Lo-Carbon Sentinel Econiq Cool-Flow

- Up to 3.78kW of cooling provided
- Activated automatically at 24°C to prevent overheating to meet Part O and TM59
- Lowers fresh air supply temperature from ambient temperatures by up to 21°C
- R32 refrigerant with a GWP of 675, 50% lower than R134a
- EER up to 4.12
- App allowing full commissioning and control of activation
- Sentinel-X Wireless Temperature Sensors available
- Best in class SFP's and thermal efficiencies up to 93%
- Sound data independently tested and verified by SRL
- Wall mounted and Floor Standing options available
- Designed with 200mm spigots to provide maximum cooling and minimal noise levels all at low system pressures





Designed to mitigate overheating conditions in the warmer months meeting the requirements of Residential Part O and TM59 standards. Lo-Carbon Sentinel Econiq Cool-Flow is Vent-Axia's latest flagship mechanical ventilation with heat recovery system combined with our Intelligent Econiq Cool-Flow Module. Designed in the UK, it offers the highest level of comfort and functionality all year round.

Vent-Axia's Lo-Carbon Sentinel Econiq Cool-Flow is a self-contained solution designed to fit within a POD or standard utility cupboard. Connection to the unit will be made utilising the 200mm spigots and Vent-Axia's Thermflow ducting which will have a thermal conductivity of no less than 0.038 W/(m·K).

In the cooler months the Lo-Carbon Sentinel Econiq Cool-Flow provides up to 93% Heat Recovery ensuring heating bills are kept to an absolute minimum, in the warmer months our Intelligent 100% summer bypass will ensure free cooling is used wherever possible to ensure the internal comfort temperature is not exceeded.

If the 100% automatic intelligent summer bypass is not able to utilise internal/external free cooling conditions to reduce overheating, Vent-Axia's Lo-Carbon Sentinel Econiq Cool-Flow will automatically detect excessive increase in temperature within the dwelling. This will operate until the internal dwelling comfort temperature is met to ensure the dwelling does not overheat beyond Part O and TM59 parameters or the comfort temperatures set by the user.

Manual boost is also possible for the end user if they wish to override the automatic cooling mode as is the ability to turn then cooling on/off.

Air Quality and Health

The MVHR filter options offer numerous benefits, including improved indoor air quality by removing allergens and particulate matter. They maintain the system's energy efficiency, reduce heating and cooling costs, and enhance the overall longevity of the system. Additionally, they capture bacteria, viruses and VOCs, promoting a healthier living environment. Regular filter maintenance extends the system's life span and ensures uninterrupted operation.

Whatever the outside environment, the system can help improve the indoor air quality by filtering out impurities, with ISO 60% Coarse (G4) supplied as standard, which can filter out sand, fine hair and particles larger than $10\mu m$. Additional filtration can be achieved with a selection of optional filters, such as ISO ePM10 (M5), which can filter pollen, stone dust and particles smaller or equal to $10\mu m$ and ISO ePM2.5 (F7), which can filter out mould spores, bacteria and particles smaller or equal to $2.5\mu m$.

The various sensor options allow for flexible installation in individual rooms, supporting effective management of the air in the home. For example, a wireless temperature sensor located within a habitable room helps ensure a healthy and safe environment. A humidity sensor located in the bathroom detects high levels of moisture can support good indoor air quality. CO_2 sensors can ensure the ppm levels are managed to help promote cognitive function.

Low Noise Levels

The Lo-Carbon Sentinel Econiq Cool-Flow is one of the quietest combined MVHR and cooling systems on the market. The range is designed with an integral acoustic enclosure, made of steel, foam and expanded polypropylene (EPP), minimising breakout noise. The highly efficient motors are mounted on anti-vibration mounts to mitigate vibration transmission.

MVHR Demand Control Ventilation

The Vent-Axia Connect smartphone application allows a multitude of functions to be adjusted from the comfort of the sofa, available on iOS and Android. With smartphone-compatible controls, the homeowner is in full control of their ventilation all year round. They have the flexibility to increase the ventilation rate during hot periods in the summer or reducing the speed to minimise running costs while away. The Sentinel control logic built within the MVHR ensures the system operates optimally



with automated functions such as frost protection, summer bypass and cooling providing comfort in the home.

