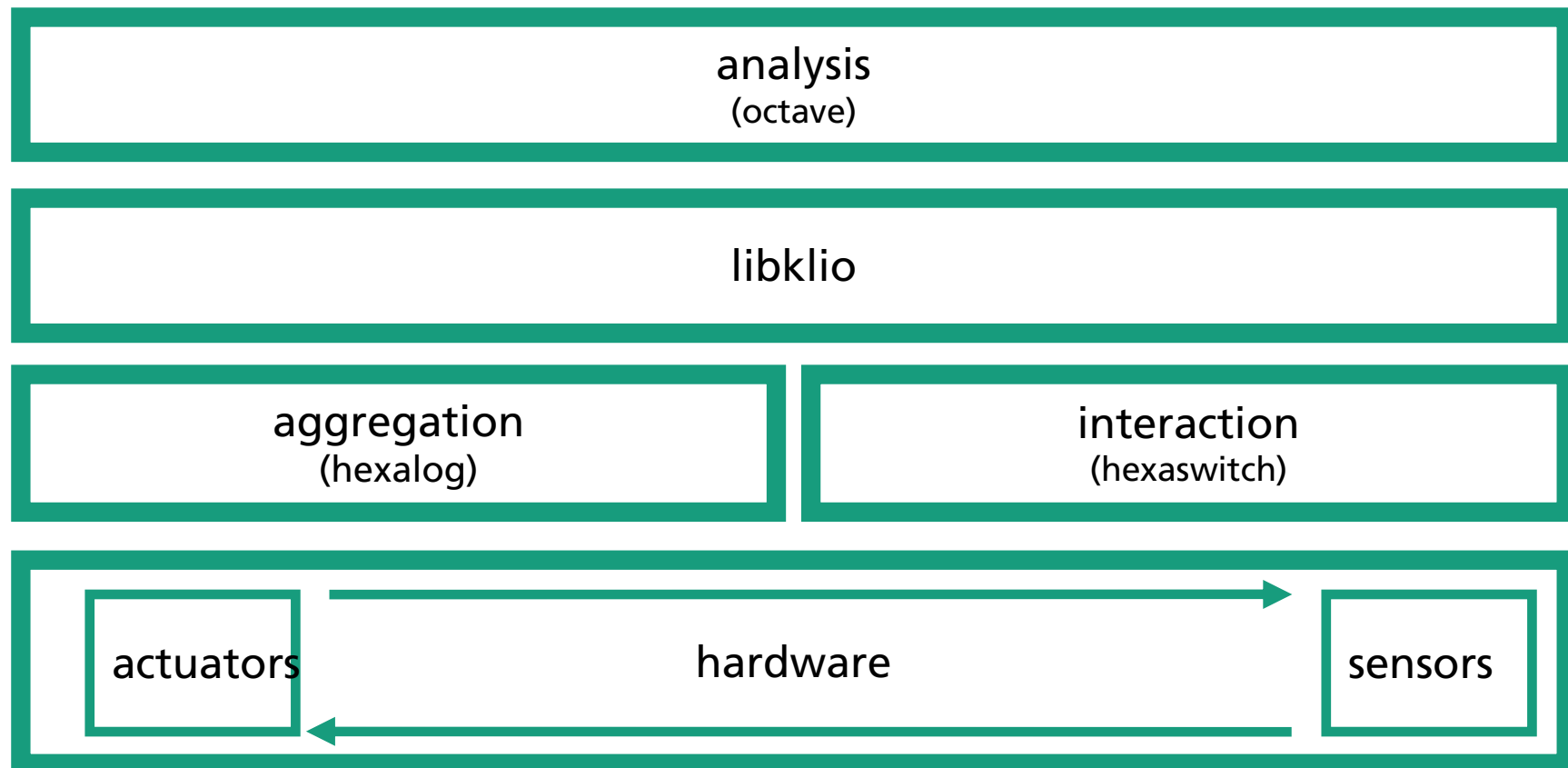


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# MEASURING AND DATA ANALYSIS WITH HEXABUS

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# Interaction of technologies



