ACCRT8002

Accutherm ACCRT8002 Vaccine Temperature Data Logger
SINGLE PROBE WITH NEW FORMAT PDF & CSV REPORTS

Do not operate the thermometer in the environmental temperature lower than 0°C / 32°F or higher than 50°C / 122°F otherwise incorrect readings or damage to the thermometer may result.

If the thermometer is not in use for a long period of time then remove the batteries from battery compartment to avoid battery leakage.

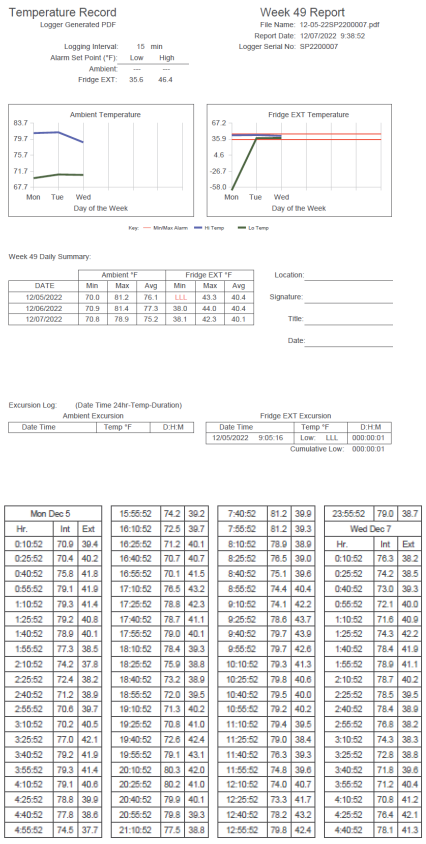
SPECIFICATIONS:

Measuring range:	External: -50 ~ 70°C (-58 ~ 158°F) (external bottle probe) Internal: 0 ~ 50°C (32 ~ 122°F)
Display accuracy:	±0.5°C / ±0.9°F over full range
Display resolution:	0.1°
Display reading update:	10 seconds
Memory:	Removable 2G micro SD card /(max 4G)
Memory capacity:	10 million readings about 5000 files (for 2G)
Data logging interval:	Default value is 15 minutes, can be set 5, 10, 15, 30, 60 min.
Alarm limit setting resolution:	0.1°
Default alarm value:	Low: -10°C, High: 50°C
Time accuracy:	±1 second per day
Time display format:	12 / 24 hours format user option
Effective calendar period:	2022 - 2099
Battery:	1.5 volt, type AA or equivalent x3 pieces
Battery life:	About 8000 hours in continuous operation with no alarm triggered
Working ambient temperature:	0 ~ 50°C (32 ~ 122°F)
Display size:	70(W) x 64(H) mm
External sensor cable length:	2000 mm
External sensor bottle size:	19.5(Φ) x 40(H) mm PE bottle
Product size:	94(W) x 110(H) x 26(D) mm
Accessories:	1.5 volt, type AA battery x3, External bottle sensor x1 Mini USB cable 1000mm length x1, 100-240V power adapter x1 Micro SD card USB adapter x1

Serial Number format SPYY####

DISPLAYSYMBOLS:

Symbol	Description
⊏/□	Low battery voltage
No probe	Probe not connected
LLL	1) Sensor open circuit 2) The reading is out of low range (-30°C)
HHH	1) Sensor short circuit 2) The reading is out of high range (70°C)
:Sd	SD card installed
r:Ec	Data logging is on
:Sd & Err	SD card is removed while data logging is turned on
rAtE	Data logging interval
buSy	data reviewing
r:Ec	Memory capacity of SD card is full. No data logging will occur. Function off automatically.



Temperature Record
Logger Generated PDF

Logging Interval: 15 min
Alarm Set Point (°F): Low High
Ambient: --- ---
Fridge EXT: 35.6 46.4

Week 49 Report
File Name: 12-05-22SP2200007.pdf
Report Date: 12/07/2022 9:38:52
Logger Serial No: SP2200007

Ambient Temperature
83.7 79.7 75.7 71.7 67.7
Mon Tue Wed
Day of the Week

Fridge EXT Temperature
67.2 35.9 4.6 -26.7 -58.0
Mon Tue Wed
Day of the Week

Key: Min/Max Alarm Hi Temp Lo Temp

Week 49 Daily Summary:

	Ambient °F			Fridge EXT °F		
DATE	Min	Max	Avg	Min	Max	Avg
12/05/2022	70.0	81.2	76.1	LLL	43.3	40.4
12/06/2022	70.9	81.4	77.3	38.0	44.0	40.4
12/07/2022	70.8	78.9	75.2	38.1	42.3	40.1

