



## Motor Speed Controller – 240V and 480V

ASM02907 and ASM02908

### Description

The AAON Motor Speed Controller is designed to control the speed of alternating current (AC) induction motors in combustion air blowers.

### Features

- Two options - 240 V and 480 V. Both controllers function the same but are equipped with a different voltage power supply.
- The controller provides either a two speed or variable speed configuration. Speed selection, either full speed or configured speed, is determined by two 24VAC binary inputs.
- The controller measures a tachometer feedback signal from the motor and uses triac-based phase control to increase or decrease voltage supplied to the motor to maintain the speed setpoint.

### Important Information

The controller uses a phase control method to adjust the voltage supplied to the motor. Confirm with the motor manufacturer that the motor being controlled is acceptable for this type of operation. Motor type must be permanent split capacitor (PSC) or shaded pole and be equipped with a one pulse per revolution Hall effect tachometer sensor.

### Mounting

The Motor Speed Controller has a factory mounted aluminum base plate. The metal base plate helps the controller regulate temperature and facilitate proper heat dissipation.

### Control Power

There are three 1/4 inch quick-connect tabs for 24 VAC control power signal connections. The W1 terminal is 24 VAC common and ground. The W2 terminal is the high-speed input, and terminal W3 is the low-speed input. If W2 is supplied with 24 VAC power and W3 is unpowered, the motor will run at full speed. If W2 and W3 receive power, or if W3 receives power while W2 is unpowered, the motor speed will be controlled to the analog input voltage or the dip switch setting.

### Line and Motor Connections

The L1 and L2 quick-connect terminals should be connected to a 240 V or 480 V power supply. The M1 and M2 terminals should be connected to the motor.

Electrical and Environmental			
Logic Power Source	18-30 VAC@3VA	Motor Power Source	204-254 VAC (240 V) 408-528 VAC (480 V)
Power AC Frequency	59-61 Hz	Motor Current Rating	4 A
Motor Compatibility	Permanent Split Capacitor or Shaded Pole	Full Speed Startup Time	15 seconds
Power Connections	1/4" quick-connect tabs	Analog Input Connections	Terminal Block, 14 GA Max
Tach Sensor Connections	3-pin 0.1" MTA Connector	Analog Control Range (2-10V)	1000-3400 RPM
Storage Temperature	-40°C to + 85 °C	Operating Temperature	-40°C to + 70 °C
UL Classification	UL 60730-1, Automatic Electrical Controls		

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