

PRODUCT INFORMATION & INSTALLATION GUIDE 2023

Airius Model 15
STANDARD SERIES

www.airius.co.uk

AIRIUS®
saving you energy

MODEL 15 DIMENSIONS AND PROPERTIES



Free hanging units can be angled up to 90° off vertical

UNIT SIZE	STANDARD
Weight:	4.1 kgs *(9 lbs)*
Height to Rim:	413 mm *(16.2 in)*
Total Height:	546 mm *(21.4 in)*
Diameter:	325 mm *(12.7 in)*
MOTOR	**230V @ 50 Hz**
Watts*:	17.4
RPM*:	1154
L/S*:	127 *(269 CFM)*
m^3/hr:	457
Centre Line Velocity[1]:	2.33 m/s @ 3 m
AMPS*:	0.07

*Motor data provided by motor manufacturer and is subject to change at anytime
[1]Velocity profile tested in situ

COVERAGE

	Heating	Cooling
Ceiling Height =	Up to 5.5 m *(18 ft)*	Up to 4 m *(13 ft)*
Nozzle Height =	Up to 5 m *(16 ft)*	Up to 3.5 m *(11 ft)*
Floor Area =	Up to 74 m^2 *(800 ft^2)*	Up to 36.8 m^2 *(400 ft^2)*

All data is indicative only and can change subject to application. For more accurate design please contact Airius.

NOISE LEVELS

Sound Power Level	= 51 dB(A)
Sound Pressure Level @ 3 m	= 30 dB(A)

Note: A typical free field environment over a reflecting plane. All acoustic testing conducted at 230 Volt, 50Hz by EBM- Papst Acoustic Laboratories

For additional noise level information contact Airius

MOTOR

Single Phase

PSC - Permanent Split Capacitor motor

230 Volt @ 50 Hz

COLOUR

Cool gray 2C - Off white as standard

Can be tailor painted to your colour specifications

Titan Series Upgrade - Black as standard

OPERATING TEMPERATURES

Operating Temperature = -20°C (-4°F) - 70°C (158°F)

ACCESSORIES & OPTIONS

Airius suspended ceiling kit - Allows Airius unit to be mounted in a suspended ceiling grid

On/off speed controls allow for variable output from Airius unit.

1 AMP and 5 AMP controls available

Air & Surface Purification - Used to mitigate contaminants:
- PHI kit - Photohydroionization - Advanced oxidation technology
- NPBI kit - Needlepoint BiPolar Ionization - Leading Ion technology

For horizontal installations Airius recommend the use of a cradle, a second cable or a rod attachment to support the fan nozzle

HOUSING

PC/ABS Resin - Inc. internal fixed blade stator, nozzle and cowl

5VA flame resistance rating

1.8 m steel safety leash cable (fastened to housing)

Applicable to Titan Series Upgrade - Chemical resistant ABS resin housing and stator blades with stainless steel fixings

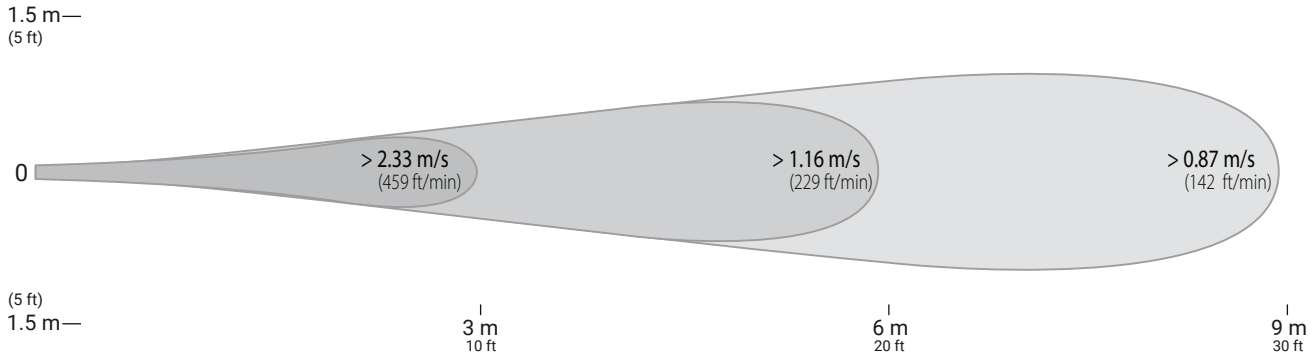
INGRESS PROTECTION

IP55 Rated

WARRANTY

5 years parts and workmanship from shipping date
120 day money back guarantee (T's & C's apply)

VELOCITY PROFILE



UNIT PLACEMENT

PREPARATION

Install electrical circuit(s) and outlet(s) in accordance with national and local electric codes.

