



Working with wireless battery monitoring systems

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ENERGY STORAGE EVENT

12 februari 2019 | NH Conference Centre Koningshof



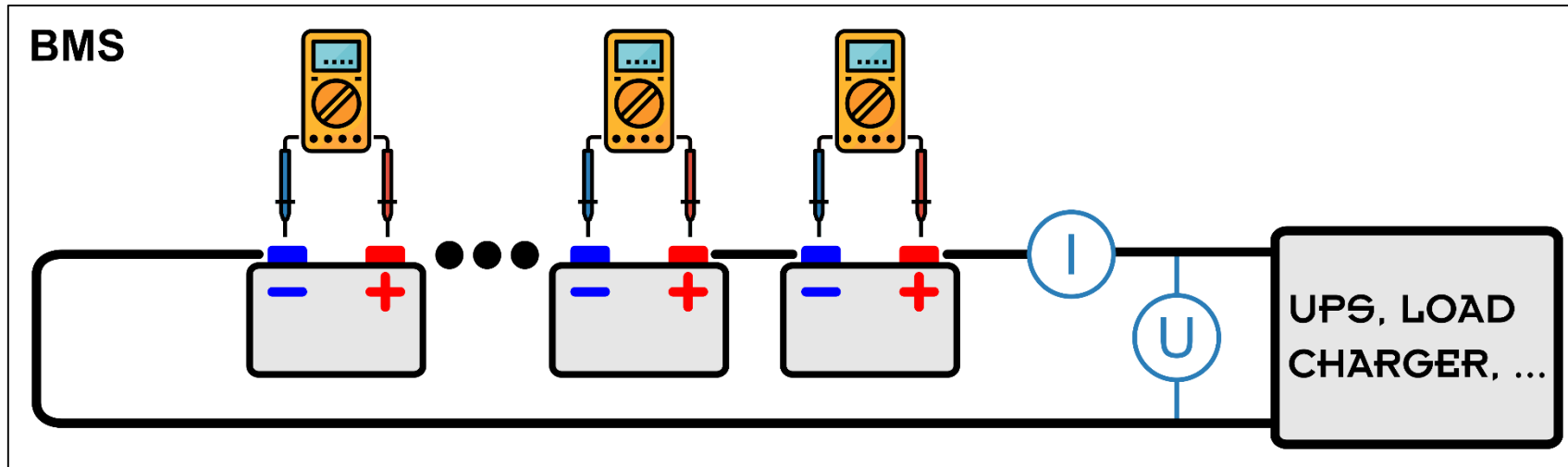
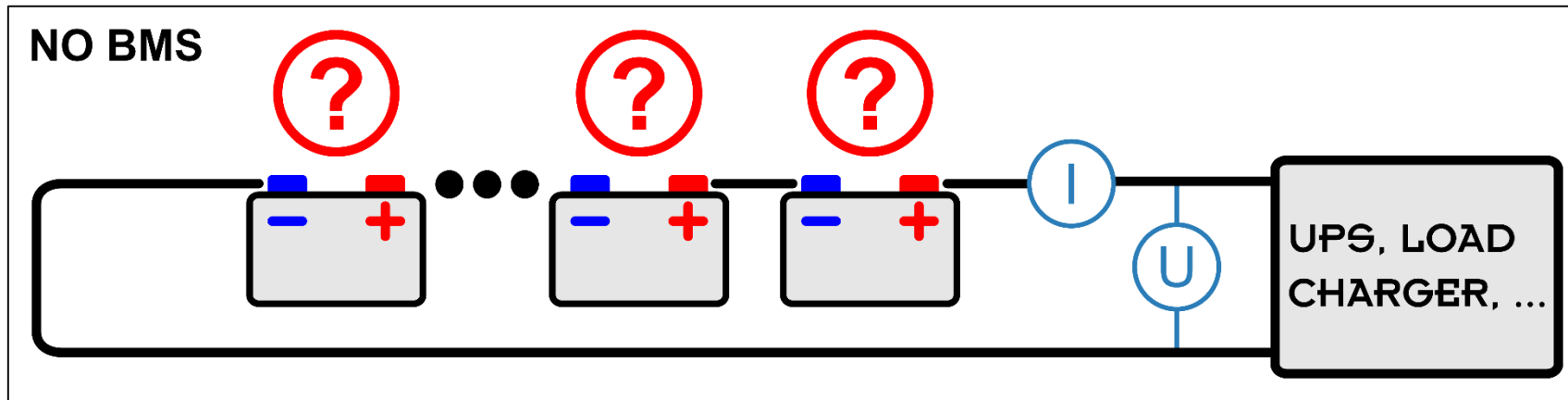
Why a Battery Monitoring System (BMS)?

