ENERGY AUTOMATION PRODUCTS

SICAM DLM - Dynamic Load Management for charging units -

SICAM DLM - maximum economics and reliability for charging infrastructures

siemens.com/sicam-dlm

SICAM DLM (Dynamic Load Management), based on SICAM 8, supports the integration of charging units into electrical grids by dynamically limiting charging power.

Expansion of EV infrastructure brings various challenges to the grid. This includes grid upgrades, utility capacity limitations, and high demand charges.

SICAM DLM from Siemens can manage these challenges!

- Significant reduction of grid expansions up to complete avoidance
- Prevention of transformers overload
- Minimization of peak loads and the resulting high charges
- Compliance with grid connection conditions, e.g., load reduction at the request of the grid operator
- Best possible use of the charging infrastructure with varying simultaneity factors

Functionality

The installation of SICAM DLM takes place on SICAM A8000 CP8031/50 in conjunction with the SICAM Device Manager. User interface is achieved through the integrated SICAM Web Dashboard functionality.

The Dynamic Load Management sends power setpoints to the connected chargers of a configured charger group. SICAM DLM supports a maximum of 250 charging units in 10 groups, where each group can be assigned a grid measurement.

Phase balancing can also be included.

SICAM Dynamic Load Management allows among 5 algorithms for power sharing to be selected:

1. Split Charging without priorities: distributes the power equally among the vehicles based on the maximum power of the charging units > best choice, without status information of the charging stations

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2. Split Charging with priorities: distributes power evenly among vehicles based on maximum charging power and pre-set priorities
3. By round-robin: for fleets and long-term parking lots with highly fluctuating charging requirements, ensures that vehicles with low charging requirements are fully charged more quickly
4. First-in / First-out: for fleets with higher overcrowding rates, ensures fastest possible vehicle charging - based on charge start, ensures fleets always have fully charged vehicles when needed
5. First-in / Last-out: - reverse order as in point 4 - for fleets with higher overcrowding rate, ensures fastest possible vehicle charging - based on charging start, ensures that fleets always have fully charged vehicles when needed

Connection of charging stations and backend systems

- Modbus TCP
  - Electrical data (measured / set-points values, ...)
- OCPP
  - Electrical data (measured / set-points values, ...)
  - Process data (authorization, billing, ...)

Connection options between SICAM DLM and charging units

- Modbus TCP

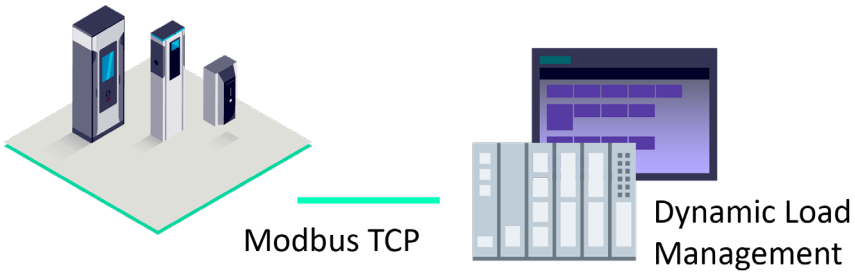
Connection options between SICAM DLM and grid operator

- Modbus TCP
- IEC 60870-5-101
- IEC 60870-5-104
- IEC 61850
- DNP3
- Digital/analog I/O

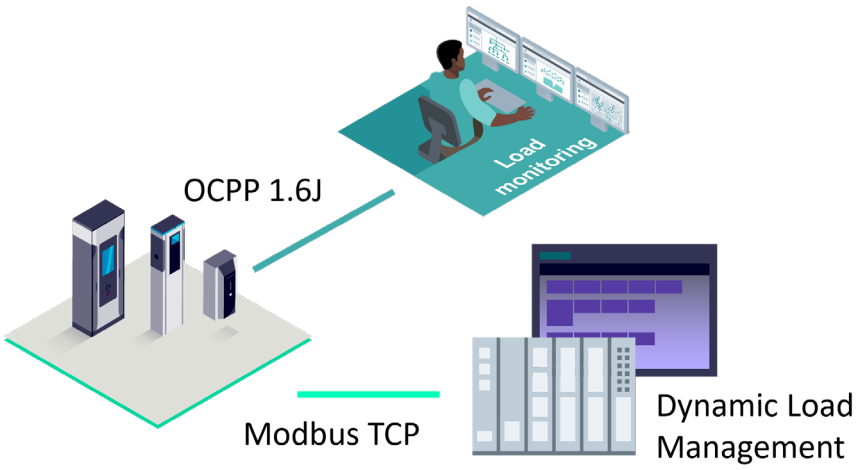
Areas of application

- Depots
- Parking garages
- Real estate
- Industrial sites
- Gas stations
- Truck stations
- Business parks

Example of connection without backend



Example of connection with backend



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