



# PRODUCT INFORMATION & INSTALLATION GUIDE 2025

Airius Model 45/EC  
**STANDARD SERIES**  
EX-A-45-EC-STD-200-277

[www.airius.co.uk](http://www.airius.co.uk)

**AIRIUS**<sup>®</sup>  
saving you energy

## MODEL 45/EC DIMENSIONS AND PROPERTIES



### UNIT SIZE

Weight:	6.3 kgs (14 lbs)
Height to Rim:	455 mm (17.9 in)
Total Height:	605 mm (23.8 in)
Diameter:	375 mm (14.7 in)

### STANDARD

### MOTOR

Watts*:	175
RPM*:	3050
L/S*:	448 (951 CFM)
m <sup>3</sup> /hr:	1615
Centre Line Velocity <sup>1</sup> :	1.53 m/s @ 12 m
AMPS*:	1.40

### 230V @ 50 Hz

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

### COVERAGE Heating Cooling

Ceiling Height =	Up to 15 m (49 ft)	Up to 8 m (26 ft)
Nozzle Height =	Up to 14 m (46 ft)	Up to 7 m (22 ft)
Floor Area =	Up to 139 m <sup>2</sup> (1500 ft <sup>2</sup> )	Up to 88.8 m <sup>2</sup> (955 ft <sup>2</sup> )

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

Operating Temperature	= -25°C (-13°F) to 60°C (140°F)
Thermal Cut Off	= 60°C (140°F)

Following thermal cut off unit must be power cycled to reset

### 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

IP44 Rated

### NOISE LEVELS

Sound Pressure Level = 52.8 dB(A)

Calculated from nozzle of unit to head height when installed at maximum ceiling height

For additional noise level information contact Airius

### COLOUR

Cool gray 2C - Off white as standard  
Can be tailor painted to your colour specifications  
Titan Series Upgrade - Off white as standard

### ACCESSORIES & OPTIONS

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

Optional speed controls allow for variable output from Airius unit.

EC controls available

Fully BMS controllable

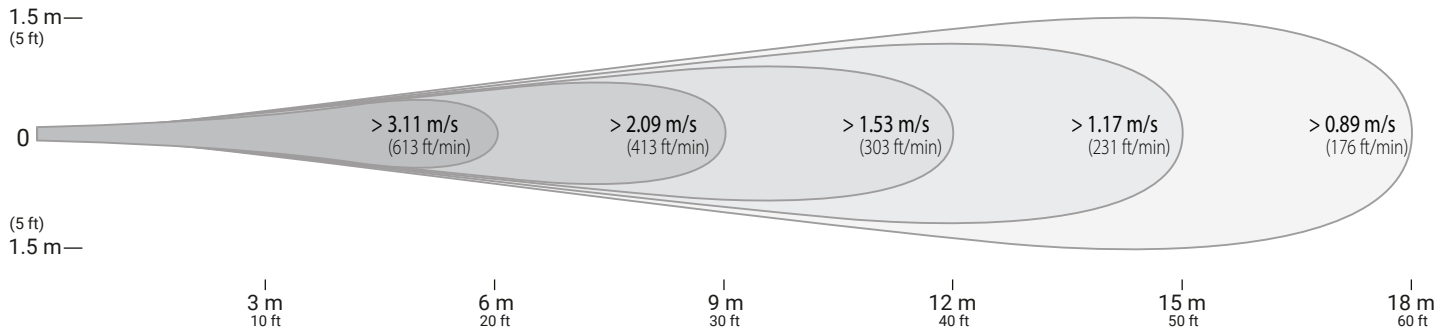
Bacnet Protocol for individual fan control

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

### 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).

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

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.

Chains **MUST** be secured from 2 fixing points at a minimum of 45° angle to ensure unit does not spin during operation.

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.

