# Installation Instructions

## SAC-U2- Smart Airflow Control Unit 2



### Design Highlights

-Temperature controlled variable fan state & speed with equipment overheat alarm
-Near silent operation with vibration isolating rubber mounts
-Height efficient design to maximise use of space within rack / cabinet
-Optional 19" Rack mounting supplied (1U)
-Self contained unit with onboard electronics for simple installation

Thank you for choosing
futureautomation

# SAC-U2- Smart Airflow Control Unit 2

Caution Warning

Beware of Moving Parts

Danger Electricity

Keep Hands Clear

**Safety Disclaimer**
Important Safety Instructions
Explanation of graphical symbols
-(Electric Shock Symbol) = The lightning flash within an equilateral triangle is intended to alert you to the presence of un-insulated "dangerous voltage" within the products enclosure that may be of sufficient magnitude to constitute an electric shock to persons
-(Caution Symbol) = The exclamation point within an equilateral triangle is intended to alert you to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product
-(Tools Symbols) = The tools symbol within a coloured square are intended to highlight the required tools necessary for correct and safe installation of the product. These are intended as a
guide only, and it is at the installer's discretion as to which tools are used.

**WARNING:** RISK OF ELECTRIC SHOCK, ONLY AUTHORIZED INSTALLERS TO OPEN THE POWER CONTROL BOX.
**WARNING:** To reduce the risk of fire or electric shock, do not expose electrical parts to rain or moisture, unless the product has been specifically designed to do so.
**WARNING:** Failure to provide adequate structural strengthening, prior to installation can result in serious personal injury or damage to the equipment. It is the installer's responsibility to ensure the structure to which the component is affixed can support the four times the weight of the component.
**WARNING:** Do not exceed the weight capacity. This can result in serious personal injury or damage to the equipment. It is the installer's responsibility to ensure that the total combined weight of all attached components does not exceed that of the maximum figure stated.
**WARNING:** Failure to provide adequate structural strength for this component can result in serious personal injury or damage to equipment! It is the installer's responsibility to make sure the structure to which this component is attached can support five times the combined weight of all equipment. Reinforce the structure as required before installing the component.

**Warnings:**

1. **Read all technical instructions fully before installation and use. It is the installer's responsibility to ensure that all documentation is passed on the end user and read fully before operation.**
2. **Keep all documentation.**
3. **Heed all warnings.**
4. **Follow all technical specifications and instructions during installation.**
5. **Do not use near water unless the product has been specifically designed to do so.**
6. **Clean only with a dry cloth.**
7. **Do not defeat the purpose of the polarized or grounding type plug. A polarized plug has two blades, one wider than the other. A grounding type plug has two blades and a grounding prong. The wide blade or third prong are provided for your safety. If the provided plug does not fit your outlet, consult an electrician or contact the manufacturer.**
8. **Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where the exit from the apparatus.**
9. **Unplug the apparatus during lightning storms or when unused for long periods of time.**
10. **Only use attachments/accessories specified by the manufacturer.**
11. **Refer all servicing to qualified personnel. Servicing is required regularly on an annual basis, when the apparatus is damaged in any way, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.**
12. **To completely disconnect the apparatus form the AC mains, disconnect the power cord plug from the AC receptacle on the power control box.**
13. **To prevent overheating, do not cover the apparatus. Install in accordance with the instructions.**
14. **UK, Ireland and Hong Kong only – The power cord is supplied with a 13A plug having an earthing pin. The apparatus is earthed and this pin is not required for safety, merely to operate the safety shutter of mains outlet.**
15. **No naked flames such as lit candles should be placed on the unit.**
16. **Observe and follow the local regulations when disposing of batteries.**
17. **Do not expose the unit to dripping or splashing fluids.**
18. **Do not place objects filled with liquid, such as vases, on the unit.**
19. **Do not expose the batteries to excessive heat such as sunshine, fire or the like.**
20. **For all mounted apparatus, the apparatus should be installed on solid wood, bricks, concrete or solid wood columns and battens.**
21. **Always turn off power at source before putting on or taking off parts and cleaning.**
22. **Do not use outdoors unless marked for outdoor use.**
23. **Exceeding the weight capacity can result in serious personal injury or damage to equipment.**

Future Sound & Vision trading as Future Automation intend to make this and all documentation as accurate as possible. However, Future Automation makes no claim that the information contained herein covers all details, conditions or variations, nor does it provide for every possible contingency in connection with the installation or use of this product. The information contained in this document is subject to change without prior notice or obligation of any kind. Future Automation makes no representation of warranty, expressed or implied, regarding the information contained herein. Future Automation assumes no responsibility for accuracy, completeness or sufficiency of the information contained in this document.

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# SAC-U2- Smart Airflow Control Unit 2

## Tool Indicator Icons

1.
2.
3.
4.
5.
6.
7.
8.

1. - Drill
2. - Tape measure
3. - Allen Keys
4. - Spirit Level
5. - Screwdrivers
6. - Spanners
7. - Pencil
8. - Saw

**Product Warranty**

This product carries a warranty that covers the cost of labour and spare parts incurred by any defects in materials and workmanship under normal use during a two year period from date of purchase. Support for any problems that are not hardware faults are excluded from the warranty entitlement. This warranty does not affect your statutory consumer rights.

