SMART CHARGING
Dynamic Load Management

EISBAER SOFTWARE – SMARTER BUILDINGS – FUTURE PROOF

CONNECT. VISUALISE. OPTIMISE.

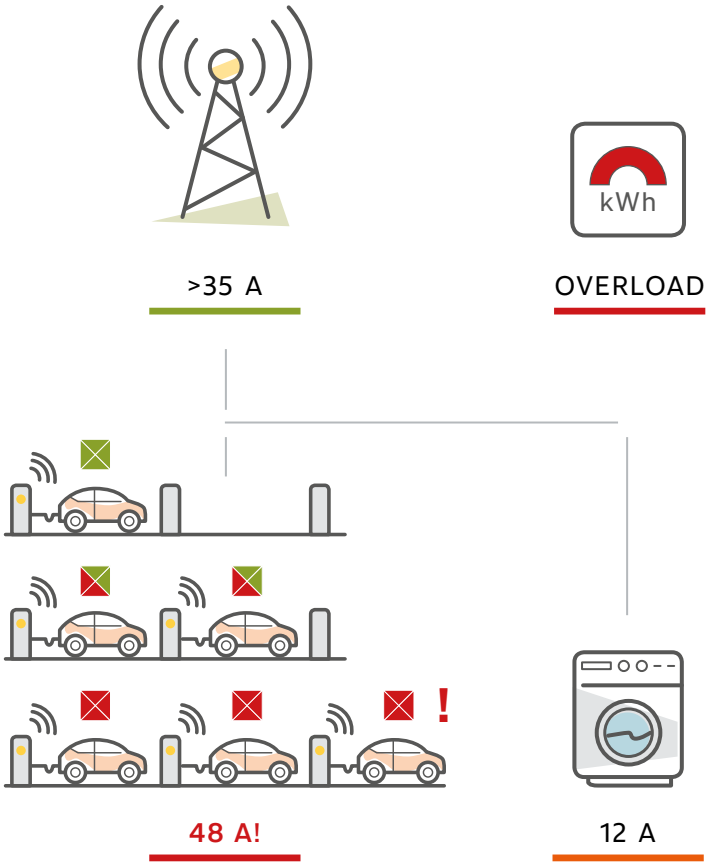
Dynamic Load Management with EisBaer Scada

Making simultaneous Electric Vehicle (EV) charging easier, faster and cheaper.

EV drivers want to charge their vehicles faster, especially in public and semi-public spaces, while charging service providers want to reduce their costs. To facilitate these demands EisBaer Scada have developed a software system that will meet the needs of both consumer and provider. It's groundbreaking Dynamic Load Management (DLM) offers smarter charging controls as well as a seamless integration into any new or existing building automation system.

With EisBaer Scada's DLM, more EV's can be charged simultaneously and in less time, whilst still using the available power more efficiently, as well as balancing the load amongst the EV charger. This software also manages the usage of loads, eliminating any unnecessary need for costly installation upgrades. The consumer can monitor their energy consumption, all completely independent of the vehicle manufacturer.