- IEEE –ANSI 1188 recommends battery monitoring
- 80% of businesses require uptime of 99,99%
- Downtime cost is high (datacenter average is 230.000€/hour)
- Increase the life and performance of Batteries
- Reduces operating cost
- Monitoring = Sustainable

What do we have to monitor?

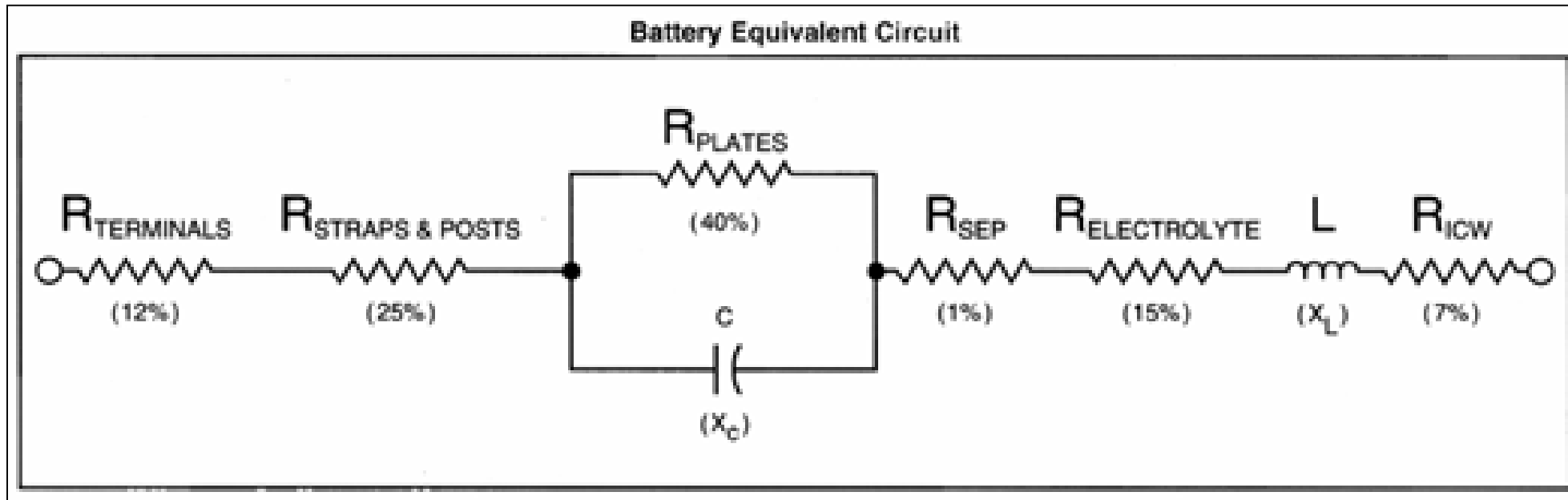
- Current and Voltage
- Temperature
- Internal resistance
- Visual : Condition of the battery (no corrosion, leakage of electrolyte,...)

No BMS vs. BMS....



A Lead Acid (VRLA) Battery Model

- There is no standardized battery model...