Outlets should generally be mounted vertically unless a “twist/locking” type is being used.

Wall switch may be installed in circuit to disable power and prevent electrical hazards when servicing.

Confirm electrical continuity of Airius unit on the ground before permanently mounting in the ceiling.

MAINTENANCE

Frequency of cleaning will vary by application and environment.

You may clean the plastic housing with a damp warm cloth, using mild household detergents.

Do not use petroleum products, thinners or solvents to clean any part of the Airius unit.

If the Airius unit fails, contact manufacturer.

MATERIALS & PROPERTIES

Constructed from recyclable materials.

The outer shell, stator and fan blades are fire rated 5VA materials.

Power cord is a 1.8 m, 3 wire, 1.02 mm diameter 300VAC rated electrical cord - CE/EU compliance rated as HO5VV (PLUG NOT SUPPLIED).

Single phase, shaded pole, single speed, axial motor.

Motor is thermally protected. Shutoff is at 110°C & reset is at 90°C.

No lubrication required. Bearings are sealed.

OPERATION

Designed to operate 24 hours-a-day, 7 days-a-week to maintain air circulation/thermal equalization/humidity equalization.

Use optional speed control to fine tune RPM if needed.

INSTALLATION

Do not hard connect fans in excess of 10 kgs unless agreed with Airius prior to Installation. When attaching it is preferred if some chain or cable is used between fan and the support. However it is not imperative.

Hang from the ceiling, typically 300 mm (12”) - 450 mm (18”) from the roof deck to fan intake.

For cooling applications fans can be installed slightly lower. Contact Airius for design details and assistance.

The Airius unit performs best when air column from the nozzle is unimpeded to the floor.

The Airius unit should not be mounted directly in front of heat ducts, vents or any other high heat source.

Use professionally installed hardware, capable of supporting a minimum of five times the weight of the fan unit.

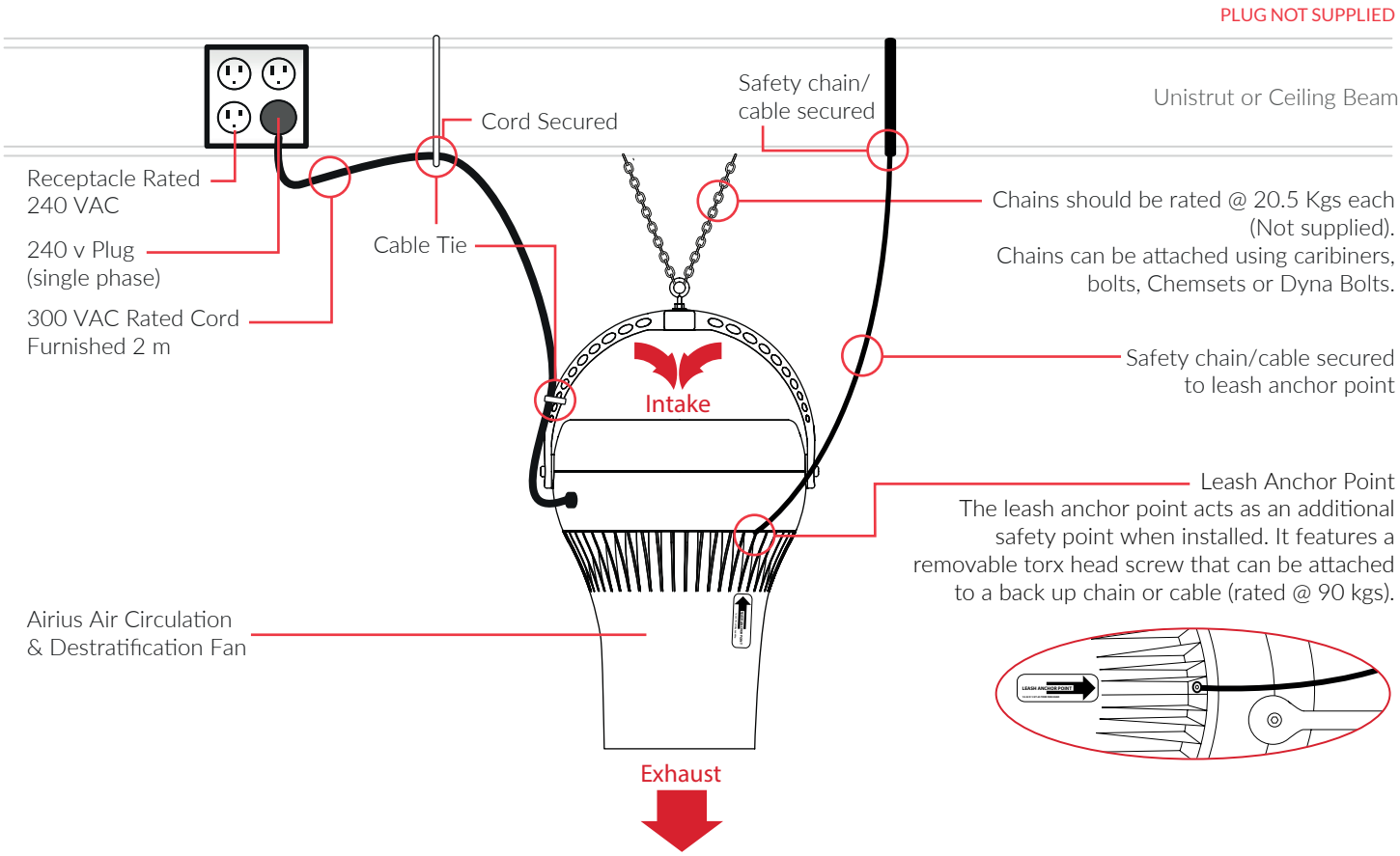
Hardware to hang the unit includes but is not restricted to: Hooks, chains, cables, carabiners, bridle rings, beam clamps and bolts.

