small size

HEAT INDEX WBGT METER

Model : WBGT-208

ISO-9001, CE, IEC1010

Wet bulb globe temperature
(WBGT)
@ Indoor/Outdoor

Black globe temperature
(TG)

Air temperature
(TA)

Wet bulb temperature
(WB)

Humidity

Dew point temperature

LCD display:
RH   **APO**
61.9
24.6 °C
HEAT INDEX WBGT METER

Buttons: HOLD, REC, SET ▲, FUNCTION ▼
IN/OUT

_bgt : WBGT(Wet bulb globe Temp.)
_b : WB(Wet bulb Temp.)
tg : TG (Black globe Temp.)
tA : TA (Air Temp.)
rH : Humidity
dP : Dew point

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The Art of Measurement

SGS ISO 9001 UKAS QUALITY MANAGEMENT 005

small size

HEAT INDEX WBGT METER
Model : WBGT-208

FEATURE
Introduction :

WBGT (wet-bulb globe temperature) was developed as a monitoring basis at US military training camps and became widespread for the use in workplaces and sports situation It is suggested in the international standard ISO 7243, OSHA (US Occupation Safety), Japan Society for Occupational Health and the SMA (Sports Medicine Australia) in establishing the permissible heat exposure limits in health , sports or other physical activities.

Measurement : WBGT value (Indoor/Outdoor Wet bulb globe temperature), Black globe temperature, Humidity, Air temperature, Wet bulb temperature, Dew point Temp..

Adjustable WBGT alarm setting, if the WBGT value over the alarm threshold, the buzzer will sound along with the flashing Display.

Using to control and monitor of physical activity in hot environment to limit the danger of heat related injuries.

Globe temperature measurement use the Pt sensor,high accuracy. Fast humidity measuring response time.

* Direct measurement of the radiation effect with a brass black ball in 40 mm dia.
* Sensor protecting mechanism.
* LCD with green light backlight, easy reading.
* Can default auto power off or manual power off.
* Data hold, record max. and min. reading.
* Microcomputer circuit, high accuracy.
* Power by UM4/AAA (1.5 V) x 3 batteries .
* RS232/USB PC COMPUTER interface.

GENERAL SPECIFICATION

Circuit	Custom one-chip of microprocessor LSI circuit.
Display	LCD size : 52 mm x 38 mm LCD with green backlight (ON/OFF).
Measurement	Wet bulb globe temperature (WBGT) @ *Indoor/Outdoor* Black globe temperature (TG) Air temperature (TA) Wet bulb temperature (WB) Humidity Dew point temperature
WBGT formula ** Wet bulb globe Temp.*	Indoor/Outdoor and no sun : WBGT = (0.7 x WB) + (0.3 x TG)
	Outdoor and full sun : WBGT = (0.7 x WB) + (0.2 x TG) + (0.1 x TA)
WBGT alarm setting	Adjustable WBGT alarm setting, if the WBGT value over the alarm threshold, the buzzer will sound along with the flashing Display.
Advanced setting	Set WBGT alarm value Auto power OFF management Set beep Sound ON/OFF Select the temperature unit to ℃ or ℉.
Data Hold	Freeze the display reading.
Memory Recall	Maximum & Minimum value.
Sampling Time of Display	Approx. 1 second.

Data Output	RS 232/USB PC computer interface. *Connect the optional RS232 cable UPCB-02 will get the RS232 plug.* *Connect the optional USB cable USB-01 will get the USB plug.*
Operating Temperature	0 to 50 ℃.
Operating Humidity	Less than 85% R.H.
Power Supply	* Alkaline or heavy duty DC 1.5 V battery (UM4/AAA) x 3 PCs, or equivalent.
Power Current	* If LCD Backlight is off, the power consumption will be approx. 5 mA. * If LCD backlight on, the power consumption will be approx. 11 mA.
Weight	489 g/1.08 LB.
Dimension	Meter : 177 x 57 x 24 mm (7.0 x 2.2 x 0.94 inch)
	Black brass ball : Round, 40 mm dia
Standard Accessories Included	Instruction manual 1 PC Black brass ball (with sensor) 1 PC Soft carrying case, CA-52A 1 PC
Optional Accessories	USB cable, USB-01. RS232 cable, UPCB-02. Data Acquisition software,SW-U801-WIN. Soft carrying case, CA-52A

ELECTRICAL SPECIFICATIONS (23± 5 ℃)

Wet bulb globe temperature (WBGT)

Range	℃	Indoor	0 ℃ to 59 ℃
		Outdoor	0 ℃ to 56 ℃
	℉	Indoor	32 to 138 ℉
		Outdoor	32 to 132 ℉
Accuracy ** Indoor*	℃	±1 ℃ (15 to 59 ℃) ±1.5 ℃ (Others)	
	℉	±1.8 ℉ (59 to 138 ℉) ±2.7 ℉ (Others)	
Accuracy ** Outdoor*	℃	±1.5 ℃ (15 to 56 ℃) ±2 ℃ (Others)	
	℉	±2.7 ℉ (59 to 132 ℉) ±3.6 ℉ (Others)	

WBGT Formula

Indoor *(Outdoor and no sun)*	WBGT= 0.7WB + 0.3TG
Outdoor *(Outdoor and full sun)*	WBGT= 0.7WB + 0.2TG + 0.1TA

Air temperature (TA)		
Range	℃	0 to 50 ℃
	℉	32 to 122 ℉.
Resolution	℃	0.1 ℃
	℉	0.1 ℉
Accuracy *@ 15 to 40 ℃*	℃	±0.8 ℃
	℉	±1.5 ℉

Black globe temperature (TG)		
Range	℃	0 to 80 ℃
	℉	32 to 176 ℉.
Resolution	℃	0.1 ℃
	℉	0.1 ℉
Accuracy *@ 15 to 40 ℃*	℃	±0.6 ℃
	℉	±1.1 ℉

Humidity	
Range	5 % to 95 % R.H.
Resolution	0.1 % R.H.
Accuracy	≧70% RH : ±(3% reading + 1% RH). < 70% RH : ±3% RH.

Dew Point Temp.		
℃	Range	-25.3 ℃ to 48.9 ℃
	Resolution	0.1 ℃
℉	Range	-13.5 ℉ to 120.1 ℉.
	Resolution	0.1 ℉.

Remark :
* Dew Point Temp. value is calculated from the Humidity/Air Temp. measurement automatically.
* The Dew Point Temp. accuracy is sum accuracy value of Humidity & Air Temperature measurement..

Wet bulb Temp.		
℃	Range	-21.6 ℃ to 50.0 ℃
	Resolution	0.1 ℃
℉	Range	-6.9 ℉ to 122.0 ℉.
	Resolution	0.1 ℉.

Remark :
* Wet bulb display value is calculated from the Humidity/Air Temp. measurement automatically.
* The Dew Point accuracy is sum accuracy value of Humidity & Air temperature measurement..

@ Above specification tests under the environment RF Field Strength less than 3 V/M & frequency less than 30 MHz only.

* Appearance and specifications listed in this brochure are subject to change without notice.

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