# temperature logging



# air humidity sensor

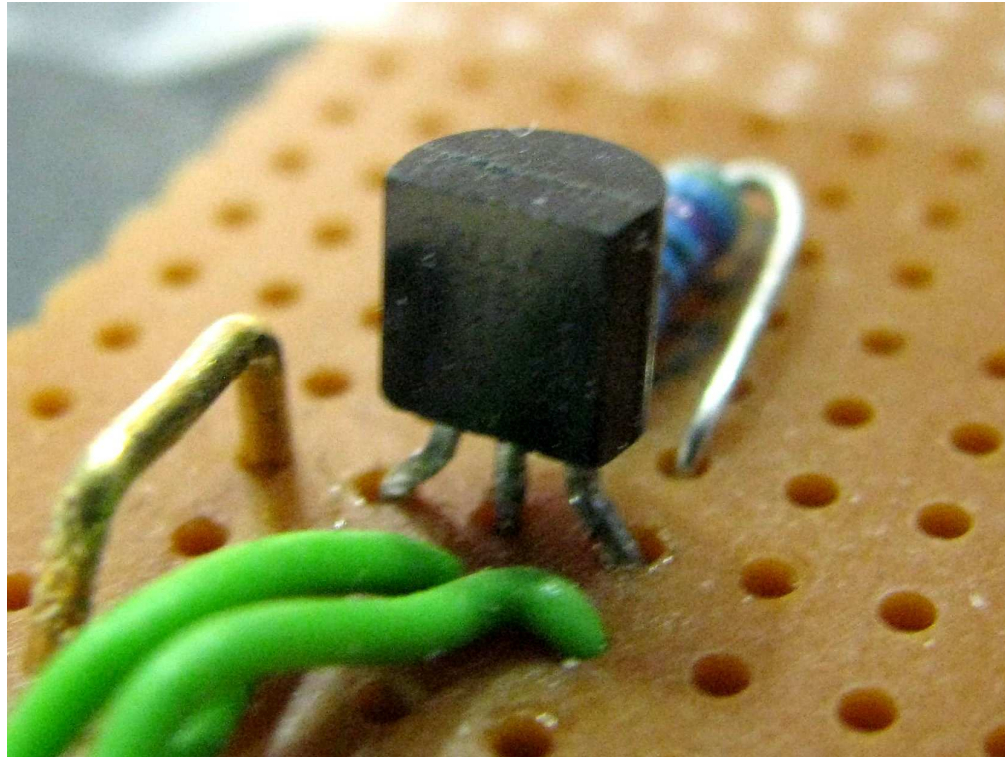