BMS Operating Principles

- Current, voltage, temperature and internal impedance measurement should be performed for each battery, allowing comparing each battery against the others
- Discharge cycles are counted
- Operating time is monitored
- Historical data allows battery failure prediction
- Comparative data between batteries of same system allow battery failure prediction

Wired BMS

Permanent wiring between battery measurement modules (BMM) and BMS main unit

Advantages

- communication is immune to the disturbances
- BMMs could be powered externally

Drawbacks

- important installation costs
- limited number of batteries /system
- possible failure of communication in case of cable interruption (single point of failure on each communication cable)
- some are performing only multiple blocks measurement

Wireless BMS

No wiring between battery measurement modules (BMM) and BMS main unit. Communication is performed in RF

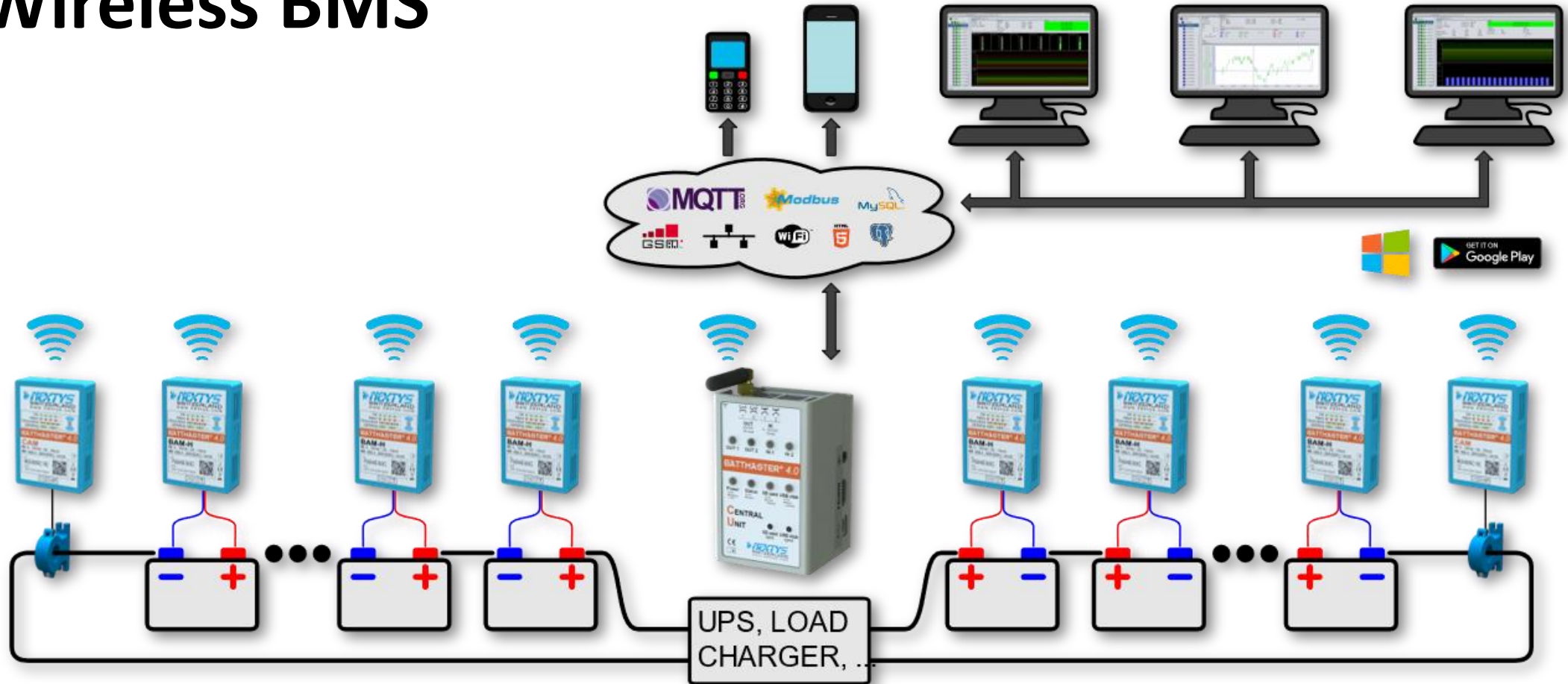
Advantages

- Very easy and cost effective installation
- High number of batteries/ system possible
- Overall cost is lower than wired BMS
- No need of external power supply for the BMM
- Measurement modules are better isolated