The following is excluded from warranty service:

- Malfunctioning caused by misuse or damage, accidental or otherwise, or service modification by persons not authorised by Future Automation, or the use of any non Future Automation supplied parts;
- Any electrical, or other environmental work external to your Future Automation mechanism including power cuts, surges or lightning strikes;
- Additional items not supplied by Future Automation although they may have been supplied together by the retailer;
- Any 3rd party software products controlling your mechanism;
- Any transfer of ownership. Warranty is provided only to the initial purchaser;
- Compensation for loss of use of the product, and consequential loss of any kind;
- Use of the product over the specified weight capacity;
- Any damage to products during transit that is not checked and notified as “unchecked” or “damaged” upon receipt of delivery.

Any part of your system that needs to be replaced during a warranty repair becomes the property of Future Automation.

# SAC-U2- Smart Airflow Control Unit 2

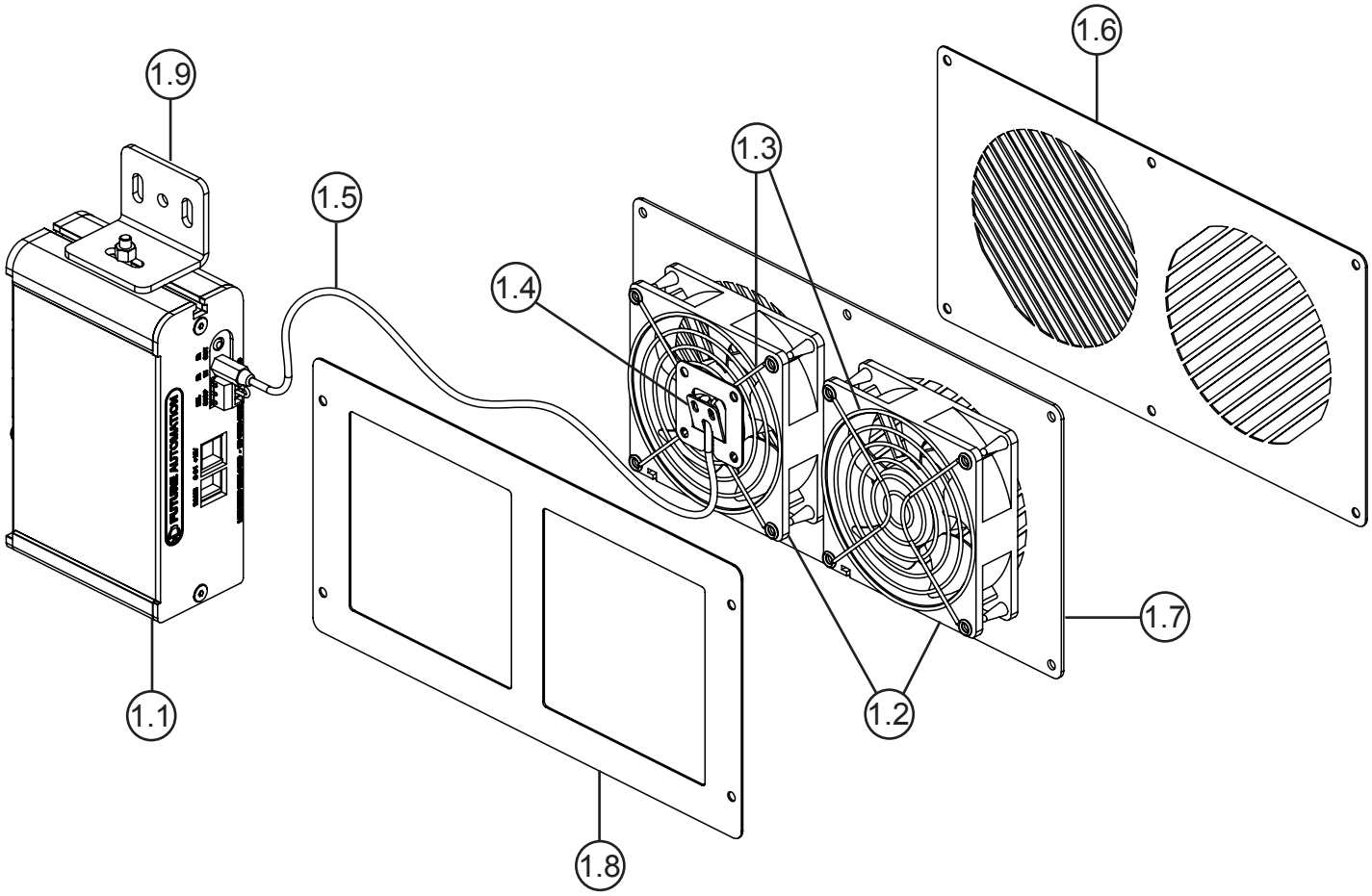


**Package Contents**

1 - SAC-U2 Unit
1.1 - Control Box
1.2 - Cooling Fans
1.3 - Fan Finger Gaurds
1.4 - Temperature Sensor Bracket
1.5 - Thermometer Cable
1.6 - External Trim Panel
1.7 - Fan Panel
1.8 - Internal Trim Panel
1.9 - Control Box Mount Bracket
**Not Shown On Page**
2 - IEC Mains Lead

