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Manual MSR BudgetLine Data Loggers

Reusable PDF data loggers for temperature and humidity.

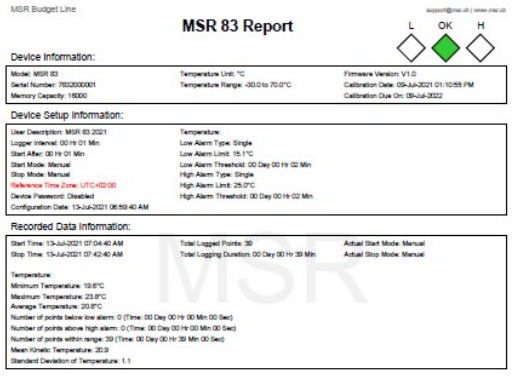
MSR63

MSR83

MSR84

MSR64

MSR86

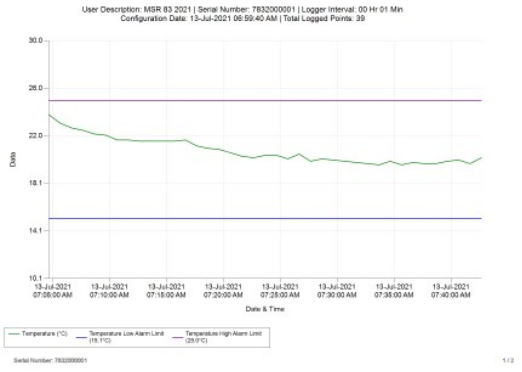


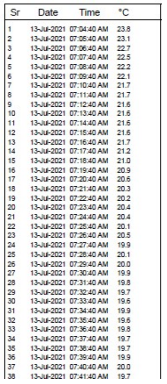
MSR 83 Report

Device Information:

Device Setup Information:

Recorded Data Information:





Sr	Date	Time	°C
1	13-Jul-2021	07:04:40 AM	23.8
2	13-Jul-2021	07:05:40 AM	23.1
3	13-Jul-2021	07:06:40 AM	22.7
4	13-Jul-2021	07:07:40 AM	22.5
5	13-Jul-2021	07:08:40 AM	22.2
6	13-Jul-2021	07:09:40 AM	22.1
7	13-Jul-2021	07:10:40 AM	21.7
8	13-Jul-2021	07:11:40 AM	21.7
9	13-Jul-2021	07:12:40 AM	21.6
10	13-Jul-2021	07:13:40 AM	21.6
11	13-Jul-2021	07:14:40 AM	21.6
12	13-Jul-2021	07:15:40 AM	21.6
13	13-Jul-2021	07:16:40 AM	21.7
14	13-Jul-2021	07:17:40 AM	21.2
15	13-Jul-2021	07:18:40 AM	21.0
16	13-Jul-2021	07:19:40 AM	20.9
17	13-Jul-2021	07:20:40 AM	20.6
18	13-Jul-2021	07:21:40 AM	20.3
19	13-Jul-2021	07:22:40 AM	20.2
20	13-Jul-2021	07:23:40 AM	20.4
21	13-Jul-2021	07:24:40 AM	20.4
22	13-Jul-2021	07:25:40 AM	20.1
23	13-Jul-2021	07:26:40 AM	20.5
24	13-Jul-2021	07:27:40 AM	19.9
25	13-Jul-2021	07:28:40 AM	20.1
26	13-Jul-2021	07:29:40 AM	20.0
27	13-Jul-2021	07:30:40 AM	19.9
28	13-Jul-2021	07:31:40 AM	19.8
29	13-Jul-2021	07:32:40 AM	19.7
30	13-Jul-2021	07:33:40 AM	19.6
31	13-Jul-2021	07:34:40 AM	19.9
32	13-Jul-2021	07:35:40 AM	19.6
33	13-Jul-2021	07:36:40 AM	19.8
34	13-Jul-2021	07:37:40 AM	19.7
35	13-Jul-2021	07:38:40 AM	19.7
36	13-Jul-2021	07:39:40 AM	19.9
37	13-Jul-2021	07:40:40 AM	20.0
38	13-Jul-2021	07:41:40 AM	19.7

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This quick start guide will help you to configure data loggers and generate PDF/Excel/CSV reports of recorded readings from it.

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Introduction

MSR63

MSR64

MSR83

MSR84

MSR86

MSR63 temperature data logger (-30…+70 ºC)
MSR64 temperature & humidity data logger (-30…+70 ºC | 0…98 % RH)

MSR83 temperature data logger (-30…+70 ºC)
MSR84 temperature & humidity data logger (-30…+70 ºC | 0…98 % RH)
MSR86 temperature data logger with external sensor (-100...+150 °C)

MSR BudgetLine: reusable low-cost data loggers for transport and storage

Reusable PDF data loggers for cost-effective monitoring of temperature and humidity values during transport and storage.

