SMT - 770 Chameleon

Residential & Commercial Networking Thermostat

Making Life Comfortable

General Description

Selecting the correct thermostat for a project is often a difficult process. As the thermostat is the main focus of any heating or cooling system it must look good on the wall, be very easy to use and meet all the needs of the user and the equipment it is controlling. This may seem an impossible task for a single thermostat especially when you consider all the different control variations required (Heat pump or heat cool logic, single or multiple fan speed control etc) as well as cater for the individual needs of all thermostat users.

This thermostat is like the reptile that it takes its name from, the Chameleon thermostat adapts quickly to suit its surroundings – a single thermostat that can control almost any type of heating, cooling or air conditioning system as well as meet all the individual needs of the people using it.

The installer is able to configure the Chameleon to control Heat pump systems, (with auxiliary or emergency heating if necessary), gas/oil heating systems with add on cooling, control high and low balance points as well as the number of heating and cooling stages needing precise control. It can even adapt to manage the number of fan speeds it must control.

The user can choose their Chameleon to be programmable or manual with single or multiple set points or the number programs as required, and then if they change their mind, the Chameleon will adapt without fuss to suit their new needs.

When larger projects are considered, or central control is necessary then the Chameleon has integrated Modbus communication. Every function and setting within the Chameleon can be viewed, locked, changed or edited from a centralised location as desired or automatically from a suitable building management system.

The Chameleon is simply a thermostat so advanced, so simple and so attractive it will be the last thermostat you should ever need to buy.

Features

Auto Season Change Over.

Selectable programmable or manual mode.

Heat cool or heat pump (O/B) logic.

Add on & Emergency Heat Control.

High & Low balance points.

Single or 3 speed fan control.

Keyboard and/or Temperature Locks.

Occupancy sensor inputs.

Programmable occupancy inputs.

Adaptive Recovery (Optimised Start).

Smart Fan logic for Commercial Control.

PIN protected menus (installer PIN).

Outside air temperature display.

24V powered with memory backup.

Volt Free (clean contact) relays.

Large backlit EL Display.

Remote temperature sensors available.

Integrated Modbus option.
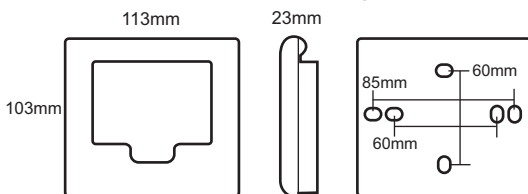
Replaces almost all 24V thermostats.

Smart Temp

Installer options

Pin number select	00 to 99.
Keyboard Lock	5 levels.
Max Heat set point	0 to 37 deg (32 to 99F)
Min Cool set point	1 to 38 deg (33 to 100F)
LCD Display Units	Deg C / Deg F
Sensor calibration	+/- 5 deg.
Time display	12 or 24 Hour.
Temperature display	Room & set temp / set temp only.
After Hours O/R time	0 to 12 hours
Stop mode Cool temp	Off 0-35c (32 - 95F)
Stop mode Heat temp	Off 0-35c (32 - 95F)
1 Set point Dead band	0.5 to 5
Advanced fan options	Cycle with heat and on with cool.
	Commercial "Smart fan".
	Smart fan with Cool run on.
Fan purge period	0-5 minutes
Mode	Auto season mode.
	Cooling only mode.
	Heating only mode.
"W2" Output Logic	Auxiliary Heat
	Add On Heat
	Emergency Heat
TT Terminal Function	Outside air temp display.
	Remote room temp sensor.
	Average room temp sensor.
	Remote override to OFF.
	Occupancy mode On/Off
Anti freeze	Off or 5c (40F).
Occupied Heating SP	Off 0-37 C (32-99F).
Occupied Cooling SP	Off 1-38 C (100F).
Span stage 1	1 -5 deg C or F.
Span stage 2	1 -5 deg C or F.
Upstage Delay time	5 ~ 60 minutes.
Adaptive recovery	On or Off.
Outside senor Calibration.	+/- 5 deg
Outside Temp Cool Inhib.	0-35C (32 - 95F)
Outside Temp Heat Inhib.	0-35C (32 - 95F)
High Balance point	0-35C (32 - 95F)
Low Balance point	-9.5 -35C (15 - 95F)
Modbus Address	0-99
Filter monitor	Off to 900 hours.
Commissioning Mode	On/Off

