# *The Dynamic Load Management for your charging park*

Whether in the city, in the underground car park, on the company premises, in front of the hotel or at the supermarket: The expansion of the charging infrastructure to **simultaneous charging** for **several e-cars** provides planners and operators equally a big challenge.

- Constant load peaks, power grid instability
- Overload of the electrical installation
- Expensive oversizing of the mains connection
- High operating costs due to highly dynamic grid load

## *Smart charging*

The remedy here is an **intelligent load management**.
All charging points are **actively controlled** via a higher-level control system. Depending on the maximum available **total mains connection**, the connected charging stations are **dynamically** controlled in their electrical power in such a way that the total power is distributed **evenly** over all electric cars.

This avoids costly load peaks and ensures **grid stability**. The design of the mains connection and the electrical installation can be chosen smaller because the **simultaneity factor** is reduced.

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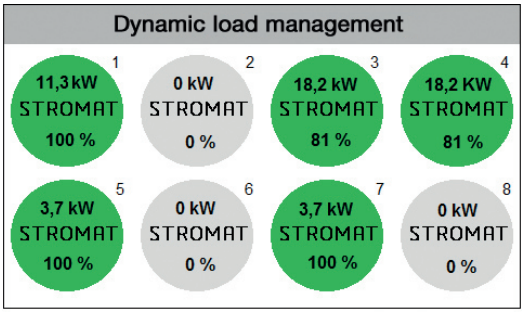
alcona Automation
Ahlener Str. 48 | 59269 Beckum | Germany | Phone: +49 (0) 25 21 / 82 30 40 - 0 | info@alcona.info | www.alcona.info

# Functioning

The **Dynamic Load Management** also includes an **electrical distribution system**, which requires all relevant components to connect the associated charging points (RCD's, circuit breakers, energy meters, ...). The execution of this electrical distribution takes place according to **local requirements** and can, in the maximum case, also include space for mains connection, main fuses and energy meters of the local energy utility company.
Each **STROMAT Wallbox** gets **mains current** connected directly to this electrical distribution (e. g. NYY5x6). In addition, each charging station is connected by means of a **2-wire control line** to the electrical distribution. The **Dynamic Load Management** communicates via this signal line with a simple **digital PWM signal** to each charging point and transfers **dynamically the desired charging power** in the range of 3,7..22 kW.




The heart of the system is the **Dynamic Load Management control system**, which distributes the load **evenly** over the connected charging points depending on the set total power. It has a **5" graphic display** on which each connected charging station visualized with their current values. The associated **LAN interface** also allows operation the system remotely.

# Your benefits

- Scalable for up to 100 charging points
- Dynamic charging power of 3.7..22 kW per charging point
- Freely adjustable maximum connected load
- Separate energy meters per charging point
- Central display with indication of current charging power and percentage control per charging point as well as the accumulated energy
- LAN interface for visualization via the Internet
- No backend system (cloud), therefore no running costs
- Possibility to assign charging priorities
- Alerting by e-mail in the event of malfunctions (e. g. fuse failure)l
- Easy communication between central control and charging stations via digital PWM signal
- Detection of single-phase or three-phase charging for optimum grid utilization
- Delivery incl. the associated electrical distribution (with RCD, circuit breakers and energy meters)