

VariPhase™ B-Series Controls

AC Motor Speed Control

Models ACB1021 & ACB1022

Overview

AirCare's OEM B-Series VariPhase sets a new standard in panel mount motor speed controls by improving efficiency, adjustment accuracy, and linearity. The internal microprocessor provides precise control of motor speed over a wide range, while a factory defaulted soft-start feature eliminates high startup currents typical of AC induction motors.



VariPhase OEM B-Series controls are designed to be panel-mounted in OEM equipment and require only a few simple electrical connections. They are suitable for both new and retrofit applications.

Features

- Variable voltage control of PSC and shaded-pole AC motors
- Linear speed adjustment range (improved over light-dimmer types)
- Easy to install in OEM equipment
- Defaulted Soft-start
- Installer-adjustable minimum speed limit (to prevent motor stall)
- Optional Screw-in connector for an external LED indicator shows when motor is running at minimum speed or greater

Models

Current	AC Voltage	
	115V	230V
2.0A	ACB1021	ACB1022

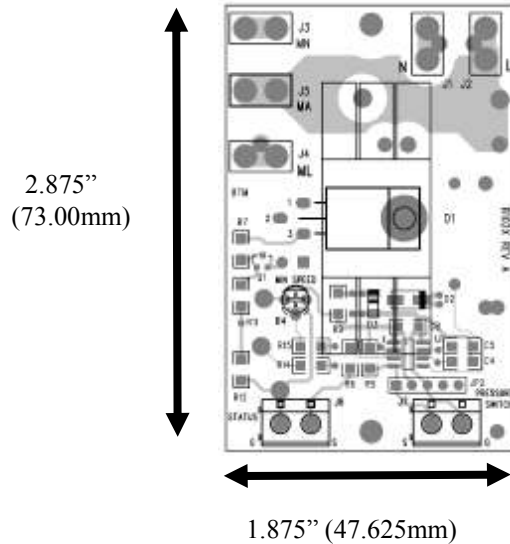
Specifications

Parameter	Min	Typical	Maximum	Notes
ACB1021 Supply Voltage (Vrms)	97V	115V	132V	
ACB1022 Supply Voltage (Vrms)	195V	230V	265V	
Load Current (Irms)			2.0A	
Ambient Temperature Range (°F)	0°F	25°C	40°C	

- Automatic Selection of 50/60Hz
- Simple connections
 - .110" Spade terminals for power
 - 2 way terminal blocks for optional features
 - External LED indicator
 - Pressure Switch input
- 0-40°C operating temperature
- Low-profile design
 - 2.875" x 1.875" x 1.5"

Mechanical

B-SERIES

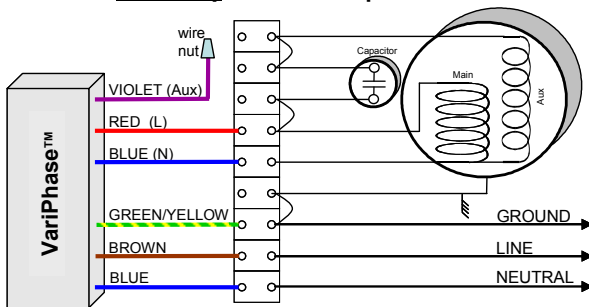


Installation and Configuration

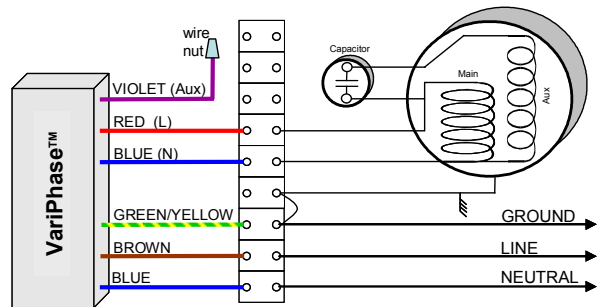
VariPhase B-Series controls can be installed with shaded-pole or PSC motors. They control the speed of the motor by phase-controlling the voltage. (Other classes of AC motors are incompatible with this type of control.) PSC motors can be connected in 2-wire (standard) or 3-wire mode. Operation in 3-wire mode provides benefits that typically include higher electrical efficiency, less motor heating (with higher reliability), and reduced motor noise.

With power removed, set the minimum speed using a slotted screwdriver. The soft-start feature is enabled in the factory. When soft-start is enabled and the VariPhase is switched on, the motor voltage will gently ramp to the minimum set speed or the speed set by the speed control knob on the front panel (whichever is greater).

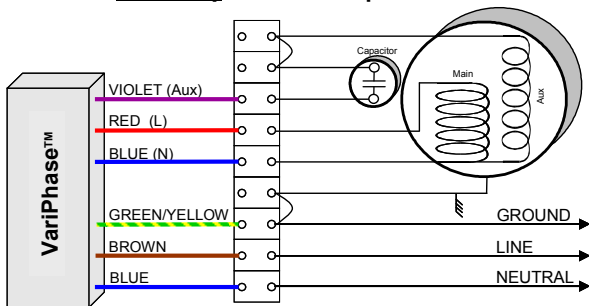
2-Wire Installation for externally connected capacitor



2-Wire Installation for internally connected capacitor



3-Wire Installation for externally connected capacitor



3-Wire Installation for internally connected capacitor

