



Electric vehicle charging development and testing

Applus IDIADA offers complete services to support manufacturers of both light and heavy-duty electric vehicles, charging station manufacturers and TIER 1's throughout the development and testing stages to ensure a safe, robust and user-friendly charging experience.

With more than 12 years' experience, IDIADA is a world leader in prototype development and charging test activities, performing early stage developments, component testing and tests to ensure the interoperability of the interfaces of electric vehicles and charging stations, as well as the compliance of both interfaces with charging standards.

More than 40 charging experts and workshops in Spain, Germany, the US and China support our clients worldwide.

CHARGING TEST SERVICES



MARKET STUDIES

IDIADA has analysed public charging stations all over the world to provide market share numbers of:

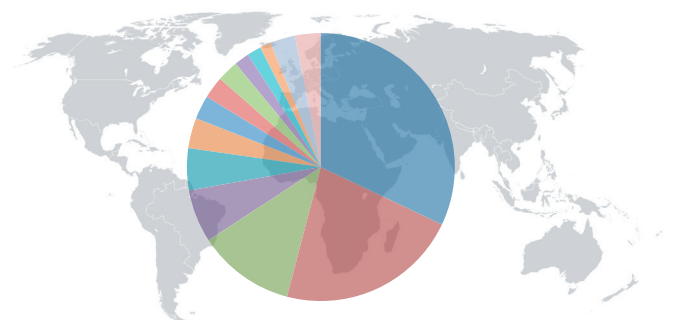
- Different charger manufacturers
- Different charger models
- Country and/or regions
- Data is regularly updated



CERTIFICATION AND CONFORMANCE TEST

Test on IDIADA's simulator to ensure conformity of the EV component, complete vehicle or charger to the standards:

- ISO 15118-2 / ISO 15118-20 / DIN 70121 / CHAdeMO 0.9-2.0 / GB/T 27930 v2011&v2015 / IEC 61851-1 / IEC 61851-23 / SAE J1772 / OppCharge / PnC
- Automatic test analysis for a fast and easy test performance



- More than 800 test cases based on:
 - Worldwide charging standards
 - IDIADA's knowhow
 - Taylor-made solutions
- Certification test services for CHAdeMO
- Accredited lab for IEC61851-1, IEC61851-23 & IEC61851-24



CHARGING TRAININGS

Customized trainings on the required charging topic:

- IEC, SAE, CCS, GB/T, CHAdeMO and OCPP 1.6
- Upcoming concepts such as ChaoJi, ISO ed.20, PnC, OCPP 2.0.1, etc



INTEROPERABILITY TEST

Test of the EV against the most representative charging stations:

- More than 20 DC and 30 AC charging stations constantly available at IDIADA for this purpose
- Exhaustive test list to ensure full interoperability
- Non-invasive communication sniffers and specific interoperability test tools used for a fast and safe data collection
- Experts for root-cause analysis in case of incompatibilities
- Strong collaboration with OEMs, charging manufacturers and CPOs



IN-FIELD TEST

Final check to ensure compatibility with a wide range of charging station brands and models:

- Tailor-made routes in the target markets
- Data collection and analysis for all charge processes
- Test under different grid conditions
- Test performance by experts for in-field problem solving



PERFORMANCE TEST

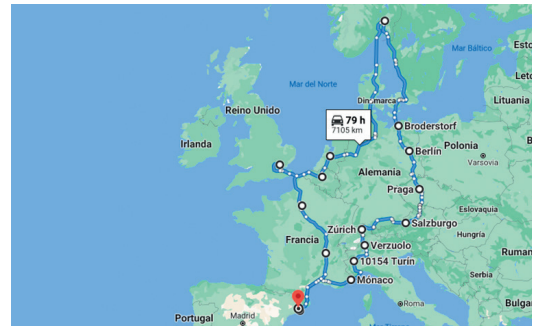
- Charging up to 500 kW
- Extreme temperature conditions (-30°C to 45°C)
- Energy balance strategy study and analysis



HEAVY-DUTY CHARGING LABORATORY

Infrastructure for conformance and interoperability testing of EV buses and eTrucks:

- Megawatt Charging System (MCS) testing tool for eTrucks
- PLC and Wireless communication interfaces
- ADC for pantograph system testing
- Based on ISO 15118 and OppCharge
- 1MW AC grid capability



CONTACT INFORMATION

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