FC-1VAC user manual

The FC-1VAC is a simple and effective way to control fan motors or heating equipment. The FC-1VAC allows you to manually adjust the speed or output of the equipment. You can also use it as a light dimmer for brooder heat lamps and power five 250-watt lamps.

Features

- One variable output
- ON/OFF switch
- Adjustable HIGH/LOW settings
- Overload protection fuse
- Rugged, NEMA 4X enclosure (corrosion resistant, water resistant, and fire retardant)
- CSA approval
- Two-year limited warranty

Installation

- Switch OFF the power at the source before connecting the incoming power wires.
- DO NOT switch on the power until you have finished all wiring and verified all equipment is properly connected and free of obstructions.

Electrical ratings

Input	◇ 120/230 VAC, 50/60 Hz
Variable stage	◇ 12.5 A at 120/230 VAC, general-purpose (resistive) ◇ 9 FLA at 120/230 VAC, PSC motor * ◇ 1/2 HP at 120 VAC, 1 HP at 230 VAC, PSC motor ◇ 1500 W tungsten at 120 VAC
Variable stage fuse	◇ 15 A, 250 VAC ABC-type ceramic

* The FLA (full load ampere) rating accounts for the increase in motor current draw when the motor operates at less than full speed. Make sure the motor/equipment connected to the variable stage does not draw more than 9 FLA.

Fill in the table below to help configure your control and verify that you do not exceed the electrical ratings.

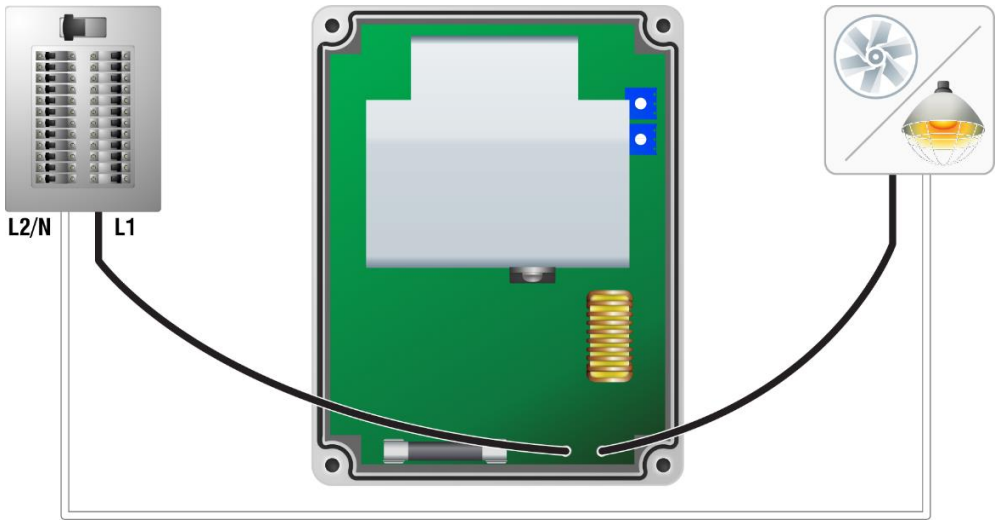
Fans	**A) Maximum current draw per fan**	**B) Number of fans**	**Total current draw = A × B**
Make			
Model			
Voltage rating			
Power factor			
Lamps	**C) Watts per lamp**	**D) Number of lamps**	**Total current draw = C × D ÷120 V**

NOTE

The FC-1VAC is designed for high current and is too strong for small motors. The control might not operate properly when running fan motors with a very inductive power factor and that draw less than 0.5 A. To test for this problem, connect the control to the motor and adjust the control from minimum to maximum. If the motor jerks or locks during any part of the range of operation, the current draw is too low. Adding more motors in parallel to increase the current draw will solve the problem. If this is not a viable solution, an 8.5 A version (model FC-1VAC-8.5) is available from your dealer.

Connecting equipment

Connect the equipment as shown in the diagram below.

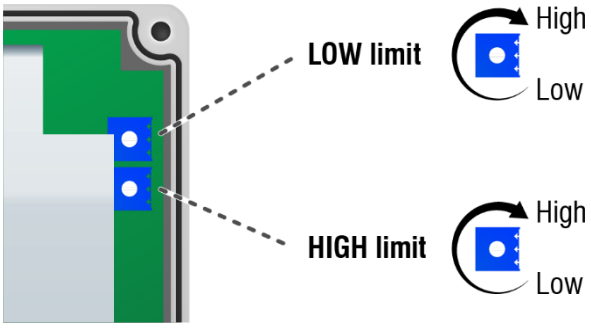


High/low limits

The factory settings for the low and high limits will adequately control most variable speed fans. You can adjust the limits to work best with your particular fan motor or incandescent lamps.

The **low limit** sets the minimum speed of the fan (or intensity of the lamps) when the control knob is set to **Low**. The limit can also be set so the fan or lamps are off when the knob is at Low.

The **high limit** adjusts the control to work with motors of different power factors and sets the maximum speed of the fan (or intensity of the lamps) when the knob is at **High**.



Limits for 120/230 VAC fans

1. Turn the control knob to **High** and then adjust the **high limit** trimmer clockwise to increase fan speed, or counter-clockwise to reduce fan speed. If the fan begins to growl or rotate slowly during this step, slowly turn the trimmer counter-clockwise until the fan is running smoothly. You may need to turn the trimmer fully counter-clockwise to regain control of the fan.
2. Turn the control knob to **Low** and then adjust the **low limit** trimmer clockwise to increase fan speed, or counter-clockwise to reduce fan speed.

Limits for 120 VAC lamps

1. Turn the control knob on the cover to **High** and then adjust the **high limit** trimmer clockwise to increase lamp intensity, or counter-clockwise to reduce lamp intensity.
2. Turn the control knob to **Low** and then adjust the **low limit** trimmer clockwise to increase lamp intensity, or counter-clockwise to reduce lamp intensity. Turn the trimmer fully counter-clockwise to turn the lamps off at this setting.