Smart Temp™

ISIS
Installation Instructions

The ISIS from Smart Temp Australia P/L is a multistage auto change-over programmable thermostat. It offers industry leading features, an impressive warranty and is extremely simple to use and set up. By taking the time to follow these instructions the ISIS will perform faultlessly and provide the end user with many years of trouble free service.

Use this installer instruction sheet for mounting and setting up the ISIS, and the User manual for information on programming and setting the real time clock etc.

Mounting the ISIS or Optional Remote Sensor.
The ISIS can only be as accurate as the temperature sensor permits. It is therefore essential that the ISIS (or remote sensor(s)) are installed in a location that is typical of the ambient room temperature. Do not install the ISIS in a draft, near a floor/wall/roof register. Consideration also needs to be given to drafts that may be present near external opening doors, chillers or windows. Where possible mount the ISIS or temperature sensor out of direct sunlight and on internal walls.

Further, when mounting the ISIS be aware of drafts that may travel down the inside of walls, (especially if mounted on external walls). It is important to fully block all cable entry holes to prevent any of these drafts effecting the internally mounted ISIS temperature sensor.

It is recommended to mount the ISIS or remote sensors between 1.5 & 1.8 metres from the floor where possible.

Cabling
Normal "AC style" low voltage cabling can be used for the ISIS control wiring. Where long cable runs are likely for the remote temperature sensor and/or remote override switch it is recommended that screened cable be used, especially where this cable is run close to high voltage electrical wiring.
Do not used twisted DATA cable (CAT 5).

Wiring
Refer to the wiring diagrams on the reverse of this sheet to connect the ISIS to the equipment. Please note, the ISIS is both a Heat Pump & Heat Cool thermostat. The mode of operation is selected with clearly marked jumpers. It is important that you have the jumpers in the correct position for the type of AC equipment installed.

Programming & Set Up

DO NOT INSTALL THE LITHIUM BACK UP BATTERY UNTIL AFTER THE REAL TIME CLOCK HAS BEEN SET.

After first connecting the AC power to the ISIS it is important to wait 15 ~ 20 seconds before attempting to press any buttons, this gives the ISIS time to "BOOT UP" and run its internal diagnostics routine. The ISIS will <u>FAIL</u> this initial BOOT sequence if the lithium battery is installed at this point. If the battery has been mistakenly installed at this point, remove the battery, power the ISIS down and wait 2~3 minutes before re applying power to the ISIS.

Use the programming instructions supplied in the user manual to set the realtime clock and program the ISIS to the end user requirements.

After the ISIS has been set up and programmed insert the lithium battery into the battery holder on the base of the main PCB.

Turn of the power to the ISIS wait 10 seconds and re connect the power to confirm that the ISIS retains memory and the backup battery and electronics functions correctly.

With the ISIS in Auto Change Over mode, test all thermostat modes by both raising the set temperature above the ambient temperature and verifying correct heater operation. Next lower the set temperature to below the ambient temperature and verify the correct operation of the cooling equipment.

Advanced Installer Functions

The ISIS has two concealed menus that are used to either fully lock the thermostat (or restrict the temperature control range) or to adjust the advanced installer functions. Each menu uses its own security code. It is important that these security codes are only given to authorised persons as these codes are fixed in ePROM and cannot be changed. If these codes are compromised then unauthorised persons will be able to make changes that will effect the performance or efficiency of the AC system.

Locking & Unlocking the ISIS
Press the ALARM / RESET button. The ISIS will display "C50". Using the Set - button adjust this to read "C45". Press the ALARM / RESET to enter the Lock menu. Pressing the ALARM / RESET button again will lock the ISIS.
Repeat this procedure to unlock the ISIS.

Setting Advanced Functions.
Press the ALARM / RESET button. The ISIS will display "C50". Using the Set + button adjust this to read "C55". Press the ALARM / RESET again to enter the Setup menu.