Density of the placement is directly related to the effectiveness, performance and savings.

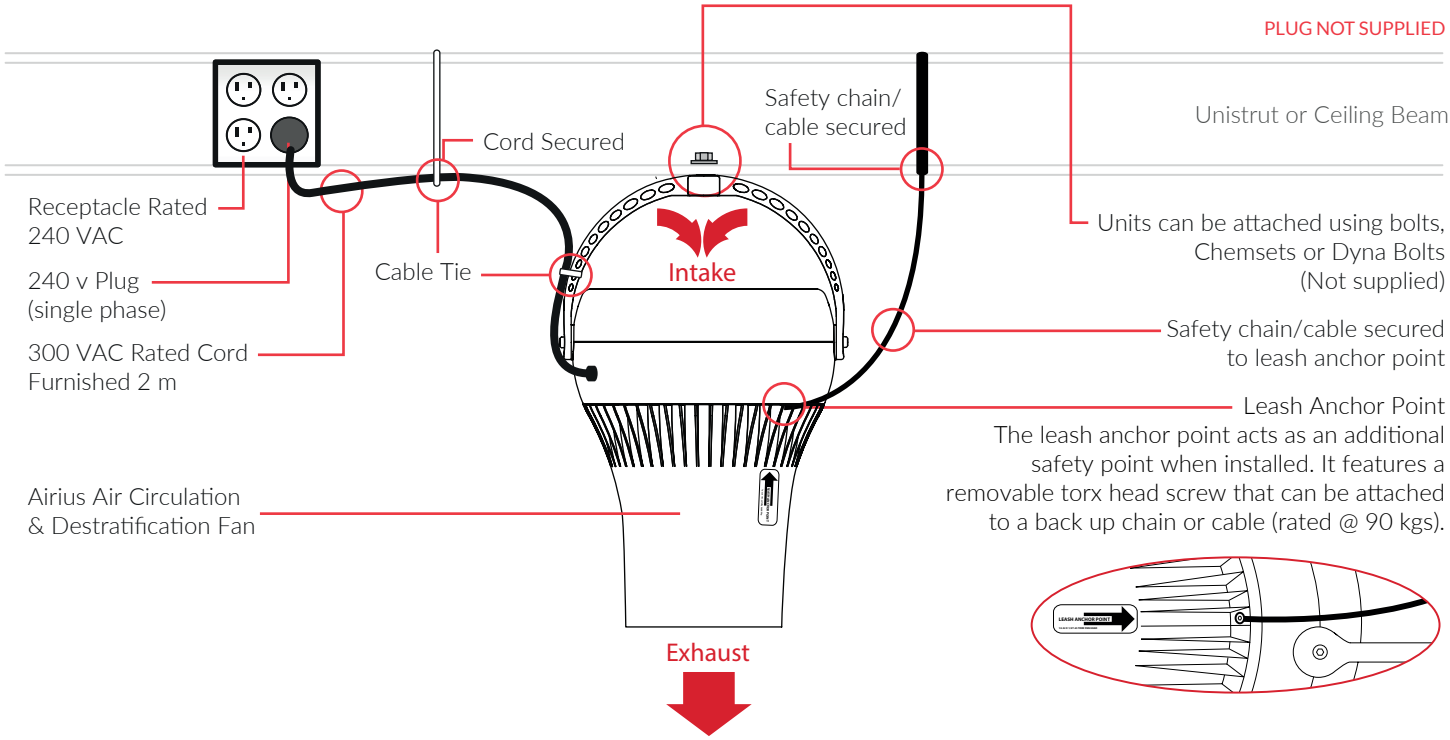
Mount out of reach from people and animals.

