



PRODUCT INFORMATION & INSTALLATION GUIDE 2025

Airius R20 EC Narrow Aisle
RETAIL SERIES

www.airius.com.au

AIRIUS[®]
Airflow Reinvented

MODEL 20/EC (DUCKBILL) DIMENSIONS AND PROPERTIES



UNIT SIZE

Weight:	5.2 kgs
Height to Rim:	311 mm
Total Height:	480 mm
Diameter:	366 mm

DUCKBILL

MOTOR

Watts*:	30
RPM*:	1700
L/S*:	292
m ³ /hr:	1053
Centre Line Velocity ¹ :	2.10 m/s @ 3 m
AMPS*:	0.26

230V @ 50 Hz

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

COVERAGE

Ceiling Height	= 2.5 m - 4m	= 2.5 m - 4.5m
Floor area	= CONTACT US	= CONTACT US

COOLING

HEATING

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 92% efficient motor
 German EBM Papst EC motor
 230 Volt @ 50/60 Hz

OPERATING TEMPERATURES

Min start temp (approx.)	= - 10° C
Min running temp	= - 30° C
Shut off	= 110° C
Reset	= 90° C

HOUSING

PC/ABS Resin - Inc. internal fixed blade stator
 5VA flame resistance rating
 1.8m steel safety leash cable (fastened to housing)

INGRESS PROTECTION

IP54 Rated

NOISE LEVELS

Sound Power Level	= 66 dB(A)
Sound Pressure Level @ 3 mts	= 45 dB(A)
Sound Pressure Level @ 6 mts	= 39.4 dB(A)

Note: A typical free field environment over a reflecting plane.
 All acoustic testing conducted at 230 Volt, 50Hz and undertaken at the EBM- Papst Acoustic Laboratories in Connecticut USA during August 2014

Please contact Airius for full Noise Testing Report

COLOUR

Off-White, Black or Grey available

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

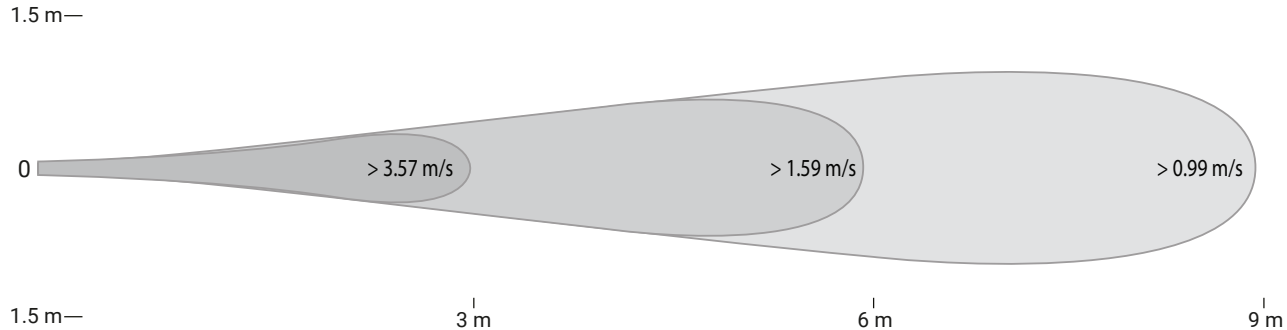
Bacnet Protocol option for individual fan control

For horizontal installations Airius recommend the use of the Airius proprietary cradle or a second cable or rod attachment to the discharge end to provide balance

WARRANTY

3 years full manufacturers replacement from date of despatch.

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

Electrically commutated, variable speed 92% efficient 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.

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.