Features:

- high measuring accuracy, DIN12830 / 21 CFR Part 1- compliant
- secured START and STOP buttons
- clear status and alarm LEDs, battery indicator
- 6-point calibration certificate included
- fast data transfer and evaluation on PC
- auto generated PDF report | Excel | CSV | email
- low battery indication
- battery life approx. 1 year, replaceable battery

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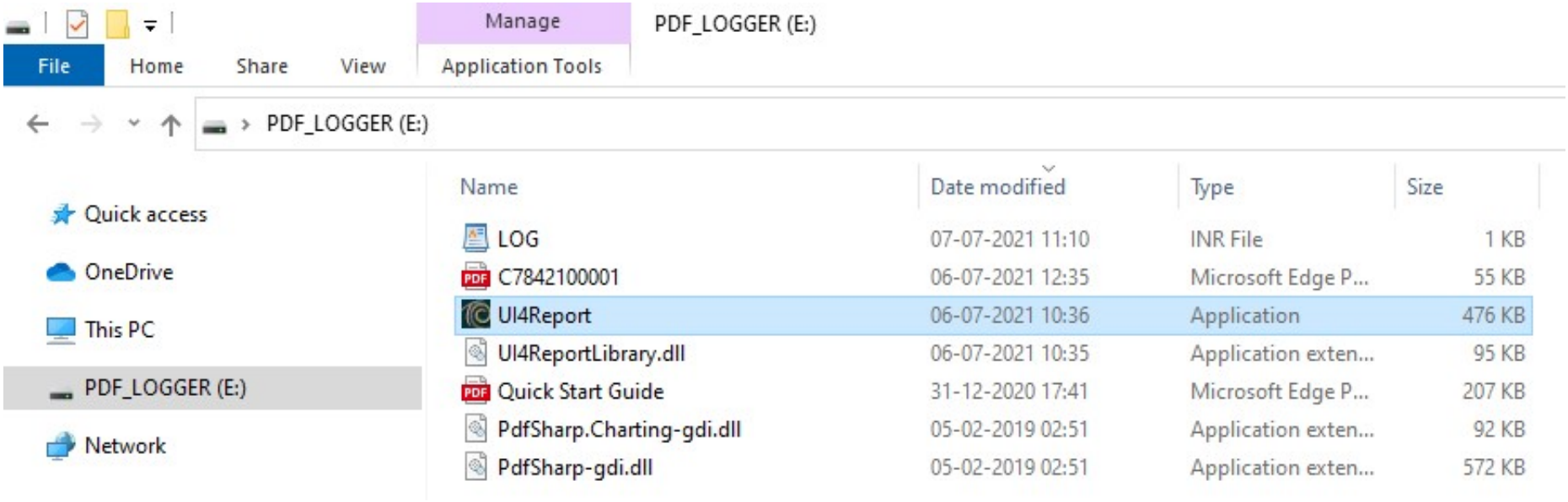
Requirements

To use the MSR BudgetLine data loggers, you will require a PC with an active USB port. PC requirements: Windows 10.

Connect Data Logger

MSR BudgetLine data loggers are available with integrated USB 2.0 A-Type plug. Hence, no additional hardware or cable is required to connect the logger with a PC. *Note:The logger will be STOPPED automatically after 10 seconds when connected with a PC. You can also STOP the logger manually by pressing the STOP button continuously for 5* seconds until the Red LED is on.

Open Data Logger USB drive «**PDF_Logger**» that contains soft copy of the Quick Start Guide Calibration Certificate «**CXXXXXXXXXX.pdf**» and «**UI4Report**» – *to get a report of recorded readings in PDF / Excel / CSV formats.*



