

CME3 *Q Plus* A TP 332A
Extract Ventilation Unit with Volt Free Boost Switching

CME3 *Q Plus* HA TP 332HA
Extract Ventilation Unit with Humidity & Volt Free Boost Switching

CME3 *Q Plus* HA LS TP 334HA
Extract Ventilation Unit with Humidity & LIVE Boost Switching








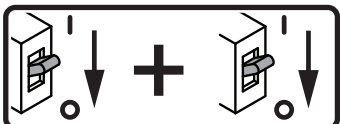
Warnings, Safety information and Guidance

Important Information

Read these instructions fully before the installation of this appliance

1. Installation of the appliance and accessories must be carried out by a qualified and suitable competent person and be carried out in clean, dry conditions where dust and humidity are at minimal levels.
2. All wiring must conform to current I.E.E. Wiring Regulations and all applicable standards and Building Regulations.
3. The appliance must be connected to a local double pole isolation switch with a contact separation of at least 3mm. Ideally located adjacent to the unit.
4. The appliance must be earthed.
5. Units are suitable for 220-240V~ 50-60Hz single phase with a fuse rating of 3A.
6. The unit must be stored in a clean and dry environment.
7. Do not install the appliance in areas where the following may be present or occur;
 - Excessive oil or a grease laden atmosphere,
 - Corrosive or flammable gases, liquids or vapours,
 - Ambient temperatures above 40°C or below -5°C,
 - Humidity levels above 90% or is a wet environment.
8. The appliance is not suitable for installation to the exterior of the dwelling.
9. This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.
10. Children should be supervised to ensure that they do not play with the appliance.
11. Ensure that external grilles are located away from any flue outlet, in accordance with relevant Building Regulations.
12. The unit must not be connected to a tumble dryer.
13. The unit must not be connected to a cooker hood.
14. Precautions must be taken to avoid the back-flow of gases into the room from an open flue appliance.
15. Ensure all ducting is free from debris and blockages before switching on the unit.
16. The unit uses a 230V ~ 50-60Hz supply and contains rotating mechanical parts. ISOLATE the unit from mains power supply and allow sufficient time for all moving parts to stop before undergoing any Servicing or Maintenance.

Explanation of symbols on the appliance

Symbol	Definition
	Read instruction Manual.
	Risk of Electric Shock.
	General hazard safety alert.
	Wait until all machine components have completely stopped before touching them.
	Disconnect the mains supply before removing this cover.
	Disconnect the mains supply before removing this cover. Before obtaining access to terminals or removing this cover, all supply circuits must be disconnected.

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Product Overview

This manual is for the range of Titon CME3 *Q Plus* Extract ventilation units. All CME3 *Q Plus* units are designed for continuous extract ventilation of multiple rooms, for example bathrooms, kitchens, utility areas and toilets. The units use a highly efficient backward curved Centrifugal impeller coupled to a high efficiency EC motor. The range consists of:

- CME3 *Q Plus* A TP 332A
Extract Ventilation Unit with Volt Free Boost Switching.
- CME3 *Q Plus* HA TP 332HA
Extract Ventilation Unit with Humidity & Volt Free Boost Switching.
- CME3 *Q Plus* HA LS TP 334HA
Extract Ventilation Unit with Humidity & LIVE Boost Switching.

Package Contents

- CME3 Unit
- Port Covers / Convertible to Ø100mm adaptors
- Product Manual
- EuP Sticker
- Product Fiche

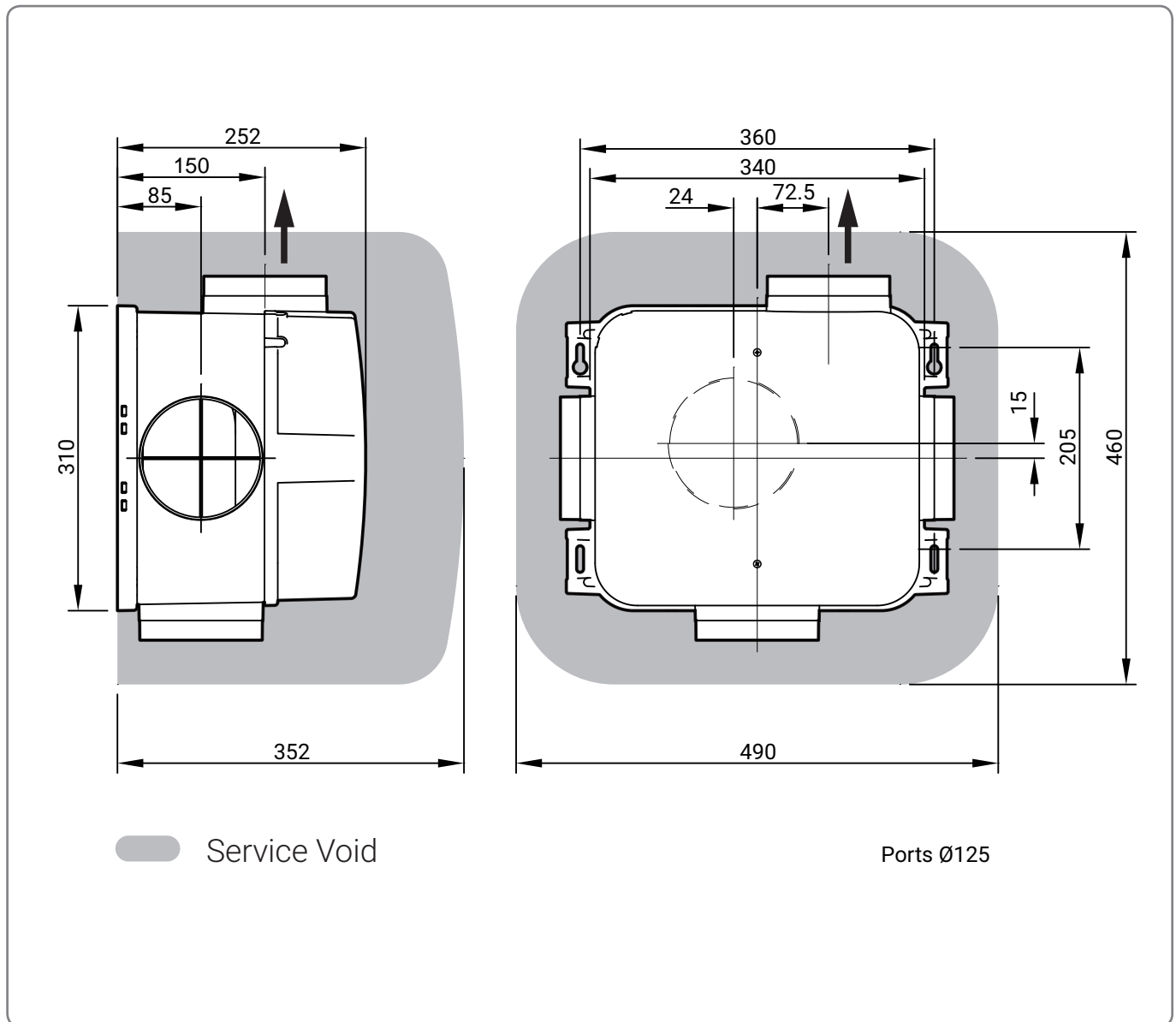
All shortages or damage must be immediately reported to the supplier.