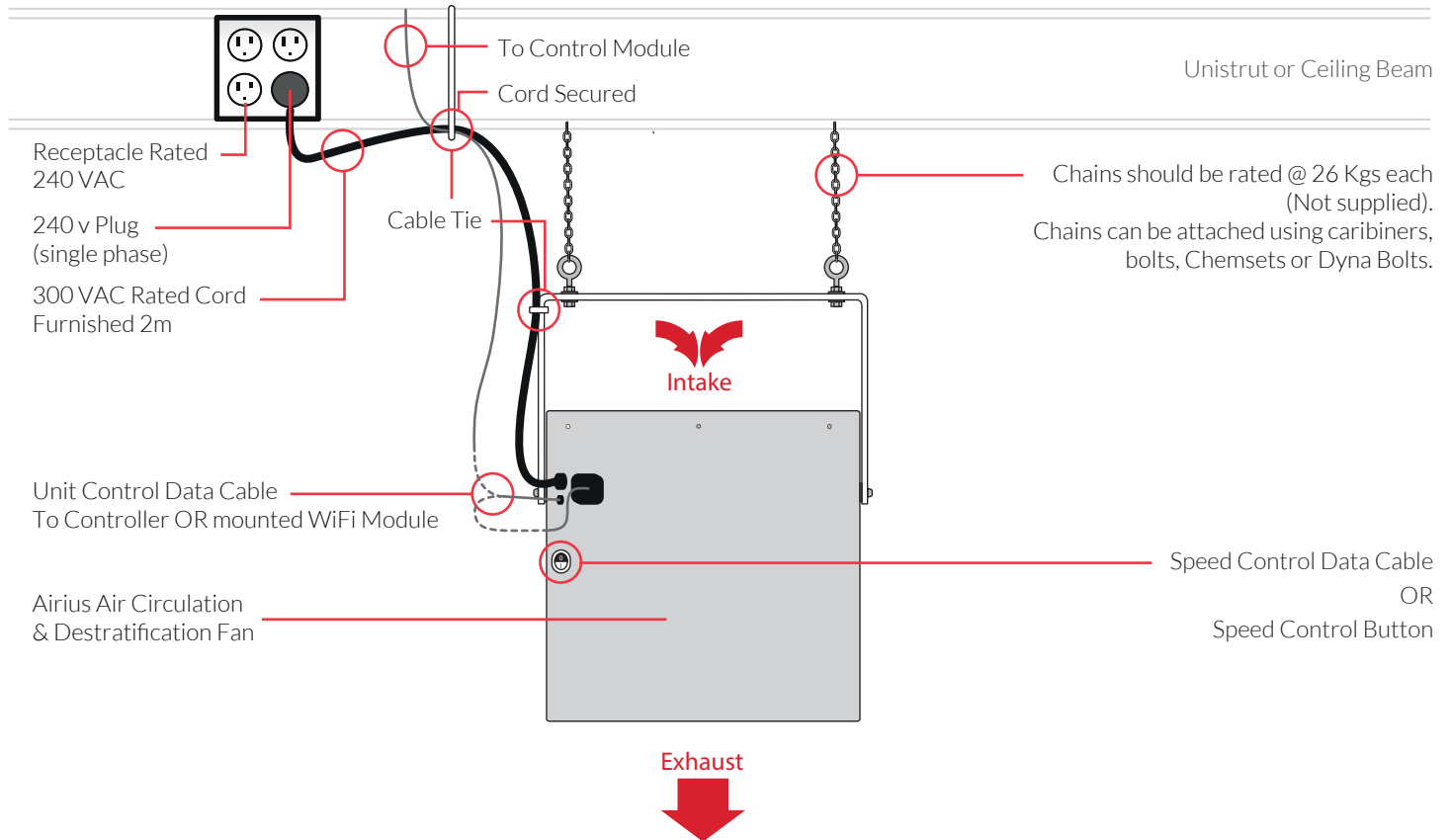
Density of the placement is directly related to the effectiveness, performance and savings.

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.

