

Thermal/DC Voltage Date Logger

精密溫度/電壓記錄器



- 單通道溫度或電壓記錄。
- 適用 B,E,J,K,N,R,S,T 各式熱電偶，溫度解析度 0.1°C ，精確度(不含熱電偶差異) 0.01% 。
- 精密冷接點溫度補償，CJC 誤差 $< +/- 0.3^{\circ}\text{C}$ 。
- 電壓量測範圍 $+/- 480\text{V}$ ，解析度達 1mV ，精確度 0.1% 。
- 通道電性隔離強度 DC 1000V ，充分隔離外在的電位干擾，保護內部電路。
- 熱電耦開路檢測。
- 以 PC/NB 及 MS Windows 為操作基礎，可藉 USB 介面進行通訊連線。
- PC/NB 操作簡易清楚，分析功能強大，利用 PC 廉價且容量龐大的記憶體，可完整記錄所有資料。
- 可由 USB 接口供電，免外接電源。

勝特力材料 886-3-5753170
勝特力电子(上海) 86-21-34970699
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[Http://www.100y.com.tw](http://www.100y.com.tw)

(Single Channel Temperature/DC Voltage Data Logger)

DLS001A1WA



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Features

- 1-channel temperature/DC voltage recording.
- Accepting B, E, J, K, N, R, S, T type thermal couples with 0.1°C reading resolution and 0.01% accuracy (thermal couple error excluded).
- Dedicated cold junction compensation
- DC Voltage measurement range +/-480V with 1mV resolution and 0.1% accuracy
- 1000V galvanic isolation for protection and noise rejection
- Break-detection circuitry to detect open thermal couple inputs
- PC/NB MS Windows based operation with USB communication interfaces
- Working with PC/NB for easy operation, powerful data analyses, and almost unlimited recording capacity
- USB_ powered Dongle(No battery required)
- The program supports measurement up to four dongles simultaneously.

Applications

- General purpose temperature/voltage measurements
- Electronics temperature/voltage measurements where high common mode voltage can exist, such as switching circuits, fuel cells, and power devices
- Long-term and high speed temperature/voltage recording from hours to months

- Real time temperature/voltage data and graphic analyses
- Temperature/voltage measurements with very high accuracy and portability
- Low-cost solution for simultaneous multiple temperature/voltage measurements and recording

Absolute Maximum

Specification Item	Symbol	Value	Unit
Dongle Power Supply Voltage	V _{dc}	6	V
Dongle Power Supply Current	I _{dc}	0.04	A
Thermocouple Differential Input Voltage	V _{tc}	±2.5	V
Operating Temperature	T _{op}	0~50	°C
Storage Temperature	T _{st}	-20~60	°C
Storage Humidity		80	%RH

Specifications

Specification Item	Symbol	Value	Unit
Thermocouple Connector Specifications			
Thermocouple connector		PCC-SMP-U-100-R-CE-ROHS (Omega)	
Thermocouple jacks		SMPW-U-M (Cu-Cu, White, Omega)	
Temperature Reading Specifications			
Temperature Sensor Type		Thermocouple B, E, J, K, N, R, S, T	
Temperature Scale		ITS-90	
Temperature Resolution		±0.1	°C
Temperature Accuracy ^{(1) (2)}		±[0.01% of reading +0.3]	
CJC Error	e _{cjc}	±0.3 ⁽³⁾	°C
Maximum Sample Rate	SR	5	Sample/ Sec
Galvanic Isolation	V _{iso}	1000VDC ⁽³⁾	V
Input Resistance	R _{in}	5M	Ω
Thermocouple break detection current	I _{tc_open}	100	nA
Common Mode Rejection Ratio 50Hz, 60Hz, 50/60Hz	CMRR	>140	dB
Normal Mode Rejection Ratio	NMRR	>110	dB

