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accucold[®]
by SUMMIT APPLIANCE

FEATURES

- ✓ Data Logger displays current temperature.
- ✓ The unit will provide a visual and audio alert when temperature rises above or falls below the high and low set points.
- ✓ The min/max feature is designed to monitor and store the highest and lowest readings until the memory is cleared, or removal of battery.
- ✓ The temperature sensor is enclosed in a glycol-filled bottle, protecting it from rapid temperature changes when refrigerator/freezer door is opened.
- ✓ Low battery alert function (battery symbol flashes)
- ✓ Push button to select °C or °F temperature display
- ✓ Measuring temperature range -30 ~ 70 °C (or -22 ~ 158 °F)
- ✓ Accuracy : ± 0.5 °C (-10 ~ 10 °C or 14 ~ 50 °F), in other ranges ± 1 °C (or ± 2 °F)
- ✓ User defined logging interval
- ✓ Powered by a 5VDC power adapter
- ✓ Rechargeable Li-ion battery to record data up to 20 hours during a power-failure event
- ✓ 6 ft (185 cm) probe-connecting cable

SAVE THIS MANUAL FOR FUTURE REFERENCE

Package Contents

- Data logger
- Temperature sensor in a glycol-filled bottle
- Instructions manual
- Magnetic sticker (w/instructions)
- Rechargeable Lithium battery
- 4 GB Memory stick
- Power adapter
- NIST-traceable calibration certificate

Parts and Controls/Features



°C/°F

Press the °C/°F button to change the temperature display scale from Fahrenheit (°F) to Celsius (°C) and back.



Up/Down keys to change settings.

MAX/MIN

Use the MAX/MIN button to display the recorded highest/lowest temperatures.

RESET

Press the RESET button ONCE to ERASE the MIN and MAX history as well as to CLEAR the high and low alarm indicators.

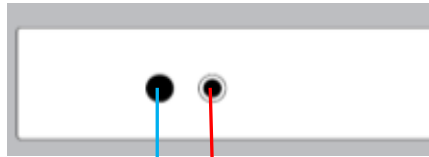
MODE

Hold the MODE button to cycle through configuration settings.

REC/STOP

Press REC/STOP to STOP or RECORD data. Hold this key for 5 seconds to change logging interval settings.

Power Adapter: Connect the unit to an AC power outlet.



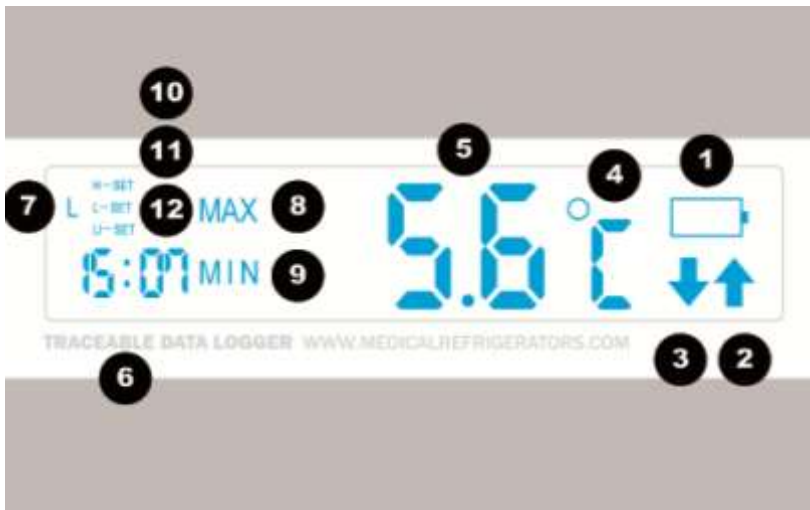
Power adapter port

Temperature probe port

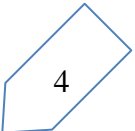
Data Logger rear view

Do not use force to connect the probe or the power adapter plugs. The power adapter plug is different from the probe plug.