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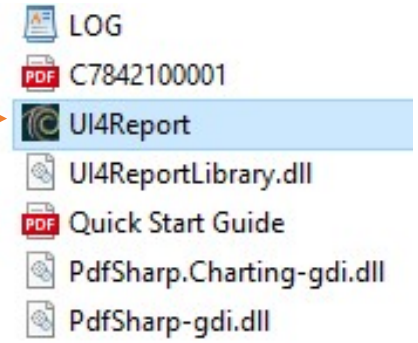
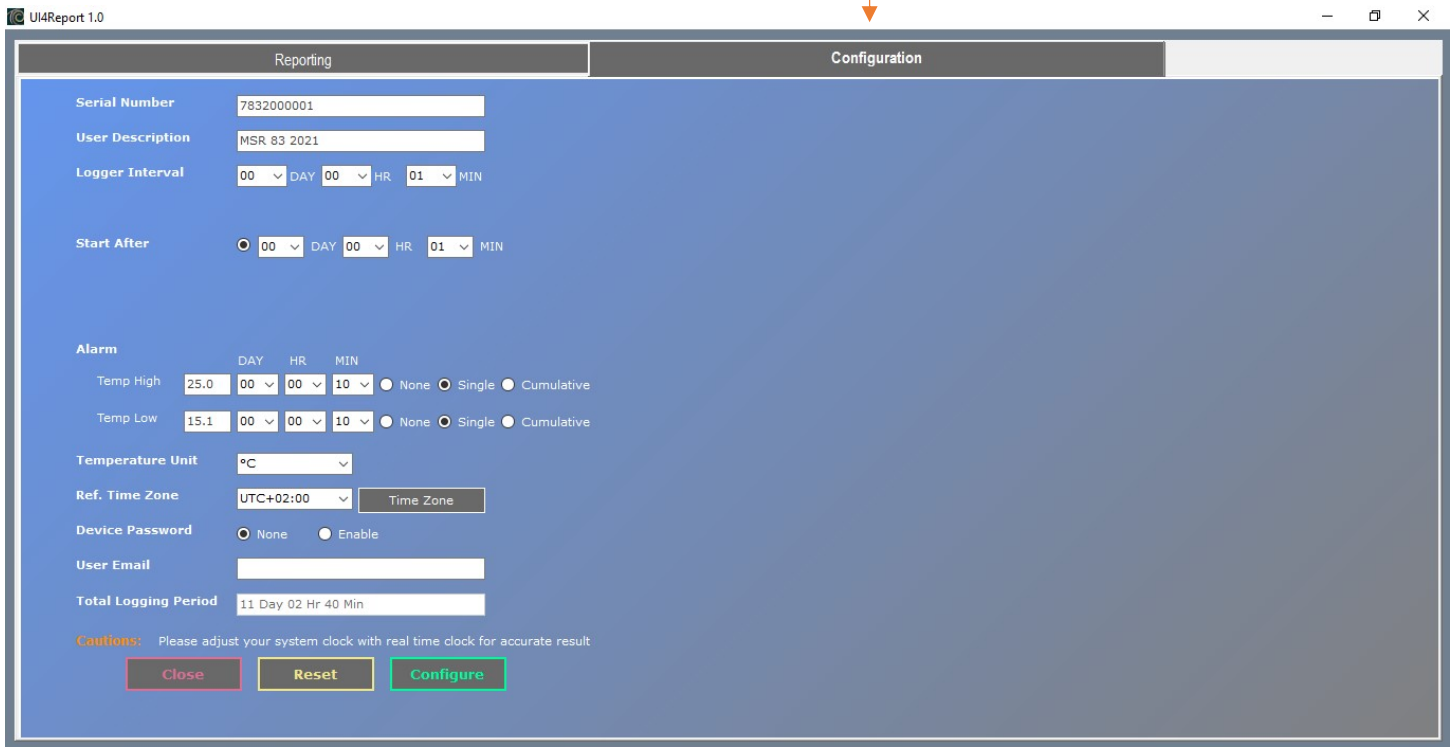
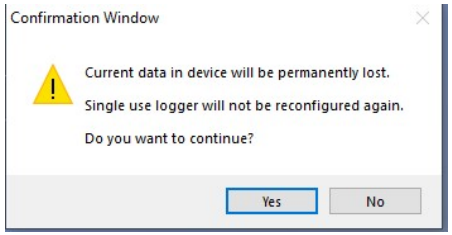
Configuring Data Logger

Connect the data logger to the PC, open the data logger folder **«PDF_LOGGER»,** double-click on **UI4Report** and click on **Configuration** window at the top on top







Enter User Description, Logger Interval, Start After (delay start time), Alarm Limit, Alarm Delay Time, Alarm Type, Temperature Unit, Time Zone, Device Password (optional), User Email (optional) and click on **Configure.**
By configuring the data logger the last recorded readings saved in its internal memory will be erased automatically. Click **Yes** to continue.

