

Technical Specifications

SL1600 SERIES CONTROLLERS

FEATURES

- 4-zone base model, expandable to 16 zones using slide-in SLM4
- 4-zone hot-swappable modules (Indoor/outdoor rated)
- Internal 120VAC/230VAC transformer with plug and play pre-installed 6' line cord (removable for conduit-wired installations)
- Large backlit LCD display
- 2 run modes: Standard mode runs user input zone run times; Auto Adjust mode requires SLW Series On-Site Weather Station to calculate weather based run times that override user input zone run times
- Rain/Freeze sensor bypass/active button located on face panel displays sensor status with tri-color LEDs (red indicates sensor is prohibiting irrigation; orange indicates an extended rain delay after weather station rain sensor permits irrigation; green indicates normal operation)
- 4 programs: A, B, C; program D can operate concurrently
- 8 start times per program
- Nonvolatile memory and real time clock/calendar circuit to retain programs as well as correct date and time – with no battery required
- Zone run times settable from 1 min. to 9 hrs. 55 min. with operation countdown displayed in hours, minutes, and seconds (zone run times overridden by weather based calculated values in Auto Adjust mode)
- Watering day selections of custom days of the week, odd/even, or interval days
- Omit settings: omit time of day window, omit day(s) of week, and omit up to 7 calendar dates
- Seasonal % adjust by program, by month for simple year round water budgeting (monthly percentages overridden in Auto Adjust mode)

ADVANCED FUNCTIONS

- Fault review displays all faults, including open and shorted zones
- Diagnostic test function using on-board multi-meter displays transformer voltage; milliamp measurement for each zone
- Built-in valve locator function for locating hidden valves by simply listening for the audible chatter of the solenoid created by a unique electrical frequency (patent pending)
- Review menu displays accumulated ET deficits by zone (in inches) and corresponding zone run times for the next available watering day
- Review menu displays maximum run time and minimum soak time used during Auto Adjust mode
- Review menu displays temperature readings (daily high/low) for previous 5 days
- Review menu accumulates total run times by zone from the last reset date
- Review menu provides the ability to clear deficits for all zones
- Rain delay of 1 – 7 days may be selected (to pause and automatically resume operation)
- SLW weather station extended rain delay programmable from 0 – 99 hours
- Run/Soak cycles allow setting of maximum run time and minimum soak time by program for use in Standard mode only
- Zone-to-zone delay programmable for 1 min. – 3 hrs. to accommodate slow closing valves and recharging of water supply



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SL1600 SERIES CONTROLLERS *(continued)*

- Master valve timing sequence with zone valve programmable by “On Delay” (1 sec. – 1 min.; 2 sec. default) and “Off Delay” (1 sec. – 3 min.; 5 sec. default) to allow for line fill and slow closing valves
- Master valve/pump start operation assignable On/Off by zone
- Clear program function to selectively delete an individual program
- Clear All function to delete all programs
- Backtrack Stored Program™ feature allows contractor to easily store a default program and retrieve the saved program in the event a customer improperly reprograms the SL1600

AUTO ADJUST FEATURES

- ZIP Code input (5 digit) or Latitude input ($\pm 60^\circ$ from EQUATOR) establish location of site for solar radiation calculation
- Sprinkler type input allows selection for zone sprinkler type (SPRAY, ROTOR, DRIP, BUBBLER) with preset precipitation rate or specific input of the zone precipitation rate (.2 – 3.0” per hour)
- Plant type input allows selection for zone plant type (COOL TURF, WARM TURF, SHRUBS, ANNUALS, TREES, NATIVE) with preset crop factors or specific input of the zone crop factor (10 – 300%)
- Soil type input allows selection for the soil type (CLAY, SAND, LOAM) and slope (0 – 25°) for the purpose of automatically calculating a run/soak period to virtually eliminate run off
- More/Less is settable by zone (-50% to +25%) for the purpose of fine tuning Auto Adjust run times to accommodate factors like shade, wind, and sprinkler inefficiencies

MANUAL OPERATION

- Manual test runs each zone with zone run times from 10 sec. – 10 min.
- Manual zone operation of a single zone (1 min. to 9 hrs. 55 min.)
- Push button manual start of a program from control panel

OPTIONS

- SLM4 4-Zone Module
- Pedestal SLPED-1600
- SLW Series On-Site Weather Stations
- SLRC and Sidekick Remote Controls
- Rain Brain Universal Sensors

ELECTRICAL FOR SL1600

- Input: 120VAC/60Hz @ 400mA for 3 valves
- Output: 28VAC, 1.0A maximum
- Fuse: 1.0A, slow blow



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MODELS

SL1600	4 zone base model, expandable to 16 zones (indoor/outdoor rated)
SL1620	20 permanently mounted zones
SL1624	24 permanently mounted zones
SLM4	4 zone module for use in the SL1600
SLM48DM	2-wire module, expands SL1600 to 48 zones

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SL1600 CONTROLLER

SL1600 CONTROLLER(S) shall be model SL1600 as manufactured by Weathermatic Sprinkler Division of Telsco Industries, or approved equal. Controller(s) shall be a four (4) program controller with hot swappable 4-zone modules to allow expansion to 16 zones.

OPERATION: Controller shall be capable of standard timed watering or auto adjust watering times when equipped with an optional SLW weather monitor manufactured by Weathermatic. Auto Adjust watering shall be based on real time, on-site weather data and system audit data entered by the user. Auto adjust timing shall be based on the Hargreaves ET calculation formula. Controller shall provide reviewable watering deficits, scheduled run times by zone and a total run time recap for each zone which is resettable by the user. A more or less function shall be provided to allow run time adjustment by zone for shade/sunlight, system efficiency and other local factors. Auto adjust mode shall also include automatic calculation of run/soak times based on both soil type and zone elevation.

