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Simx Technical Bulletins

From time to time, it is necessary for Simx to publish product-related information to the marketplace. This is for the benefit of Wholesalers, Contractors and Customers alike. These bulletins may, by their very nature, cover both a diverse range of products and subject matter.

You are actively encouraged to both use and contribute to the ongoing maintenance and development of the Simx Bulletin system. Please note customer feedback has resulted in many of the Bulletins produced to-date.

Each Bulletin is issued with a unique reference number and current issues are listed in the Index (tb000.) These Bulletins form an integral part of our product catalogue and our representatives are tasked to ensure that you are kept up-to-date with the latest Bulletins, as well as the latest product pamphlets.

The very latest bulletins may also be downloaded from our Website;
www.simx.co.nz

If you get asked repetitive questions regarding any of our products and would like 'the official word' to fax your customer, please contact Simx on our support hotline (09) 259 1662 or email sales@simx.co.nz to request a Bulletin.

Simx ... the difference is excellence

NOTE: Bulletin numbers not listed in the Index are no longer applicable to the current product range.



ECO-SPOT AND ECO-FLOOD MANUAL OVERRIDE FUNCTION No. 35

Date: 04/24

Manual Override function on LHT0096/97/98 (Eco Spot) and LHT0099 Eco Flood

The circuitry of these units has been designed to overcome failings which are present in 'old-era' products.

These failings include false manual override latching caused by power 'brown-outs', where the product latches on and will remain on indefinitely for days or weeks, day and night, until the unit is switched off manually. The same symptoms will also occur where the lights have been latched on by the user and they have subsequently forgotten to switch them back into sensor mode.

In order to overcome both the above scenarios the circuitry has been modified to include the following remedies:

- 1) The manual override function has been linked to the daylight sensor function so that the lights cannot remain latched on in daylight hours.
- 2) The sensor requires a 'double-pulse' signal before it will latch into manual override mode, overcoming the 'brown-out' problem (the sensor requires a double off/on signal to initiate the override function).
- 3) It is possible to switch the sensor into the override mode during the daytime, but the lights will not illuminate until dusk (if you want the lights left on for visitors, or want the house to have a 'lived-in' look until you arrive home).
- 4) If the lights have been switched into 'manual override' mode and remain on for the whole night, they will reset into 'sensor-only' mode when it becomes daylight. The lights will switch off in the morning and when it becomes dark again the lights will not latch on in override mode but will be in 'sensor-only' mode, responding to movement. This overcomes the possibility of the user going away for several days and leaving the lights latched on every night.
- 5) It is not possible to switch into manual override from the 'power off' situation. This overcomes 'operator confusion' problems. If the user switches on/off/on several times from the 'power off' position, the sensor will always end up in 'sensor only' operation.
- 6) The circuitry has also been modified to create a slight 'pause-period' between switching cycles. This is an approximately 2 second period between the time the light switches off and the time the sensor responds to further movement. This 'blank period' overcomes problems inherent in old technology models, whereby the lights were able to reflect back off a shiny surface into the sensor. The result of this was that the sensor could respond to the light disappearing in the same manner as it would to heat movement- when the light switched off the sensor interpreted it as movement and switched the lights back on. This would result in a continuous off/on cycling of the lights. This 2-second delay feature is apparent during the 'walk-test' set-up and should be taken into account at that time, ie: pause for a few seconds when the lights switch off before moving again.

The above may at first appear confusing but these examples will help you to understand the logic of these intelligent features.

- a) The lights have been operating in sensor mode, but the user is going out during the afternoon and would like the lights latched on when darkness falls, to give the appearance of someone being home or else to light the path for when they return after dark. They flick the switch off/on/off/on before they leave home and the sensor will be latched into override mode. The lights will remain unlit during the daylight hours, but will light as soon as dusk falls. The lights will then remain on until the user comes home and resets them, by switching off/on once only.
- b) If the above example is repeated but the user forgets to switch the lights off when they return home, the lights will automatically switch off when daylight appears. In addition to this, the sensor will automatically reset from the manual override mode into sensor mode. This ensures that the lights will not inadvertently remain in the override mode and switch on for the whole night the next evening. Instead, they will be in the normal sensor mode, ready to detect movement as soon as dusk settles.



A question which is often asked is “can 2 or more sensors be connected to 1 light fitting ?” The official word is a resounding YES, provided they are of the same type. In other words, don’t use a Trinity and a Smart-Sense together. Wiring of the sensors is in parallel.



PRODUCT WARRANTY TABLE

No. 045

Date: 04/24

Product Warranty Period	1 Year	2 Years	3 Years	4 Years	5 Years	7 Years
FANS						
MANROSE FANS (including Designer and Lo Carbon)					■	
MANROSE HYPER150 FANS & FAN KITS						■
MANROSE CONTOUR LED FASCIAS			■			
BASEC FANS			■			
SIMX COMMERCIAL FANS		■				
MIXFLO FANS				■		
FAN ACCESSORIES	■					
FAN TIMER (FAN2444 and FAN0372)		■				
DUCTING	■					
DIFFUSERS	■					
GRILLES	■					
HOME VENTILATION						
SMARTVENT SYSTEMS*					■	
SMARTVENT SYSTEMS SEASONAL UPGRADES					■	
POSITIVE2 AND EVOLVE2 UPGRADE KITS			■			
HEATTRANS					■	
HEATTRANS THERMOSTAT CONTROLLERS	■					
MAXVAK			■			
LIGHTING & SENSORS						
SIMX LED RANGE			■			
SIMX DECOR EXTERIOR					■	
SIMX SENSORS			■			
LED BUTTON (ROUND/OVAL)		■				
ESYLUX SENSORS					■	
ESYLUX LUMINAIRES					■	
MANROSE HEAT LAMPS		■				
CHIMES						
SIMX CHIMES	■					
HAND DRYERS						
MANROSE HAND DRYERS			■		■	

* Excludes filters/tablet.