Floor plans, mezzanines, office locations, machinery, people placement, plumbing, lighting, duct work, electrical systems, natural light/air systems, cranes, doors, windows, ventilation and fire suppression systems are all factors in properly locating the Airius system within the ceiling.

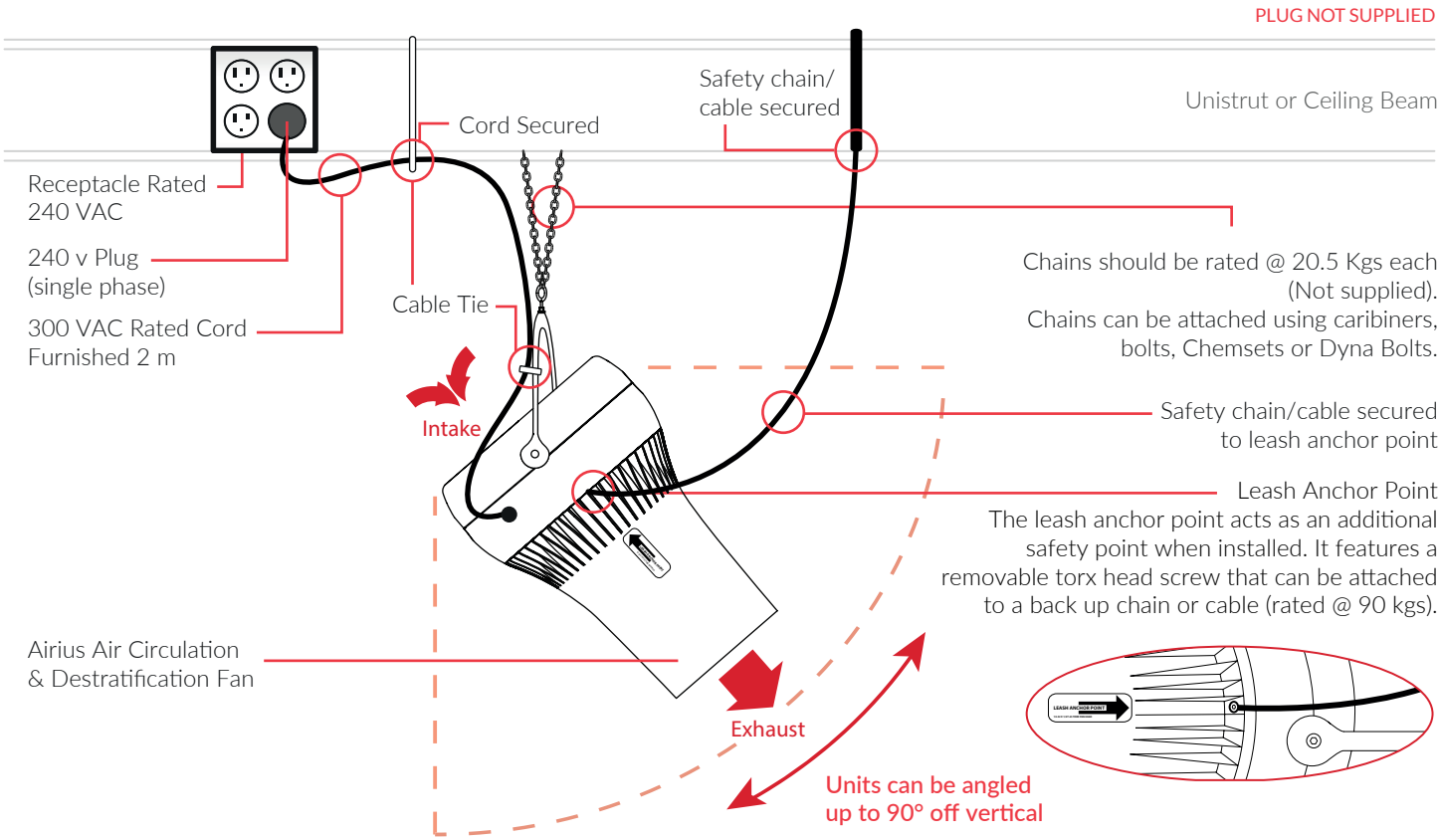
CHAIN HUNG (STRAIGHT)