Each program shall have eight independent start times, calendar schedules, watering budgets by month and a soak/cycle for varying soil percolation rates.

Controller shall have a pump start/master valve position which shall be programmable to operate on demand from any selected zone. A programmable safety delay shall be included for zone to zone delay and master valve to zone delay for opening and closure.

Controller shall have input for rain and freeze sensor devices. Use of the optional SLW weather monitor shall incorporate the rain and freeze shutdown functions and shall incorporate a 48 hour delay after closure of the rain sense switch.

Controller shall have self-diagnostic capabilities to detect “short” or “open” zones and the ability to display lists of faults on an LCD display for the user. Diagnostics shall also include LCD display of volt/amp readings by zone and for transformer output as well as backup battery reading. A chatter function shall also be provided to assist in locating buried valves. The controller shall automatically prevent master valve opening or pump start when the valve locator diagnostic is used.

Display shall be backlit for clear viewing in all lighting conditions. Zone timing shall be settable from 1 minute to 9 hours and 55 minutes.

Program D shall operate concurrently with programs A, B and C. Programs A, B and C shall stack in sequence of start time operation.

Program schedules shall include options for days of the week, odd date, even date or an interval of 1 to 30 days. A ‘no water’ window shall be available to inhibit daily operations of a program between two selected times on a given day; omission of up to 7 specified calendar dates or specific days of the week. Adjustments for leap year shall be automatic.

Manual operation shall be provided by program, by station, or on a programmable test program with durations from ten (10) seconds to ten (10) minutes. The programmable test program shall also check for short and open conditions on each zone each time it is run.

Non-volatile memory shall retain all programming and real-time clock shall be provided to maintain date and time.

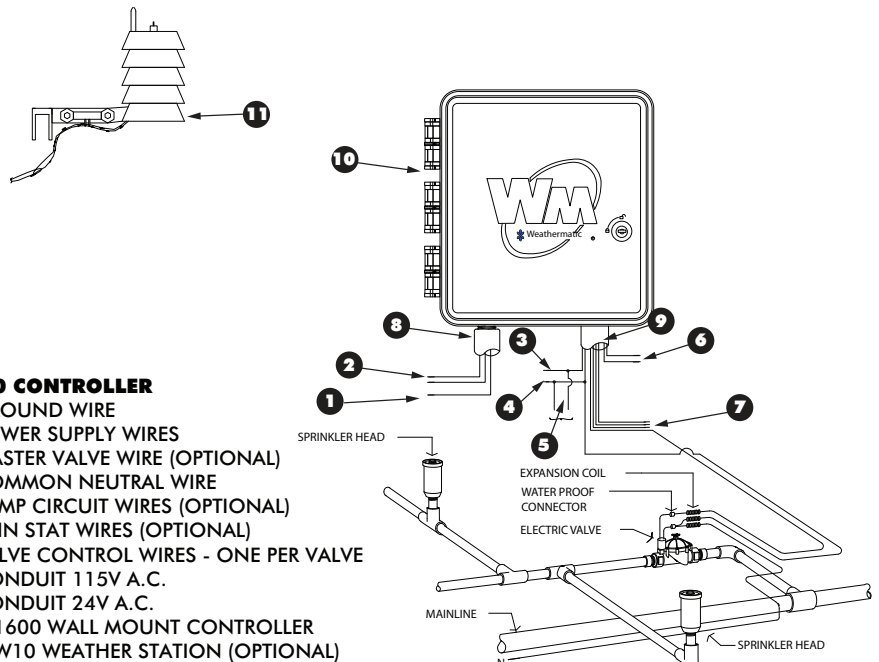
Technical Specifications

SL1600 CONTROLLER *(continued)*

CONSTRUCTION: Controller shall be enclosed in a U.L., CE and C-Mark Listed rainproof plastic enclosure with optional key lock. The enclosure shall be rated for outdoor or indoor use. Enclosure shall be a wall mount (pedestal mount) model with removable knockouts on the lower side and back of the housing for choice of wiring location. The operating panel shall be a totally enclosed module that is removable from the housing for programming at a separate location. A test post for 24V a.c. operation shall be accessible with or without the operating panel. Zone modules (SLM4) shall be self-contained modules that can be installed without turning off power to the unit and programming of new zones shall not be required. Module wiring connections shall be of the type that allows insertion of solid wires without any tool. Each module shall contain its own surge protection.

ELECTRIC: Controller shall be completely electric in operation. Controller shall be installed and wired in accordance with manufacturer's published instructions. Controller shall be capable of operating from an independent power supply. Primary shall be 115V a.c. 60hz or 230V, 50hz.

WARRANTY: Controller shall have a manufacturer's limited warranty of three (3) years.



SL1600 CONTROLLER

1. GROUND WIRE
2. POWER SUPPLY WIRES
3. MASTER VALVE WIRE (OPTIONAL)
4. COMMON NEUTRAL WIRE
5. PUMP CIRCUIT WIRES (OPTIONAL)
6. RAIN STAT WIRES (OPTIONAL)
7. VALVE CONTROL WIRES - ONE PER VALVE
8. CONDUIT 115V A.C.
9. CONDUIT 24V A.C.
10. SL1600 WALL MOUNT CONTROLLER
11. SLW10 WEATHER STATION (OPTIONAL)