

Charging interface module (LIM)

The process “charging” of a electric vehicle is equal to the process “refuelling” of a conventionally powered vehicle.

Since a charging cable is used, the process is also called conductive (grid-bound) charging.

The charging process requires both, components in the vehicle as well as components outside the vehicle. Inside the vehicle, a charging socket and a power electronics for the voltage conversion is necessary. Outside the vehicle, not only AC voltage supply and a charging cable but also a charging station (for example wallbox) is necessary. The wallbox has a protective function and carries out the control of the charging process.

The charging interface module (LIM) is the control unit with the task to enable the communication between the vehicle and the charging station.

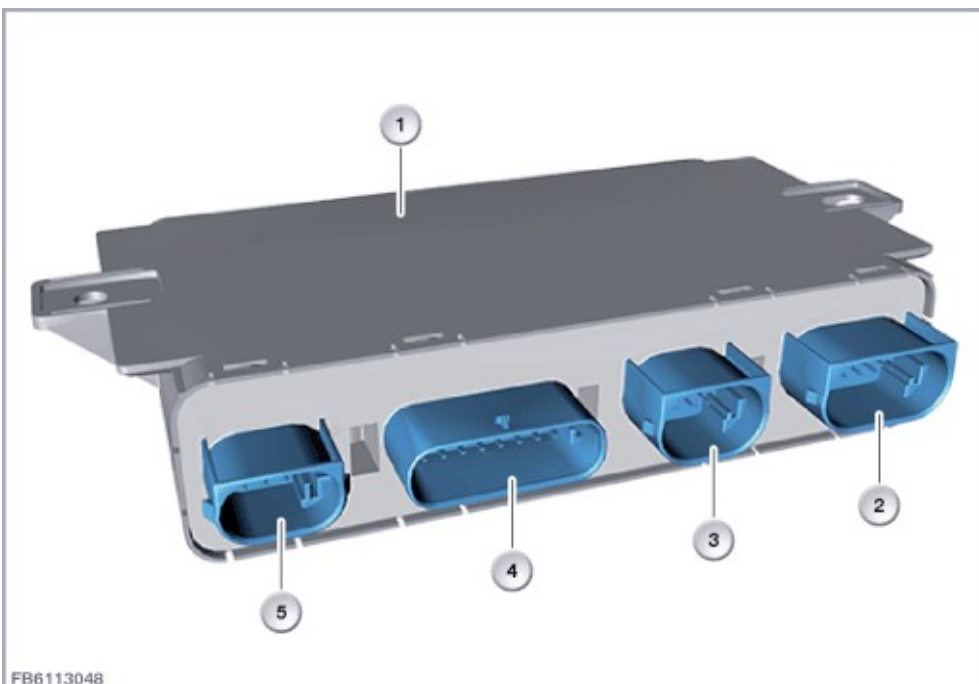
Functional description

The charging interface module (LIM) can wake up the control units within the vehicle electrical system when the charging cable is being connected.

In addition, a direct line from the LIM control unit to the electrical machine electronics (EME) is present. The electrical machine electronics (EME) starts the voltage conversion and thus the charging procedure only if the LIM control unit enables the charging procedure via a signal on this line.

The following components are connected to the charging interface module (LIM):

- Central locking drive, charging socket cover
- Central locking drive, charging socket
- High-voltage charging socket
- Status display, charging



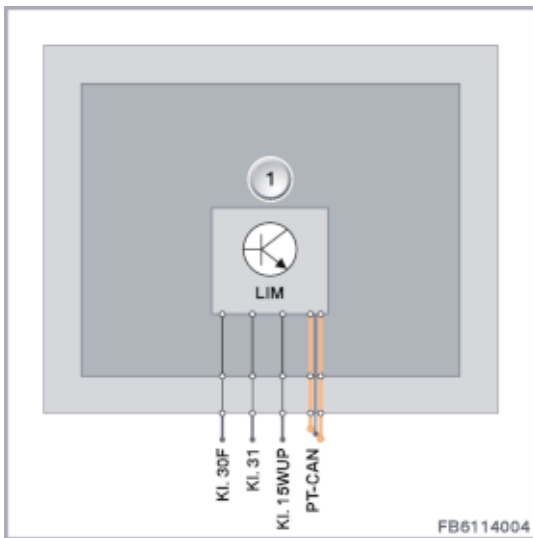
Item	Explanation	Item	Explanation
1	Charging interface module (LIM)	2	12-pin plug connection
3	eight-pin plug connection	4	16-pin plug connection
5	six-pin plug connection	6	

Structure and inner electrical connection

The LIM control module is connected to the vehicle with 4 plug connections.

The charging interface module (LIM) contains a terminating resistor for the powertrain CAN.

The LIM control unit is supplied with terminal 30F and terminal 15 wake-up.



Item	Explanation
1	Charging interface module (LIM)

Pin assignments

The graphic above shows only the supply and bus connection. The current pin assignment is recorded on the wiring diagrams in the ISTA diagnosis system (Integrated Service Technical Application). Click on the component code in the wiring diagram to activate the "Installation location" and "Pin assignment" tabs.

Nominal values

Please observe the following setpoint values for the charging interface module (LIM):

Variable	Value
Supply voltage	9 to 16 volts
Temperature range	-40 to 120 deg C

Diagnosis instructions

Failure of the component

If communication to the LIM control unit malfunctions, perform the standard checks (global test module). If there is an internal control unit fault, the following behaviour is to be expected:

- Fault code entry in the charging interface module (LIM)