside air temperature is at least 1c cooler than the current indoor temperature the SMT-455 will enable the Economy Function.

### Economy Function Logic

If the fan is not already running the economy function will start the indoor fan and begin to apply a 0-10V output to the Fresh Air Damper. The 0-10V output will be at 10V when the room temperature is 0.5c above the current cool set point temperature. If the room temperature rises to the point where the HVAC system starts the economy function will be disabled.

A 0-10V output is also applied to the return air damper reducing from 10V to 0 as economy increases.

Note, for accurate economy control it is recommended that an external outside air sensor is used (as shown below), however if the SMT-455 is connected to Wi-Fi, the local weather as taken from the internet is used. This outside air temp is shown on the display, as is the current economy status.



The SMT-455 provides multiple 0-10V outputs, should you wish you may assign one output as Fresh Air and another output as Return Air. This is helpful especially if you use the Day Time Vent Function (DVT) that permits the Fresh Air Damper to open a fixed percentage when the building is occupied.



## Wiring Examples - Ancilliary Functions

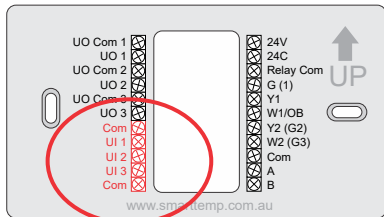
The SMT-455 has several universal inputs with a library of selectable capabilities that are accessed via the Installer Options menu as described previously in this manual.

These functions include

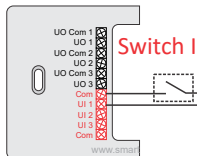
- Remote Room Temperature
- Average Room Temperature
- Outside Air Temperature
- Fault Input
- Force Occupancy
- 2 Pipe Temp Sensor
- Filter Reminder
- Window Switch
- Door Switch
- PIR Input
- Fan Coil Warm Start
- Force Off
- Data (Controlled by Modbus / BACnet)

The SMT-455 universal inputs are Volt Free.

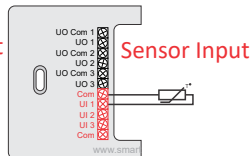
**Do Not Apply Power To These Inputs**



Regardless of the function, the wiring is identical



Fault, Door, Window, PIR, Occupancy Switch etc.

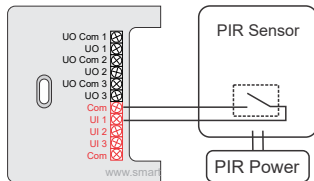


Remote, Averaging, Fancoil Temperature sensor etc

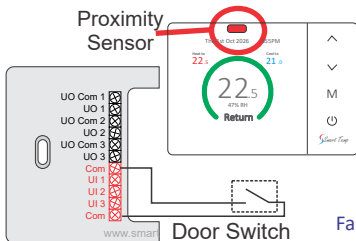
## Automated Functions

Using the Universal Inputs described previously the SMT-455 can perform automatic control functions.

**PIR Input** will automatically swap between the user setpoints and the installer defined Un-Occupied setpoints when movement is detected. Use a standard security style PIR sensor wired into the Universal Input. The PIR sensor will need be independently powered.



**Occupancy Input** will swap between the user setpoints and the installer defined Un-Occupied setpoints when the Input is active.



**Window & Door Input** will change the mode of the SMT-455 between the current user mode and Off.

The door input can also be configured for latched room occupancy detection by selecting the Latched function. In this mode, after the door is closed, the SMT-455 enters and remains in Occupied Mode if it detects movement inside the room after the door is closed.

**Fault Input** will halt the equipment from running while this input is active. It can optionally display the Fault graphic on the display as well.



## Wiring Examples - RS-485 Communications

The SMT-455 is fitted with a highly reliable RS-485 communications ability that permits high level control of various Inverter style HVAC systems, (via the optional Multilink adapter) or it to be connected to a ModBus or BACnet network for central control. Additionally the SMT-455 can “imitate” a temperzone<sup>(tm)</sup> TZT-100 thermostat and be connected directly to the temperzone<sup>(tm)</sup> UC7 or UC8 unit control card for Hi-Level control.

The Communications settings can be defined in the Installer menu as described previously in this manual. In this menu you can set the protocol type, such as

- Modbus RTU (use this for temperzone)

- BACnet MSTP

- Multilink

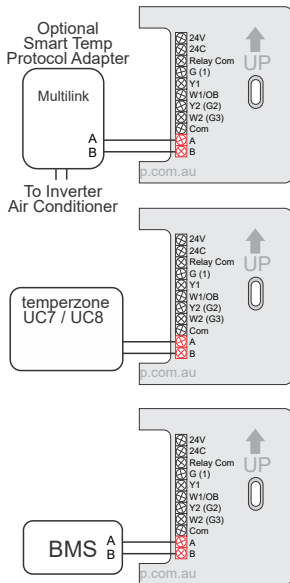
You are also able to adjust

- Network Address

- Baud Rate

- Parity

For more detailed information on the points as well as more communications setup information, please see the full SMT-455 manual that is available from [smarttemp.com.au](http://smarttemp.com.au).



# Specifications

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## Hardware

Size	135 x 95 x 26mm
Weight	0.23 Kg
Box Size	158 x 107 x 35 0.3Kg
Ingress Protection	IP 30
Power	12 ~28V AC or DC
Power Consumption	1.5A max
Contact Rating	0.8A max per relay 2A total
Screw terminals	5mm
Relays	8
Analogue output	3 (10 mA max- protected)
Universal input	3 (Volt Free)
Sensor Type	10K NTC Type II
Display	9.5cm TFT Colour
WiFi Module	2.4 GHz IEEE 802.11b, 802.11g, and 802.11n (HT20)
Communications	RS-485 (120 EOL)
Temperature Range	5 to 35c
Humidity Range	5 to 95% (non-condensing)
Temperature Accuracy	+/- 5% at 35c
Temp Resolution	0.1c
RH Accuracy	+/- %5 at 50% at 25c
Storage Range	-10 to 90c
Warranty	36 Months RTB

## Software

Programmable Modes	Commercial Programmable Residential Programmable Manual (with Timer)
Programmable Events	2 to 6
Commercial AH Timer	Off to 12 hours
Compressor Protections	Anti-cycle Stage Delays Upstage Downstage
Equipment Modes	Heat Cool & Auto
Fan Speeds Supported	1 or 3
Aux Functions	Economy Cycle Occupancy Detection Door & window monitoring Fault Input
Light Sensor	Day & Night detection
Communications Modes	Modbus RTU BACnet MS/TP temperzone (TM) Smart Temp Multilink BLE Type III

## FCC Compliance

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*This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:*

- (1) This device may not cause harmful interference, and*
- (2) This device must accept any interference received, including interference that may cause undesired operation.*

*Attention: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.*

*Note: This product has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This product generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.*

*If this product does cause harmful interference to radio or television reception, which can be determined by turning the thermostat off and on, the user is encouraged to try to correct the interference by one or more of the following measures:*

- Reorient or relocate the receiving antenna.*
- Increase the separation between the equipment and receiver.*
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.*
- Consult the dealer or an experienced radio/TV technician for help.*

*This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and your body.*



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