

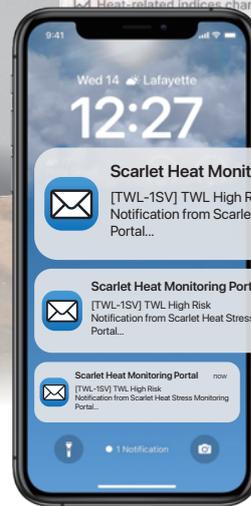
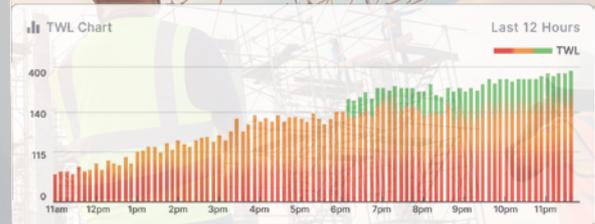
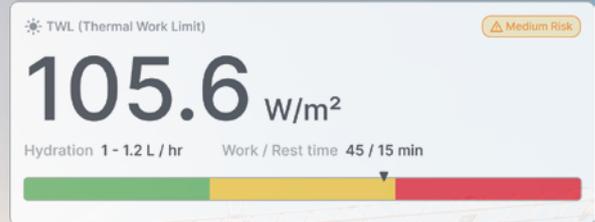
2025 ALL-NEW



