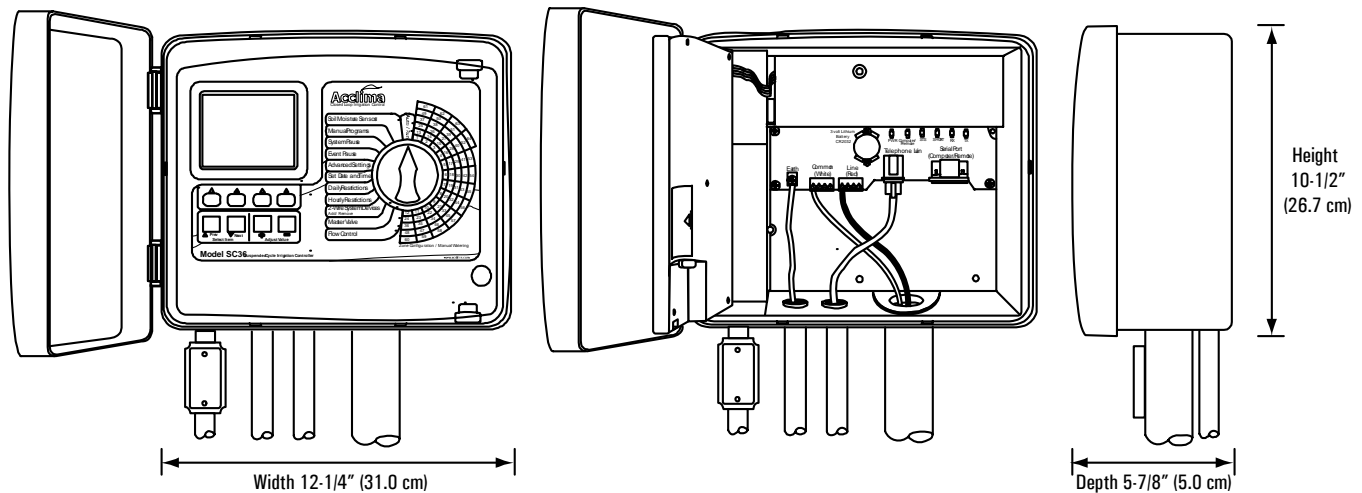


CS3500

Water on Demand[®] 2-Wire Irrigation Controller

The CS3500 is an advanced computerized irrigation controller using patented Digital TDT soil moisture sensors to accurately and efficiently control irrigation. The CS3500 uses advanced 2-Wire system design and is a powerful, yet flexible controller that can be monitored remotely over the internet or phone line using Irrigation Manager™ Software.



Wire Recommendations:

Maximum Distance from Controller in Feet

AWG	1 Valve Activated	2 Valves Activated	3 Valves Activated	4 Valves Activated	5 Valves Activated
14 GA	3,300	1,650	1,110	800	650
12 GA	4,000	2,650	1,750	1,300	1,050
10 GA	4,000	4,000	2,750	2,050	1,650

CS3500 Dimensions:

Overall Height	10-1/2" (26.7 cm)
Overall Width	12-1/4" (31.0 cm)
Overall Depth	5-7/8" (5.0 cm)

Model Number:

ACC-CON-WD64

Specifications

The irrigation controller shall be capable of automatic, semi-automatic and manual operations. The controller shall be offered in an indoor/outdoor ABS plastic locking cabinet with key. The wall-mount type controller cabinet shall be weather resistant and have an internally mounted transformer. The cabinet shall have knock-out openings in the bottom for communications, control and power wiring. The cabinet shall have perforations for mounting screws, top middle, right bottom and middle bottom of the cabinet behind programming interface. The controller shall include a programming interface with a 24 position rotary switch, eight programming buttons and a backlit liquid crystal display.

Specifications (continued)

The controller shall operate and maintain up to 64 zones and 20 digital time domain transmissometry soil moisture sensors. It shall be capable of operating as a stand-alone controller and allow remote operation through a personal computer using a Windows™ operating system over an RC232 serial connection, phone line connection, Ethernet connection, or direct wire or radio link. The controller shall be capable of logging all activities and sensor data and uploading the logs to the PC when connected. The controller shall carry a three-year limited warranty.

The controller shall have a customizable and independent program for each zone. The programming shall include a 365-day calendar including leap years. Manual zones, groups of zones or programs shall be capable of running at any time. Each zone shall be programmable in one of three modes:

- 1) **Water on Demand.** Used in conjunction with a digital time domain transmissometry soil moisture sensor(s). Zones with a sensor installed have a minimum and maximum user set moisture threshold and customized cycle and soak durations. When moisture levels are below the minimum threshold a watering cycle will begin, and will continue until the specified time lapses or the moisture level in the soil reaches the maximum threshold. Each zone may be programmed to run independently from any other zone during certain times of the day or days of the week.
- 2) **Dependant Zone.** Zones without a digital time domain transmissometry soil moisture sensor shall be set as a dependant zone to follow the readings of a reference zone employing such a sensor. The dependant zone shall be assigned to run as a percentage of the duration of its reference zone with its own custom cycle and soak time. Each zone, whether reference or dependant shall have its own customizable watering window.
- 3) **Time based.** Any zone shall allow a run time from 0 to 18 hours adjustable in 1 minute intervals. Each timer based zone shall have its own cycle and soak time along with a customizable watering window.

The controller shall use a 2-wire system for communications and control, powering standard 24V AC valve solenoids. Compatible system decoders shall be used at each valve to communicate over the 2-wire

system to and from the controller. Decoders shall be 1, 2, or 4 valve configuration and each digital time domain transmissometry soil moisture sensor shall have a build in decoder for one valve. The controller shall support up to 64 valves and have the electrical capability to operate up to 4 standard 24V AC solenoids simultaneously. Each valve decoder port shall be able to operate 2 7VA solenoids. The controller shall be capable of watering 4 zones simultaneously.

The controller shall be compatible with 1,2,4,16 and 32 zone decoders suitable for linking a conventional multi-circuit valve communication system to a 2-wire controller communication system without the need for additional decoders at each valve.

2-wire pair shall be polyethylene insulated #14 or larger direct burial wire, one red and one white. All splices to the 2-wire pair, decoders and sensors must use direct burial wire nut connector kits with grease caps. Lightning arrestors shall be built into each digital time domain transmissometry soil moisture sensor, valve decoder and controller. All metal components of the sensor shall be electrically isolated to prevent galvanic corrosion.

The controller's Real Time Clock shall have battery back-up to insure operation for up to 10 years. The controller shall have an interface to receive a Badger Meter (Data Industrial) flow meter. The controller shall be able to manage flow to optimize performance by running up to 4 zones at one time. The controller shall be able to log soil conductivity, soil temperature and soil moisture from multiple digital time domain transmissometry soil moisture sensors every 10 minutes and store the logs until downloaded to a computer where the logs may be viewed in separate graphs through compatible software.

The controller dimensions shall be width: 12-1/4" (31.0 cm), height: 10-1/2" (26.7 cm), depth: 5-7/8" (5.0 cm).

The controller shall be as manufactured by Acclima, Inc., Meridian Idaho.

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