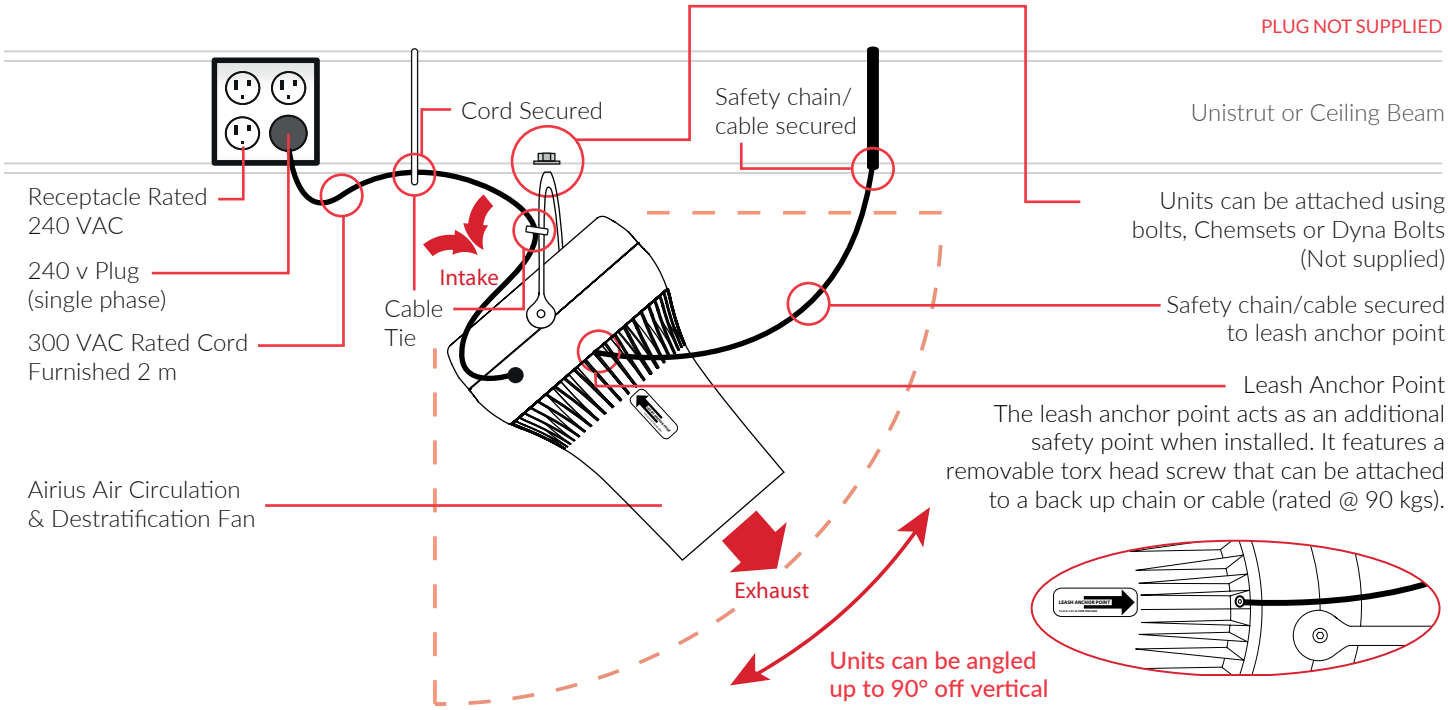
CEILING FIXED (STRAIGHT)



CHAIN HUNG (ANGLED)



CEILING HUNG (ANGLED)



AIRIUS SPEED CONTROLLER 1 AMP



Airius Model	10/S3	15/S2	25/S1	45/PS-4	Onyx PS-4	50/PS-4	60/PS-4	G400/ PS-4
No. of Units	14	11	7	4	3	3	1	1

MOUNTING

The controllers are to be mounted on a smooth surface. Connect voltage supply, motor(s) and earth as shown in the scheme with cables of the proper diameter. On the mains side, a safety switch with recommend pre-fuses has to be installed.

TRANSPORT AND STOCK KEEPING

Avoid shocks and extreme conditions, stock in original packaging.

WARRANTY

Two years from delivery date against defects in manufacturing. Any modifications or alterations to the product relieve the manufacturer of all responsibility. The manufacturer bears no responsibility for any misprints or mistakes in this data, and modifications or improvements to the product can be made at any time after date of publication.

TECHNICAL DATA

Voltage: 230Vac – 50/60Hz
Weight: 1 kg
IP Rating: IP54

	MAX AMPS	FUSE
STR-1-10L10	1.0	FT-1.25 A

Enclosure: Plastic R-ABS, UL94-V0, grey RAL 7035 or sheet steel (RAL 7032, polyester powder coating).

Recommended prim. Fuse: ca 1,5 x trafo.
Max ambient temperature: 35°C

These transformer speed controllers are based on the principle of voltage control with auto-transformers. They are applicable to voltage-controllable motors (230V – 50/60Hz) to control the speed (of fans, pumps etc.). When choosing a controller it is important to know the current intensity consumption on the taps.

MAINTENANCE

In normal conditions the controllers are maintenance-free. If soiled clean with dry or dampish cloth. In case of heavy pollution clean with a non-aggressive product. In these circumstances the controller should be disconnected from the mains. Pay attention that no fluids enter the controller. Only reconnect the controller to the mains when it is completely dry.