SCARLET | TECH

TWL-1SV

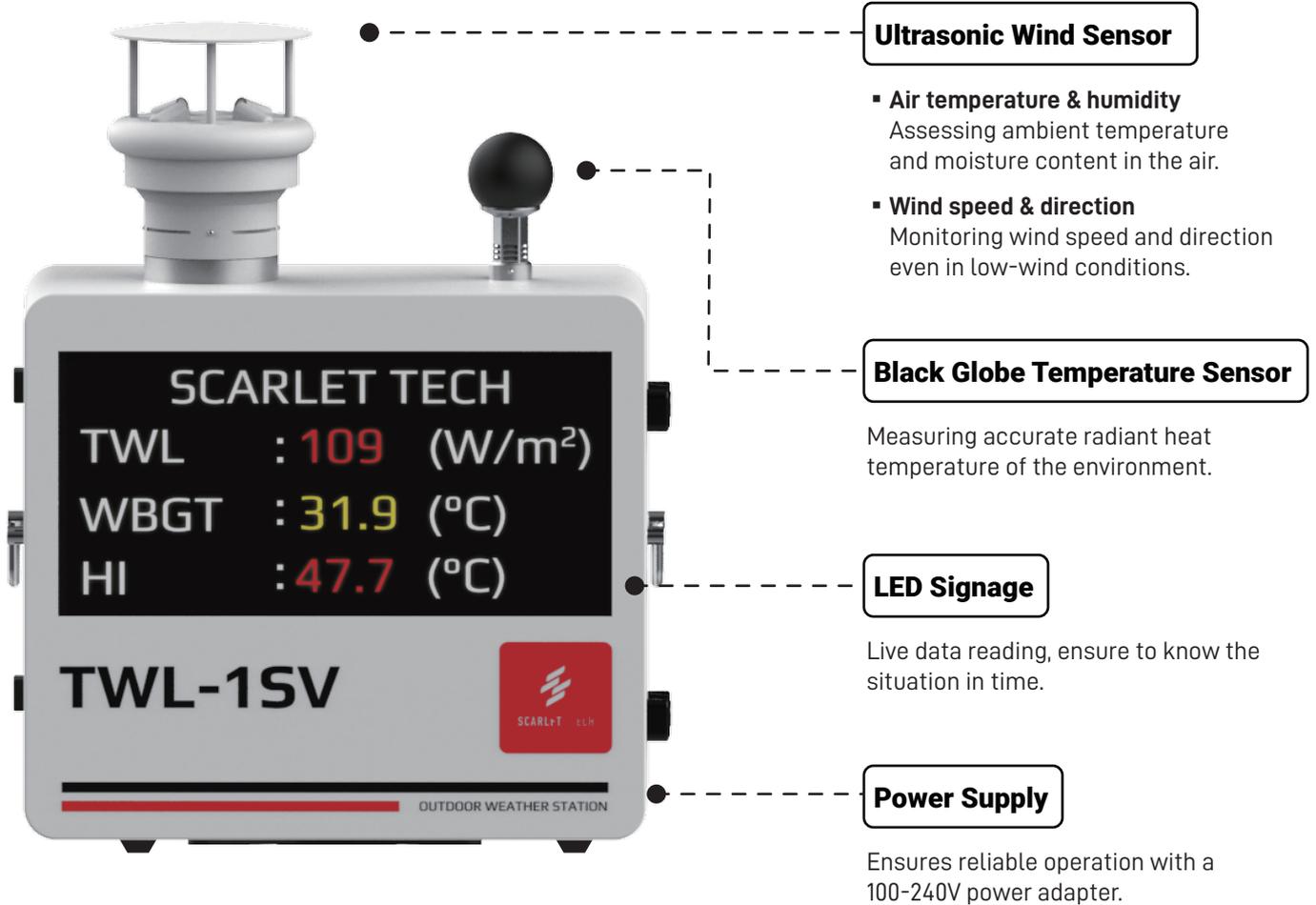
Online Heat Stress Weather Station



- Measure TWL, WBGT, Heat Index
- Live LED signage for instant monitoring & alert
- Remote real-time monitoring via the internet
- Get instant heat stress alerts via web or email
- Historical data backup on device and web portal cloud
- Ensure OSHA compliance for heat safety

Real-Time Heat Stress Detection with Remote Access

The TWL-1SV is a powerful, cloud-ready heat stress weather station designed to enhance safety and protect workers in high-temperature environments. It features built-in LED signage that displays key heat stress indices—including TWL, WBGT, and Heat Index—along with real-time warning statuses, keeping on-site workers and supervisors continuously informed of changing conditions.



Flexible Connectivity for Easy Integration

All heat stress indices and key weather data measured by the TWL-1SV can be transmitted to the cloud for remote monitoring or integrated with PCs and existing systems via a serial port.



LAN

Provides internet connectivity to the cloud portal through the RJ45 connector.



Serial

Accesses data using serial commands via MODBUS/RS485 parameters.



Cloud-Based Heat Monitoring Web Portal

Scarlet Online Heat Monitoring Web Portal displays heat indices and weather factors measured by TWL-1SV, providing real-time data and visual alerts. With the web portal, user can remotely monitor multiple TWL-1SV stations, ensuring comprehensive heat management from any location.



