

High-Voltage Test Bench

CAPABILITY SHEET - HV DIELECTRIC / IMPULSE / PD TESTING - ENGINEERED TO ORDER

THE BENCH

WHAT	A high-voltage test bench that proves the insulation of power apparatus - AC and DC withstand, lightning impulse and partial discharge - to IEC 60060 and IEC 60270.
OUR ROLE	Neometrix engineers and integrates the lab - layout, safety enclosure, earthing, screening, controls and measurement; the HV sources are bought-in specialist instruments.
STATUS	Engineered to order; sized to the apparatus, its voltage class and the test standard. No specific delivered laboratory is claimed on this sheet.

APPLY THE VOLTAGE

AC + DC WITHSTAND	An HV test transformer applies power-frequency and induced withstand; a DC set applies DC withstand and reads leakage - the apparatus held above its rated voltage.
LIGHTNING IMPULSE	An impulse (Marx) generator fires a 1.2/50 us high-voltage surge that reproduces a lightning strike, proving the basic insulation level (BIL) of the apparatus.
SAFETY FIRST	The defining engineering: an earthed test cage, door interlocks, automatic earthing and discharge sticks and clearances - a lethal voltage applied and removed safely.

MEASURE THE INSULATION

WITHSTAND	A calibrated voltage divider reads kV to MV; the object passes if the insulation holds the applied AC, DC and impulse without breakdown or flashover.
PARTIAL DISCHARGE	A PD detector catches tiny internal discharges in picocoulombs to IEC 60270 - the early warning a withstand test alone can miss - screened against noise.
TAN-DELTA	Dielectric dissipation factor (tan-delta) and capacitance read insulation loss and health - which rise as insulation ages or absorbs moisture.

DISTINCTNESS & ENGAGEMENT

NOT A PRESSURE IMPULSE	This impulse is ELECTRICAL - a lightning voltage surge for dielectric strength - not the hydraulic pressure impulse of our hose and component fatigue rigs.
NOT AN EMC LAB	Distinct from an EMI/EMC lab (electromagnetic compatibility, immunity at a few kV). This applies high voltage to prove insulation dielectric strength.
ENGAGEMENT	Send the apparatus, voltage class and test standard to sales@neometrixgroup.com for a clause-by-clause compliance matrix in two working days.

PROJECTS DESK

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