



# ADVANCED UNIVERSAL INTERLOCK

PRODUCT MANUAL

# ADVANCED UNIVERSAL INTERLOCK





## THE CONTENT

Warning 04

Product Specification 05

Setup Instructions 05

Operating Instructions 10

Troubleshooting Guide 10

Limited Warranty 11

# WARNINGS

## READ AND FOLLOW ALL INSTRUCTIONS

To reduce the risk of injury, do not permit children to use this product.

Children must stay away from this product and electrical cord(s).

Assembly and disassembly by adults only.

Cleaning and user maintenance must be performed by adults only who understand the risk of electric shock.

Device should be installed by a qualified & experienced technician; Use in commercial settings only. Not for residential use.

Risk of electric shock. If replacement of the plug or cord is needed, use only identical replacement parts.

Always unplug this product from the electrical outlet before removing, cleaning, servicing or making any adjustment to the product.

Risk of electric shock. Connect this product only to a grounding type receptacle protected by a ground-fault circuit interrupter (GFCI) or residual current device (RCD). Contact a qualified electrician if you cannot verify that the receptacle is protected by a GFCI/RCD. Use a qualified electrician to install the GFCI/RCD, which has a maximum rate of 30mA. Do not use a portable residual current device (PRCD).

To reduce the risk of electric shock, replace damaged cord immediately. Use a qualified electrician to replace the cord.

To reduce the risk of electric shock, do not use extension cords, timers, plug adaptors or converter plugs to connect unit to electric supply; provide a properly located outlet.

Do not attempt to plug in or unplug this product while standing in water or when your hands are wet.

Do not use an appliance leakage current interrupter (ALCI) in place of a GFCI since the ALCI will not protect people.

People using medications and/or having an adverse medical history should consult a physician before using this product.

Do not use drugs or alcohol before or during the use of this product.

Do not use this product when it is snowing, raining, thundering or lightning.

Do not sit, straddle, step or exert pressure on the product as injury could occur.

Do not modify this product and/or use accessories not supplied by the manufacturer.

This product is intended to be used only for the purposes described in the manual!

**FAILURE TO FOLLOW THESE WARNINGS MAY RESULT IN PROPERTY DAMAGE,  
ELECTRIC SHOCK, ENTANGLEMENT OR OTHER SERIOUS INJURY OR DEATH.**



## SAFETY INTERLOCK FOR POOLS

The Advanced Universal Interlock provides multilayer protection against accidental chlorine gas creation in pool circulation systems.

Configurable to work with all chemical controllers, feed systems, and many safety switches. Stops chemical pumps upon loss of flow.

## PRODUCT SPECIFICATION

Model	AUI
Voltage	Output 120AC, 60Hz, 12 Amps Input 120AC, 60Hz, 12 Amps

## SETUP INSTRUCTIONS

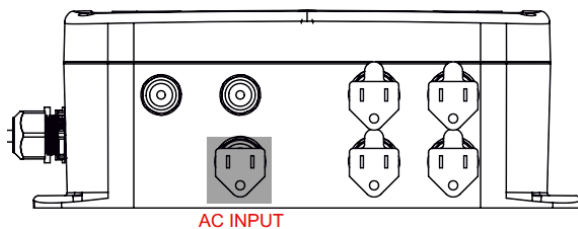
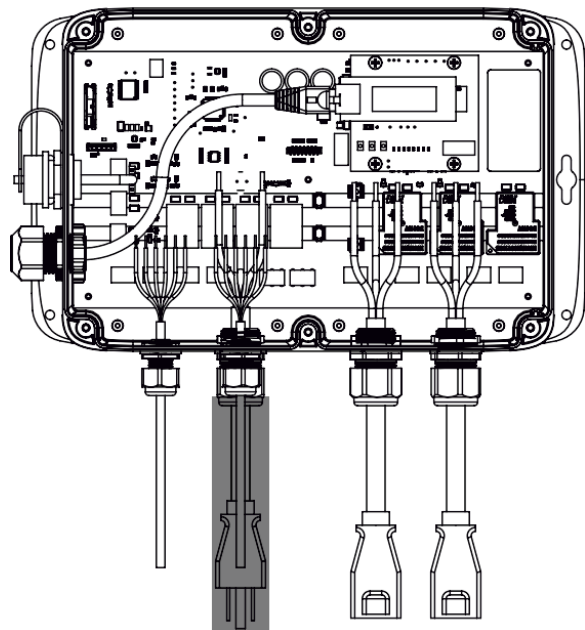
### MOUNTING

Mount AUI vertically on a wall with cords facing down towards the ground.

