



## Wall Mounted pH and Conductivity Controller for Boilers and Cooling Towers

HI 9923 is a 2-in-1 pH and conductivity controller engineered for monitoring of industrial boilers and cooling towers. Two separate setpoints can be adjusted from 5 to 10 pH and 1 to 6 mS/cm to activate independent relays. Two pumps or electro-valves can be wired directly to the controller and be powered through the terminals. For optimum control, the operator can set the Dead Band (hysteresis) from 0 to 0.5 mS/cm. Trimmers for the pH and conductivity are positioned on the front panel make for easy calibration. A ground probe can be connected to the appropriate terminals to prolong the pH electrode's life.

HI 9923 provides for an alarm relay which is activated when pH falls below the setpoint by the operator-adjustable threshold of 0.5 to 2.5 pH, or conductivity exceeds the setpoint by a value in the 0.5 to 2.5 mS/cm range. The alarm is activated also if the pH and/or conductivity are not corrected within the operator-determined time frame of 1 to 90 minutes.

The boiler and cooling towers' status can be ascertained from a distance with dosage and alarm LED's. This 2-in-1 controller accepts pH electrodes with a BNC connector and a conductivity probe with a DIN connector incorporating a temperature sensor.

The HI 9923 compensates for the temperature effect of conductivity measurements automatically.



### Specifications

HI 9923	
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 <sup>12</sup> Ohm
Calibration	manual, 2 point for pH and 2 point for conductivity, with trimmers on the front panel
Hysteresis (EC)	adjustable from 0 to 0.5 mS/cm
Setpoint	2, selectable from 5.00 to 10.0 pH and from 1.00 to 6.00 mS/cm
Temperature Compensation (EC)	automatic, 0 to 50°C (32 to 122°F) with β=2%/°C
Dosing Contact	2 powered terminals for pH (alkaline dosage) and EC corrections (240 V, Max. 2A, 1,000,000 strokes)
Alarm Relay	1, activated when pH falls below the setpoint more than a selectable value (0.5 to 2.5 pH) or when max dosage time for pH (adjustable from 1 to 10 minutes) elapses; or when EC reading exceeds the setpoint more than a selectable value (0.5 to 2.5 mS/cm) 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

### Ordering Information

HI 9923 is supplied complete with instructions.

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

HI 9923-□

For a complete range of process electrodes and probes, see section T2.  
For a complete range of calibration, cleaning and maintenance solutions, see section F.