MANROSE®

Simx warrants to the purchaser that this product is free from defects in the material and workmanship for a period of five years from the date of original purchase. The warranty only operates if proof of purchase in the form of a bill of sale, invoice or purchase receipt is presented at the time of request of service.

The customer shall ensure that the goods are fit and suitable for the purpose for which they are required and the company is under no liability if they are not.

The warranty is in addition to all other conditions, warranties, guarantees, rights and remedies which may be applied by relevant legislation in New Zealand.

The warranty will not be applicable if the product has not been installed, operated and maintained in accordance with the manufacturer's instructions and recommendations contained in operating & installation instructions provided with the product, or if the product has been used in a manner other than for which it was originally designed, or if the damage, malfunction or failure has resulted from incorrect voltages, alterations, accidents, misuse, neglect, abuse, faulty or improper installation or mains supply problems, including lightning surges.

This warranty is limited to the product only (expressly excluding labour and transport costs) and is dependent on it being returned to point of purchase. Simx reserves the right to repair or replace any warranty item at it's discretion.



Note: Packaging - We recommend that you keep all the original packaging as it provides the best protection should you have to store or transport this unit in the future.



Duct layout

It is recommended that when connecting duct to stretch the duct as long and straight as possible. This will provide improved airflow and optimise fan performance. The more bends the duct has, the greater the resistance to airflow. Excess duct should be cut off to ensure the duct is fully extended and tight.

Correct Duct Installation
(Recommended)



Incorrect Duct Installation
(Not Recommended)

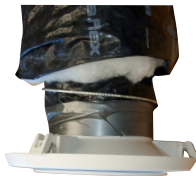


Connecting Insulated Duct

When connecting Insulated Ducting you need to tape both the inner and the outer sleeve of the duct. This ensures the system is installed to offer the least amount of airflow resistance and optimum performance levels. Taping only the outer sleeve is likely to result in the inner duct obstructing the airflow of the system. This is particularly important with Acoustic Ducting.

Follow the 3 steps below:

1 Secure the 'CORE' to the spigot with duct tape.



2 Pull the 'INSULATION' up to the join



3 Tape the 'OUTER SLEEVE' to the spigot with the duct tape.



Duct Connectors

When connecting two lengths of duct we strongly recommend the use of a 'Duct Joiner'. Using a duct joiner will help to ensure the duct is connected securely, and will not collapse over time. It is the ONLY way to correctly join two lengths of duct and maintain long term performance. This is particularly important when connecting insulated duct.

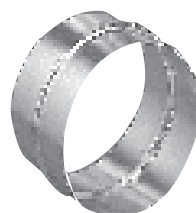
Duct Connectors Order Code:

100mm plastic connector - DCT0159

125mm metal connector - DCT0037

150mm metal connector - DCT0059

200mm metal connector - DCT0071



Occasionally it is reported that consumers cannot put their sensors or sensor lights into Override mode. For instance, the customer may try flicking the switch off/on/off/on within 2 seconds as required, however the light simply comes on, and goes off immediately, followed by the sensor going back to sensing mode.

We have found that some switches do not operate at a speed sufficient to put these sensors and sensor lights into Override mode.

Whenever an override problem is encountered, please check that the switch is of the newer type. This would most likely be manufactured after 1990.

Another main cause for Override mode error is user speed, i.e. flicking the switch too quickly or too slowly.

See bulletin No. 80 for more info on Auto/Manual Switching Methods



MAN INLINE CENTRIFUGAL FANS – Plastic housing

Addition of FAN0356 MAN315L (L for Large)

This is a higher performing model than FAN0357 - MAN315.

It was in previous catalogues pre 2010 as RVK315HP

Code	New name	Source code
FAN0357	MAN315	RVK315E2-A1
FAN0356	MAN315L	RVK315E2-L1



K SERIES INLINE CENTRIFUGAL FANS – STEEL HOUSING

Range from 100 - 315mm sizes

Stocked range from 150 - 315mm sizes

Sizes 100 and 125 indent only 12 weeks.

Comes complete with one metal foot.

The inline centrifugal fan as we know it was the K series invented in 1974 by Kanalfakt in Sweden. It is the original inline centrifugal fan and has been upgraded over the years. It has been sold in NZ for over 25 years so there are thousands already in the marketplace and meet the requirements of customers that prefer the finish of a metal body.

Metal Inline Fans -Competitors

Temperzone – Ellicent AXC

Fantech – Ventmajor VM

Pacific HVAC (Fans Direct) – ICM Turbomax

Pacific HVAC (Fans Direct) – K Series – parallel import

Smooth-Air – VKM – VEVKM

KD INLINE MIXED FLOW FANS

The KD range of fans will not be in future catalogues, however it will be available as an indent item, on a 14 week lead time as it currently is.

If you receive enquiries for this product, unless it is for replacement of an existing KD fan then offer an alternative ex stock fan. Although the KD series list higher air volumes for diameter, with duct fans the performance airflows with no pressure do not reflect the actual airflows achieved once ducting, filters, inlet grilles and outlet grilles are added to a system. With these factors considered our other existing stocked products become more attractive.

The following table gives some examples for the installed airflows labelled Duty 2.