# Temperature sensor

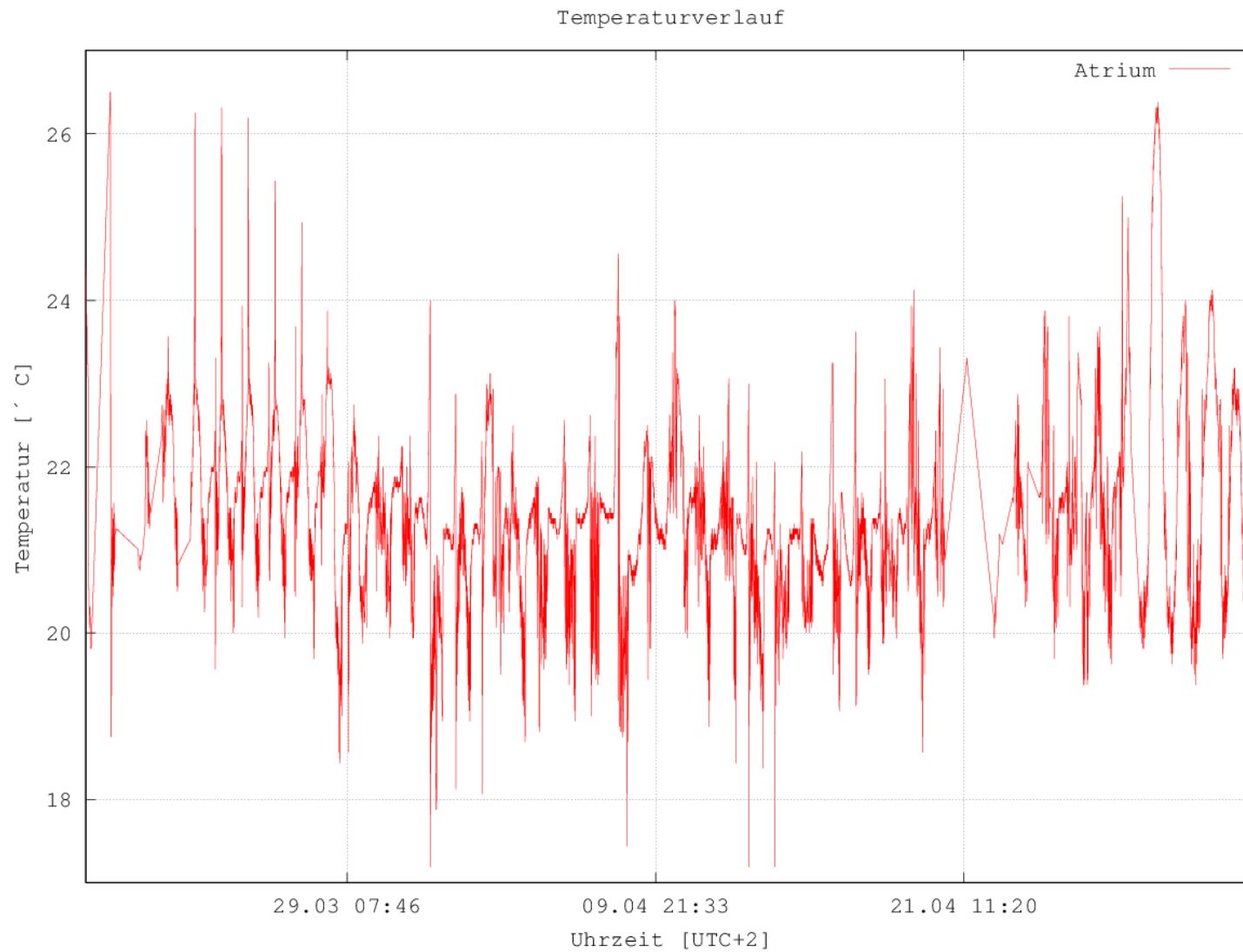
## Dallas DS18S20, one wire

Features:

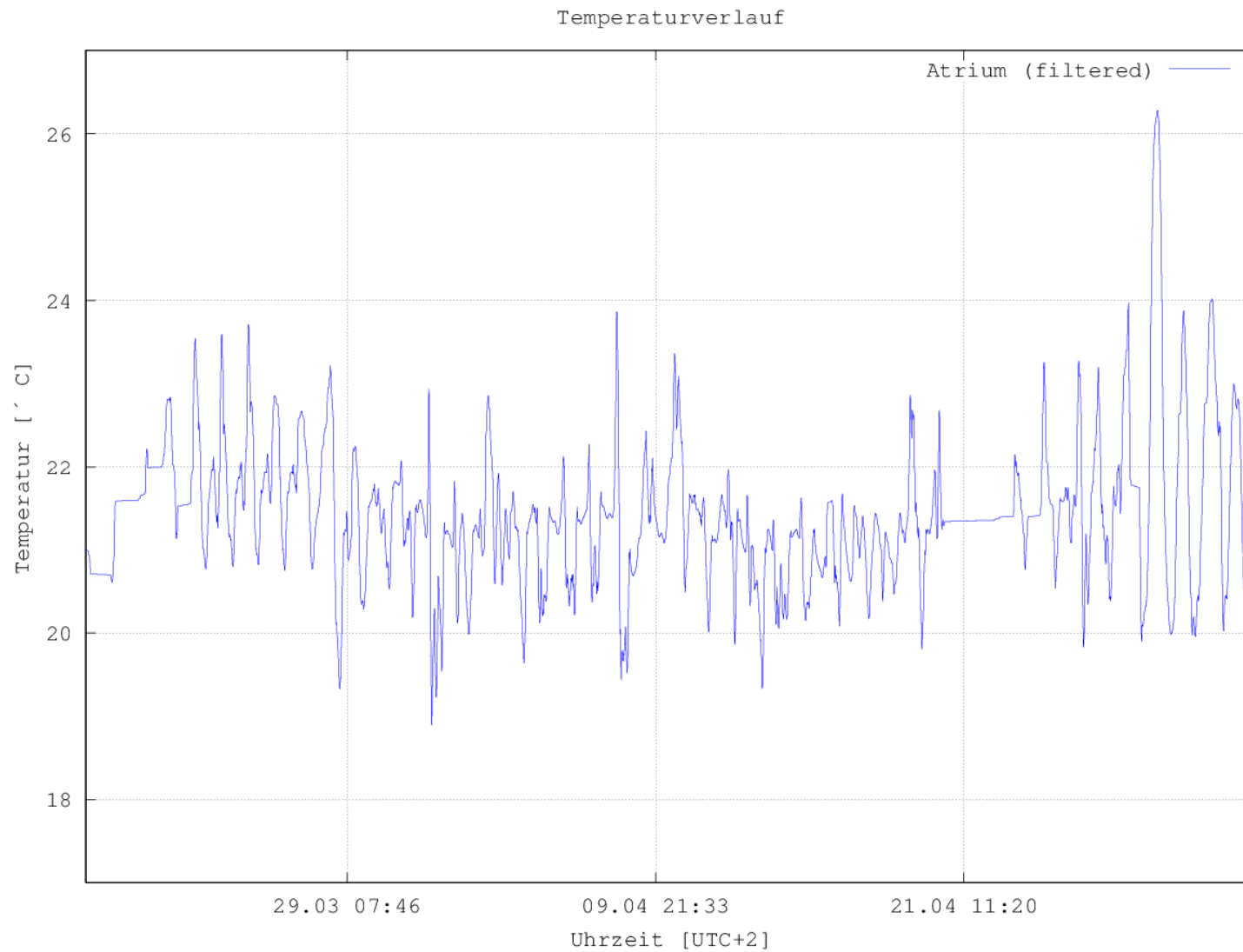
- Measuring range -55 ..125° C
- Accuracy  $\pm 0.5^{\circ}$  C
- 2.40 €



