The ESP-LX Modular Controller
One Controller. Any Installation

A member of the popular ESP family of controllers, the ESP-LX Modular can fit the specification from a high-end residential installation to a commercial installation. The large display and intuitive programming sequence make this the most user-friendly controller in its class. The spacious cabinet and quick-connect terminal locations make installation a snap. Features like the Contractor Default™ program with restore timer and hot-swappable modules (that’s right, no need to power down!) make service calls more efficient and earn you more money by taking less time!

Features

- Eight station base model with the capacity to expand up to 48 stations in increments of 4, 8 or 12 stations.
- Hot swappable modules can be installed in any position while the controller is in operation.
- ESP Programming: Extra-Simple Programming with self-prompting large alphanumeric dot matrix display makes this controller easy to program, read, and understand.
- Spacious heavy-duty key-locking cabinet (NEMA 3R rated) with internal junction box provides lots of room for wiring for a clean and professional looking installation.
- Removable, battery-programmable panel for the convenience of both programming instruction and programming prior to installation.
- Four independent programs (A, B, C, and D-drip), with eight start times each allow mixed irrigation applications in a single controller.
- D-drip program can run simultaneously with program A, B, or C to maximize hydraulic capacity and minimize watering time.
- 365-day calendar with leap year intelligence for one-time date and time setting.
- Five cycle modes (CUSTOM, CYCLICAL, ODD, ODD31, or EVEN) selectable by program for maximum flexibility and watering restriction compliance.
- Calendar-Day-Off option to set any day of the month as a non-watering day for all programs (in any cycle mode) accommodates special occasions and unique watering ordinances.
- Contractor Default™ function to save a customized default program which can be easily accessed at a later date. Delayed recall feature to set the day (up to 90 days later) on which the controller will automatically restore the saved program. This is useful in reloading a schedule that has been altered or in replacing a temporary schedule for new seed or sod.
- User-selectable languages enable programming and operation in the chosen language: English, Spanish, French, German, Italian, and Portuguese
- Seasonal adjustment available by program and by month, up to 300%.
- Programmable rain delay enables system to stay off for a specified period with an auto-restart.
- Readily accessible manual watering function (right on the dial!) to operate a single valve, several valves, or an entire program. Manual watering operation will not alter the programmed watering schedule.
- Programmable Valve Delay to allow for water well recovery or time for slow-closing valves to turn off.
- Cycle+Soak™ by station allows total irrigation time to be split into usable cycles, minimizing runoff.
- Master valve/pump start circuit, programmable by station, for optimal irrigation control.
- Dedicated sensor terminals allow the user to easily connect a sensor to the controller for maximum water efficiency.
- Sensor bypass switch allows the user to override an active sensor.
- Sensor override function allows the user to override an active sensor by station.
- Built-in diagnostic functions let you confirm program information, calculate total program and valve run times, and run a test program that operates all system valves in sequence.
- Diagnostic self-setting circuit breaker identifies a valve or wire fault and continues to water operable stations.
- Enhanced Diagnostic Feedback™ alerts the user to programming errors and other conditions that may render a schedule inoperable. Externally visible light is illuminated and an appropriate text message is displayed.
- RASTER™ Wiring Test diagnoses field wiring and solenoid problems quickly and easily.
- Lithium battery maintains date and time during a power outage for ten years.
- Non-volatile program memory (100-year life) maintains user’s program during a power outage independent of the battery backup.
- Compatible with the Rain Bird IQ™ Central Control system and ET Manager Cartridge Weather-based Smart Control.

Operating Specs

- Station timing: 0 to 12 hours for all stations (0 to 120 minutes selectable in 1-minute increments; above 120 minutes selectable in 10-minute increments).