Secure the AUI to the wall with screws through the keyhole mounts on the AUI sides.

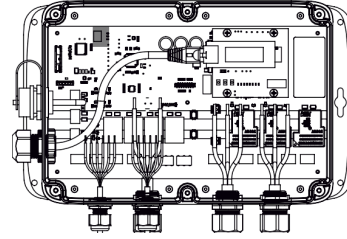
### POWER CORD

Plug the AUI into a 120VAC, 15Amp, 60 Hz Ground Fault Circuit Interrupted (GFCI) protected outlet.



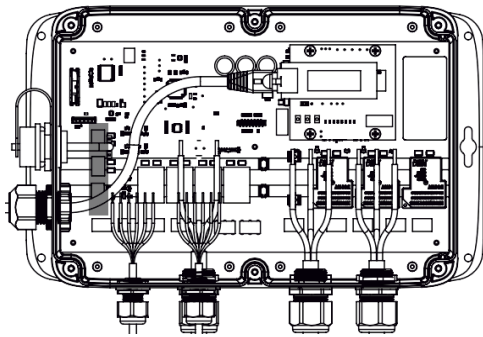
## DIP SWITCH SETTINGS

Set the dip switches to include the dry contact closure inputs in the data log.



DRY CONTACT CLOSURE INPUT	ENABLED	DISABLED
Dry Contact Closure Input 1	DIP SWITCH 1 = ON	DIP SWITCH 1 = OFF
Dry Contact Closure Input 2	DIP SWITCH 2 = ON	DIP SWITCH 2 = OFF
Dry Contact Closure Input 3	DIP SWITCH 3 = ON	DIP SWITCH 3 = OFF

## DRY CONTACT CLOSURE INPUTS



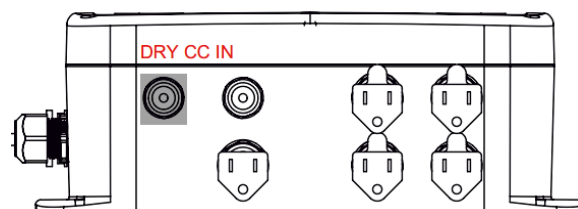
Wire Normally Open and Common terminals of a dry contact closure device's output to an AUI Dry Contact Closure Inputs.

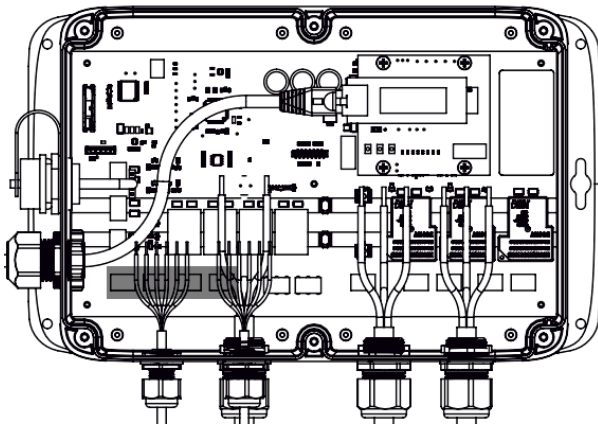
Any OPEN condition on any Dry Contact Closure Input will set the AUI into Alert Mode.

All Dry Contact Closures must be CLOSED to set the AUI into NORMAL mode.

