

# Application note



Subject:  
**Optimizing EV Charging Load Balancing**

Industry:  
**EV Charging**

Product:  
**EM600 series**

Customer:  
**OEMs, System integrators**

## CUSTOMER ISSUE

In EV charging installations, efficient load balancing is essential to prevent exceeding the available power at the main distribution point.

Typically, a single energy meter is installed upstream of the charging infrastructure to transmit real-time measurements to the load balancing system.

This enables:

- **Dynamic load allocation** among multiple EV chargers
- **Prevention of overload conditions** and avoidance of power limit penalties
- **Optimization of charging speed** based on the available electrical capacity

## OUR SOLUTION

The EM600 provides accurate three-phase energy and power measurements, ensuring fast and stable feedback for effective load management in EV charging applications.

Thanks to its Ethernet connectivity, the EM600 can communicate directly with energy management systems or charge controllers using Modbus TCP/IP or HTTPS REST API, ensuring reliable and secure data transmission.

## BENEFITS

- **100 ms update rate** for highly responsive and precise load balancing
- **Direct communication** via Modbus TCP/IP or HTTPS REST API
- **Dual Ethernet port** available for easy daisy-chain connection of multiple systems