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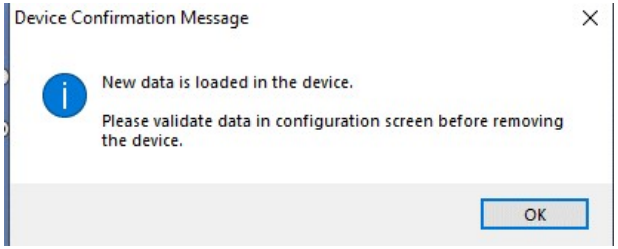
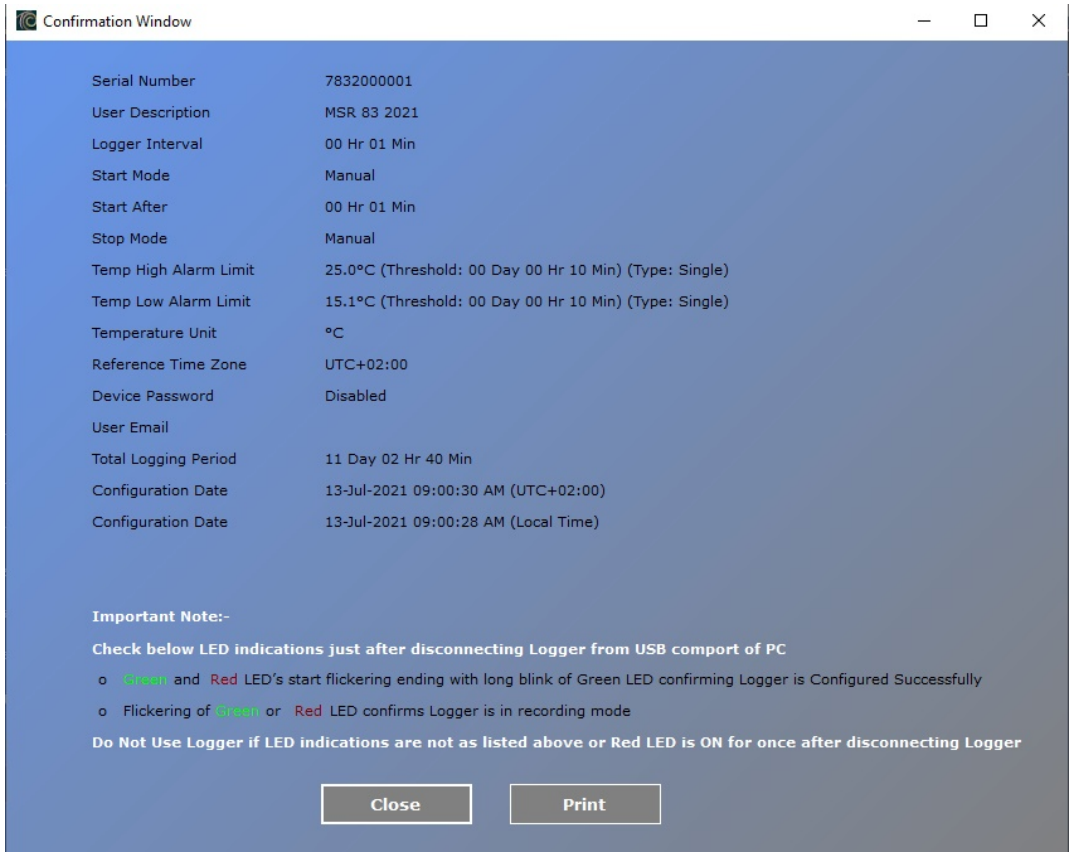


New data is loaded in the device. Please validate data in configuration screen before removing the device. Click **OK.**

Verify the set parameters and click **Close** or **Print** to get a printout of the confirmation window.



Just after disconnecting the data logger, the green and the red LED will start flickering and then the green LED will be ON for a second indicating the configuration of the logger has completed successfully.

Check if configuration is completed successfully:
MSR BudgetLine loggers with display will continuously indicate current reading only (START | STOP | RUN | OKAY will not be shown on the display). Press «START» button on the data logger once; twice blinking of the green LED will indicate that the configuration is completed successfully.

Note: FailSafe Logging will be automatically started after the configuration of the data logger. This helps the receiver to get recorded readings from the logger even if the sender forgets to press the START button while activating the data logger.

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START Data Loggers MSR63, MSR64

LED INDICATION

2.0 A-TYPE USB CONNECTION

TAMPERPROOF & ROBUST CASE

LED INDICATION

2.0 A-TYPE USB CONNECTION

TAMPERPROOF & ROBUST CASE

Check the status of the logger:
Press the START button once and check the LED indication:

LED Indication	Data Logger Status
green LED flashes twice	waiting to START (press START button for 5 seconds to START)
green LED flashes once	STARTED (in delay start mode)
green LED flashes once	recording – OK (no alarm condition)
red LED flashes once	recording – alarm condition
red LED flashes twice	STOPPED
yellow LED flashes twice	low battery

START the data logger:
Keep the START button pressed continuously for 5 seconds until the green LED flashes, followed by a flashing of the red and green LED»s. Once the red and green LED»s stop flashing you may check the status by pressing the START button again for once which will flash the green LED for once confirming the MSR data logger has been started successfully.

Note: Do not use the data logger if no LED is ON or if the red LED flashes twice after pressing the START button. Replace the battery if the yellow LED flashes twice. Avoid using the logger without battery replacement.

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START Data Loggers MSR83, MSR84, MSR86

LED INDICATION

2.0 A-TYPE USB CONNECTION

TAMPERPROOF & ROBUST CASE

Check the status of the data logger: During recording [RUN] & Stop [STOP] mode, press the START button once to view MIN | MAX | AVERAGE values.