Switch Functions

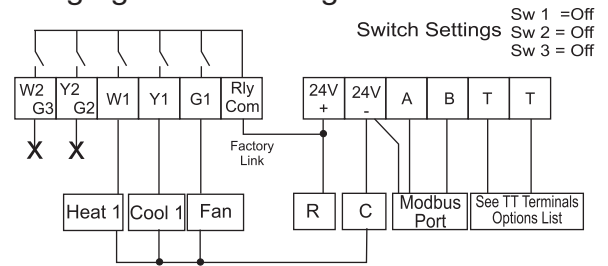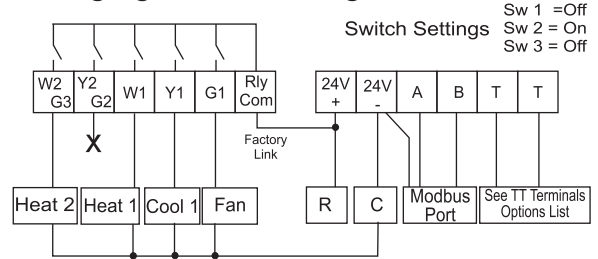|	Off	On
Sw 1 - Fan Speed.	1 Speed (2 Heat / 2 Cool)	3 Speed (1 Heat / 1 Cool)
Sw 2 - A/C Equip.	Heat & Cool	Heat Pump O/B Terminals
Sw 3 - Stages (if Sw1 =OFF)	1 Stage	2 Stages
Sw 4 - Reversing Valve When Sw2 = ON (HP Mode)	Energized Cool (O)	Energized Heat (B)
Sw 4 - Fan Mode When Sw2 = OFF (HC Mode)	Fan by Heater (HG)	Fan by T'stat (HE)
Sw 5 - Anti cycle delay	Off	4 Minutes
Sw 6 - Operation	Manual Thermostat	Programmable Thermostat
Sw 7 - Min Run time	2 minutes	6 Minutes
Sw 8 - Prog Type When Sw6 = ON (programmable)	Commercial Programmable	Residential Programmable
Sw 8 - # Events When Sw6 = OFF (Manual)	Single Set Point	2 Set points

Case size & mounting holes

113mm   23mm

103mm   85mm   60mm   60mm

Wiring Examples

1 stage gas heat 1 stage add on cool

Switch Settings: Sw 1 =Off, Sw 2 = Off, Sw 3 = Off

W2 G3 | Y2 G2 | W1 | Y1 | G1 | Rly Com | 24V + | 24V - | A | B | T | T

X   X   Factory Link

Heat 1 | Cool 1 | Fan   R | C | Modbus Port | See TT Terminals Options List

2 stage gas heat 1 stage add on cool

Switch Settings: Sw 1 =Off, Sw 2 = On, Sw 3 = Off

W2 G3 | Y2 G2 | W1 | Y1 | G1 | Rly Com | 24V + | 24V - | A | B | T | T

X   Factory Link

Heat 2 | Heat 1 | Cool 1 | Fan   R | C | Modbus Port | See TT Terminals Options List

1 stage reverse cycle 3 speed fan

Switch Settings: Sw 1 =On, Sw 2 = Off, Sw 3 = On

W2 G3 | Y2 G2 | W1 | Y1 | G1 | Rly Com | 24V + | 24V - | A | B | T | T

Fan Med   Factory Link

Fan High | R/Valve | Comp | Fan Low   R | C | Modbus Port | See TT Terminals Options List
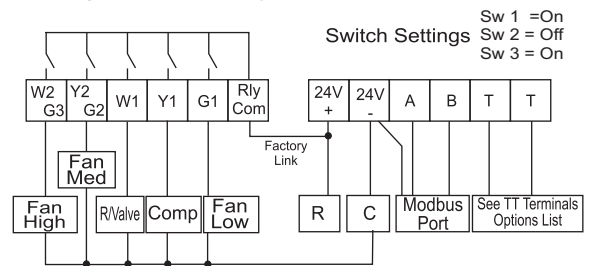
2 stage Heat Pump with Emergency Heat 1 speed indoor fan

Switch Settings: Sw 1 =Off, Sw 2 = On, Sw 3 = On

W2 G3 | Y2 G2 | W1 | Y1 | G1 | Rly Com | 24V + | 24V - | A | B | T | T

Comp 2   Factory Link

E. Heat | R/Valve | Comp 1 | Fan   R | C | Modbus Port | See TT Terminals Options List
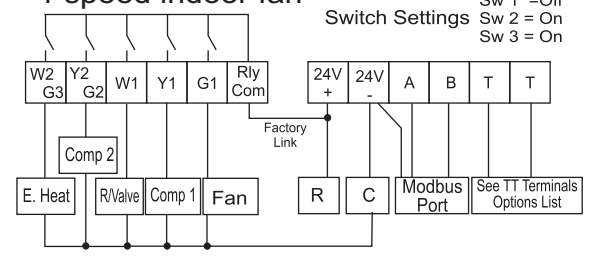
Terminal Designations

Terminal	Designation
24-	24V - 0v input.
24+	24V - Active input.
R/com	Relay common.
G1	Fan low.
Y1	Compressor 1 / Cool 1
W1	Reversing Valve / Heat 1
G2/Y2	Fan Med / 2nd Compressor / Cool 2.
G3/W2	Fan High / Aux Heat. / Heat 2
T	Remote Terminal
T	Remote Terminal
A	Modbus Data
B	Modbus Data

Smart Temp

Another Quality Product manufactured by Smart Temp Australia