How To Specify

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<th>Controller Base Model (8-Station)</th>
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<tr>
<th>Modules</th>
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<td>ESPLXMSM4: 4-Station Module</td>
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- Automatic Starts: 8 start times per program on the quarter hour for up to a total of 32 start times per day if using all four programs.
- Independent programming schedule options variable per program: CUSTOM day-of-the-week, ODD day watering, EVEN day watering, and variable day cycle from 1 to 31 days.
Dimensions

Controller only:
- Width: 14.32 in. (36.4 cm)
- Height: 12.69 in. (32.2 cm)
- Depth: 5.50 in. (14.0 cm)

Controller in optional metal cabinet:
- Width: 15.12" (38.40 cm)
- Height: 12.75" (32.39 cm)
- Depth: 7.52" (19.10 cm)

Optional metal pedestal:
- Width: 28.13" (71.45 cm)
- Height: 14.87" (37.77 cm)
- Depth: 7.11" (18.06 cm)

Optional Features
- Metal cabinet (LXMM)
- Metal pedestal mount (LXMMPED)

Electrical Specifications
- Input required: 120VAC ± 10%, 60Hz
  (International models: 230VAC ± 10%, 50Hz)
- Australian model: 240VAC ± 10%, 50Hz.
- Output: 26.5VAC 1.9A.
- Optional power back-up: Lithium coin-cell battery
  maintains time and date during a power outage
  (up to 10 years) while non-volatile memory
  maintains the schedule (100-year life).
- Multi-valve station capacity: Up to two 24 VAC,
  7VA solenoid valves per station plus a master
  valve.

Specifications

The controller shall be of a hybrid type that
 combines electro-mechanical and microelectronic
circuitry capable of fully automatic or manual
operation. The controller shall be housed in a wall-
mountable, weather-resistant plastic cabinet with a
key-locking cabinet door suitable for either indoor
or outdoor installation. The Controller shall have
the ability to be programmed and operated in any
one of six languages: English, Spanish, French,
Portuguese, German, and Italian. The display
shall show programming options and operating
instructions in the chosen language and be easily
changed to any other language without altering
the programming or operation information.

The controller shall have a base unit with 8 sta-
tions as well as three expansion slots capable of
receiving station modules of either four, eight or
12 stations each to create a controller of up to 48
stations. All stations shall have the capability of
independently bypassing an active rain sensor or
of functioning as a normal station output. Station
timing shall be from 0 minutes to 12 hours. Run
time resolution shall be in 1-minute increments
from 0 to 2 hours and 10 minute increments from
2 to 12 hours. The display shall show “No Run
Times” or equivalent icon for 230VAC models if no
run time has been entered for any station in any
program.

The controller shall have four separate and
independent programs which can have different
start times, station timing and watering days. Each
program shall have up to 8 start times available.
The controller shall stack multiple start times
in sequence to prevent hydraulic overload. The
controller shall allow simultaneous or over lap-
ing of program D with any other program. The
controller shall be capable of operating two 24 VAC
solenoid valves per station plus a master valve or
remote pump start relay. The controller shall have
an electronic, diagnostic circuit breaker that shall
sense a station with an electrical overload or short
circuit and shall bypass that station and continue
operating all other stations.

The controller shall have a 365-day calendar with
a permanent day off feature that allows a day(s)
of the week to be turned OFF on any cycle (odd/
even/1-31 day cycle). A day set to “Permanent Off”
shall override the normal repeating schedule and
shall show the words “Day Always Off/Day Off” on
the display.

The controller shall have a season adjust feature
adjustable from 0% to 300% of the actual run time
selected in increments of 1%. Seasonal adjust
shall be able to affect all programs simultaneously,
programs individually, or to be preset month-to-
month in a given program.

The controller shall have Cycle+Soak™ water
management software which is capable of operat-
ing each station for a maximum cycle time and a
minimum soak time to reduce water run-off. The
maximum cycle time shall not be extended by
water budgeting.

The controller shall have a 12-hour AM/PM or 24
hour military (for 230VAC and 240VAC models)
clock with a midnight day change over. The con-
troller shall have a sensor circuit for connection to a
rain sensor or to an underground moisture sensor
system that will interrupt a scheduled watering
under “wet” or “moist” conditions. The controller
shall have an indicator on the display and one
externally visible alarm light to indicate that a sen-
sor is connected and active and that watering has
been temporarily disabled.

The controller shall have access to a variety of
advanced features. These features shall include:
save a custom default program, retrieve a custom
default program immediately, retrieve a custom
default program at a specified date up to 90
days in the future, set a valve or rain delay, clear
memory, set a day as “Permanently Off,” select an
“Event Day Off” within the next 30 days, review
all program data, and display actual program run
time.

The controller shall be compatible with the
Rain Bird IQ™ Central Control system.

The controller shall be as manufactured by
Rain Bird Corporation.

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