**Before you Start, Check the Following:**

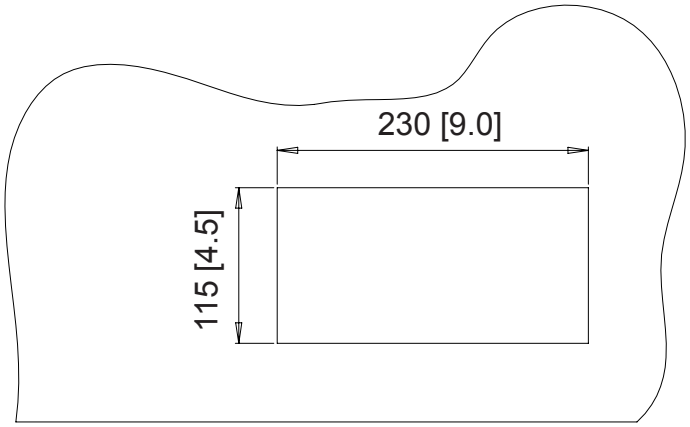
-The product is in good condition
-No damage to any parts
-Wiring is all secure

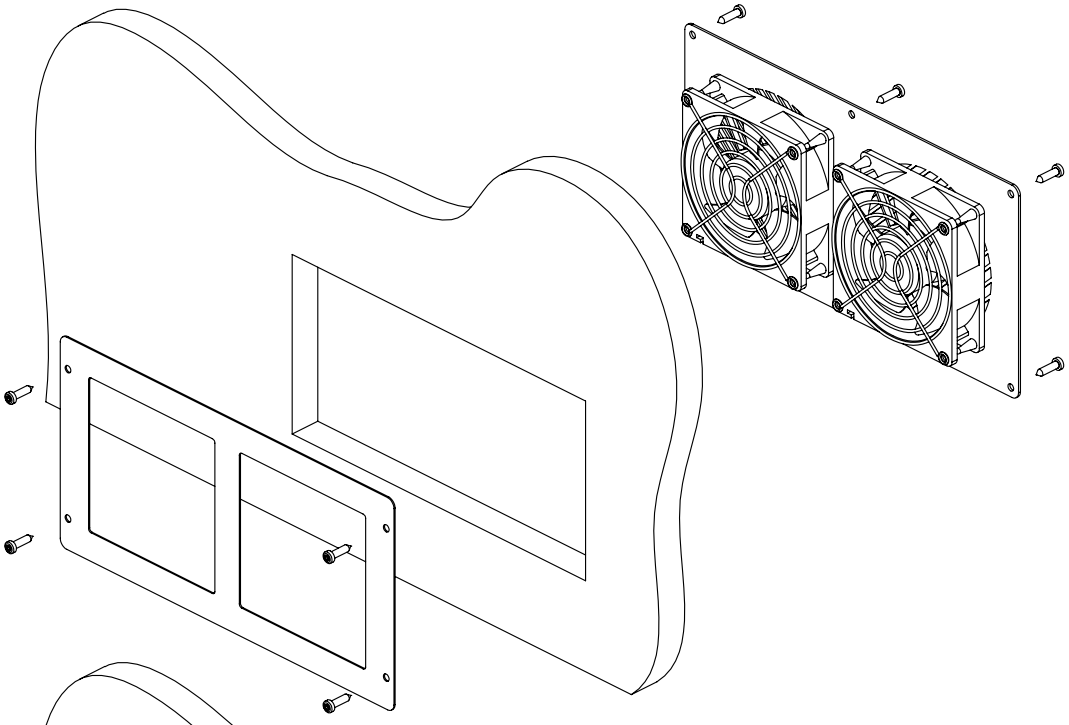


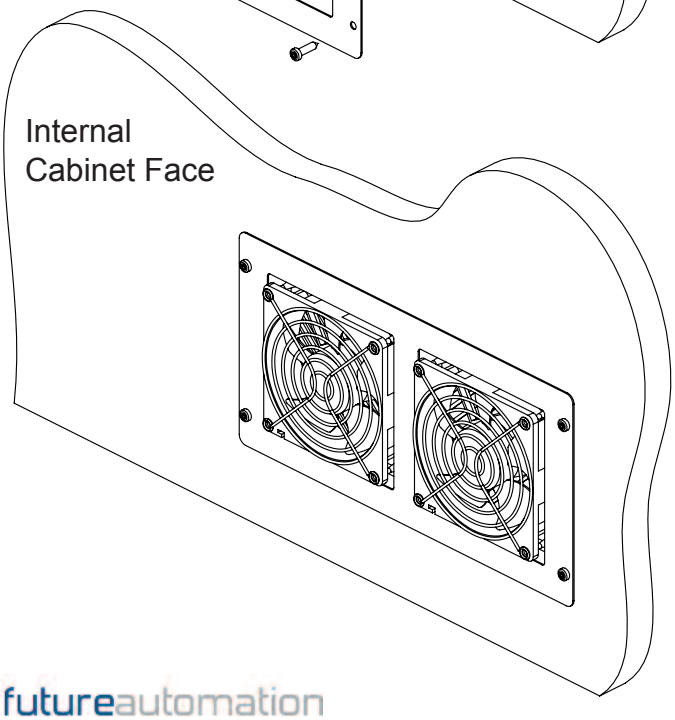
# SAC-U2- Smart Airflow Control Unit 2

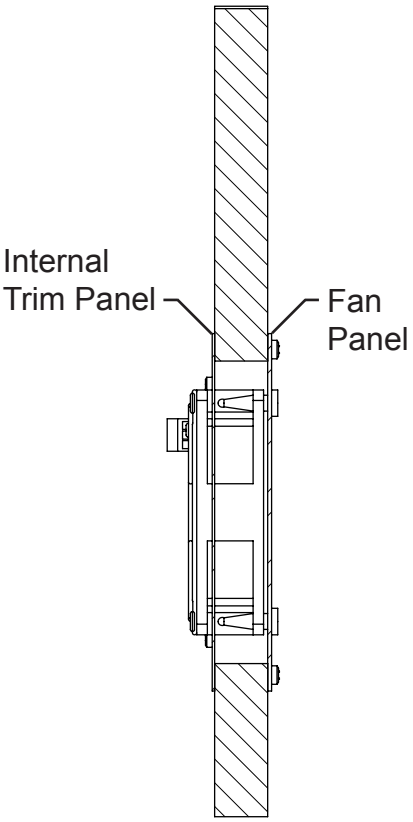
**Mounting Option A**

Measure where you want the SAC unit to be mounted and cut a void in the cabinet with the dimensions shown. Assemble the unit as shown and secure in place from both sides.



