



ELC-810

AUTOMATED WATER LEVEL CONTROLLER



ALL-IN-ONE CONTROLLER OFFERS
THE EASE OF SINGLE, DUAL
OR TRI-SENSING APPLICATIONS

MAINTAIN PRECISE WATER LEVELS
IN ANY POOL, SPA
OR WATER FEATURE

The model ELC-810 Automated Water Level Controller is an interactive, fully menu-driven, automated multi-water-level-sensing control system designed to maintain precise water levels for commercial and residential swimming pools, spas, spray grounds and other water park 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 level; 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 it can be easily retrofitted to an existing pool or spa.

INPUTS

Sensors

Up to three proximity switch sensors sensitive to within +/- 1/8 in. (4mm) of nominal water level

Supply voltage to sensor(s): 12 V DC
Current consumption < or = 15mA per sensor
Sensor operation temperature 25° C to 70° C
Operating humidity 35% 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 30V valve and the internal electronics plus provide some power for a remote alarm indicator, if desired
Power switch located on side of controller with LED indicator

OUTPUTS

Valves

Up to two solenoid applications for filling and draining; controller interlocks with auto water make-up and drain-off valves and provides adjustable time delay for increasing level and manual override
1 SSR output solenoid valve at 24VAC 1.85 A with blue LED indicator
Alarm has 1 relay output with C, NO and NC contacts available at a terminal block for remote annunciation of 4 alarm conditions-- information in the display defines the specific fault; alternately, the relay may be used to activate a drain solenoid

USER INTERFACE

Menu-Driven Operating System

5-switch user interface with four direction arrows and enter key with short, audible click with each key press for easy navigation through menu

All menu settings are capable of password protection

All users may view settings

Menu Settings

Present Settings Screen:

Delay → Shutoff = 0:02
Maximum on Time = 120 min.
Manual Override = :10
Delay → Normal = 60:00

Level Sensor, ACT
Alternate Sensor, Off

Last Fill Time was: XX : XX : XX
Last Drain Time was: XX : XX : XX
Last Alarm was: XX : XX : XX

Password: Tog ↔ None

Setup Screen (valid password gives access):

Manual Override: 10 Second Default
Delay to Shutoff: 0:02 Default
Maximum on Time: Tog ↔ 120 min. Default
Alternate Sensor: Tog ↔ Off (On)
Delay to Normal: 60:00 Default
High Level Option: Tog ↔ No (Yes)
Flow Sensor Type: Tog ↔ Closed (Open)
Level Sensor Type: Tog ↔ ACT (OTHER)
Sounder with Alarm: Tog ↔ Yes (No)

Filling Screen:

Manual Override: XX
Auto Fill: XX : XX : XX
High Level Drain: XX : XX : XX

Delay Screen:

Auto Fill: XX : XX : XX
Delay to Normal: XX : XX : XX

Alarm Screen:

ALARM: Maximum on time exceeded
ALARM: Over-current to valve
ALARM: No valve, or wiring problem
ALARM: Sensor not working properly

Face Panel

LCD display with white-on-black lettering, 2-line x 24-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

Indicators

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 the above-listed four alarm conditions

Other indicators

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

Controller has a 15-second rolling slosh filter with 0.1-second samples for fluid detection

Delay to Shutoff: 2 seconds to 5 minutes, with ability to adjust to the second

Maximum On Time: Adjustable from 30 to 240 minutes; may be disabled for extended or unlimited filling

Manual Override: Adjustable from 5 to 99 seconds for override activation of the solenoid valve(s)

Alarm Conditions

Any of the following four conditions initiates an alarm and brings on the relay output, the red LED and audible alarm:

1. Maximum On Time has been reached; normal functions disabled until reset
2. No. 24 VAC for valve, i.e., polyfuse is open; auto restore
3. No valve load, i.e., valve or wiring failure; auto restore
4. Sensor not working properly; auto restore

A fifth alarm condition is the high drain, where the relay is used for the drain solenoid valve--the red LED flashes at double rate but without audible alarm; alarm resets when water reaches normal level

SAFETY SYSTEMS

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

The 24VAC is monitored by the microcontroller; if it detects that the polyfuse is open due to an overcurrent condition, or that no load is present when it turns the valve on, an alarm is output

Sensor alarm can be disabled for use with other types of sensors

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-DS-ST (Dual Sensing / Surge Tank)
ELC-810-TS-ST (Tri-Sensing / Surge Tank)
ELC-810-SS-ST (Surge Tank applications)
ELC-810-SS-SW (Standard Well applications)
ELC-810-SS-DW (Deck Well applications)
ELC-810-SS-SG (Sight Glass applications)
ELC-810-SS-WW (Wet Well applications)

WARRANTY

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.

ACT disclaims all liability for damage during transportation, for consequential damage of any nature, for damage due to handling, installation or improper operation, and for determining suitability for the use intended by the purchaser.

ACT makes no warranties, either expressed or implied, other than those stated above. No representative has authority to change or modify this warranty in any respect.

AQUATIC CONTROL TECHNOLOGY PRODUCTS

The ELC-810 Automated Water Level Controller is part of a full line of AquatiControl products and equipment for the commercial aquatic market.



AquatiControl
TECHNOLOGY

2771 West Oxford Avenue, Suite 2
Englewood, CO 80110
Ph: 303-762-9470 • Toll Free: 877-755-8817
Fax: 303-761-1499
Email: info@aquaticontrol.com
www.aquaticontrol.com