



Akiki Engineering Est.

Water & Steam Experts



1.6. Instrumentation Catalogue

October 7, 2010

Contents

Cooling Tower Controller	3
Flowmeters	5
pH-ORP Monitor and Controller	7
Mini Controllers	8

Cooling Tower Controller



Akiki Engineering Instrumentation Series Cooling Tower Controllers continuously protect cooling systems from the harmful effects of scaling, corrosion, and microbiological growth. They are designed using advanced microprocessor technology and the latest in surface mount assembly techniques. The result is amazing versatility in a compact, reasonably priced controller package. The units are simple to program using the clearly labeled keypad and the bright alphanumeric display. The distinctive receptacle cords make it easy to connect any electrical device being controlled.

Options:

- Conduit connections are available where hard wiring is preferred and is required for 220VAC service. The optional mounted flow assembly is used to interrupt the controllers outputs when there is less than 1 GPM of flow. A high pressure (250 PSI max) flow assembly is available for applications above 125 PSI.
- The selectable timer is an available option allowing chemicals to be dosed by percent, pulse with accumulator, percent post blow down, or a limit timer. An alarm output relay is available to provide an A/C output to an alarm device such as a strobe light or warning siren. Additionally, an alarm dry contact is also available to send an alarm signal to integral building management systems or other controls.
- Biological growth can be easily controlled using the optional 28-day biocide timer; this timer is available as a single, dual, or even triple biocide control. Applications where make up water conductivity varies may require the make up conductivity option. This allows for control of the towers based on cycles of concentration. Controllers that have pH control can also have the added feature of ORP control, allowing control or monitoring of your oxidizing chemicals. Programmable proportional 4-20mA outputs can be added to allow for control of metering pumps, or remote monitoring of system inputs.
- The serial line communication option can be ordered with or without an internal modem. These unique features allow for the user to monitor and change the system parameters directly or from a remote location.

Operating Specifications:

- Power Requirements: 90 - 250 VAC @ 50/60 Hz, 100 VA
- Control Output: Line Voltage @ 600 VA Per Relay (5 amps @ 120 VAC)
- Maximum Pressure of Standard Flow Assembly: 200 PSI @ 70 F, 125 PSI @ 125 F, 8.62 Bars @ 52 C
- Electronic Environment: 0 to 125 F, -17.8 to 52 C, 100 % Humidity

Features:

- A high resolution 10 bit A/D converter and adjustable analog sample sensitivity for greater accuracy from all sensor inputs.
- Control TDS, pH or ORP.
- Fully isolated differential inputs for all circuits help prevent the possibility of ground loops.
- Keypad activated hand/off/auto control of all relay outputs.
- Modular hardware and software for easy access and servicing.
- A prewired NEMA type 4X enclosure, High Impact Resistant PVC, for protection from harsh environments.
- Hi/Lo Alarm Indicator: Standard
- Standard pH Scale: 0-14 pH
- Standard Conductivity Scale: 0-500, 0-2000, 0-5000, 0-10000 and 0-20000 S/cm
- Standard ORP Scale: 0-1000 mV
- Front Panel H/O/A Control: Standard
- Timers: Programmable
- Accuracy - At point of measure excluding sensor: 1 %
- Differential: Programmable
- Standard Plumbing: Glass Filled Polypropylene (GFPPPL) Slip or Threaded

Flowmeters



Features:

- Well suited for closed pipe installation
- Easy-to-read dual scale (GPM/LPM) screen printed on both sides of the meter body
- Horizontal or vertical pipe installation
- One-piece machined acrylic meter body
- Corrosion resistant internal parts
- Durable, highly polished one-piece meter body
- Stainless Steel Floats and float guides
- Sturdy adapters with O-ring seals
- Bulkhead nuts attach directly to inside panel
- Separate mounting screws are not required
- Acceptable in direct sunlight applications

Options:

- Adjustable Flow Control Valve, which is easy to disassemble. No special tool required, ALL FIELD REPLACEABLE.

Operating Specifications:

- Temperature: 190F/88C @ 0 pressure or 200F/93C @ 0 pressure
- Pressure: 150 PSIG/10.3 Bar @ 70F/21C or 250 PSIG/17.2 Bar @ 70F/21C
- Full scale accuracy: 10 % or 5 %
- Meter Body Material: Acrylic or Machined Acrylic
- Adapter Material: Polypropylene
- Connection Type: Saddle
- O-rings: Viton
- Float Material: # 316 SS. Hastelloy or Teflon (low flow units)
- Max. Pressure Drop: 0 psi or 2 psi full scale

pH-ORP Monitor and Controller



Features:

- Display in C or in F
- Automatic Temperature Compensation (pH)
- Hold & Simulate Function
- Relay Options
- Dual Output Option Allows Temperature and pH Signal Transmission



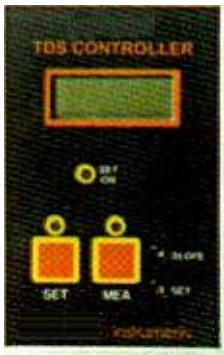
Applications:

- Neutralization systems
- Heavy metals recovery
- Scrubber control
- Plating control
- Water quality monitoring
- Disinfecting

Operating Specifications:

- Each pH/ORP Sensor requires a preamplifier

Mini Controllers



Features:

- Alarm Contact
- LCD Display
- 2-Meter Cables

Applications:

- Neutralization systems
- Heavy metals recovery
- Scrubber control
- Plating control
- Water quality monitoring
- Disinfecting

Operating Specifications:

- pH meters' pH range is from 2 to 12

Options:

- Mini Controllers are 110/220V. Other voltages and models are available.
- Other Electrodes are also available.