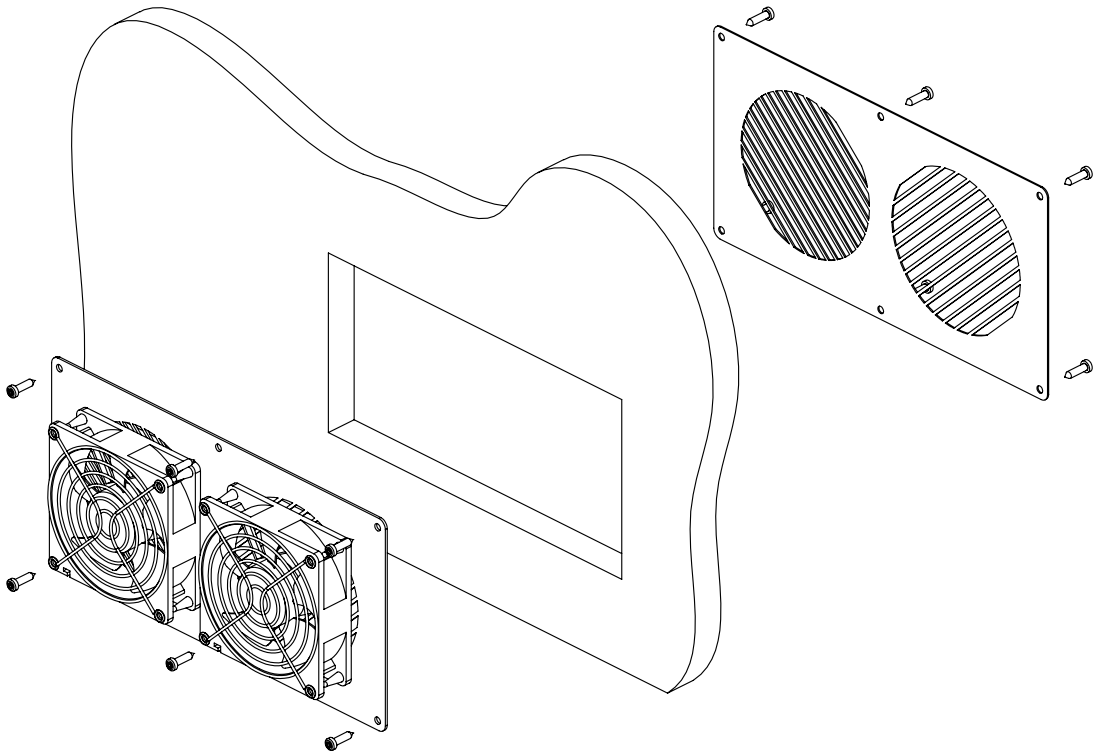



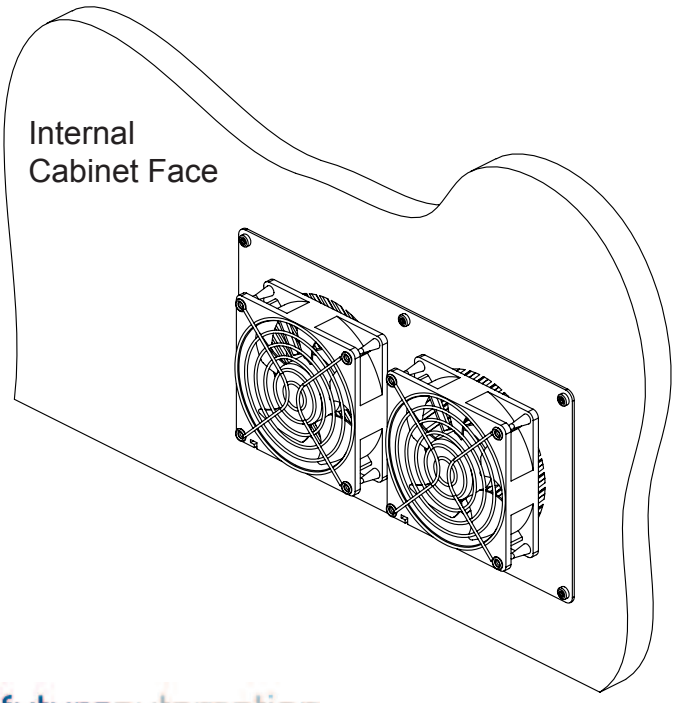


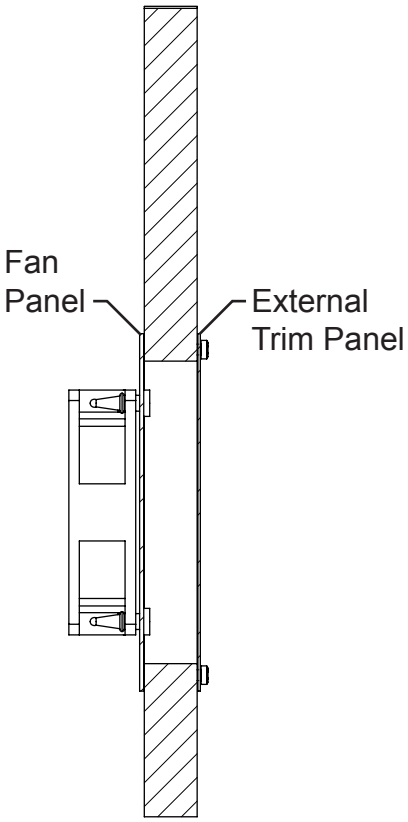



**Mounting Option B**

Measure where you want the SAC unit to be mounted and cut a void in the cabinet with the dimensions shown on the previous page. Assemble the unit as shown and secure in place from both sides.



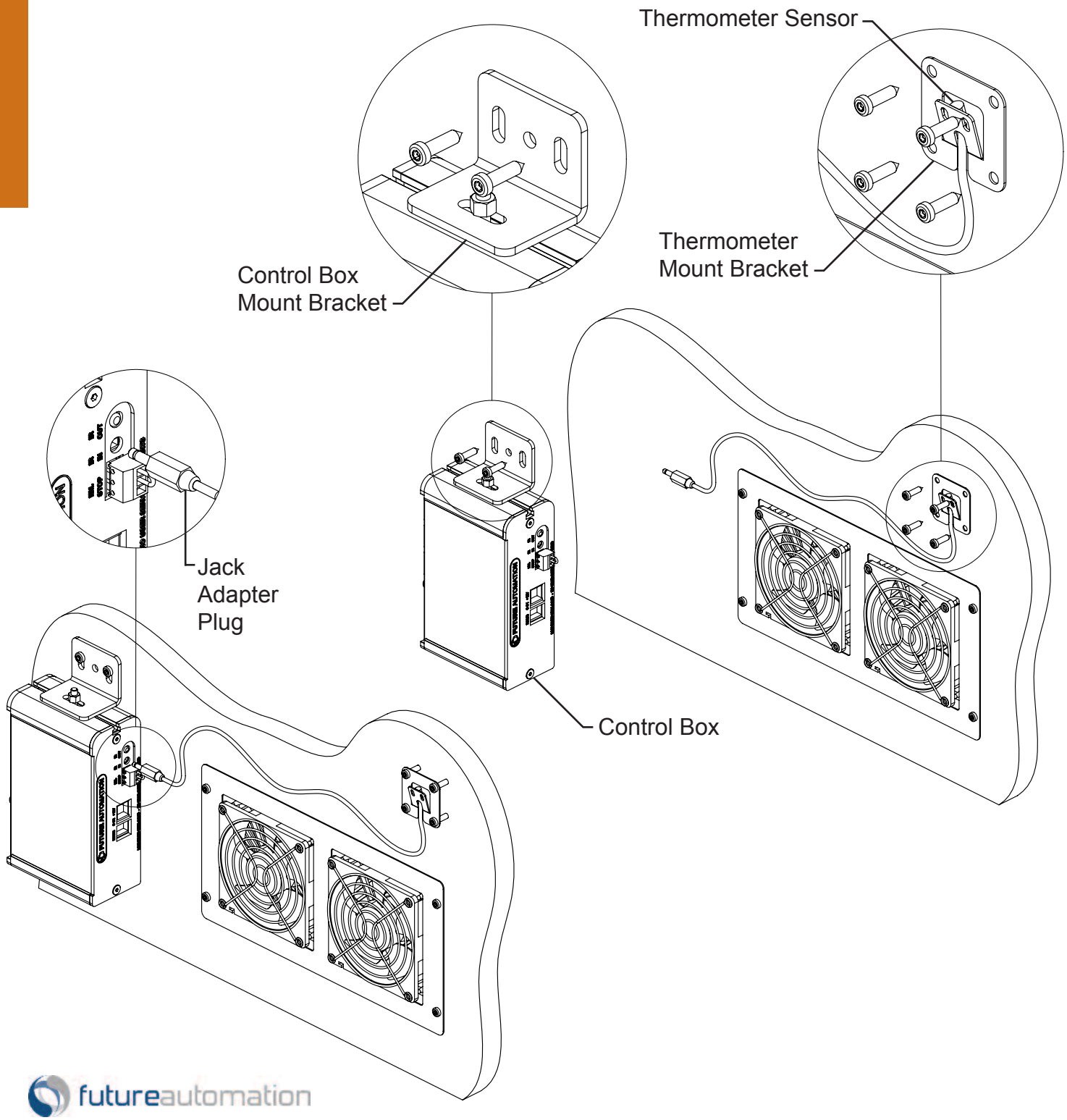


# SAC-U2- Smart Airflow Control Unit 2

**Fitting the Thermometer and Control Box**

Mount the control box on the internal cabinet face or rest in a secure place. Plug the thermometer into the unit using the jack adapter plug. Make sure to place the thermometer in the most relevant place to monitor the temperature. Either next to the AV equipment or at the highest point within the cabinet.



