



**HAYWARD®**

# Input/Output Expander

for OmniLogic

## Owner's Manual

### Contents

Description.....	2
Installation.....	2
Configuration.....	6

HLIOEXPAND

Hayward Pool Products  
620 Division Street, Elizabeth NJ 07207  
[www.hayward.com](http://www.hayward.com)



# HAYWARD®

## FCC Statement

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by Hayward could void the user's authority to operate this equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio / TV technician for help.

## Industry Canada Statement

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

The term "IC" before the certification / registration number only signifies that the Industry Canada technical specifications were met.



# HAYWARD®

## Description

The HLIOEXPAND is an expander board accessory for all OmniLogic pool controls. It offers four additional temperature sensor inputs, pool/spa valve actuator outputs and low voltage (dry contract) outputs to control various pool and backyard equipment. After installation, the OmniLogic will detect the HLIOEXPAND and allow you to configure the additional input/outputs to control and/or monitor your pool and backyard equipment.

**SENSOR INPUT:** Use only Hayward 10k ohm thermistor type temperature sensors (not included). Hayward recommends the multipurpose "PC" sensor available at local Hayward dealers.

**VALVE ACTUATOR OUTPUT:** 24 VAC, 0.55 A, fuse protected

**LOW VOLTAGE DRY CONTACT RELAY:** 24 VAC, 0.5 A max

## Installation

**DANGER of Death, Injury or Property Damage if procedure not followed.** This accessory connects to the OmniLogic panel beneath the dead front. Dead front removal is required for this installation. Power to the OmniLogic panel **MUST** be shut off before the dead front is removed. This means a complete shutdown of power to the entire OmniLogic panel.

### Overview

The HLIOEXPAND is design to slide between guide rails and insert into a dedicated slot on the OmniLogic main board. Once inserted, the OmniLogic will discover the HLIOEXPAND and its inputs/outputs can be configured within the OmniLogic's CONFIGURATION WIZARD.

There are two "locking" positions when sliding the HLIOEXPAND between the OmniLogic's guide rails. The first position will hold the board in place to allow easy access to wire sensors, valves, and low voltage equipment. Once all connections are made, slide the HLIOEXPAND further into the second position. The HLIOEXPAND should insert firmly into the OmniLogic main board's slot and lock in place.

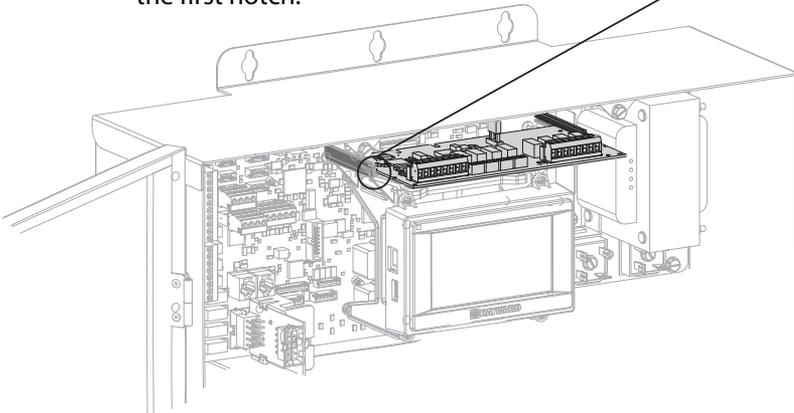
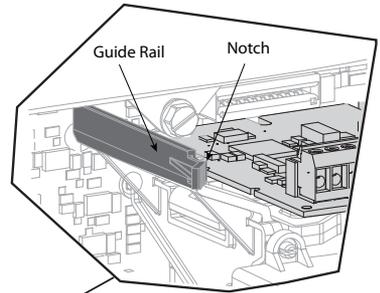


# HAYWARD®

## Lock HLIOEXPAND into Position 1

1. Remove power to the entire OmniLogic panel.
2. Remove the OmniLogic deadfront to expose the main board and relays.
3. Slide the HLIOEXPAND between the guide rails until it locks as shown below. In this position, the board will be sticking out from the enclosure allowing access to the wiring connections on the HLIOEXPAND.

**Position 1**  
Insert HLIOEXPAND board  
until the guide rails clips into  
the first notch.



## Wiring

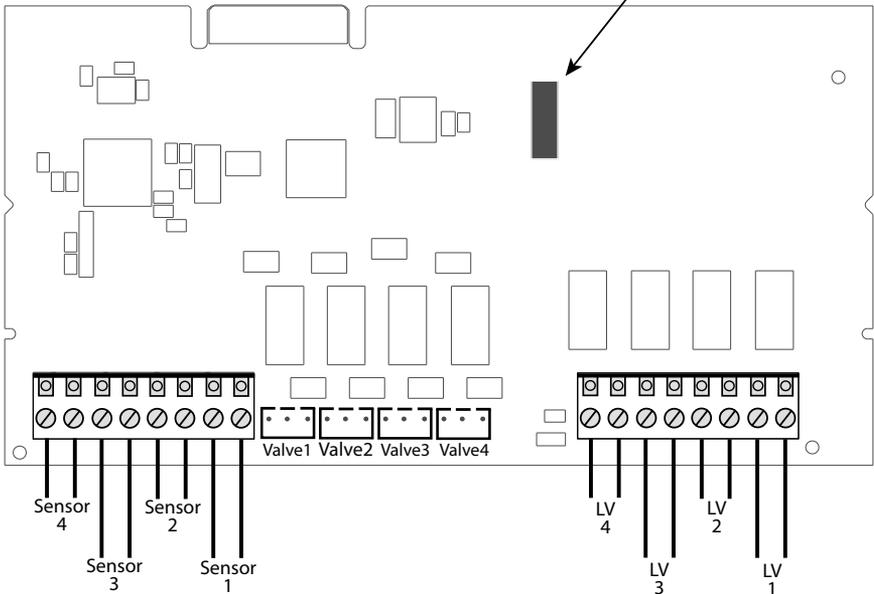
Refer to the diagram below for the location of the wiring connectors for temperature sensors, valve actuators and low voltage pool/spa equipment. For detailed information about wiring these components, Low Voltage Wiring section of the OmniLogic Installation manual.

