Proportional pH and Conductivity Control for Fertigation

HI 9913 is a 2-in-1 pH and conductivity controller engineered for dosage of fertilizer solutions in hydroponics.
HI 9913 measures pH from 0 to 14 and EC from 0 to 10 mS/cm. Two separate setpoints can be user-adjusted from 4 to 7 pH and 0 to 6 mS/cm. The relays are activated when pH exceeds the setpoint or conductivity falls below the desired value. Two pumps or electro-valves can be wired directly to the controller and be powered through the terminals. The operator can adjust two independent proportional settings for pH and conductivity. The time cycle is adjustable from 0 to 90 seconds, while the proportional band is 0 to 2 for both pH and EC. A ground probe can be connected to the appropriate terminals to eliminate interference and prolong the pH electrodes' life.
HI 9913 provides for an alarm relay which is activated in several circumstances. These include when the pH is below the setpoint by the operator-adjustable threshold of 0.5 to 2.5 pH, or EC exceeds the setpoint by a value in the 0.5 to 2.5 mS/cm range. The alarm goes off if the pH and/or conductivity are not corrected within the operator-determined time frame of 1 to 10 minutes. The alarm can be turned off during maintenance. The fertilization status can be ascertained from a distance through dosage and alarm LED's.
HI 9913 accepts pH electrodes with a BNC and a conductivity probe with a DIN connector. HI 9913 compensates for the temperature effect on conductivity measurements automatically.

Specifications

	HI 9913
Range	0.00 to 14.00 pH; 0.00 to 10.00 mS/cm
Resolution	0.01 pH; 0.01 mS/cm
Accuracy (@20°C/68°F)	±0.02 pH; ±2% F.S.
Input Impedance	10^{12} Ohm
Calibration	manual, 2 point for pH and 2 point for EC, through trimmers on the front panel
Setpoint	2, selectable from 4.00 to 7.00 pH and from 0.00 to 6.00 mS/cm
Temperature Compensation (EC)	automatic, 0 to 50°C (32 to 1226F) with ß=2%/°C
Proportional Control	adjustable from 0.00 to 2.00 pH and from 0.00 to 2.00 mS/cm, time cycles from 0 to 90 seconds
Dosing Contact	2 powered terminals for pH and EC dosages (240V) Max. 2A, 1,000,000 strokes activated whe pH > setpoint and when mS reading < setpoint, respectively
Alarm Relay	1, activated when pH varies more than a selectable value (0.5 to 2.5 pH) from setpoint or when max dosage time for pH (adjustable from 1 to 10 minutes) elapses; or when conductivity varies more than a selectable value (0.5 to 2.5 mS/cm) from setpoint or when max dosage time for EC (adjustable from 1 to 10 minutes) elapses (isolated, Max 2A-240 V, resistive load, 1,000,000 strokes)
Power Supply	110/115 Vac ±10% or 220/240 Vac ±10%; 50/60 Hz
Environment	-10 to 50°C (14 to 122°F); RH max 95% non-condensing
Dimensions / Weight	221 x 181 x 86 mm (8.7 x 7.1 x 3.4") / 1.6 kg (3.5 lb.)

Accessories

HI 7004/1L	pH 4.01 buffer solution, 1 L bottle	HI 7039L	5000 µS/cm calibration solution, 500 mL bottle
HI 7007/1L	pH 7.01 buffer solution, 1 L bottle	HI 8427	pH/ORP electrode simulator
HI 7031L	1413 µS/cm calibration solution, 500 mL bottle	HI 931001	pH/ORP electrode simulator with display

For a complete range of process electrodes and probes, see section T2.

Ordering Information

HI 9913 is supplied complete with instructions.

1= 115 Vac power supply
2= 230 Vac power supply

HI 9913 -