

Aqua 100

- Basic EC or pH control
- Competitively priced
- Reliable
- Compatible with the Aqua 300



Straightforward EC and pH control

The Aqua 100 series consists of two controller models. The first is the Aqua 100 EC, which is an easy-to-use device for controlling the EC level of your irrigation water. The second is the Aqua 100 pH which controls the pH level of your irrigation water. Both these models can be used in combination with other controllers, such as the Aqua 300.



Aqua 100

General specifications of the Aqua 100:

Housing (LxWxH):

Plastic 295x250x130

Protection level:

Splash proof

Inputs

Power supply:

230 V AC

External EC/pH setpoint:

5 K ohm

External EC/pH setp.

on/off:

Contact

Outputs

Alarms:

max, 70 V, 3 A

Alarms general:

Make-and-break contact

Alarms max. EC/pH:

Make-and-break contact

Alarms min. EC/pH:

Make-and-break contact

Extra connection for displaying the EC/pH level measured by the sensor:

0 – 1 V

Controlling the EC with the Aqua 100 EC

The Aqua 100 EC measures and controls the EC level of the irrigation water. The amount of fertilizer solution added to the irrigation water depends on the desired EC level (called the 'EC setpoint') which is set. If the EC level measured by the sensor deviates from the EC setpoint, the controller adjusts the position of the regulating valve, since this determines how much fertilizer solution is drawn from the fertilizer tank or tanks.

Temperature correction

The EC level is measured by a sensor electrode, which is fitted in the supply pipe of the irrigation system. The sensor and the measurement circuit both include a temperature correction facility, so water temperature fluctuations will not affect the EC level measured. The Aqua 100 EC is also equipped with a test switch, enabling you to check the control and alarm functions of the device.

Safeguards

An alarm circuit monitors the fertilizer application of the Aqua 100 EC and switches off the system if a deviation between the pre-set and the measured EC level persists. This prevents either too much or too little fertilizer solution being applied. The Aqua 100 EC also enables you to set a minimum and maximum limit for the EC level. If the EC level is not within the pre-set range, the controller generates an alarm.

Aqua 100 EC Specifications

Measuring range	0 – 1 or 0 – 10 EC
Temp. compensation	5 – 30°C
Max. meas. deviation	< 2 %
Inputs	
Sensor electrode	MEC 12
Outputs	
Control method	Regulating valve or pulse/pause valve
Control current	24 VAC max 0.5 A

Controlling the pH with the Aqua 100 pH

The Aqua 100 pH measures and controls the pH (i.e. the acidity) of the irrigation water. If the pH level measured by the sensor deviates from the desired pH level (called the 'pH setpoint'), the controller adjusts the position of the acid or lye regulating valve to compensate. The Aqua 100 pH can control and measure the acidity of the water in the pH range 3 to 8.

Checking the controller operation

The pH level is measured by a sensor electrode, which is fitted in the supply pipe of the irrigation system. The Aqua 100 pH is also equipped with a test switch, enabling you to check the control and alarm functions of the device.

Safeguards

An alarm circuit monitors the acid or lye application of the Aqua 100 pH and switches off the irrigation system if a deviation between the pre-set and the measured pH level persists. This prevents your crops from receiving irrigation water with the wrong pH level. In addition, the Aqua 100 pH enables you to set a minimum and maximum limit for the pH level. If the pH level is not within the pre-set range, the controller generates an alarm.

Aqua 100 pH Specifications

Measuring range	3 – 8 pH
Max. meas. deviation	< 3 %
Inputs	
Sensor electrode	PHC
Outputs	
Control method	Pulse / pause control

More information?

For more information, please contact HortiMaX directly (phone: +31 (0)15 362 03 00) or one of our dealers near you. You can also visit our website at www.hortimax.com.