GB Patent GB 2491516

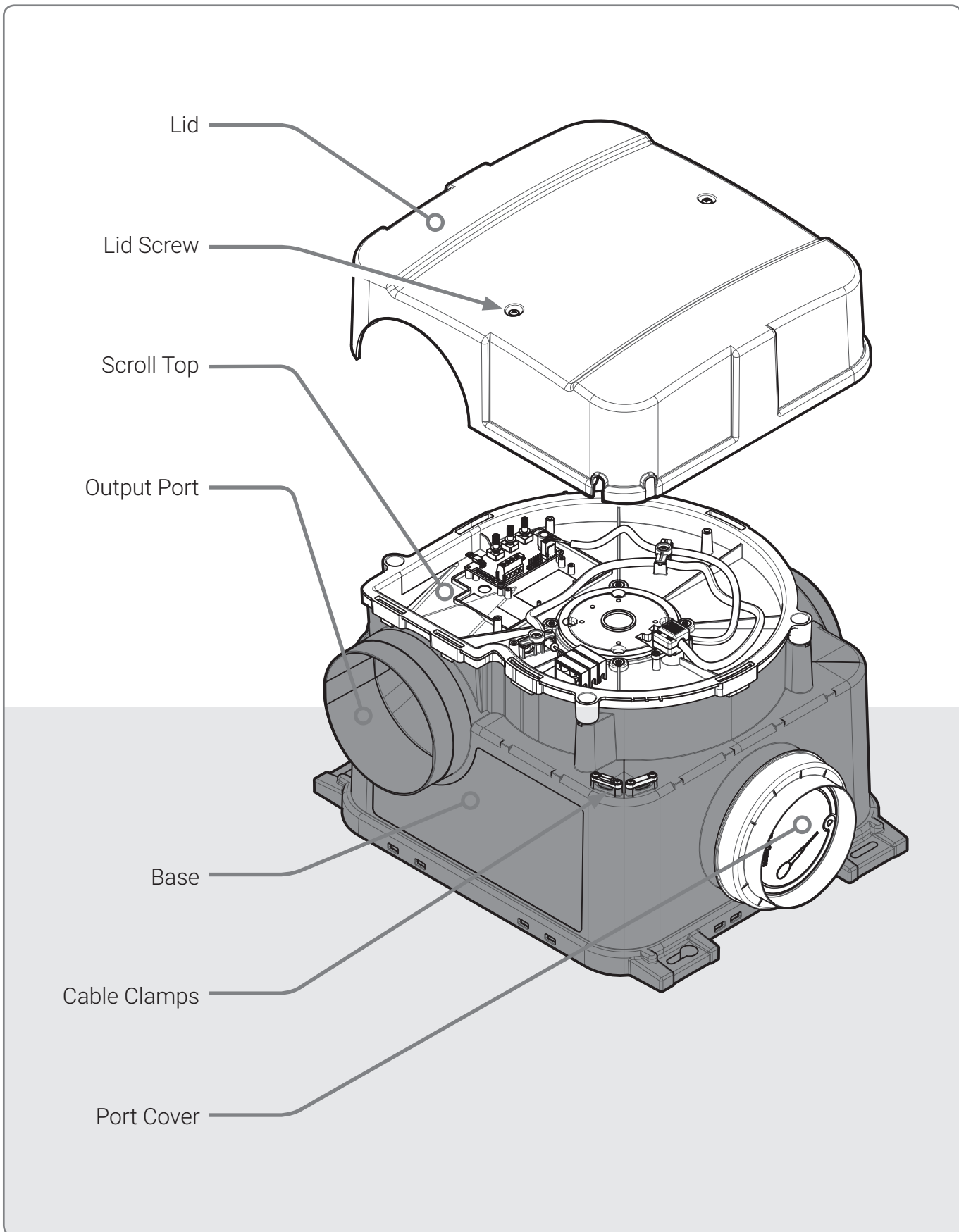
Dimensions

This diagram details the overall size of the unit and the additional space required around the unit to allow for commissioning and future servicing and maintenance



All Dimensions in mm DO NOT BOX IN UNIT

Component Identification



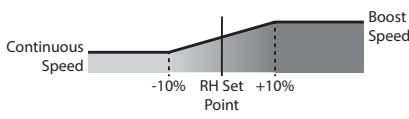
All Dimensions in mm

Product Features

	CME3 Q Plus A	CME3 Q Plus HA	CME3 Q Plus HA LS
	The CME3 Q Plus is controllable by various volt-free switches and sensors. Mains switching can be achieved by use of the Titon Boxed Relay 5A TP 505.		The CME3 Q Plus HA LS is controllable by various mains switches.
Mains switching	No	No	Yes
Volt free switching	Yes	Yes	No
Continuous Speed	The normal running speed of the unit. Continuous Speed is configured using a stepless independent fan control potentiometer		
Boost Speed	An increased speed providing higher extract air flow. Boost Speed is configured using a stepless independent fan control potentiometer		
Boost Switching	The Boost Speed can be enabled by connection of a volt free one-way switch, or combined with the Setback Speed with the 3 position switch TP508.		The Boost Speed can be enabled by connection of a mains one-way switch, or combined with the Setback Speed with the 3 position switch TP508.
Boost Overrun Timer	The timer maintains the Boost Speed for a specific time variable between 0 and 30 minutes after Boost Speed is disengaged. The Boost Overrun Timer time is configured using stepless independent potentiometer		





	CME3 Q Plus A	CME3 Q Plus HA	CME3 Q Plus HA LS
Setback Speed	The reduced ventilation rate is automatically set at the mid point between minimum speed and the selected Continuous Speed.		Setback Speed, reduced ventilation rate, is configured using a stepless independent fan control potentiometer.
Setback Switching	Is enabled by connection of a latching volt-free one-way switch, or combined with the Boost Speed with the 3 position switch TP 508.		Enabled by connection of a latching mains one-way switch, or combined with the Boost Speed with the 3 position switch TP 508.
Integrated Humidity Sensor	NA	<p>The units are fitted with an Integrated Humidity Sensor. This continuously monitors the relative humidity (RH) of the extracted air. The fan speed increases proportionally between Continuous Speed & Boost Speed depending on the measured %RH;</p>  <p>The Humidity Sensor's set point is variable from 55%RH to 85%RH and is configured using a potentiometer.</p>	



Installation

Fixing

The unit must be securely fixed to a single smooth flat surface. Any orientation is possible.

Locate a site for mounting the Titon CME3, take into consideration the position of:

- The rooms to be ventilated
- The Electrical services
- The exhaust port orientation.

Ensure there is adequate access for installation and maintenance, see Dimensions for sizes.

Securely mount the unit through the mounting holes on the casing using the appropriate fixings for the substrate and the CME3.

Ensure the unit is not distorted by the fixings or mounting surface.

The fixing slots on the unit are 6mm wide, it may be necessary to use washers to prevent damage to the CME3's fixing slots.

Tighten screws by hand, DO NOT over tighten screws or use power tools.

Ducting Connections

Titon recommend that:

1. Ø125mm ducting is used for the connection of the Output Port to Outside.
2. Ø125mm or Ø100mm ducting is used for connection to the other ports.
3. A minimum distance of 200mm between the CME3 unit and any sharp bends in duct work.
4. Ducting should be insulated where it passes through unheated areas and voids.
5. Unit should be insulated when fitted in unheated area.
6. Where a duct extends externally above roof level the section above the roof should be insulated or a condensate trap should be fitted just below roof level.
7. Where ducts pass through fire barriers, they must be appropriately fire stopped in accordance with the requirements of Part B Building Regulations (England & Wales).
8. A ducting condensate drain must be fitted to vertical Output Port to Outside duct work.
9. Condensate drain pipe work must be adequately secured, installed to have a minimum 5° fall and be insulated if any part of the pipe passes through an unheated void. All insulation to be the equivalent of at least 25mm of insulating material with a thermal conductivity of 0.04 W/(mK).
10. Ducting must be installed in such a way that resistance to airflow is minimised.
11. Ducting connected to the Output Port to Outside must be to the external air outside the building envelope.
12. All ducting joints including those to the CME3 unit's Duct Ports and Convertible Port Covers must be permanently connected and sealed.
13. Do not distort ducting, Convertible Port Cover or Duct Ports.

14. Ø125mm ducting fits inside the units Duct Ports.
15. Ø100mm ducting fits inside the Convertible Port Cover.
16. Unused extract ports must be fitted with not converted or undamaged port covers.

How to convert the Port Cover

To enable the Port Cover to be used as an adaptor for 100mm ducting, use a small screwdriver to tear out the tail and centre section. Ensure the tear out sections is completely removed.

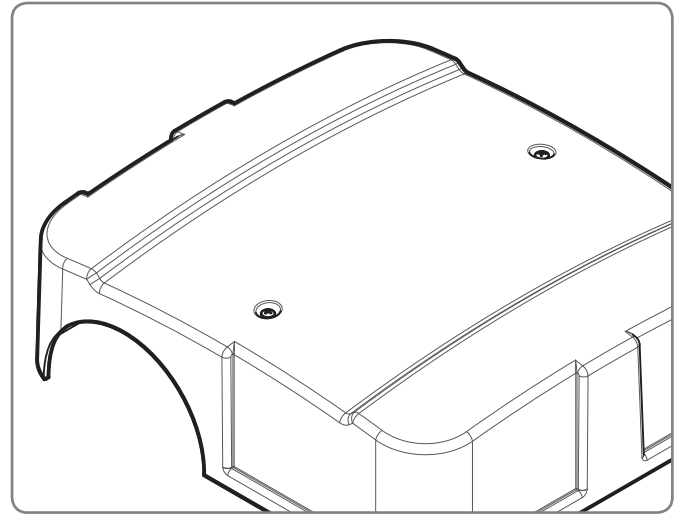


Wiring

Wiring Connection Access

The supply connections differ between units. Identify which connection style and ensure that the correct instructions are used.