The Lo-Carbon Sentinel Econiq is Vent-Axia's latest flagship mechanical ventilation with heat recovery system. Designed and developed in the UK, it offers the highest level of comfort and functionality all year round.



Introducing a full range of products, with air performance suitable for all types of homes, the new Sentinel-X wireless controls platform delivers complete control over the home environment, provided through a full range of wired/wireless sensors and a smartphone app.









Cooling Unit Control Strategy

The MVHR controller shall automatically switch between heat recovery, summer bypass and active cooling via the Econiq Cool-Flow Module, continuously measuring internal & external temperatures to maintain comfort thresholds efficiently. The Econiq Cool-Flow Module can only be activated if both MVHR fans are running. In addition to the standard automatic cooling, provision shall also be made to allow active cooling to be disabled and enabled:

- Cooling permanently switched off the user may choose to isolate the Econiq Cool-Flow Module from the mains. As such the power supply should be monitored so as to not flag a fault under these (intentional) conditions
- Cooling disabled off by schedule the user may choose either a weekly or databased schedule (e.g. Holiday mode) to prevent Econiq Cool-Flow Module to be active for the duration.
- Cooling enabled user override Such as using a switch input on the MVHR overriding demand for cooling regardless of settings/ schedules. The cooling unit will have additional temperature sensors built-in and flow rates may be increased automatically to ensure internal component temperatures are not exceeded, Econiq Cool-Flow Module may be temporarily disabled for a period to allow the compressor to cool down in extreme cases.

A Whole New Experience

The highly sculpted interior surfaces, designed using the latest CFD techniques, ensure airflows are maximised through the unit, minimising noise and energy use. This feature alone provides an experience, that will delight homeowners, providing the most discrete and highly efficient ventilation available.

Integral Humidity Sensor

The integral humidity sensor increases speed in proportion to relative humidity levels, saving energy and reducing noise. The sensor also reacts to small but rapid increases in humidity, even if the normal trigger threshold is not reached. This unique feature ensures adequate ventilation, even for the smallest wet room. The nighttime relative humidity setback feature suppresses nuisance tripping as humidity gradually increases with falling temperatures.

Model

Description Stock Ref
Sentinel Econiq Cool-Flow with Wall Mounted Kit 413887
Sentinel Econiq Cool-Flow with Floor Mounted Kit 413888

Accessories

Description Stock Ref Wall Mounting Kit for Controller 411628

Control/Sensor Overview

							4 Speed	
Power	Colour	CO ₂	PIR	Temp.	Humidity	Wireless	Switch	Stock Ref
Battery	White			✓	✓	✓		496431
Battery	White			✓	✓	✓	✓	496437
Battery	Black			✓	✓	✓	✓	497689
0-10V	White	✓		✓	✓			496432
240V	White			✓	✓	✓		496429
240V	White	✓		✓	✓	✓		496433
240V	White		✓			✓		496438
240V	White			✓	✓	✓	✓	496620
240V	Black			✓	✓	✓	✓	497693
240V	White			✓	✓		✓	496621
240V	Black			✓	✓		✓	497697

Spare Filters

Stock Ref
411690
411691
411692

SEC Class

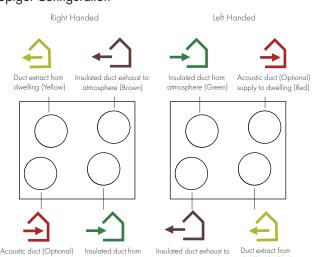
Model	SEC Class
Econiq L	A+

SAP PCDB Test Results (Econiq L)

	Thermal Efficiency %	SFP (W/l/s)
K+1	93	0.56
K+2	93	0.53
K+3	93	0.56
K+4	92	0.62
K+5	91	0.72
K+6	91	0.84
K+7	90	1.01

Spigot Configuration

supply to dwelling (Red)

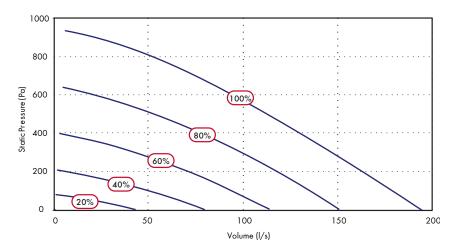


atmosphere (Brown)

atmosphere (Green)

dwelling (Yellow)

Performance



Please note: The Econiq Cool-Flow Module must have a minimum of 83 1/s from the MVHR to ensure components do not overheat. 20% and 40% fan curves are only to be used for the MVHR running without cooling.