The ISIS will display "HL XX" This is the highest value you wish the user to be able to adjust the set temperature to. This value can be adjusted using the Set + or SET - buttons. Default value is 31

Press the ALARM / RESET button again to display "LL XX" This is the lowest value you wish the user to be able to adjust the set temperature to. This value can be adjusted using the Set + or SET - buttons. Default value is 16

Press the ALARM / RESET button again to display "HA XX" This is the value you wish the ISIS to activate the over temperature alarm. This value can be adjusted using the Set + or SET - buttons. Default value is 45

Press the ALARM / RESET button again to display "LA XX"   This is the value you wish the ISIS to activate the under temperature alarm. This value can be adjusted using the Set + or SET - buttons. Default value is 04

Press the ALARM / RESET button again to display "Db XX"   This permits adjustment of the dead band value, which is the value in deg C between heat and cool modes that you wish the ISIS to remain idle. This value can be adjusted using the Set + or SET - buttons. Default value is 1 deg C.
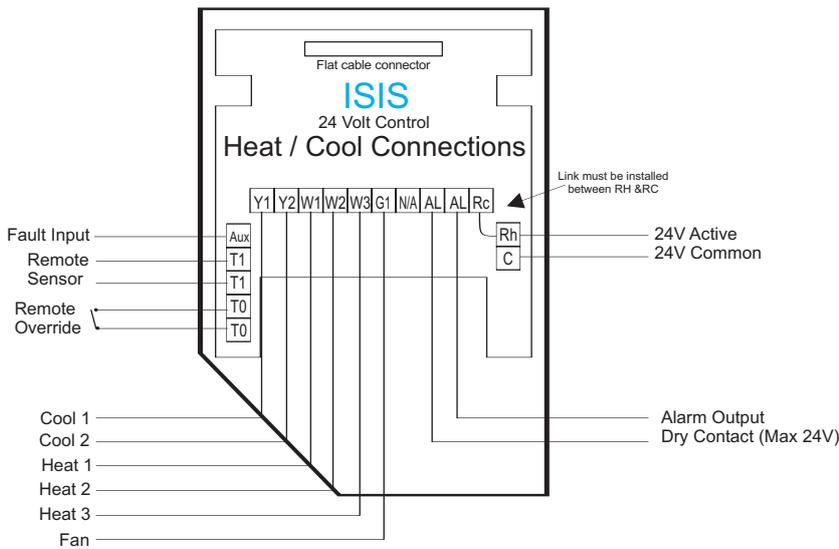
Press the ALARM / RESET button again to display "Ot XX"   This activates the ISIS optimised start function "Ot 00" is optimised start off. "Ot 01"is optimised start on. This value can be adjusted using the Set + or SET - buttons. Default value is "OO" (off). Optimised start will Start the ISIS before the programmed start time to ensure the area is at the desired temperature <u>by</u> the programmed start time.

Press the ALARM / RESET button again to display "AH XX"   This sets the ISIS After Hours run on time period. This value can be adjusted to values between "0" and "4" hours using the Set + or SET - buttons.
Default value is "02" *(Use "00" to set the after hours run on time period to Off)*

Press the ALARM / RESET button again to display " t 00"
This permits you to adjust the temperature calibration of the thermostats temperature sensor. This value can be adjusted to values between "-6 c" and "+6 c" using the Set + or SET - buttons. Default value is "00" (Calibration Offset is nil)

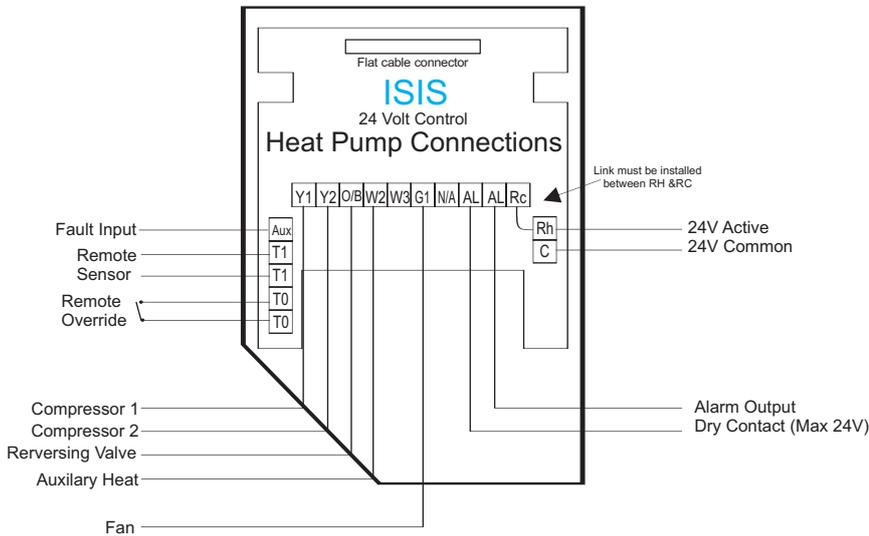Press the ALARM / RESET button again to return the ISIS to normal mode.

