



MODEL 63 PACKAGE

Includes Modulating Humidistat, Duct Sensor, Blower Activation Relay and Outdoor Temperature Sensor

The Model 63 Automatic Digital Modulating Control (ADMC) package is the recommended humidistat for the Aprilaire modulating steam humidifier, Model 801.



MODEL 5558 PACKAGE

Includes Modulating Humidistat and Outdoor Temperature Sensor

The Model 5558 Automatic Digital Modulating Control package is the recommended humidistat for the Aprilaire modulating steam fan pack ductless humidifier, Model 866.

WALL MOUNTED CONTROL FEATURES

- Microcomputer based design with proportional algorithm – providing exceptional accuracy
- Digital display – large LCD with backlight with humidification and dehumidification indicators
- Outputs – controls humidification and dehumidification equipment
- Output signals – on/off and/or proportional outputs provides greater flexibility
- Modulating output signal – provides a 0 to 10Vdc or 2-10Vdc proportional control signal to the humidifier.
- Integrated sensor or remote duct sensing for better application flexibility
- Programable proportional band to increase or decrease the sensitivity of the humidifier control
- Humidity set point – adjustable from 0 to 100% relative humidity
- Humidity setpoint reset based on outdoor temp. Prevents window condensation in colder climates
- On-off signal - 24Vac dry contact capable to handle up to 1 amp
- Proportional high limit override – prevents over-humidification within the duct and costly water damage
- Multi-level lockable access menu and lockable set point – prevent accidental changes
- Indicator when outdoor temperature setback is used for winter compensation
- Selectable Celsius or Fahrenheit scale

OUTDOOR TEMPERATURE SENSOR

When used with the wall mounted humidistat the humidity set point is automatically readjusted based on the difference between the room temperature and the outside temperature to prevent window condensation.

INCLUDED IN MODEL 63 PACKAGE ONLY

DUCT HUMIDITY SENSOR FEATURES

- Proportional Duct Sensor can be used as the primary measurement of the relative humidity in the duct instead of the room and responds to the needs of wall mounted humidistat
- When not used as the controlling sensor, the Duct Sensor can be use as a proportional high limit override – provides a feedback to the wall mounted humidistat to prevent condensation in the duct.

BLOWER ACTIVATION RELAY

Allows the humidistat to turn the HVAC blower when there is a call for humidity, even when the HVAC system is idle to add humidity to the premisses.

PRODUCT SPECIFICATIONS	
Modulating Humidistat	
Outputs	Actual humidity (0-100% RH), 0-10 Vdc / 2-10 Vdc Humidity set point (0-100% RH) 0-10 Vdc / 2-10 Vdc Humidification proportional control signal, 0-10 Vdc / 2-10 Vdc Dehumidification proportional control signal, 0-10 Vdc / 2-10 Vdc Humidification dry contracts 24 Vac, 1 A max, 3 in-rush Dehumidification dry contracts 24 Vac, 1 A max, 3 in-rush
Inputs	Window temperature sensor or outside temperature sensor (10K Ω) External set point from Aprilaire humidifier, external humidity sensor (0-10 Vdc / 2-10 Vdc) or high limit (0-10 Vdc / 2-10 Vdc) 1 alarm status digital input (24 Vac or dry contact)
Power supply	22 to 26 Vac 50/60 Hz or 28 to 32 Vdc
Power consumption	1 VA
Set point range	10 - 90% RH (in 1% increments)
Sensor precision	$\pm 3\%$ or better at 40% RH and 73°F (23°C)
Proportional band	2% to 10% for control signal
Electrical connection	18 AWG (0.8 mm ²) minimum
Operating condition	32°F to 104°F (0°C to 40°C), 0-95% RH
Storage condition	14°F to 122°F (-10°C to 50°C), 0-95% RH
Temperature compensation reset feature	Automatic readjustment of set point from and Outdoor Temperature Sensor (included)
Weight	0.35 lb (160 g)

PRODUCT SPECIFICATIONS	
Duct Sensor	
Power supply	22+/-10% Vac or Vdc
Power consumption	1 VA
Electrical connection	18 AWG minimum
Set point range	10 - 90% RH (in 1% increments)
Output	0-10 Vdc, Humidity set point (0-100% RH)
Sensor precision	$\pm 3\%$ at 40% RH and 73°F (23°C)
Relative Humidity Range	0-100% RH
Operating temperature	-40°F to 176°F (-40°C to 80°C)
Storage condition	14°F to 122°F (-10°C to 50°C), 0-95% RH
Weight	0.30 lb (130 g)

BASIC APRILAIRE MODULATING CONTROL OPERATION:

The Aprilaire Automatic Digital Modulating Control (ADMC) is designed to be mounted on a wall in the living space. The ADCM provides precise humidity control by providing a variable output to the humidifier based on the difference between the set point on the control and the sensed humidity. The proportional band default is 5% RH and can be varied from 2% - 10% in increments of 0.5%.