Real-Time Data

- Heat indices
- Weather parameters



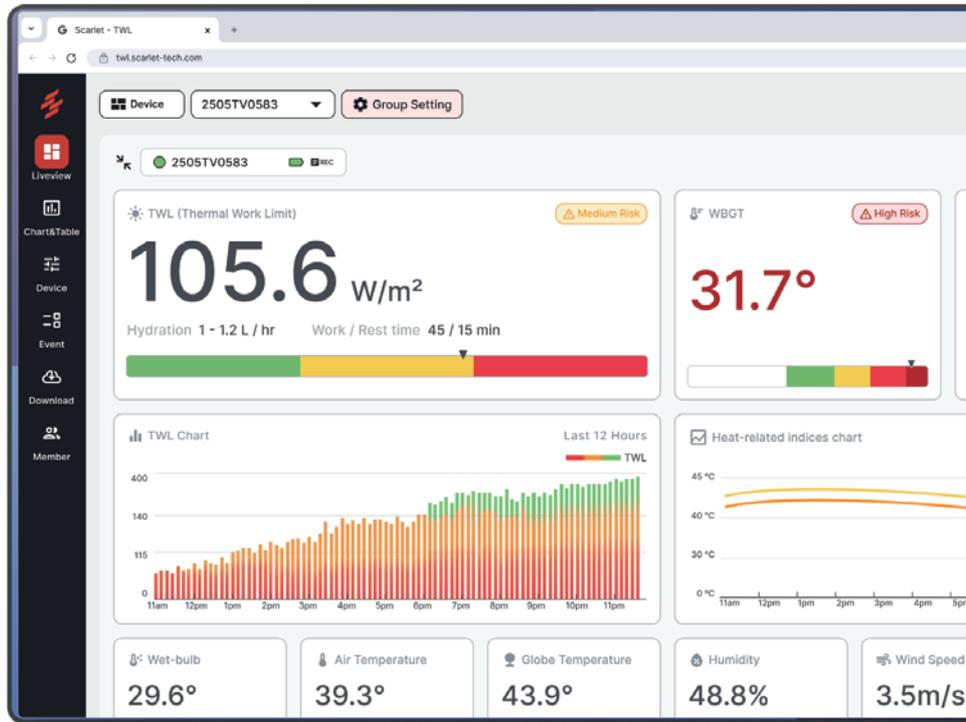
Instant Alert

- Email notifications
- Color-coded browser alerts



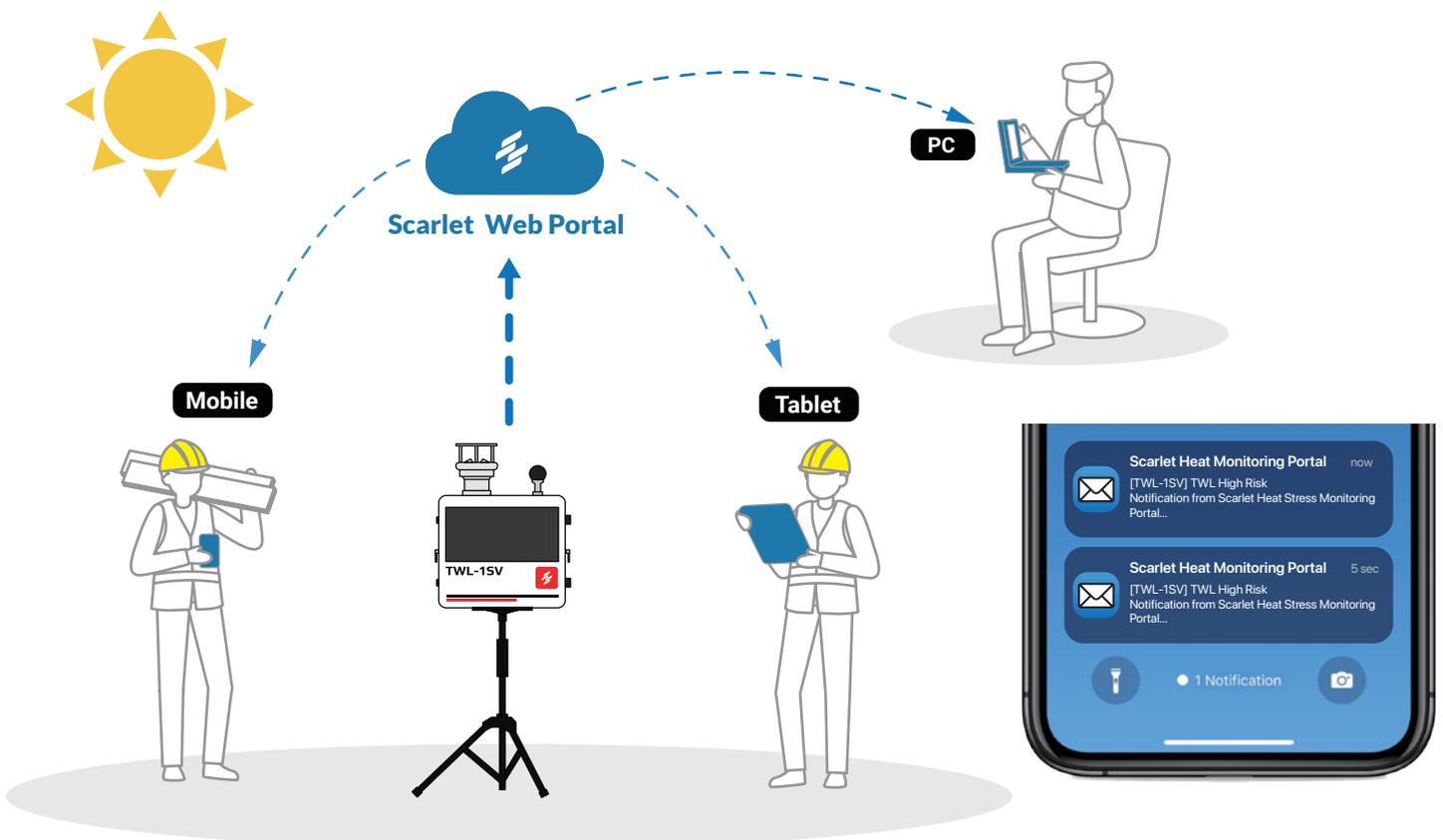
Data Logging

- Cloud-based data storage
- Intuitive charts and tables



Instant Alert on Your Smart Device

Access TWL-based heat alerts through the cloud portal, ensuring users receive notifications via browser or email from any location. On-site HSE officers can monitor TWL levels directly on their mobile devices, even when attending to other tasks. Meanwhile, higher management can monitor worksite heat stress status remotely.