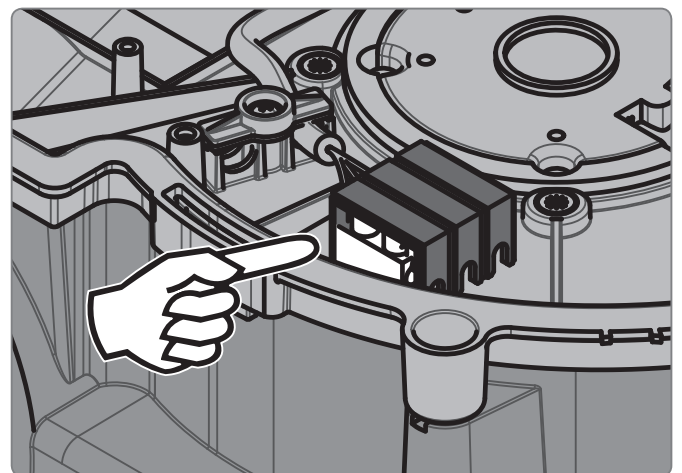
Access to the supply connections is achieved by loosening the two captive retention screws and removing the Lid.



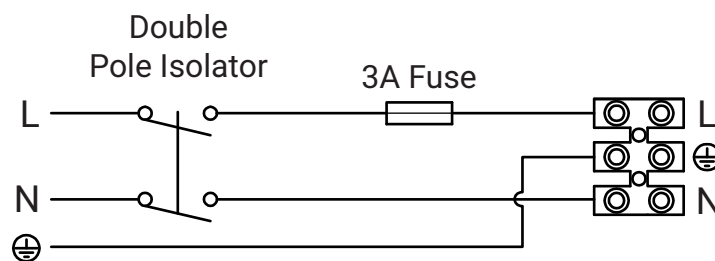
Lid Fixing Screws

CME3 Q Plus A & HA

The supply connection of this unit is via a Connector Block; This is accessed by removing the Connector Block Cover. To remove the cover unclip from the Connector Block. After supply connection has been made and before powering up the unit the Connector Block Cover MUST be refitted.



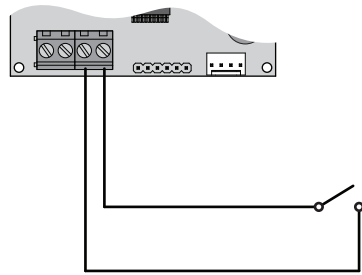
Connector Block & Cover
CME3 Q Plus A & HA models



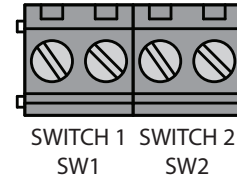
Supply Wiring Diagram 230V~50/60Hz EE 141

Volt-free setback switching of the unit's controller PCB using single-pole latching switch and / or volt-free normally open relay contacts.

To avoid the unit being inadvertently left in Setback Mode, it is recommended that only one latching switch is fitted.



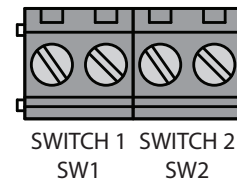
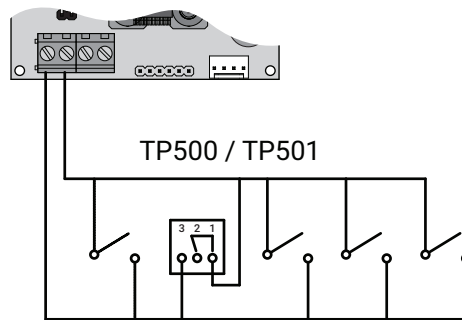
Volt-free setback switch or normally open relay contacts



Boost switching and External Humidistat connection ref EE 151

Volt-free boost switching of unit's controller PCB using single-pole switches TP 502, TP 503, TP 507 and/or TP500 / TP501 Humidistat.

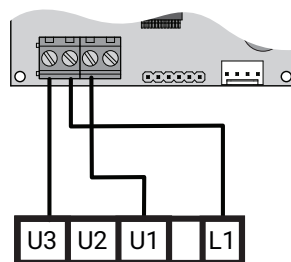
There is a maximum of 10 single pole switches or humidistats that can be used.



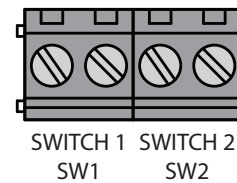
Setback Switch connection ref EE 152

SWITCH POSITIONS

- 1- Setback Speed
- 2- Continuous Speed
- 3- Boost Speed



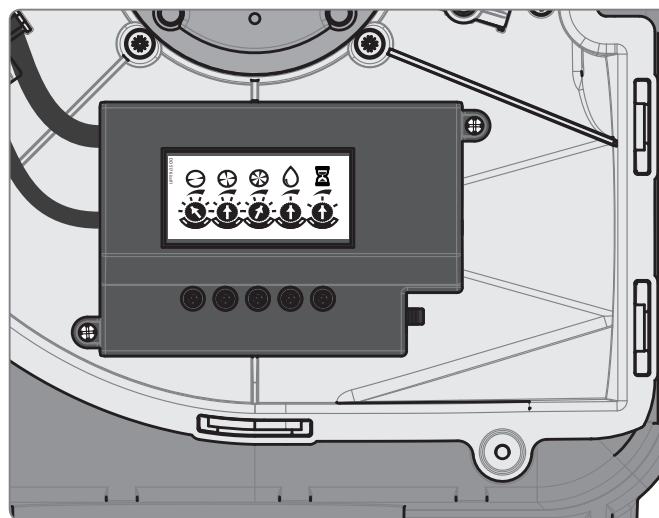
TP508 Three Position Rotary Switch



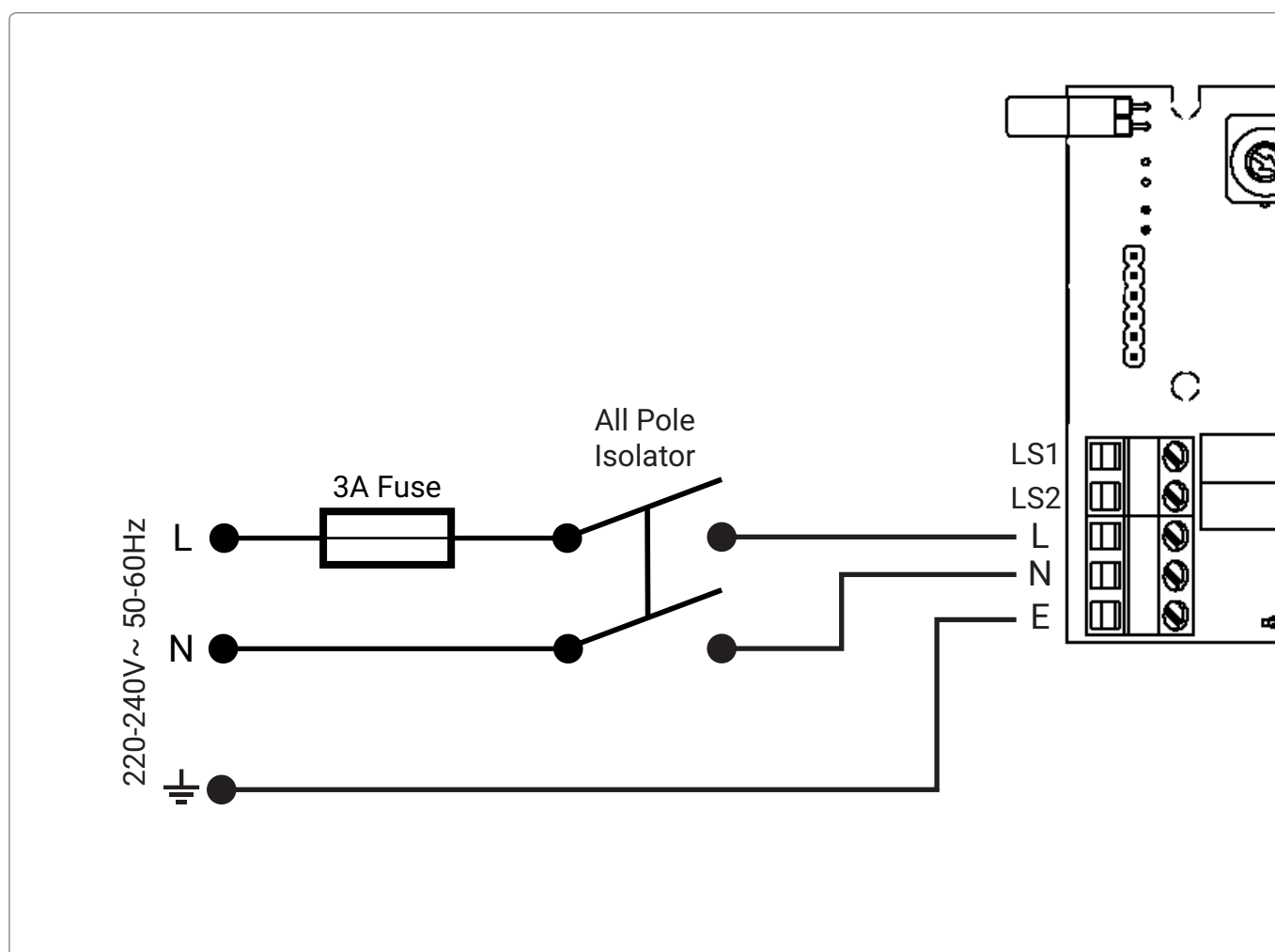
Three position Rotary Switch TP 508 switching and connection ref EE 153