Display Indication:

LCD Indication	Data Logger Status
Only Current Reading	not started
START	waiting to START recording (in delay start mode)
RUN	started recording
STOP	recording is stopped
OK	no alarm condition
NOT OK	LO | HI alarm condition
Lo VOLT	low battery

START the data logger:
Initially, the current reading will be shown on the display before starting the data logger. Keep the START button pressed continuously for 5 seconds to start the logger. The green LED and the red LED will start flickering confirming the logger has been started successfully. The display will indicate START until the delay start time is over. After completion of the delay start time, the display will indicate RUN and the current reading confirming logger has been started successfully.
Note: Do not use the data logger if START is not shown on the display or if the LED is not ON after pressing the START button for 5 seconds.
«**Lo VOLT**» on the display indicates low battery. Avoid using logger without battery replacement.

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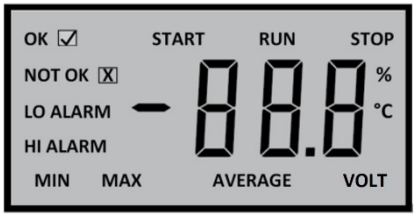
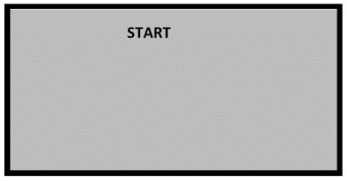
Multi-Function LCD Display

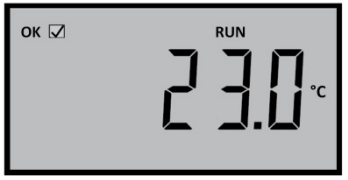


Logger Status

Waiting to START
Press START button continuously for 5 seconds to start logger.



Logger is STARTED
Logger is waiting till delay start time is completed.

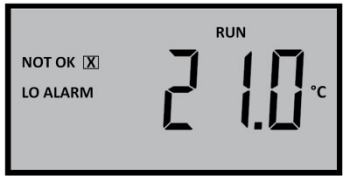


Logger is in recording mode

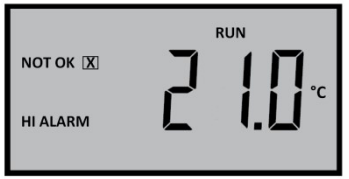
Logger is in STOP mode
Press STOP button continuously for 5 seconds to stop the logger.

Alarm Status

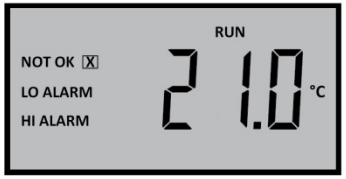
OK – No Alarm Condition



Low Alarm Condition



High Alarm Condition

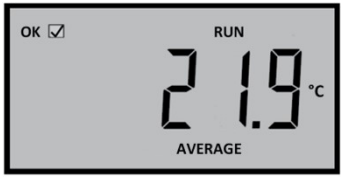


Low & High Alarm Condition

Min/Max/Avg Values
During recording or Stop Mode, press START button once to view all values.

Minimum

Maximum



Average

Low Battery Indication
Avoid using the logger without battery replacement.

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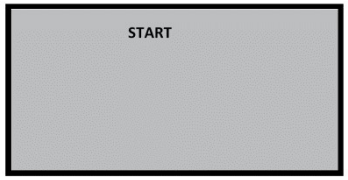
Precautions for Sender

- Store the data logger in a cool and dry place.
- Don’texpose the data logger to direct sunlight and avoid condensation forming inside the unit.
- A little pre-cooling is advisable in case of lower temperature application.
- Don’t use the data logger if START is not shown on the display or if the LED is not ON after pressing the START button for 5 seconds.

Waiting to START
Press START button continuously
for 5 seconds to start the logger.



Logger is STARTED
Logger is waiting till
delay start time is completed.

Logger is in recording mode

- «Lo VOLT» on display / yellow LED flashes indicates low battery. Avoid using the data logger without battery replacement.

- Record the complete details (serial number of data logger, start data & time) prior to starting the logger.
- Place the data logger as close to the application as possible.
- Never allow the data logger to remain loose, especially during transit.
- Frequent rattling may reset the logger.
- Clearly mark the box containing the loggers so that it is easily identified at the end of the measurement period

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Precautions for Receiver

- Identify the box containing the data logger.
- Note down the time when the logger is removed from the box.
- Check LCD / LED indications.

Logger is in recording mode

Logger is in STOP mode
Press STOP button continuously for 5 seconds to stop the logger.

