

Analysis Report



Data

Test name:

2019-09_INT_DELIVERIES_SEPTMBER

Number of devices tested:

25

Test dates:

None - None

Test author(s):

Óscar González - Victor Barberán

Disclaimer

The methods used in this analysis are subject to the low amount of devices tested, and in general, a *common sense* approach is applied. This means that the plots indicate only trends and highlight some (but not all) potential faulty devices.

Below, the confidence intervals used are those of the normal distribution (meaningful for sample numbers >30) and of the t-student distribution.

Conclusions are derived by analysing the data further and testing the devices for longer periods if needed. Please, also note that statistical significance cannot be inferred from these amounts of devices, so some assumptions for normality have to be accepted. Comments and further discussion are always welcome.

Finally, the individual sensors components integrated in the Smart Citizen hardware have their own accuracies and dispersions, for which Smart Citizen cannot assume any liability other than trying to work with the most appropriate selection. The tests we perform are aimed to determine and assume any failures in the sensors and their integration within the Smart Citizen hardware. For more information, please check the [official documentation](#) and the datasheets of each of the sensors.

Warnings

Device 9964 has no location

Conclusions

- One extra sensor is added from previous tested batches (9974): device takes some time to stabilise in CCS811

Time Series Plots

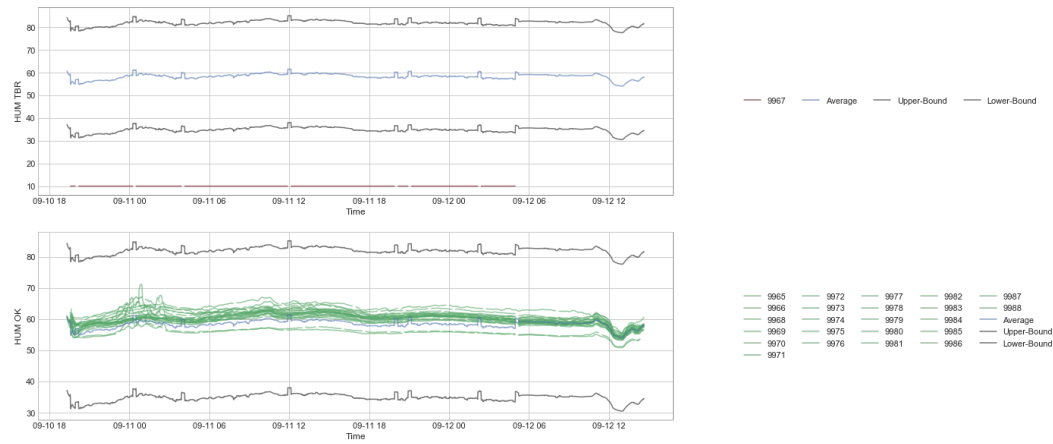
Min Date available: 2019-09-12 14:38:00+02:00

Max Date available: 2019-09-12 14:38:00+02:00

(1/10) - HUM

Using t-student Distribution

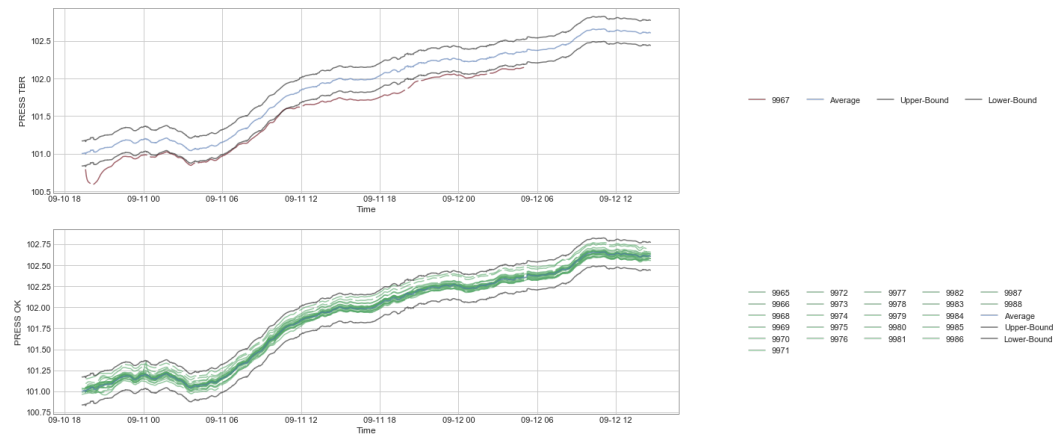
WARNING: Device 9967 out of 3% limit - 73.0% out