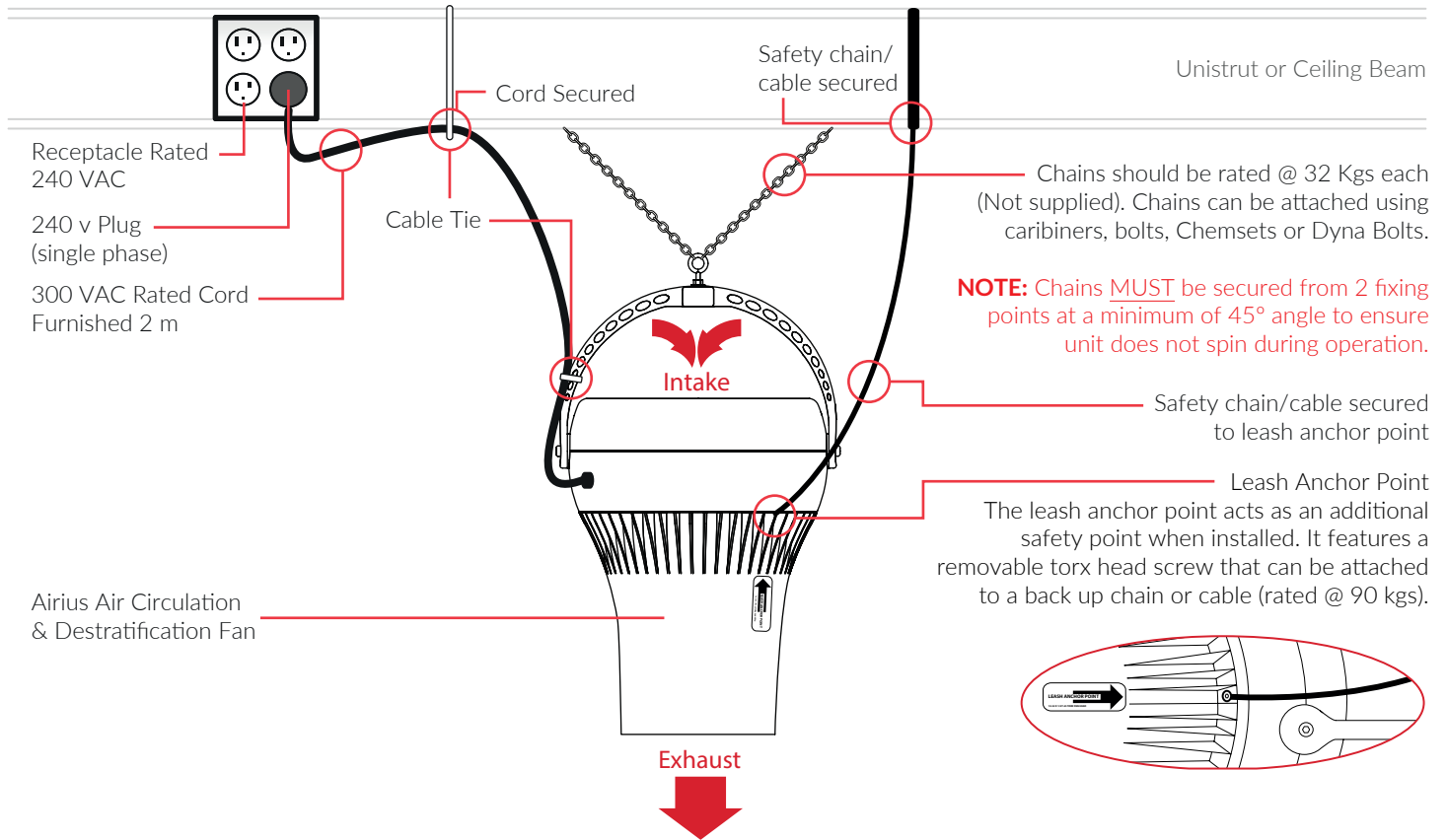
Density of the placement is directly related to the effectiveness, performance and savings.

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.