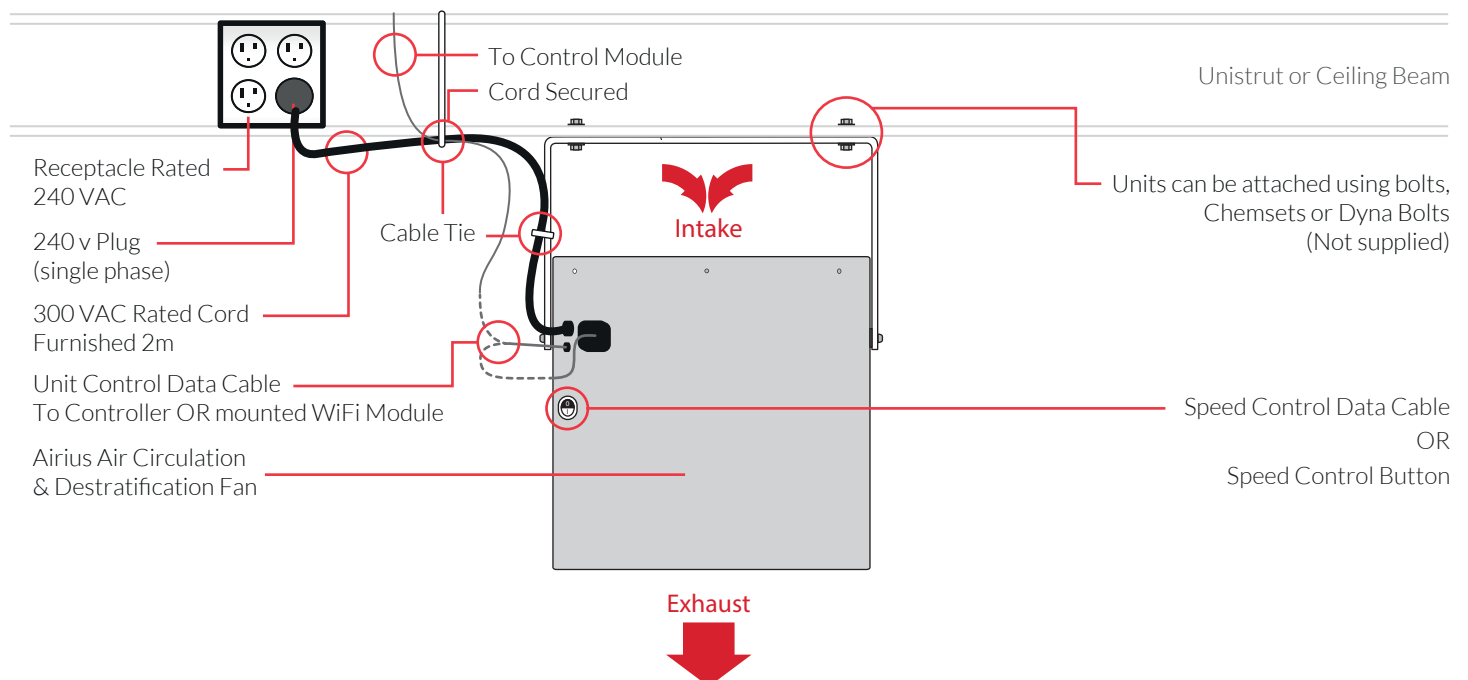
CHAIN HUNG (STRAIGHT)