Drawbacks

- Communication can be affected by heavy shielded environments

Wireless BMS



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Wireless BMS

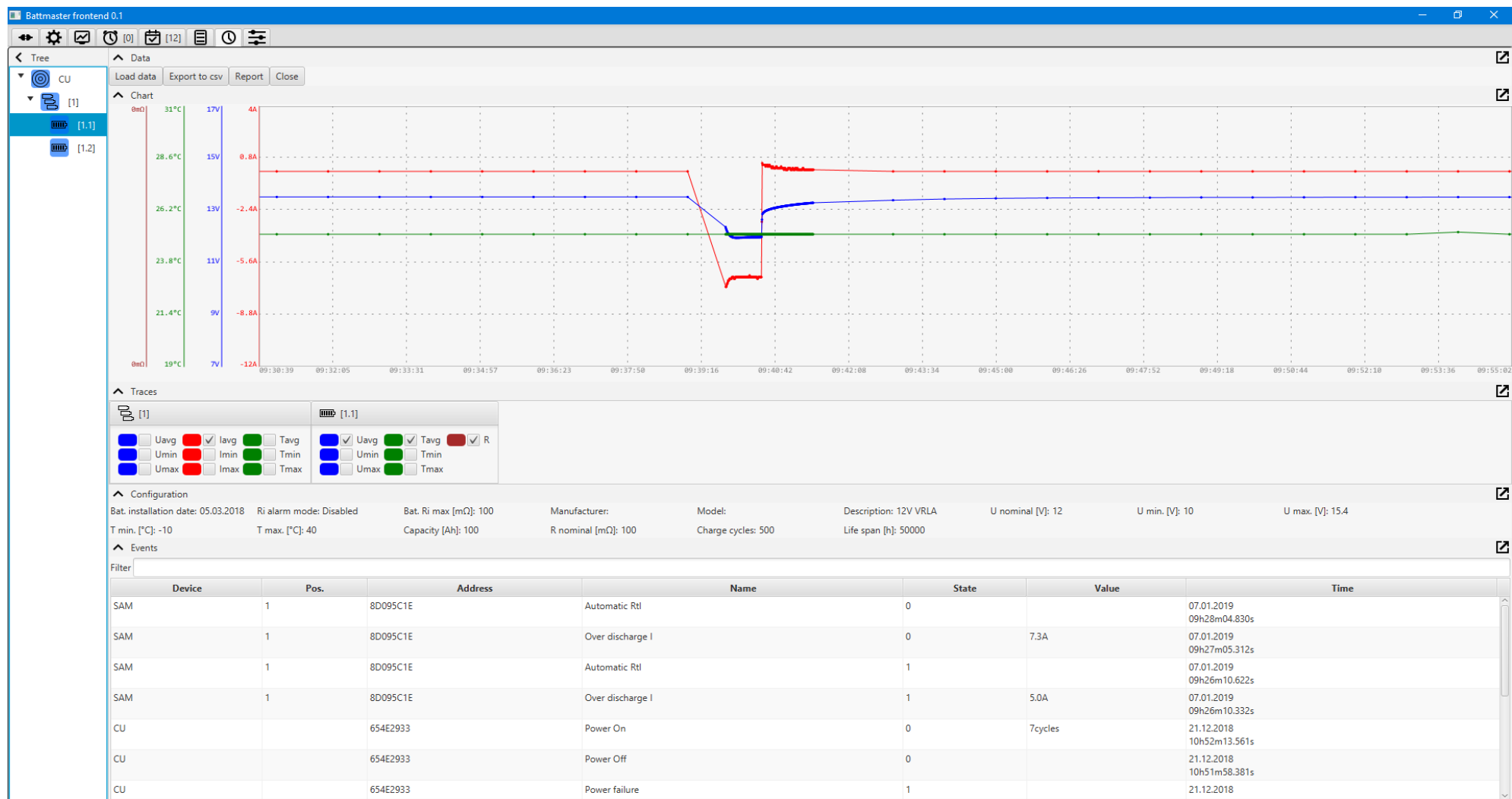
- 414 Batteries x 12V 92Ah



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Measured values



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More details on wireless BMS?

Contact :

A&C Solutions BVBA,
sales@ac-solutions.be
www.battmaster.eu

Visit us here and get a live demo!

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