

Application note



Subject:
**High-Accuracy DC Monitoring
for BESS Applications**

Industry:
Energy Storage Systems

Product:
DCM2

Customer:
OEMs

CUSTOMER NEED

Battery Energy Storage Systems (BESS) require accurate DC monitoring to precisely measure the energy exchanged between the battery and the Power Conversion System (PCS).

AC-side measurements alone do not provide full visibility of the battery section, as they include conversion losses and cannot show the actual DC energy flow.

This limitation reduces the accuracy of efficiency analysis, energy balancing, and system diagnostics.

For utility-scale and industrial applications, the customer is looking for a reliable solution.

OUR SOLUTION

The proposed solution consists of installing a DC meter directly on the DC side of the energy storage system on the battery rack, inside the combiner or on the bus.

With a measuring range **up to 1500 V dc and 1500 A dc**, the device is ideal for high-power BESS applications and international projects thanks to its CE and cURus certifications.

The meter provides real-time data to EMS, PCS, and SCADA systems, enabling:

- continuous energy monitoring
- system efficiency analysis
- advanced diagnostics
- accurate bidirectional supervision of DC energy flows

Additionally, shunt temperature monitoring allows early detection of potential operational anomalies.

BENEFITS

- Measuring range: **up to 1500 V dc / 1500 A dc**
- **Independent monitoring** of: DC voltage, DC current power and energy
- Shunt temperature monitoring for **real-time diagnostics**
- Ethernet + RS485 communication for **flexible integration**
- Imported/exported **kWh and Ah monitoring**
- **CE and cURus certifications** for global applications
- **Higher accuracy** in BESS efficiency calculations