	External Conditions		Internal Conditions			ı	Econiq Cool-Flow Module			Econiq Cool-Flow	
	Dry Bulb Temp (°C)	Wet Bulb Temp (°C)	Dry Bulb Temp (°C)	Wet Bulb Temp (°C)	Airflow (I/s)	Supply Air (°C)	Power In (kW)	EER	Cooling Capacity (kW)	EER	Cooling Capacity (kW)
					83	14.06	1.15	1.72	1.97	1.99	2.15
*	25	24	27	10	111	15.00	1.06	2.33	2.47	2.91	2.72
	35	24	2/	19 -	139	16.02	1.01	2.85	2.88	4.15	3.26
					167	16.58	0.96	3.53	3.39	3.74	3.78
					83	12.84	1.10	1.38	1.80	1.66	1.86
	01	22	27	10	111	14.04	1.02	1.86	2.23	2.21	2.31
	31	22	2/	19 -	139	15.18	0.97	2.29	2.67	2.71	2.71
					167	15.58	0.94	2.74	2.98	3.27	3.14
					83	10.86	1.04	1.65	1.72	1.57	1.65
**	07	10	07	10	111	11.98	0.98	2.23	2.18	2.09	2.05
	27	19	27	19 -	139	12.66	0.94	2.71	2.54	2.61	2.43
					167	13.68	0.90	3.22	2.91	3.02	2.74

 $^{^\}star$ ErP & BS EN 13141-7:2021 Cooling performance test conditions ** BS EN 13141-7:2021 Cooling performance test condition

Sound Data (Sentinel Econia Cool-Flow)

(Serimer Econiq Cool-now)													
Conditions (Summer Bypass Closed) Octave Band (Hz) Sound Power Levels (dB)										Sound Pressure dB(A)			
Airflow (I/s)	Supply Speed (%)	Extract Speed (%)	Test Mode	63	125	250	500	1 k	2k	4k	8k	Lw(A)	Lp(A) @ 3m
			Supply	66.6	62.5	61.3	56.1	53.7	47.3	37.5	28.1	58.8	41.3
83	53	51	Extract	67.4	53	52.8	41.5	40.9	32.7	25.7	23.7	47.9	30.4
			Breakout	62	56.4	57.6	46.9	46.5	38.9	30.5	26.2	52.4	31.9
			Supply	66.5	64.5	67.3	62	57.1	51.8	41.5	30.7	63.7	46.2
102	64	61	Extract	70.9	56	54.2	43.8	42.5	35.5	28.5	24.5	50	32.5
			Breakout	61.3	59.7	56.7	51.3	49.3	43	35.3	29.3	54.3	33.8
			Supply	67.7	66.4	62.4	66.6	59	54.3	44.9	33.8	65.4	47.9
111	74	71	Extract	71.1	56.8	53.6	46.6	43.1	37.1	29	26.4	50.5	33
		Breakout	61.7	62.3	56.3	58	51	45.6	36.5	29.4	57.2	36.7	
			Supply	68.2	67.5	63	68.3	59.9	55.8	47.1	35.7	66.9	49.4
132	77	77	Extract	71.4	57.5	55	48.5	44.8	38.9	30.5	25.8	51.8	34.3
			Breakout	62.3	61.8	56.6	59.6	52.2	47	37.7	29	58.2	37.7
			Supply	70.1	68.9	65	69.7	62.1	58.2	51.1	40	68.7	51.2
139	88	84	Extract	70.9	59.5	55.4	51	46.6	40.8	33.7	26.3	53.2	35.7
			Breakout	64.1	63.7	57.5	57.9	53.6	49	41.1	31.9	58.7	38.2
			Supply	79.7	72.7	67.2	71.5	64.6	60.8	55.5	44.8	71.2	53.7
167	100	100	Extract	76	63.1	57.8	52.5	49.2	43.8	38.2	27.2	56.1	38.6
			Breakout	68.7	66.4	58.8	62.4	57.2	52.3	45.9	34.7	62.8	42.3