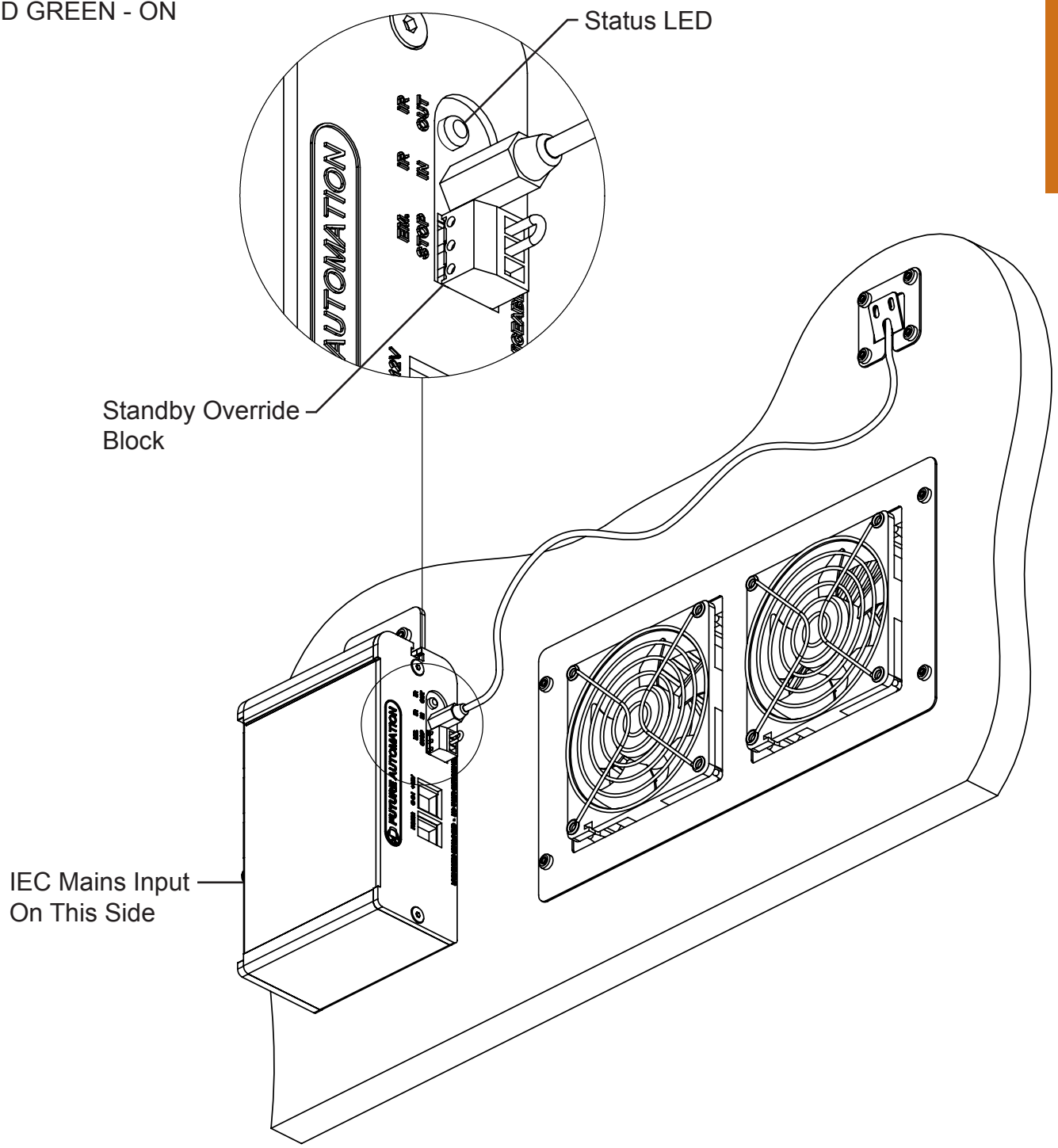
# SAC-U2- Smart Airflow Control Unit 2



**Standby Override Block**

The SAC unit will only work if the standby override block is plugged in, unless you connect the SAC unit to the AV equipment then the SAC unit acts as a slave and turns on/off when the AV equipment is turned on/off.