Model	Duty 1	Duty 2	Alternative	Duty 2
KD200L	366 L/s at 0Pa	250L/s at 200Pa	K200L	200L/s at 200Pa
KD200L	366 L/s at 0Pa	250L/s at 200Pa	ACM250	347L/s at 200Pa
KD250L	551 L/s at 0Pa	430 L/s at 250Pa	ACM250	347L/s at 200Pa
KD315L	593 L/s at 0Pa	450 L/s at 250Pa	ACM315	505L/s at 250Pa
KD315XL1	768L/s at 0Pa	600 L/s at 100Pa	ACM315	605 L/s at 100Pa
KD315XL1	768L/s at 0Pa	400 L/s at 175Pa	ACM315	545 L/s at 200Pa
KD315XL1	768L/s at 0Pa	400 L/s at 175Pa	BIQ3541Q	400 L/s at 230Pa
KD355XL1	1113 L/s at 0Pa	600 L/s at 200Pa	BIQ4041Q	600 L/s at 260Pa
KD400M1	1155 L/s at 0Pa	600 L/s at 200Pa	BIQ4041Q	600 L/s at 260Pa



Simx is committed to the safe use, storage, handling and transport of lithium ion batteries on and offsite. Lithium batteries can be extremely dangerous if damaged or mishandled.

Storage

Store lithium ion batteries:

- In a cool and dry place.
- Store away from moisture or liquids.
- Handle with care and do not drop or puncture batteries.
- Keep batteries in original packaging until use, where practical.
- Do not store near any food, drink or tobacco.
- Store away from direct sunlight, heat and elevated temperatures. E.g. Window displays, heaters.
- Lithium Ion Batteries can be stored in temperatures ranging from 5°C-60°C however the ideal storage temperature is 20°C.

Handling

Follow these guidelines when handling lithium ion batteries:

- Do not open, disassemble, burn, drop, or crush.
- Do not expose to extreme heat or fire.
- Personal protective equipment is not required under normal conditions.
- Do not allow conductive material to touch the battery terminals. A dangerous short-circuit can cause fire or an explosion.

Personal safety when damage to a battery occurs

Lithium batteries can generate excessive heat, poisonous gases and fire if damaged.

Treat with extreme caution.

If you need to handle a damaged or opened battery

- Wear protective hand and face equipment.
- Dispose of correctly and immediately.
- Call 111 if signs of smoke or fire are present.

Safe Disposal

It is recommended batteries are disposed of according to local regulations. In Auckland batteries may be disposed of at the following locations (charges apply):

- Waitakere Refuse and Recycling Centre.
- Ecotech Services Ltd.
- Eco Drop Recycling Centre Christchurch.

Dispatch

When packing or dispatching lithium ion batteries or cells must be:

- Disconnected and separated from the fitting.
- Wrapped to prevent short circuiting and damage (e.g. using a blister pack and / or bubble-wrap)
- Packed in strong outer packaging.
- Secured against movement within the outer packaging.



When transporting

Under UN classification for transport (not the HSNO classification), Lithium ion batteries are classified as Class 9 Miscellaneous Dangerous Substances:

- When transporting, refer to your own company's policy around transporting hazardous goods and discuss with your couriers.

Refer to:

- SDS, section 14, Transport Information.
- Ministry of Transport Transporting Dangerous Goods Safely.
- IATA Lithium Battery Guidance Document.
- Secured against movement within the outer packaging.

Emergency procedures

Medical emergency:

Use the following table to decide what to do in the event of exposure to a damaged lithium ion battery. If in any doubt, seek medical help as well.



Type of exposure	First aid measures
Inhalation	<ul style="list-style-type: none"> • Take affected persons into the open air and position comfortably • Supply fresh air or oxygen; in severe cases obtain medical attention. • In case of unconsciousness bring patient into stable side position for transport.
Skin contact	<ul style="list-style-type: none"> • Instantly wash with water and soap and rinse thoroughly. • If skin irritation persists, call a physician.
Eye contact	<ul style="list-style-type: none"> • Rinse thoroughly with plenty of water for at least 15 minutes. • Consult a physician.
Swallowing	<ul style="list-style-type: none"> • Rinse mouth immediately and drink plenty of water. • Seek immediate medical advice.
Self-protection of First Aider	<ul style="list-style-type: none"> • Avoid contact with skin, eyes or clothing. • Use personal protective equipment as required.

Firefighting measures:

Formation of toxic gases is possible during heating or in the case of a fire.

Suitable extinguishing agents: CO₂, dry chemical or foam extinguishers.

Unsuitable extinguishing agents: Type D extinguishers. Use of water spray on full jet may be inefficient.



IP66 OYSTER LED Bulkhead All models – now to include Pre-wired fly leads

The product specification for the Oyster LED range has changed effective from May 1st 2016.

The luminaire is now being ordered ex-factory with a fitted electrical cable. This is wired to the internal terminal block and extends out of the fitting through the IP gasket on the side of the luminaire. This fly lead will now extend out of the gland by approximately 500mm.

This will assist the installer in speeding up the installation time required for each fitting. In most installations now, the electrician will not have to open the luminaire at all. This product improvement will transition over time as the range rolls over as new stock arrives.

**LHT0222, LHT0223 IP66**

The relays that govern switching maximums on our Simx sensors were originally designed when switching incandescent and halogen loads were the norm.

Since the proliferation of LED products, some changes were required, as the existing relays could only handle very small LED loads.

This project has now been completed and the new maximum switching loads are listed as below. It is important to note that this is the maximum switching load without use of a remote contactor. When a contactor is added to the circuit, this allows the installer to exceed maximum rated load, because the load is being switched externally to the sensor relay.