DRY CONTACT CLOSURE INPUT 1	DRY CONTACT CLOSURE INPUT 2	DRY CONTACT CLOSURE INPUT 3	AUI STATE
OPEN	OPEN	OPEN	ALERT
OPEN	OPEN	CLOSED	ALERT
OPEN	CLOSED	OPEN	ALERT
OPEN	CLOSED	CLOSED	ALERT
CLOSED	OPEN	OPEN	ALERT
CLOSED	OPEN	CLOSED	ALERT
CLOSED	CLOSED	OPEN	ALERT
CLOSED	CLOSED	CLOSED	NORMAL

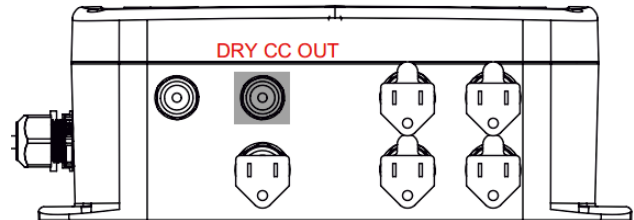
\*Note: Any unused Dry Contact Closure Input must be shorted closed by a wire jumper. The status of each Dry Contact Closure Input is indicated by the LEDs on the enclosure. If a Dry Contact Closure Input is disabled by its dip switch setting, the LED on the enclosure will be off. Dry Contact Closure Inputs that are opened will be illuminated solid red. Dry Contact Closure Inputs that are closed will be illuminated solid green.





Wire devices (controllers or feed pumps with contact flow input) to the dry contact closure outputs. Use devices powered from a Class 2 power supply only.

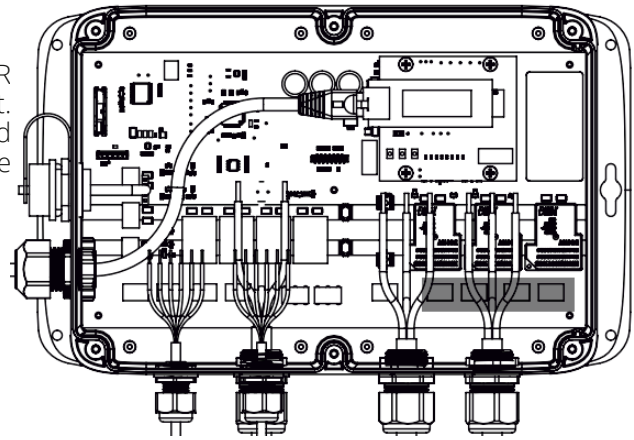
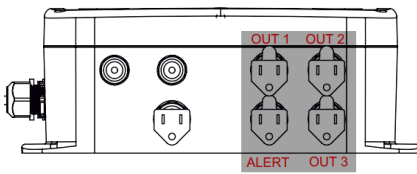
Maximum dry contact closure output rating is 2 Amps, 24VDC.



DRY CONTACT CLOSURE OUTPUT	AUI STATE = NORMAL	AUI STATE = ALERT
Dry Contact Closure Output 1	Dry Contact Out = CLOSED	Dry Contact Out = OPEN
Dry Contact Closure Output 2	Dry Contact Out = CLOSED	Dry Contact Out = OPEN
Dry Contact Closure Output 3	Dry Contact Out = CLOSED	Dry Contact Out = OPEN
Dry Contact Closure Alert Output	Dry Contact Out = OPEN	Dry Contact Out = CLOSED

Powered outputs (120VAC, 12 Amp, 60 Hz).

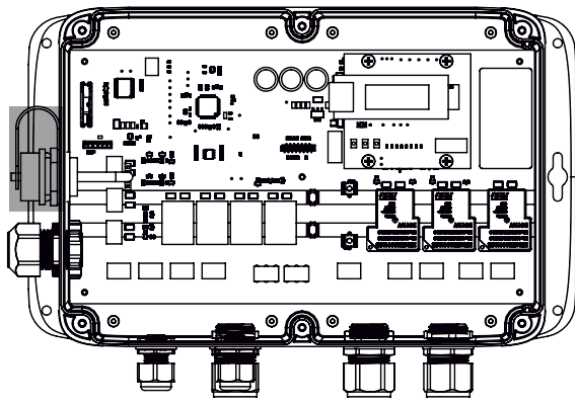
Plug in pumps / alert devices into NEMA 5-15R corded sockets. Total current for all powered outputs and powered alert output must not exceed 12 Amps. See table below for on / off states for each powered output.



