

AutoFog™

Fogging and Misting Control

Description

A multi application fogging or misting controller that utilizes environmental data including solar radiation (optional), relative humidity and temperature. The user then establishes what ideal relative humidity and temperature they want the environment to be and the controller actively works to achieve this.

The controller will only fog/mist between times of day, temperatures and relative humidity levels set by the user. The controller can also interact with stir fans and activate them as fogging/misting occurs to improve the efficacy of the fogging/misting.



Users can enable and force fogging or stir fan operation directly from unit

Changes in all settings can be affected from control unit

Users can scroll through settings and view current status of the environment

Robust IP 65 Splash resistant case with liquid crystal digital display of all readings and settings

Applications

Small to large environments
Propagation areas

AutoFog™ Controls

Solenoids
Stir Fans
Main Pump

AutoFog™ Monitors

Relative Humidity
Temperature
Solar radiation

Fogging/Misting

Fan Foggers
Misters
High-pressure
Low-pressure

Advantages to the Grower

The Autofog™ will expertly manage the environment to optimize it for your plants, this can:

- Increase fruit set and flower quality
- Create fewer stressed and vulnerable plants
- Have humidity controlled only when required

Environmental Monitor

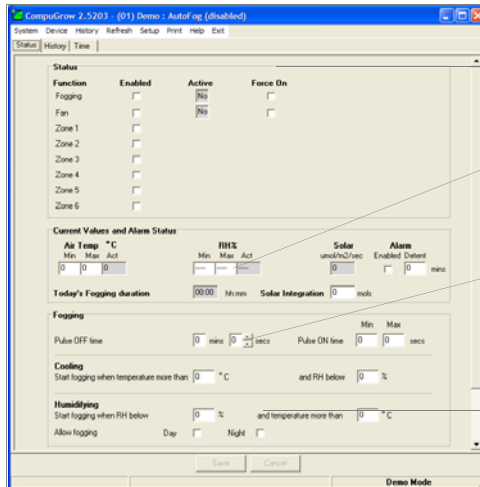
The Autofog™ has an inbuilt environmental data logging system, which can also be used to monitor your greenhouses environment. The user can then set alarms for temperature and relative humidity. This monitor will also advise the grower how much solar radiation has been received in the greenhouse that day and for how long the fogging/misting has been running.

Optional Features

PC Interface
Software
Solar Sensor

AutoFog™

Fogging and Misting Control



Users can enable and force fogging or stir fan operation remotely

Alarm threshold minimum and maximums are set by the user. An alarm 'Delant' can be set to prevent the system alarming on when 'spikes' occur.

Users set the time delay between fogging/misting cycles and set the maximum and minimum time the fogging can run at any one time

User sets the controller to only fog once the environment is above a certain temperature and below a set relative in addition to only allowing fogging/misting between specific times of day

Technical Specifications

Fogging Zones	1-6
Environment Sensors	1 Aspirated
Sensors	Relative Humidity Temperature Solar Radiation
Outputs Controlled	Stir Fans Main Pump Zone solenoids 24AC Outputs
Stir Fans	Single bank temperature on off and interaction with fogging if required
PC Interface	RS485 Standard Serial Optional USB Converter
PC Specification	Windows 2000 Plus Modem with internet access and activated sound card
Communication	Up to 1200m from AutoFog Preferred cable Cat 5E Stranded 4 twisted pairs
Reports	Exports Tab Delimited to Excel or similiar
Electrical	Power 115/230v AC, 50/60Hz, 50Va
Physical	Weight 1.5kg

The AutoFog™ controller measures air temperature and relative humidity and uses this information to intelligently control the fogging/misting in a greenhouse or growing area. The fog/mist may be produced by any means including high pressure fogging system, low pressure misters or a spinning disk fogging fan. Fogging may be used to cool the growing environment and also to humidify it in dry weather. In very humid, warm weather the fan may be allowed to run but fogging will be inhibited. The grower has full control over all of these functions.

The controller has eight 24V AC outputs which are used as follows :-

In the case of a fan-fogger, one output is used to switch on the fan, one to switch on the spinning disk and the other to operate a solenoid valve to control the water flow; a forth output can be used for an external alarm system.

The fan-fogger may thus run on its own as a simple stirring fan or may be joined by the spinning disk whilst the water is pulsed on/off to produce puffs of fog. The interval time between puffs is set by the grower as is the minimum and

maximum ON times. The controller then adjusts the puff size over this range proportionally to the temperature/humidity error that it is trying to correct. So the hotter it is, or the drier it is, the bigger the puffs of fog.

For a multi-zone pump and solenoid fogger, one output may be used to operate a stir fan, one to switch on a pump and the other outputs may be used to operate from one to six zone solenoid valves. Similar to the fan-fogger, the pressure fogging system produces variable sized puffs of fog/mist as described above.

The AutoFog™ has CompuGrow™ software and PC interface that allows all readings and setting to be accessed remotely from the PC which may be located up to 1.2km away. In addition, temperature, humidity and optionally solar irradiance may be logged to the PC and viewed graphically.

The Enviro Sensor measure temperature to within +/- 0.2°C and RH within +/-2% over a wide range. The sensor is protected from environmental contaminants by a PTFE filter membrane making it particularly rugged.