CME3 Q Plus HA LS

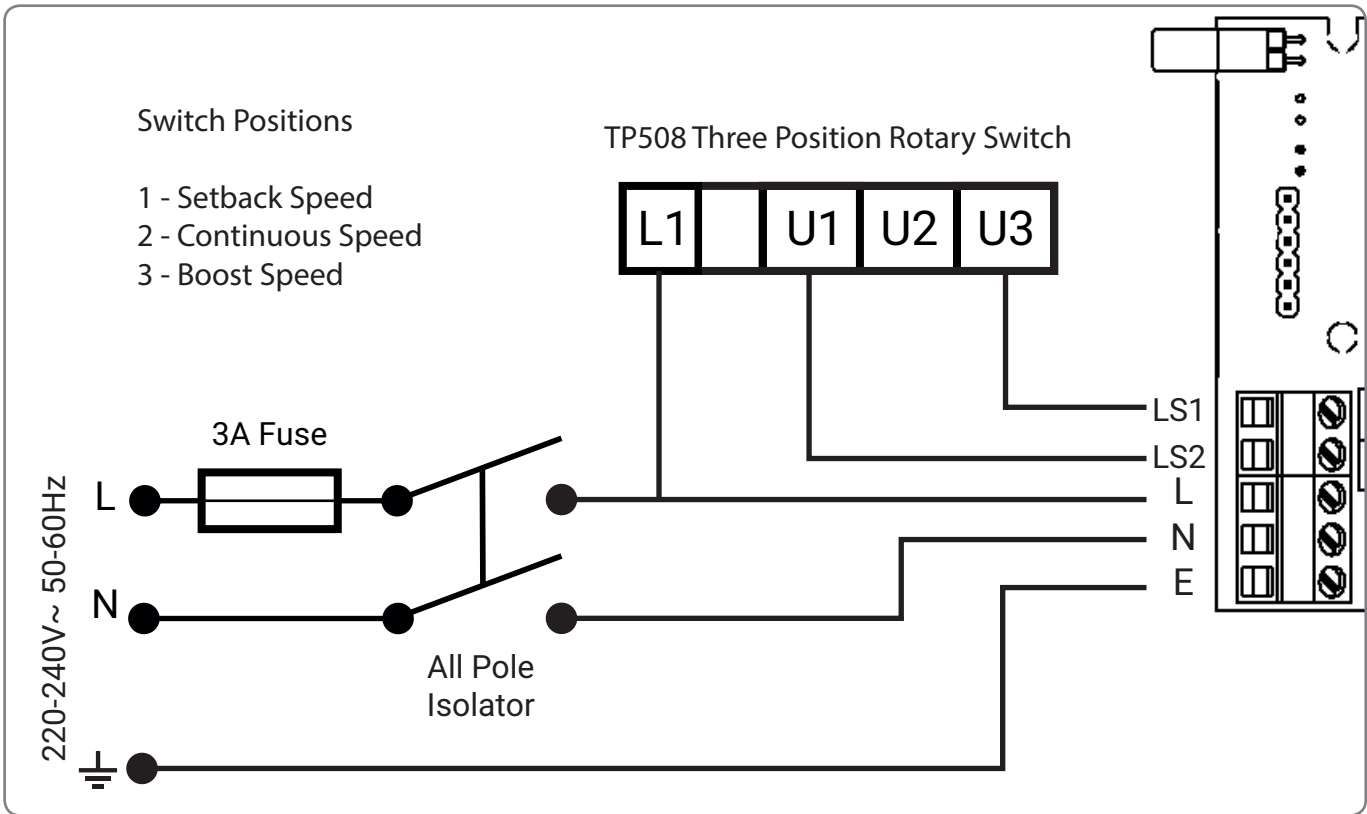
The supply connection to this unit is via screw terminals mounted on the printed circuit board (PCB), access is achieved by removing the PCB Cover. To remove the PCB cover remove the two small retaining screws and the cover will lift. After supply connection has been made and before powering up the unit the PCB cover **MUST** be refitted and screwed in place, do not overtighten screws.