Specifications

• Heat stress index

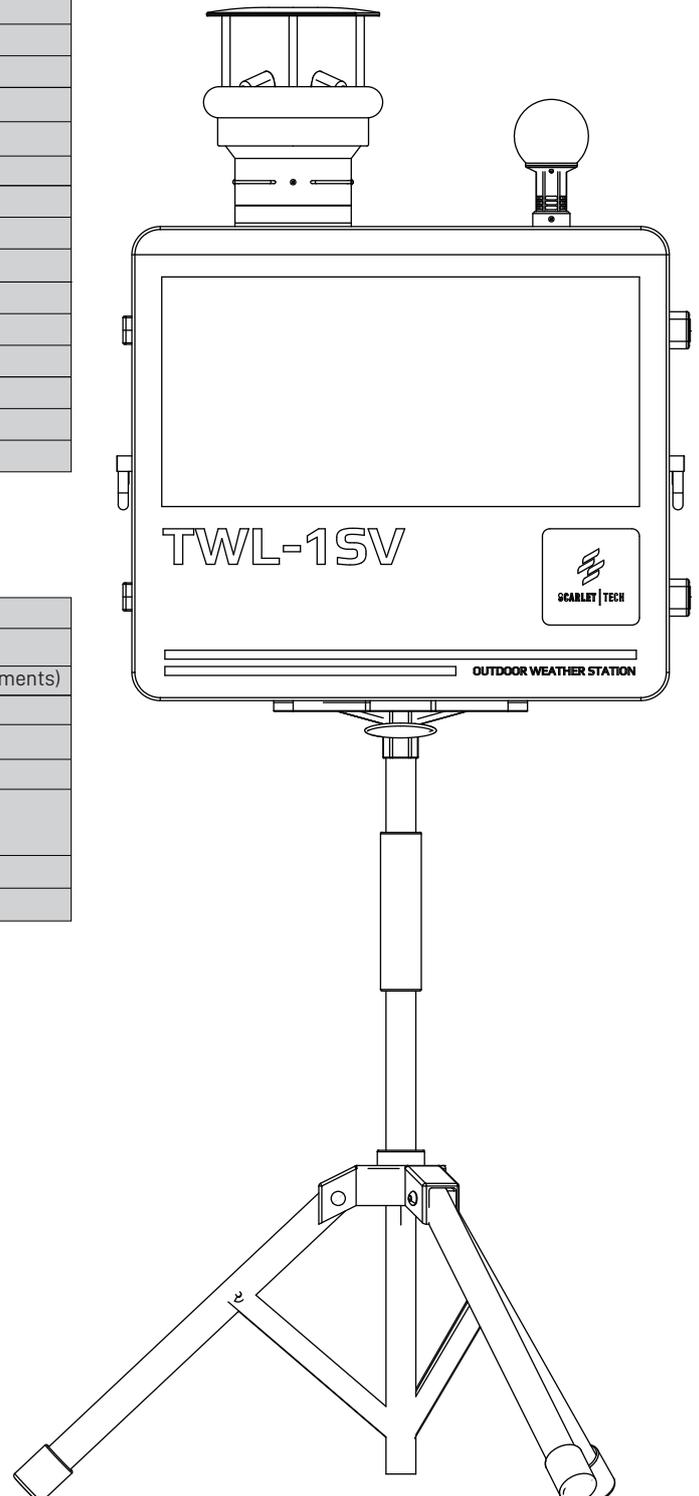
Wet-bulb temperature	Operating range: 0 to 66 °C
	Resolution: 0.1 °C
Wet-bulb globe temperature (WBGT)	$WBGT = 0.7 \times Tw + 0.2 \times Tg + 0.1 \times Ta$
	Resolution: 0.1 °C
Thermal work limit (TWL)	Dynamic calculation based on Tw, Tg, Ta and WS
	Safe max < 38.2 °C
Heat index (HI)	Operating range: 0 to 66 °C
	Resolution: 0.1 °C

• Environmental sensor

Globe thermometer	Operating range: -40 to 120 °C
	Accuracy: ± 0.1 °C (@25 °C)
	Resolution: 0.1 °C
Dry-bulb temperature	Operating range: -20 to 90 °C
	Accuracy: ± 0.3 °C
	Resolution: 0.1 °C
Humidity	Operating range: 0 to 100 % RH
	Accuracy: $\pm 2\%$
	Resolution: 0.1%
Wind speed	Operating range: 0 to 70 m/s
	Accuracy: $\pm 0.3\%$; $\pm 3\%$ of reading (> 10m/s)
	Resolution: 0.1 m/s
Wind direction	Operating range: 0 to 359° (no blank sector)
	Accuracy: $\pm 3^\circ$
	Resolution: 1°

• System

Power supply	100 to 240V AC power adapter (Default)
	Solar panel & battery pack (Optional)
Measurement frequency	2 minutes (in accordance with TWL measurements)
Internet connection	Ethernet via RJ45 connector (Default)
	Wi-Fi (Optional)
	4G LTE (Optional)
Degree of protection	Sensor: IP67 waterproof; Console: IP65 water resistant
Device dimension	36 x 42 x 15 cm
Weight	8.5 kg



Authorised Distributor

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TEST & MEASUREMENT



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