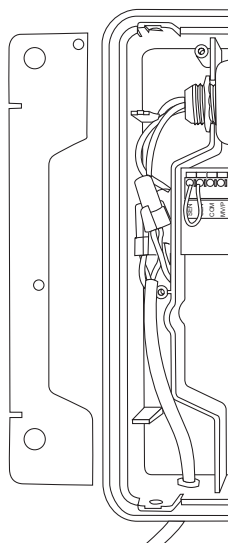


SL1600 Interior Layout

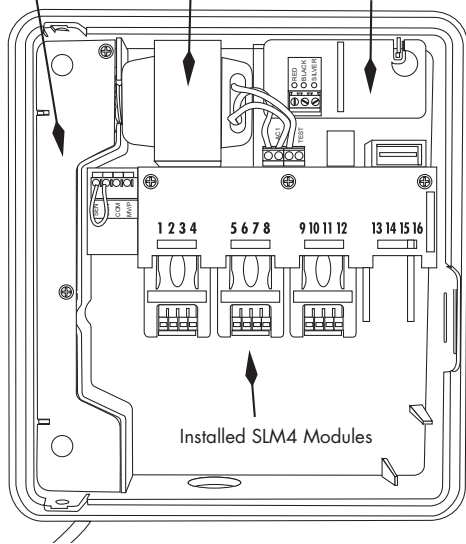
AC Wiring Cavity with panel removed



AC Wiring Cavity panel

Transformer

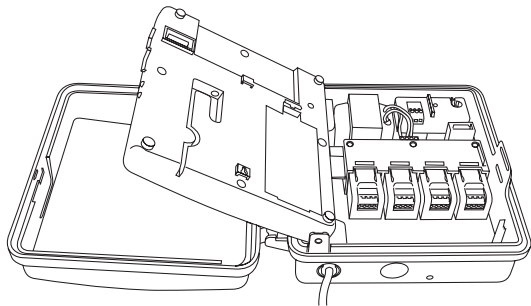
Optional SLHUB Communication Hub



Controller Installation

All SL1600 controller housings are designed for indoor or outdoor installation. Your SL1600 controller can be located in any convenient spot such as inside the garage or on an outside wall. It is recommended that you choose a location where the irrigation system will not be spraying directly on the controller, in the event that the housing door is left open.

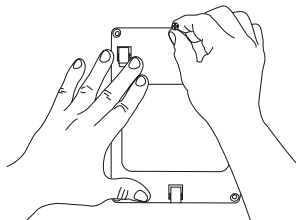
- Open the controller's front door, then open the control panel of your SL1600 controller.
- Remove the control panel from the SL1600 controller housing by pushing upward and outward to remove from the hinges, then set the control panel aside in a safe place.



- Mount the SL1600 controller with or without using the SL1600 controller Quick Mount bracket.

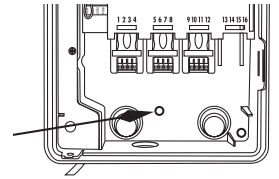
Installing With Quick Mount Bracket (recommended)

- Determine mounting height for easy viewing and be sure to mount low enough for field wires to reach all controller wiring terminals and test post at top of controller.
- Place the mounting bracket against the wall so that the word "CONTROLLER SIDE" is visible and the open ends of the housing retainers are pointing upward.
- Using one of the mounting screws (or a pencil) mark the location onto the wall of the top/center hole (see photo below).



- Install a wall anchor in the marked position then install the bracket onto the anchor using one of the mounting screws provided (do not tighten screw fully yet). The center screw will automatically level the bracket on the wall. After level is set, mark the other mounting holes and install the remaining wall anchors.

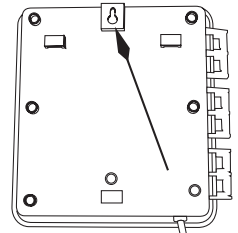
- Install other screws through bracket into anchors (except for bottom center screw) and tighten all screws.
- Align controller housing with the three retainers on the bracket and lower it into place.
- For additional security, install a bottom center mounting screw from the inside of the controller. Drive the provided screw through the mounting notch located just below the zone modules to secure the controller to the bracket and wall anchor.



Installing Without Quick Mount Bracket

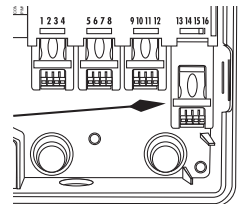
- Determine mounting height for easy viewing and be sure to mount low enough for field wires to reach controller wiring terminals and test post at top of controller.
- Install a wall anchor in the desired location. This will be for the top/center hanger hole of the controller.
- Install one of the mounting screws provided into the wall anchor.

Hang the controller on the mounting screw by positioning the controller on the head of the mounting screw. Check the controller for level, then drive a 2nd screw into the "notch" inside the bottom/center location.



SLM4 Module Installation

- Your SL1600 controller is factory equipped with one 4-zone module. You may add three additional SLM4 modules for a total of 16 zones.
- The SL1600 controller will automatically recognize the additional zones as they are installed. No special programming is required to initialize the modules.
- You can insert or remove a module without removing power from the controller.
- To install a module, push the module into the channels until you feel it lock in place. To remove a module, push DOWN on the center release panel on the top of the module and use the top tab to pull it out.



Note: Modules must be inserted in the sequence of numbered zones. Do not leave any gaps in module positions.

AC Power Wiring

- Plug the included 6-foot line cord into a 120VAC outlet. **(E-SL1600 units for international use are prewired for 230VAC.)**
- Do NOT use a switch controlled wall outlet for operating an irrigation controller.



Alternate Wiring

If you are mounting your SL1600 controller outdoors or local electrical codes require hard wiring, proceed with the following steps.