(2/10) - PRESS

Using t-student Distribution

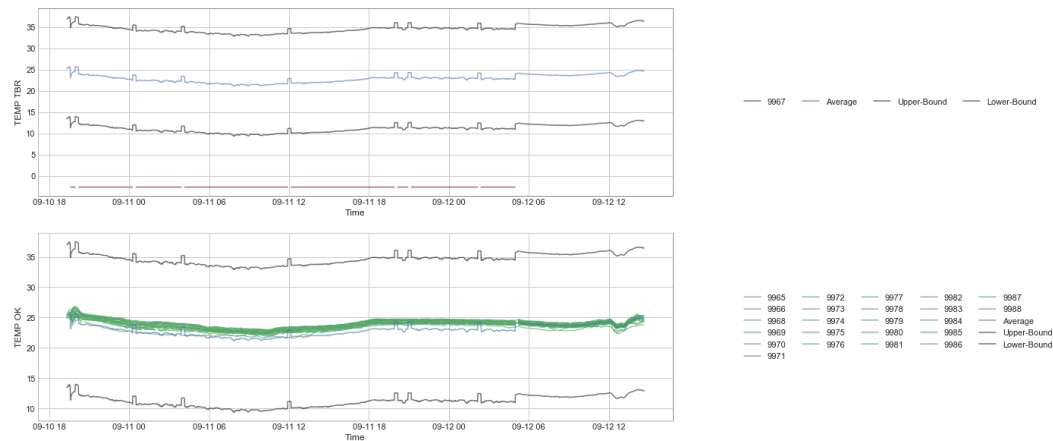
WARNING: Device 9967 out of 3% limit - 72.0% out



(3/10) - TEMP

Using t-student Distribution

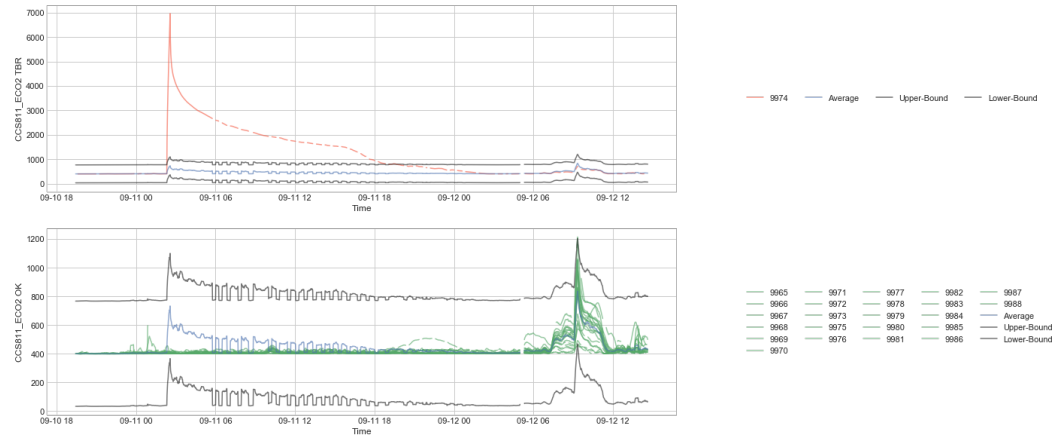
WARNING: Device 9967 out of 3% limit - 73.0% out