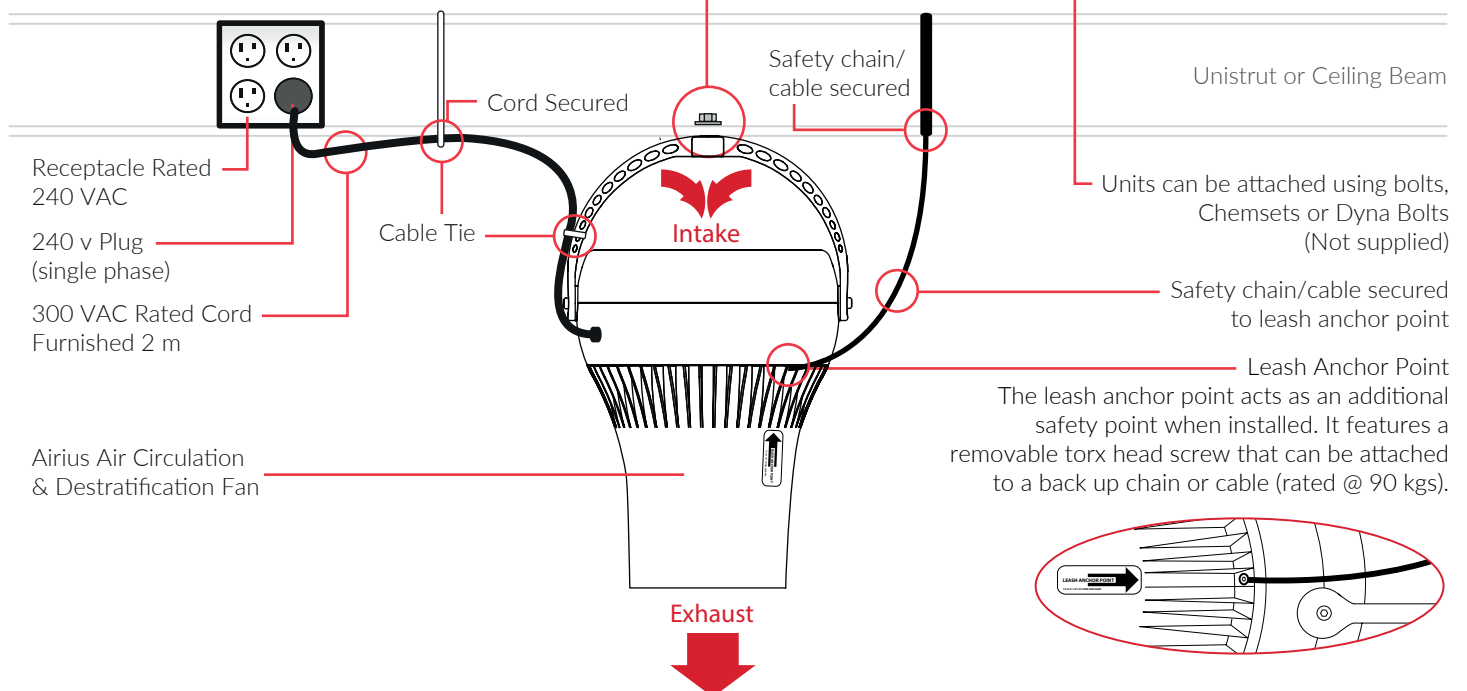
**CHAIN HUNG (STRAIGHT)**

PLUG NOT SUPPLIED



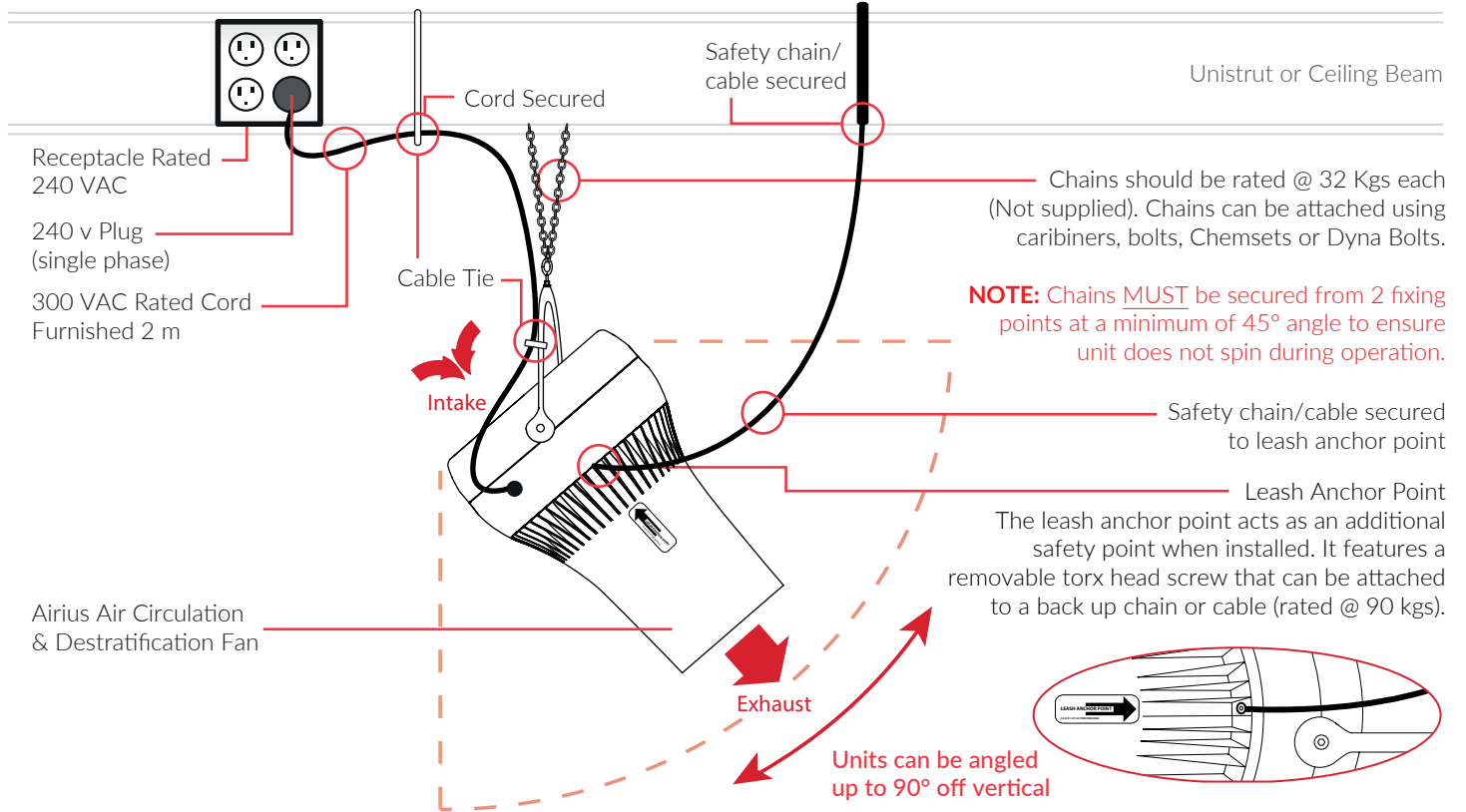
**CEILING FIXED (STRAIGHT)**

PLUG NOT SUPPLIED



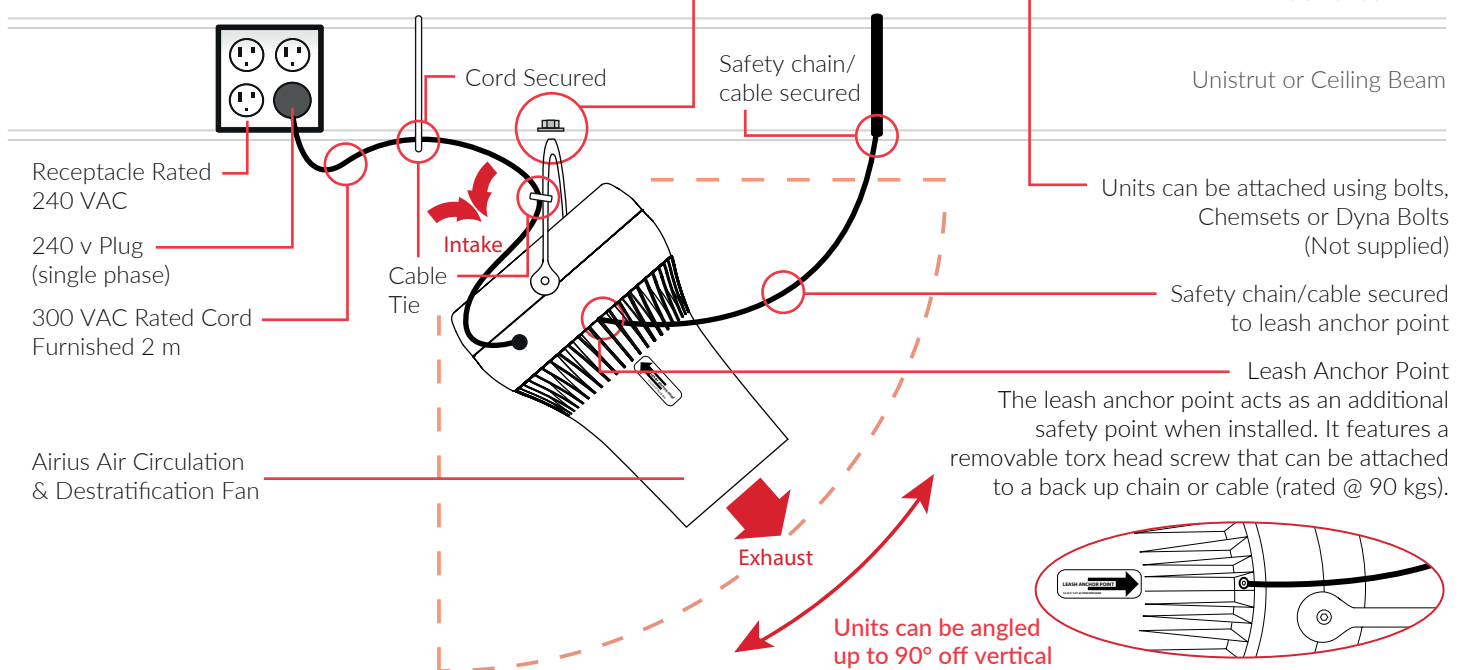