Warning: Connecting the SL1600 controller to the primary power should be done by a licensed electrician following all local codes. To prevent electrical shock, make sure all supply power is OFF before connecting these wires. Electrical shock can cause severe injury or death. This controller is not intended for use by children. Do not allow children to play with the controller.

- Remove the screws that secure the AC Wiring Cavity Panel. This will allow access to the transformer wiring.
- Remove the existing wire nuts connected to the transformer wires.
- For use with conduit, simply remove the line cord knockout. To do this, use a small, flat screwdriver blade in the slot of the knockout on the underside of the controller housing. Tap out the knockout with a hammer. Install the conduit and wiring. Discard the line cord.
- For **120VAC** operation, make the wire connections using wire nuts, indicated in the chart below.
- For **230VAC** operation, make the wire connections using wire nuts, indicated in the chart below.
- Replace the AC Wire Cavity Panel and secure with the screws.
- Return to the breaker box and turn on the circuit breaker. Verify that the controller turns ON.


Wire connections for 120VAC	TRANSFORMER WIRE COLOR	AC INPUT WIRE	NOTE
	BLACK	NEUTRAL	
	WHITE	120VAC HOT	
	RED	DO NOT USE -230VAC	(cover with wire nut)
	GREEN	EARTH GROUND	(typically green wire)


Wire connections for 230VAC	TRANSFORMER WIRE COLOR	AC INPUT WIRE	NOTE
	BLACK	NEUTRAL	(typically WHITE in USA)
	WHITE	DO NOT USE -120VAC	(cover with wire nut)
	RED	230VAC HOT	(typically BLACK in USA)
	GREEN	EARTH GROUND	(typically green wire)

24VAC Valve Wiring

WARNING: Never mix 24VAC and high voltage wiring in the same conduit.

- For **solid wires**, simply push to insert the stripped end of valve wires into the module connector.
- For **stranded wires**, use a small screwdriver blade to push back the orange slide lock trigger first, then insert the stranded wire while holding the trigger in the open position. When you release the slide trigger, the wire will lock in place.
- **Knockouts:** The SL1600 controller provides several convenient knockouts for your choice of routing for valve and accessory 24VAC wiring. The knockouts should be removed by striking with a hammer and screwdriver inwards, toward the inside of the housing.

 Note: Your SL1600 controller utilizes screwless terminals for fast installation.

 Note: To **remove wires**, push back the slide trigger using a small screwdriver and then pull out the wire to remove.

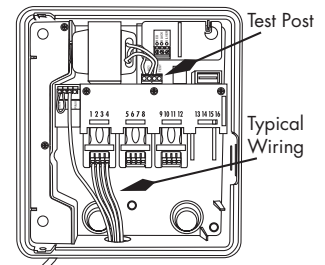
- **COM (Valve Common):** Connect the Valve Common wire to the **COM** terminal.

- **MV/P (Master Valve/Pump Terminal):** Connect one wire to the **COM** position and the second wire to the **MV/P** position. Polarity is not important. Note that the total current of the activated Pump Start Relay AND valve(s) cannot exceed the maximum output current (default is 1.3A).

- **SEN (Rain/Freeze/Wind Sensor):** If you are using an optional rain, freeze, or wind sensor, use the **SEN** terminals for these devices. There is no polarity required for these wires. Remove and discard the factory installed wire jumper.

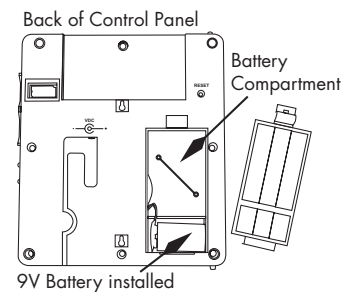
- **Zone Wires:** Connect a zone wire to a terminal on the SLM4 Module. Your SL1600 controller can power a total of 3 valves concurrently or a total of 2 valves with one master valve. Take caution when running a pump start relay so maximum output current does not exceed 1.3A. To locate a zone, touch zone wire to the **TEST POST** and determine which zone valve is ON. Note that the TEST POST is **HOT** even when the control panel is not in the housing.

 Note: If you are **NOT** using an optional rain or freeze sensor, the wire jumper must be in place for your valves to turn ON. The jumper must also be in place if you are using the SLW weather monitor. **SLW WEATHER MONITOR DOES NOT ATTACH TO THESE TERMINALS.**



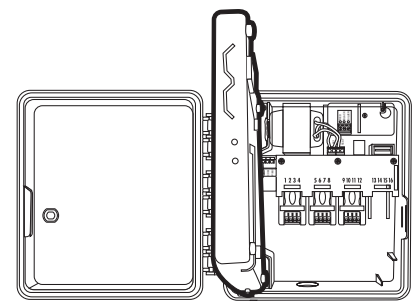
9V Battery Installation

Open the battery compartment on the back of the operating panel and connect the battery to the cables. A new battery will provide backup power for the processor and display for approximately 8 hours during a power failure. The purpose of the 9V battery is to maintain correct clock time during a power failure. The SL1600 controller has non-volatile memory to permanently retain all programs in the event of electrical and battery power loss. When the operating panel is opened or removed, it is operating only on power provided by the 9V battery.



Control Panel Installation

- With the controller and optional SLW20 installation complete, re-insert the control panel into the housing. To do this, hold the operating panel at a 90 degree angle from the housing (see photo below) and position the top of the panel slightly toward the housing and slip the top post into the top hinge, then push the bottom post into the lower hinge. The panel should now swing open and close freely on the hinges.
- The SL1600 controller will automatically restore power and communication to the control panel as soon as it is closed. No ribbon cable is required.



Installation is complete. Proceed to your Owner's Manual to program your controller.