

Electrical high-voltage safety

The rapid adoption of electric vehicles (EV) in the automotive industry brings with it an **increase in safety requirements** both in design and aftersales. EVs have high-voltage electrical systems that typically range from 60 to 800 volts including different technologies, different vehicle types, and powertrain architectures that may involve several **high-voltage (HV) components**.



To support a broad portfolio of clients, Arplus+ IDIADA has a **dedicated team of HV system experts with a vast knowledge of safety standards and safety requirements**. This team assesses all the different electrical work in vehicles and identifies possible hazards as well as appropriate solutions.

At IDIADA, we are well aware that end users expect EVs to be intrinsically safe. This feeling of safety implies that actions such as driving, or charging, must be done without being aware that electricity can pose a problem, even in the case of extreme external conditions (raining, hot and cold temperatures). To convey this commitment to high-voltage electrical safety and meet high-level requirements, OEMs must develop a vehicle platform that meets the following points:

- Insulation coordination: Electrical safety while driving / Electrical safety while charging
- Protection against direct contact
- Protection against indirect contact
- HMI safety information to users



To guarantee that the above items are successfully implemented, IDIADA provides a set of services that include:

- Conformity of production according to **UNECE R.100 / FVMSS 305**
- Conformance test according to **ISO 6469-3 (BEV)**
- Conformance test according to **ISO 13063** (Mopeds and motorcycles)
- Conformance test according to **EN 17128 (PLEV)**
- Conformance test according to **EN 15194 / UL 2849** (EBIKES and EPACS)
- Consultancy on **GTR20**

IDIADA's facilities and dedicated equipment guarantee the highest quality in testing. As a result, leading OEMs and Tier 1 companies already rely on our expertise in vehicle and component safety.