# **Temperature Datalogger**

**Users Manual** 



## USB Datalogger IP 54 Water Proof

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### **1 FEATURES**

- Measure °C/°F Temperature
- Datalogging- 50,000 records
- Fast USB download
- Easy- to-Use PC software for parameter settings and data analysis
- Internal Temperature alarm

#### 2 Specifications

#### Temperature

Туре	Thermistor
Measurement Range	-40 to 85°C(-40~185°F)
Accuracy	±1.2°F(0.6°C) from -4 to 122°F(-20 to 50°C)
	±1.8°F(1.0°C) all other ranges
Resolution	0.1°C

- Display : 3 digit LCD.
- LED status: red LED of Alarm, greed LED of Record.
- Sampling rate: 1 times/3 second.
- Battery : One 3.6V ½ AA lithium battery
- Battery Lift :1 year.
- External Power Supply: 5 VDC with 0.5A.
- Operating temperature and humidity : -40 to 85°C(-40~185°F), 0-95%,RH,non-condensing.
- Instrument dimensions :83(L)\*60(W)\*24(H) mm.
- Weight : About 77g.

#### **3** Applications

- Building HVAC monitoring.
- Warehouses.
- Refrigerator.
- Clean rooms.
- Freezer.
- Shipping vans.
- Shipping crates.
- Cargo vessels.
- Storage areas.

#### WHAT'S IN THE BOX



#### **4 START UP AND GENERAL OPERATION**

• LCD Display



1.	Temperature Display	4.	Battery Level Indicator
2.	Recording	5.	Unit of Measurement
3.	USB Communication		

#### 5 Turn On Temperature Data Logger

- Press the Start button for 2 seconds to turn on the Temperature Data Logger.
- The unit is ready to use.



- 6 Switch between  $^\circ\!C$  or  $^\circ\!F$ 
  - Press °C/°F to switch between °C or °F





#### 7 Recording Data

• Press the Start button to start data recording.



• The LCD display will display REC and the LED green light twinkle when the **Temperature Data Logger** is recording.



• Press the Start button again to stop recording.



• When recording stopped, the REC will disappear.



#### 8 Sampling rate

(5sec / 10sec / 1min / 5min / 10min / 30min / 1 hour)

Data sampling rate can only be set from PC setup screen.

Select the time interval from the drop-down menu.

Click "Save Settings" to save the setting.

Setting	tup	
GENERAL Product# Current Date&Time Start Date&Time End Date&Time	Temperature Data Logger - USB 01/01/2011 01:00:14AM 01/01/2011 01:11:30AM 01/04/2011 06:52:21PM	✓ Time synchronization Temperature Unit C F
Unit Description	Temperature Data Logger	Alarm Unit
ALARM LIMIT High Temp Limit	5sec 10sec 30sec 1min 5min 10min 30min 1hour 70 C	
Low Temp Limit	20 C	
	<u>H</u> elp	Save Settings Close

#### 9 Temperature Calibration

- 1. The preparation  $25^{\circ}$ C calibrator chamber.
- 2. Press and hold "°C/°F" button first, then press and hold "Start" button for 2 seconds to enter the calibration mode.



3. Press "Start" button to start the calibration.



4. During the calibration, the LCD will display the antenna sign.



- 5. The datalogger will start 25°C calibration 20 minutes after the Start button is pressed.
- 6. When the calibration is completed, the COM will show up.



• Press and hold the Start button for two seconds to turn off and restart the unit



#### **10 Software Installation**

1.Link website https://www.tenmars.com/

or scan below QR code:



- 2.Search TM-306U.
- 3.Click on the TM-306U photo.
- 4. Click File Download, then select Software Download.
- 5. Download and unzip the software.
- For the latest software information and installation procedures, please refer to the <u>software installation</u> <u>guide</u>.

#### **11 USING PC SOFTWARE**

- Start Window PC software.
- Click on All programs, Click on "Temperature Data Logger"
- Click on STLogger to start the datalogger program.



#### **12 Connection Status**



No Connection Screen

• Connect **Temperature Data Logger** to the PC with a USB cable.



• Press Start for 2 seconds to turn on Temperature Data Logger. **Temperature Data** Logger is now connected to the PC.



- If the datalogger is properly connected, these three values will show up.
  - 1. Temperature Reading
  - 2. Battery Status
  - 3. Display "Connected"



Connected Screen

#### **13 Setup Screen**

• Click "Setup" to enter the Setup screen.

