



PRODUCT INFORMATION & INSTALLATION GUIDE 2025

Airius Model 630 EC
EMERALD SERIES

www.airius.com.au

AIRIUS[®]
Airflow Reinvented

MODEL 630/EC DIMENSIONS AND PROPERTIES



UNIT SIZE	STANDARD
Weight:	48 kgs
Total Height:	615 mm
Diameter:	770 mm
MOTOR	230V @ 50 Hz
Watts*:	390
RPM*:	900
L/S*:	2882
m ³ /hr:	10,375
Centre Line Velocity ¹ :	4 m/s @ 10m (est)
AMPS*:	1.70
Thrust*:	25 Newtons

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

COVERAGE

	COOLING	HEATING
Ceiling Height	= 8m - 18m	= 8m - 23m
Floor area	= Up to 300m ²	= Up to 350m ²

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

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	= - 25° C
Shut off	= 135° C
Reset	= 125° C

HOUSING

Hi Grade Aircraft 3mm Aluminium including fixed internal stator
5VA flame resistance rating
3 x 3.0m x 3mm wire supports provided, 1 x 5.0m x 3mm wire provided for support. 5.0m wire is used for angled suspension. If not used for angled suspension then to be used to vertical support and cut to length

WARRANTY

3 years full manufacturers replacement from date of dispatch for fan only

NOISE LEVELS

Sound Power Level	= 65 dB(A) est
Sound Pressure Level @ 7 mts	= 48 dB(A)
Sound Pressure Level @ 10 mts	= 45 dB(A)

COLOUR

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

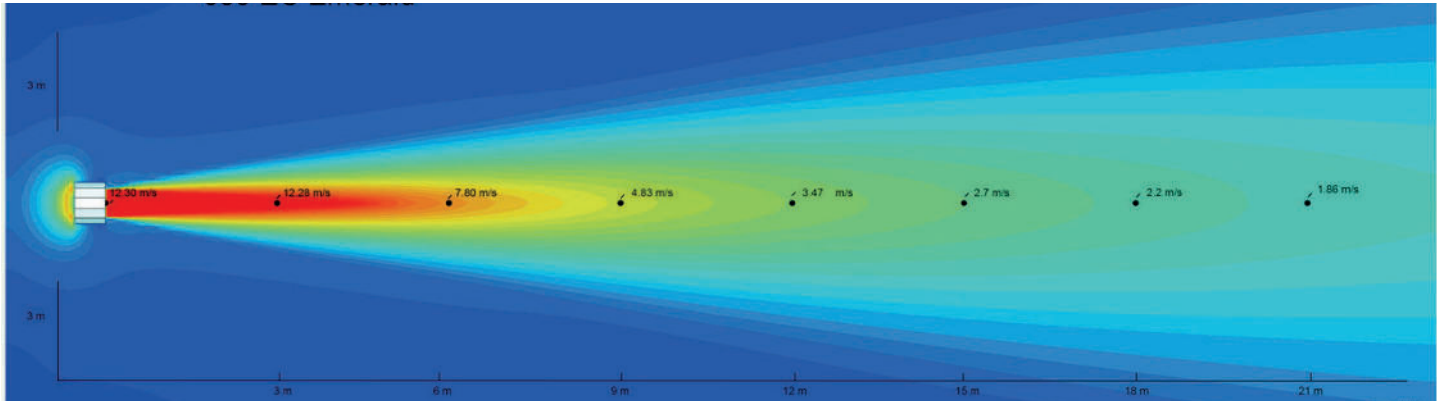
ACCESSORIES & OPTIONS

- Multiple speed control options available:
 - Full 0 - 100% potentiometer speed control option
 - Fully programmable Airius touch screen controller
- Fully BMS controllable
- Bacnet Protocol option for individual fan control
- RS 485 for modbus capable
- For horizontal installations it is imperative that there is a 3mm wire 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 55; H2 rated (H2 = Direct exposure to water from outside through rain, snow or ice formation.)
Max. relative humidity (%): 100
Corrosion requirements: Yes
Example applications: Condensers and heat exchangers, outdoors without protection against rain. Heat pumps, outdoors without protection against rain

VELOCITY PROFILE



UNIT PLACEMENT

PREPARATION

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

Outlets should generally be mounted vertically unless angled installation is required.

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 cleaning agent.

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 0.6m, 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 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

Vertical Suspension

4 x 8.0 mm eyebolts on the fan casing support the 3.0 mm wire suspension kits (supplied). The suspension kits are designed to hang the fan from the structure. Ensure installation aligns with the supplied suspension and seismic components (see page 4).