PLUG NOT SUPPLIED



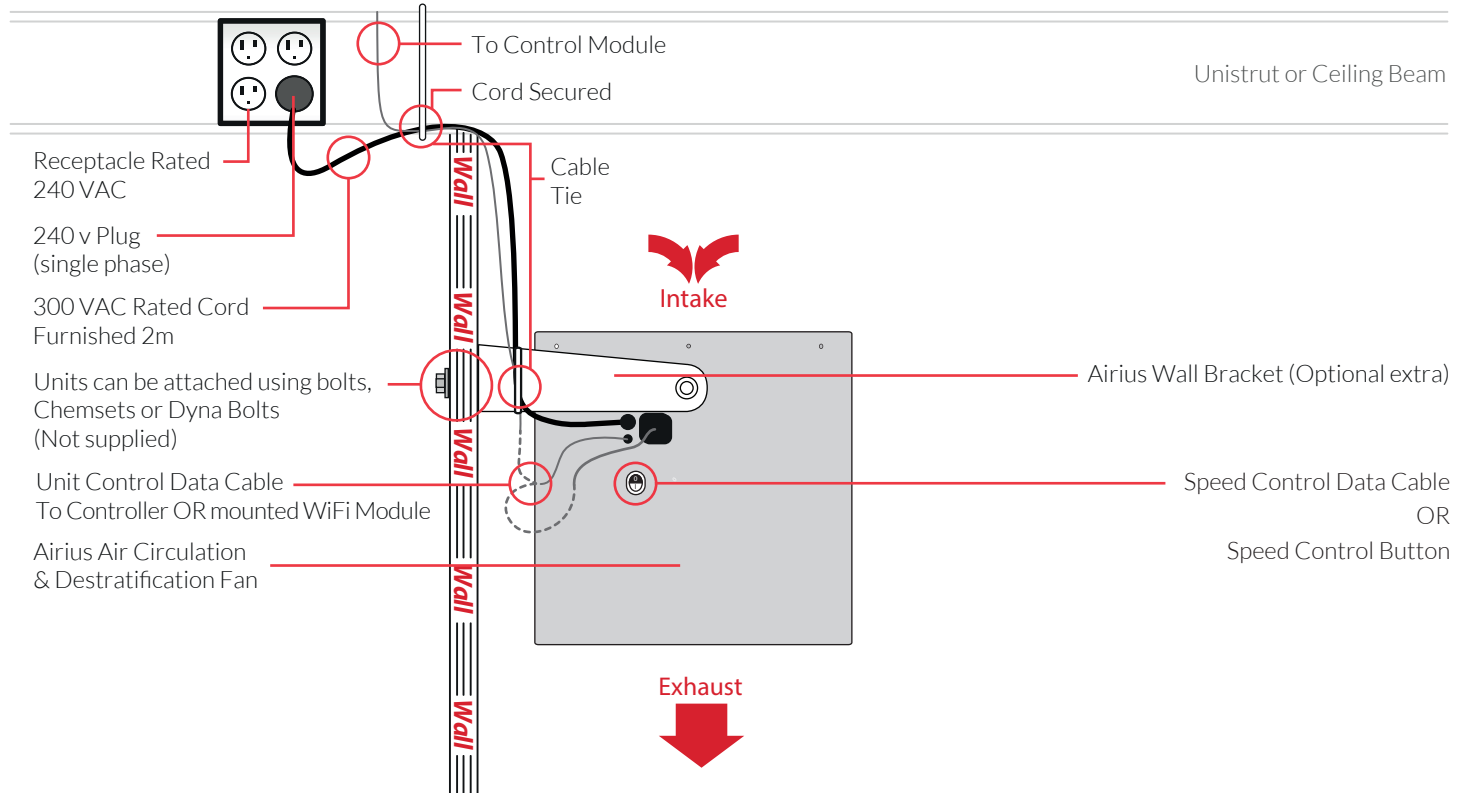
CEILING FIXED (STRAIGHT)

PLUG NOT SUPPLIED



WALL FIXED (STRAIGHT)

PLUG NOT SUPPLIED



DESTRATIFICATION FAN WALL BRACKET



Optional Accessory For Wall Installations

DESCRIPTION

Airius' powder coated, 5mm, aluminum wall bracket is used with the Air Pear Series, Designer Series 10, 15, 25, 45, or Retail Series 20EC sized fans to mount to a vertical surface. Connection detail now includes ratchet teeth to lock the fan at an angle.

MATERIAL

Powdercoated 5mm aluminum.

MOUNTING HOLE PATTERN

2 x 3 hole pattern. 70mm vertical by 140mm from centre.

DIMENSIONS

MOUNT- 10, 15 & 25

A = 302 mm
B = 305 mm
C = 96 mm

MOUNT- 45

A = 280 mm
B = 343 mm
C = 96 mm

WARRANTY

Warranty - 3 -years parts and workmanship.