- Inform the sender immediately if NO LCD/LED indications are found at the time of receipt/removed from the box and do not try to connect the data logger with a PC.
- Press the STOP button for 5 seconds (until the display indicates STOP) to stop the logger.
- The data logger will be automatically stopped after 10 seconds when connected with the USB port of a PC.
- Before connecting it with the USB port of a PC, allow the logger to come to room temperature.
- Retrieve the recorded data from the logger as your first priority.
- After stopping, when the logger is connected for the first time to the USB port of the PC, both LEDs (green and red) will start flickering, indicating the report generation of the recorded data is in process. **Do not disconnect the logger until both LEDs (green and red) are ON continuously, which indicates the report of the recorded data is ready.**
- Once the report of the recorded data is generated, whenever the logger is connected to the USB port of the computer, both LEDs (green and red) are ON continuously, which indicates the data logger is in stop mode and the report of the recorded data is already generated.
- Plug the logger on the USB port, open the folder «PDF_Logger» and double click on «UI4Report». This will open «UI4Report 1.0». Now select your required «Report Format» - PDF | Excel | CSV and click on «Process Report». Your selected report format will be automatically saved in the default location «C:\Documents\UI4Report\data». You may also choose your location to save the report or send to a third party by adding their email ID.
- Don’t remove the USB cap or connect until the logger comes to room temperature.
- Don’t retry connecting the logger if the report generation process is not started/completed after connecting the logger with the PC in the first attempt.
- Don’t open the casing of the data logger or remove the battery. Doing this may delete the recorded readings from the logger permanently.

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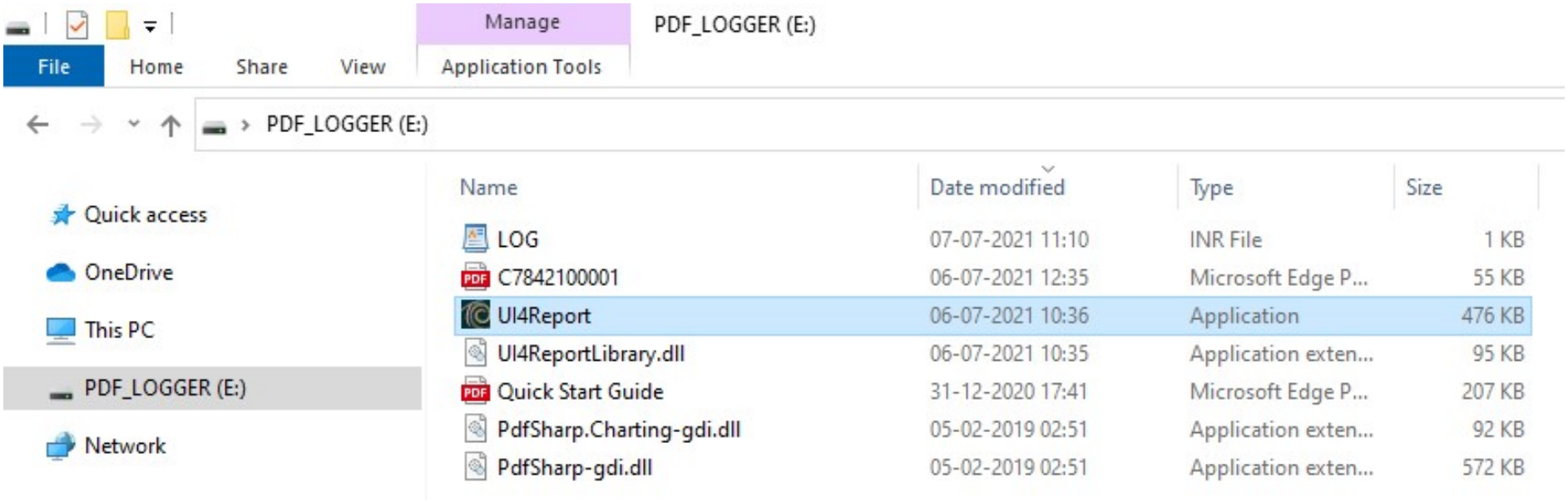
STOP Data Logger

To stop recording, press the «STOP» button continuously for 5 seconds until the red LED is ON.
Note: Logger will be automatically STOPPED after 10 seconds when connected with the USB port of a PC.

Report Generation

MSR BudgetLine data loggers are available with integrated USB 2.0 A-Type plug. Hence, no additional hardware or cable is required to connect the logger with the PC. After stopping, when the logger is connected for the first time to the USB port of the computer, both LEDs (green & red) will start flashing to show the report generation is in process. **Do not disconnect the logger until both LEDs (green and red) are ON continuously, which indicates the report is ready**. Once the report is generated, whenever the logger is connected to the USB port of the computer, both LEDs (green & red) are ON continuously, which indicates the data logger is in stop mode and the report is already generated.