Note: All fan supports are certified to meet AS1170.4 seismic and suspension requirements. Seismic-rated fixings to the structure must be supplied by the installing contractor. If required, Airius can provide these fixings at additional cost, provided the structural fixing method is specified.

Horizontal Suspension - Wire Support

1 x 8.0 mm eyebolt is supplied for the side of the fan (toward the outlet). Fit it to the pre-drilled hole and use the 3.0 mm x 5.0 m wire to suspend the fan at the required angle.

Horizontal Suspension - Wall-Mounted Brackets

2 x prefabricated wall brackets are available (optional, extra cost) for direct wall mounting. Contact Airius for details.

For heated or conditioned spaces, mount the fan as close to the ceiling as possible, but not less than 500 mm below it. For combination heating/cooling, fans may be mounted close to or slightly below the ceiling. Contact Airius for design guidance.

Suspension kit provided for fan suspension includes: 3 x 3.0mm x 3.0m wires, 1 x 3.0 mm x 5.0 mm wire, 4 x Eurolocks, 4 x seismic tags, 1 x 8.0 mm side support eyebolt with locknut and washers.

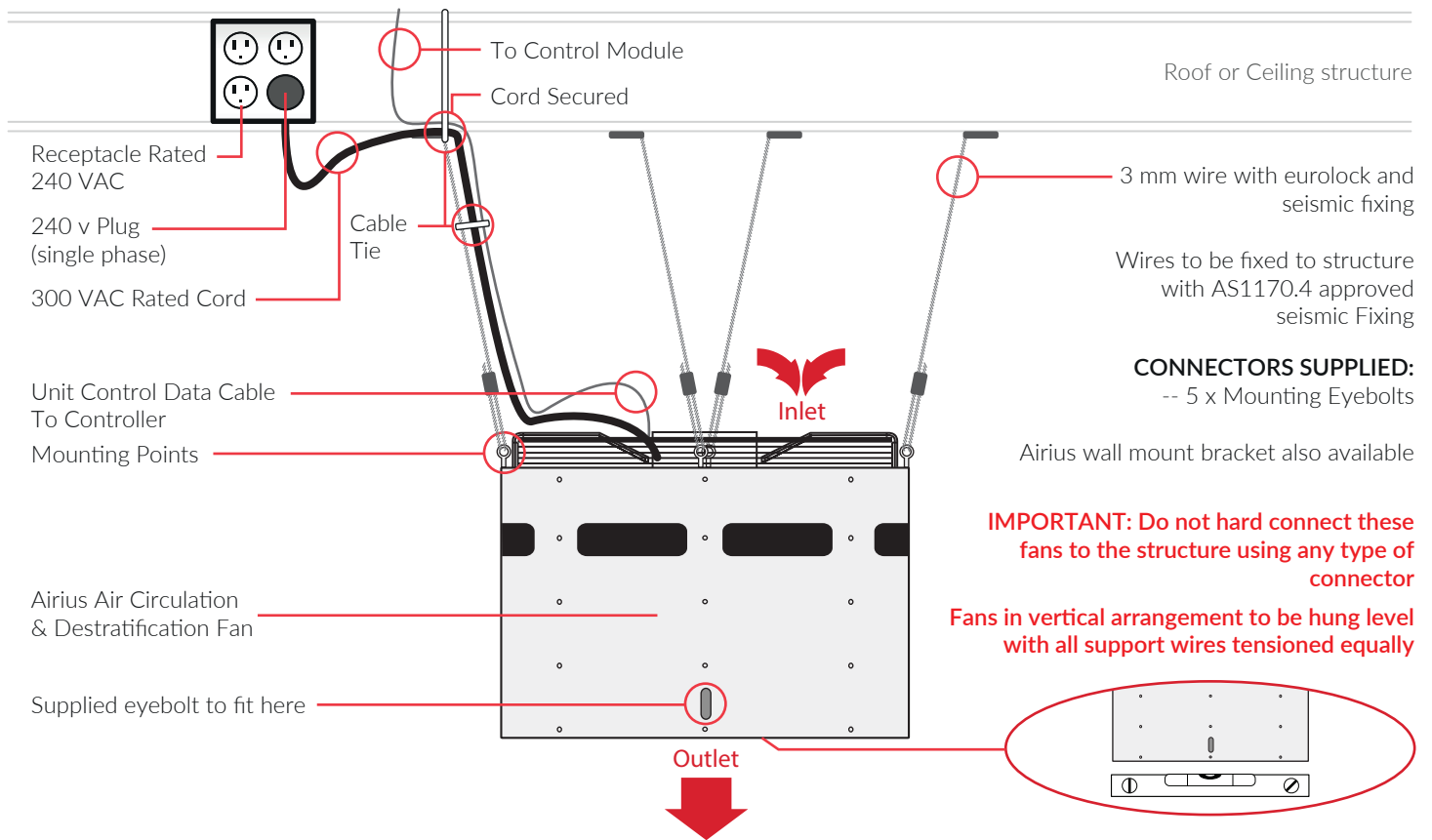
Note: The suspension kit complies with AS1170.4 pending the top-end fixing method. Each site requires specific top-end fixings, which are not supplied. Contact Airius for compliant solutions (additional charges apply).