The Duct Sensor can be installed in the return duct and used as the controlling sensor or it can be used as a high limit sensor. When used as the controlling sensor the RH level in the return duct is communicated to wall mounted control. The wall mounted control will compare the RH from the duct sensor and set point from the control to modulate the output signal. When used as a high humidity sensor the Duct Sensor is installed in the duct 4'– 5' downstream of the steam dispersion tube. If high humidity is detected in the duct the control will send a signal to the humidifier to decrease the steam output. (The duct sensor is not used with the Model 866 Steam Humidifier with Fan Pack.)

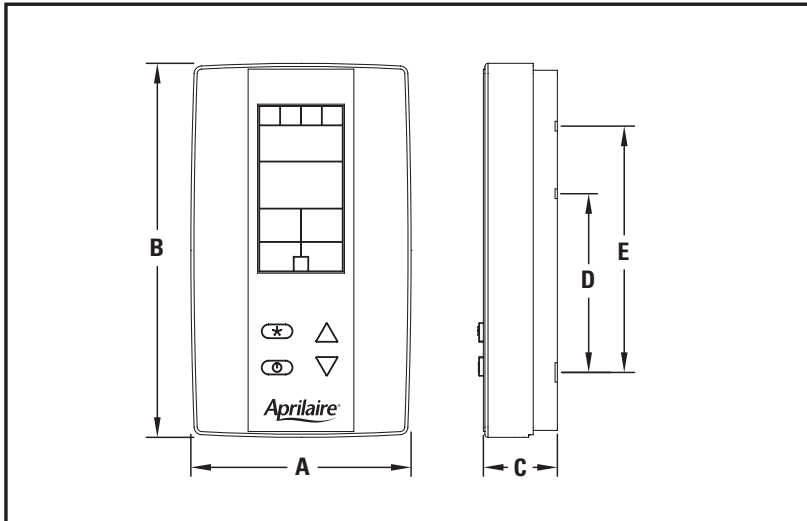
The Blower Activation Relay is used to turn on the HVAC systems blower when there is a call for humidity and the HVAC systems blower is off. The humidification system must have control of the HVAC systems blower to achieve proper humidity levels and allow the humidifier to modulate properly. (The duct sensor is not used with the Model 866 Steam Humidifier with Fan Pack.)

The Outdoor Sensor is used for temperature compensation to prevent window condensation.

Other available accessories:

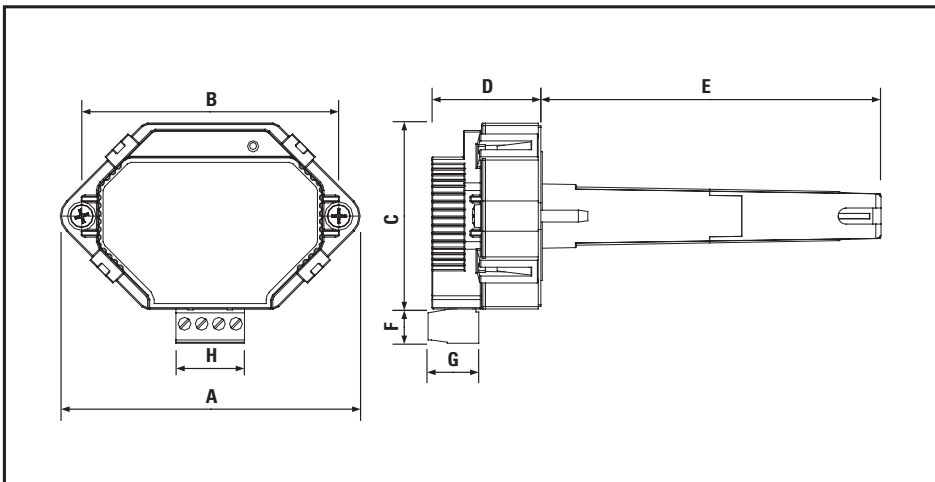
- High humidity limit switch (4594): prevents high humidity levels in the duct
- Airflow switch (4592): airflow proving switch to ensue airflow in the duct.

AUTOMATIC DIGITAL MODULATING CONTROL AND DUCT SENSOR DIMENSIONAL DRAWINGS



Dimension	Inches (in)	Metric (mm)
A	2.85	73
B	4.85	123
C	1.00	24
D	2.36	60
E	3.27	83

Automatic Digital Modulating Control dimensional drawing



Dimension	Inches (in)	Metric (mm)
A	3.50	89
B	3.00	76
C	2.16	55
D	1.30	33
E	3.95	100
F	0.37	9.5
G	0.60	15
H	0.80	20

Duct Sensor dimensional drawing



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