Location:
Signature:
Title:
Date:

Excursion Log: (Date Time 24hr-Temp-Duration)

Ambient Excursion

Date Time	Temp °F	D:H:M

Fridge EXT Excursion

Date Time	Temp °F	D:H:M
12/05/2022 9:05:16	Low: LLL	000:00:01
	Cumulative Low:	000:00:01

Mon Dec 5		
Hr.	Int	Ext
0:10:52	70.9	39.4
0:25:52	70.4	40.2
0:40:52	75.8	41.8
0:55:52	79.1	41.9
1:10:52	79.3	41.4
1:25:52	79.2	40.8
1:40:52	78.9	40.1
1:55:52	77.3	38.5
2:10:52	74.2	37.8
2:25:52	72.4	38.2
2:40:52	71.2	38.9
2:55:52	70.6	39.7
3:10:52	70.2	40.5
3:25:52	77.0	42.1
3:40:52	79.2	41.9
3:55:52	79.3	41.4
4:10:52	79.1	40.6
4:25:52	78.8	39.9
4:40:52	77.8	38.6
4:55:52	74.5	37.7

15:55:52	74.2	39.2
16:10:52	72.5	39.7
16:25:52	71.2	40.1
16:40:52	70.7	40.7
16:55:52	70.1	41.5
17:10:52	76.5	43.2
17:25:52	78.8	42.3
17:40:52	78.7	41.1
17:55:52	79.0	40.1
18:10:52	78.4	39.3
18:25:52	75.9	38.8
18:40:52	73.2	38.9
18:55:52	72.0	39.5
19:10:52	71.3	40.2
19:25:52	70.8	41.0
19:40:52	72.6	42.4
19:55:52	79.1	43.1
20:10:52	80.3	42.0
20:25:52	80.2	41.0
20:40:52	79.9	40.1
20:55:52	79.8	39.3
21:10:52	77.5	38.8

7:40:52	81.2	39.9
7:55:52	81.2	39.3
8:10:52	78.9	38.9
8:25:52	76.5	39.0
8:40:52	75.1	39.6
8:55:52	74.4	40.4
9:10:52	74.1	42.2
9:25:52	78.6	43.7
9:40:52	79.7	43.9
9:55:52	79.7	42.6
10:10:52	79.3	41.3
10:25:52	79.8	40.6
10:40:52	79.5	40.0
10:55:52	79.2	40.2
11:10:52	79.4	39.5
11:25:52	79.0	38.4
11:40:52	76.3	39.3
11:55:52	74.8	39.6
12:10:52	74.0	40.7
12:25:52	73.3	41.7
12:40:52	78.2	43.2
12:55:52	79.8	42.4

23:55:52	79.0	38.7
Wed Dec 7		
Hr.	Int	Ext
0:10:52	76.3	38.2
0:25:52	74.2	38.5
0:40:52	73.0	39.3
0:55:52	72.1	40.0
1:10:52	71.6	40.9
1:25:52	74.3	42.2
1:40:52	78.4	41.9
1:55:52	78.9	41.1
2:10:52	78.7	40.2
2:25:52	78.5	39.5
2:40:52	78.4	38.9
2:55:52	76.8	38.2
3:10:52	74.3	38.3
3:25:52	72.8	38.8
3:40:52	71.8	39.6
3:55:52	71.2	40.4
4:10:52	70.8	41.2
4:25:52	76.4	42.1
4:40:52	78.1	41.3

CONTENTS:
*Accutherm ACCRT8002 DDL
*ISO 17025 Calibration Certificate
*External Sensor Probe
*USB Cable & Adaptor (Primary power)
*3-1.5V AA Batteries (Secondary power)
*Micro SD card USB Adaptor

ACCRT8002 Vaccine Temperature Data Logger

INTERNAL (INT) Sensor located inside the Display Unit measures Room Temperature

EXTERNAL (EXT) Bottle Temperature Sensor to be place in Refrigerator or Freezer

FEATURES:

- High accuracy
- **10 million readings (2G)**
- Internal and external sensors reading display
- **Pre-set configuration menu (FrG/FrZ & interval duration)**
- Minimum and maximum reading memories
- Low and high alarm limits setting
- Flashing light alarm indicator
- °C or °F scale
- Real time display
- Waterproof external sensor
- Low battery indication
- Removable SD memory card or USB interface for data retrieval
- Optional external power supply
- Flip out desk stand
- C**SV & PDF with graphs, excursion table, CSV detailed data**

INSTALLATION

1. Unpack the unit and connect the external bottle probe.
2. Open the battery door and pull out the battery insulation strip
3. Peel off display protective sheet.
4. Put the external bottle sensor inside the fridge or freezer. Let the probe acclimate to the temperature (approx. 1 hour).