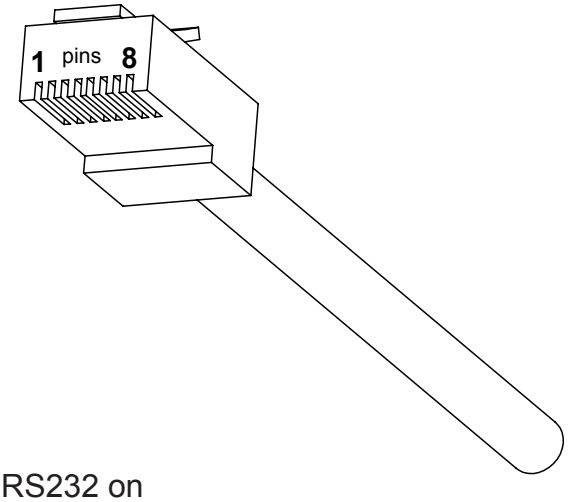
- LED RED - STANDBY
- LED GREEN - ON



# SAC-U2- Smart Airflow Control Unit 2

**Contact Closure**

The contact closure is not presently used.

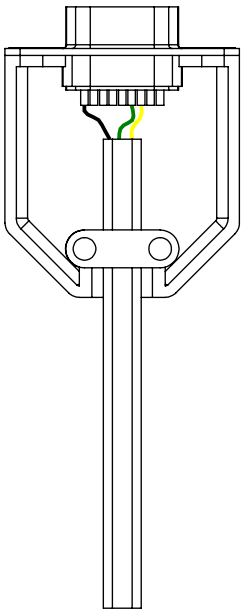



**RS232**
- Use an RJ25 connector in the socket marked RS232 on the control box to operate using RS232

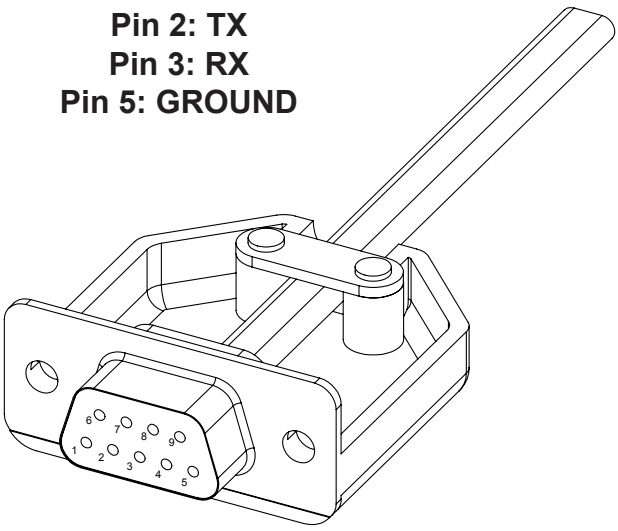
**Details**

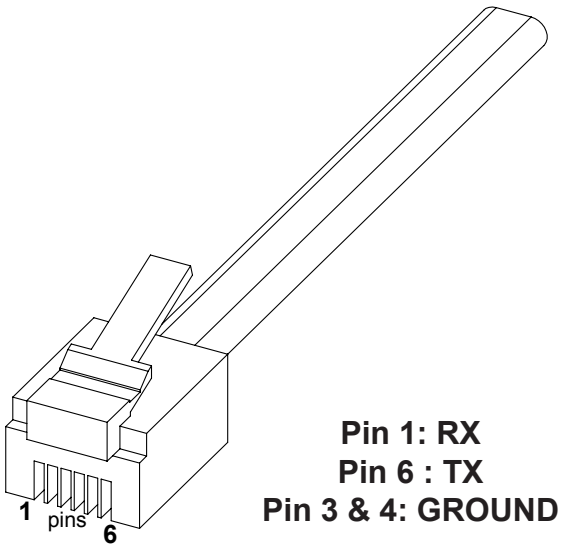
| | |
|---|---|
| Baud rate: | 9600 |
| Stop bit: | 1 |
| Parity: | None |
| Databits: | 8 |

| RJ25 | | 9 PIN D |
|---|---|---|
| PIN 1: RX | TO | PIN 2: TX |
| PIN 6: TX | TO | PIN 3: RX |
| PIN 3: GROUND | TO | PIN 5: GROUND |
| PIN 4: GROUND | TO | PIN 5: GROUND |