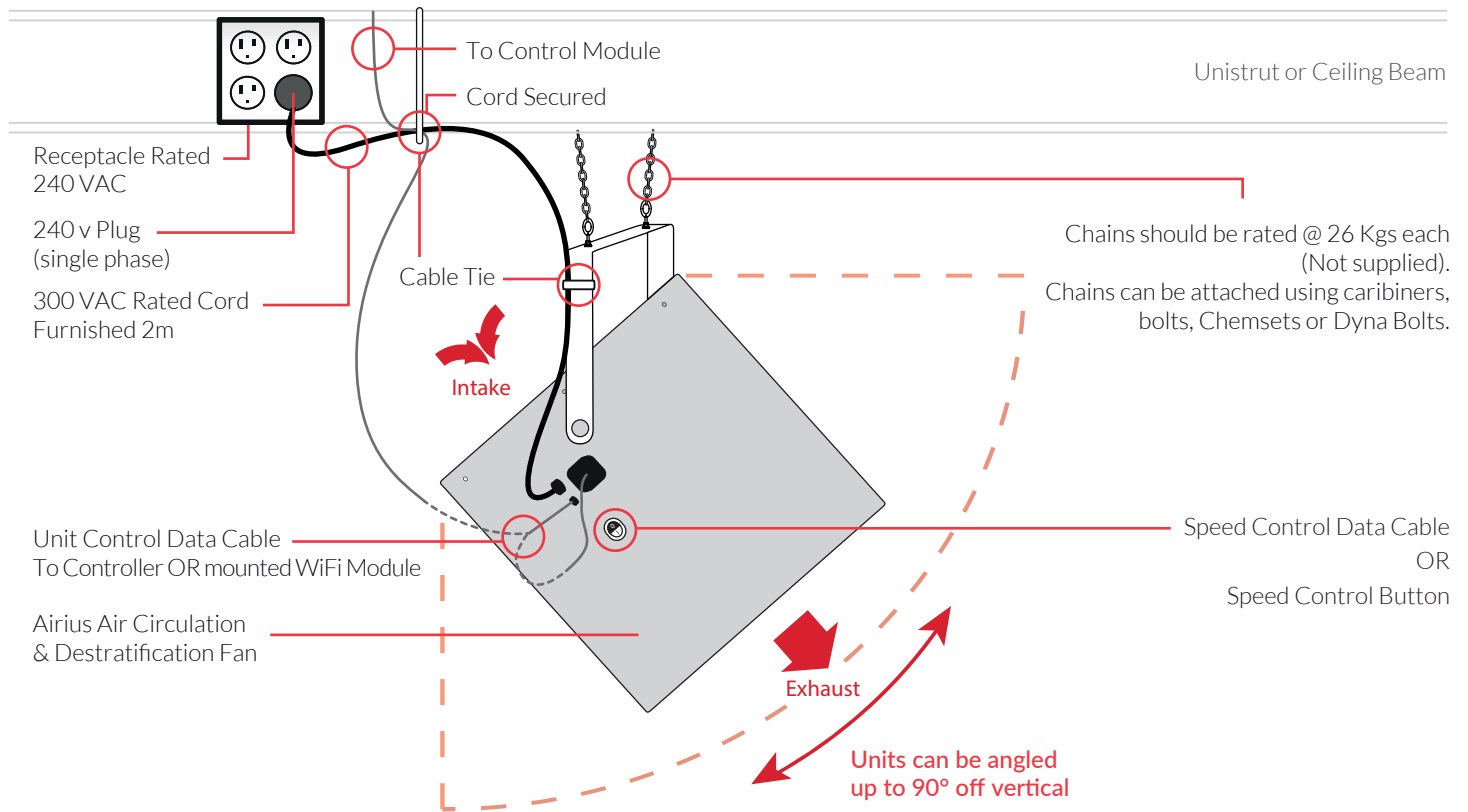
COLOUR OPTIONS

Off white
Black

Limited colour options available with a minimum order.