50Hz, 60Hz			
Normal Mode Rejection Ratio 50/60Hz	NMRR	>87	dB
Voltage Reading Specifications			
Voltage Input Type		WiseLife VA-480 Voltage Adaptor	
Voltage Resolution		1	mV
Voltage Input Range		+/- 480	Vdc
Voltage Input Accuracy		$\pm[0.1\% \text{ of reading} + 1\text{mV}]^{(3)}$	
Input Resistance	Rin	1M	Ω
Communication Specifications			
USB Communication		USB2.0(full speed device), USB A-type Connector	
Power Specifications			
Power Requirement (Dongle)	Vdc	4.5~5.5	V
Maximum Power Consumption	Pmax	0.22	W
Physical Specifications			
Dimensions (WidthxDepthxHeight)		96x29x14.5	mm ³
Weight		30	g
Environmental Specifications			
Operating Temperature	Top	0~50	°C
Humidity		< 80	%RH

(1) Accuracy is specified for ambient temperature between 20°C and 30°C .

Thermocouple error is excluded.

(2) For ambient temperature outside 20°C to 30°C, extra error of (0.01% of reading + 0.03°C) per °C outside the range must be added.

Table 1: Measure Range and Accuracy

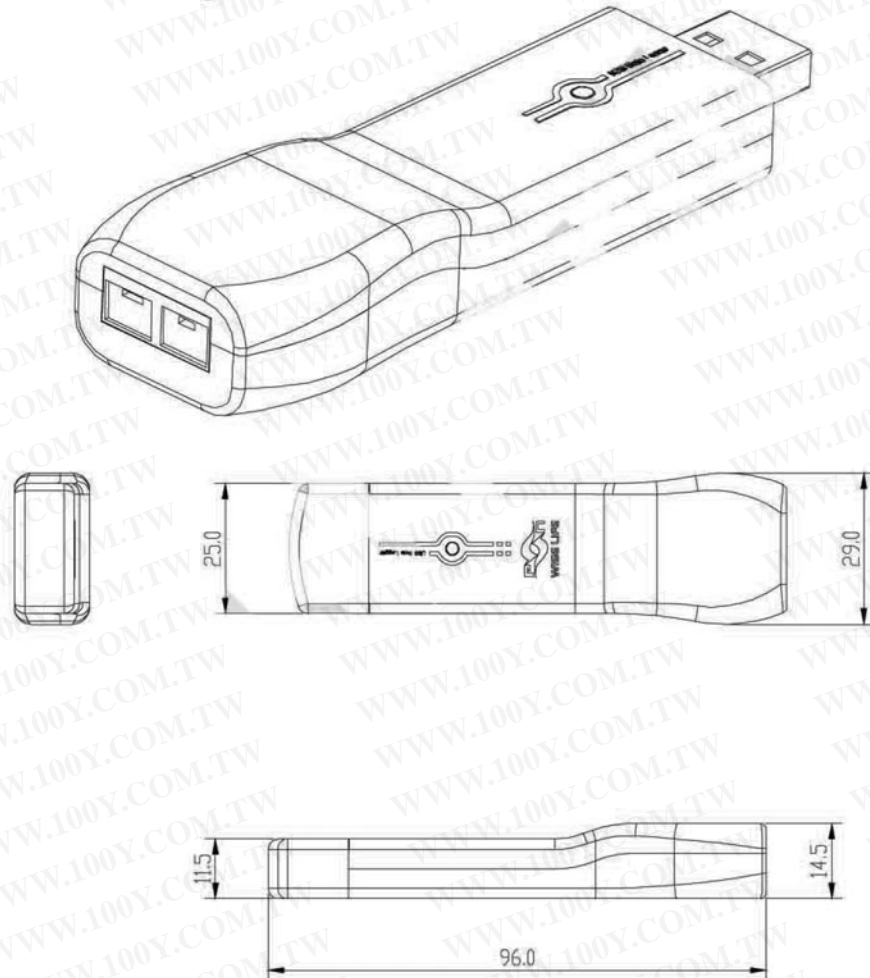
Input Type	Measure Range	Measure Accuracy
DC Voltage ⁽¹⁾	- 480 to 480 V	$\pm[0.1\% \text{ of reading} + 1\text{mV}]$
Thermocouple T-type	-200 to 400°C	$\pm[0.01\% \text{ of reading} + 0.3]^\circ\text{C}^{(2)}$
Thermocouple K-type	-200 to 1372°C	
Thermocouple B-type	250 to 1820°C	
Thermocouple E-type	-200 to 1000°C	
Thermocouple J-type	-210 to 1200°C	
Thermocouple N-type	-200 to 1300°C	