Fan spacing directly affects performance and energy savings. Mount units out of reach of people and animals and avoid positioning directly in front of heat ducts or other high-heat sources.

When positioning, consider floor plans, mezzanines, offices, machinery, lighting, ductwork, plumbing, electrical systems, cranes, doors, windows, ventilation, and fire suppression systems. For optimal performance, ensure the airflow column from the nozzle is unobstructed to the floor.

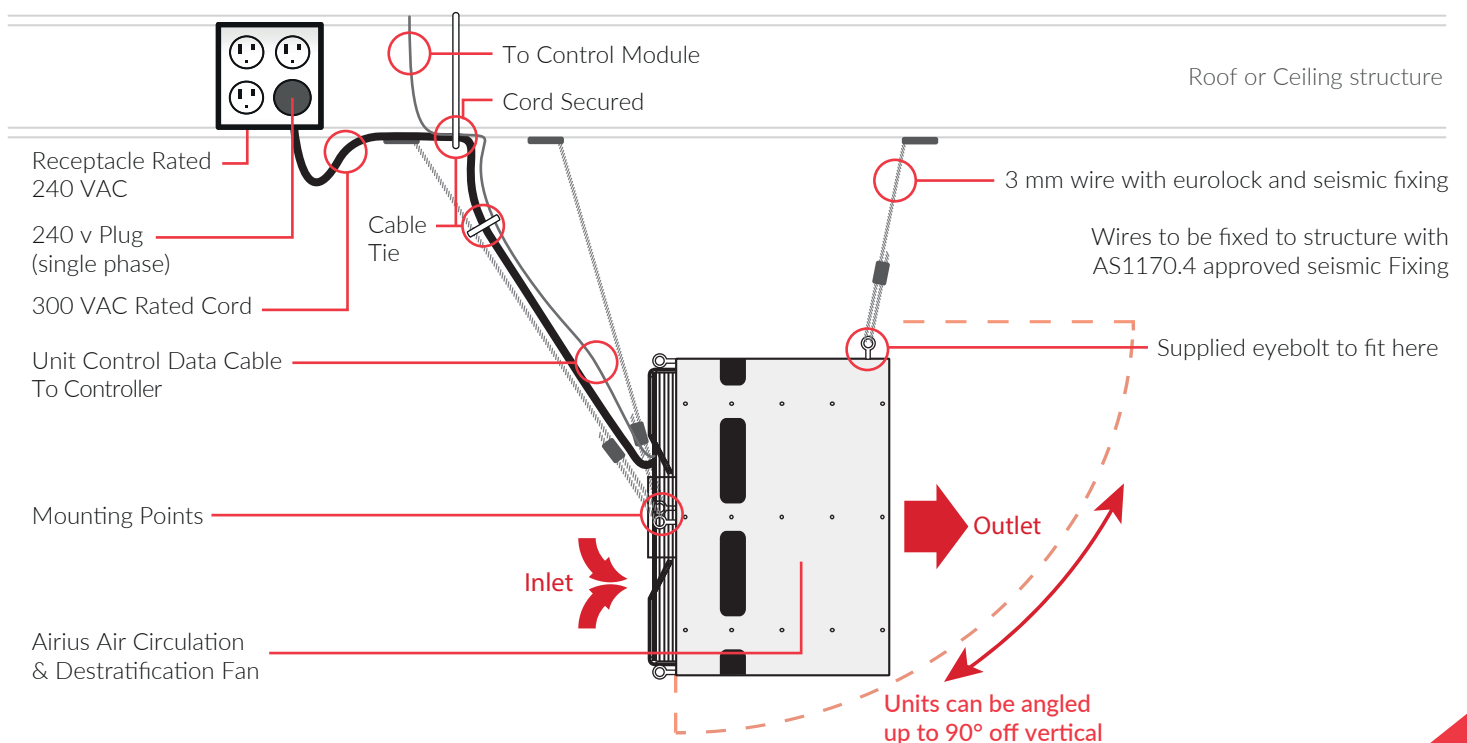
CHAIN HUNG (STRAIGHT)

PLUG NOT SUPPLIED



CHAIN HUNG (ANGLED)

