

# PRODUCT INFORMATION & INSTALLATION GUIDE

**AIRIUS MODEL 630/EC TYPHOON** 

www.airius.com.au | v1.1



# PRODUCT INFORMATION & INSTALLATION GUIDE AIRIUS MODEL 630/EC TYPHOON

# **DIMENSIONS AND PROPERTIES**



UNIT SIZE	STANDARD
Weight:	40kg
Total Height:	630mm
Diameter:	790mm
MOTOR	230V @ 50Hz
Watts*:	730 (max)
RPM*:	1080
L/S*:	3335
m3/hr:	12,100
Centre Line Velocity^:	4.5 m/s @ 10m (est)
AMPS*:	3.5
Thrust*:	28 Newtons (est)

#### **COVERAGE**

	COOLING	HEATING
Ceiling Height	10m - 20m	10m - 25m
Floor Area	Up to 350m2	Up to 400m2

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

#### **MOTOR**

Single Phase

Electrically commutated, variable speed 90% efficient motor EC motor

230 Volt @ 50/60 Hz

OPERATING TEMPERATURES				
Min start temp (approx)	-20°C			
Min running temp	-20°C			
Shut off	55°C			

#### HOUSING

Hi-Grade Aircraft Alloy - Inc. internal fixed blade stator 5VA flame resistance rating

4 x 1.5 metre 4mm chains supplied plus fittings

#### WARRANTY

 $\ensuremath{\mathtt{3}}$  years full manufacturers replacement from date of despatch.

#### **NOISE LEVELS**

Sound Power Level	68 dB(A) est
Sound Pressure Level @ 7 mts	40 dB(A)
Sound Pressure Level @ 10 mts	37 dB(A)

#### **COLOUR**

Dulux Natural White Pro Texture Flat 20T 1119F. Some custom colours available (additional costs & lead time applies)

#### **ACCESSORIES & OPTIONS**

- Multiple speed control options available:
- Full 0 100% potentiometer speed control option
- Fully programmable Airius touch screen controller
- Airius PearLink WiFi Control
- Fully BMS controllable
- Bacnet Protocol option for individual fan control
- For horizontal installations it is imperative that there is a chain attached to the eyebolt supplied on the nose of the fan
- Airius strongly recommends all fans are speed controlled using one of the Airius options above

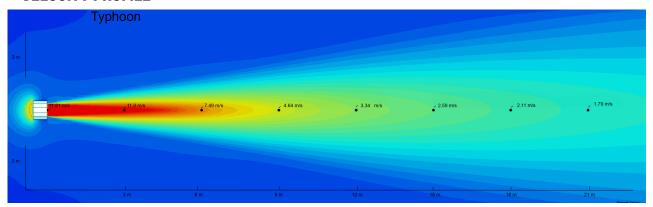
#### **INGRESS PROTECTION**

IP 54

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### **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 aluminium powder-coated housing with a non abrasive damp warm cloth and mild household detergent.

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.

Power cord is a 1.5m, 3 wire, 1.02 mm diameter 300VAC rated electrical cord - CE/EU compliance rated as HO5VV (PLUG NOT SUPPLIED).

Electrically commutated, variable speed 90% efficient motor. Motor is thermally protected. Shutoff is at 135°C & reset is at 125°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

It is recommended to use the four chains (supplied) to hang the fan vertically onto two opposite eyebolts found on the fan. If extending the chain length, the same or stronger chain must be used to extend the fan support.

The load rating of chain of the Airius supplied chain is 150kgs.

Any extra chain supplied by others must match that performance criteria. The fans can be hung down to three metre below the ceiling.

For Cooling the Airius fan should be located to suit client's requirements. Suggested locations are from just under the ceiling or closer to the floor to ensure suitable air-cooling flow.

For Heating or Conditioned Spaces the Airius fan should be securely installed as close as possible to the ceiling. For combination applications fans can be installed close to ceiling or lowered slightly. 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.

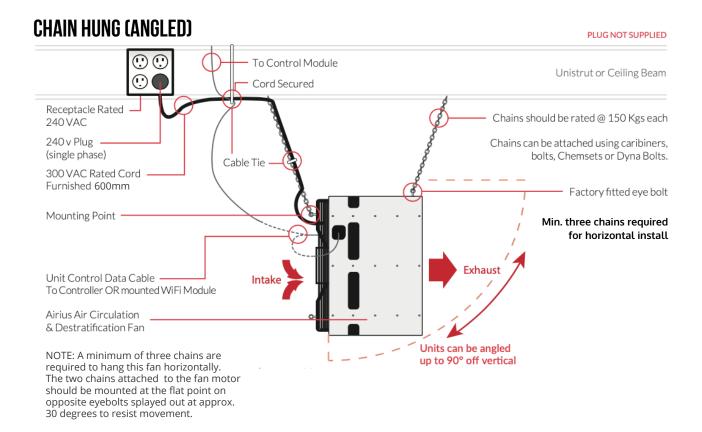
Density of the placement is directly related to the effectiveness, performance and savings.