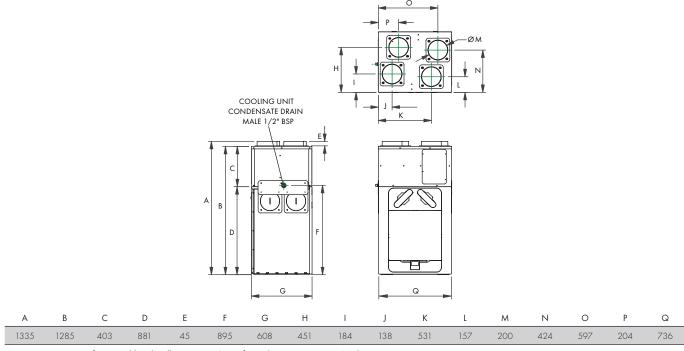
Sound Data (Sentinel Econiq L MVHR only)

Octave Band (Hz) Sound Power Levels, dB											SPL dB(A)
Speed	Test mode	63	125	250	500	1k	2k	4k	8k	LwA	@ 3m
	Supply	52.9	50.9	46.8	43.0	34.6	2 <i>7</i> .1	19.2	25.4	43.9	26.4
20%	Extract	50.3	49.0	36.0	31.5	23.6	16.1	18.9	25.3	36.4	18.9
	Breakout	34.6	34.8	35. <i>7</i>	34.9	29.6	25.1	21.0	25.3	36.0	15.5
	Supply	59.5	56.5	59.4	55.0	48.2	42.6	31.8	26.1	55.9	38.4
40%	Extract	51.9	51.3	50.4	41.2	35.0	25.3	19.8	25.4	44.8	27.3
	Breakout	40.2	42.6	46.5	45.4	41.0	36.2	25.5	25.3	46.5	26.0
	Supply	66.9	62.4	63.3	62.0	57.9	53.5	43.4	34.2	63.2	45.7
60%	Extract	60.6	60.3	54.2	49.5	44.4	36.2	27.9	26.3	51.7	34.2
	Breakout	45.5	49.8	52.5	53.1	49.7	46.7	36.2	26.9	54.5	34.0
	Supply	82.4	67.6	65.2	67.6	64.2	60.8	50.8	43.2	69.2	51.7
80%	Extract	75.5	68.6	59.3	56.0	48.3	44.2	36.9	31.3	58.6	41.1
	Breakout	59.2	55.0	56.8	60.0	55.4	53.9	44.1	33.4	61.0	40.5
	Supply	79.4	69.6	66.6	<i>75</i> .1	64.9	63.6	53.4	45.7	73.7	56.2
100%	Extract	72.4	70.5	60.5	56.4	49.8	46.3	39.0	33.4	59.5	42.0
	Breakout	63.0	<i>57</i> .1	58.5	63.7	56.8	55.9	46.4	36.2	63.5	43.0



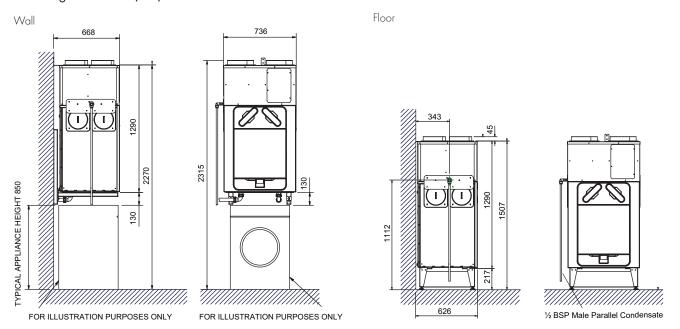
Unit Dimensions (mm)

Econiq Cool-Flow Module Weight: 50kg. Total Solution Weight: 96kg (including MVHR unit).