Thermocouple S-type	-50 to 1760°C
Thermocouple R-type	-50 to 1760°C

(1) Use Wiselife VA-480 voltage adaptor

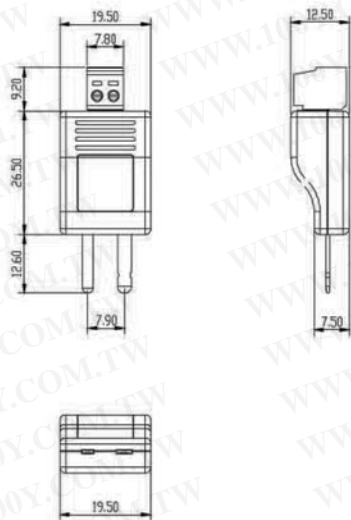
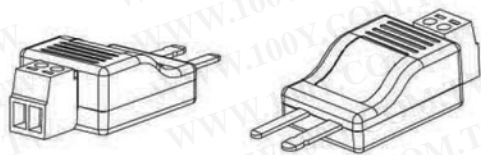
(2) Accuracy is specified for ambient temperatures between 20°C and 30°C without considering the error of thermocouple. Extra error of (0.01% of reading + 0.03°C) per °C outside the range must be added if ambient temperature not between 20°C and 30°C.

Mechanical Drawings

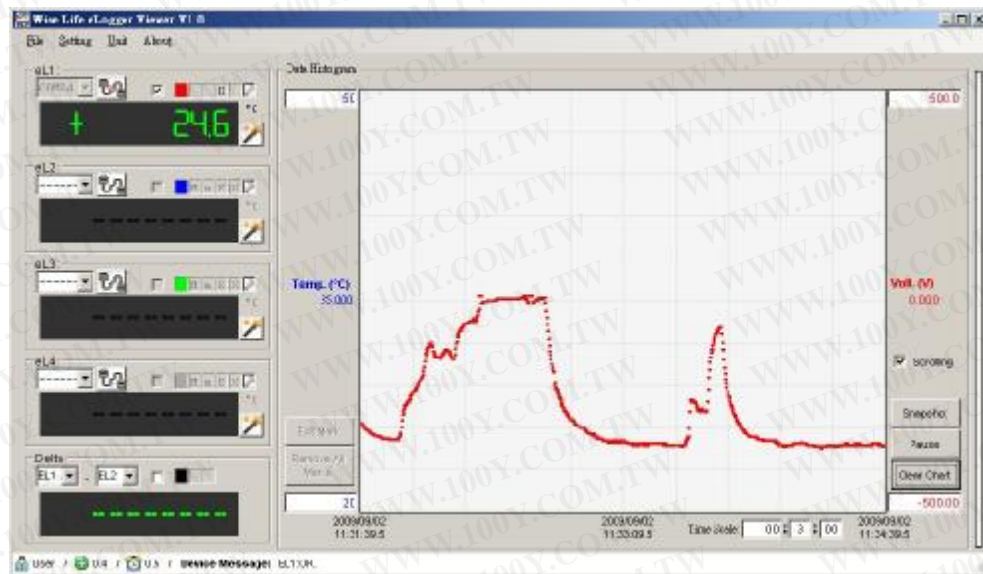
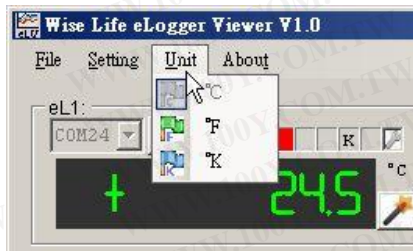


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Wise Life VA-480 Voltage Adaptor (optional)



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