MOTOR PROTECTION

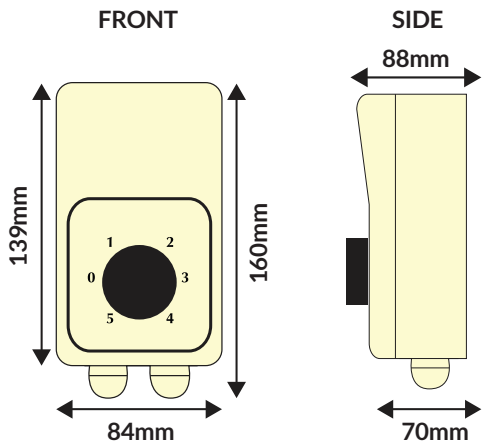
It is always recommended to install a proper motor protection device.

All works may only be carried out by skilled personnel following the local regulations and AFTER the controller is completely separated from the mains. Replace fuse only with same type and rating.

According to the low voltage directive: 2006/95/EC/
The EMC directive: 2004/108/EC

AIRIUS SPEED CONTROLLER 1 AMP

DIMENSIONS

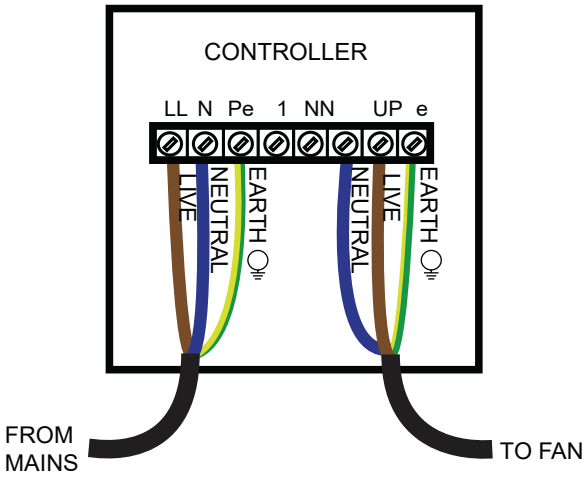


SPEED CONTROLLER COMPONENTS

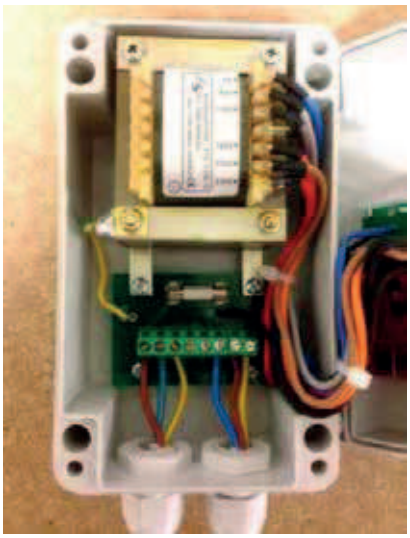




WIRING DIAGRAM



To install with thermostat fit thermostat switch in line on the live wire.



When wiring is complete controller should appear as above.

PLEASE NOTE: THIS CONTROLLER MUST BE EARTHED

AIRIUS SPEED CONTROLLER 5 AMP



Airius Model	10/S3	15/S2	25/S1	45/PS-4	Onyx PS-4	50/PS-4	60/PS-4	G400/ PS-4
No. of Units	74	57	35	21	15	15	7	5

MOUNTING

The controllers are to be mounted on a smooth surface. Connect voltage supply, motor(s) and earth as shown in the scheme with cables of the proper diameter. On the mains side, a safety switch with recommend pre-fuses has to be installed.

TRANSPORT AND STOCK KEEPING

Avoid shocks and extreme conditions, stock in original packaging.

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TECHNICAL DATA

Voltage: 230Vac – 50/60Hz
Weight: 5.5 kg
IP Rating: IP54

	MAX AMPS	FUSE
STR-1-50L22	5.0	FT-8.0 A

Enclosure: Plastic R-ABS, UL94-V0, grey RAL 7035 or sheet steel (RAL 7032, polyester powder coating).

Recommended prim. Fuse: ca 1,5 x trafo.
Max ambient temperature: 35°C

These transformer speed controllers are based on the principle of voltage control with auto-transformers. They are applicable to voltage-controllable motors (230V – 50/60Hz) to control the speed (of fans, pumps etc.). When choosing a controller it is important to know the current intensity consumption on the taps.

MAINTENANCE

In normal conditions the controllers are maintenance-free. If soiled clean with dry or dampish cloth. In case of heavy pollution clean with a non-aggressive product. In these circumstances the controller should be disconnected from the mains. Pay attention that no fluids enter the controller. Only reconnect the controller to the mains when it is completely dry.

