

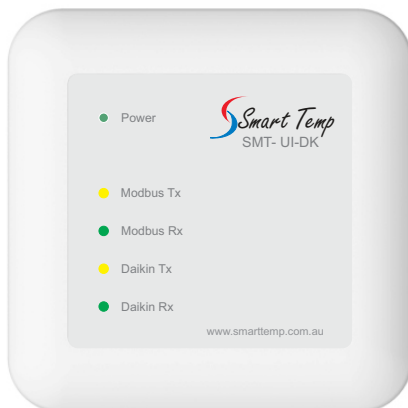
SMT-UI-DK

Modbus RTU to Daikin P1 P2 Interface

Basic Manual

This interface was designed to permit Smart Temp thermostats (and other devices such as Building Management Systems with Modbus capabilities) to control Daikin air conditioning systems that have the standard Daikin P1 P2 interface.

The SMT-IU-DK has been designed to be a easy to install and understand interface that can provide clear indication of both Modbus (A B) and HomeBus (P1 P2)communications.



Switches

The SMT-UI-DK is fitted with 8 DIP switches. Unless advised otherwise, when using the SMT-UI-DK on Smart Temp products - All switches should remain **OFF**.

Note:-

Sw6 - 1.0/0.1 resolution in some circumstances may need be turned on.

Unfortunately the need for this function is hard to define in this manual due to changes in Daikin firmware. If you have failed communications or poor control resolution try changing this switch position.

		OFF	ON
Sw 1	Reserved	Leave OFF	Leave OFF
Sw 2	Temperature Format	Deg C	Deg F
Sw 3	Network Address 0	0	1
Sw 4	Network Address 1	0	2
Sw 5	Network Address 2	0	4
Sw 6	Temperature Resolution	1.0 Deg	0.1 Deg
Sw 7	Baud	9600	19200
Sw 7	End Of Line Termination	Off	On

When all address switch are set to OFF, the SMT-UI-DK will still use Modbus address 1 as Address 0 is not supported.

LEDS The SMT-UI-DK is fitted with 5 indicator LEDS.

Power The SMT-UI-DK is receiving power from the Daikin AC system via the P1 P2 terminals.

Modbus Tx The SMT-UI-DK is transmitting data to the Smart Temp Thermostat.

Modbus Rx The SMT-Ui-DK is receiving data from the Smart Temp thermostat.

Daikin Tx The SMT-UI-DK is sending data to the Daikin AC system.

Daikin Rx The SMT-UI-DK is receiving data from the Daikin AC system.

The Smart Temp SMT-DK-UI can also be used by any modbus device such as BMS system that wish to

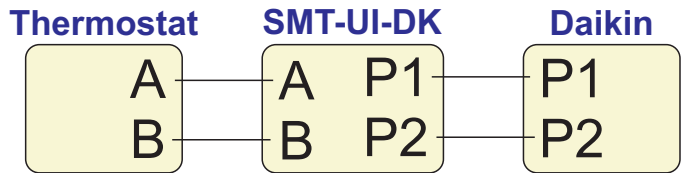
Wiring

The SMT-UI-DK is powered by the Daikin P1 P2 terminals. The P1 P2 terminals provide approximately 12V DC and are generally not polarity dependent. Once the P1 P2 terminals are connected to the SMT-UI-DK you should see the uppermost Green "Power" LED illuminate.

The Modbus A B terminal are polarity dependent. The "A" terminal from the thermostat must be connected to "A terminal in the Smart Temp SMT-UI-DK etc.

The Modbus Tx & Rx LEDs will flicker when ever the thermostat is sending or receiving commands from the SMT-UI-DK. Likewise the Daikin Tx & Rx LEDs will flicker when communicating with the Daikin AC system.

The SMT-UI-DK communication LEDs are a powerful tool to determine correct operation. If for example the Modbus LEDs flicker (Indicating correct Modbus operation) but the Daikin communication LEDs do not, it would be wise to check the Daikin P1 P2 communication settings



Advanced.

Modbus

The SMT-UI-DK can be used by a standard BMS that wished to control a Daikin system with P1 P2 terminals. A master document supplied by Smart Temp or a authorised distributor can supply the SMT-UI-DK Modbus object list. The master manual will provide the Modbus registers that need be mapped by the BMS system.

Please contact Smart Temp for the SMT-UI-DK master manual should you need this information.

Error Codes

The SMT-UI-DK will pass all Daikin error codes to the Modbus master device via the Modbus A B terminals. Many Smart Temp devices will display these error codes.

A list of these error codes can be found in the SMT-UI-DK master manual. Please contact Smart Temp should you need this information.

Multiple AC Units

Some Smart Temp thermostats are able to control multiple Daikin AC systems from a single wall controller, such as when using the Smart Temp Inspire Touch Ver II. In these applications you must define the control of AC 1 using Modbus address 1, AC 2 will be Modbus address 2 etc. See the relevant Smart Temp manual for specific product information on this function.

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All care has been taken in the preparation of this manual.
Smart Temp or its distributors accept no responsibility for error or omissions in this manual.