INGEREV **DLM** Dynamic Load Management

OPTIMISED USE OF THE POWER AVAILABLE AT CHARGING STATIONS

Dynamic Load Management (DLM) is an optional software package available for either the Ethernet or GPRS/3G communication cards in the INGEREV® range of EV charging stations.

The DLM system makes it possible to interconnect up to 10 charging stations, while defining the maximum power delivered to all the chargers together, so that the assigned threshold is never exceeded, regardless of the number of vehicles connected to the charging stations.

This optimizes the use of the existing installation, either through the contracted power available, or the power handling capability due to the cable section, line protection devices or any other system limitation.

DLM Basics

The DLM adopts an adaptive management approach, based on the number of charging stations operating, the type of socket used in each charger and the current demanded by each vehicle.

It is possible to choose to prioritize those vehicles connecting in Mode 3 over those connecting through a domestic socket, or vice versa. Moreover, the operating time of the domestic sockets can be limited, as these are non-adjustable loads.

It is also possible to combine three-phase and single-phase stations in the same DLM system, given the fact that the power is configured and controlled at a phase level. Even different output powers can be defined in the same phase. This could be useful, for example, if we know that another charging station, with a given fixed power consumption, is connected to one of the phases.

Finally, it is a dynamic and adaptive system, given the fact that, if one of the vehicles is not consuming all the assigned current then, after a certain amount of time, the current not being consumed is assigned to the rest of the connected vehicles.

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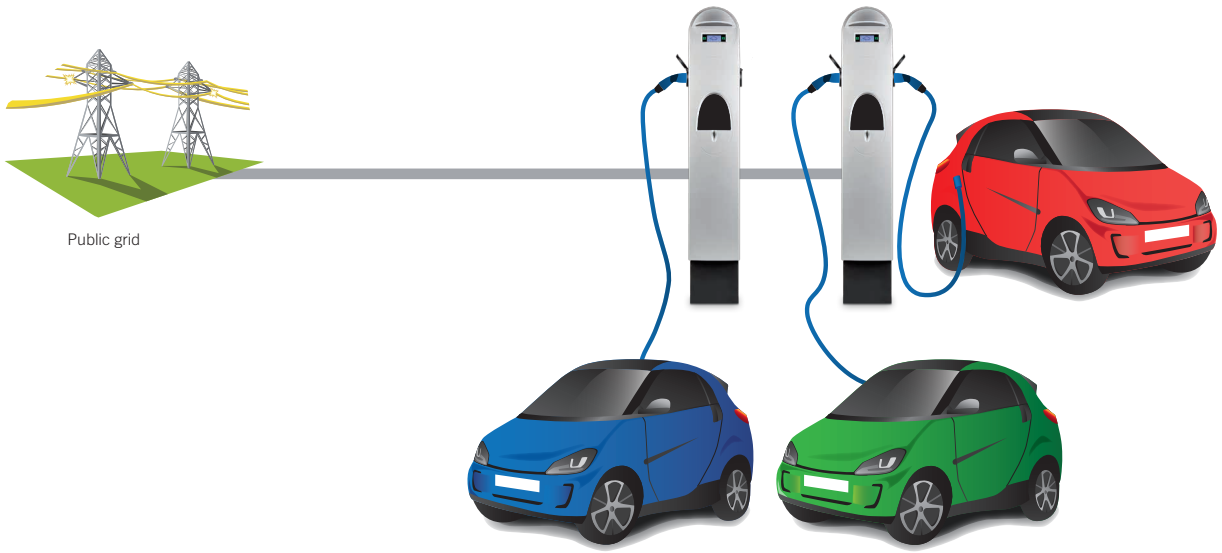
Functionality

The hardware required to implement DLM comprises an INGEREV® station and either an Ethernet or 3G communication card.

A maximum number of 10 stations can be inter-connected, with the possibility of different models and powers. It is also possible to interconnect single-phase and three-phase stations.

In any case, the Ethernet or 3G communication card, which includes the DLM functionalities, must be installed in one of the charging stations located at the ends of the RS-485 bus.

DLM overview



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