Wiring connections front and back, allowing LH & RH fitting by rotating unit 180deg

Mounting Dimensions (mm)



Recommended max system flow Part F Compliant App Commissioning Certificate RF858 connectivity, 802.11b/g/n WiFi and Bluetooth low energy 4.2 Spigot Options Spigot size	167 I/s @ 150 Pa ✓ Vertical Only 200mm
RF858 connectivity, 802.11b/g/n WiFi and Bluetooth low energy 4.2 Spigot Options Spigot size	√ Vertical Only
Spigot Options Spigot size	Vertical Only
Spigot size	•
1.2	200mm
Left/Right Hand Orientation Through Control	\checkmark
Fully automatic 100% summer bypass	✓
Active Frost Protection to -20°C	✓
Fault Code Indicator	✓
Easy Access Filters: ISO Coarse 65% (G4)	✓
Easy Access Filters: ISO ePM 10 50% (M5)	0
Easy Access Filters: ISO ePM2.5 70% (F7)	0
Clean Filter Indicator (Time frame)	✓
PIN Number Lock	✓
Running Time Indicator	✓
Enthalpy Heat Exchanger	0
Soft-Start Boost	✓
Delay-On	✓
Number of controllable speeds	4
Installer function to copy/load unit setup	✓
Inputs 2 x 0-10V; 2 x LS; 5 x Volt-Free	✓
Integral Humidistat	✓
Relay outputs - For example control heaters or geothermal heat exchanger	0
BMS - modbus supported over RS485	✓
Operating ambient temperature (°C)	-20 to +40
Operating Humidity (%RH)	0 to 95
Mounting	Wall or Floor
Maintenance access	From Front

O - Denote Optional

Econiq Cool-Flow Module Overview

Up to 3.78kW of cooling provided	✓
Activated automatically at 24C to prevent overheating to meet Part O and TM59	✓
Utilising R32 refrigerant providing a GWP of 675	✓
EER up to 4.12	✓
Lowers incoming air by up to 21°C	✓

Consultant's Specification

Specification - Econiq Cool-Flow Module

The Econiq Cool-Flow Module shall be manufactured with a RAL9003 powder coated mild steel outer case construction and be fully insulated for thermal and acoustic performance.

The unit shall have easy access to the front of the unit via the access panel for access to Controls (including Control PCBA, Run Capacitor, Relay and connections board).

The Econiq Cool-Flow Module shall include a factory fitted gasket creating an airtight seal with the MVHR. The Econiq Cool-Flow Module shall also be supplied with mounting brackets to mechanically fix the Econiq Cool-Flow Module to the MVHR along with an upper bracket to be fitted between the Econiq Cool-Flow Module and the wall, ensuring unit stability.

The maximum weight of the combined solution shall not exceed 100kg for the Econiq Cool-Flow Module and MVHR combined, the Lo-Carbon Sentinel Econiq Cool-Flow.

The MVHR and Cooling module assembly shall be supported on the specific floor-mounting stand or specific prefabricated steel brackets.

The Vent-Axia Econiq Cool-Flow Module shall operate in unison with the MVHR unit and never independently.

The Econiq Cool-Flow Module shall provide up to $3.78 \, \mathrm{kW}$ of Cooling, and utilise R32 refrigerant providing a GWP of 675 whilst providing an EER of up to 4.12.

The Lo-Carbon Sentinel Econiq Cool-Flow shall be capable of lowering fresh air supply temperature by up to 21 $^{\circ}\text{C}.$

The Econiq Cool-Flow Module shall be supplied with a two year (parts only) warranty.

Connection to the unit will be made at the 200mm spigots utilising Vent-Axia Thermflow ducting which will have a thermal conductivity of no less than 0.038 W/(m·K).

Condensate Connection will be via the single side which is a LH condensate as standard utilising 1/2 BSP Parallel, Male threaded connection.

