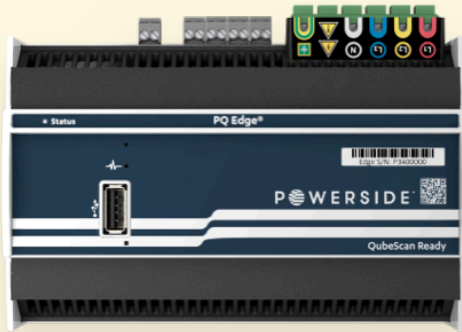# Monitoring station

An overview

The chosen one

- We chose the following product

- Price: 2350 euros + tax + 300 euros additional sensor + 600 euros UPS

What can it measure

- Voltage in live (~100 ms) ~0.05 V. PQCube can measure Power consumption

- Frequency

- Total Harmonic distortion

- Full Harmonic analysis

- Flicker detection

External sensor

3m long cable

- Temperature: From -20°C to 80°C

- Pressure: Resolution better than 0.001 hPa

- Humidity: 0 to 100% RH

- Acceleration (x, y, & z): sensitivity$\sim 1\text{cm/s}^2$
  - Not very fast: Average over the last second measured at 32 Hz

Pros

- Easy to connect and take the data (ethernet cable and python library)
- Generally enough for our needs

Cons

- A bit expensive if you need one per fridge
- The external sensor for temperature, humidity etc is not that good.
- Only one sensor can be connected to the PQEdge
- There is not yet an UPS (they sold us the wrong one...) Probably better to look for another sensor for temperature, vibration, etc