PRODUCT	MAXIMUM LED LOAD
Smart Sense LHT0119/0120	110 watts
Smart Sense LHT0142	110 watts
Dual Mount LHT0179	200 watts
Microsense LHT0182	300 watts
Trinity LHT0238/0239	110 watts

Minimum LED load is 1 Watt.



Switching Methods for the Simx Lighting Sensor Light Range

Most of the Simx Lighting sensorlight ranges have a manual override function, which allows the unit to operate as a “permanently ON” luminaire. However, the way this is achieved, and what happens, can vary between different ranges. The table below explains the switching method for each range, how the luminaire will react, and how to switch it back to Auto mode again.

Additionally, also included are other special function options that are clarified here. Refer to the relevant installation manuals to confirm correct setup and operation of all functions.

MODEL NUMBER	MODEL NAME	Switch to MANUAL	OUTCOME	Switch back to AUTO
LHT0096 LHT0097 LHT0098	ECOSPOT TWIN PAR38	OFF/ON/OFF/ON	Light will remain ON until dawn, then revert to AUTO, unless switched back to AUTO earlier. MANUAL mode will not turn lamps on during daylight hours.	OFF/ON
LHT0244 LHT0250	LED ECOSPOT 2X8W	OFF/ON/OFF/ON	Light will remain ON for 8 hours then revert to AUTO, unless switched back to AUTO earlier.	OFF/ON/ OFF/ON
LHT0234 LHT0235 LHT0236 LHT0237	MIGHYTLITE LED 15W - 24W	Manual Switch ON	Light will remain ON permanently until Manual Switch is OFF. Note special wiring required, refer to Installation Manual.	Manual Switch OFF
LHT0277 LHT0278 LHT0279 LHT0280 LHT0281 LHT0282	REFLECT LED 12W - 26W	OFF/ON/OFF/ON	Light will remain ON until dawn, then revert to AUTO, unless switched back to AUTO earlier. MANUAL mode will not turn lamps on during daylight hours.	OFF/ON
Special Functions: LHT0277, LHT0278, LHT0279, LHT0280, LHT0281, LHT0282			Setting timer on sensor to ‘D’ setting disables the PIR. Light now will illuminate permanently between dusk and dawn every day.	
LHT0331 LHT0332	TRINITY LED	OFF/ON/OFF/ON	Light will remain ON until dawn, then revert to AUTO, unless switched back to AUTO earlier. MANUAL mode will not turn lamps on during daylight hours.	OFF/ON
Special Functions: LHT0331, LHT0332			Switching OFF/ON x3 times, activates time delay mode. Light will stay on from dusk for pre-set time (1-8 hours), then revert to AUTO every night.	
LHT0283 LHT0284 LHT0285 LHT0286	ESYLUX AFR FLOOD	NO MANUAL OVERRIDE		
Special Functions: LHT0283, LHT0284, LHT0285, LHT0286			Setting timer on sensor to ‘D’ setting disables the PIR. Light now will illuminate permanently between dusk and dawn every day.	



MODEL NUMBER	MODEL NAME	Switch to MANUAL	OUTCOME	Switch back to AUTO
LHT0287 LHT0288 LHT0289 LHT0290	ESYLUX AOL WALL	NO MANUAL OVERRIDE		
Special Functions: LHT0287, LHT0288, LHT0289, LHT0290			Setting timer on sensor to 'D' setting disables the PIR. Light now will illuminate permanently between dusk and dawn every day.	
LHT0397 LHT0398 LHT0399 LHT0400 LHT0401 LHT0402 LHT0403 LHT0404	ESYLUX ALVA BOLLARD	REMOTE CONTROL	Activate TWILIGHT setting to disable the PIR. Light now will illuminate permanently between dusk and dawn every day.	Disable TWILIGHT setting
Special Functions: LHT0397, LHT0398, LHT0399, LHT0400, LHT0401, LHT0402, LHT0403, LHT0404			Set ORIENTATION setting to provide courtesy light level (10-20%) up to 1 hour, or all night, after no movement detected.	
LHT0337 LHT0338 LHT0339 LHT0340	ELITE WALL	NO MANUAL OVERRIDE		
Special Functions: LHT0337, LHT0338, LHT0339, LHT0340			Provides courtesy light level (10%) between dusk and dawn when no movement detected	
LHT0347 LHT0348	MIGHTYLITE SOLAR	REMOTE CONTROL	Will switch between Manual and Auto modes on command from remote control. Will ignore Manual mode command if battery is below 35% charged. Provides courtesy light level (10%) between dusk and dawn when no movement detected.	REMOTE CONTROL
Special Functions: LHT0347, LHT0348			6 other control settings including dimming. Refer to Installation Manual.	
LHT0413 LHT0414 LHT0415 LHT0416	ESYLUX ALVA BULKHEAD	VIA EXTERNAL PUSH BUTTON	Override to 4 hour permanently ON.	VIA BUTTON OR TIME ELAPSE
Special Functions: LHT0413, LHT0414, LHT0415, LHT0416			Set luminous flux output to a fixed (reduced) value. Set ORIENTATION to provide courtesy light level (10%) up to 1 hour, or all night, after no movement detected. Activate TWILIGHT setting to disable the PIR. Light now will illuminate permanently between dusk and dawn every day.	



Sensorlight Switching Issues for the SIMX Sensor Light Range

Are your Sensor Lights coming off and on when there is no one outside, even with the sensitivity adjusted right down? Here is why it may happen and how to fix it.

Two reasons this may occur. One is electrical, the other environmental.

