

Demico Inc. Outdoor Temperature Sensor Sun Shield

To accurately measure the outdoor air temperature, an outdoor temperature sensor must be insulated from the direct and indirect effects of the sun and allow sufficient airflow directly to the temperature sensor. The direct effect of the sun is the infrared energy received directly from the sun. The indirect effect of the sun is the infrared energy that is continuously reflected and absorbed and re-emitted from all objects. These indirect sources include the ground, control cabinets, and the sunshield itself. Manmade sources of heat also emit infrared energy. Examples include cars, electrical transmission and distribution transformers, etc.

The Demico Inc. Temperature sensor Sun Shield uses a solid piece of redwood to enclose and insulate the sensor from natural and manmade sources of direct infrared energy. Strategically placed holes in the redwood allow sufficient airflow to keep the sensor equal to the nearby air temperature.



Mounting Considerations:

The Sunshield is designed to mount directly to a 1/2" plastic conduit. A plastic conduit fitting is screwed into the bottom of the sunshield. The conduit should be run to a junction box nearby where a weep hole can be used to drain the conduit. During severe weather conditions it is possible for precipitation to blow into the enclosure and will drain into the conduit.

The sunshield should be mounted at a height of 5 to 6 feet above the ground, or roof where the temperature is to be measured. The sunshield should be mounted below other metallic conductors for lightning protection.

Maintenance:

The sunshield is constructed from solid redwood. No stain or paint is required. The exterior of the sunshield will weather naturally to a grayish color. Redwood is naturally pest resistant and rot resistant and will have a long natural life. Light colored stains may be applied if desired, as well as water protective products designed for wooden decks. Spraying or coating the inside of the sunshield is not recommended. The sunshield is assembled with wooden dowels and good quality outdoor wood glue to last a long time.

Sensor Installation:

The sunshield is designed to accommodate a standard Demico temperature sensor. To install the sensor in the sunshield, unscrew the housing from the conduit fitting. The wood hole in the bottom is threaded. Place the included strain relief over the wire just below the sensor body. Push the wire clamp portion of the strain relief against the wire firmly. Push the strain relief with wire into the threaded end of the conduit fitting. Push the wire clamp portion of the strain relief against the wire firmly. Push the included small piece of fiberglass circuit board into the space between the strain relief and conduit fitting to keep the wire secure. Place 2 of the included rubber "O" rings over the sensor body to space the sensor off the circuit board. Place the third "O" ring around the sensor and the circuit board as shown to help center the sensor in the sunshield. Carefully slide the sunshield over the sensor and screw back onto the conduit fitting.