All ducting throughout the system to be fully insulated

Specification - MVHR Unit

The Mechanical Ventilation Heat Recovery Unit shall be the Lo-Carbon Sentinel Econiq L as manufactured by Vent-Axia. It should be sized as indicated on the drawings and shall be in accordance with the particular specification.

The unit shall be fully insulated for thermal and acoustic performance and shall incorporate a high-efficiency composite plastic counter-flow heat exchanger with an independently verified thermal efficiency of up to 93% when tested to EN 308.

The heat exchanger shall be protected by ISO 60% Coarse (G4) grade filters on both exhaust and supply with the facility to accommodate ISO ePM 10 (M5), ePM2.5 (F7) or an inline filter such as the Vent-Axia Pure Air Carbon Filter. The built-in filters shall be accessible via tool-free access doors. The heat exchanger, motors, summer bypass and all other serviceable parts shall be accessible through the front of the unit.

The Lo-Carbon Sentinel Econiq L shall automatically vary the ventilation rate via EC/DC motors, as it receives signals from optional or in-built sensor inputs. When a signal is received, the fans shall either vary their speed proportionally or on a normal/boost principle. The unit shall have the facility to commission the supply and extract fans individually via in-built minimum and maximum speed adjustment, alternative wired remote-control unit or via a compatible smartphone using the Vent-Axia Connect application. The fans themselves shall have independent, infinitely variable speed control.

The MVHR unit shall be manufactured with an ABS Outer case construction and an Expanded Polystyrene (EPS) inner chassis with custom motor and impeller mounting features. The inner chassis will assist in reducing noise and act as a large anti-vibration mount avoiding transmission through to the back mounting plate or the base of the unit. The MVHR unit shall be tested to ensure it meets the maximum allowable vibration of no more than 1 mm/s, measured on the unit wall fixing points.

The unit shall have a fully automatic 100% summer bypass, integral minimum and maximum infinitely variable speed controls with facia mounted failure indication. The unit shall have low-energy, high efficiency EC/DC fan/motor assemblies with sealed for life bearings. The impellers shall be high-efficiency backward curved centrifugal type, achieving an SFP as low as 0.38W/l/s (EN 308).

The unit shall have two condensate drain outlets for handing to be defined onsite and during commissioning. The unit shall have wireless control capability options, using RF868 connectivity, 802.11b/g/n Wi-Fi and Bluetooth low energy 4.2. The unit shall use RF868 to connect to a wide ecosystem of wireless sensors including but not limited to CO_2 , temperature, and relative humidity. The unit shall be able to engage Wi-Fi to

connect to local devices and create a local area network to allow for a larger network to be created for commissioning. The unit shall have Bluetooth low energy 4.2 to allow connectivity onto compatible smartphone devices. The unit shall be constructed with a removable tool free front panel which gives access to the removable on-board controller and other accessories. The EPS panel can then be removed with 4 screws allowing full maintenance access. This shall provide access to the following:

- ✓ Supply or extract fan
- ✓ Heat exchanger
- ✓ Access to the electrical connections

Access shall be provided for wiring termination and setup/commissioning. The unit can be supplied with either a backlit user interface or a blank plate, both of which shall be removable for remote mounting if required. Filters shall be accessed via the two filter drawers found near the top of the unit, the S shall have filter drawers and the M and L shall have filter caps.

Units shall be manufactured by Vent-Axia Ltd.

Standard MVHR Controls

The Lo-Carbon Sentinel Econiq L shall incorporate the following functions through a user interface fitted by the manufacturer or a paired smartphone with the Vent-Axia Connect application:

- \checkmark Integral infinitely variable fan speed control on supply and extract.
- ✓ 6 speeds; 4 adjustable
- ✓ Left or Right hand spigot configuration, programmable during commissioning
- ✓ Tool free filter access
- ✓ Integral BMS interfaces control and status indication
- ✓ Heating interlocks
- 24V external sensor supply, e.g. PIR sensor
- ✓ 0-10V proportional speed adjustment
- ✓ Volt free contacts
- ✓ Fully automatic summer bypass
- ✓ Filter check facility
- ✓ Control panel PIN number lock

The unit shall incorporate:

- An integral humidity sensor with the following features: Ambient Response; Raises
 the humidity trigger point as dwelling temperature reduces.
- Rapid Response: Monitors the rate of change in humidity and triggers increased airflow even if the humidity trigger threshold is not reached.
- Proportional Response; incrementally increases the fan speed to reduce noise and reduce energy consumption.
- ✓ RS485 connectivity Long distance cabling to support multiple sensor connections.
- RF868 connectivity Radio reference 868 MHZ for multiple wireless sensors pairing Bluetooth low energy 4.2 - Enable pairing within compatible smartphone device
- ✓ 802.11b/g/n Wi-Fi Enable localised access point or connect to the local area network using the Vent-Axia Connect application, via a compatible smartphone device
- The unit shall incorporate an automatic 100% summer bypass damper which
 monitors internal and external temperatures to maintain the user comfort
 temperature (default 25°C): -
- 'Evening Fresh' turns the unit to maximum speed with the bypass operational for 2 hours or until the user comfort temperature is reached (default 25°C).
- 'Night Time Fresh' will run the unit at maximum speed with the bypass operational throughout the night or until the dwelling reaches minimum temperature (default 14°C).

Independently acoustically tested to BS EN 13141-7:2010

Econiq Cool-Flow Module Controls

The MVHR controller shall automatically switch between heat recovery, summer bypass and active cooling via the Econiq Cool-Flow Module, continuously measuring internal & external temperatures to maintain comfort thresholds efficiently. The Econiq Cool-Flow Module can only be activated if both MVHR fans are running.

In addition to the standard automatic cooling, provision shall also be made to allow active cooling to be disabled and enabled:

- ✓ Cooling permanently switched off the user may choose to isolate the Econiq
 Cool-Flow Module from the mains. As such the power supply should be monitored
 so as to not flag a fault under these (intentional) conditions
- ✓ Cooling disabled off by schedule the user may choose either a weekly or datebased schedule (e.g. holiday mode) to prevent Econiq Cool-Flow Module to be active for the duration.
- Cooling enabled user override Such as using a switch input on the MVHR overriding demand for cooling regardless of settings/schedules.

The Econiq Cool-Flow Module will have additional temperature sensors built-in and flow rates may be increased automatically to ensure internal component temperatures are not exceeded, Econiq Cool-Flow Module may be temporarily disabled for a period to allow the compressor to cool down in extreme cases.



Sentinel-X Controllers

Battery Controllers & Sensors



Battery - Internal Temperature and Humidity - Wireless

Room mounted humidity and temperature sensor for wired or wireless communication with a compatible system. Using an in-built RF 868 MHz (Wireless radio frequency), or RS485 (Wired connection) communication method whilst being powered by batteries.

- Dimensions (HxWxD) (mm) 60 x 60 x 22
- 2 x AAA Batteries included
- Temperature range 0~60°C
- Relative humidity range 0-90% RH
- Wireless range 20m closed/100m open
- RF 868MHz Wireless or RS485 Wired communication
- Status LED indicator for pairing, health check and fault conditions
- Mounted using provided back plate

Stock Ref

496431



Battery - 4 Speed Switch with Temperature and Humidity - Wireless

Room mounted Speed Switch for wireless communication with a compatible system. Using an in-built RF 868 MHz (Wireless radio frequency) communication whilst being powered by batteries.

- Dimensions (HxWxD) (mm) 90 x 90 x 17
- 2 x AAA Batteries included
- Temperature range 0~60°C
- Relative humidity range 0-90% RH
- Wireless range 20m closed/100m open
- RF 868MHz Wireless
- Mounted using provided back plate or compatible with a standard single gang or surface mounted pattress box
- Status LED indicator for pairing, health check and fault conditions

 Model
 Stock Ref

 White
 496437

 Black
 497689

HMI Kit



Wall-mounted HMI Kit to suit Econiq models with full HMI

Includes HMI Blank controller, HMI backplate and cable.

