

# Elitech

Código : 976814 DattaLogger"ELITECH"RC-5-con interface-



Los dataloggers de temperatura RC-5 y RC-5+ poseen interfaz de conexión USB *plug-and-play*, *display* LCD multifuncional, operación con botón doble, grado de protección IP 67, almacenamiento interno de hasta 32.000 lecturas, batería sustituible y soporte de montaje (optativo).

Para obtener la análisis de datos de forma rápida y segura, el usuario podrá exportar los datos en formato PDF o Excel, por medio de software de gerenciamiento de datos (Modelo RC-5), o sin la necesidad de instalación (modelo RC-5+). Su design robusto y compacto atiende a las exigencias dinámicas de los más diferentes sistemas de almacenamiento y transporte de productos refrigerados. Siendo su principal aplicación el monitoreo de la cadena del frío en productos farmacéuticos, alimenticios, biológicos y de laboratorios.

Con opciones de sensor de temperatura interno o externo.

## RC-3 Temperature Data Logger Operation Instruction

### I. Product overview:

This data logger is mainly used for temperature recording during storage and transportation of foodstuff, medicine, chemicals and other products which are temperature sensitive, especially widely used in the ocean/air/highway transportation for the export oriented enterprises, or for the large-sized global chain businesses.



### II. Specification:

Product size: 84mm (length) X 44mm (width) X 20 mm (height)

### III. Technical parameters:




- ◆ Temperature measuring range:  $-30^{\circ}\text{C}\sim+60^{\circ}\text{C}$ ;
- ◆ Accuracy:  $\pm 1^{\circ}\text{C}$ ;
- ◆ Record capacity: 16000points(MAX);
- ◆ Sensor: Internal NTC thermal resistor;
- ◆ Power supply: inner CR2450 battery or power supplier via USB interface;
- ◆ Battery life: in normal temperature, if the record interval sets as 15 minutes, it could be used above one year.
- ◆ Ambient environmental temperature:  $-30^{\circ}\text{C}\sim+60^{\circ}\text{C}$ ;
- ◆ Resolution:  $0.1^{\circ}\text{C}$ ;
- ◆ Record interval: 10s~24hour adjustable;
- ◆ Communication interface: USB interface;

### IV. Initial use:

1. Install RC-3 temperature data logger data management software.
2. Connect RC-3 with computer via USB, and install USB driver according to the Installation Tips.
3. Open RC-3 temperature data logger data management software, and click the icon  in the tool bar to check the connection, and then exit from the connection interface.
4. Click the parameters icon  in the tool bar to set parameters. After finish the parameters setting, click "save" button to save all the parameters and exit from parameter setting interface.
5. Exit from RC-3 temperature data logger data management software.

### V. Data access:

The recorded data information could be accessed from the temperature data logger. And this process will not clear the historical memory or stop record process if it is in the record status.

1. Connect the data logger with computer via USB cable, after successfully connection, the icon  shown in the LCD of data logger will light.
2. Open RC-3 temperature data logger data management software, and click the icon  in the tool bar to check the connection, and then exit from the connection interface.
3. Click the icon  in the tool bar to upload the recorded data to the computer.

Note: RC-3 parameters setting is operated through computer, for the details, please see the help file of RC-3 temperature data logger data management software.

### VI. Function description:

The data logger display interfaces includes: status display, record capacity display, time display, date display, Max. temperature display, Min. temperature display, temperature upper limit display, temperature lower limit display. If no operation within 15 minutes, the data logger will turn off the display automatically.

If the display has been turned off, short press the key to enter the display interface. Each time press the key, it will shift among the display interfaces according to the sequence as described above.

#### Status display interface:

See Figure 1

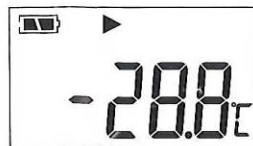








Figure 1

After short press the key, it enters to the status display interface from the display turn-off status. The temperature displayed in the LCD screen is the current environmental temperature. In the status display interface:

If the symbol  lights, indicate the data logger is in the status of recording  
If the symbol  lights, indicate the data logger has stopped/terminated recording  
If neither of the symbols  and  lights, indicate the data logger has not started its function of recording.  
If the symbols of  and  light, indicate the temperature measured exceeds its temperature upper/lower limit.  
The temperature shown in this status display interface is the current environmental temperature.

#### Record capacity display interface:

When the symbol "Log" lights, it indicates that it enters to capacity display interface. The number shown in the LCD is the recorded temperature group, the interface is shown as Figure 2:

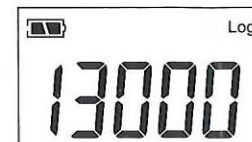


Figure 2

#### Time display interface:

In time display interface, it displays the hour and minute of the data logger. The time format is 24 hours. The display interface is as shown in Figure 3:



Figure 3

#### Date display interface:

In date display interface, it displays the month and date of the data logger, display interface is shown as Figure 4:

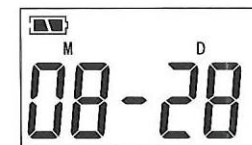


Figure 4

Note: The data below the symbol "M" indicates month, and the data below the symbol "D" indicates date.