AUI STATE = NORMAL	AUI STATE = ALERT
Powered OUT 1 = ON	Powered OUT 1 = OFF
Powered OUT 2 = ON	Powered OUT 1 = OFF
Powered OUT 3 = ON	Powered OUT 1 = OFF
Powered ALERT OUT = OFF	Powered ALERT OUT = ON

The AUI logs the status for the Dry Contact Closure Inputs every minute. If a Dry Contact Closure changes from CLOSED to OPEN or from OPEN to CLOSED, the data log is also updated immediately. To save data log in to USB drive:

a) Open USB port cover.

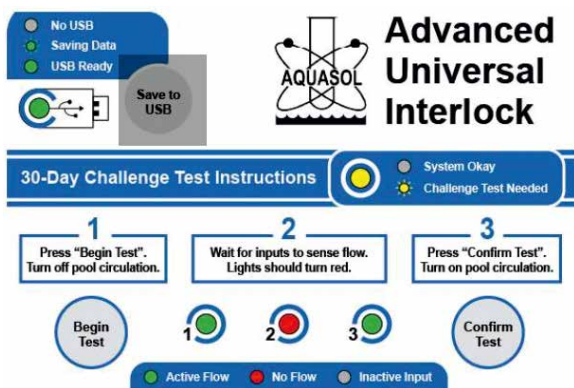


b) Plug in USB flash drive and wait for USB LED to turn solid Green.



c) Press and hold Save to USB button for 5 seconds.

d) The USB LED will begin to blink Green.



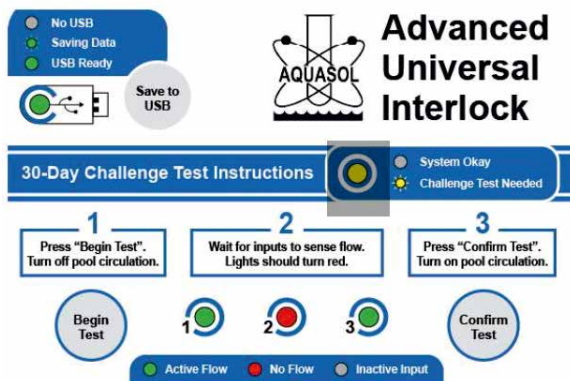
e) Once all the data is written, the USB LED will turn solid Green. If the USB drive fails to save, the USB LED will turn solid RED, and the AUI will reset.

f) Remove the USB flash drive from the AUI USB port.

g) Replace and secure USB cap back onto the AUI USB port.



# 30 DAY CHALLENGE TEST



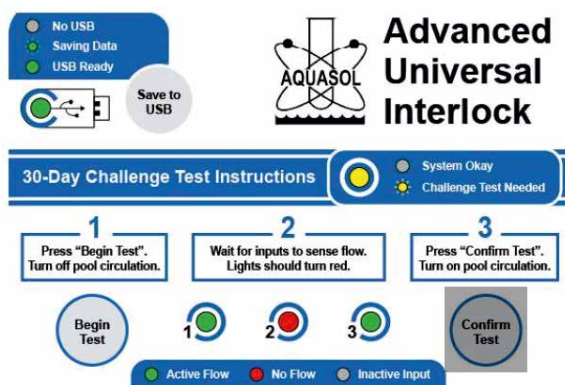
Every 30 Days, the AUI will alert pool operator that a "Challenge Test" should be performed by flashing the challenge test LED.

a) To perform the challenge test, press the Begin Test button. The Challenge Test LED will now turn on solid yellow.

