

# DEHUMIDIFICATION CONTROLLERS

**Model 5112**  
**Model 5311**

The Models 5112 and 5311 offer low-cost dehumidification control for applications that do not require humidification of an environment. These ON/OFF controllers are designed to maintain relative humidity levels below ambient in sealed chambers, desiccator cabinets and dry boxes. The Model 5311 is a fixed-point, non-adjustable dry gas valve and sensor preset at 5% RH. The Model 5112 is an adjustable dehumidification controller with LDC display. For full range control of humidity levels please refer to the ETS 5000 Series Controller Literature.

## Features:

- **Model 5112**
  - User adjustable set point**
  - Continuous humidity level display**
  - 90-240 VAC/50-60 Hz, 3 amps**
  - Dehumidifier ON/OFF**
  - Stand-alone or panel mount**
  
- **Model 5311**
  - Single-point control set at 5% RH**
  - Low cost environment control**
  - Ideal for maintaining continuous low humidity (dry gas) environments**
  - Non-adjustable/no display**
  - Integrated solenoid valve & regulator**
  - 12 VDC universal power module**
  
- **Controller Accuracy:**
  - Measurement:  $\pm 2\%$  RH**
  - Set pt. Tracking:  $\pm 3\%$  RH**
  - Display (5112):  $\pm 0.1\%$  RH**



**Model 5112**



**Model 5311**

## Description:

Both the Model 5311 and 5112 utilize capacitive film humidity sensors. The Model 5311 sensor generates a digital output relative to the set point. When the humidity level rises above 7% RH, the sensor generates a signal that activates a solid state relay which in turn opens the dry gas solenoid valve. When the humidity level drops below 4% the sensor generates a "0" deactivating the valve.



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The Model 5311 consists of an integrated solenoid valve with adjustable pressure regulator and control module, both of which operate from 12 VDC. A 90-240 VAC universal power module provides the necessary power. The controller requires approximately 250 ma with the solenoid on and only 10 ma when the solenoid is off.

The Model 5112 sensor generates a signal proportional to the humidity level over the entire 0-100% RH range. Measurement accuracy is  $\pm 2\%$  RH. The sensor is mounted on a 30" (194cm) cable for installation inside the controlled environment and is supplied with a 3/8" NPT compression fitting attached to the cable.

The Model 5112 can control any dehumidification operating system that requires 90-240 VAC at a maximum of 3 amps. The dehumidification system (not included) power cord is plugged into the 3-prong North American outlet on the rear panel. The Controller applies power whenever the humidity is above the set point by 2% RH.

The controller enclosure conforms to DIN 43700, measuring 3.78"W x 3.78"H x 3.35"D (9.6 x 9.6 x 8.5 cm). It can be located on top or next to the controlled environment or installed directly into a panel cutout using the available mounting clips.

The front panel consists of a 3½-digit LCD readout that continuously displays the relative humidity and when the Set Pt button is depressed, the set point. The set point is changed using a screwdriver adjustable, multi-turn potentiometer. A DEHUMIDIFIER ON/OFF switch overrides the controller and manually turns off the dehumidifier. A green LED indicates when the dehumidifier is activated.

## Specifications:

### Model 5311:

**Sensor type:** Temp compensated, capacitive film  
**Range:** Fixed pt: 5% RH std.  
**Accuracy:**  $\pm 2\%$  RH  
**Lo/Hi band:** 4% RH (off) / 7% RH (on)  
**Set pt adjust:** None  
**Manual contr:** None  
**Display:** None  
**Resolution:** N/A  
**Control Out:** Solenoid valve  
**Power req.:** 90-240 VAC Power Module, 30W  
**Gas in/out :** ¼" quick disconnect  
**Dimensions:** -

**Warranty:** One (1) year

### Model 5112

Temp compensated, capacitive film  
Adjustable: 0-100% RH  
 $\pm 2\%$  RH  
2% RH below set pt / 2% RH above set pt  
20-turn screw driver adjust potentiometer  
Dehumidify ON/OFF pushbutton switch  
3½-digit LCD  
0.1% RH  
3 Amp solid state relay  
90-260 VAC, 50/60Hz, 700W max  
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3.78"W x 3.78"H x 3.35"D  
(DIN 43700) 9.6 x 9.6 x 8.5 cm)

*Specifications are subject to change without notice*