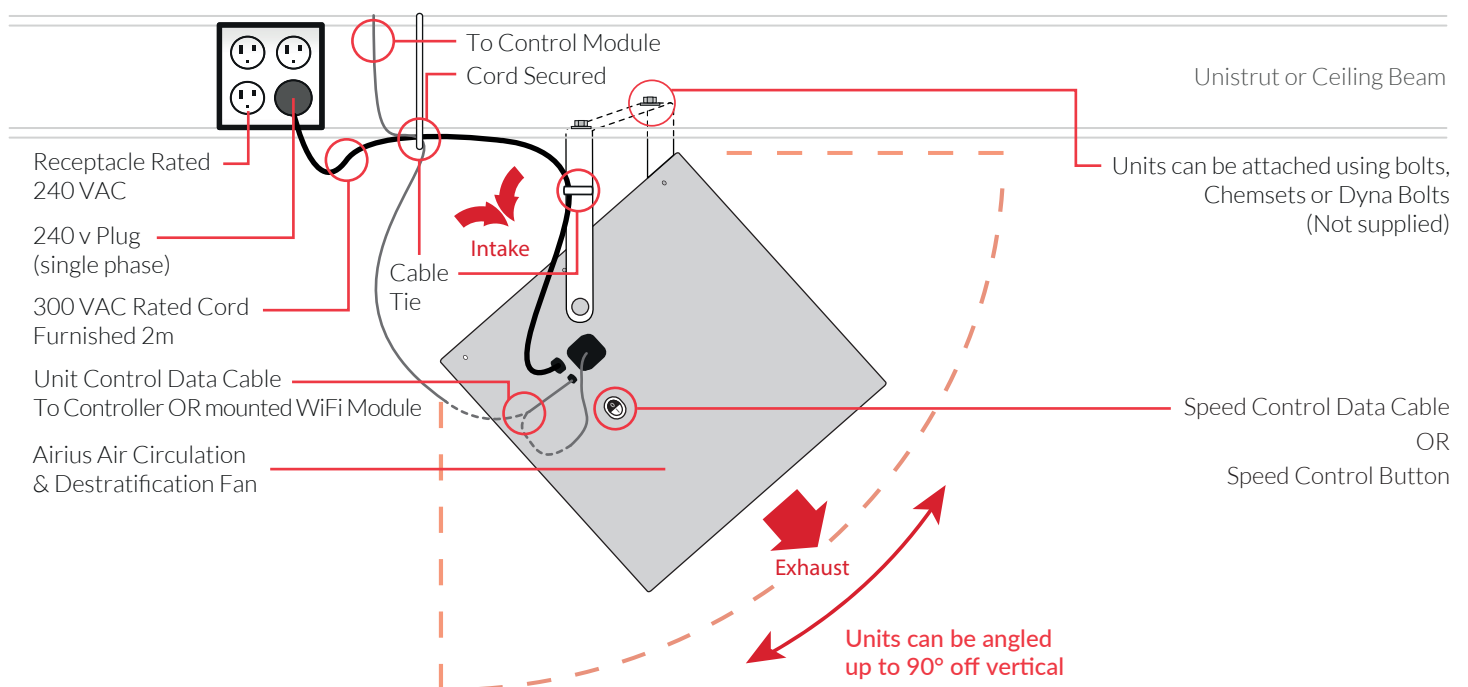
CHAIN HUNG (ANGLED)