SET TEMPERATURE SCALE

1. Slide [°C/°F] switch to the desired temperature scale.

MINIMUM / MAXIMUM READING MEMORY

1. Press [MIN/MAX] to display minimum recorded reading.
2. Press the button again to display maximum recorded reading.
3. Press the button once more to display normally.
4. To reset the memory, Press and hold the button until two bars "---.-" are displayed.
5. Always reset the memory once before taking new readings.

DATE AND TIME SETTING

1. Press [SET] and [🡻] simultaneously until the display showing the hour format "12H".
2. Press [🡻] to select 12 or 24 hours time format.
3. Press [SET] to confirm hour format and start year setting. The last two digits of the year will be flashing (Default is "22"). Press [🡹] or [🡻] to set the current year.
4. Press [SET] to confirm year and begin month setting. The month digit will be flashing (Default is "1").
5. Press [🡹] or [🡻] to set the current month.
6. Press [SET] to confirm month and start date setting. The date digit will be flashing (Default is "1").
7. Press [🡹] or [🡻] to set the current date.
8. Press [SET] to confirm date and begin hour setting. The hour digit(s) will be flashing.
9. Press [🡹] or [🡻] to set the current hour.
10. Press [SET] to confirm hour and begin minute setting. The minute digits will be flashing.
11. Press [🡹] or [🡻] to set the current minute.
12. Press [SET] to confirm minute and finish the date and time setting.

* Press and hold the [🡹] or [🡻] button will increase or decrease the value automatically.

LOW /HIGH ALARM LIMIT AND DATA LOGGING INTERVAL SETTING

There are 3 alarm settings, FrG mode, FrZ mode, Alt mode. There are fixed alarm values FrG mode 2 to 8C / 35.6~46.4F, FrZ mode -50 to -15C / -58~5F.

2. Press [🡹] or [🡻] to select the mode..
3. Select Alt mode. Press [SET] to start EXT low alarm limit setting. The EXT low alarm limit will be flashing (Default is -10.0 and "Lo" flashes).
4. Press [🡹] or [🡻] to set the value.
5. Press [SET] to confirm EXT low alarm limit and start high alarm limit setting. The EXT high alarm limit will be flashing (Default is 50.0 and "HI" flashes).
6. Press [🡹] or [🡻] to set the value.
7. Press [SET] to confirm EXT high alarm limit and start data logging interval setting. The default value "15" (15 minutes) would flash.
8. Press [🡹] or [🡻] to set the value 5, 10, 15, 30, or 60 minutes.
9. Press [SET] to confirm data logging interval and finish the settings.

When the reading is lower or higher than the alarm limit:

a. The alarm will sound for 1 minute. And after 1 minute, the alarm will sound 2 seconds for every minute.
b. The red light will flash.

10. The alarm sound will stop if the reading falls within the alarm limits or any button is pressed. But the "Lo" or "Hi" icon and the red light will still be flashing which indicates that an alarm has been triggered.
11. If the alarm for external bottle probe is triggered, the month, data and time and "ON" icon would be displayed for 5 seconds for each excursion and back to main display.
12. When the current temperature returns to within alarm parameters, press [ON/OFF] or [MIN/MAX] to turn off the alarm indication.

Alarm function is always on. No volume adjustment available. When acceptable parameters are met the alarm will stop but the display will continue to flash through recent excursions until [MIN/MAX] is reset.

DATA LOGGING ON/OFF

1. Make sure that the SD card is placed in the slot. Printed side down and metal contacts are inserted facing device. "Sd" and current time alternately flash on display bottom right corner.
2. Press and hold [SET] for about 6 seconds to switch on or off the data logging.
3. "ON / rEc" display means the data logging is on. "rEc" and current time will alternately flash on display.
4. "OFF / rEc" display means the data logging is off. "Sd" and current time will alternately flash on display.

*When the unit is connect to the computer, data recording would stop automatically.

*It is highly recommended to use AC power adaptor in data logging mode as primary power.

DATA RETRIEVAL

1. Connect the DDL to the external computer by the USB cable provided. Allow 60-90 seconds for the report to generate. Do not click any buttons on the device while the report is generating.
2. Open the logging file in folder "PDF_files" or "CSV_files" to view the logged readings.
3. Data will automatically be generated once a week, Monday through Sunday.
4. If logged excursions are reviewed during the week subsequent files of the same name will be represented by parentheses (#); as the number increases, 0, 1, 2 etc. the highest number is the most current file.

ALARM ON/OFF

1. Press [ON/OFF] once to switch the alarm limit off or on.

POWER ON/OFF

1. Press and hold [ON/OFF] for about two seconds to switch off.