SD Card, real time data logger, Patent

12 channels Temp. RECORDER

Model : BTM-4208SD *ISO-9001, CE, IEC1010*

Lutron

LUTRON ELECTRONIC

The Art of Measurement

SD Card real time data logger

12 channels TEMPERATURE RECORDER

Model : BTM-4208SD

FEATURES

* 12 channels Temperature recorder, use SD card to save the data along with time information, paperless.
* Real time data logger, save the 12 channels Temp. measuring data along the time information (year, month, date, minute, second) into the SD memory card and can be down load to the Excel, extra software is no need. User can make the further data or graphic analysis by themselves.
* Channels no. : 12 channels (CH1 to CH12) temperature measurement.
* Sensor type : Type J/K/T/E/R/S thermocouple.
* Auto datalogger or manual datalogger. Data logger sampling time range : 1 to 3600 seconds.
* Type K thermometer : -100 to 1300 ℃.
* Type J thermometer : -100 to 1200 ℃.
* Page select, show CH1 to CH8 or CH9 to CH12 in the same LCD.
* Display resolution : 1 degree/0.1 degree.
* Offset adjustment.
* SD card capacity : 1 GB to 16 GB.
* RS232/USB computer interface.
* Microcomputer circuit provides intelligent function and high accuracy.
* Jumbo LCD with green light backlight, easy reading.
* Can default auto power off or manual power off.
* Data hold to freeze the measurement value.
* Record function to present the max. and min. reading.
* Power by UM3/AA (1.5 V) x 8 batteries or DC 9V adapter.
* RS232/USB PC COMPUTER interface.
* Heavy duty & compact housing case.

GENERAL SPECIFICATIONS

Circuit	Custom one-chip of microprocessor LSI circuit.	
Display	LCD size : 82 mm x 61 mm. ** with green color backlight.*	
Channels	12 channels : T1, T2, T3, T4, T5, T6, T7, T8, T9, T10, T11 and T12.	
Sensor type Resolution	Type K thermocouple probe. Type J/T/E/R/S thermocouple probe. 0.1℃/1℃, 0.1℉/1 ℉.	
Datalogger Sampling Time Setting range	Auto	1 second to 3600 seconds *@ Sampling time can set to 1 second, but memory data may loss.*
	Manual	Push the data logger button once will save data one time. *@ Set the sampling time to 0 second.*
Memory Card	SD memory card. 1 GB to 16 GB.	
Advanced setting	* Set clock time (Year/Month/Date, Hour/Minute/ Second) * Decimal point of SD card setting * Auto power OFF management * Set beep Sound ON/OFF * Set temperature unit to ℃ or ℉ * Set sampling time * SD memory card Format	
Temperature Compensation	Automatic temp. compensation for the type K/J/T/E/R/S thermometer.	
Linear Compensation	Linear Compensation for the full range.	
Offset Adjustment	To adjust the zero temperature deviation value.	
Probe Input Socket	2 pin thermocouple socket.	
Over Indication	Show " - - - - ".	
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.*	

Power off	Auto shut off saves battery life or manual off by push button.
Operating Temperature	0 to 50 ℃.
Operating Humidity	Less than 85% R.H.
Power Supply	**.* Alkaline or heavy duty DC 1.5 V battery (UM3, AA) x 8 PCs, or equivalent.
	**.* DC 9V adapter input. (AC/DC power adapter is optional).
Power Current	Normal operation (w/o SD card save data and LCD Backlight is OFF) : *Approx. DC 8.5 mA.*
	When SD card save the data but and LCD Backlight is OFF) : *Approx. DC 30 mA.*
	**. If LCD backlight on, the power consumption will increase approx. 14 mA.*
Weight	Meter : 948g (includes batteries)
Dimension	225 X 125 X 64 mm (8.86 X 4.92 X 2.52 inch)
Accessories Included	* Instruction manual..... 1 PC * Type K Temp. probe, TP-01..... 1 PC
Optional Accessories	* Type K thermocouple probe. TP-01, TP-02A. TP-03, TP-04 * SD Card (1 GB) * SD Card (2 GB) * USB cable, USB-01. * RS232 cable, UPCB-02. * Data Acquisition software, SW-U801-WIN. * AC to DC 9V adapter. * Hard carrying case, CA-08.

ELECTRICAL SPECIFICATIONS (23± 5 ℃)

Sensor Type	Resolution	Range	Accuracy
Type K	0.1 ℃	-50.1 to -100.0 ℃	± (0.4 % + 1 ℃)
		-50.0 to 999.9 ℃	± (0.4 % + 0.5 ℃)
	1 ℃	1000 to 1300 ℃	± (0.4 % + 1 ℃)
	0.1 ℉	-58.1 to -148.0 ℉	± (0.4 % + 1.8 ℉)
		-58.0 to 999.9 ℉	± (0.4 % + 1 ℉)
	1 ℉	1000 to 2372 ℉	± (0.4 % + 2 ℉)
Type J	0.1 ℃	-50.1 to -100.0 ℃	± (0.4 % + 1 ℃)
		-50.0 to 999.9 ℃	± (0.4 % + 0.5 ℃)
	1 ℃	1000 to 1150 ℃	± (0.4 % + 1 ℃)
	0.1 ℉	-58.1 to -148.0 ℉	± (0.4 % + 1.8 ℉)
		-58.0 to 999.9 ℉	± (0.4 % + 1 ℉)
	1 ℉	1000 to 2102 ℉	± (0.4 % + 2 ℉)
Type T	0.1 ℃	-50.1 to -100.0 ℃	± (0.4 % + 1 ℃)
		-50.0 to 400.0 ℃	± (0.4 % + 0.5 ℃)
	0.1 ℉	-58.1 to -148.0 ℉	± (0.4 % + 1.8 ℉)
		-58.0 to 752.0 ℉	± (0.4 % + 1 ℉)
Type E	0.1 ℃	-50.1 to -100.0 ℃	± (0.4 % + 1 ℃)
		-50.0 to 900.0 ℃	± (0.4 % + 0.5 ℃)
	0.1 ℉	-58.1 to -148.0 ℉	± (0.4 % + 1.8 ℉)
		-58.0 to 999.9 ℉	± (0.4 % + 1 ℉)
	1 ℉	1000 to 1652 ℉	± (0.4 % + 2 ℉)
Type R	1 ℃	0 to 600 ℃	± (0.4 % + 0.5 ℃)
		601 to 1700 ℃	± (0.4 % + 1 ℃)
	1 ℉	32 to 1112 ℉	± (0.4 % + 1 ℉)
		1113 to 3092 ℉	± (0.4 % + 2 ℉)
Type S	1 ℃	0 to 600 ℃	± (0.4 % + 0.5 ℃)
		601 to 1500 ℃	± (0.4 % + 1 ℃)
	1 ℉	32 to 1112 ℉	± (0.4 % + 1 ℉)
		1113 to 2732 ℉	± (0.4 % + 2 ℉)

Remark :

a. Accuracy value is specified for the meter only.

b. Accuracy is tested under the meter's environment temperature within 23 ± 5℃.

c. Linearity Correction :
Memorize the thermocouple's curve into the intelligent CPU circuit,

PATENT	CHINA : ZL 2008 2 0189918.5 ZL 2008 2 0189917.0 TAIWAN : M 358970 M 359043 Germany : Nr. 20 2008 016 337.4 JAPAN : 3151214 U.S.A. : Pending

* Appearance and specifications listed in this brochure are subject to change without notice. 0909-BTM4208