

## 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 idle speed values. The Idle adjustment control setting includes a "zero-power FAN STOP" position at which fan speed is stopped when ambient temperature is below setpoint. This "zero-power FAN STOP" [See Note (\*)] function will be overridden by temperature control functionality meaning that power will be applied to the fan when the ambient temperature exceeds setpoint. Modulating band above set point, between the maximum and minimum speeds, is fixed at 6 degrees. 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.

(\*) When in STOP mode, hazardous voltages will be present at load terminals. Disconnect main power when installing or servicing unit.

### 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 / 20/85% line voltage, front panel  
 Maximum speed 98% line voltage  
 Noise RF suppression 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

Model #	Power	Control	Set point
55-54-L420	96/264VAC	6 deg F bandwidth	Front idle adjust Local 35 to 95 deg F
55-54-L420-S	96/264VAC	6 deg F bandwidth	Front idle adjust Local 35 to 95 deg F

The "S" option includes a bypass switch for modes: FULL, OFF, AUTO



### 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
- The 55-54-L420S contains all the features of the 55-54-L420 and has a bypass switch mounted on the front of the device that changes mode between: FULL, OFF, and AUTO.

### Dimensions

Dimensional Outline and Wiring

