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Smart Water Application Technology™ (SWAT™) Performance Summary

Testing Agency: Center for Irrigation Technology **www.californiawater.org**

Product: Hunter Solar Sync Sensor (connected to Hunter XC-800 controller)

Product Type: Climatologically Based Controller

Product Description: The Hunter Solar Sync Sensor gathers solar and temperature data to calculate ET, watering requirements and seasonal adjustments. The X-Core and ACC series controllers have the Solar Sync software built into each model and only requires the Solar Sync Sensor to become a smart controller. Tested with Hunter XC-800 controller.

SWAT Protocol*: Turf and Landscape Equipment Climatologically Based Controllers 8th Draft Testing Protocol (Sept. 2008)

The concept of climatologically controlling irrigation systems has an extensive history of scientific study and documentation. The objective of this protocol is to evaluate how well current commercial technology has integrated the scientific data into a practical system that meets the agronomic needs of turf and landscape plants. The evaluation is accomplished by creating a virtual landscape subjected to a representative climate to evaluate the ability of individual controllers to adequately and efficiently irrigate that landscape. After initial programming and calibration the controller is expected to perform without further intervention during the test period. Performance results indicate to what degree the controller maintained root zone moistures within an acceptable range. If moisture levels are maintained without deficit, it can be assumed the crop growth and quality will be adequate. If moisture levels are maintained without excess it can be assumed that scheduling is efficient.

***All SWAT protocols may be viewed at www.irrigation.org**

Hunter Solar Sync Sensor SWAT™ Performance Summary

Irrigation Adequacy	Irrigation Excess
Minimum of 6 test zones: 100% **Maximum of 6 test zones: 100%** **Mean/Average of 6 test zones: 100%** **Irrigation Adequacy** represents how well irrigation met the needs of the plant material. This reflects the percentage of required water for turf or plant material supplied by rainfall and controller-scheduled irrigations. Research suggests that if this value is between 80% and 100%, the acceptable quality of vegetation will be maintained.	**Minimum of 6 test zones: 0%** **Maximum of 6 test zones: 4.6%** **Mean/Average of 6 test zones: 1.2%** **Irrigation Excess** represents how much irrigation water was applied beyond the needs of the plant material. This reflects the percentage of water applied in excess of 100% of required water according to data from CIMIS station #80 Fresno State, Fresno County during the test period.

Product Detail Supplied by Manufacturer

Hunter Solar Sync Sensor **www.HunterIndustries.com**

Installation	Data Source	Data Link	Initial Purchase	Additional Hardware	Additional Fees
Conventional controller Solar Sync software built into the controller	On-site solar, temperature and rainfall sensor	Hard wired (Wireless version available)	Purchase price includes Solar Sync Sensor	❑ Rain Switch ❑ Temperature Sensor ❑ Solar Sensor	None

Additional Features

Zones	Time of Day	Day of Week	Other	If Data Link is Discontinued
X-Core = 2-8 sta. ACC = 12-42 sta.	Controlled by host controller	Controlled by host controller	❑ The internal software of the controller modifies the user defined peak demand schedule and makes daily adjustments. ❑ Non-volatile memory ❑ With temperature sensor, will suspend irrigation at preset temperature threshold.	The controller maintains the current schedule until the link is re-established. An error message is displayed