**CHAIN HUNG (ANGLED)**

PLUG NOT SUPPLIED

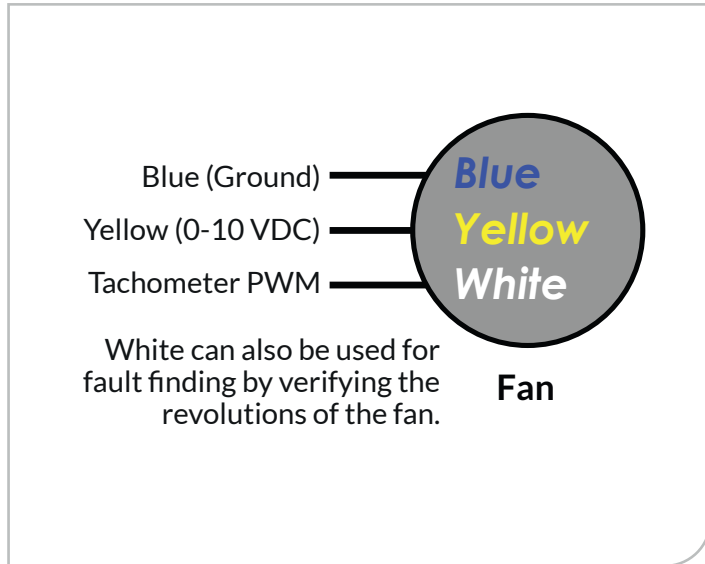


**CEILING HUNG (ANGLED)**

PLUG NOT SUPPLIED



## BMS CONTROL WIRING



### GENERAL NOTES

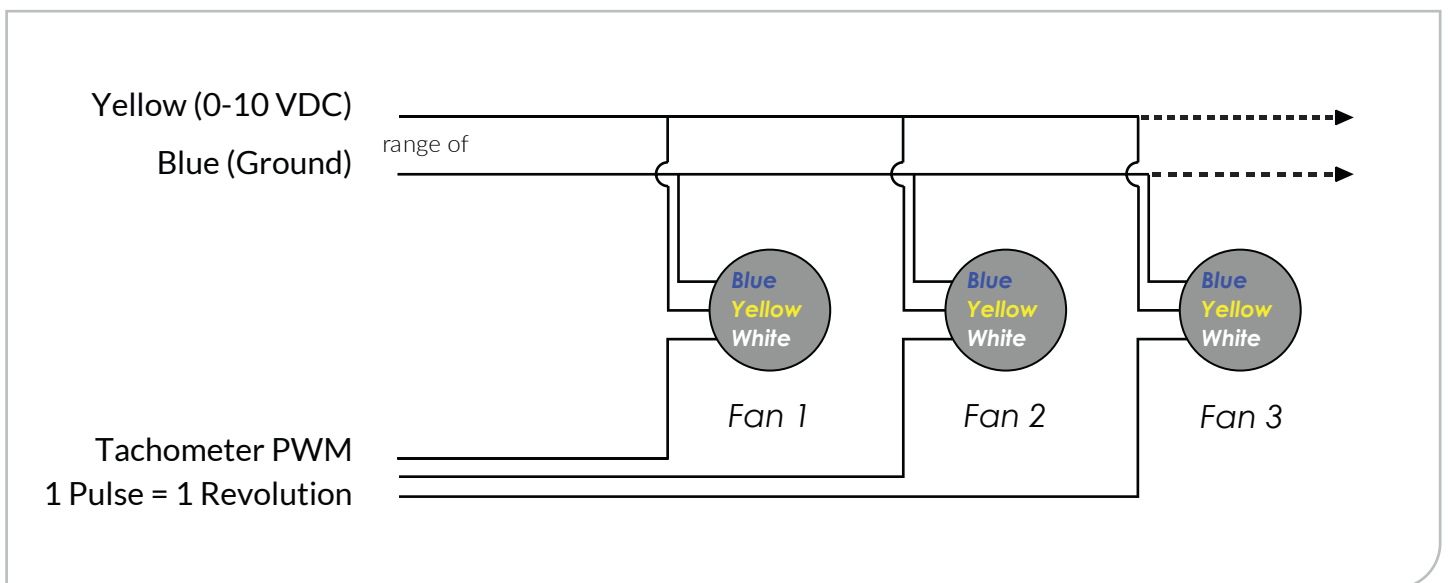
0-10 V signal allows infinitely variable open loop speed control

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





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