(4/10) - CCS811_ECO2

Using t-student Distribution

WARNING: Device 9974 out of 3% limit - 28.2% out

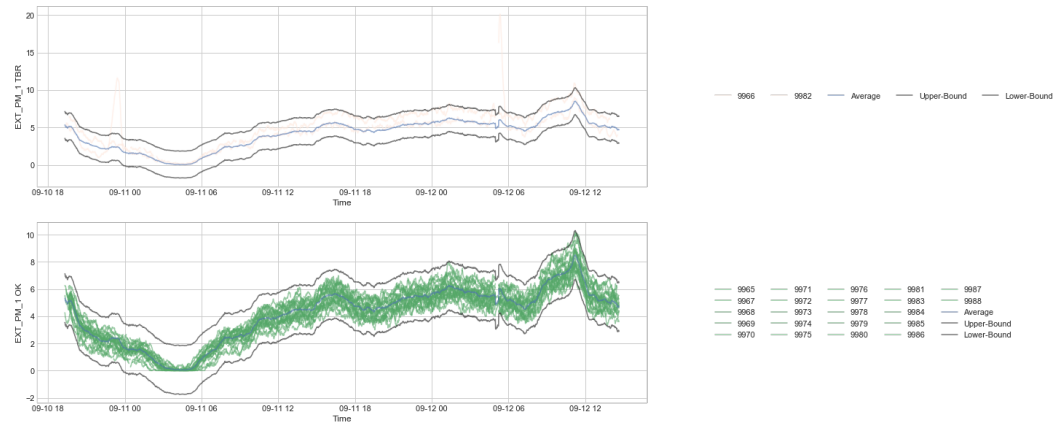


(5/10) - EXT_PM_1

Using t-student Distribution

WARNING: Device 9966 out of 3% limit - 4.0% out

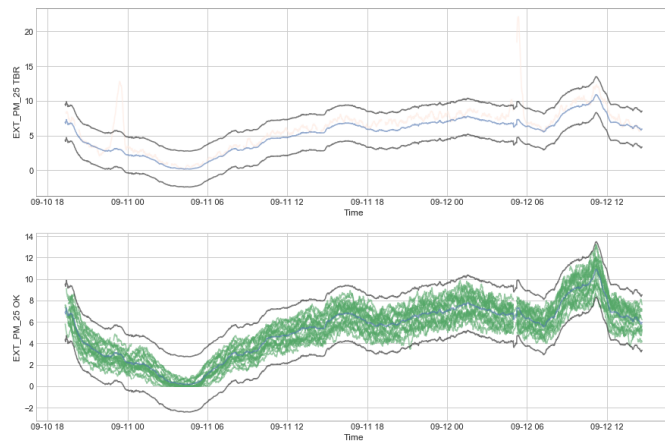
WARNING: Device 9982 out of 3% limit - 3.7% out



(6/10) - EXT_PM_25

Using t-student Distribution

WARNING: Device 9982 out of 3% limit - 3.6% out



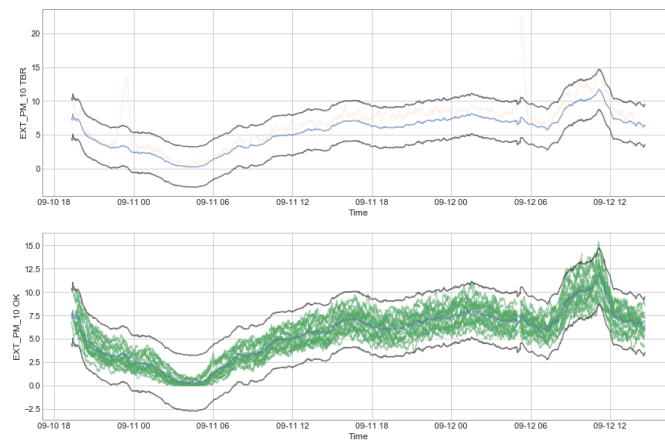
9982 Average Upper-Bound Lower-Bound

9965 9971 9976 9981 9987
 9966 9972 9977 9983 9988
 9967 9973 9978 9984 Average
 9968 9974 9979 9985 Upper-Bound
 9969 9975 9980 9986 Lower-Bound
 9970

(7/10) - EXT_PM_10

Using t-student Distribution

WARNING: Device 9982 out of 3% limit - 3.9% out



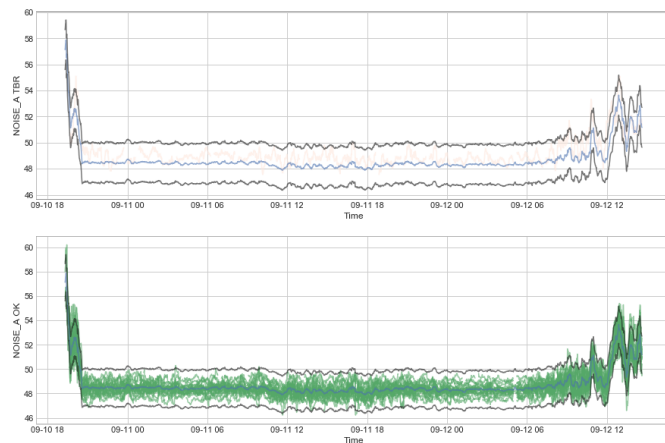
9982 Average Upper-Bound Lower-Bound

9965 9971 9976 9981 9987
 9966 9972 9977 9983 9988
 9967 9973 9978 9984 Average
 9968 9974 9979 9985 Upper-Bound
 9969 9975 9980 9986 Lower-Bound
 9970

