

# Variable Speed Fan Controller

## General Description

Precisely modulate the speed of ventilation fans in response to changes in ambient temperature. Optimum air circulation is maintained in ventilated areas and buildings with minimum noise and efficient use of energy. A thermistor monitors the air temperature and, as the temperature rises or falls within a preset band above set point, the fan speed is correspondingly increased or reduced between maximum and minimum speed values. The modulating band above set point between the maximum and minimum speeds, is fixed at 6 degrees F. Temperature set point is adjustable from 35 to 95 degrees F.

Especially designed for agricultural buildings, although of broad application in all ventilated areas, these fan controls are compact units designed to fit on a standard 4x4 junction box. Construction protects the electronic controls against dust and solid state design ensures long life and reliable operation. Fan speed motors must be permanent split capacitance or shaded pole with built-in thermal fuse. Load must decrease as RPM increases and bearings should be capable of operating at minimum RPM for phase angle speed control

### Model 51E has the following special features

**Auto fan off:** Fan off set back is internally adjustable from 2 to 20 deg F below set point. In the set back position, the fan motor will disable when the room temperature fall below the set back temperature.

**Auto heat on:** A heater interlock output is provided externally adjustable from 2 to 20 deg F below set point. Out put is relay 2.5A @ 250VAC resistive.

**Digital display:** a digital indicator shows the room temperature.



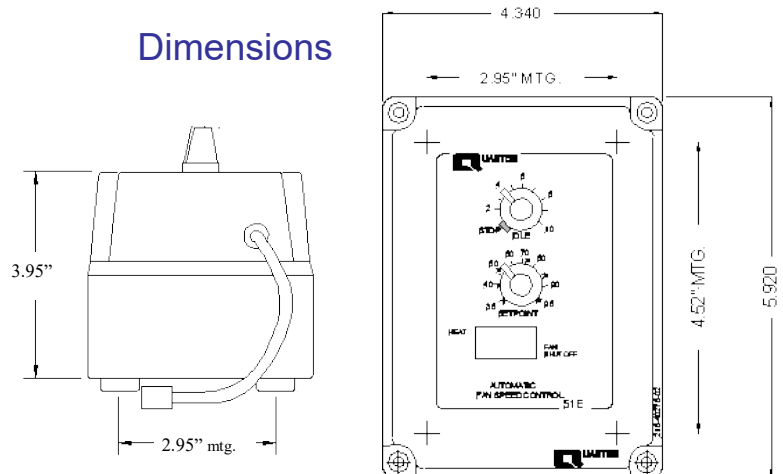
## Features

- Modulates fan speed in response to temperature changes
- Convenient wall mounted or junction mounted control unit
- 8.5A full load rating
- 3 second kick start
- Fully insulated moisture proof enclosure
- Meets NEMA specification 547
- Universal line power 96/264VAC
- Fan auto off 2-20 deg F below st point
- Heater output 2-20 deg F below set point
- Digital temperature display

## SPECIFICATIONS

Voltage 96/264VAC  
 Output: 8.5A full load, 20.5A locked rotor  
 Temperature range 35/95 deg F  
 Setpoint Local set pot, 5 deg F divisions  
 Control: Phase control proportional, 6 deg F bandwidth  
 Stability: 2% FS  
 Accuracy 5% FS  
 Sensor NTC 20K at 77F included (#223-40058-08)  
 Operating ambient: up to 120 deg F  
 Idle adjustment Stop and 20/85% line voltage, front panel  
 Maximum speed 98% line voltage  
 Noise RF supression standard  
 Overall size: unit: 4.3 x 5.9 x 4.9 in  
 Overall size: sensor 9/16in diameter x 7/8in long probe, 12in leads  
 Mounting to 4x4 junction box  
 Options Lamp (RPM) indicator

## Dimensions



Model #	Power	Control	Set point	Range
51-E54-L420	96/264VAC	6 deg F bandwidth	Front idle adjust Local	35 to 95 deg F