

Smart Fleet Management SFM

THE SELF-LEARNING ENERGY MANAGEMENT SYSTEM



SFM 
Smart Fleet Management

A self-learning energy management system

KIEPE's Smart Fleet Management (SFM) software records the operating data of electric buses and rail vehicles and enables automatic and predictive charging strategies. This increases the reliability and availability of the charging infrastructure, while at the same time improving the service life of the traction battery and saving energy costs.

SFM is a self-learning energy management system that collects consumption, distance and performance related data. SFM creates a digital model of the route, which is shared with the fleet via a cloud-based storage system.

The system calculates the expected energy consumption of the vehicles in real time, enabling optimized charging of electric and In Motion Charging (IMC®) buses and rail vehicles. This approach ensures that the traction battery is kept in an optimal state of charge, extending its useful life while reducing energy consumption during charging.

SFM in fleet operation

- The predictive charging strategy increases operational stability, reduces battery wear.
- The utilization of the charging infrastructure is optimized, and the capacity of the network increased by up to 30 %, which reduces energy costs.

Advantages

- Learning about routes, consumption and charging times of a vehicle depending on the time of day and season
- Sharing route information via a cloud-based platform
- Optimized charging performance, reducing dependence on the charging infrastructure
- Predictive adjustment of charging power and consumption
- Prioritized charging of electric and IMC buses
- High reliability of the buses during operation
- Optimum utilization of the network
- Visualization of the information in a customizable dashboard

Forward-looking operational management

The Smart Fleet Management (SFM) energy management system is suitable for the new generation of traction systems for e-buses from KIEPE. In addition to the Kiepe Traction Inverter (KTI) and the patented Kiepe Traction Control (KTC),

this also includes the Kiepe Fleet Management (KFM). This ensures smooth operation, as service and repair work is managed preventively and proactively a cloud-based solution.