LCD Display Description

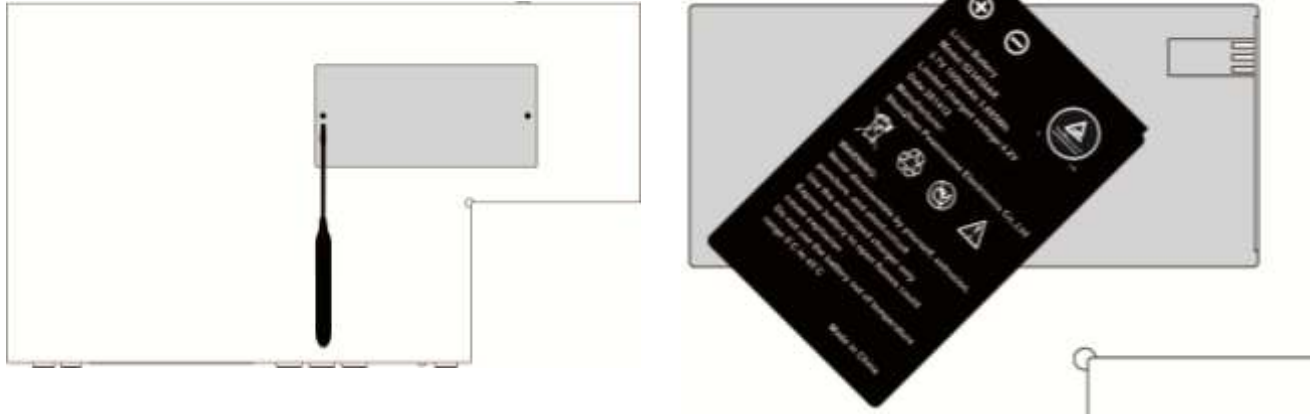


1	Low battery symbol. Replace battery when this appears
2,3	Up arrow (High Alarm), Down arrow (Low Alarm) = Blinks if any high/low alarm occurred
4	°C: Celsius temperature units °F: Fahrenheit temperature units
5	Current temperature value is displayed
6	Time icon: Indicates hour and minute (24-hour clock) Logging interval is displayed when REC/STOP key is pressed and held for 5 seconds
7	Recording in progress indicator
8	Maximum temperature value during a data logging session is displayed
9	Minimum temperature value during a data logging session is displayed
10	H-SET: High alarm temperature setting mode
11	L-SET: Low alarm temperature setting mode
12	LI-SET: Logging interval setting mode



Set Up

Battery: To replace the battery, unscrew the battery compartment cover located on the top of the unit and install the battery. Follow polarity (+/-) diagram below.






Replace the battery cover. The unit will beep and all segments of the LCD will be activated.

Default Data Logger Settings

○ Logging interval	5 minutes
○ Year	2015
○ Month	January (01)
○ Day	1
○ Time	00:00
○ High alarm	10 °C
○ Low alarm	2 °C
○ Display temperature	°C

Operation

Programming the Data Logger

Year	From the main display screen: Hold the MODE key for 3 seconds, then press the Mode key TWICE to enter the Year setting mode. Use the up and down arrows to adjust the year accordingly. Press MODE key ONCE to confirm the settings.	
Month	From the main display screen: Hold the MODE key for 3 seconds, then press the Mode key 3x to enter the Month setting mode. Use the up and down arrows to adjust the month accordingly. Press MODE key ONCE to confirm the settings.	
Day	From the main display screen: Hold the MODE key for 3 seconds, then press the Mode key 4x to enter the Day setting mode. Use the up and down arrows to adjust the day accordingly. Press MODE key ONCE to confirm the settings.	
Hour	From the main display screen: Hold the MODE key for 3 seconds, then press the Mode key 5x to enter the Hour setting mode. Use the up and down arrows to adjust the hour accordingly. Press MODE key ONCE to confirm the settings.	
Minute	From the main display screen: Hold the MODE key for 3 seconds, then press the Mode key 6x to enter the Minute setting mode. Use the up and down arrows to adjust the minute accordingly. Press MODE key ONCE to confirm the settings.	

LOGGING INTERVAL

This setting tells the logger how frequently you want it to take and store readings. The unit has a logging interval of 20 s to 60 minutes.

Setting the Logging interval	From the main display screen: Hold the REC/STOP key for 3 seconds to enter the Logging Interval setting mode. Use the up and down arrow keys to adjust the sampling rate accordingly. Press REC/STOP key ONCE to confirm the settings.
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HIGH AND LOW ALARM

By default, the high and low alarm settings are 8 °C and 2 °C respectively. To reset high alarm and low alarm temperature settings, follow instructions below.