**Pin 2: TX**
**Pin 3: RX**
**Pin 5: GROUND**




**Pin 1: RX**
**Pin 6 : TX**
**Pin 3 & 4: GROUND**

**RS232**

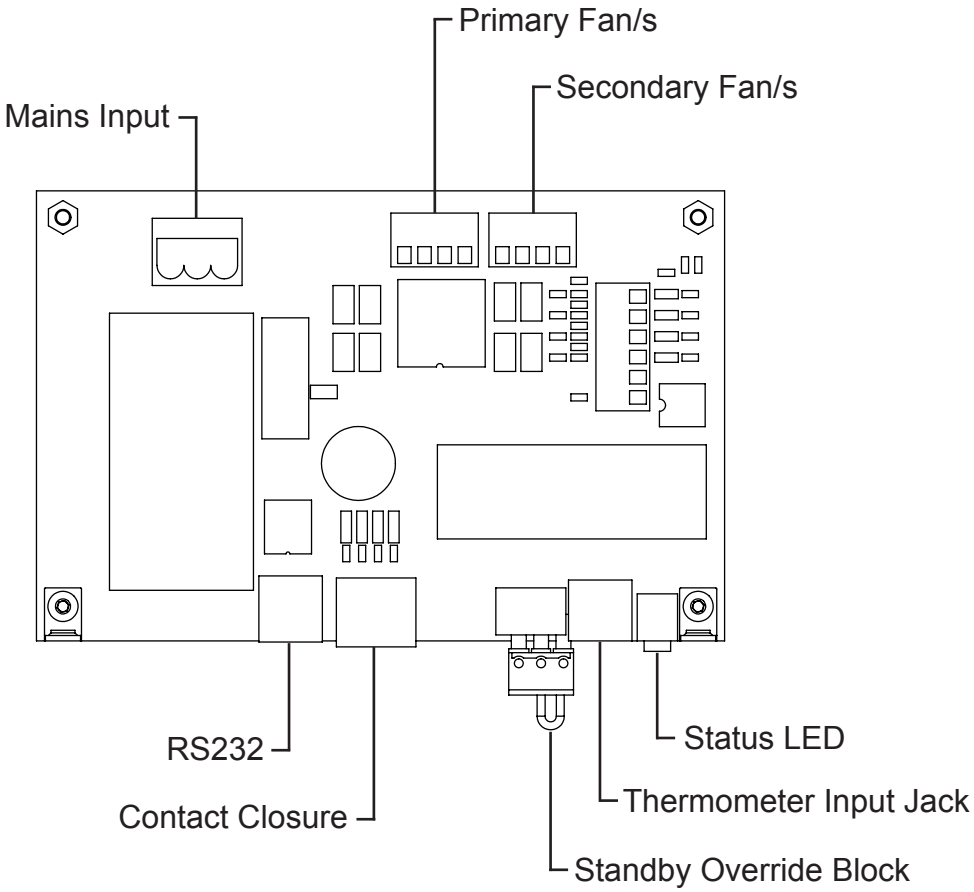
**IMPORTANT**
Ensure protocol is entered exactly as written, including Carriage Return ↵ (Enter / ASCII 13) immediately after the last character.

The command temperature sets shown are just an example

| COMMAND | ACTION |
|---|---|
| scale c ↵ | Sets temperature control to Centigrade ° C (Default) |
| scale f ↵ | Sets temperature control to Fahrenheit F |
| on 28 ↵ | Turns primary fans on at set temperature (Default set 26 °C) |
| boost 32 ↵ | Turns secondary fans on at set temperature (Default set 28 °C) |
| alarm 36 ↵ | Alarm will sound at set temperature (Default set 45 °C) |
| off 22 ↵ | Turns off all fans on at set temperature (Default set 24 °C) |
| ENQUIRY | RESPONSE |
| on ?↵ | Shows current set temperature of when fans turn on |
| boost ?↵ | Shows current set temperature of when secondary fans turn on |
| alarm ?↵ | Shows current set temperature of when alarm sounds |
| off ?↵ | Shows current set temperature of when fans turn off |
| ?↵ | Shows current temperature |
| lo ?↵ | Shows lowest recorded temperature |
| hi ?↵ | Shows highest recorded temperature |
| reset hi ↵ | Resets record of highest temperature |
| reset lo ↵ | Resets record of lowest temperature |

# SAC-U2- Smart Airflow Control Unit 2

## Connectivity Details




## SAC - Trouble shooting

For information & technical support on our products
please refer to the relevant web site or phone number -

General Contact
info@futureautomation.co.uk
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US Contact
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# SAC-U2- Smart Airflow Control Unit 2



## Technical Overview

A general technical overview of the SAC, Smart Airflow Control range.

| | SAC-T | SAC-U1 | SAC-U2 |
|---|---|---|---|
| **Product Dimensions (W,H,D)** | 484x54x405mm [19x2.1x15.9"] | 260x252x41mm [10.2x10x1.6"] | 260x135x31mm [10.2x5.3x1.2"] |
| **Control Box Dimensions (W,H,D)** | N / A | N / A | 94x150x52mm [3.7x5.9x2"] |
| **Weight (Kg)** | 4Kg [8.8lb] | 1.5Kg [3.3lb] | 1.5Kg [3.3lb] |
| **Power Consumption** | Max 100W | Max 80W | Max 80W |
| **Power Consumption On Standby** | 3W | 3W | 3W |
| **Standard Colour** | Black | Black | Black |
| **MAX Airflow** | 268.6m3/h | 134.3m3/h | 134.3m3/h |
| **MAX Fan Speed** | 2400rpm | 2400rpm | 2400rpm |
| **MAX Noise Level** | 28dB | 28dB | 28dB |
| **Control** | RS232 + Standby Overide | RS232 + Standby Overide | RS232 + Standby Overide |
| **Power Supply** | 240V or 110V | 240V or 110V | 240V or 110V |
| **Control Of 3rd Party Product** | No | No | No |
| **Output Power Supply** | No | No | No |
| **LCD Display + Push Button Control** | Yes | No | No |
| **Shipping Details** | | | |
| **Dimensions (W,D,H)** | 600x100x500mm [23.6x3.9x19.7"] | 350x350x50mm [13.8x13.8x2"] | 350x200x50mm [13.8x7.9x2"] |
| **Weight (Kg)** | 5Kg [11lb] | 2.5Kg [5.5lb] | 2.5Kg [5.5lb] |

## Notes...

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