

## 255-700 ETgauge

The **Model 255-700 ETgauge** is a modified atmometer and is a convenient, practical tool for irrigation management. It provides the irrigation technician with evapotranspiration (ET) information which can be used to accurately estimate how much water to apply and when to schedule an irrigation.

The ETgauge has been used successfully in the turf/golf course industries, field crops/vegetable enterprises, and tree/vineyard cropping systems. In addition, it has been utilized by a number of private and extension-type projects involving ornamental horticultural types of plantings. It suitable for use both outdoors and in indoor growing environments such as greenhouses and hotel terrariums.

The 255-700 ETgauge evaporates distilled water through a ceramic (clay) plate which is covered by a green fabric. This is a physical model of the reference evapotranspiration process from a well irrigated plant canopy such as turf grass or alfalfa. The fabric covering creates a diffusion barrier or resistance which controls the evaporation rate, similar to that found in healthy leaves in a well watered plant community. The ETgauge is less complicated than using sophisticated electronic hardware for measuring the various environmental variables necessary for determining ET. Evapotranspiration is directly determined by visually reading a sight-tube which is mounted on the side of a water reservoir cylinder. Cumbersome empirical equations and calculators are not required.

The 255-700E is the electronic version of the visual gauge. It can be a cost-effective alternative to a complete weather station for estimating ET. All of the weather variables (temperature, relative humidity, net radiation, and wind speed) act upon water evaporating through the ceramic/cloth cover interface, producing an electronic signal (pulse) after 0.01 ET has been lost. This output can be counted and logged using the 260-2103 Rain Logger, the WS-25 Weather Station, or converted to 4-20mA using the 260-RGAI-70 Digital to Analog Conversion PCB.

### Ordering Information

255-700	ETgauge
255-700E	Electronic ETgauge



255-700E Electronic ETgauge

### Specifications

Accuracy:  $\pm 1\%$  of evaporated water  
 Resolution: 0.01" reference evapotranspiration, ETr  
 Capacity: 12" ETr per filling  
 Temperature: 0-70°C or 0-54°C max if using batteries  
 Humidity: 0 to 100%  
 Visual readings: Sight tube with scale in inches and mm mounted on water reservoir  
 Output: Single pulse per 0.01" ETr  
 Output connection: Two wire, internal screw-terminal block  
 Signal: Line pulled low for a  $2.3 \pm 0.7$  second pulse after each 0.01" ETr  
 Impedance: Normally open-circuit, 53 ohms during pulse  
 Transient protection: Fully lightning protected except direct strike to the unit  
 Power supply: Four alkaline "AA" cells (6 V)  
 External supply connection: 5 to 16 Vdc, 0.1 A peak 0.4 mA average.  
 Internal screw-terminal block  
 Mounting: Stainless steel vertical bracket  
 Material: Ceramic evaporation plate, green canvas plate cover, glass sight tube, PVC plastic housing, CMOS electronics  
 Size: 22.3" H x 3.1" Dia  
 Weight/shipping: 3 lbs/4 lbs