Kestrel 5400- Heat Stress Meter - Practical User Guide

(Australian Building & Construction Industry) 14 Jan 2026

Purpose

This document is a practical user guide intended to support consistent and representative use of the Kestrel 5400 heat stress meter on Australian building and construction sites.
It is **not** a legal instrument, standard, or regulatory document.

Recommended Display Configuration (Before Use)

To improve transparency and consistency of readings, it is **recommended** that the Kestrel 5400 user screen is configured to display the following three values at all times:

- **Air Temperature (Temp)**
- **Relative Humidity (Humidity)**
- **Wet Bulb Temperature (Wet Bulb)**

Displaying these three values together allows users to clearly see the environmental factors contributing to heat stress and helps avoid confusion or dispute about how readings are derived.

How to Set the 3-Reading Display on the Kestrel 5400

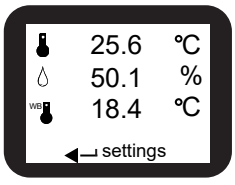
1. **Power** on the Kestrel 5400 & press **Options/Exit** button

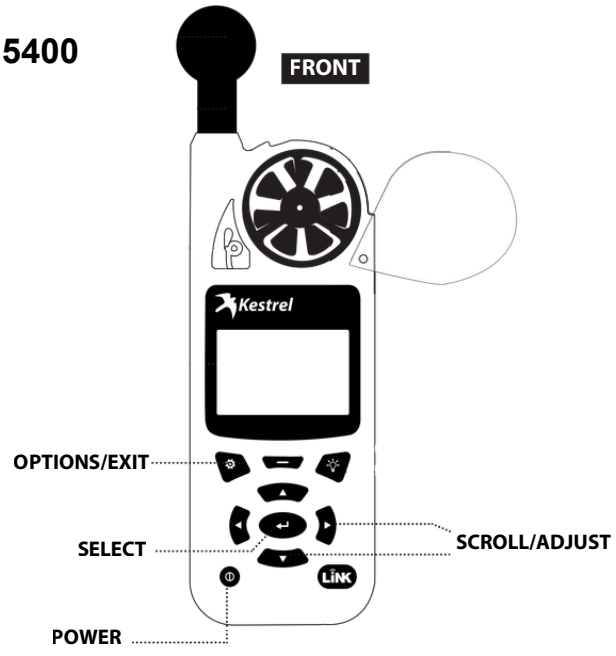
2.Scroll/Adjust down▼ and **select** 'System'.
then down▼ and **select** 'Measurements'
then down▼ and **select** 'User Screen 1'
then right ▶ to show 'On'

3.Press **Options/Exit** button x 3 until back to main screen

4.Scroll to the **3-Value Display Layout** and press **select**

5. Assign the following parameters:
Temp (Air Temperature)
Humidity (Relative Humidity)
Wet Bulb / or **Time**





To do this

- **1.Scroll/Adjust** down▼ to the Row you want to change press **select**
- **2.**Then while 'Meas' is highlighted **Scroll/Adjust** right ▶ to adjust to your preferred parameter.
- **3.**Press **Options/Exit** button x 1 to get back to Rows to change other Rows if needed
  or **Options/Exit** button x 2 to gow back to main screen

Once set,these three readings will be visible simultaneously during use.

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Guiding principle

Heat stress readings should represent worker exposure at the time of measurement, not heat absorbed by the instrument itself.

Approved Measurement Methods

Handheld Dynamic Reading (Sun or Mixed Conditions)

Used where work is performed in **direct sunlight** or where conditions are changing.

Procedure

- Hold the meter **away from the body**
- Spin on the lanyard for **8–10 seconds**
- Record the reading **immediately**
- Do **not** wait for prolonged stabilisation while handheld

Purpose

Maintains airflow across sensors and prevents solar or body-heat loading of the instrument.

Important Note on Solar Exposure

The Kestrel 5400 is a handheld instrument and does not use a radiation shield.
Stationary exposure in direct sunlight allows the instrument housing to absorb radiant heat, which can artificially elevate readings.

What This Guide Does Not Do

- It does **not** replace site agreements, EBAs, or industrial arrangements
- It does **not** set stop-work thresholds
- It does **not** override site-specific heat policies

This guide is intended to assist users in taking **fair, repeatable, and technically sound measurements.**

Industrial Relations Disclaimer

This guide is provided as practical guidance only.
Where Enterprise Bargaining Agreements (EBAs), site agreements, or regulatory requirements specify temperature limits or stop-work provisions, those requirements continue to apply.

This guide has been developed with and is approved by Kestrel AU Pocket Weather Instruments

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