Without Dynamic Load Management

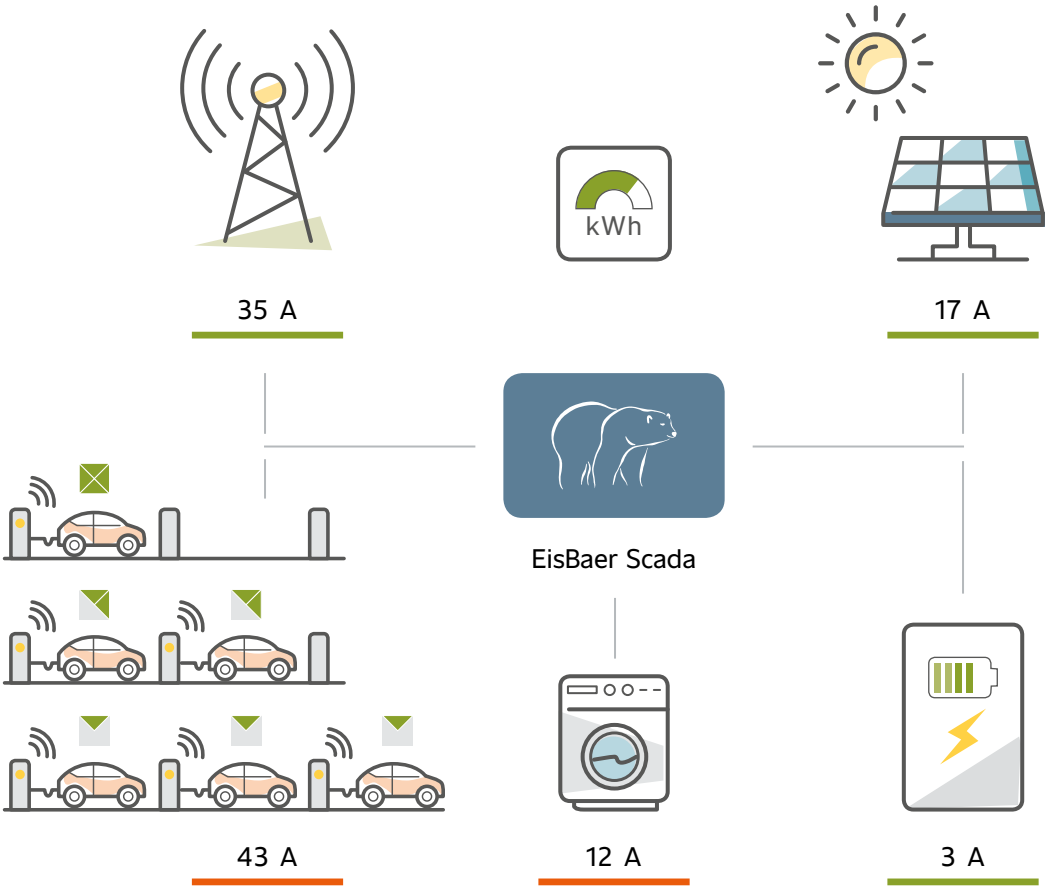


With the introduction of Dynamic Load Management (DLM), EisBaer Scada aim to eradicate these challenges and provide a reliable and cost effective solution that will aid in the smooth transition from fuel cars to electric.

Common problems that are associated with the modern Electric Vehicles include:

- Intermittent charging of numerous EVs will create bottlenecks in supplying capacity and expose power system to severe security risks.
- Multiple charging points are usually calling for an upgrade of cable, transformer etc.
- Large-scale deployment of electric vehicles (EVs) is going to happen in next 5-10yrs.
- Upgrade – costing tens of thousands of euros.

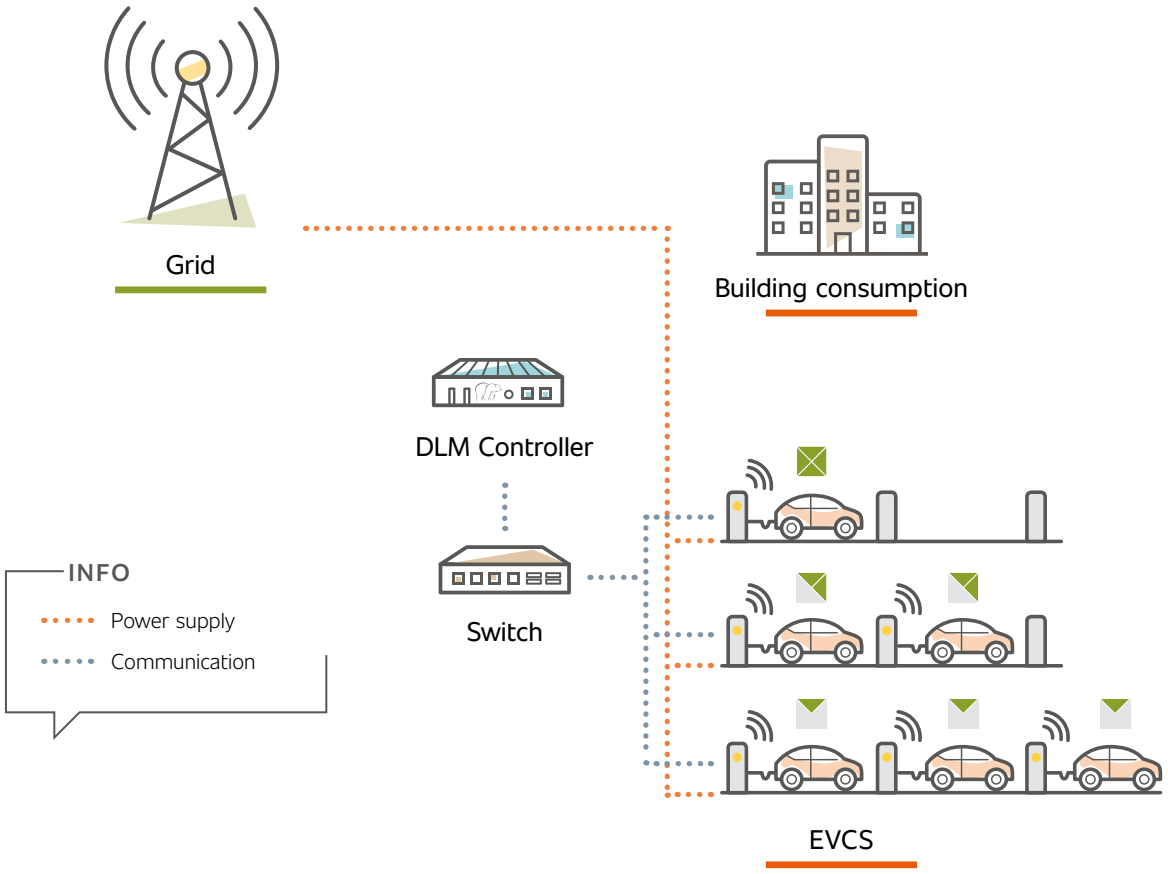
With (DLM) Dynamic Load Management EisBaer Scada allows you to optimise energy usage to meet power demands without overloading the grid.