Open data logger USB drive «**PDF_Logger**» that contains soft copy of the Quick Start Guide and the Calibration Certificate «**CXXXXXXXXXX.pdf**» and «**UI4Report**» – *to get a report of the recorded readings in PDF / Excel / CSV formats.*



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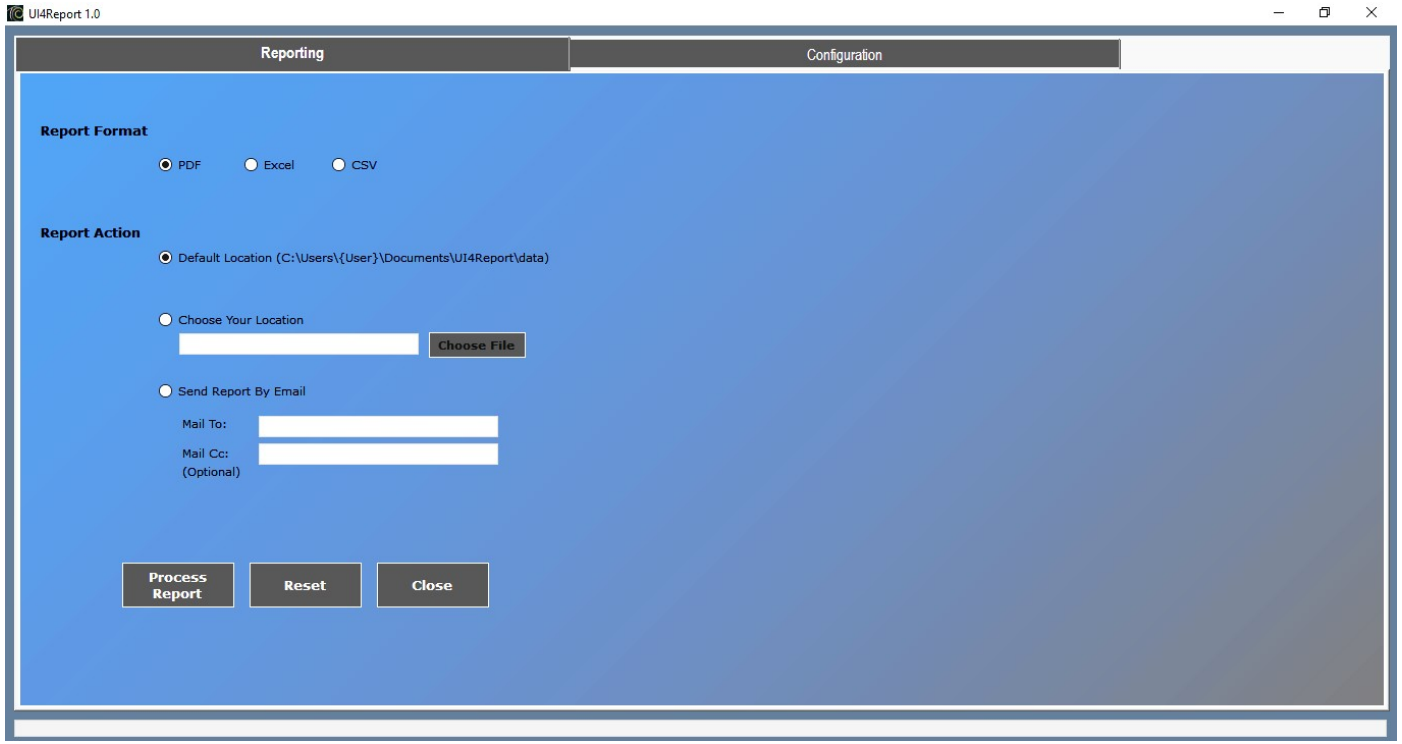
Process Report – PDF / EXCEL / CSV Format

Double-click on **UI4Report** shown in the drive «**PDF_Logger»** to open the «**UI4 Report 1.0**» window.



Report Format: Select your required **report format** (PDF or Excel or CSV).
Report Action:

- **Default Location:** This will open a report of recorded readings in your selected format and save it in the default location C:\Users\{User}\Documents\UI4Report\data
- **Choose Your Location:** This will open a report of recorded readings in your selected format and save it in your specified location.
- **Send Report by Email:** This will send an email of the selected report format of recorded readings to the email ID specified.
- **Click on Process Report to perform the selected action.**