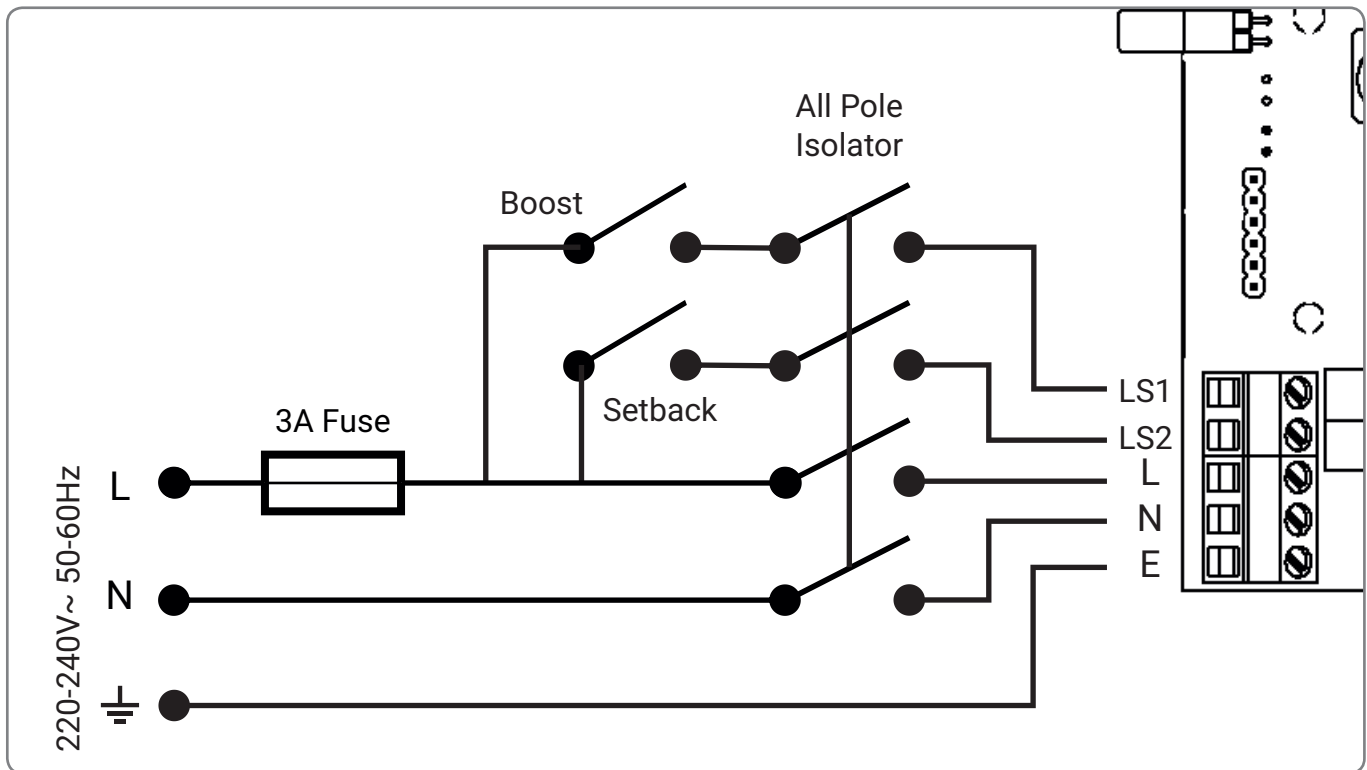
PCB Cover CME3 Q Plus HA LS



CME3 Q Plus HA LS Wiring Diagram 220-240V~ 50-60Hz ref EE 184

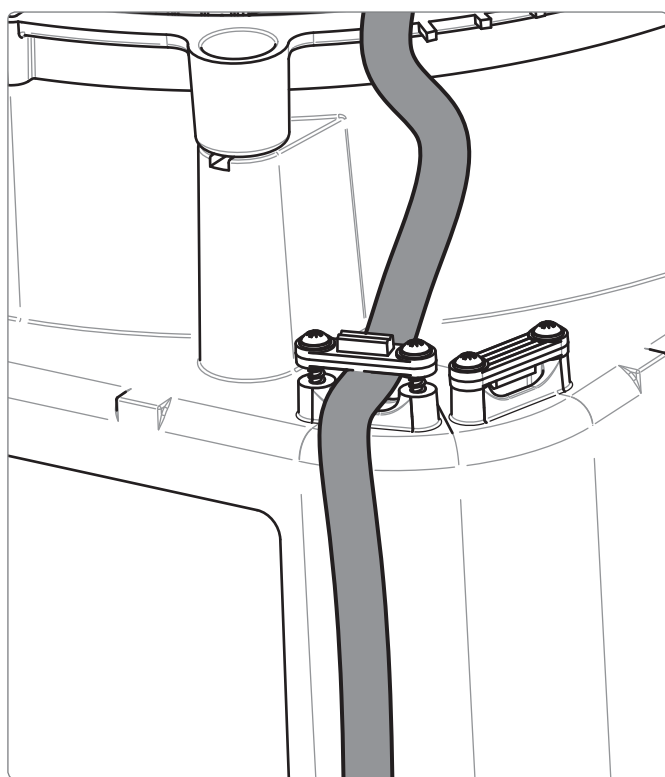


CME3 Q Plus HA LS Three position Rotary Switch TP 508 switching and connection ref EE 185



CME3 Q Plus HA LS Boost and Setback switching ref EE 186

Cable Retention



CME3 Q Plus Cable Clamps

Ensure the supply cable and if used control cable are routed via the cable clamp and securely held in place. The Cable Clamp Bar can be removed and turned over and used to clamp thinner cables.

Commissioning

CME3 Q Plus A

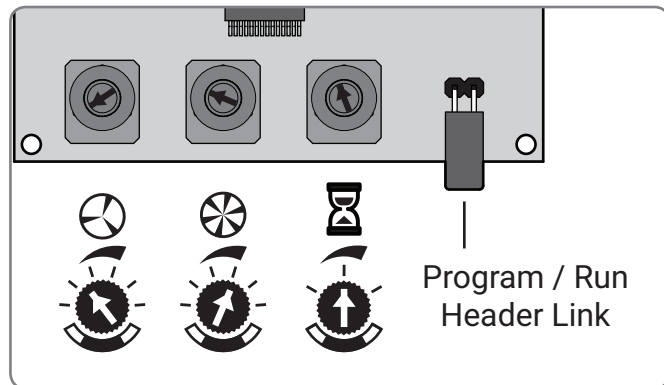
The fan speeds of the Titon CME3 Q Plus A will require adjustment to ensure that the flow rates achieved provide adequate ventilation. The Titon CME3 Q Plus A has 3 standard fan speed settings, Continuous Speed, Boost Speed and Setback Speed.

The Continuous Speed and Boost Speeds are adjustable via Rotary Potentiometers. Setback Speed is automatically set at the mid point between minimum possible Continuous Speed and the selected Continuous Speed.

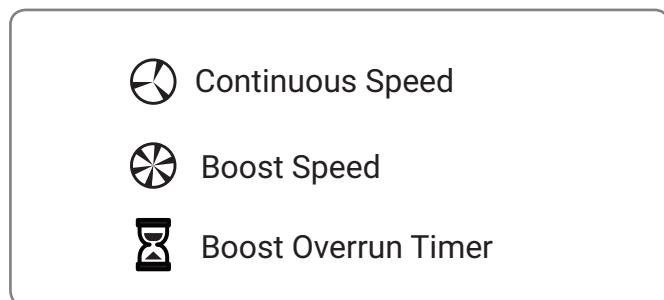
Prior to the first commission, set the Continuous Speed potentiometer to minimum by rotating fully anti-clockwise and set the Boost Speed potentiometer to maximum by rotating fully clockwise.

Control Parameters

- All volt-free switch inputs are disabled when the Program / Run Header Link is in the Program position.
- All speed control potentiometers are disabled when the Program / Run Header Link is in the Run position.
- The unit needs to be powered up for the commissioning settings to be stored.

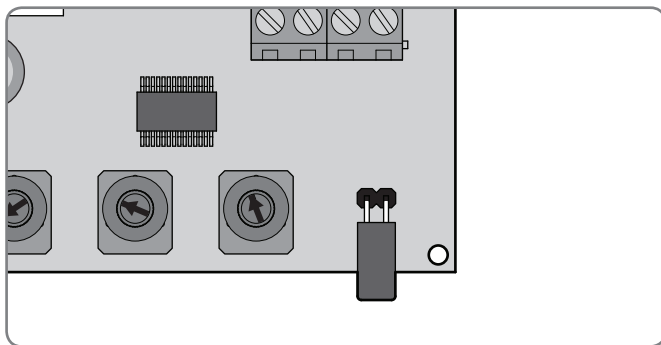


Control Locations

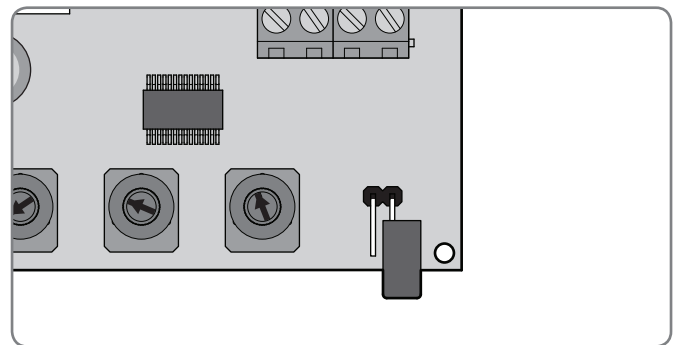


Control Identification

Commissioning Controls



Header Link in Program position



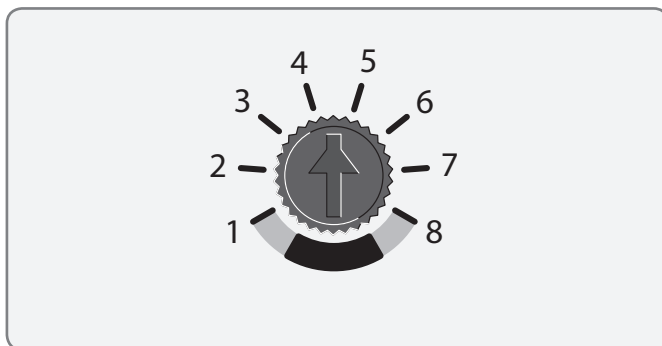
Header Link in Run positions

1. To place the unit into commission mode move the link into the Program Position, i.e. fitted over both pins.
The CME3 Q Plus A will automatically switch between Continuous Speed and Boost Speed when adjusting the respective potentiometer.
2. Rotate Continuous Speed adjustment potentiometer to achieve required continuous air flow.
3. Rotate Boost Speed adjustment potentiometer to achieve required boost air flow.
4. Return Program / Run Header Link to Run Position, fitted to one pin, to exit commissioning.