(8/10) - NOISE_A

Using t-student Distribution

WARNING: Device 9987 out of 3% limit - 3.6% out



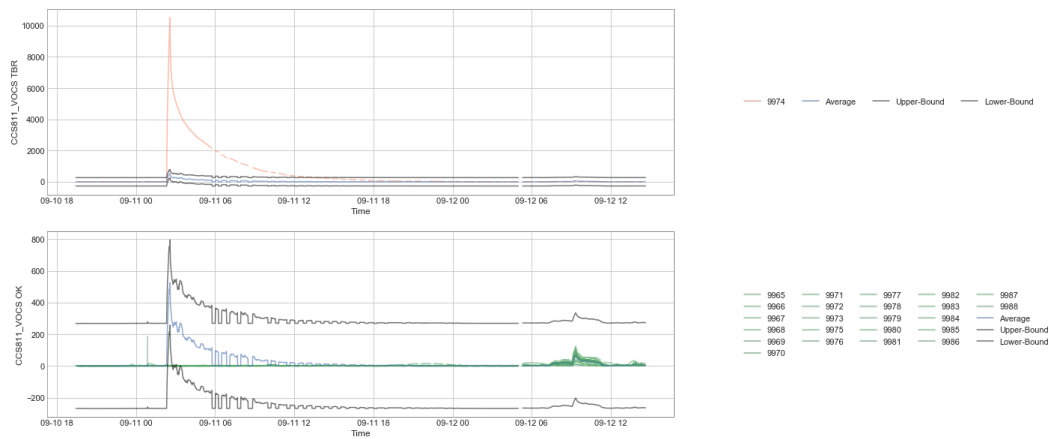
9987 Average Upper-Bound Lower-Bound

9965 9971 9976 9981 9986
 9966 9972 9977 9982 9988
 9967 9973 9978 9983 Average
 9968 9974 9979 9984 Upper-Bound
 9969 9975 9980 9985 Lower-Bound
 9970

(9/10) - CCS811_VOCS

Using t-student Distribution

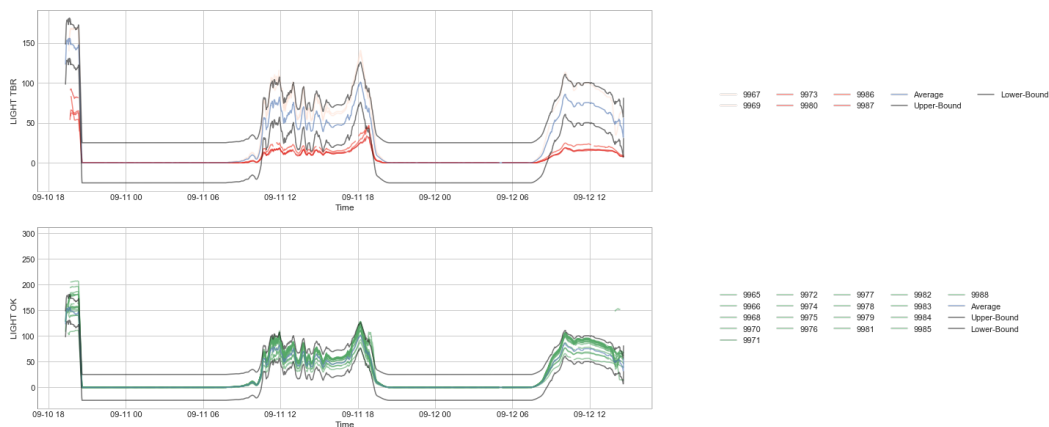
WARNING: Device 9974 out of 3% limit - 19.2% out



(10/10) - LIGHT

Using t-student Distribution

WARNING: Device 9967 out of 3% limit - 5.0% out
WARNING: Device 9969 out of 3% limit - 5.7% out
WARNING: Device 9973 out of 3% limit - 31.9% out
WARNING: Device 9980 out of 3% limit - 33.5% out
WARNING: Device 9986 out of 3% limit - 31.2% out
WARNING: Device 9987 out of 3% limit - 33.5% out



Summary

	Dispersion	Total Number of devices	TBR Number of devices	OK Number of devices
HUM	8.449758	25.0	1.0	24.0
PRESS	0.059662	25.0	1.0	24.0
TEMP	4.212900	25.0	1.0	24.0
CCS811_ECO2	131.504237	25.0	1.0	24.0
EXT_PM_1	0.643428	25.0	2.0	23.0
EXT_PM_25	0.927428	25.0	1.0	24.0
EXT_PM_10	1.068691	25.0	1.0	24.0
NOISE_A	0.549193	25.0	1.0	24.0
CCS811_VOCS	96.372481	25.0	1.0	24.0
LIGHT	9.006115	25.0	6.0	19.0