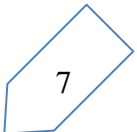
High Alarm Temperature Setting	This is the high temperature limit. The current temperature is considered out-of-range if the probe reads a temperature equal to or above the high temperature limit. From the main display screen: Hold the MODE key for 3 seconds to enter High Alarm temperature setting mode. Use the up and down arrows to adjust temperature accordingly. Press MODE key ONCE to confirm the setting.
Low Alarm Temperature Setting	This is the low temperature limit. The current temperature is considered out-of-range if the probe reads a temperature equal to or below the low temperature limit. From the main display screen: Hold the MODE key for 3 seconds, then press the Mode key ONCE to enter Low Alarm temperature setting mode. Use the up and down arrows to adjust temperature accordingly. Press MODE key ONCE to confirm the settings.

When an alarm condition occurs ↓ ↑ will appear on the display along with a beeping sound to alert user. While the beeping sound lasts for 60 seconds, the high and low indicators will remain on display even when the unit gets back in range. Press RESET to clear. Press any key ONCE to stop the beeping sound.

Set the high and low alarm temperature limits above and below the refrigerator/freezer operating temperature to prevent false alarms. Refrigerators are designed to run between 2-8 °C (36-46 °F) while freezers run below -15 °C (5 °F).

Battery Life

The unit comes with a rechargeable lithium battery. In case of power failure the average battery life is about 20 hours when fully charged. To achieve longer battery life during operation, use a less frequent sample rate.



To Use

- Once the Data Logger has been programmed, place the temperature sensor (in glycol bottle) in the location to be monitored, such as inside a refrigerator or freezer. Data Logger may be placed on top of unit with LCD display easily visible and the alarm audible. Data Logger displays internal temperature of unit being monitored, as well as maximum and minimum temperatures reached. The Data Logger's maximum and minimum readings reflect the highest and lowest temperatures since the battery was inserted or since the RESET button was last pressed.
- If the temperature measurement rises above or falls below the set temperature range, the alarm will sound. To silence the alarm, press any key ONCE.

Data Logging / Recording Function

In the Data Logger Setting menu user confirms time, date, and sampling rate.

TO RECORD DATA

- Press **REC** key after inserting flash drive and make sure **L** displays on the screen to record data.
- A steady LED blue light indicates logging mode.

- Press **REC/STOP** key to safely eject USB drive and avoid data loss/corruption.
- Old RECORDS should be renamed or transferred before re-inserting the flash drive.

PLEASE NOTE

A blinking **L** on display indicates recording mode is active. Press REC/STOP key to STOP.

CSV File

To download data, USB drive is ejected safely and connected to a computer. Open file(s) in Microsoft Excel or any .CSV compatible program.


Data results will be displayed in tabular form as in the following example:-

Date	time	T(F)	T(C)	Hi Alarm	Lo Alarm	Lo Alarm Setting(C)	Hi Alarm Setting(C)
6/30/2015	15:49:38	41.5	5.3	0	0	2	10
6/30/2015	15:49:58	41.5	5.3	0	0	2	10
6/30/2015	15:50:18	41.4	5.2	0	0	2	10
6/30/2015	15:50:38	41.5	5.3	0	0	2	10
6/30/2015	15:50:58	41.5	5.3	0	0	2	10
6/30/2015	15:51:18	41.4	5.2	0	0	2	10
6/30/2015	15:51:38	41.5	5.3	0	0	2	10
6/30/2015	15:51:58	41.4	5.2	0	0	2	10
6/30/2015	15:52:18	41.4	5.2	0	0	2	10
6/30/2015	15:52:38	41.5	5.3	0	0	2	10
6/30/2015	15:52:58	41.4	5.2	0	0	2	10
6/30/2015	15:53:18	41.4	5.2	0	0	2	10
6/30/2015	15:53:38	41.4	5.2	0	0	2	10



Date	Time (24 hour clock)	Temperature in Degrees Fahrenheit	Tempera- ture in Degrees Celsius	High Alarm temperature status 0 = no alarm event 1= Alarm event	Low Alarm temperature status 0 = no alarm event 1= Alarm event	Low Alarm Temperature Setting in Degrees Celsius	High Alarm Temperature Setting in Degrees Celsius
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Troubleshooting