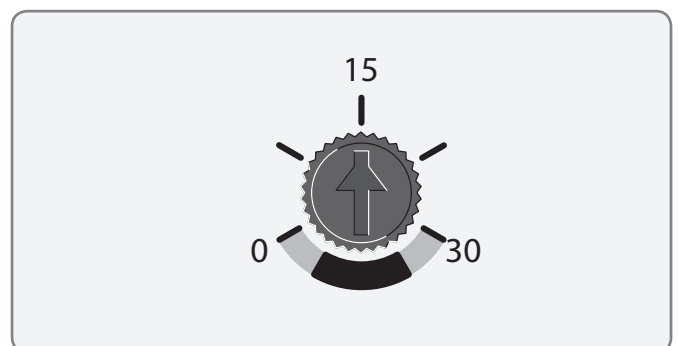
After commissioning the Program / Run Header Link must be placed in the Run position. Alternatively the Program / Run Header Link can be completely removed to 'lock' the commissioned settings.

Boost Overrun

Boost Overrun Timer is variable between 0 and 30 minutes.



Commissioning Pot positions



Boost Overrun Pot positions

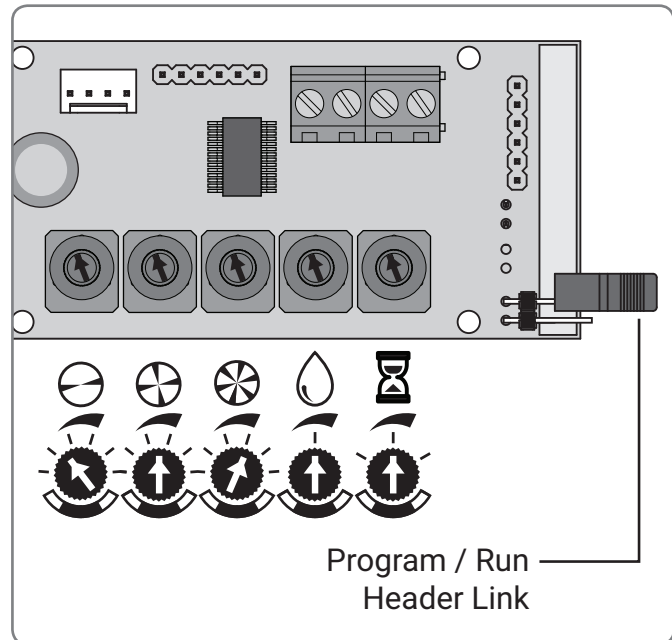
Rotate potentiometer to change overrun time. Boost Overrun Timer adjustment can be done at any time without the need to move the Program / Run Header Link.

CME3 Q Plus HA

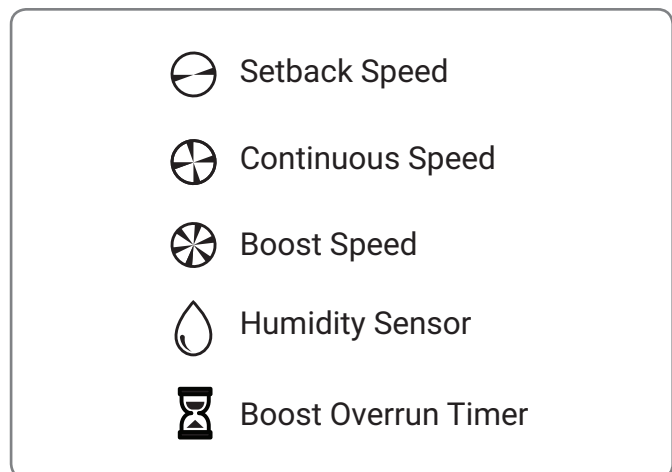
The fan speeds of the Titon CME3 Q Plus HA will require adjustment to ensure that the flow rates achieved provide adequate ventilation. The Titon CME3 Q Plus HA has 3 standard fan speed settings, Continuous Speed, Boost Speed and Setback Speed. All speeds are adjustable via Rotary Potentiometers.

Control Parameters

- All switch inputs are disabled when the Program / Run Header Link is in the Program position.
- All speed control potentiometers are disabled when the Program / Run Header Link is in the Run position.
- Boost Overrun Timer & Humidity Sensor adjustment can be done at any time without the need to move the Program / Run Header Link.
- The unit needs to be powered up for the commissioning settings to be stored.

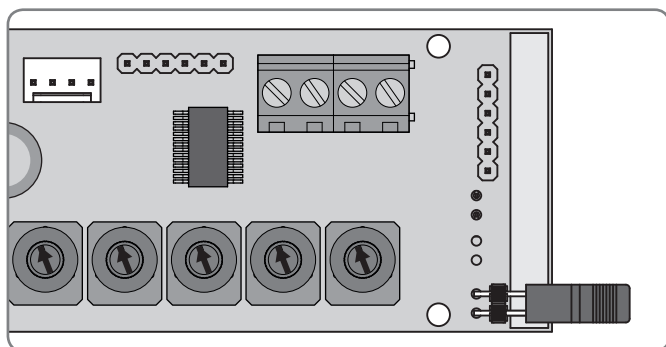


Control Locations



Control Identification

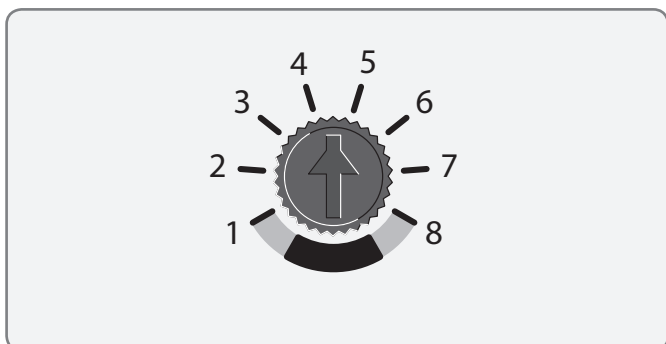
Commissioning Controls



Header Link in Run position

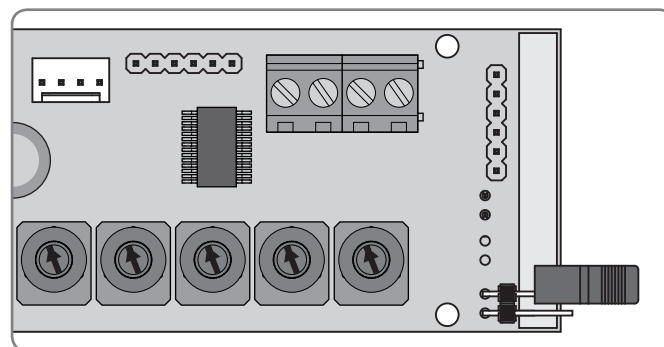
To place the unit into commission mode move the link into the Program Position, i.e. fitted over both pins. The CME3 Q Plus HA will automatically switch between Setback Speed, Continuous Speed and Boost Speed when adjusting the respective potentiometer.

1. Rotate the Speed adjustment potentiometer to achieve required air flow for each speed.



Commissioning Pot positions

2. Return Program / Run Header Link



Header Link in Program position

to Run Position, i.e. fitted to one pin, to exit commissioning.

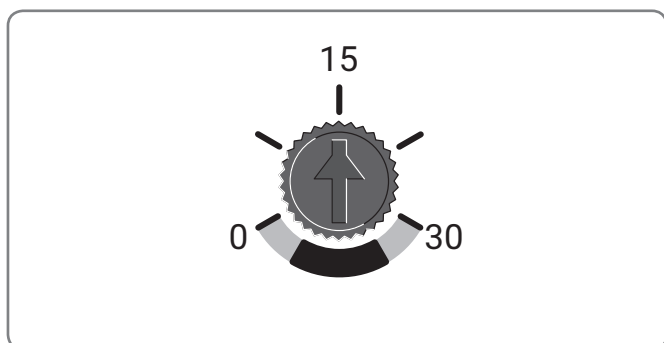
After commissioning the Program / Run Header Link must be placed in the Run position.

Alternatively the Program / Run Header Link can be completely removed to 'lock' the commissioned settings.

Boost Overrun

Boost Overrun is variable between 0 and 30 minutes.

Rotate potentiometer to change overrun time. Boost Overrun adjustment can be done at any time without the need to move the Program / Run Header Link.