PLUG NOT SUPPLIED



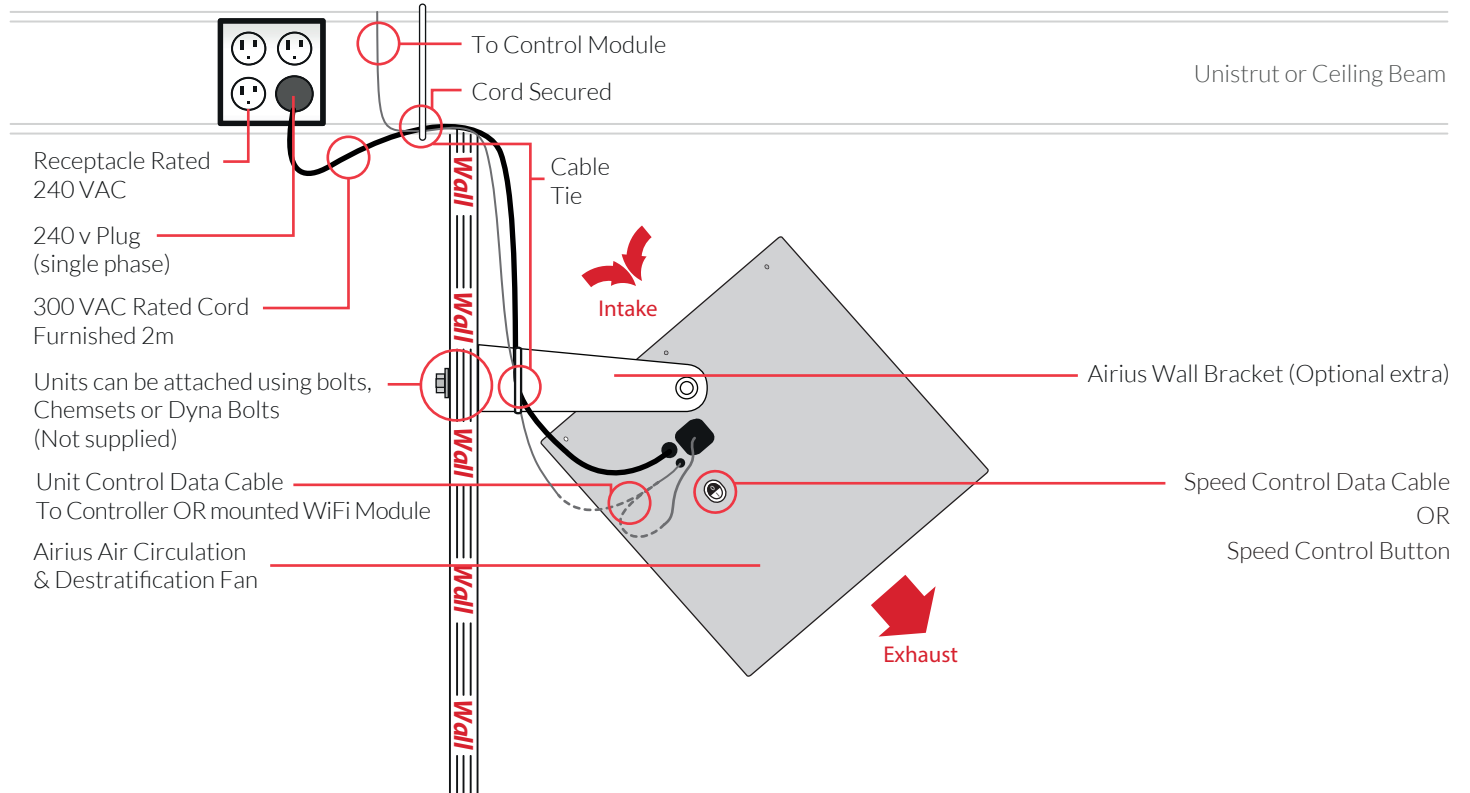
CEILING HUNG (ANGLED)

PLUG NOT SUPPLIED

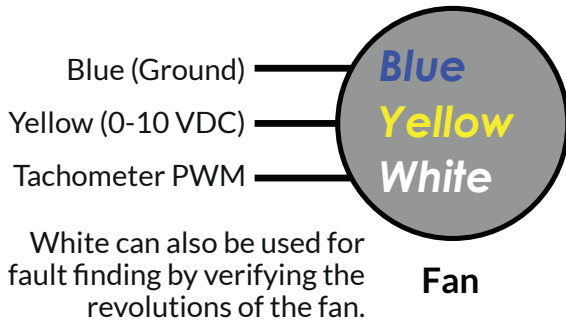


WALL FIXED (ANGLED)

