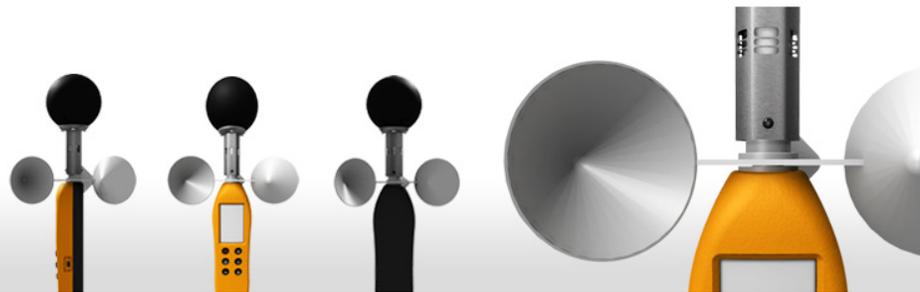




Scarlet TWL-1S

TWL-1S
Smart heat stress detector



Hardware Features

Wind Cup



Collects Winds From Any Direction

Wind cup design in Scarlet's TWL-1S collects winds from any direction. You don't have to worry how to setup the device. Instead, our competitor 4400 uses impeller. That means you need to know where the wind comes from and then point the device to that direction. By using TWL-1S, you don't have to worry about the placement of the device since it just collects wind from anywhere. Sit the device on the tripod, leave it alone, measures are done. The picture captured in Dubai Cable, TWL-1S stood aside of the oven.

Sensor Protection

Extends Sensors' Lifetime

Windy and sandy is very common in GCC area and this really challenges the lifetime of anemometer. We designed a silicone pad to protect the wind cup anemometer. A one month intensive test conducted in UAE shows Scarlet TWL-1S survived better than it's competitor.

Humidity sensor is fragile and needs to be protected well. Scarlet TWL-1S has replaceable PP filter to keep dust and dirty away but allows vapor reaching sensor. As



showed in the picture, the filter with white film can be easily pull up. The sensors it protects are marked in the red circle.



Wireless Paging (TWL-1SR only)

To provide active warning when harsh environment is detected, we incorporate 433MHz technology into TWL-1SR. It can notify EHS manager from 200 meter away. When TWL < 115 W/m is detected, a radio signal will emit to notify people who carry the receiver (pager).

The test was conducted by 3rd party. The location is in the center of desert. Usage patten: 15 - 20 mins a day, 5 days a week, 4 weeks in total. Our competitor's impeller was broken while TWL-1S's wind cup was functional still.

Datasheet

Technical Data

| | |
|-----------------------------|---|
| Air Temperature | Range: 0-60 °C / Accuracy ± 0.6 °C |
| Global Bulb Temp Indoor | Range: 0-80 °C / Accuracy ± 1.0 °C (15-40 °C) |
| Globe Bulb Temp Outdoor | Range: 0-80 °C / Accuracy ± 1.5 °C (15...40 °C) |
| Relative Humidity | Range: 5-95 % RH / Accuracy $\pm 3\%$ (at 25 °C; 10-90 % RH) $\pm 5\%$ (others) |
| Wind Speed | Range: 0.3-10 m/s / Accuracy $\pm (2\%$ of reading + 0.2) m/s |
| Operating Range Electronics | Range: -10...60 °C |
| Accuracy at 23 \pm 5°C | ± 1.0 % RH / ± 0.2 K |
| Resolution | Air Temperature: 0.1°C Global Bulb Temp: 0.1°C Wet Bulb Temp: 0.1°C Relative Humidity: 0.1% Wind Speed: 0.1 m/s |

Specifications

| | |
|----------------------|--|
| Power Supply | 4 AAA 3V battery, power supply 4 mA consumption without lighting |
| Measurement interval | 2 seconds |
| Backlight | 3 color backlights (Red, Green, Yellow) |
| Data Logger | Yes, minimal data sampling rate : 10 min, Data storage: 5,000 |
| Connection Interface | Mini USB (UART) |
| Enclosure Material | ABS |
| Dimension | 268x72x30 mm |
| Weight | 880g, 1.5kg including battery, tripod and box |
| Probe protection | Polypropylene plastic cage |

Note: Scarlet TWL-1S package contains: TWL-1S device x 1, AAA battery x 4, AA battery x1, Tripod x1, USB cable x1, Box x1.