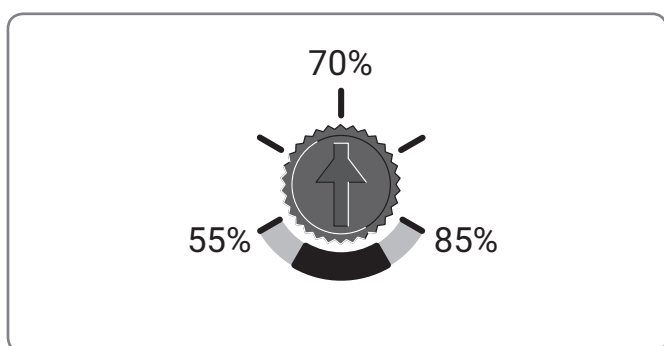


Boost Overrun Pot positions

Humidity Sensor

The Humidity Sensor's trigger point is variable from 55%RH to 85%RH.

Rotate potentiometer to change trigger point. Humidity Sensor adjustment can be done at any time without the need to move the Program / Run Header Link



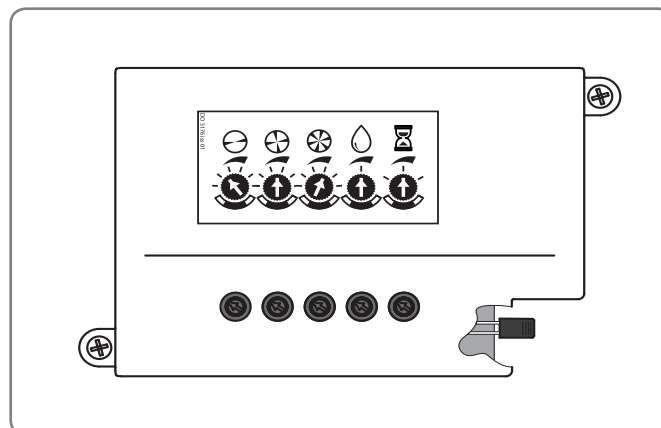
Humidity Sensor Pot positions

CME3 Q Plus HA LS

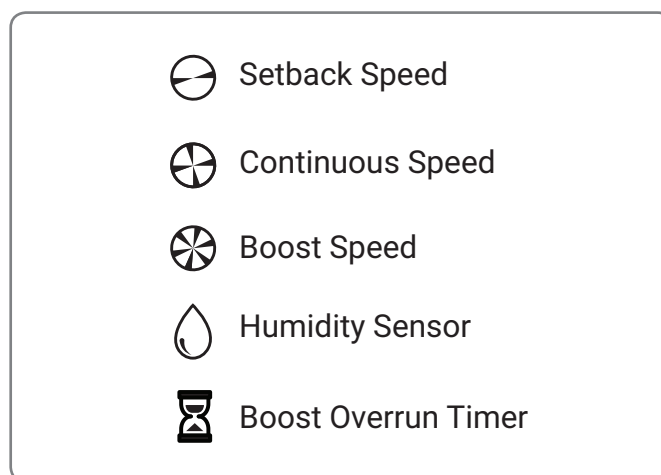
The fan speeds of the Titon CME3 Q Plus HA LS will require adjustment to ensure that the flow rates achieved provide adequate ventilation. The Titon CME3 Q Plus HA LS has 3 standard fan speed settings, Continuous Speed, Boost Speed and Setback Speed. All speeds are adjustable via Rotary Potentiometers. Ensure the PCB Cover is securely fitted before powering up the unit to commission.

Control Parameters

- All switch inputs are disabled when the Program / Run Header Link is in the Program position.
- All speed control potentiometers are disabled when the Program / Run Header Link is in the Run position.
- Boost Overrun Timer & Humidity Sensor adjustment can be done at any time without the need to move the Program / Run Header Link.
- The unit needs to be powered up for the commissioning settings to be stored.

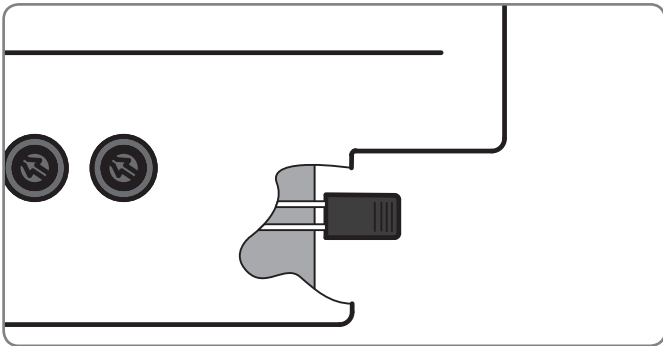


Control Locations

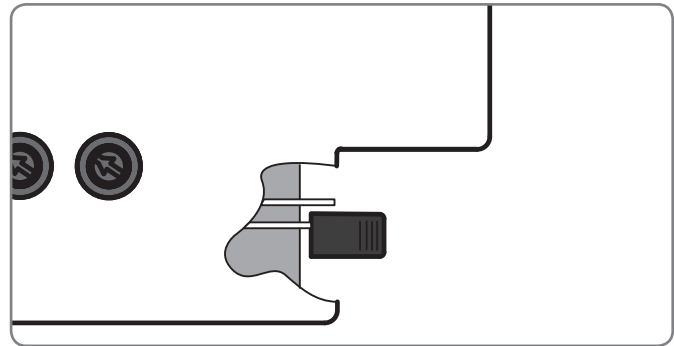


Control Identification

Commissioning Controls



Header Link in Run position



Header Link in Program position

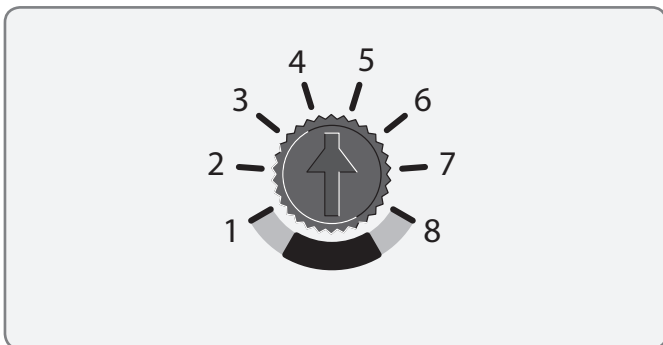
To place the unit into commission mode move the link into the Program Position, i.e. fitted over both pins. The CME3 Q Plus HA LS will automatically switch between Setback Speed, Continuous Speed and Boost Speed when adjusting the respective potentiometer.

1. Rotate the Speed adjustment potentiometer to achieve required air flow for each speed.

2. Return Program / Run Header Link to Run Position, i.e. fitted to one pin, to exit commissioning.

After commissioning the Program / Run Header Link must be placed in the Run position.

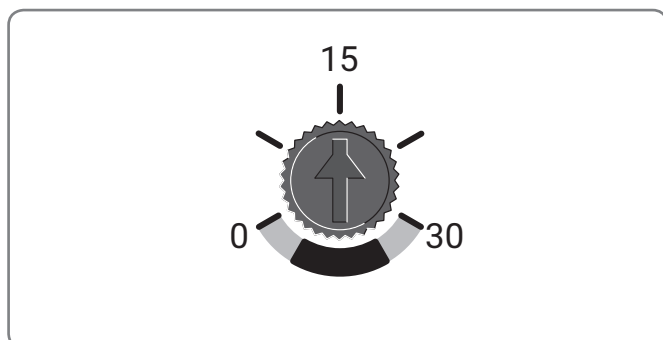
Alternatively the Program / Run Header Link can be completely removed to 'lock' the commissioned settings.



Commissioning Pot positions

Boost Overrun

Boost Overrun is variable between 0 and 30 minutes.

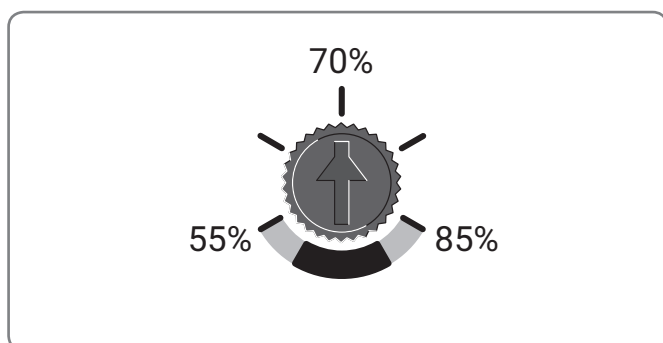


Boost Overrun Pot positions

Rotate potentiometer to change overrun time. Boost Overrun adjustment can be done at any time without the need to move the Program / Run Header Link.