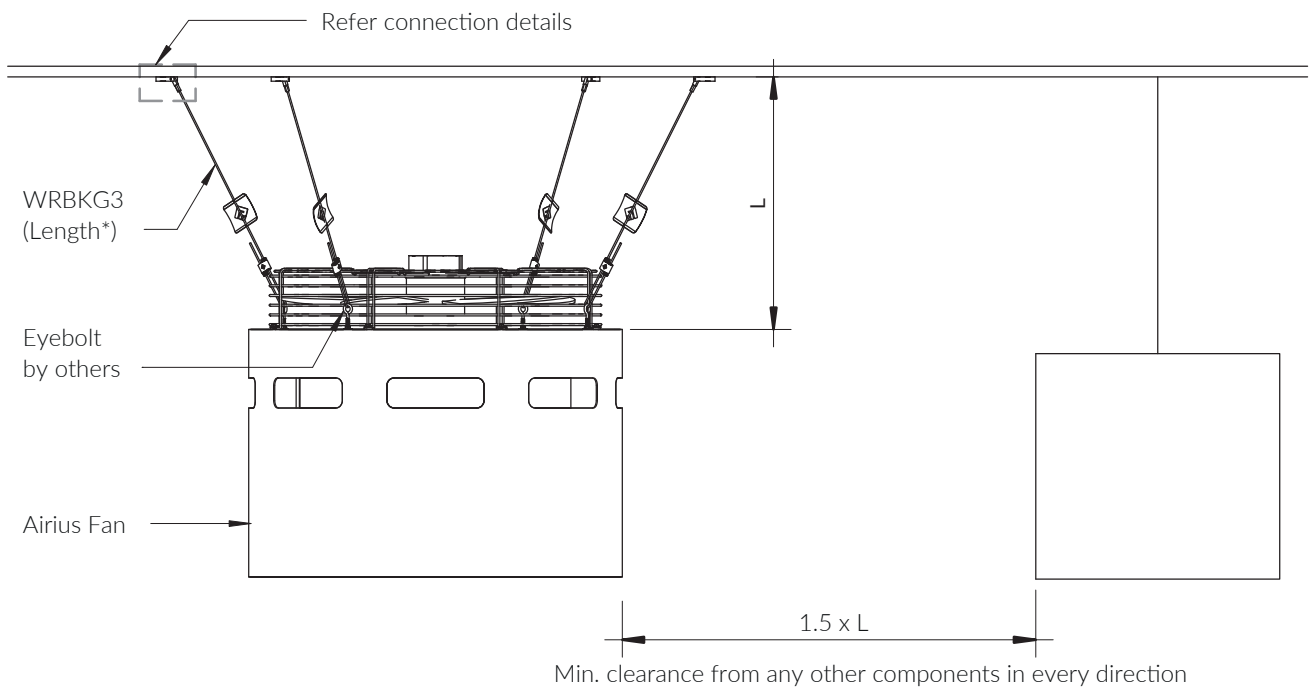
PLUG NOT SUPPLIED



ISOMETRIC VIEW (STRAIGHT)



FRONT VIEW (STRAIGHT)



Notes: Additional Seismic restraints for suspended fixtures are not required if the minimum clearance of 1.5 x L metre has been met on each side of the fan as per detail and 4 x WRBKG3 (Length*) are installed.

A. Note: L is the length of wire suspension.

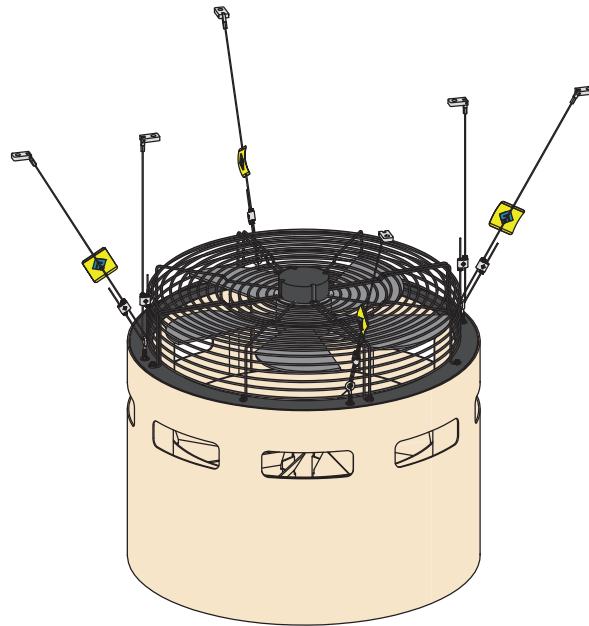
Important note: If this clearance can NOT be met, then the fans are to be seismically restrained. Refer to 'No 1.5m Clearance' installation details on page 6.