- If electrical, the relay inside the sensor may be 'misbehaving' leading to intermittent triggering for no particular reason. This is a rare occurrence but can sometimes happen. This is a product fault, and Simx gladly replace through our normal warranty process.
- If environmental, this is more prevalent during changes of season when the weather is more wild and variable. We commonly get a rise in fault inquiries on this topic in late Autumn and early Spring. The only way to be sure for this location is to assess performance during stable, calm weather conditions. If this is the cause, then with calmer weather the sensor stabilises its operation again.

As PIR sensors are looking for changes in heat signatures, blustery winds generate patchy air temperature fluctuations more than in Summer and Winter. The optimum range setting to compensate for all seasons is generally at halfway on that dial. This applies to all exterior sensors.

What can you do?

Firstly, reset the Range dial to halfway. To help mitigate those blustery conditions, try angling the sensor head about 20-25 degrees lower, or if you don't want to re-aim, by placing a covering strip across the top 5-8mm of the sensor lens (electrical insulation tape is a good trial for this or use the lens mask supplied with the light), both of which can assist in solving the random triggering.



Summer Feature operation for SV01P, SV02P, SV04P and SV06P systems

After installing the summer feature components and setting the DIP switch, the fFan Mode Maximum and *Heat Transfer Option functions are to be disabled.

The Fan Mode Maximum function is used to reduce or stop air supply into the ventilated spaces when the ceiling temperature rises above the set System Maximum Temperature, particularly during the warmer summer months. Alternatively, a summer feature is installed to draw cooler air from the outside when the ceiling temperature rises above the set System Maximum Temperature.

The summer feature is an automatic function, and its operation requires that the Fan Mode Maximum function be disabled. Leaving the Fan Mode Maximum function “active” (i.e. Fan Low or Fan Off) will prevent the system from switching to the summer feature as the Fan Mode Maximum function overrides the summer feature. Refer to page 19 of the Keypad Controller User Manual for steps on how to disable the Fan Mode Maximum function.

If both the summer and heat transfer features are installed, then Heat Transfer Option should be disabled as well. Refer to page 21 of the Keypad Controller User Manual for steps on how to disable the Heat Transfer option.

** if a heat transfer feature is installed*



MANROSE®

FOR UNITS PURCHASED & INSTALLED IN NEW ZEALAND ONLY – EFFECTIVE: 1 NOVEMBER, 2018

TERMS & CONDITIONS

This Warranty Covers

Manrose branded Hyper150 fan units purchased and installed in New Zealand. Simx Ltd warrants the fan against defects in components or faulty workmanship in manufacturing. The following fans and kits are covered:

FAN0085	FAN0101	FAN0102	FAN0618	FAN0619	FAN0803
FAN0804	FAN2033	FAN2034	FAN2035	FAN2036	FAN5360
FAN5370	FAN5375	FAN5376	FAN5377	FAN5899	FAN5900

Warranty Period

Items found to be defective within 7 years of the original purchase date, supplied with proof of purchase will be replaced by Simx Ltd during normal business hours without cost to the owner for the parts. In addition, direct repair labour costs are also covered up to a maximum value of \$150 with the submission of a supporting invoice.

It Is Conditional On

- The fan unit having been installed by a competent person in accordance with the appropriate installation and maintenance instructions.
- The equipment being regularly maintained in accordance with the manufacturer's maintenance instructions.

It Does Not Apply If

- The serial number of any unit has been defaced, removed or altered.
- Damage or problems resulting from the use of an accessory not supplied by Simx Ltd.
- The damage is caused by accident, misapplication, abuse, alteration or tampering.
- The damage is caused by faulty external wiring, incorrect or fluctuating power supply, or any outside electromagnetic interference.
- The damage is caused by a failure to and keep the fan clear of obstructions.
- The unit is installed in a mobile application (eg caravan, boat, crane).
- The unit is used other than for the ventilation of air for human health.
- The equipment has been re-installed at any location other than the original location.

It Does Not Cover

- Consequential damage.
- Other kit components such as ducting or grilles
- Field wiring
- Any deterioration to the casing, and electronics caused by using the unit in a corrosive environment.
- Normal servicing costs required for periodical maintenance.
- Damage caused by storm, fire, flood, vandalism, earthquake, vermin or any other outside agency.
- Cost incurred because of restricted or unsafe access to the equipment.

Maintenance

To comply with the terms of the Warranty, your fan needs to be serviced by a competent person in accordance with the relevant Installation & Maintenance instructions.

Warranty Claims

Warranty claims can be made through
<http://simx.co.nz/warranty-request>



SmartVent system now utilises both AC/EC Fan Types which are available in both 150mm and 200mm size.

EC Centrifugal FAN Type is now supplied with latest SmartVent Systems like Advance, P3. EC fan is also backward compatible* with Positive 2/positive +/- Evolve 2 systems.

**The polarity of the EC speed control connections is different between latest the systems and previous generations of systems.*

AC FAN TYPE

AC centrifugal Fan is available in both 150mm and 200mm size. These fan units are compatible with all the present positive pressure systems.

MOTOR TESTING:

Caution: It is important that the system is isolated from mains supply prior doing any electrical testing. If present, Unplug motors from Ceiling Box PCB.

