MAFI
Marine Air Flow International

DC VSD "Air-On-Demand" System
Auto Fan Speed Controller

Spec Data Sheet

Our Air-On-Demand systems are pre-programmed to ensure that your fans only run at the necessary speed which reduces unwanted noise and unnecessary power consumption.

- At an engine room temperature of 30 degrees celsius the fans will run at idle speed.
- From 30-40 degrees the fan speed increases relative to the temperature.
- At 40 degrees celsius the fans will run at 100% until the temperature reduces to 30 degrees at which point they will return to the preset idle speed.

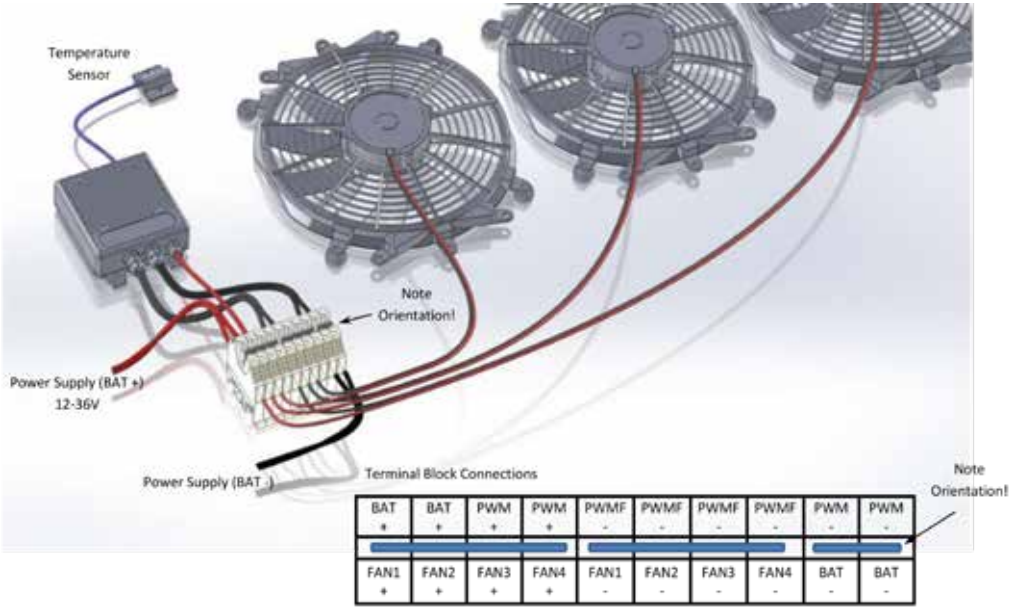
Sensors should be mounted in the air-out stream to provide a true indication of operating engine room temperature.

A single controller is capable of running up to 76 amps total. IE: 4 of our 12" 12 Volt DC fans at 19 Amps ea = 76 amps, OR 4 of the 24 Volt fans at 9 amps ea = 36 amps. Max 4 fans recommended per controller.

Our Air-On-Demand systems are fully bench tested and pre-programmed ready for installation. Also included is a full wiring diagram to aid with installation.

We supply our Air-On-Demand with a 3 year replacement warranty.

MAFI Part Code	Power	Max Amp Output	KG	Cost
FAN-VSDC12V/24V	12v or 24v	76 Amps	2.5KG	Quotable



NB: All export projects are quoted in USD

Notes:

The controller is NOT reverse-polarity protected. Double check all connections before applying power and always turn off the power supply before making any wiring changes. The fans can be reversed polarity but NOT the controller.

Our new DC VSD system works via pulse width mod (PWM). PWM is NOT suitable for use with brushless DC motors, only with traditional brushed DC motors. All connection points are external for simplicity and function via a terminal strip to be mounted in the ship DC board. Terminal strip is supplied by MAFI.

Ensure to fit correct in line protection to match the required load. Protection should be placed prior to the controller. Where practical, it is also recommended to fit protection for each individual fan unit for configurations with multiple fans.

The two BAT connections on the terminal block are not for supplying power from multiple power banks to the single unit. This is to split the supply using small cables, allowing for easier installation in a compact space.

Recommended AWG Gauges are as follows:

15A: AWG 14 = 1.63 dia/ 2.08mm^2
20A: AWG 12 = 2.05 dia/ 3.31mm^2
30A: AWG 10 = 2.59 dia/ 5.26mm^2
40A: AWG 8 = 3.26 dia/ 8.36mm^2
50A: AWG 6 = 4.11 dia/ 13.29mm^2

Temperature Probe Test Procedure:

To test the unit once wired up as per schematic, heat the temp probe with a heat gun (not a flame or gas torch). Fan speed will increase from idle after reaching 30 degrees and will run at max speed at 40 degrees. Cool the temp probe and check the fan returns to idle.

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