When making these connections, be aware that wires should be routed to the low voltage side of the OmniLogic. Taking care when routing wires will help prevent the possibility of pinching a wire when re-mounting the panel.

After all connections have been made, use wire anchors and ties to secure the bundle of wires coming from the HLIEXPAND. Two anchors (with adhesive back) and two nylon ties straps are provided. When determining a location to mount the anchors, be sure to position wiring below the deadfront and above the OmniLogic's main board.

Note that the actuator outputs are protected by a 4 amp "automotive" type fuse. This fuse can be replaced if necessary.

4A replaceable fuse

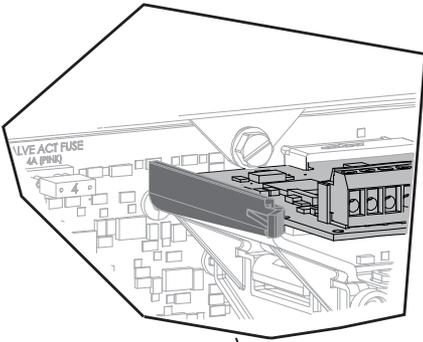




# HAYWARD®

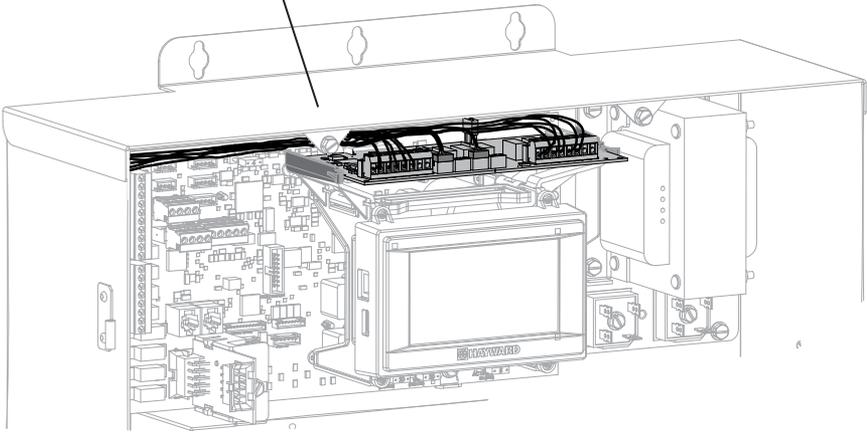
## Lock HLIOEXPAND into Position 2

1. With all the wires attached, slide the HLIOEXPAND between the guide rails until it locks into position 2 as shown below. If the board is difficult to slide, you may have to spread the guide rails slightly to release the board from position 1.
2. Replace the OmniLogic deadfront and fasten.
3. Restore power to the OmniLogic.



### **Position 2**

Slide the HLIOEXPAND board all the way until it inserts firmly into the OmniLogic main board's slot. The guide rails will lock as shown.





# HAYWARD®

## Configuration

The HLIOEXPAND will be automatically discovered at power up and can be found in the CONFIGURATION WIZARD. As you progress through the wizard, the four additional valve outputs, low voltage outputs, and temperature sensor inputs will all be displayed in their corresponding tables. They can be easily identified by looking for "IO Module" under "Device Type" in the tables (as shown below). Refer to the OmniLogic Installation Manual for details on how to configure valve outputs, low voltage outputs and temperature sensor inputs.

HLIOEXPAND  
VALVES

**Select Device** ▲ ▼

HUA	Device Name	Device Type
0165002a9a	VLV4	Main Panel
0410000001	VLV1	IO Module
0410000001	VLV2	IO Module
0410000001	VLV3	IO Module
0410000001	VLV4	IO Module

⏻
🔧 SELECT device
✖
✔

HLIOEXPAND  
Low Voltage Output

**Select Device** ▲ ▼

HUA	Device Name	Device Type
0165002a9a	LVR4	Main Panel
0410000001	LVR1	IO Module
0410000001	LVR2	IO Module
0410000001	LVR3	IO Module
0410000001	LVR4	IO Module

⏻
🔧 SELECT device
✖
✔

HLIOEXPAND  
Temperature Sensors

**Select Device** ▲ ▼

HUA	Device Name	Device Type
0165002a9a	SNS5 (DE SPA)	Main Panel
0410000001	SNS1	IO Module
0410000001	SNS2	IO Module
0410000001	SNS3	IO Module
0410000001	SNS4	IO Module

⏻
🔧 SELECT device
✖
✔

For further information or consumer  
technical support, visit our website at  
**[www.hayward.com](http://www.hayward.com)**



Hayward is a registered trademark and OmniLogic is  
a trademark of Hayward Industries, Inc. © 2013 Hayward Industries, Inc.

All other trademarks not owned by Hayward are the property of their respective owners.  
Hayward is not in any way affiliated with or endorsed by those third parties.

USE ONLY HAYWARD GENUINE REPLACEMENT PARTS