B Temperature Data Logger	
<b>!!</b>	Setup
	Download Records
hanne	Graphic & Chart Analysis for Saved Data
T	emperature: 27.1 °C
Battery Status:	Help 100%
onnected	

- he values in the white area can be changed by the user.
- The value in the grey area can not be changed by the user.
- Click "Save Settings" to save the values to the datalogger.

GENERAL	Temperature Data1 agent 1100			
Current Date&Time	01/01/2011 01:06:56AM	j♥ Time syr	chronization	
Start Date&Time	01/01/2011 01:11:30AM		re Unit	
End Date&Time	01/04/2011 06:52:21PM	¢ r	1. 0	
Unit Description	Temperature Data Logger	Alarm Unit		4
Interval	5sec 💌	🗭 On	C Off	
High Temp Limit	70 0			
Low Temp Limit	<u>20</u> C			

#### 14 Download Records

• Click Download to download the stored data.

🖾 Temperature Data Logger	
	Setup
	Download Records
hann	Graphic & Chart Analysis for Saved Data
	Temperature: 27.0 °C
Battery Status:	Help
Connected	

• Click "Download" to start the download.

Detailed Status Connected!	0%	

• Download Completed

100%	
Detailed Status	
Save file C:\Program Files\Your Company Name\Te Logger\data\TemperatureData.dat success! Download finish! 56832 records downloaded.	emperature Data

#### 15 Graphic & Chart Analysis

Downloaded data will first be displayed in graph format.



Each data groups are listed according to the date of the sampling. Lowest group number represents earliest sampling date.

[1] 03:54:53PM,05/01/2012 -> 02:54:13PM,05/02/2012, 16553 Records	-
[1] 03:54:53PM 05/01/2012 -> 02:54:13PM 05/02/2012, 16553 Records	
[2] 04:26:01PM,05/02/2012 -> 03:12:36PM,05/04/2012, 33680 Records	

emperature Dat	i Logger 12	- (=
View Export Hel		
<u> </u>	C * [1] 01:11:35AM,01/01/2011 -> 10:34:30PM,01/01/2011, 15396 Records      [1] 01:11:35AM,01/01/2011 -> 10:34:30PM,01/01/2011, 15396 Records	
	[2] 06:52:39PM,01/04/2011->: 05:52:20PM,01/04/2011-2: Hecords [3] 06:52:33PM,01/04/2011->: 04:25:18AM,01/07/2011,41434 Records	
-		I <sup>100</sup>
		95
		-90
		85
		-80
		-75
		70
		-65
		60
		-55
		-50 -
		45
		-40
		-35
		-30
		20
		15
		10
		-5
		-0
		-5
11:35AM 02:39:15AM 01/2011 01/01/2011	04:14:35AM 05:49:55AM 07:25:15AM 09:00:40AM 10:36:00AM 12:09:55PM 01:42:25PM 03:15:00PM 04:47:30PM 06:20:05PM 07:52:35PM 09:25:10PM 01:01:20110	4
	Temperature Temp High Alarm Temp Low Alarm	
	From: 01:11:35AM.01/01/2011 To: 10:34:30PM.01/01/2011	

### **16 Data in Listing Format**

To display data in Listing format:

- Click File
- Click Chart Preview

View E	xport Help		
Open	Ctrl+O	"C "F	[1] 01:11:35AM,01/01/2011 -> 10:34:30PM,01/01/2011.15396 Records 💌
Print Graph Graph Prev	i Ctrl+P riew		
Print Chart.	Ctrl+Q		
Chart Previ	ew		
Printer Setu	up		
Exit	Ctrl+X		

### 17 Data Listing Format

Pro Start End	duct Name: Description: 5 Data&Time: Data&Time: 6	Temperature STLogger Re 06:52:18PM, 06:52:28PM,	Data Logg cord Data 01/04/2011 01/04/2011	er 1
Interval: 10 seconds				
Record Count: 2				
Temp Alarm High: 70.0 'C				
Temp Alarm Low: 20.0 'C				
No.	Time	Date	Temp('C)	Alarm
1	06:52:18PM	01/04/2011	33.2	
2	06:52:28PM	01/04/2011	33.5	

Printed 7/24/2012

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#### **18 Data Export**

Select export data type: Text or Excel CSV.





Click Save to save the file in .CSV/Text format.



File Saved.