Qty	Code
4	WRBKG3 (Length*)

*Length in metres (See TDS for available lengths).

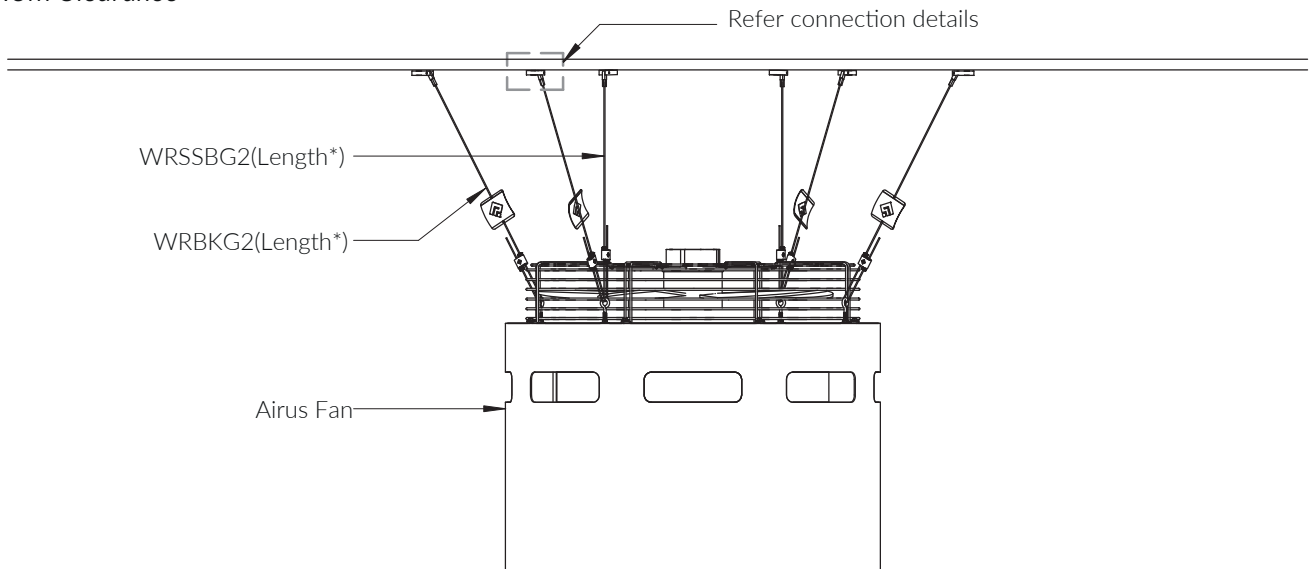
ISOMETRIC VIEW (STRAIGHT)

No 1.5m Clearance



FRONT VIEW (STRAIGHT)

No 1.5m Clearance

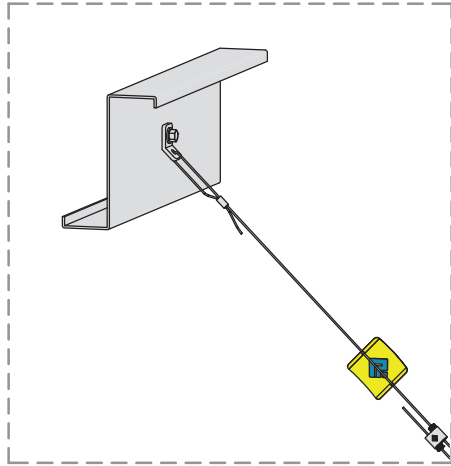


Notes:

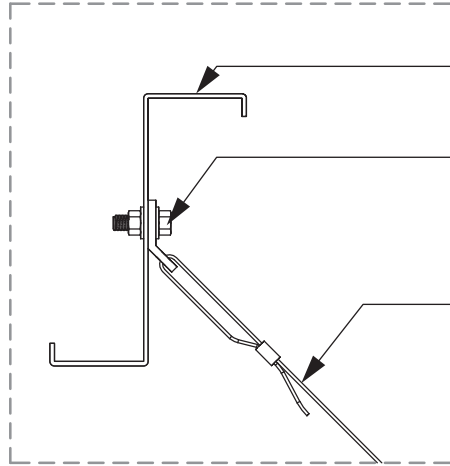
Qty	Code
4	WRBKG2 (Length*)
2	WRSSBG2 (Length*)

*Length in metres (See TDS for available lengths).

ISOMETRIC



SECTION



Purlins

1x HBFT**10(Length*) Hex Bolt
 2x WM**10 Washer
 1x HN**10 Hex Nut

Wire Rope Bracing

Notes:

1. For restraint spacing, refer to the project specific Design Statement.

*Length in millimeters (See TDS for available lengths).