Electrical Diagram

ISIS
24 Volt Control
Heat / Cool Connections

Flat cable connector

Link must be installed between RH &RC

Y1 Y2 W1 W2 W3 G1 N/A AL AL Rc | Rh C

- Fault Input — Aux
- Remote Sensor — T1 / T1
- Remote Override — T0 / T0

- 24V Active — Rh
- 24V Common — C

- Cool 1
- Cool 2
- Heat 1
- Heat 2
- Heat 3
- Fan

- Alarm Output Dry Contact (Max 24V)

ISIS Heat Cool Configuration

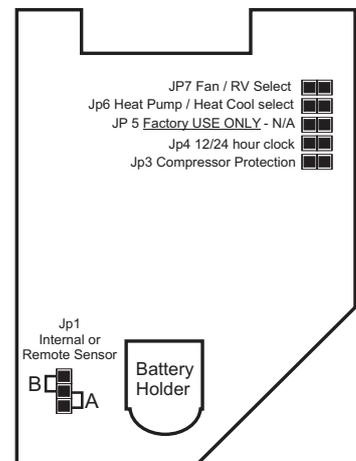| Jumper Position	JP3	Jp4	Jp5	JP6	JP7
Off	4 min Time Delay	Clock 24 Hour	N/A	**Must be in this position**	Fan ON immediate with Heat call (Elec. Heat)
On	Time Delay Off	Clock AM/PM	N/A		Fan controlled by plenum switch (Gas. Heat)

JP-1 Position A = Internal Sensor
Position B = Remote Sensor

ISIS
24 Volt Control
Heat Pump Connections

Flat cable connector

Link must be installed between RH &RC

Y1 Y2 O/B W2 W3 G1 N/A AL AL Rc. | Rh C

- Fault Input — Aux
- Remote Sensor — T1 / T1
- Remote Override — T0 / T0

- 24V Active — Rh
- 24V Common — C

- Compressor 1
- Compressor 2
- Rerversing Valve
- Auxilary Heat
- Fan

- Alarm Output Dry Contact (Max 24V)

ISIS Heat Pump Configuration

Jumper Position	JP3	Jp4	Jp5	JP6	JP7
Off	4 min Time Delay	Clock 24 Hour	N/A		Rev Valve Energize "O" (cooling)
On	Time Delay Off	Clock AM/PM	N/A	**Must be in this position**	Rev Valve Energize "B" (heating)

JP-1 Position A = Internal Sensor
Position B = Remote Sensor

- JP7 Fan / RV Select
- Jp6 Heat Pump / Heat Cool select
- JP 5 Factory USE ONLY - N/A
- Jp4 12/24 hour clock
- Jp3 Compressor Protection

Jp1 Internal or Remote Sensor
B A

Battery Holder

Specifications

Range:	5° to 35° c.
Deadband:	1~5 deg C (Adjustable)
Alarms:	2~45 deg C (Adjustable)
After Hours:	0~4 Hours (Adjustable)
Cal Offset:	+/- 6 C (Adjustable)
Resolution:	1°c
Accuracy:	+/- 0.3°c
Load rating:	2 Amps @ 24 VAC max.
Lithium Bat:	10 Years (Or 8 weeks accumulated power outage)
Voltage:	24VAC.
Connectors:	Screw type.
Material:	PC/ABS
Weight:	210g
Size:	82 x 140 x 27
Warranty:	1 year R.T.B

Optional 240V Interface available
Smart Pak
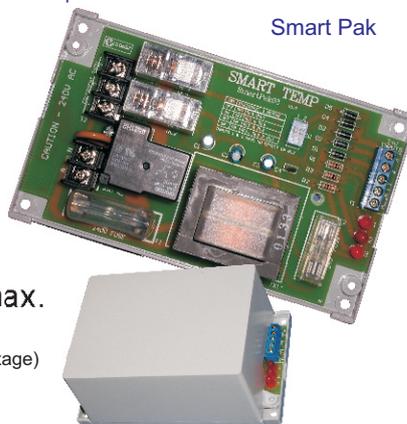
Optional Smart Pak Cover Shown

Optional Adjustable Remote Sensor
(Non Adjustable and Duct Mount Sensors available)

Smart Temp
SET

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