Physical Inspection:

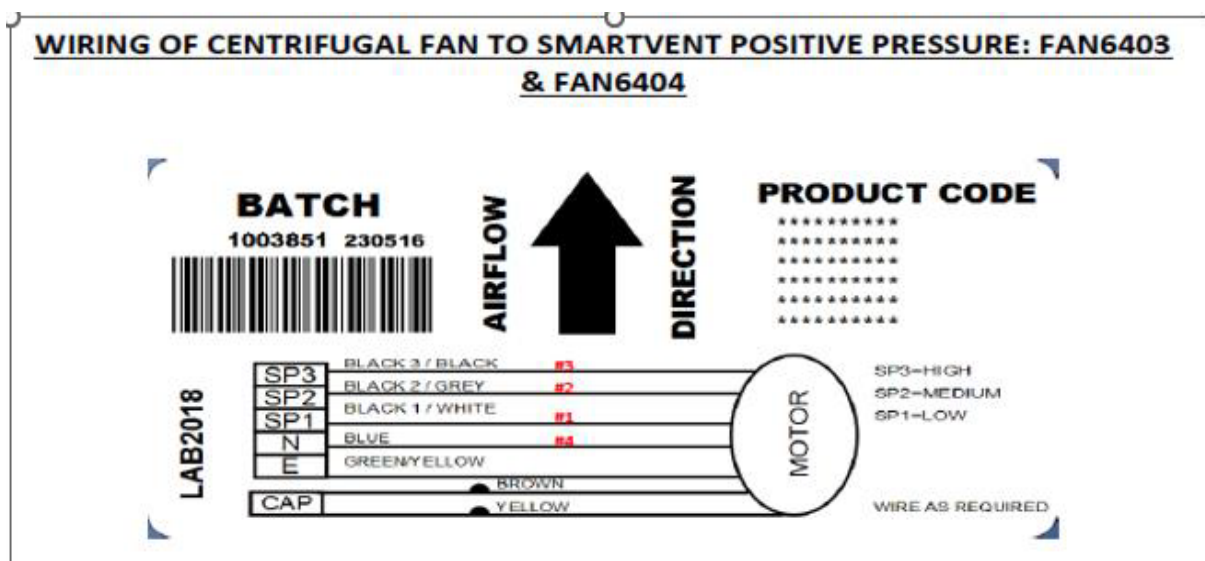
- After isolation, remove duct to access impeller and turn it to observe if it's noisy, jammed or producing any unusual noise; impeller should be rotating smoothly.

Electrical Testing:

A humming/slow moving/motionless fan motor could be due to a fault with capacitor, motor winding, cable or incorrect wiring etc.

***Capacitors need to be carefully discharge prior testing.**

- Ensure the motor is wired correctly and use a multimeter to test the motor windings resistance.

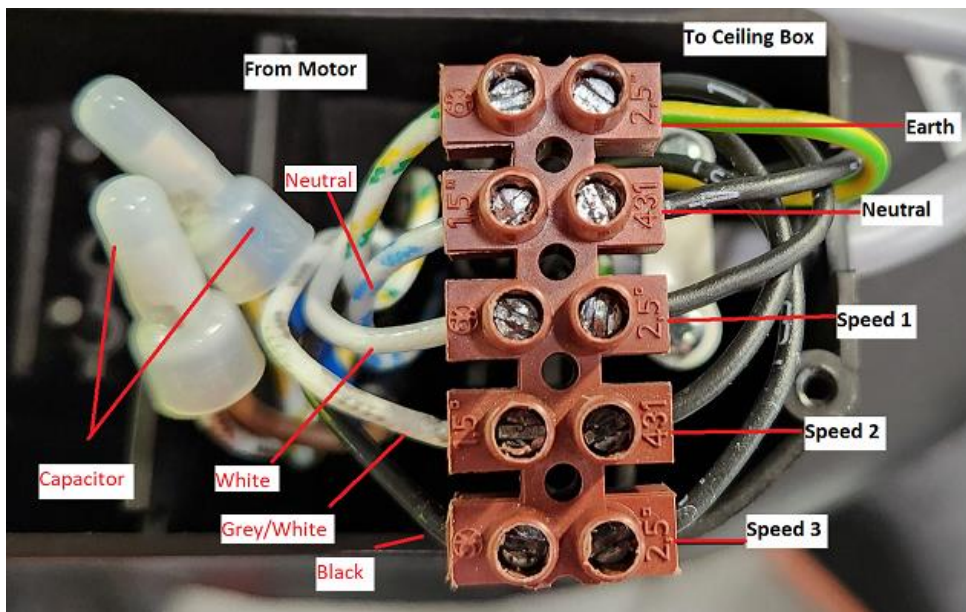


AC MOTOR Wiring Configuration on CEILING BOX END



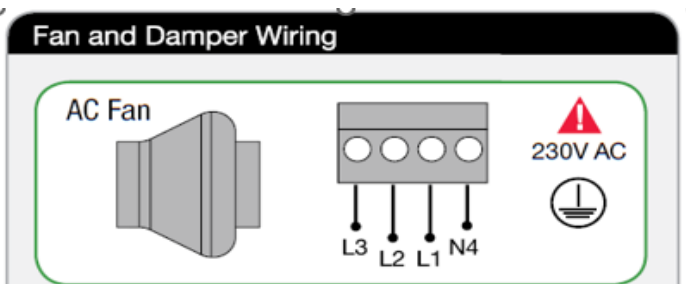


AC MOTOR CONNECTIONS WITHIN MOTOR TERMINAL BOX



Motor Winding Resistance Test

-Use Multimeter to measure resistance between each winding and neutral.



