

*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 °C.
* Type J thermometer : -100 to 1200 °C.
* 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	Type K thermocouple probe. Type J/T/E/R/S thermocouple probe.	
Resolution	0.1°C/1°C, 0.1°F/1 °F.	
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 °C or °F * 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 UPGB-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 °C.
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, UPGB-02. * Data Acquisition software, SW-U801-WIN. * AC to DC 9V adapter. * Hard carrying case, CA-08.

#### ELECTRICAL SPECIFICATIONS (23±5 °C)

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 ℉ )
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 Germany : Nr. 20 2008 016 337.4	TAIWAN : M 358970 M 359043 JAPAN : 3151214	U.S.A. : Pending
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\* Appearance and specifications listed in this brochure are subject to change without notice.

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