ADVANTAGES

- Restricting the total charging load protects the local grid – eliminate a risk of overloading even when multiple chargers are being used simultaneously.
- Sharing the charging load cuts costs for the required upgrade of electricity infrastructure.
- Total integration in the existing building automation system.
- Integration of solar generator and battery storage systems.
- Chargers can be monitored and controlled by end customer.

Dynamic load management controller
Static control without measurement



MATERIAL LIST

Static for 6 loading stations

- 1 x DLM Controller 6
- Network Switch, 10 ports
- 6 x AC Wallbox, Typ 2, 11/22 kW

Details:

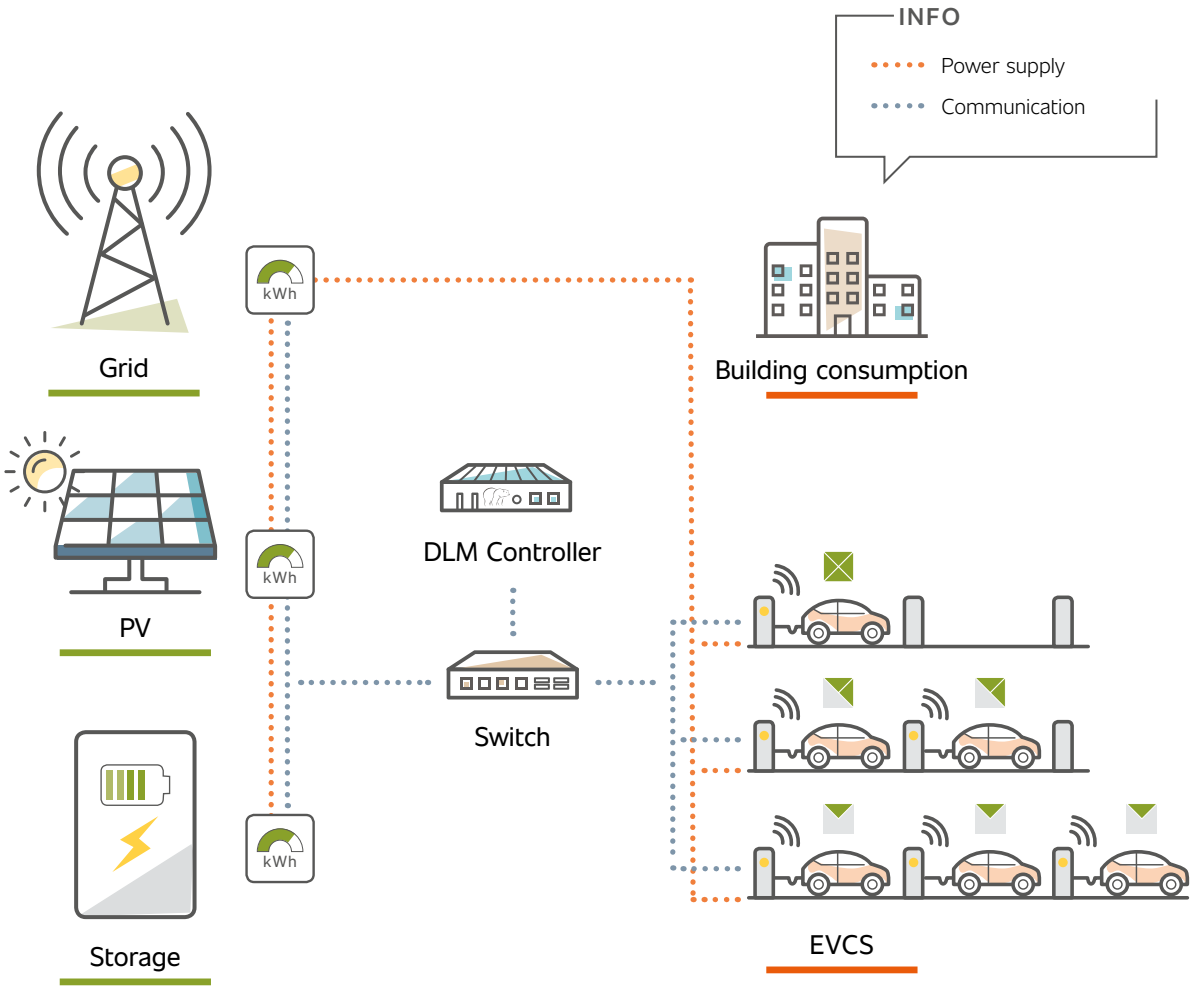
- Setting of a static current value at the incoming feed for the charging park. The existing sub-distribution circuits determine available charging currents.
- When using charging stations with integrated measuring equipment, no extra measuring devices are required.
- The Load Management Controller communicates with the charging stations via an on-site network infrastructure.
- There must be one network connection for each charging station plus one extra connection for the controller.
- The configuration of the load management must always be adapted individually to the local conditions. The proposed solution provides the controller hardware and the basic software for this purpose. The management system is specifically designed as instructed by the client with final costs determined by the approved designs.
- For remote maintenance or diagnostics an internet connection is required. Optionally, this can be realized via a mobile radio router.
- The installation and configuration of meters, network and charging stations is carried out by the customer.