# Temperature – raw data

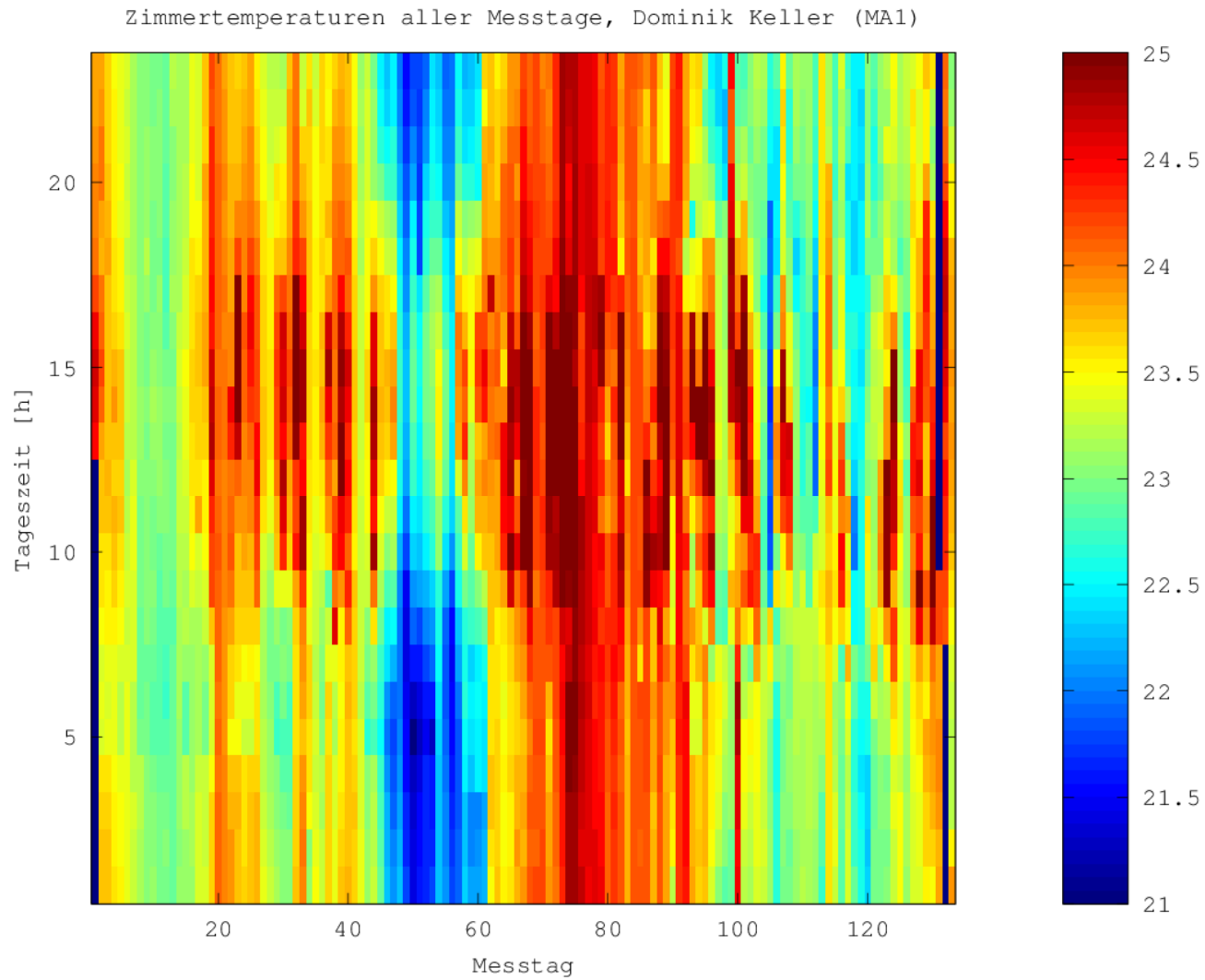


# Temperature – Savitzky-Golay filtered





# Temperature – heatmap