MOTOR PROTECTION

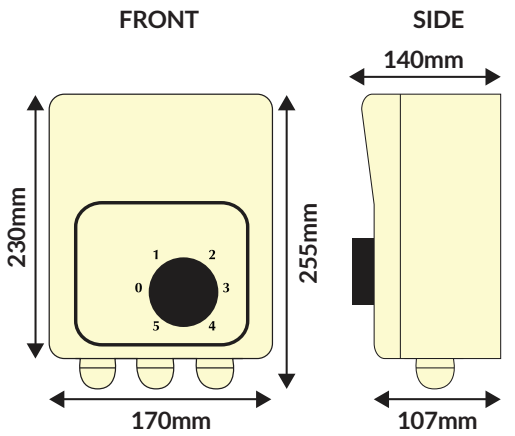
It is always recommended to install a proper motor protection device.

All works may only be carried out by skilled personnel following the local regulations and AFTER the controller is completely separated from the mains. Replace fuse only with same type and rating.

According to the low voltage directive: 2006/95/EC/
The EMC directive: 2004/108/EC

AIRIUS SPEED CONTROLLER 5 AMP

DIMENSIONS

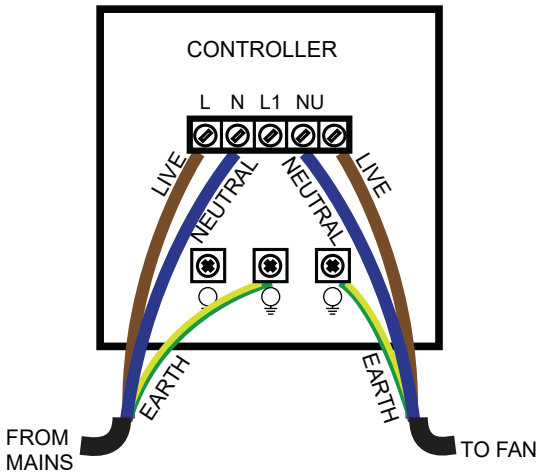


SPEED CONTROLLER COMPONENTS

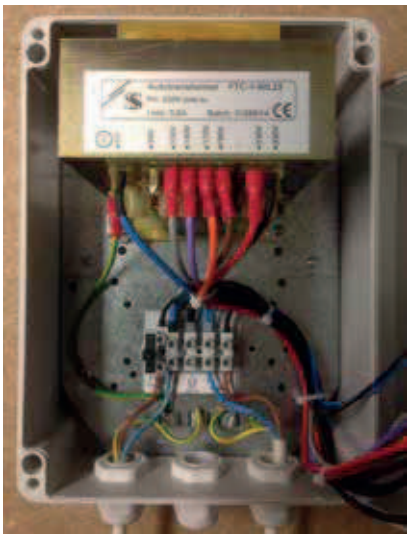




WIRING DIAGRAM



To install with thermostat fit thermostat switch in line on the live wire.



When wiring is complete controller should appear as above.

PLEASE NOTE: THIS CONTROLLER MUST BE EARTHED

AIRIUS STVS1 SMART SPEED CONTROLLER 5 AMP



Ideal for BMS & Fire System Integration

Airius Model	10/S3	15/S2	25/S1	45/PS-4	Onyx PS-4	50/PS-4	60/PS-4	G400/ PS-4
No. of Units	74	57	35	21	15	15	7	5

MOUNTING

The controllers are to be mounted on a smooth surface. Connect voltage supply, motor(s) and earth as shown in the scheme with cables of the proper diameter. On the mains side, a safety switch with recommend pre-fuses has to be installed.

TRANSPORT AND STOCK KEEPING

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WARRANTY

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KEY FEATURES

- Analogue input signal (0—10 VDC) galvanically isolated
- TK monitoring for thermal motor protection
- 5 switching levels according to the input signal
- LED status indication
- +12 VDC output (e.g. as supply for MTP-X10K potentiometer from Sentera)

TECHNICAL DATA

Voltage: 230Vac – 50/60Hz
Weight: 5.5 kg
IP Rating: IP54

	MAX AMPS	FUSE
STR-1-50L22	5.0	(5* 20 mm) T-8,0 A-H

Enclosure: Plastic R-ABS, UL94-V0, grey RAL 7035 or sheet steel (RAL 7032, polyester powder coating).

Recommended prim. Fuse: ca 1,5 x trafo.
Max ambient temperature: 35°C

The STVS1 series of transformer fan speed controllers regulate the rotational speed of single-phase voltage controllable motors in five steps by varying the output voltage according to an 0—10 VDC analogue input signal. They are equipped with autotransformer(s) and feature TK monitoring for thermal motor protection.