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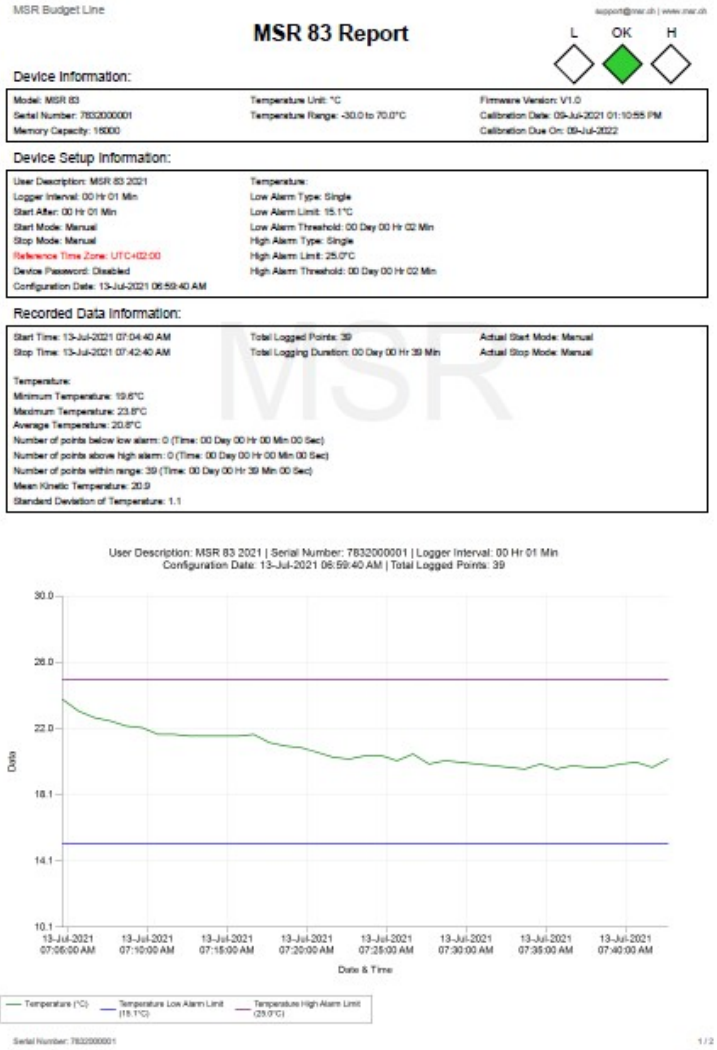
Report Analysis

Selected report format of recorded data will be automatically opened and saved at your selected location just after clicking «Process Report».

Summary & Statistical Data


MSR Budget Line

MSR 83 Report

L OK H

Device Information:

Model: MSR 83	Temperature Unit: °C	Firmware Version: V1.0
Serial Number: 7832000001	Temperature Range: -30.0 to 70.0°C	Calibration Date: 09-Jul-2021 01:10:55 PM
Memory Capacity: 16000		Calibration Due On: 09-Jul-2022

Device Setup Information:

User Description: MSR 83 2021	Temperature:
Logger Interval: 00 Hr 01 Min	Low Alarm Type: Single
Start After: 00 Hr 01 Min	Low Alarm Limit: 15.1°C
Start Mode: Manual	Low Alarm Threshold: 00 Day 00 Hr 02 Min
Stop Mode: Manual	High Alarm Type: Single
Reference Time Zone: UTC+02:00	High Alarm Limit: 25.0°C
Device Password: Disabled	High Alarm Threshold: 00 Day 00 Hr 02 Min
Configuration Date: 13-Jul-2021 06:59:40 AM	

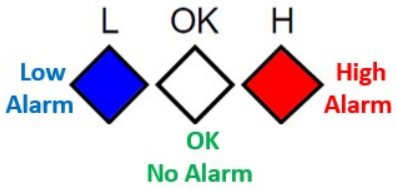
Recorded Data Information:

Start Time: 13-Jul-2021 07:04:40 AM	Total Logged Points: 39	Actual Start Mode: Manual
Stop Time: 13-Jul-2021 07:42:40 AM	Total Logging Duration: 00 Day 00 Hr 39 Min	Actual Stop Mode: Manual

Temperature:
Minimum Temperature: 19.6°C
Maximum Temperature: 23.8°C
Average Temperature: 20.8°C
Number of points below low alarm: 0 (Time: 00 Day 00 Hr 00 Min 00 Sec)
Number of points above high alarm: 0 (Time: 00 Day 00 Hr 00 Min 00 Sec)
Number of points within range: 39 (Time: 00 Day 00 Hr 39 Min 00 Sec)
Mean Kinetic Temperature: 20.9
Standard Deviation of Temperature: 1.1

Graphical View

Alarm Status



Sr	Date	Time	^{0}C	
1	4-JUN-2019	16hr: 16min	24.5	
2	4-JUN-2019	16hr: 17min	20.8	Readings with Alarm Limits
3	4-JUN-2019	16hr: 18min	18.7	
4	4-JUN-2019	16hr: 19min	15.4	
5	4-JUN-2019	16hr: 20min	12.6	
6	4-JUN-2019	16hr: 21min	12.6	Readings Below Low Alarm Limit
7	4-JUN-2019	16hr: 22min	13.0	
8	4-JUN-2019	16hr: 23min	20.0	
9	4-JUN-2019	16hr: 24min	20.4	
10	4-JUN-2019	16hr: 25min	20.8	
11	4-JUN-2019	16hr: 26min	21.6	
12	4-JUN-2019	16hr: 27min	27.2	
13	4-JUN-2019	16hr: 28min	27.7	Readings Above High Alarm Limit
14	4-JUN-2019	16hr: 29min	28.6	

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Contact Us:

We are pleased that you are using our data loggers. If you have any questions, please contact the sales office where you purchased your MSR BudgetLine data logger. More than 90 MSR sales partners in over 50 countries worldwide are available to provide you with competent advice.

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