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)** PLUG NOT SUPPLIED To Control Module Unistrut or Ceiling Beam Cord Secured Receptacle Rated Chains should be rated @ 150 Kgs each 240 VAC 240 v Plug Cable Tie Chains can be attached using caribiners, (single phase) bolts, Chemsets or Dyna Bolts. Four chains required - two shown for clarity. 300 VAC Rated Cord Furnished 1.5m Intake Mounting Point Unit Control Data Cable · **IMPORTANT:** Do not hard connect To Controller OR mounted WiFi Module these fans to the structure using any type of connector. Airius Air Circulation & Destratification Fan **CONNECTORS SUPPLIED:** -- 4 x 1.5m length rated to 150kg ea -- 5 x Mounting Eyebolts Factory fitted eye bolt **Exhaust**







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# **CONTROL WIRING CONNECTIONS**

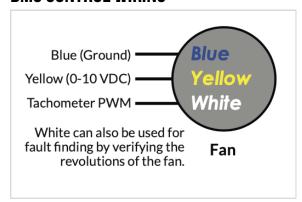
# FULL SPEED WIRING Connect: +10v 0-10v PWM SPEED CONTROLLABLE WIRING Connect: Speed Control (Potentiometer)

+10v

**NOTE:** 0-10 volt analogue signal supplied by fan motor. 3 wire low voltage cable or Cat 5 or Cat 6 cable to be used to either an Airius Potentiometer or a BMS controller (by others).

# **BMS CONTROL WIRING**

GND



#### **GENERAL NOTES**

0-10v PWM

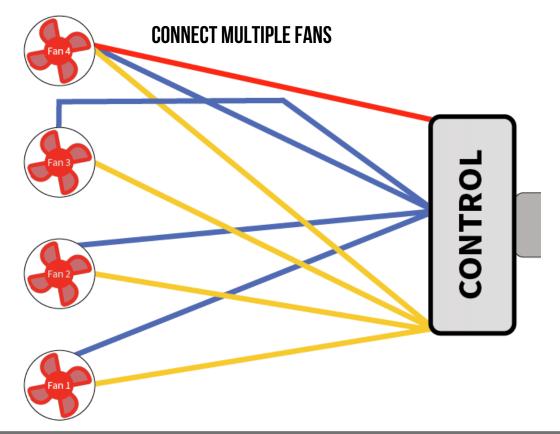
0-10 V signal allows infinitely variable open loop speed control

Connecting the red and yellow leads will allow EC fans to operate at full speed.

A single controller can be used to control multiple fans with the same speed setting.

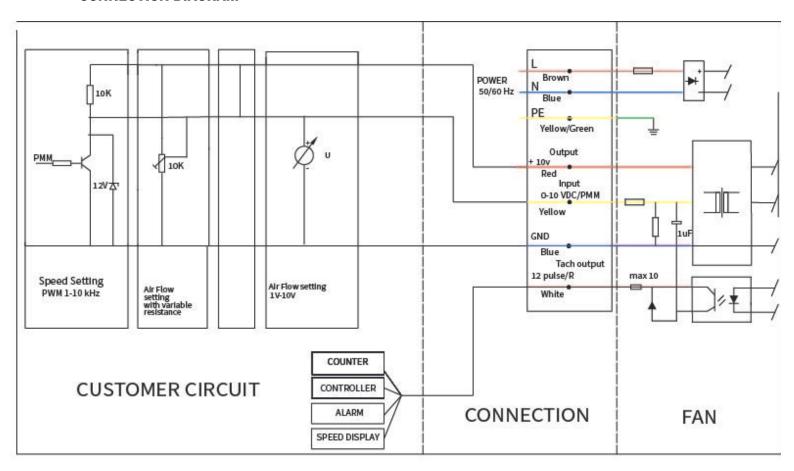
The BMS generates this voltage to send to the signal (yellow)

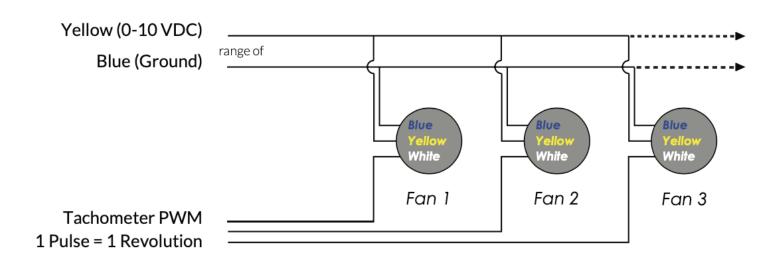
Yellow is labelled as 0-10VDC because that is the acceptable range of voltages that the fan will accept.





# **CONNECTION DIAGRAM**









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