Replacement Product Codes:

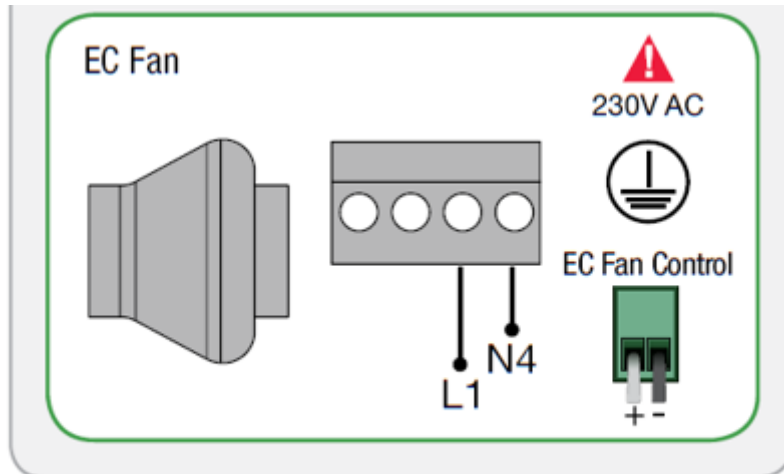
FAN7485 - 150MM SMARTVENT CENTRIFUGAL FAN COMPLETE ASSY; COMES WITH SV01, SV02

FAN7486 - 200MM SMARTVENT CENTRIF FAN COMPLETE ASSY; COMES WITH SV04, SV06



EC FAN TYPE

EC FAN types have two cables attached to it, namely mains cable to supply power and a control cable for fan speed controlling.



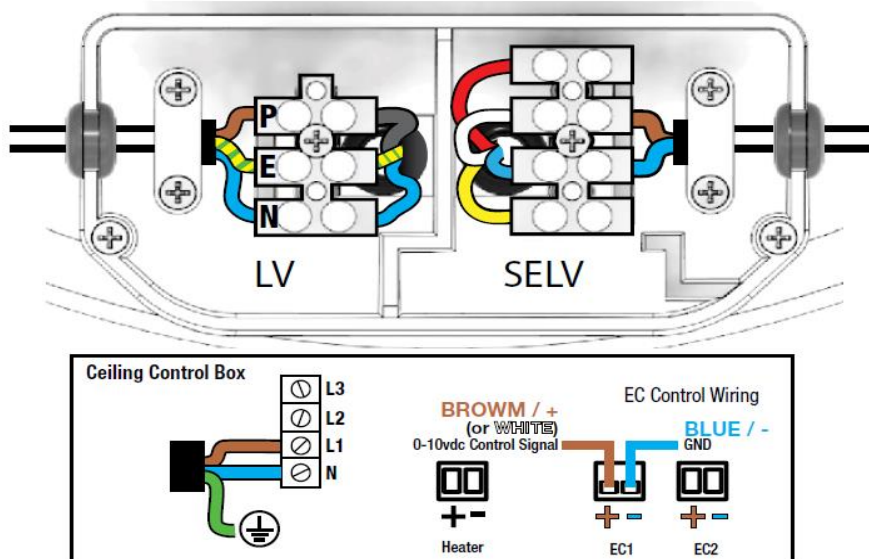
- 3 Core Mains Cable consists of Phase, Neutral, Earth spade.
- 2-Core cable for EC FAN Control, polarity sensitive.

EC Motor Assembly

EC Motor terminal box has two separate compartments for Low Voltage (LV) and Safety Extra Low Voltage (SELV) as shown in image below.

Installation

EC Fan Wiring Info



Low Voltage is nominal 230V AC supply to the motor.

SELV cable will connect to EC FAN terminal provided on Ceiling Box.



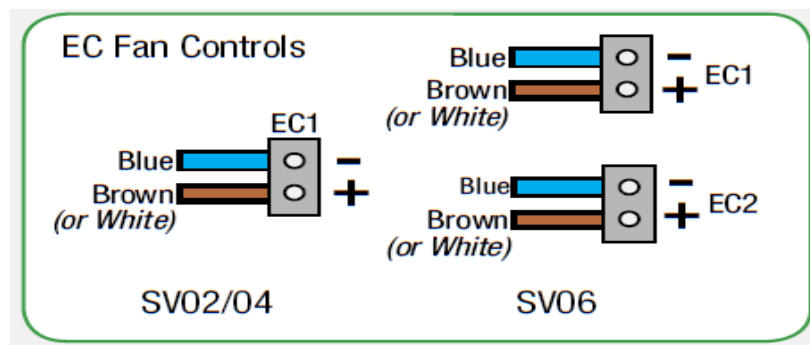
WIRING & POLARITY

EC fan is backward compatible with Positive 2/positive +/- Evolve 2 systems.

- EC FAN is supplied with Mains Power using a Junction Box.
- 2-Core Control cable will connect to EC 1 terminal on ceiling box. (as shown below)
- Ensure polarity is correct Blue-Negative and Brown/White-Positive.
- On Advance/Positive 3 motor will plug directly on AC FAN1 socket.

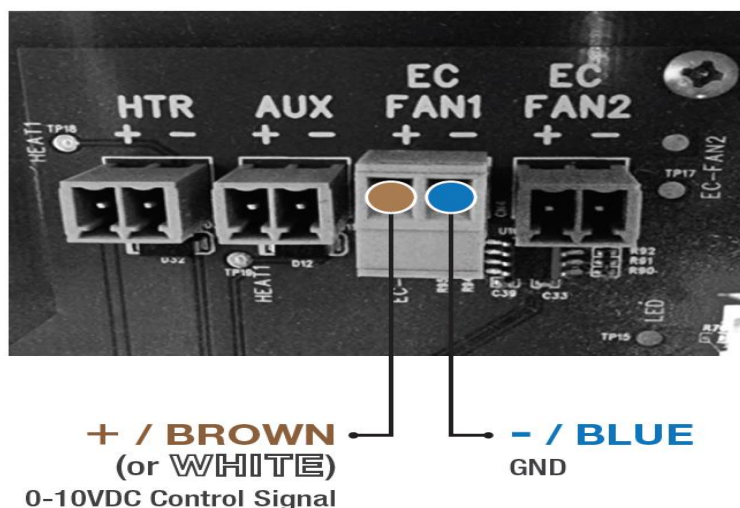
TROUBLESHOOTING

- The EC fan only works when in low speed. At any other speed the power is disconnected. The system configuration may have been set to AC fan - change fan type to EC fan in advance setting menu (setting 024=1)
- EC fan not running regardless of speed setting on TSC. Check EC fan control cable wiring polarity as shown below.

