

Application note



Subject:

**Accurate DC Energy Monitoring
for Megawatt Charging
Systems (MCS)**

Industry:

EV Charging Stations

Product:

DCM2

Customer:

OEMs

CUSTOMER NEED

Megawatt Charging Systems (MCS) for electric trucks and heavy-duty vehicles require accurate DC energy monitoring on the charger output to precisely measure the energy transferred to the vehicle during each charging session.

AC-side measurements alone do not provide full visibility of the delivered energy, as they include conversion and cable losses and do not reflect the real DC energy flow at the charger output.

OUR SOLUTION

The DCM2 DC energy meter is installed on the output side of the MCS charger, between the power conversion stage and the charging connector.

With a measuring range up to 1500 V dc and 1500 A dc, the DCM2 is designed for high-power EV charging applications and international projects.

The solution combines accurate DC measurement with Ethernet and RS485 communication interfaces for seamless integration with charger controllers and energy management systems.

CE and cURus approvals, together with CTEP compliance, make the DCM2 particularly suitable for the North American market.

BENEFITS

- **High-power applications** up to 2.25 MW (1500 V dc / 1500 A dc)
- **Accurate monitoring** of DC voltage, current, power, and energy
- Ethernet and RS485 communication for **flexible system integration**
- **CE and cURus approved** for international applications
- **CTEP compliance and 0.0001 kWh resolution** for US market requirements
Improved visibility of real DC energy delivered to the vehicle for accurate billing and energy management