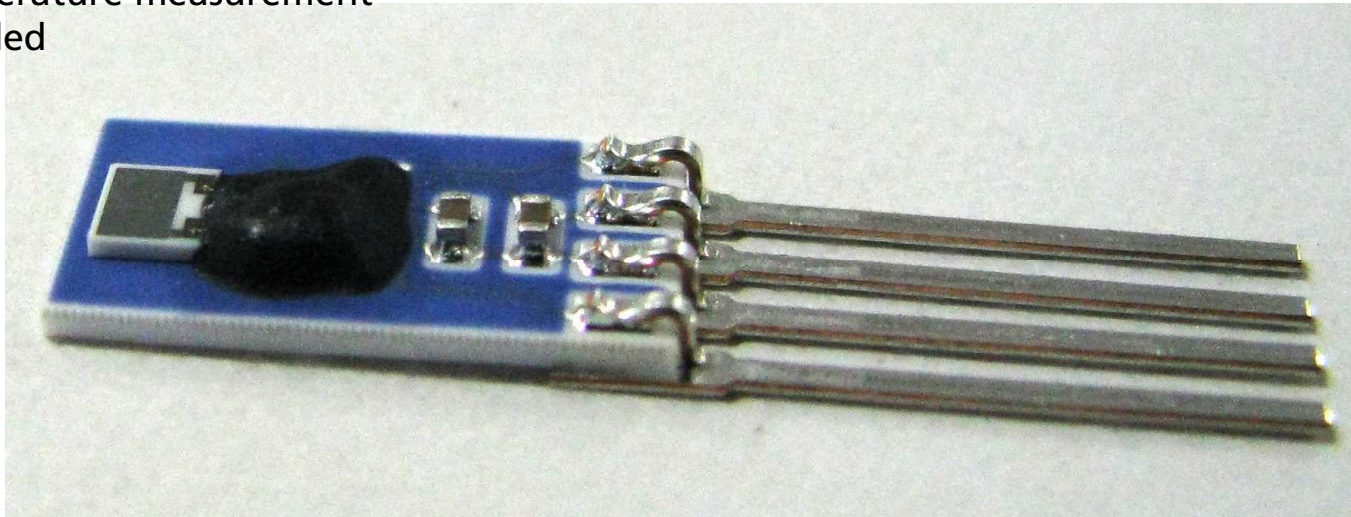


# humidity sensor

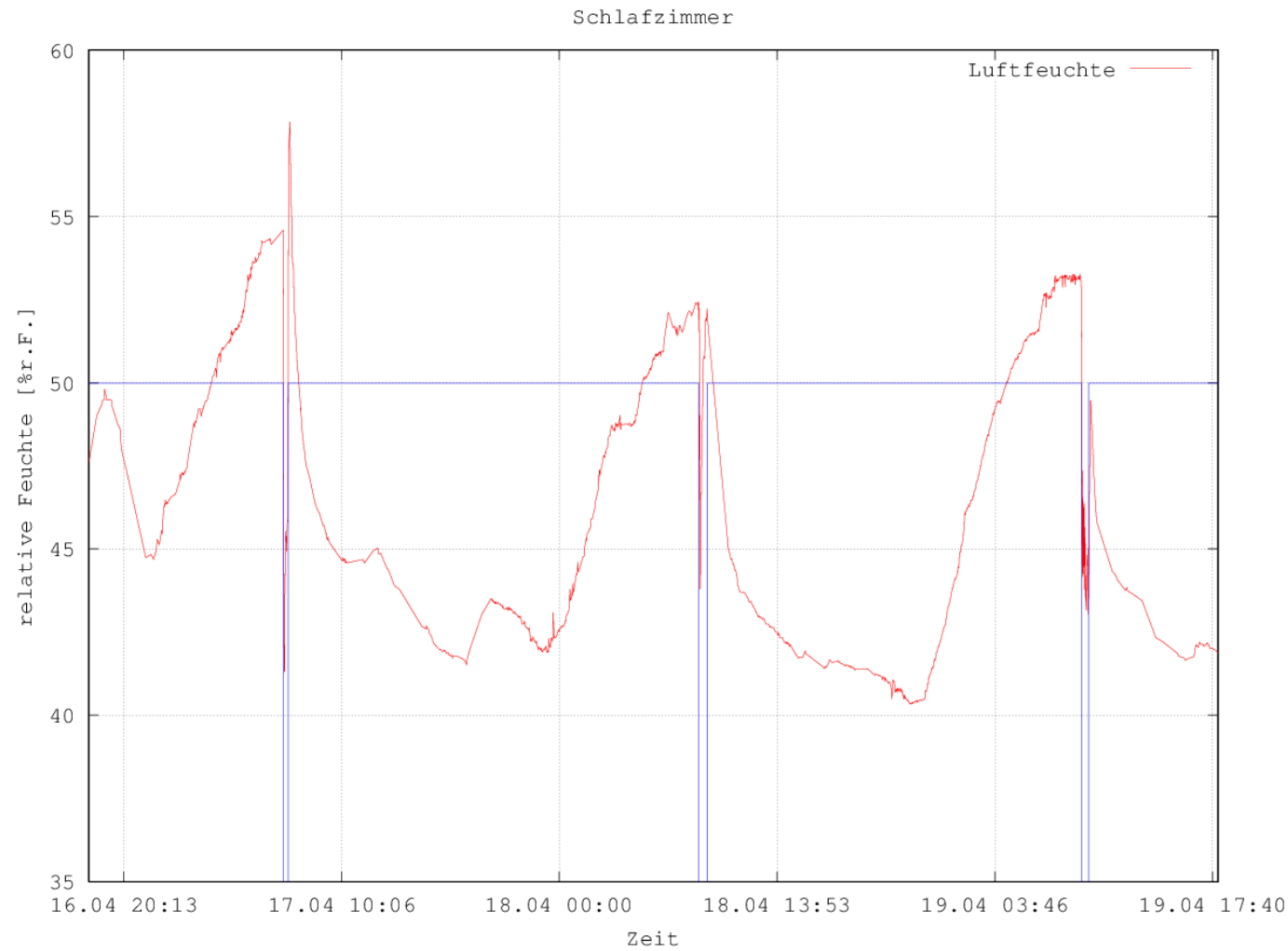
## Hygrosens HYT-271, I2C

Features:

- Measuring range 0 ..100% rH
- Accuracy  $\pm 1.8\%$  rH
- 15-30 €
- Temperature measurement included



# Humidity and window

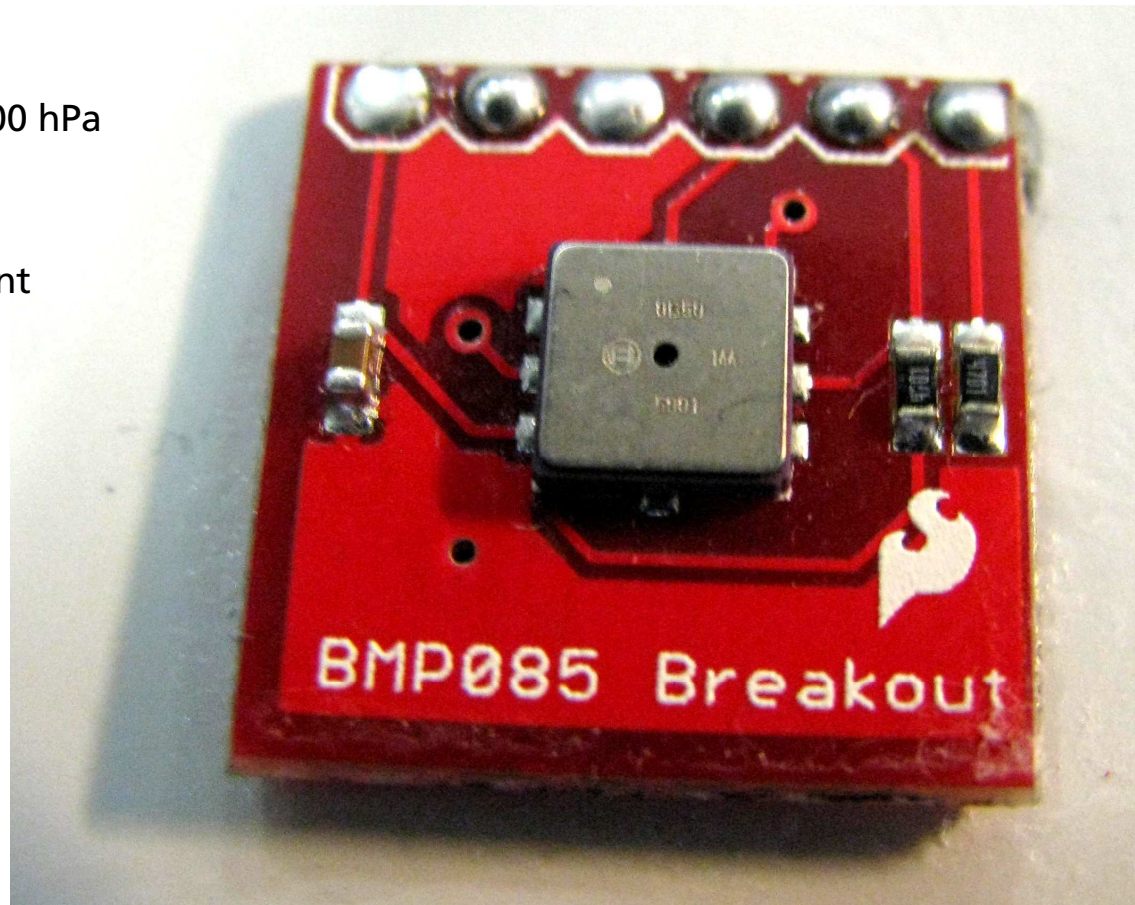


# pressure sensor

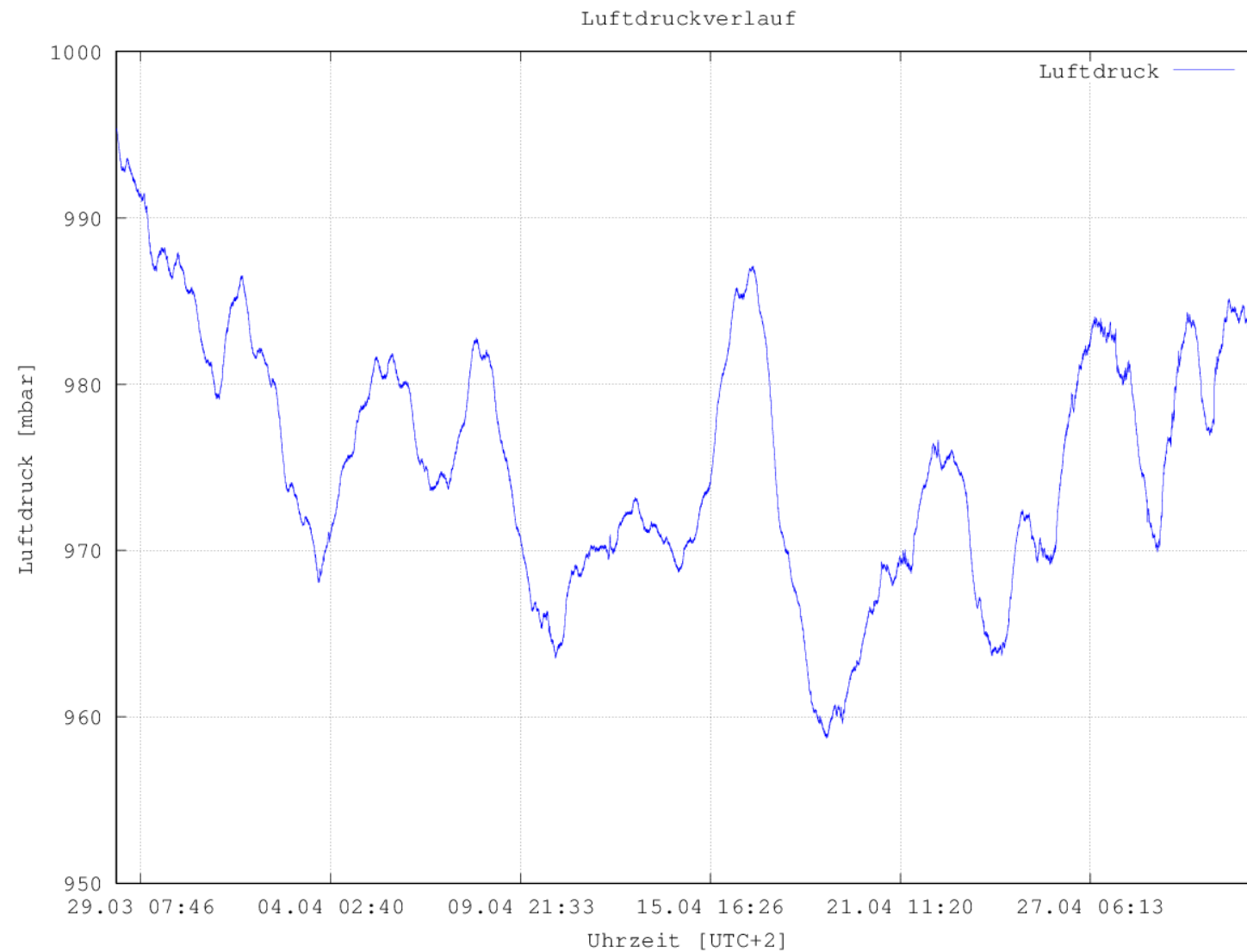
## Bosch BMP085, I2C

Features:

- Measuring range 300..1100 hPa
- Accuracy  $\pm 0.03$  hPa
- 20 €
- Temperature measurement included



# Air pressure



# Analyzing data with libklio

## Live demo

List all sensors in a database:

- `klio-sensor -a list -s <database>`

Show infos about a particular sensor:

- `klio-sensor -a info -s <database> -i <sensor-id>`

Show readings of a particular sensor:

- `klio-sensor -a dump -s <database> -i <sensor-id>`