

BluLite Calibration Instructions

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Required Equipment

- A Windows PC with DataSuite software installed
- Temperature/Humidity generator for reference values
- Microsoft Excel app

Running BluLite in controlled environments

Connect BluLite to Datasuite

- 1. Launch DataSuite software.
- 2. Please find the Bluetooth scanner in the shortkeys on the top toolbar or in "Devices".

🖲 🗗 🕞 🕞	• • • • • • • • •	3 💶 😣		•			
Home S	Settings Devices	Analysis and Repor	ts Help				
齡 Run All	🖓 Auto Setup 🗵	E Detect Devices	Firmware Update	C Refresh Network Connections	Search	Q	
崎 Stop All	+ Add Setup File	Define Sensor	Bluetooth	😁 Show Network Paths			
Actions	Settings	Dev	vices	DataNet Network	Search		
λ							

3. Find the specific BluLite and add it to the map in DataSuite.



Scan Bluetooth Devices	x
Scanning for devicesplease wait.	
Pini-BI30313 BluLite31161	
BIULITE4 126 1	
₹ ^N	
Add Device	

You will find the logger on the screen like this



The BluLite is connected.



Reset Calibration

1. right-click on the logger's icon and choose **Calibration => Reset Calibration**.



2. Setup logger: right-click on the logger's icon and choose **Setup.**



3. Set the logger parameters: Temperature scale °C, Interval 1 minute, Averaging points 1 as shown below:

Setup for BluLite: 16231108		x
Properties	Sensors Boomerang Report	
Identifiers SN:	16231108	
Comment:	Bl ^j uLite 1108	
Device:	BluLite	
Firmware:	2.03	
Battery level:	99%	
Temperature Scale ○ °C ● °F Sampling Rate		
Interval:	00:01:00 🚖 [hh:mm:ss]	
Recording time:	11.09:04:00 [(days) hh:mm:ss]	L3
OK and Run	OK Close	



- 4. Push "Ok and Run" button.
- 5. Repeat Reset Calibration for each BluLite you wish to Calibrate.

Measuring with BluLite

- 1. First point Set the chamber for 90 minutes with the first desired value of the selected measurement and place the running data loggers into the chamber.
- 2. Second point Change the temperature settings of the chamber to second desired value of the selected measurement value and resume logging data for another 60 minutes (wait until the chamber is stabilized).
- 3. Third point (if 3 point calibration is made) Change the temperature settings of the chamber to second temperature value and resume logging data for another 60 minutes (wait until the chamber is stabilized).
- 4. Stop the measurement in the BluLite.



Preparing Excel

- a. Make sure the BluLite device is still connected to the DataSuite
- b. Open the log files from "Open Data"

••••••••••			
Home Settings Devices	Analysis and Reports Help		
🔁 Open Data 🛛 🐻 Save	🖓 Map View 🛛 🖉 Sensors View 🗵	Backup System File Section:	🖳 Load Wallpaper
🗊 Save Project 🛛 Open Project	🗟 History View 🔒 Lock Map View	C Restore System Files	🕼 Reset Wallpaper
File	Views	Backup	V

c. Select the dates (A); the loggers that were calibrated, you can choose multiple loggers at the same time by pressing Ctrl + Left click (B); and then press OK (C)



Open Data Files	
Time Period - From: Until:	01/05/2024 00:00 □ ▼ 17/09/2024 23:59:59 □ ▼
S/N 18043032 21060397 24051133 22221274 16231161 16231108 16231235 20103607	Comment * Test kantoor * DL14microlog ProcUte DL16 * BuLite31161 * BuLite31161 * BuLite31235 * Fourtec *
Data File Path C:∖Users∖Publi	ic:Yourtec\DataSuite\Data Files\

d. For each logger press OK in the sync data window

Sync Data			x
Display rate:		Original Rate	\sim
		Average	
		Close sample	
l	OK	Cancel	

The view will be changed to History view and the data will appear in a graph mode.

 Select the measurements you wish to export: By default, all the measurements are selected and are colored in the plot color in the graph. Deselect the measurements from the view in order to export only the relevant measurement.



For example, we selected only temperature:



f. Export the data : Home>Export > Export to Excel

<u>•••••</u> •••••••••••••••••••••••••••••••	💷 🕄				
Home Settings Devices	Analysis and Reports Help				
🕞 Open Data 🛛 🐻 Save	🖓 Map View 🛛 🖉 Sensors View 🕞	Backup System File	🕰 Load Wallpaper 🛛 🗐 Display All Devices' Names	Import From Mobile	Export - 🧟 Print Map View
🗊 Save Project 🛛 Open Project	🗟 History View 🔒 Lock Map View	C Restore System Files	Reset Wallpaper		Export to Excel
File	Views	Backup	Wallpaper	Import	Export to CSV

The data will appear as such:

	Α	В	С	D	E	F
1	Comment		BluLite1108		BluLite31161	
2	S/N		16231108		16231161	
3	Sensor		Temperature		Temperature	
4	Low					
5	Pre-low					
6	Pre-high					
7	High					
8						
9	Date	Time	Temperature	Alarm Typ	Temperature	Alarm Type
10	01/09/2024	3:03:56 pm	23		23.2	
11	01/09/2024	3:04:56 pm	23		23.2	
12	01/09/2024	3:05:56 pm	23		23.2	
13	01/09/2024	3:06:56 pm	23		23.2	
14	01/09/2024	3:07:56 pm	23		23.2	
15	01/09/2024	3:08:56 pm	23		23.2	
16	01/09/2024	3:09:56 pm	23		23.2	
17	01/09/2024	3:10:56 pm	23		23.2	
18	01/09/2024	3:11:56 pm	22.9		23.2	
19	01/09/2024	3:12:56 pm	23		23.2	
20	01/09/2024	3:13:56 pm	22.9		23.2	
21	01/09/2024	3:14:56 pm	22.9		23.3	
22	01/09/2024	3:15:56 pm	23		23.2	
23	01/09/2024	3:16:56 pm	22.9		23.2	
24	01/09/2024	3:17:56 pm	22.9		23.2	
25	01/09/2024	3:18:56 pm	22.9		23.2	
26	01/09/2024	3:19:56 pm	22.9		23.2	
27	01/09/2024	3:20:56 pm	22.9		23.2	
28	01/09/2024	3:21:56 pm	22.9		23.2	



g. Calculate the average measurement value for each calibration point in each logger for at 20 samples (20 min), after the chamber is stabilized.

In the example below, we can see 2 temperature measurements. First point is 23 degrees and second point is 50 degrees with two loggers.

8									
9	Date	Time	Temperature	Alarm Type T	emperature	Alarm Type			
10	01/09/2024	3:03:56 pm	23		23.2				
11	01/09/2024	3:04:56 pm	23		23.2				
12	01/09/2024	3:05:56 pm	23		23.2				
13	01/09/2024	3:06:56 pm	23		23.2				
14	01/09/2024	3:07:56 pm	23		23.2				
15	01/09/2024	3:08:56 pm	23		23.2				
16	01/09/2024	3:09:56 pm	23		23.2				
17	01/09/2024	3:10:56 pm	23		23.2		Average Fi	rst point 31161	
18	01/09/2024	3:11:56 pm	22.9		23.2		23.205		
19	01/09/2024	3:12:56 pm	23		23.2				
20	01/09/2024	3:13:56 pm	22.9		23.2		Average Fi	rst point 1108	
21	01/09/2024	3:14:56 pm	22.9		23.3		=average(C10:C29)	
22	01/09/2024	3:15:56 pm	23		23.2				
23	01/09/2024	3:16:56 pm	22.9		23.2				
24	01/09/2024	3:17:56 pm	22.9		23.2				
25	01/09/2024	3:18:56 pm	22.9		23.2				
26	01/09/2024	3:19:56 pm	22.9		23.2				
27	01/09/2024	3:20:56 pm	22.9		23.2				
28	01/09/2024	3:21:56 pm	() 9		23.2				
29	01/09/2024	3:22:56 pm	22.9		23.2				
37	01/09/2024	3:17:30 pm	50		50				
38	01/09/2024	3:17:40 pm	50		50				
39	01/09/2024	3:17:50 pm	50		50				
90	01/09/2024	3:18:00 pm	49.9		50		Average Se	cond point 31161	
91	01/09/2024	3:18:10 pm	50		50				
92	01/09/2024	3:18:20 pm	50		50				
93	01/09/2024	3:18:30 pm	49.9		50		Average Se	cond point 1108	
94	01/09/2024	3:18:40 pm	49.9		50				
95	01/09/2024	3:18:50 pm	50		50				
96	01/09/2024	3:19:00 pm	50		50				

Go to Calibration



Home	Settings	Devices	Analysis and Rep	orts Help
🔁 Open	Data 🕞 :	Save	🕅 Map View	∬ [≣] Sensors View ⊸
🗊 Save	Project 🕞 🤅	Open Project	🗟 History View	Lock Map View
	File		N N	liews



 b. Connect make sure the logger is still connected. Then, right click on logger's icon and choose Calibration => Calibrate, the following screen will appear:

Display Data Download Data Cancel Download		
Calibration	Calibrate	
Setup	Reset Calibration	
Stop		
Run		
Remove		
Connect		
Activisto		

c. To prevent accidental change of the calibration, the calibration procedure is protected by a password. The default password is **1234.**

Password	x
Enter password to enable this feature	
Password :	_
OK Cancel	Change Password



For 2 points of calibration

Calibration			х
Sensor Sensor:	Temperature	~	Logger data BluLite Serial Number: 16231108 BluLite 1108 Battery Level: 98% Version: 2.04 Temperature: 23.40°C Internal RH: 52.80%
Calibration	Reference Valu	e Logger Value	
Point	#1: 0	0	Сору
Point	#2 23	23.205	Сору
Point	#3 50	49.975	Сору
		Send Calibration	Reset Calibration Close

Enter values: **reference value** (the average for the chamber data) and **logger value** (the average for the logger's data) for points **#2** and **#3** as marked above. The logger value should correspond to each logger according to its serial number. Press **Send Calibration** to finish.

Repeat for each data logger.



For 3 points of calibration:

nsor Sensor: Te	mperature	~	Logger data BluLite Serial Number: 16231108 BluLite 1108 Battery Level: 98% Version: 2.04 Temperature: 23.40°C Internal RH: 52.80%
libration	Reference Value	Logger Value	
libration Point #1:	Reference Value	Logger Value	Сору
libration Point #1: Point #2	Reference Value 8 23	Logger Value 7.883 23.205	Сору

Enter values: **reference value** (the average for the chamber data) and **logger value** (the average for the logger's data) for points **#1**, **#2** and **#3** as marked above.

The logger value should correspond to each logger according to its serial number. Press **Send Calibration** to finish.

Repeat for each data logger.