MAINTENANCE

In normal conditions the controllers are maintenance-free. If soiled clean with dry or dampish cloth. In case of heavy pollution clean with a non-aggressive product. In these circumstances the controller should be disconnected from the mains. Pay attention that no fluids enter the controller. Only reconnect the controller to the mains when it is completely dry.

MOTOR PROTECTION

It is always recommended to install a proper motor protection device.

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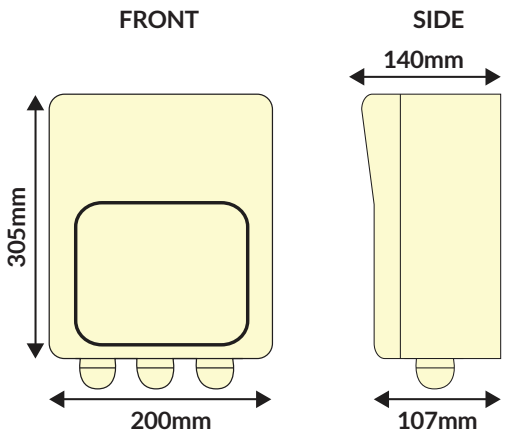
According to the low voltage directive: 2006/95/EC/
The EMC directive: 2004/108/EC

MOTOR DATA

Control signal input:	0—10 VDC
Output:	12 VDC / Imax 50 mA
Unregulated output:	230 VAC (max. 2 A)
Switching levels	Switching levels
Up:	2; 4; 6; 8; 9,5 VDC
Down:	Up level — 0,2 VDC
Max. Rel. humidity:	5—95 % rH (non-condensing)

AIRIUS STVS1 SMART SPEED CONTROLLER 5 AMP

DIMENSIONS

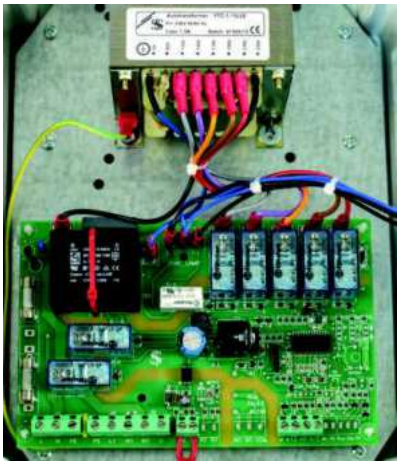


SPEED CONTROLLER COMPONENTS

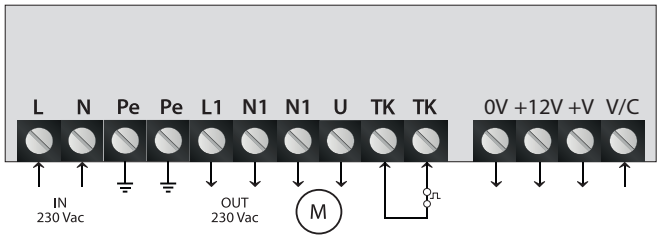




WIRING DIAGRAM



To install with thermostat fit thermostat switch in line on the live wire.



PLEASE NOTE: THIS CONTROLLER MUST BE EARTHED

VOLTAGE

0–10 VDC or external potentiometer positions (MTVor MTP)*	0	-	1	2	3	4	5
Wires		-					
							Regulated Output (VAC)
Voltages**	0	80***	110	140	170	190	230
							Unregulated Output (VAC)
L1	0	230	230	230	230	230	230

* See the operational diagram on the next page for the corresponding voltages.
** If more than 5 output voltages are available, adjust the 5 steps by changing the internal wiring.
*** Available but not connected.

WIRING & CONNECTIONS

L	Power supply, phase (230 VAC / 50–60 Hz)
N	Power supply, neutral
Pe	Earth terminal
L1	Unregulated output, line
N1	Unregulated output, neutral
U	Regulated output to motor, line
TK	Input - TK monitoring for thermal motor protection
0V	Ground
+12V	Output 12 VDC / Imax 50 mA
+V*	Digital output 12 VDC / Imax 50 mA (0 VDC = TK fault; 12 VDC = normal operation)
V/C	Input U: 0–10 VDC



AIRIUS®
saving you energy

Airius Europe, Middle East & Asia

Airius Europe Ltd
Holwell Farm, Cranborne
Dorset
BH21 5QP, UK
Tel - +44 (0) 1202 554200
Fax - +44 (0) 1202 554396
Email - info@airius.co.uk
Web - www.airius.co.uk

Airius Americas

811 South Sherman Street
Longmont
Colorado
80501 USA
Tel - (00) 1 888 247 7327
Email - Info@airiusfans.com
Web - www.airiusfans.com

Airius Oceania & S.E. Asia

P.O. Box 1812
Byron Bay
NSW
2481 AUSTRALIA
Tel - +61 (2) 6608 2736
Email - info@airius.com.au
Web - www.airius.com.au

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