ESP-LXME Controller
ESP-LX Series Controllers

The popular Rain Bird ESP-LX Series commercial controllers have been enhanced to provide additional features and station capacity. The ESP-LXME Enhanced Controller provides flow sensing and management with modular station capacity from 8 to 48 stations. Station modules are available in 4-, 8-, and 12-station models.

Applications

The ESP-LXME provides flexible features and modular options that make the controller ideal for a wide variety of applications including light-commercial, commercial, and industrial irrigation systems. Modular options include modular station capacity, flow sensing, metal case and pedestal, ETC Manager Smart Cartridge, and NCC Network Control Communication Cartridges. These options are field installed and can upgrade and enhance the ESP-LXME at any time in the future.

Easy to Use

The ESP-LXME Controller utilizes the Rain Bird ESP Extra-Simple Programming user interface. The dial, switches, and buttons interface which Rain Bird first introduced in the early 1990's is easy to learn and use and has become a standard controller interface for the irrigation industry. The large LCD display incorporates softkey text labels for the button functions rather than dedicated buttons.

Multiple language support allows the end-user or maintenance personnel to interface with the controller in their primary language. User selectable languages include English, Spanish, French, German, Italian, and Portuguese. Date, time, and unit formats are also user configurable.

Easy to Install

The ESP-LXME Controller has a spacious case and quick-connect terminals making installation fast and easy. Multiple size wiring knockouts are provided on the bottom and back side of the case to adapt to a wide variety of wiring applications. The door and front panel are removable so the case can be easily mounted to the wall.

Controller Hardware

- Plastic, locking, UV resistant, wall-mount case
- Optional painted steel and stainless steel cases and pedestals
- 8-, or 12-stations base unit expandable to 48 stations with 4-, 8-, & 12-Station Modules
- Flow Smart Module™ factory installed or field upgradable

Controller Features

- Large LCD display with easy to navigate softkey user interface
- Hot-swappable modules, no need to power down the controller to add/remove modules
- Dynamic station numbering eliminates station numbering gaps
- Weather Sensor input with override switch
- Master valve/pump start circuit
- 6 user-selectable languages
- Non-Volatile (100- year) program memory
- Standard 10kV surge protection
- Front panel is removable and programmable under battery power

Water Management Features

- Optional Flow Smart Module™ with Learn Flow utility and flow usage totalizer
- FloWatch™ protection for high and low flow conditions with user defined reactions
- FloManager™ manages hydraulic demand, making full use of available water to shorten total watering time
- SimulStations™ are programmable to allow up to 5 stations to operate at the same time
- Water Windows by program plus Manual MV Water Window
- Cycle+Soak™ by station
- Rain Delay
- 365-Day Calendar Day Off
- Programmable Station Delay by program
- Normally Open or Closed Master Valve programmable by station
- Weather Sensor programmable by station to prevent or pause watering
- Program Seasonal Adjust
- Global Monthly Seasonal Adjust

Diagnostic Features

- Alarm light with external case lens
- Electronic diagnostic circuit breaker
- Program summary and review
- Variable test program
- RASTER™ station wiring test

Operating Specifications

- Station timing: 0 min to 12 hrs
- Seasonal Adjust; 0% to 300% (16 hrs maximum station run time)
- 4 independent programs (ABCD)
- ABCD programs can overlap
- 8 start times per program
- Program Day Cycles include Custom days of the week, Odd, Odd31, Even, & Cyclical dates
- Manual station, program, test program

Electrical Specifications

- Input required: 120 VAC ± 10%, 60Hz (International models: 230 VAC ± 10%, 50Hz or 60Hz; Australian Models: 240 VAC ± 10%, 50Hz)
- Output: 26.5 VAC 1.9A
- Power back-up: Lithium coin-cell battery maintains time and date while nonvolatile memory maintains the programming
- Multi-valve capacity: Maximum five 24 VAC, 7VA solenoid valves simultaneous operation including the master valve, maximum two solenoid valves per station

Certifications

- UL, CUL, CE, CSA, C-Tick, FCC Part 15

Dimensions

- Width: 14.32 in. (36,4 cm)
- Height: 12.69 in. (32,2 cm)
- Depth: 5.50 in. (14,0 cm)

How To Specify

ESP-LXME

Base Controller without Flow Smart Module
ESP-8LXME:
8-station base

Base Controller with Flow Smart Module
ESP-12LXMEF:
12-station base

ESPLXMSM4

Station Modules
ESPLXMSM4:
4-Station Module

ESPLXMSM8:
8-Station Module

ESPLXMSM12:
12-Station Module

FSM-LXME

Flow Smart Modules
FSM-LXME Flow Smart Module

Specifications

The ESP-LXME 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, German, Italian, & Portuguese. The display shall show programming options and operating instructions in the chosen language without altering the programming or operation information.