#### Max.temperature display:

The maximum temperature valued measured since the beginning of recording, its display interface is shown as Figure 5:



Figure 5

#### Min.temperature display:

The minimum temperature measured since the beginning of recording, display interface is shown as Figure 6:

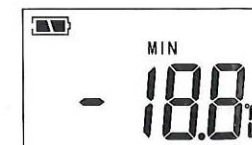


Figure 6

### Temperature upper limit display interface shown as Figure 7:

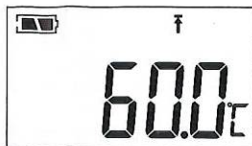


Figure 7

### Temperature lower limit display interface shown as Figure 8:

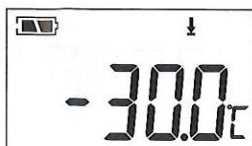



Figure 8


## VII. Operation instruction:


### 1. Start recording


After setting RC-3 parameters in data management software, the function of recording has not been started yet, at this time, press the key for more than three seconds in the status display interface, the symbol  lights, and the recording has started.

\* After finishing parameters setting in RC-3 temperature data logger data management software, it will clear up the recorded historical data. Please read and save data before parameter setting!

### 2. Stop recording



① The data logger will automatically stop recording when the recording capacity is full. In the status display interface, the symbol  lights, it means recording stops.

② If "permit stopping by pressing key" is set, press the key for more than three seconds, in the status display interface, the symbol  lights, it means recording stops.

③ It could stop recording though setting in data management software. In the status display interface, the symbol  lights, it means recording stops.

\*After the data logger stops recording, it could not be started again by press the key. It could only be started by setting the parameters in RC-3 data management software.

### 3. Alert status Instruction

During recording, if the measured temperature is higher than temperature upper limit, in the status display interface, the symbol  lights, indicating upper limit alert; if the measured temperature is lower than temperature upper limit, in the status display interface, the symbol  lights, indicating lower limit alert.

### 4. Record interval

The record interval could be set in RC-3 data management software. After setting, it will save the data in the data logger according to the set record interval. In RC-3 data management software, when record interval is set, click the setting bar of record time length, then the software will automatically calculate the record time length.

### 5. Record time length

The "record time length" means that the total record time when the memory reaches its full capacity. After the record interval is set, click at the setting bar record time length, then the software will automatically calculate the record interval.

### 6. Clear the recorded data

The recorded data could be cleared through setting the parameters in RC-3 data management software.

### 7. Inner clock and calendar

The clock could be adjusted by RC-3 data management software.

### 8. Sensor failure


When there is a sensor failure or over temperature range, it could query by two methods as below;




1) When the temperature exceeds temperature range or there is a break circuit or short circuit, it will display "Err" in the position of temperature in the status display interface.

2) There will appear an instruction of "Sensor error" in RC-3 data management software.

## 9. Battery level indication

1) The battery level could be displayed in RC-3 LCD screen.

2) Click the connection icon  in the tool bar of RC-3 data management software to query the battery level.

Battery level indication	Battery level color in the software	Level
	Blue	25%~100%
	Yellow	10%~25%
	Red	<10%

Note: If the battery is in a very low level (<10%), please replace the battery timely.

## 10. RC-3 temperature data logger data management software

It could analyze the data in the forms of data table and curve graph and exported in picture format. The historical data could be queried, saved, printed or exported in Word/Excel/TXT format. For the detailed method, please see "Help" file in RC-3 data management software.

## VIII. Battery replacement:

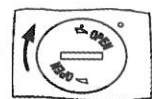


Figure 9



Figure 10

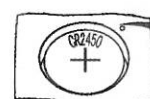


Figure 11



Figure 12

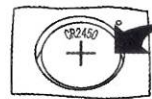


Figure 13

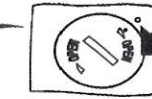


Figure 14



Figure 15



Figure 16

### Replacement steps:

1. Rotate the battery cover clockwise to the position as shown in Figure 10.

2. Remove the battery cover.

3. Remove the old battery from the battery slot.

4. Put the new battery into the battery slot.

5. Place the battery cover in the position shown in Figure 14.

6. Rotate the battery cover counter clockwise to the position shown in Figure 16.

Note: The pole piece in the bottom of the battery slot is negative.

### IX. Device list:

One RC-3 temperature data logger

One software installation CD

One operation instruction

One USB cable