PLUG NOT SUPPLIED



BMS CONTROL WIRING



GENERAL NOTES

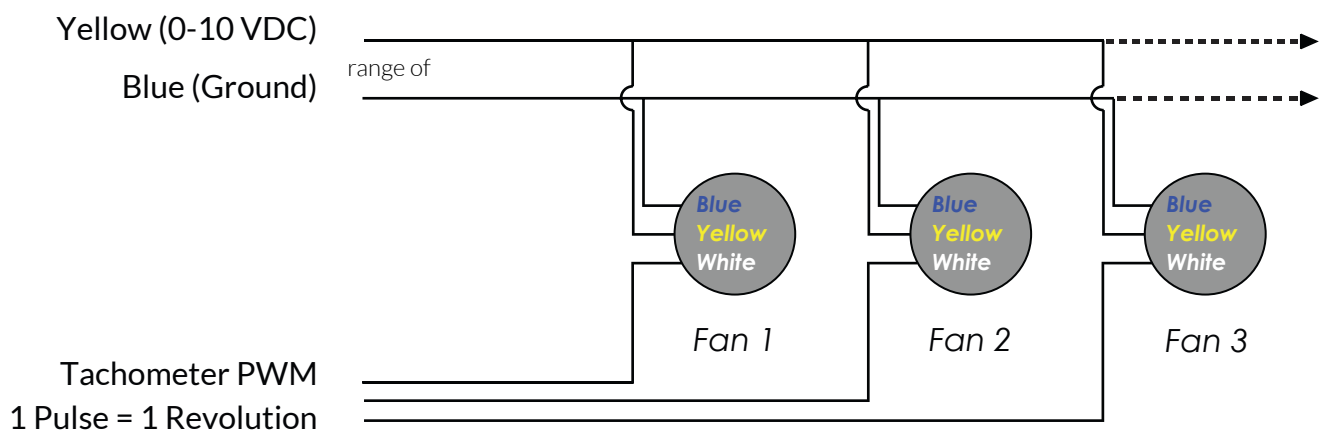
0-10 V signal allows infinitely variable open loop speed control

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



POTENTIOMETER EC (0-10V) NON-POWERED SPEED CONTROLLER



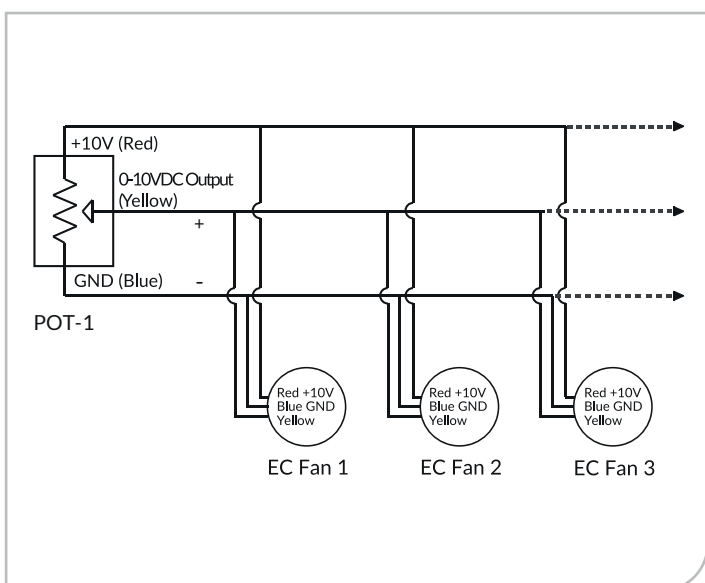
FEATURES

Input Voltage: 10VDC
Output Voltage: 0-10VDC

OPERATION

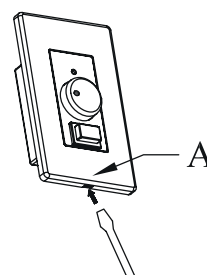
Rotating the dial will change the output voltage from 0VDC to 10VDC and change fan speed. The push button is used for on/off control.

The indicator light shows the on/off power status.



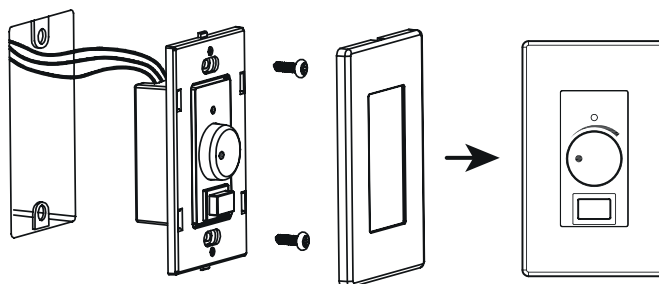
WIRING

1) Open the front panel by using a flat head screwdriver



2) Wire according to the diagram on the previous page

3) Install the front panel as shown in the following diagram



CAUTION

Electrical installations should only be carried out by qualified personnel only. Follow safety measures to avoid electric shock.





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