The controller shall have a base station capacity of 8 or 12 stations as well as 3 expansion slots capable of receiving station modules of 4, 8, or 12 stations to create a controller capacity of up to 48 stations. All stations shall have the capability of independently obeying or ignoring the weather sensor as well as using or not using the master valve. Station timing shall be from 0 minutes to 12 hours. The controller shall have a Seasonal Adjustment by program which adjusts the station run time from 0 to 300% in 1% increments. The controller shall also have a Monthly Seasonal Adjustment of 0 to 300% by month. Station timing with Seasonal Adjustment shall be from 1 second to 16 hours.

The controller shall have 4 separate and independent programs which can have different start times, start day cycles, and station run times. Each program shall have up to 8 start times per day for a total of 32 possible start times per day. The 4 programs shall be allowed to overlap operation based on user defined settings which control the number of simultaneous stations per program and total for the controller. The controller shall allow up to 5 valves to operate simultaneously per program and total for the controller including the master valve/pump start circuit. 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 to operate all other stations.

The controller shall have a 365-day calendar with Permanent Day Off feature that allows a day(s) of the week to be turned off on any user selected program day cycle. (Custom, Even, Odd, Odd31, & Cyclical). Days set to Permanent Day Off shall override the normal repeating schedule and not water on the specified day(s) of the week. The controller shall also have a Calendar Day Off feature allowing the user to select up to 5 dates up to 365-days in the future when the controller shall not start programs. The controller shall incorporate a Rain Delay feature allowing the user to set the number of days the controller should remain off before automatically returning to the auto mode.

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

The controller shall incorporate a FloManager feature providing real-time flow, power, and station management. FloManager shall manage the number of stations operating at any point in time based on water source capacity, station flow rate, number of valves per station; user-defined simultaneous stations per program and for the controller. FloManager shall incorporate the ability to provide station priorities to determine the order in which stations shall operate. The controller shall ignore the station number and instead operate the highest priority stations first and the lower priority stations last when FloManager is enabled. FloManager shall be an option that is disabled by default and the controller shall operate zones in order of station number, started with the lowest numbered zone set to irrigate and ending with the highest number zone.

The controller shall offer Water Windows for each program. This function sets the allowed start and stop time where watering is allowed. If the watering cannot be completed by the time the Water Window closes, the stations with remaining run time are paused and watering automatically resumes when the Water Window opens the next time.

The controller shall offer a Flow Smart Module option which adds flow sensing functionality. The Flow Smart Module sensor input shall accept a direct input from a flow sensor with no flow scaling device required.

Module features shall include a FloWatch Learn Flow Utility which learns the normal flow rate of each station. Each time the station runs FloWatch compares the current real-time flow rate to the learned rate and takes user defined actions if high flow, low flow, or no flow is detected. FloWatch shall automatically determine the location of the flow problem and isolate the problem by turning off the affected station or master valve. FloWatch shall be compatible with both normally closed and open master valves. A Manual Master Valve Water Windows shall be provided to coordinate day time manual watering with the flow sensing. This Water Windows shall offer programmable days of the week and manual watering additional flow rate.

The controller shall have an alarm indicator light on the front panel visible through the outer door with the door closed and locked. The alarm light shall prompt the user to select the alarm softkey to review the alarm condition(s).

The controller shall be compatible with the ETC-LX ET Manager Cartridge which upgrades the controller to a Smart controller. A weather service signal received by the cartridge shall automatically adjust the individual controller program day cycles and station run times to apply the minimum amount of water required based on the current plant water requirements.

The controller shall be compatible with the IQ™ Platform utilizing NCC Network Communication Cartridges. The NCC Cartridge shall provide communication with the IQ Central Computer and other controllers via a variety of communication options (Direct Connect Cable, Phone, GPRS/Cellular, Ethernet, WiFi, Radio, and IQNet Communication Cable). The IQ Platform shall provide remote computer control of the controller providing automatic or manual program adjustments.

The controller shall offer an optional metal cabinet and pedestal.

The controller shall be as manufactured by Rain Bird Corporation.