



QUESTemp[°] 3X Series

PORTABLE THERMAL ENVIRONMENT
AND HEAT STRESS MONITORS

Typical Applications

- Military Training Facilities
- Commercial and Naval Ships and Submarines
- Athletic Training and Events Facilities
- Manufacturing Plants
- Commercial Bakeries
- Power Generation Plants
- Warehousing and Distribution Centers
- Shipbuilding Operations



QUESTemp[°] 32

- Wet-Bulb, Dry-Bulb, Globe Temp, WBGT in, WBGT out, plus RH, Heat Index and HUMIDEX.
- Easy to use device accurately assesses heat stress.



QUESTemp[°] 34

- All of the features of QUESTemp[°] 32, plus provides datalogging capabilities.
- Interfaces with QuestSuite Professional II.



QUESTemp[°] 36

- All of the features of QUESTemp[°] 34, plus additional sensor capabilities, which allow the calculation of PMV/PPD thermal comfort indices.
- Optimizes safe work time with real-time guidance on work/rest regimens.

The Issue

Heat stress prevention begins with worker training and environmental monitoring. Many devices are at your disposal to measure environmental conditions. Some are more appropriate than others. For instance, common temperature and humidity meters are often used because they are one of the most inexpensive devices available. However, there are significant trade-offs. Temperature and humidity meters do not provide a complete answer. The influences of radiant heat, air flow, work rate and clothing ensembles are not considered by temperature and humidity measurements alone. Each of these additional factors can greatly influence an individual's physiological tolerance of heat and should not be ignored.

The Solution

Quest Technologies Portable Heat Stress Monitors incorporate WBGT (Wet-Bulb Globe Temperature) sensing technology. Experts agree that WBGT is the gold standard for heat stress monitoring. These portable instruments calculate and display a WBGT Index value that considers the affects of ambient air temperature, humidity, air flow (which provides an evaporative cooling effect to the body) and radiant heat from sources such as the sun, furnaces, ovens, boilers, etc.

The WBGT Index is then applied to look-up tables from organizations like the U.S. Navy, the American Conference of Governmental Industrial Hygienists, the Electric Power Research Institute, ISO and others to determine safe work times or appropriate work-rest regimens within the monitored environment. Quest's more advanced WBGT monitors have even incorporated these look-up tables into the firmware of the instrument. The meter is then able to automatically determine and display stay times or work-rest regimens for immediate application to the work at hand.

Product Specifications

	QUESTemp°32	QUESTemp°34	QUESTemp°36
INPUT			
Sensor Type: Temp. (Wet, Dry & Globe) Relative Humidity Air Velocity	RTD Capacitive Polymer -	RTD Capacitive Polymer -	RTD Capacitive Polymer Hot Wire
Measurement Ranges: Temp. (Wet, Dry & Globe) Relative Humidity Air Velocity (Optional)	-5 to 100°C (23 to 212°F) 0 to 100% -	-5 to 100°C (23 to 212°F) 0 to 100% -	-5 to 100°C (23 to 212°F) 0 to 100% 0 to 2 M/S
Accuracies: Temp. (Wet, Dry & Globe) Relative Humidity Air Velocity	+/- 0.5°C (0.9°F) +/- 5% -	+/- 0.5°C (0.9°F) +/- 5% -	+/- 0.5°C (0.9°F) +/- 5% +/- 5%
USER PROGRAMMABLE PARAMETERS			
Temperature Scale Display Language Time & Date Datalogging Intervals Heat Index/Humidex Air Flow Measurement Channel	°C or °F Multiple - - Yes -	°C or °F Multiple Clock/Calendar 1,2,5,10,15,30 or 60 min Yes -	°C or °F Multiple Clock/Calendar 1,2,5,10,15,30 or 60 min Yes On/Off
INDEPENDENTLY CERTIFIED STANDARDS			
Intrinsic Safety Electromagnetic Conformance	See Note 1 CE Mark	See Note 1 CE Mark	See Note 1 CE Mark
POWER			
Disposable Batteries Rechargeable Battery Option AC Power Adapter	9V (150 Hrs.) NiMH (300 Hrs.) Yes	9V (150 Hrs.) NiMH (300 Hrs.) Yes	9V (150 Hrs.) NiMH (300 Hrs.) Yes
MECHANICAL			
Case Size (Aluminum) Weight	9.2x7.2x3" 23.5x18.3x7.5 mm 2.6 lbs (1.2 kg)	9.2x7.2x3" 23.5x18.3x7.5 mm 2.6 lbs (1.2 kg)	9.2x7.2x3" 23.5x18.3x7.5 mm 2.6 lbs (1.2 kg)

Note 1: UL/CSA Standards for Class I Groups A, B, C & D; Groups E, F, & G; Class. Temperature Code T3 & ATEX.

Product Features

	QUESTemp°32	QUESTemp°34	QUESTemp°36
Mechanical Design:			
Tripod-Mount Area Monitor	•	•	•
IP54 Water & Dust Resistance Rating	•	•	•
Sensors:			
Shielded Dry Bulb Sensor	•	•	•
Covered, Extra Large Wet Bulb Reservoir	•	•	•
2" or 6" Globe Sensor	•	•	•
Detachable WBGT Sensor Bar	•	•	•
Optional Sensor Bar Extension Cables	•	•	•
(2) Additional WBGT Sensor Bar Input Ports	•	•	•
On-Board Relative Humidity Sensor	•	•	•
Optional Detachable Air Velocity Probe			•
User Interface:			
Liquid Crystal Display	•	•	•
Large Keypad	•	•	•
Measurement Data:			
Dry Bulb Temperature	•	•	•
Wet Bulb Temperature	•	•	•
Globe Temperature	•	•	•
Relative Humidity	•	•	•
Air Velocity (Optional)			•
Indoor WBGT Index	•	•	•
Outdoor WBGT Index	•	•	•
Head-Torso-Ankle Weighted Average WBGT (Optional)	•	•	•
Stay Time Data			•
Real Time Clock		•	•
Overall Summary Data		•	•
Detailed Time History Data		•	•
Outputs:			
Display	•	•	•
RS-232 Serial Printer/Computer Interface		•	•
Parallel Printer Interface		•	•
Data Management:			
QuestSuite Professional II		•	•