Humidity Sensor

The Humidity Sensor's trigger point is variable from 55%RH to 85%RH.



Humidity Sensor Pot positions

Rotate potentiometer to change trigger point. Humidity Sensor adjustment can be done at any time without the need to move the Program / Run Header Link

Reset Information

Controller Reset

Following a controller reset the ventilation system will need to be fully re-commissioned. The unit will need to be powered up during the reset procedure.

1. Place the Program / Run Header Link in the Run Position
2. Rotate the Continuous Speed and Boost Speed adjustment fully clockwise.
3. Place Program / Run Header Link in the Program Position.
4. Rotate the Continuous Speed adjustment potentiometer fully anti clockwise.

Hardware Reset

Certain conditions (repeated supply interruptions etc.) can activate the automatic motor protection mode. Where by the fan motors are prevented from operating. This requires a hardware reset to return the unit to normal operating mode, to achieve this power to the unit should be switched off for 5 minutes, restoring the power after this time will reset the hardware of both the motor and PCB. Commissioning settings are not affected during a hardware reset.

Technical

Product Fiche

Supplier Name	Titon Hardware Ltd.	
Supplier Address	894 The Crescent Colchester Business Park Colchester Essex CO4 9YQ	
Model	CME3 <i>Q Plus</i> A Central Mechanical Extract	CME3 <i>Q Plus</i> HA Central Mechanical Extract
Model Identifier	TP332A	TP332HA
Declared Typology	NRVU - UVU	NRVU - UVU
Type of Drive installed	Multi-speed drive	Multi-speed drive
Type of heat recovery system	none	none
Thermal efficiency of heat recovery	n/a	n/a
Nominal NRVU Flow Rate (m ³ /s)	0.083	0.083
Effective power input (kW)	0.042	0.042
SFPint W/(m ³ /s)	n/a	n/a
Face velocity in m/s	n/a	n/a
Nominal external pressure in Pa	200	200
Internal pressure drop in Pa	n/a	n/a
Static efficiency of fan in accordance with (EU) No 327/2011	39% - < 125W motor	39% - < 125W motor
Declared maximum internal leakage rate (%)	n/a	n/a
Energy performance of the filters	n/a	n/a
Casing sound pressure level (L _{WA})	57dB(A)	57dB(A)
Filter Warning (RVU)	n/a	n/a
Model	CME3 <i>Q Plus</i> HA LS Central Mechanical Extraxct	
Model Identifier	TP334HA	
Declared Typology	NRVU - UVU	
Type of Drive installed	Multi-speed drive	
Type of heat recovery system	none	
Thermal efficiency of heat recovery	n/a	
Nominal NRVU Flow Rate (m ³ /s)	0.083	
Effective power input (kW)	0.042	
SFPint W/(m ³ /s)	n/a	
Face velocity in m/s	n/a	
Nominal external pressure in Pa	200	
Internal pressure drop in Pa	n/a	
Static efficiency of fan in accordance with (EU) No 327/2011	39% - < 125W motor	
Declared maximum internal leakage rate (%)	n/a	
Energy performance of the filters	n/a	
Casing sound pressure level (L _{WA})	57dB(A)	
Filter Warning (RVU)	n/a	
Internet address (for disassembly instructions)	www.titon.co.uk	

Routine maintenance

All ventilation units require periodic maintenance. Routine maintenance must only be carried out by a suitably qualified and competent person. The CME3 Q Plus must be periodically cleaned internally. The maximum time between cleaning will depend on the local environment. Titon recommend the unit be cleaned every 3 – 4 years at a minimum.

In the event of any queries please contact the system installer.

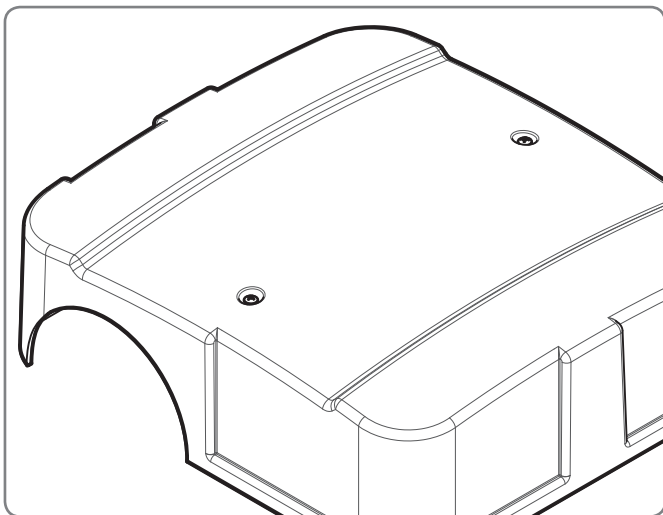
WARNING: The unit uses a 230V ~ supply and contains rotating mechanical parts. ISOLATE the unit from mains power supply and allow sufficient time for all moving parts to stop before undergoing any Servicing or Maintenance.

Cleaning Exterior

For best results use a clean damp cloth with a warm mild detergent solution. Do not use solvents or abrasive cleaners.

Access to the Interior for Cleaning

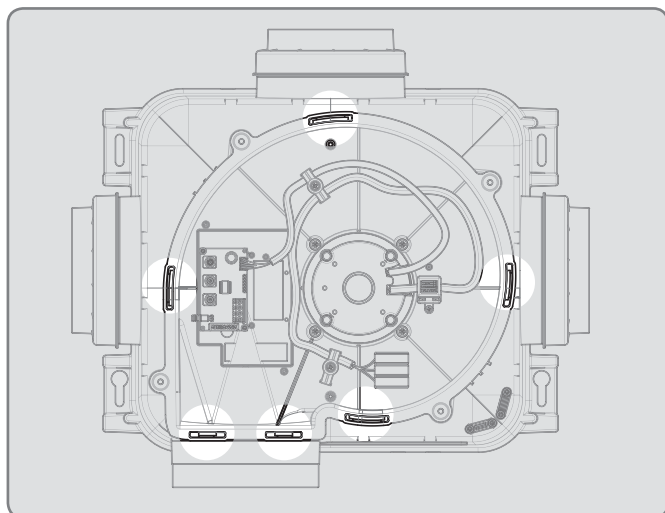
Access to the interior of the unit is achieved by loosening the two captive retention screws and removing the Lid.



Lid Fixing Screws

Removal of the Scroll Top

The Scroll Top is retained with six clips, some units may also use four screws. To remove the Scroll Top first remove and retain the screws (if fitted).

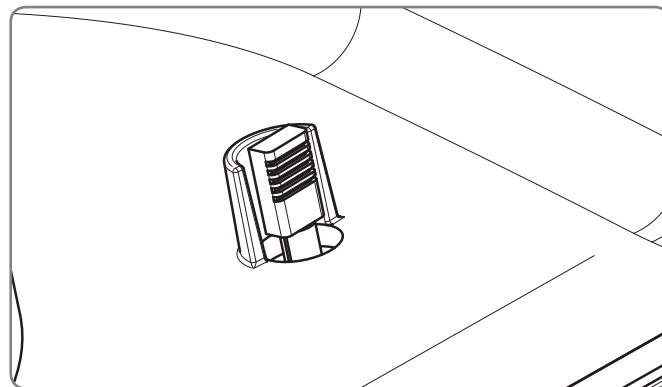


Scroll Top Clips

Place a large flat bladed screw driver into the slot adjacent to the clip and gently push the screw driver handle towards the centre of the unit (motor) whilst and the same time easing the Scroll Top away from the base, this will disengage the clip. Repeat for the other five clips. Tip. disengage the clips adjacent to the Output Port last to aid easier removal of the Scroll Top. Re assemble is the revers of the above. Ensure the clip holes are resealed with self adhesive aluminium tape.

Cleaning Interior

For best results use a clean damp cloth with a warm mild detergent solution.



Humidity Sensor

Do not use solvents or abrasive cleaners. When cleaning the interior ensure that the humidity sensor does not get wet, dust with a dry cloth.



Installed by

In the event of any queries please contact the system installer. Ensure this booklet is passed to the householder once installation & commissioning of the ventilation system is complete. This Product Manual must be kept in the Home Information Pack and used as a service record.



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