<p>Displays 'NP'</p> 	<ul style="list-style-type: none"> ✓ The temperature sensor is not installed correctly. 																																								
<p>Display screen not working</p>	<ul style="list-style-type: none"> ✓ Make sure the AC adapter and Li-ion battery are installed correctly. 																																								
<p>“Low battery” indicator flashing</p>	<ul style="list-style-type: none"> ✓ Battery may need to be recharged. 																																								
<p>Logger is not logging</p>	<ul style="list-style-type: none"> ✓ Press the Rec/Stop key and make sure the L symbol appears on the left side of the display. ✓ The logger will stop logging if AC power is removed and rechargeable battery is not connected or not charged. ✓ The logger will stop logging if the USB flash drive memory is full. 																																								
<p><i>A hyphen in place of an alarm event</i></p>																																									
<table border="1"> <thead> <tr> <th>Date</th> <th>Time</th> <th>T(F)</th> <th>T(C)</th> <th>Hi Alarm</th> <th>Lo Alarm</th> <th>Lo Alarm Setting(C)</th> <th>Hi Alarm Setting(C)</th> </tr> </thead> <tbody> <tr> <td>10/29/2014</td> <td>15:49:25</td> <td>50.2</td> <td>10.1</td> <td>-</td> <td>-</td> <td>6</td> <td>27</td> </tr> <tr> <td>10/29/2014</td> <td>15:50:24</td> <td>50.2</td> <td>10.1</td> <td>-</td> <td>-</td> <td>6</td> <td>27</td> </tr> <tr> <td>10/29/2014</td> <td>16:16:24</td> <td>79.9</td> <td>26.6</td> <td>-</td> <td>-</td> <td>6</td> <td>27</td> </tr> <tr> <td>10/29/2014</td> <td>16:42:24</td> <td>79.9</td> <td>26.6</td> <td>-</td> <td>-</td> <td>6</td> <td>27</td> </tr> </tbody> </table>		Date	Time	T(F)	T(C)	Hi Alarm	Lo Alarm	Lo Alarm Setting(C)	Hi Alarm Setting(C)	10/29/2014	15:49:25	50.2	10.1	-	-	6	27	10/29/2014	15:50:24	50.2	10.1	-	-	6	27	10/29/2014	16:16:24	79.9	26.6	-	-	6	27	10/29/2014	16:42:24	79.9	26.6	-	-	6	27
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<p>✓ <i>Results when user is changing the logging interval and the USB is still logging data</i></p>																																									

Recalibration

It is recommended that Felix Storch, Inc., temperature monitoring products be calibrated every two years to ensure proper function and accurate measurements; however, your quality system or regulatory body may require more frequent calibrations. To schedule your recalibration, please contact our ISO/IEC 17025:2005 calibration laboratory accredited by Perry Johnson Laboratory Accreditation, Inc., at calibration@summitappliance.com

Care & Maintenance

- Do not disassemble the product, as product damage may result.
- Store the product where it will not be exposed to direct sunlight, dust or high humidity.
- Do not wash or expose the product to water or other liquids.
- Clean the product by wiping with a soft, dry cloth.
- Never use volatile or abrasive liquids or cleaners to clean the product.
- Do not drop the product or subject it to sudden shock or impact.

Customer Support

For technical support, please call 800-932-4267 (U.S. and Canada) or email info@summitappliance.com

For more information, please call ACCUCOLD at 718-893-3900 (U.S. and Canada). See us on the web at www.summitappliance.com

Limited Warranty

SUMMIT products have a limited warranty period of 1 year against defects in materials and workmanship from the date of purchase. Accessory items and sensors have a limited warranty of 3 months. Repair services have a limited warranty period of 3 months against defects in materials and workmanship. SUMMIT shall, at its option either repair or replace hardware products that prove to be defective, if a notice to that effect is received within the warranty period. SUMMIT makes no other warranties or representations of any kind whatsoever, expressed or implied, except that of title, and all implied warranties including any warranty of merchantability and fitness for a particular purpose are hereby disclaimed.

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