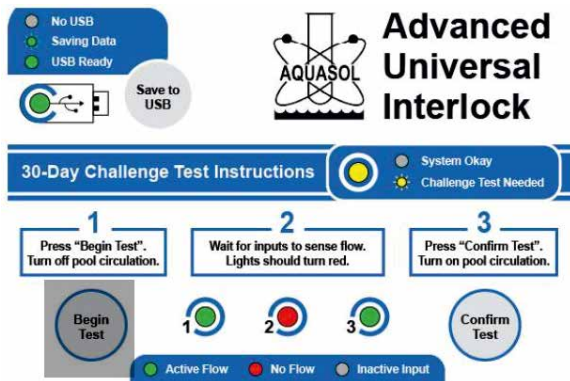
b) Each dip-switch enabled Dry Contact Closure Input must be opened and then closed. This is achieved by shutting off circulation to the pool and then restoring it.

c) Press the Confirm Test button to end the 30 Day Challenge Test. If you do not complete the test and press Confirm Test, the test will expire in 10 minutes and will be logged as a failed test in the data log.

If you do not open and close each dip-switch enabled contact closure, the test will also be logged as a failed test. You can cancel a test by pressing and holding the Begin Test and Confirm Test buttons for 5 seconds.



# INSTANT CHALLENGE TEST



The 30 Day Challenge Test can also be manually started at any time. Successfully completing a manual Challenge Test will reset the 30 Day counter for the 30 Day Challenge Test.

a) Begin a challenge test by pressing and holding the Begin Test button for 5 seconds.

b) Each dip-switch enabled Dry Contact Closure Input must be opened and then closed.

c) Press the Confirm Test button to end the 30 Day Challenge Test. If you do not complete the test and press Confirm Test, the test will expire in 10 minutes and will be logged as a failed test in the data log.

If you do not open and close each dip-switch enabled contact closure the test will also be logged as a failed test.

You can cancel a test by pressing and holding the Begin Test and Confirm Test buttons for 5 seconds.

# OPERATING INSTRUCTIONS

It is recommended that multiple switch input devices are used at each pool and that at least one of them is installed at the point of chemical injection. Possible devices include but are not limited to:

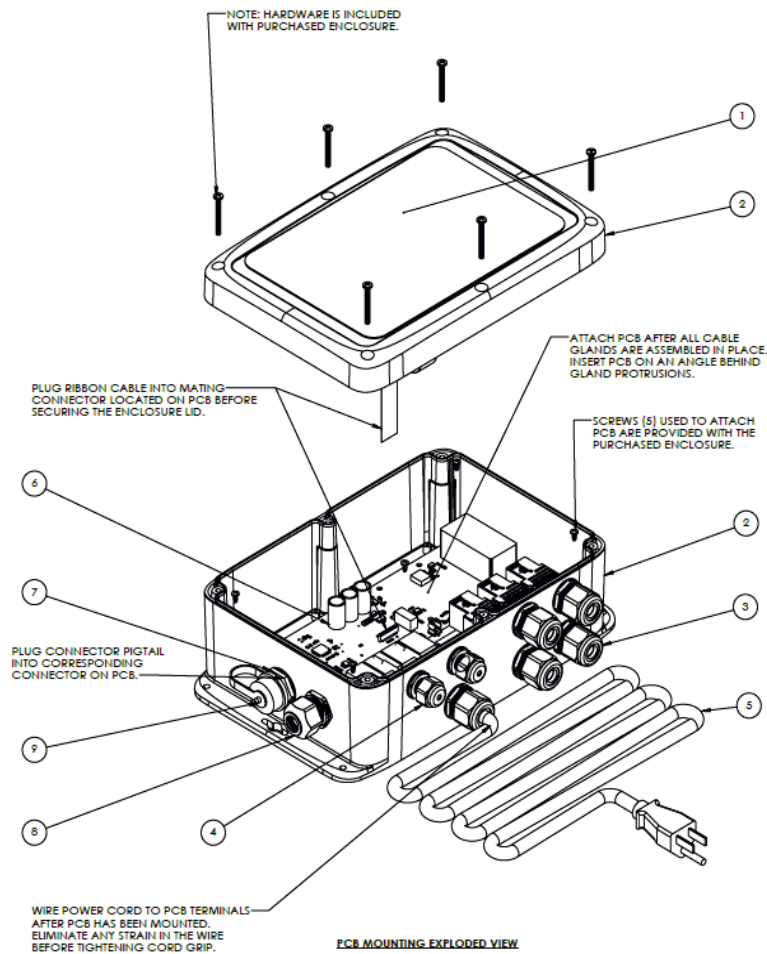
Pressure Switch

Flow Switch

Float or Level Switch

Current Switch

## TROUBLESHOOTING GUIDE



ITEM NO.	PART #	DESCRIPTION	
1	9808-023	Membrane Switch Overlay	1
2	9808-022	Enclosure	1
3	O-1327-01	Cord Grip, Compact Liquid-Tight	5
4	O-1425-01	Cord Grip_Black Nylon_IP68_.12-.26 Cord OD	2
5	CA-0154-01	NEMA 5-15P_14awg 3c_SJTW Cord_6.5ft	1
6	9808-027	PCB Assembly	1
7	CN-0705-01	USB A Corn_Panel Mount	1
8	O-1426-01	Rj45 Feed Through	1
9	O-1427-01	USB_A_B Connector Cap with Rubber Lead	1

# LIMITED WARRANTY

We guarantee the Aquasol AUI to be free from defects in material and workmanship for one (1) year from the date of sale to the individual purchaser, with an additional extended warranty on specified electronic components.

Should a defect occur, return part or component postage or shipping prepaid as provided below, and we will:

During the first 12 months from the date of sale to the customer at our option, either replace or repair any defective parts free of charge, charging only for postage or shipping.

During the first 5 years (60 months) from the date of sale, Aquasol Controllers will replace or repair any defective electronic component (except fuses or relays) on the printed circuit board free of charge, charging only for postage or shipping. This warranty is limited to electronic components only, and to the original purchaser, and is set in force only by the return of the included warranty registration card. Any modification or alteration of the electronic circuitry renders this warranty null and void. Chemical damage is not covered.

NOTE: ALL PARTS NEEDING REPAIR OR REPLACEMENT MUST BE SENT PRE-PAID TO:

AQUASOL CONTROLLERS, INC.

1707 TOWNHURST DRIVE

HOUSTON, TX 77043

This guarantee does not provide for labor for service rendered at the site of installation, nor does it include service necessitated by damage to misuse, abuse, improper line voltage, fire, or other acts of God. This guarantee is limited only to the Aquasol AUI and does not apply to other accessories used in conjunction with its operation. THE LIABILITY OF AQUASOL CONTROLLERS, INC. ON ANY EXPRESSED OR IMPLIED WARRANTY IS LIMITED TO THE ORIGINAL PURCHASE PRICE OR THE COST OF UNIT REPLACEMENT IS STIPULATED ABOVE. Should a defect occur, the defective part should be returned to the selling dealer for shipment to Aquasol Controllers, Inc. or may be returned directly should this not be reasonable. Repairs or replacement will be made within a reasonable period of time. AQUASOL CONTROLLERS, INC. WILL NOT BE LIABLE FOR ANY CONSEQUENTIAL DAMAGES OR INCONVENIENCE CAUSED BY A DEFECT IN OR THE ABSENCE OF THE AUI UNIT. The period of time deemed reasonable will be dependent upon the nature of the defect and availability of parts.

THIS WARRANTY CONTAINS ALL WARRANTIES EXTENDED BY AQUASOL CONTROLLERS, INC., EITHER EXPRESSED OR IMPLIED, AND THE DURATION HEREOF IS LIMITED TO THE PERIOD OF TIME SPECIFIED ABOVE. THIS WARRANTY WILL BECOME VALID ONLY UPON COMPLETION AND RETURN OF THE INCLUDED WARRANTY CARD WITHIN 10 DAYS AFTER THE DATE OF PURCHASE.



**1707 Townhurst Drive  
Houston, Texas 77043**

**Phone: 713-683-6406  
Toll Free: 800-444-0675**

**Fax: 713-683-6490  
Web: [www.aquasol.com](http://www.aquasol.com)  
Email: [sales@aquasol.com](mailto:sales@aquasol.com)**

**8:00 a.m. – 5:00 p.m.  
Monday – Friday**