

ESP-SAT Series Controllers

Satellite Controller for Maxicom²® or SiteControl

The power of an advanced water-management tool in an easy-to-use package. The ESP-SAT is a commercial-duty controller for the basic or sophisticated user. The ESP-SAT serves as a field satellite controller for the Rain Bird Maxicom² and SiteControl central control systems. It also has all the features and stand-alone capabilities of Rain Bird's ESP-MC controller line. Four programs, a real-time calendar, Rain Bird's exclusive Cycle+Soak™ water management feature, and the best customer satisfaction program in the industry, helping you conserve both water and money.

Features

- Operates as a field satellite controller for the Maxicom² and SiteControl central control systems.
- Advanced contamination-resistant design to assure reliable performance.
- Heavy-duty electrical surge protection.
- 12-hour watering duration for any or all stations to aid in drip compatibility.
- Four programs with eight start times each allow mixed irrigation applications in a single controller.
- Two master valve terminals, one programmable by station, provide better control.
- Programs can overlap to maximize hydraulic capacity and minimize watering time.
- 365-day calendar with leap year intelligence for one-time date and time setting.
- Event day off option to set any day of the month as a non-watering day for all programs.
- Programmable rain delay enables system to stay off for specified period with auto-restart.
- Independent day cycle by program.
- Water budget by program provides adjustments from 0-300% in 1% increments.
- Cycle+Soak by station allows total irrigation run time to be split into usable cycles, minimizing runoff.
- Manual watering by station or program.
- Sensor override switch with LED to indicate when irrigation is suspended.
- Non-volatile, 100-year memory holds program, date, and time during power outages.
- Automatic fault indication identifies electrical shorts, skips shorted stations, and continues watering remaining program.
- Quick-connect terminal strip speeds installation.
- Universal remote ready: pre-installed connectors for addition of remote products.
- Heavy-duty transformer for simultaneous operation of up to nine 24 VAC, 7VA solenoids.
- Battery-programmable controller allows for programming prior to installation.

Stand-Alone Operating Specifications

- Station timing: A, B, C, D: 0 to 2 hours in 1-minute increments; 2 to 12 hours in 10-minute increments
- Automatic starts: 32 starts total, eight per program per day
- Programming schedule: 1. ODD day watering per program; 2. EVEN day watering per program 3. CYCLICAL (1 to 99 days, variable per program; 4. Custom day-of-the-week by program
- Test program: Variable 1 to 99 minutes

Operating Specifications (Central Control Operation)

- Requires a CCU to connect to Maxicom² central controller
- Requires a TWI to connect to SiteControl central controller
- MAXILink™ models have 2 sensor inputs - no decoders required
- 40 station models require 2 CCU channels.

Electrical Specifications

- Input required: 117 VAC ± 10%, 60Hz (International models: 230 VAC ± 10%, 50Hz)
- Output 26.5 VAC, 2.5A
- Station load capacity: Up to two 24 VAC, 7VA solenoid valves per station (up to 4 stations operating simultaneously) plus a master valve or pump start relay
- Diagnostic circuit breaker skips and indicates stations with overloaded circuits
- Battery backup: 9VDC, NiCad rechargeable for programming under battery power and for maintaining active program-in-progress during a power outage
- Heavy-duty electrical surge protection



Dimensions

Metal Wall Mount

- Width: 11⁵/₁₆" (28,7 cm)
- Height: 11¹/₂" (29,2 cm)
- Depth: 6¹/₂" (16,5 cm)

SS Pedestal

- Width: 11¹/₂" (29,2 cm)
- Height: 30" (76,2 cm)
- Depth: 11¹/₂" (29,2 cm)

Models

- ESP-12SAT-2W
- ESP-24SAT-2W
- ESP-40SAT-2W
- ESP-12SAT-2S
- ESP-24SAT-2S
- ESP-40SAT-2S
- ESP-12SAT-LW
- ESP-24SAT-LW
- ESP-40SAT-LW
- ESP-12SAT-LS
- ESP-24SAT-LS
- ESP-40SAT-LS

How To Specify

ESP - 24SAT - 2W

Model
ESP:
(120VAC)
IESP:
(230 VAC)

Mounting
W: Metal Wall Mount
S: Stainless Steel

Satellite Path
2: Two-Wire
L: MAXILink™ Radios

Number of Stations
12SAT: 12 stations
24SAT: 24 stations
40SAT: 40 stations

Specifications

The irrigation system controller shall be of a hybrid type that combines electromechanical and microprocessor-based circuitry capable of fully automatic and manual operation. The controller will be housed in a weatherproof, lockable, 16-gauge seamless steel cabinet suitable for wall mounting or free-standing stainless steel pedestal mounting.

The controller shall operate on a 117 VAC \pm 10% power input and be capable of actuating up to two 24 VAC, 7VA solenoid valves per station plus a master valve or pump start relay. The controller shall be capable of operating four stations plus the master valve simultaneously. Controller output shall be protected against severe electrical surge.

As a stand-alone, the controller shall have four separate irrigation programs (A, B, C, & D) which can have different start times, watering days, day cycles, and station timing. Each program shall have eight start times per day.

The controller shall have _____ stations, with each station capable of an operating time of 0 to 2 hours in one-minute increments and 2 to 12 hours in 10-minute increments. Controller station operation shall be of automatic sequential stacking to avoid overlapping operation unless programmed to overlap.

The controller shall have a 365-day calendar with day-of-the-month OFF feature. Programs will run on an ODD/EVEN day cycle, day-of-the-week ON/OFF cycle, or in cycles from 1 to 99 days. In addition, the controller shall have a programmable rain shut-down from 1 to 99 days.

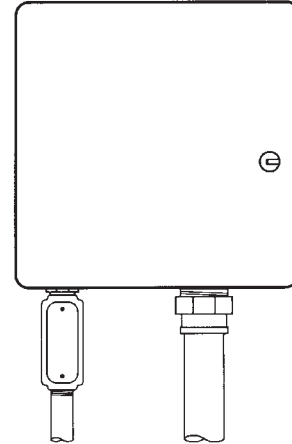
The controller shall have two master valve/remote pump start circuits for use with a master valve to pressurize the system when the irrigation cycle starts or to activate a remote pump start relay to run the pump during the irrigation cycle. One master valve/pump start circuit shall be programmable by station; the other shall function at all times.

The controller shall be capable of being operated manually at any time. A manual single station, a group of stations, or a program can be selected to run for the programmed time without affecting the normal program. This controller shall be capable of running a variable system test program without affecting the normal program.

The controller shall be a Rain Bird ESP-Satellite.

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 and puddling. The maximum cycle time shall not be extended by water budgeting.

The controller shall have an internal non-volatile memory which will retain the irrigation program and the programmed date and time for a minimum of 100 years without power. A 9 VDC rechargeable battery and recharging circuit shall also be included for counting down the program-in-progress during a power outage and shall allow programming of the controller when it is disconnected from the main power supply.



The controller shall indicate when it is operating under central control. It shall also display which channel and station is in operation at such time. There shall be a station status indicator light and a master valve status indicator light. These lights will indicate station operation and circuit integrity. An indicator for sensor status will be found on the front panel along with a switch to suspend sensor operation. This indicator and override will work with a sensor wired to the controller's sensor terminals.

The controller shall be as manufactured by Rain Bird Corporation, Glendora, California.

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