



HAYWARD®

1007446 RevA

Input/Output Expander

for OmniLogic

Owner's Manual

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HLIOEXPAND

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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.



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Introduction

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. Included with the HLIOEXPAND is a plastic scaffolding (for OmniLogic models built after 2023) and plastic anchors to secure wiring.

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

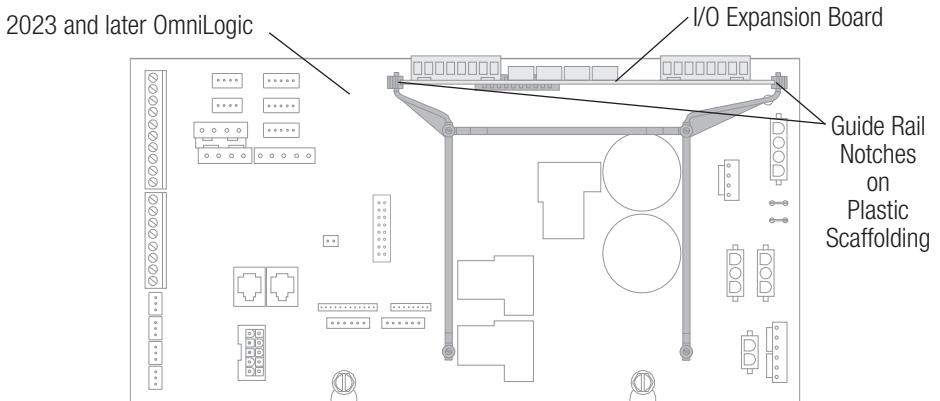
Low Voltage Dry Contact Relay: 24 VAC, 0.5 A max

Installation

Overview

The HLIOEXPAND is designed to slide between guide rails on the plastic scaffolding 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 scaffolding's guide rails (shown below). 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.



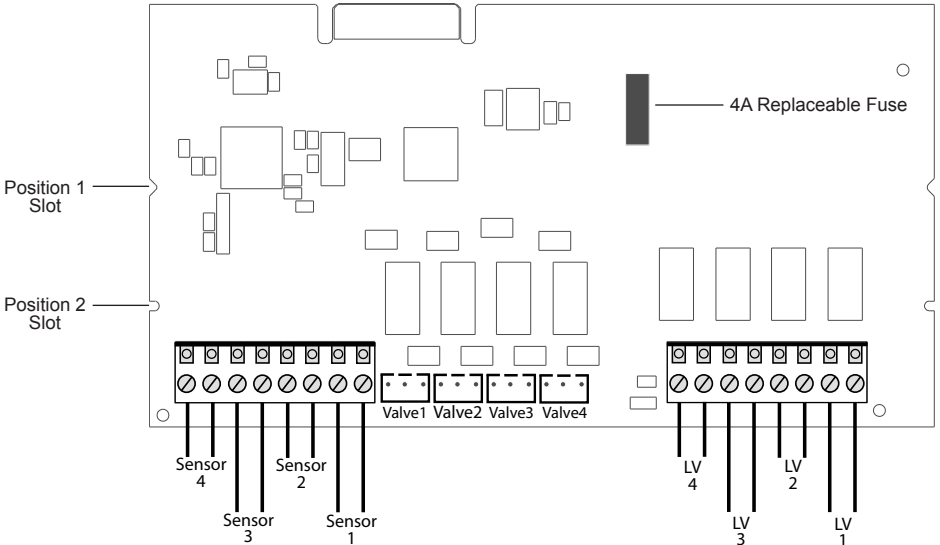
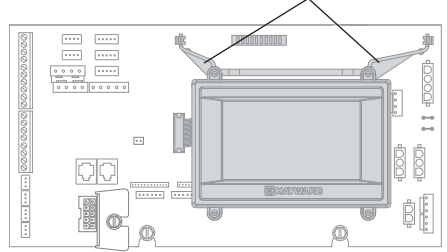


Wiring

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.

1. Remove power to the entire OmniLogic panel.
2. Remove the OmniLogic deadfront to expose the main board and relays.
- 3a. **Pre-2023 OmniLogic models:** These models have a local touchscreen with built-in scaffolding that supports the HLIOEXPAND. For pre-2023 models, the scaffolding included with the HLIOEXPAND is not needed.
- 3b. **2023 and newer OmniLogic models:** Install the included plastic scaffolding as shown in the image on page 2.
4. Slide the HLIOEXPAND between the guide rails until it locks into the Position 1 slot as shown in the image below. In this position, the board will be sticking out from the enclosure allowing access to the wiring connections on the HLIOEXPAND.
5. 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.

Pre-2023 OmniLogic Models
(scaffolding already installed)





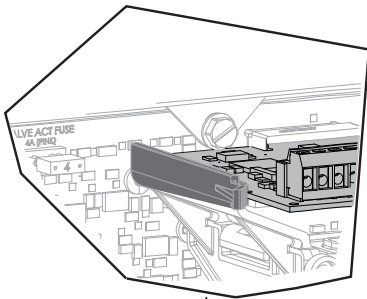
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When making these connections, be aware that wires should be routed to the low voltage side of the OmniLogic. Taking care when routing wires will help prevent the possibility of pinching a wire when re-mounting the panel.

After all connections have been made, use wire anchors and ties to secure the bundle of wires coming from the HLIOEXPAND. 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.

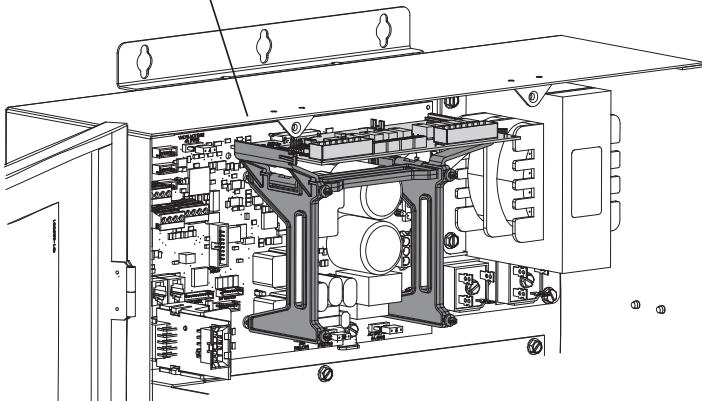
Lock HLIOEXPAND into Position 2

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.





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
✖
✔



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technical support, visit our website at
www.hayward.com



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