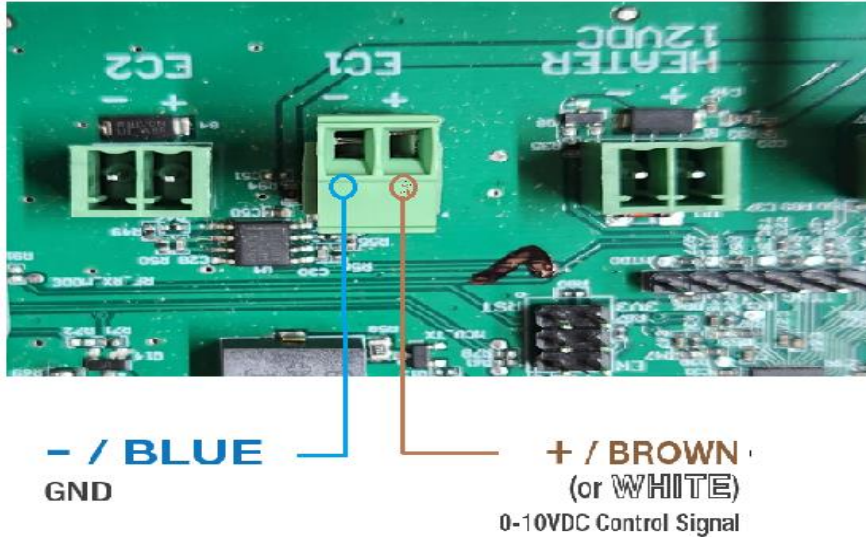


EC FAN Wiring on Evolve 2/ Positive 2/ P+ systems

EC CONTROL WIRING

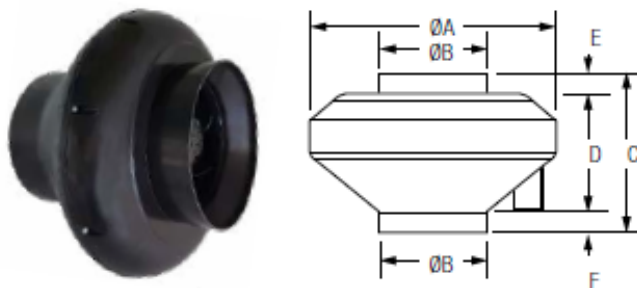


EC FAN Wiring on Advance/Positive3 systems

EC CONTROL WIRING**Replacement Product Codes:****FAN1102** - 150MM SMARTVENT EC CENTRIF FAN COMPLETE ASSY SV01/2**FAN1103** - 200MM SMARTVENT EC CENTRIF FAN COMPLETE ASSY SV04/6

Technical Specifications - Positive Pressure Systems

Specifications	SV01L+	SV01P3	SV02L+	SV02P3	SV02AD	SV04L+	SV04P3	SV04AD	SV06L+	SV06P3	SV06AD
House Size	Up to 100m ²		Up to 100m ²			Up to 280m ²			Up to 560m ²		
Max. Fans	2	4	2	4		2	4		2	4	
Fan Type	AC	EC	AC	EC		AC	EC		AC	EC	
Spigot Size	150mm		150mm			200mm			200mm		
Fan Speeds	3	Infinitely Variable	3	Infinitely Variable		3	Infinitely Variable		3	Infinitely Variable	
Max. Air Flow per Fan @ 0 Pa	152 l/s, 548m ³ /hr	175 l/s, 630m ³ /hr	152 l/s, 548m ³ /hr	175 l/s, 630m ³ /hr		282 l/s, 1014m ³ /hr	284 l/s, 1023m ³ /hr		282 l/s, 1014m ³ /hr	284 l/s, 1023m ³ /hr	
Max. Air Flow per Fan @ 150 Pa	98 l/s, 353m ³ /hr	132 l/s, 480m ³ /hr	98 l/s, 353m ³ /hr	132 l/s, 475m ³ /hr		211 l/s, 760m ³ /hr	206 l/s, 742m ³ /hr		211 l/s, 760m ³ /hr	206 l/s, 742m ³ /hr	
Max. Static Pressure per Fan	336 Pa	568 Pa	336 Pa	568 Pa		441 Pa	461 Pa		441 Pa	461 Pa	
Power Supply	220–240V AC 50 Hz		220–240V AC 50 Hz			220–240V AC 50 Hz			220–240V AC 50 Hz		
Input Power per Fan	57W	67W	57W	67W		105W	85W		105W	85W	
Current (A) per Fan	0.26A	0.29A	0.26A	0.29A		0.47A	0.7A		0.47A	0.7A	
Operating Temp	–25°C to 50°C		–25°C to 50°C			–25°C to 50°C			–25°C to 50°C		
Sound Level	47 dB(A)		47 dB(A)			53 dB(A)			53 dB(A)		



Fan Dimensions (mm)	A	B	C	D	E	F
Spigot Size – 150mm	340	150	280	170	50	60
Spigot Size – 200mm	340	200	280	170	50	60