- Dimensions (HxWxD) (mm) 90 x 90 x 17
- Power supply 240V
- Wireless range 20m closed/100m open
- RF 868MHz Wireless or RS485 Wired communication
- Compatible with standard single gang or surface mounted pattress box

Stock Ref

411628

24V Sensors



0-10V CO $_{2}$, Temperature and Humidity - Wired

Room mounted $\rm CO_2$ sensor with 0-10V signal output powered by an external 24V supply.

- Dimensions (HxWxD) (mm) 90 x 90 x 17
- 24V Power supply required
- Temperature range 0~60°C
- Relative humidity range 0-90% RH
- CO₂ range 0-2000PPM
- Compatible with standard single gang or surface mounted patters how
- Status LED indicator for pairing, health check, faults & air quality traffic light index
- O-10V Wired Communication

Stock Ref

496432

Sentinel-X Controllers

240V Controllers & Sensors



240V - Internal Temperature and Humidity - Wireless

Room mounted humidity and temperature sensor for wired or wireless communication with a compatible system. Using an in-built RF 868 MHz (Wireless radio frequency), or RS485 (Wired connection) communication method whilst being powered by a local 240V supply.

- Dimensions (HxWxD) (mm) 90 x 90 x 17
- Power supply 240V
- Temperature range 0~60°C
- Relative humidity range 0-90% RH
- Wireless range 20m closed/100m open
- RF 868MHz Wireless or RS485 Wired communication
- Compatible with standard single gang or surface mounted pattress box
- Status LED indicator for pairing, health check, faults & air quality traffic light index

Stock Ref 496429



240V - 4 Speed Switch with Temperature and Humidity - Wireless

Room mounted Speed Switch for wireless communication with a compatible system. Using an in-built RF 868 MHz (Wireless radio frequency) communication whilst being powered by a local 240V supply.

- Dimensions (HxWxD) (mm) 90 x 90 x 17
- Power Supply 240V
- Temperature range 0~60°C
- Relative humidity range 0-90% RH
- Wireless range 20m closed/100m open
- RF 868MHz Wireless
- Mounted using provided back plate or compatible with standard single gang or surface mounted pattress box
- Status LED indicator for pairing, health check and fault conditions

 Model
 Stock Ref

 White
 496620

 Black
 497693



$240 \text{V} \cdot \text{CO}_{2'}$ Temperature and Humidity - Wireless

Room mounted $\rm CO_2$ sensor for wired or wireless communication with a compatible system. Using an in-built RF 868 MHz (Wireless radio frequency), or RS485 (Wired connection) communication method whilst being powered by a local 240V supply.

- Dimensions (HxWxD) (mm) 90 x 90 x 17
- Power supply 240V
- Temperature range 0~60°C
- Relative humidity range 0-90% RH
- CO₂ Range 0-2000 PPM
- Wireless range 20m closed/100m open
- RF 868MHz Wireless or RS485 Wired communication
- Compatible with standard single gang or surface mounted pattress box
- Status LED indicator for pairing, health check, faults & air quality traffic light index

Stock Ref 496433



240V - PIR Sensor - Wireless

Room mounted PIR sensor for wired or wireless communication with a compatible system. Using an in-built RF 868 MHz (Wireless radio frequency), or RS485 (Wired connection) communication method whilst being powered by a local 240V supply. Room mounted presence detector for min/max or on/off control. Wall or ceiling mounting.

- Dimensions (HxWxD) (mm) 90 x 90 x 17
- Power supply 240V
- 5-25min run on timer
- PIR Range 3m
- Compatible with standard single gang or surface mounted pattress box
- Wireless range 20m closed/100m open
- RF 868MHz Wireless or RS485 Wired communication

Stock Ref 496438



240V - 4 Speed Switch with Temperature and Humidity - Wired

Room mounted Speed Switch for wired communication with a compatible system.
Using an in-built RS485 communication method powered by a local 240V supply.

- Dimensions (HxWxD) (mm) 90 x 90 x 17
- Power Supply 240V
- Temperature range 0~60°C
- Relative humidity range 0-90% RH
- Mounted using provided back plate or compatible with standard single gang or surface mounted pattress box
- Status LED indicator for pairing, health check and fault conditions
- RS485 Wired Connection

 Model
 Stock Ref

 White
 496621

 Black
 497697