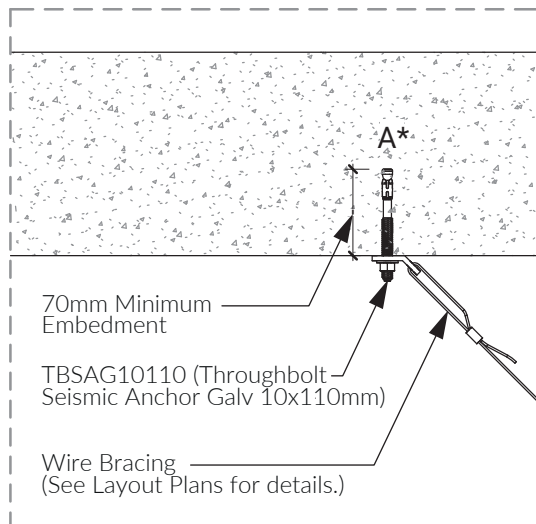
**Available in Zinc / Galv / Stainless.

2. Tags for identification purposes only.

3. Braces should be hand tightened to remove slack.

Qty	Code
1	HBFT**10
1	HN**10
2	WF**10

SECTION



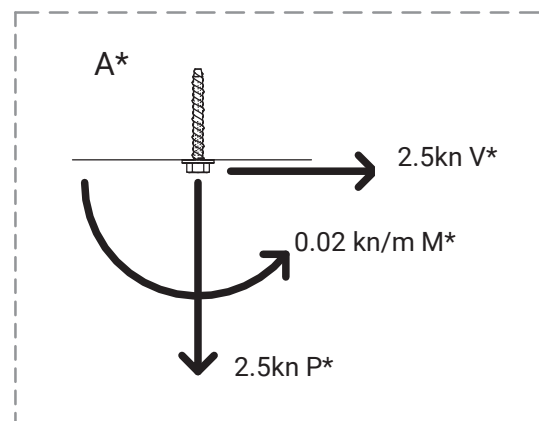
70mm Minimum Embedment

TBSAG10110 (Throughbolt Seismic Anchor Galv 10x110mm)

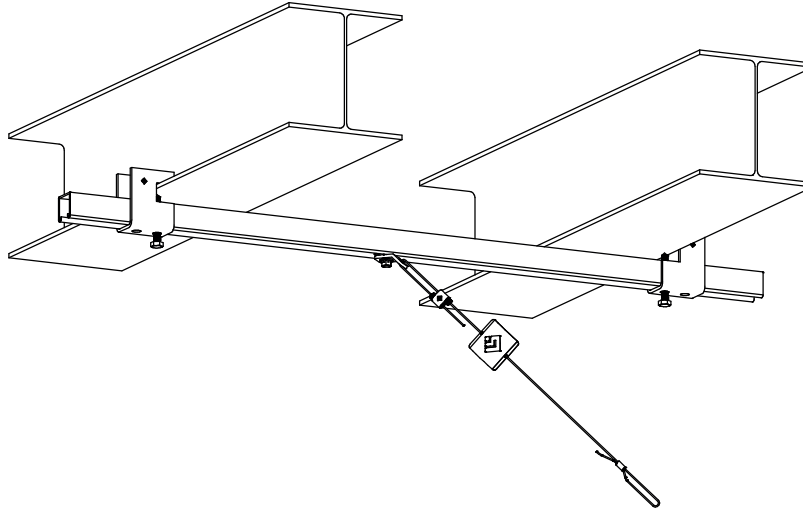
Wire Bracing (See Layout Plans for details.)

Notes:

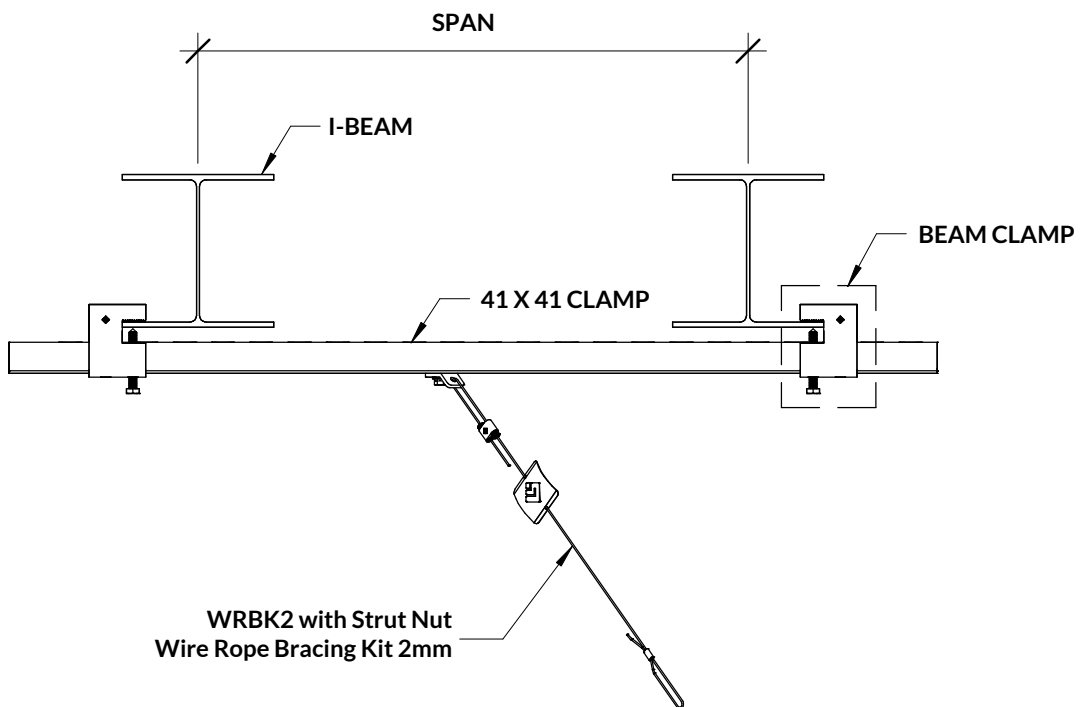
Independent design max. actions.



ISOMETRIC



FRONT VIEW



Notes:

Low to Mid-Level Suspended Component	
Suspended Component Weight (kg)	S (span in mm)
20 and below	2600
30	2400
40	2100
50	1900
60	1700

High-Level Suspended Component (above mid to roof level)	
Suspended Component Weight (kg)	S (span in mm)
20 and below	2400
30	2000
40	1700
50	1500
60	1300

CONTROL WIRING CONNECTIONS

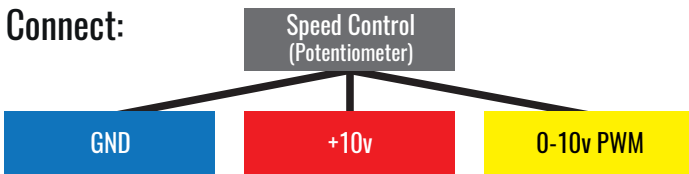
FULL SPEED WIRING

Connect:



SPEED CONTROLLABLE WIRING

Connect:



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).

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.

GENERAL NOTES

The brown and white cables found in the control cable are for RSA and RSB connections only.

Please note. There are two white cables included in the power cable that are redundant and are not required unless needing an alarm etc. Airius doesn't offer this service.

CONTROL WIRING

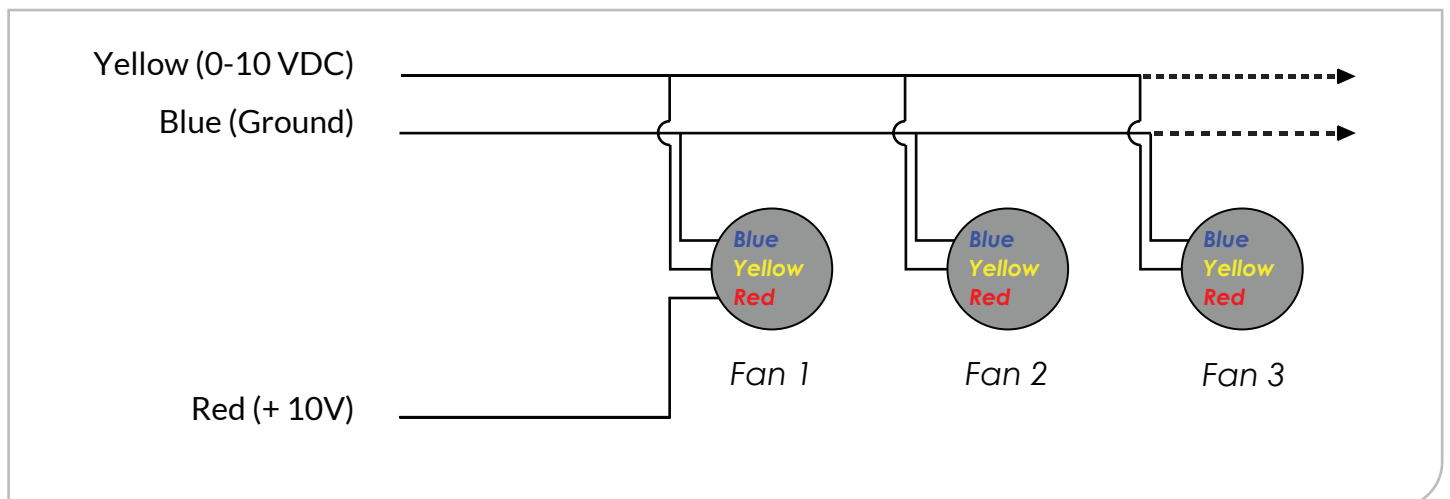
Control Wiring (0-10V Speed Control with Potentiometer).

