

# Technical Specifications

## SL9600TW CONTROLLER

### FEATURES

- 96-zone two-wire controller (Indoor/Outdoor rated)
- Internal transformer with commercial terminal block, On/Off power switch and LED status indicator
- 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
- Rain/Freeze sensor bypass/active button displays sensor status with tricolor LEDs (red indicates sensor is prohibiting irrigation; orange indicates an extended rain delay; green indicates normal operation)
- 4 programs: A, B, C, D Programs can operate stacked or concurrently
- 8 start times per program
- Nonvolatile memory and real time clock/calendar to retain programs and current date and time – no battery required
- Zone run times from 1 min. to 9 hrs. 55 min. with operation countdown displayed in hours, minutes, and seconds
- Watering day selections of custom days of the week, odd/even, or interval days (1 – 30 days)
- Omit settings: omit time of day window, omit day(s) of week, and omit up to 7 calendar dates
- Monthly % adjust by program, for simple year-round water budgeting
- Programs and operates SmartWire™ SLDEC Series decoders
- Connections for up to 3 different 2-wire paths for maximum installation flexibility
- LED display and status lights for programming, operation status, and troubleshooting with error codes
- 5 user selectable languages

### ADVANCED FEATURES

- Two independently programmed master valves - Normally open or normally closed
- Flow sensor data review
- Fault review displays all faults, including open and shorted zones
- On-board multi-meter displays transformer voltage; milliamp measurement for each zone
- Built-in valve locator chatters the solenoids (patent pending)
- Review menu displays ET deficits by zone and corresponding zone run times
- Review menu displays maximum run time and minimum soak times
- Review menu displays temperature readings (daily high/ low) for previous 5 days
- Review menu accumulates total run times by zone
- Programmable rain delay of 1 – 7 days
- SLW Weather Station extended rain delay programmable from 0 – 99 hours



SmartLine Controller	
Model	Description
SL9648TW	48 Zone Two-Wire Controller
SL9696TW	96 Zone Two-Wire Controller

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#### **ADVANCED FEATURES**

- Run/Soak cycles allow setting of maximum run time and minimum soak time by zone for use in Standard mode only
- Programmable zone-to-zone delay 1 min. – 3 hrs.
- Programmable master valve timing sequence with “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 user to easily store a default program and retrieve the saved program in the event a customer improperly reprograms the controller

#### **SLDEC – VALVE DECODERS FEATURES**

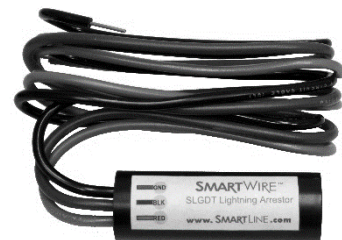
- Decodes signals from SLM48DM to open and close valves
- Fully programmable for valve addresses using SLM48DM
- Input voltage 24 – 28VAC from 2-wire path
- Shock resistant
- Freeze/heat resistant (-20° to 60°C)
- 14 gauge PVC-coated connecting wires
- Sealed electrical components for protection from water and dirt
- Surge protection
- Operates valves to a maximum of 100’ (30m) from decoder
- Diagnoses and reports failed solenoids to the SL9600TW
- Auto shutdown if communication with SL9600TW is lost

#### **SLWIRE – DECODER WIRE FEATURES**

- 2-conductor, jacketed, UL/UF approved for direct burial
- Sunlight resistant

#### **SLGDT – DECODER LIGHTNING ARRESTOR FEATURES**

- Protects the 2-wire system from excessive static charges created by a lightning strike.
- Sealed and impervious to moisture, salts, fertilizers and mild chemicals. Can be buried directly in the soil.
- Shock resistant
- Freeze/heat resistant (-20° to 60° C)
- No electrical contact with the soil
- Each Lightning Arrestor protects a 300 foot radius
- Electrical Specifications
- Requires no power from the 2-wire system
- Can only be connected to SmartWire™ 2-wire systems





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## SL9600TW CONTROLLER

DECODER(S) shall be model SLDEC(1), (2) or (4) as manufactured by Weathermatic Sprinkler Division of Telsco Industries.

