

ELC-810 Water Level Controller



The model ELC-810 Automated Water Level Controller is an interactive, fully menu-driven, automated multi-level-sensing control system designed to maintain precise water levels for commercial and residential swimming pools, spas, fountains, and water features. Unlike systems that use floats or other moving parts or introduce an electrical current into the water; the ELC-810 uses proximity sensors to monitor the water level accurately and to automatically activate the auto water make-up control valve. It offers single, dual or tri-level sensing for normal, alternate, and high water levels; integral time delay sequence to avoid cycling due to wave action; and an adjustable feed alarm timer, which interrupts water flow in the event of a problem. In most cases the ELC-810 can be easily retrofitted to an existing pool, spa, fountain, spray ground, or other water feature.



Standard Well

The standard well is designed for mounting at static water levels, usually in a pump pit in the equipment room. For bodies of water with skimmers.



Sight Glass

The sight glass is typically utilized on a balance tank configuration. For bodies of water with balance tanks.



Surge Tank

The surge tank application allows mounting in a surge tank to control water levels. For bodies of water with overflow gutters.



Wet Well

The wet well design allows water level sensing in a 2" static well, usually in the equipment room. For bodies of water with skimmers.



Deck Well

Installed deck side on applications where mechanical equipment is above or below the water level. For bodies of water with skimmers.

INPUTS

Sensors

One, Two, or Three switch sensors sensitive to within +/- 1/8 in. (4mm) of nominal water level

Supply voltage to sensor(s): 12 VDC

Current consumption ≤ 10mA per sensor

Sensor operation temperature 0° C to 60° C

Operating humidity 0% RH to 95% RH

Power

Controller: 115 VAC, 1 phase, 60 Hz

Fused at 2 amps with a user-protected 5 x 20mm fuse

Controller has a 40VA 24VAC transformer protected with a 2.0 A polyfuse to external loads, allowing the system to power a 30VA valve and the internal electronics

Power switch located on side of controller with LED indicator

OUTPUTS

Single solenoid application for water make-up. Controller interlocks with auto water make-up valve and provides adjustable time delay for increasing level.

1 SSR output solenoid valve at 24VAC 1.85 A max. with blue LED indicator

Low Water Shutoff Relay: C, NO, and NC contact are available and rated at 16A, 250VAC or 30 VDC.

Annunciation of 4 alarm conditions

Information in the display defines the specific fault

USER INTERFACE

Menu-Driven Operating System

5-switch user interface with up, down, left and right arrows and enter key with short, audible click with each key press for easy menu setup

All menu settings are capable of password protection

All users may view settings. Use select key to step through menu.

Face Panel

LCD display with white-on-black, 2-line x 16-character alpha/numeric display

Display backlight powers down after a 15 minute period of no key entries and comes back on by pressing any key

Overlay is embossed polycarbonate

USER INTERFACE

Indicators

Power (Green LED on power rocker switch) on left side of controller indicates power supplies are working

Alarm (flashing red LED and audible beeping, if activated) for all alarms

Filling (blue LED)

Normal Level (yellow LED)

Alternate Level (yellow LED)

Flow (green LED)

AMBIENT CONDITIONS

Works in conditions of 0° C to 60° C Sealed case enables use in very humid environments provided case seal is intact

CONTROLS

Timings

Manual Over-ride: Adjustable from 5 seconds to 99 seconds.

Delay to Shutoff: Adjustable from 2 seconds to 5 minutes. (Blue LED flashes when timing)

Maximum On Time: Adjustable from 30 to 240 minutes; or continuous.

Delay to Normal: Adjustable from 1 minute to 60 minutes.

Alarm Conditions

Any of the following four conditions initiates an alarm condition with flashing red LED and audible alarm, if enabled:

1. Maximum On Time Exceeded; normal functions disabled until reset
2. Over-current to Valve; auto restore
3. Sensor not working properly; auto restore
4. No Valve or Wiring Problem; auto restore

SAFETY SYSTEMS

All settings are capable of password protection and are saved in a nonvolatile memory so they are preserved during a power outage

Controller provides separation of high and low voltage

All cordage features watertight strain reliefs

PHYSICAL SPECIFICATIONS

Dimensions (HxWxD) and Weight

4.75 in. x 7.88 in. x 3.5 in.; 3.4 lbs.

Materials and Mounting

Housing: Watertight NEMA 4X UL94 5V UL flammability rated polycarbonate enclosure (meets IP66 and NEMA 4, 4X, 12 & 13 ratings); enclosure and connections designed to eliminate the possibility of corrosion and/or damage to internal components of the controller

Mounting: User mounts unit using four mounting holes located under the lid and outside the gasket seal

MODELS AVAILABLE

ELC-810-XX-ST-000 (Surge Tank)

ELC-810-XX-SW-000 (Standard Well)

ELC-810-XX-DW-000 (Deck Well)

ELC-810-XX-SG-000 (Sight Glass)

ELC-810-XX-WW-000 (Wet Well)

Replace XX with SS (Single Sensing), DS (Dual Sensing), or TS (Tri Sensing) and 000 with Length of Cable

WARRANTY

AquatiControl Technology (ACT) warrants equipment of its manufacture and bearing its identification to be free of defects in workmanship and material. ACT's liability under this warranty extends for a period of one year from date of delivery from our factory or authorized distributor. It is limited to repairing or replacing any device or part which is returned, transportation prepaid, to the factory within one year of delivery to the original purchaser, and which is proven defective upon examination.

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