Currently the following models / manufacturers are supported:

- ABB EVLunic Pro S, ABB EVLunic Pro M
- KEBA c-series, KEBA x-series
- Eaton xChargeln S
- Stöhr Base-Line, Stöhr Design-Line, Stöhr Design-Tower
- wallbe Pro
- Webasto Life Modbus
- Schneider EV Link G4

  Due to constant device and model extensions of the charging stations, the compatibility has to be checked in case of order.

Dynamic load management controller
Dynamic control with measurement



MATERIAL LIST

Dynamic for 6 loading stations

- 1 x DLM Controller 6
- Network Switch, 10 ports
- 6 x AC Wallbox, Typ 2, 11/22 kW
- 1 x energy meter Modbus
- 1 x Modbus RS 485 – LAN interface

Details:

- Metres are installed in the system to accurately measure the flow of electricity to each unit, this helps the DLM controller calculate the power available for each charging station.
- Metering information can be sent directly from the DLM controller, e.g. via Modbus, M-bus, KNX, Bacnet etc.
- PV systems and storage can be integrated into the charge control. These may be directly connected, depending on the product, e.g. via Modbus TCP. If the selected hardware does not support this, then the installation of a meter would be required.
- When using charging stations with integrated measuring equipment, no additional meter are required.
- The Load Management Controller communicates with the charging stations via an on-site network infrastructure.
- There must be one network connection for each charging station plus one extra connection for the controller.
- For remote maintenance or diagnostics an internet connection is required. Optionally, this can be realized via a mobile radio router.
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EisBaer Software

is designed for different areas of application.

OFFICES

- Total integration in the existing building automation system.
- With EisBaers LNOT™ (Local Network of Things), our solution works directly on site, so we guarantee maximum stability and secure data exchange.
- Can prioritise individuals through RFID card identification, for example, an office worker (lower priority) and/or sales person (higher priority).

APARTMENTS

- Electric car drivers unlock the charging station with an RFID, charging card or key fob and start the charging process.
- Usage can be allocated to the respective apartment owner/tenant.
- Facility manager has full access and control over charging process.
- EisBaer Scada easily captures all charging data. These records are easy to export.

CARPARKS

- Full integration in the existing lighting control and car park automation system.
- EisBaer DLM enables you to combine the grid power with the PV system of your car park, charge electric cars environmentally friendly and optimise the self-consumption of your car.

RESIDENTIAL

- Sustainably charge your electric car at home by simply connecting to your solar panel (PV) or its battery storage system.
- Full monitoring and control through integration into any existing or future smart home system.

HOTELS

- Electric car drivers who are looking for a way to charge their vehicle – opens up a new guest segment.
- The EisBaer dynamic load management controls the charging power of the charging stations depending on the total load of the building. This ensures that all charging stations are supplied with the highest possible power and at the same time the total load of the house connection is never exceeded.
- The data from DLM can be directly transferred to a guest's account via the built in EisBaer PMS interface to the hotel room booking system and made available for billing or just for users overview.

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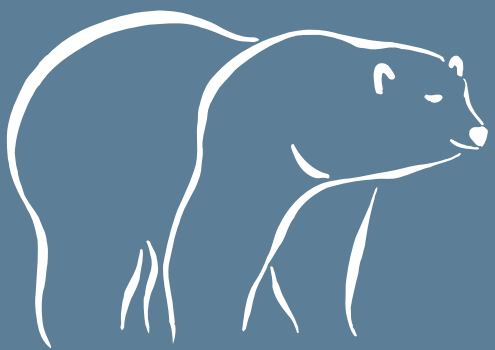

ALEXANDER MAIER GmbH
Beckstraße 3, D-69412 Eberbach
T +49 (0)6271 919470 | **E** info@busbaer.de
www.busbaer.de