**OPERATION:** Decoders shall be reprogrammable on the job site using the SL9600TW's programming port and shall be electrically compatible with any Weathermatic commercial grade 24 VAC low voltage solenoid over the full range of maximum rated operating pressures. Each decoder output shall be capable of operating up to a maximum of two electrical solenoid valves. Decoders shall have two way communications between the controller module and decoders allowing for self-diagnostic testing to indicate a solenoid short, open solenoid, and wire path over-current or communications errors. Each decoder shall have an indelible marking label that to indicate the color code and station for each valve operated by the decoder and that may be marked by the installer for identification.

**WARRANTY:** DECODERS shall have a manufacturer's limited warranty of two (2)\* years provided proper grounding procedures are followed according to the manufacturer's recommendation.

\*3-Years – When used with Weathermatic SLWIRE decoder wire and SLCONN connectors

CONTROLLER(S) shall be model SL9600TW as manufactured by Weathermatic Sprinkler Division of Telsco Industries. All two-wire operation shall include two-way communication between the controller and decoder to notify the user of any error in operation or electrical faults. Controller(s) shall be a four (4) program, stand-alone controllers capable of operating up to 96 remote control valves. Controller(s) shall be compatible with SLW series weather station for fully automatic adjustment of seasonal irrigation schedules.

**OPERATION:** Controller(s) may be programmed to operate with either user supplied station run times or automatically calculated station run times based on SLW weather station data, sprinkler type, plant type, soil type and slope. Automatic water conservation shall be available using either twelve programmable monthly seasonal percentage adjustments or automatic ET based adjustments based on SLW series weather station real-time, on-site climate data. The user may select to move between timed station mode or ET mode without loss of programming information. Each program shall have eight independent start times, calendar schedules, watering budgets, and cycles for varying sprinkler types and soil percolation rates. Controller shall have a user-selectable cycle and soak feature, by program, and fully automatic cycle and soak based on sprinkler precipitation rates, soil type and slope for reduction of run-off. The controller shall be capable of storing a user-created default program which may be retrieved at a later date to replace any overrides or adjustments to scheduled operation. Controller shall have a standard pump start or master valve output which shall be programmable to operate on demand from any selected controller station. A programmable pump start/master valve delay shall be included in the pump circuit.

**WARRANTY:** SL9600TW shall have a manufacturer's limited warranty of two (2)\* years provided proper grounding procedures are followed according to the manufacturer's recommendation.

\*3-Years – When used with Weathermatic SLWIRE decoder wire and SLCONN connectors

IRRIGATION CONTROL WIRE(S) shall be SmartWire model SLWIRE122-XXXX or SLWIRE142-XXXX as manufactured by Weathermatic Sprinkler Division of Telsco Industries.

**CONSTRUCTION:** Conductors must be soft drawn, annealed, solid copper conforming to ASTM 33. Conductor insulation must be 4/64-inch thick polyvinyl chloride (PVC) conforming to UL #493. Two insulated conductors shall be laid in parallel and encased in a single outer jacket of 3/64-inch thick, high-density, sunlight resistant polyethylene conforming to ICEA S-61-402 and NEMA WC5, having a minimum wall thickness of .045-inch. The two conductors must be color-coded: normally one conductor red and the other black. Both conductors shall be the same size.

**OPERATION:** Wire shall be sized as either 12 or 14 AWG as indicated on the irrigation plan, but shall not exceed manufacturer's published limits for maximum wire distances. All connections to the irrigation control wires along the two-wire path shall be made using SLCONN splice kits supplied by Weathermatic Sprinkler Division of Telsco

**WARRANTY:** SLWIRE shall have a manufacturer's limited warranty of two (2) years.

LIGHTNING SURGE ARRESTOR(S) shall be SmartWire model SLGDT as manufactured by Weathermatic Sprinkler Division of Telsco Industries.

**OPERATION:** Weathermatic SLGDT gas discharge tube lightning arrestors must be used on all 2-wire grids. The SLGDT lightning arrestor attaches directly to the 2-wire system and helps dissipate static electricity generated by a nearby lightning strike. While Weathermatic components have lightning arresting features, the SLGDT provides an extra measure of protection.

**WARRANTY:** SLGDT shall have a manufacturer's limited warranty of two (2)\* years provided proper grounding procedures are followed according to the manufacturer's recommendation.

\*3-Years – When used with Weathermatic SLWIRE decoder wire and SLCONN connectors



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