

EV Charger & EVSE Test System

CAPABILITY SHEET - AC & DC TO 350 kW - CONFORMANCE & AGEING - ENGINEERED TO ORDER

THE SYSTEM

WHAT	A charger lives between two strangers - a grid it cannot control and a vehicle it has never met. This laboratory reproduces both at will, for AC charge points of 7-22 kW and DC fast chargers to the 350 kW class.
THE CORE IDEA	Two emulated strangers, one instrumented handshake: a grid simulator that misbehaves on command, a bidirectional battery emulator that is always exactly where the test plan parked it, and every protocol layer exercised between them.
STATUS	Engineered to order. Reference configuration, not yet built - engineered against India's charging build-out; no order followed, so no delivered system is claimed.

ENVELOPE

GRID SIMULATION	Programmable 1-phase / 3-phase source, tens-of-kVA class: deviation, sags, swells, harmonic injection - with PQ measured both ways: the charger's own PF, THD and standby draw across load.
BATTERY EMULATION	Bidirectional DC, 0-1,000 V class: any pack, any SoC, realistic dynamics - absorbing full power regeneratively so tested energy returns to the bus, not to heat.
PROTOCOLS	IEC 61851 CP/PP state matrix including fault states; ISO 15118 / DIN 70121 negotiate-interrupt-resume; OCPP backend simulation; interoperability matrices across vehicle profiles.

PROVE DESIGN, PROVE DECADE

SAFETY SUITE	HV withstand to the 6 kV class, insulation resistance, earth continuity, RCD behaviour - sequenced inside the automation, not bolted beside it.
AGEING BANKS	Tens of stations, 24x7, profile-driven - connect, negotiate, charge, disconnect - regenerative loads, per-station logging, limit supervision, automated reports. The same test, refused permission to stop.
ENVIRONMENT & EMC	Thermal soak via the Neometrix climatic chamber line; electromagnetic verdicts via the Neometrix EMI/EMC laboratory - one qualification family.

STANDARDS & ENGAGEMENT

STANDARDS	IEC 61851-1/-23, IS 17017, ISO 15118, DIN 70121, IEC 62196, OCPP conformance scenarios; ISO/IEC 17025-traceable calibration in the scope of supply.
SOURCING	Grid simulators, emulator stages and analysers are proprietary bought-in components; Neometrix engineers and builds the system - architecture, protocol harnesses, safety integration, bank engineering, automation, installation and acceptance.
ENGAGEMENT	Send the chargers, volumes and certification route to sales@neometrixgroup.com - compliance matrix within two working days.

PROJECTS DESK

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Reference configuration. Power classes, station counts, protocol depth and environmental pairing are sized to the chargers and standards, and settled at design review. Type test proves the design; the ageing bank proves the decade.