The +10V (red cable) reference must only be connected to the first fan in the circuit. As this will cause instability or control signal interference leading to PCB failure and warranty void.

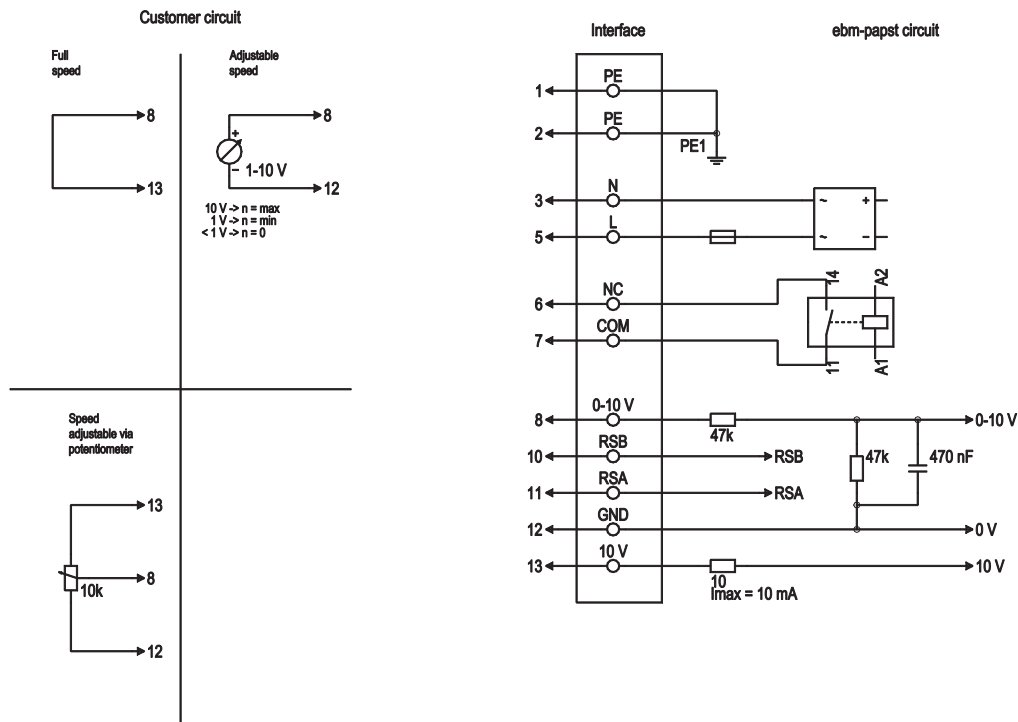
The 0-10V (yellow Cable) control signal should be distributed in parallel to all fans.

The Ground (GND) (blue cable) connection should be looped across all fans to ensure a common reference.

STANDARD CONTROL WIRING DETAIL WITH 10K POTENTIOMETER



CONNECTION DIAGRAM



No.	Conn.	Designation	Color	Function/assignment
1	1, 2	PE	green/yellow	Protective earth
1	3	N	blue	Power supply, neutral conductor 50/60 Hz
1	5	L	blad<	Power supply, phase, 50/60 Hz
1	6	NC	white 1	Status relay, floating status contact; break for failure, contact rating 250 VAC / 2A (AC1)/min. 10 mA, basic insulation on supply side and reinforced insulation on control interlace side
1	7	COM	white 2	Status relay, floating status contact common connection, contact rating 250 VAC / 2A (AC1) / min. 10 mA, basic insulation on supply side and reinforced insulation on control interface side
2	8	0-10V	yellow	Analog input (set value); 0-10 V; Ri = 100 kΩ; adjustable curve
2	10	RSB	brown	RS485 interface for MODBUS, RSB
2	11	RSA	white	RS485 interface for MODBUS, RSA
2	12	GND	blue	Reference ground for control interface, SELV
2	13	+10V	red	Fixed voltage output 10 VDC, +10 V ±3%; max. 10 mA; Short-circuit-proof: power supply for external devices (e.g. pot)



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V1.0