

Electrical Safety and High Voltage Compliance Checklist

Electric Vehicle & Charging Station Industry

CRITICAL – GROUNDING & EARTHING SYSTEMS

Main earthing grid is installed as per IS 3043 with proper electrode spacing.

☐ Compliant ☐ Partially Compliant ☐ Non-Compliant ☐ NA

Earthing pit test records are updated quarterly.

☐ Compliant ☐ Partially Compliant ☐ Non-Compliant ☐ NA

All metallic structures, chargers, and enclosures are bonded to earth.

☐ Compliant ☐ Partially Compliant ☐ Non-Compliant ☐ NA

Earth busbars and conductors are free from corrosion and tight at joints.

☐ Compliant ☐ Partially Compliant ☐ Non-Compliant ☐ NA

Neutral and earth are properly segregated in all panels.

☐ Compliant ☐ Partially Compliant ☐ Non-Compliant ☐ NA

Earthing connections for EVSE DC output are inspected and recorded.

☐ Compliant ☐ Partially Compliant ☐ Non-Compliant ☐ NA

Lightning arrestors are installed and tested annually.

☐ Compliant ☐ Partially Compliant ☐ Non-Compliant ☐ NA

Earthing test points are clearly marked and easily accessible.

☐ Compliant ☐ Partially Compliant ☐ Non-Compliant ☐ NA

CRITICAL - LOCKOUT/TAGOUT (LOTO) PROCEDURES

LOTO procedure is implemented for all maintenance activities.

☐ Compliant ☐ Partially Compliant ☐ Non-Compliant ☐ NA

Personnel performing LOTO are trained and authorized.

☐ Compliant ☐ Partially Compliant ☐ Non-Compliant ☐ NA

Energy isolation points are clearly identified and labeled.

☐ Compliant ☐ Partially Compliant ☐ Non-Compliant ☐ NA

LOTO locks, keys, and tags are stored securely when not in use.

☐ Compliant ☐ Partially Compliant ☐ Non-Compliant ☐ NA

Periodic LOTO audits are performed to ensure compliance.

☐ Compliant ☐ Partially Compliant ☐ Non-Compliant ☐ NA

EMERGENCY PREPAREDNESS & RESPONSE

Electrical incident response plan is displayed and understood by team.

☐ Compliant ☐ Partially Compliant ☐ Non-Compliant ☐ NA

Emergency contact numbers are displayed near switchgear and control rooms.

☐ Compliant ☐ Partially Compliant ☐ Non-Compliant ☐ NA

Electrical first-aid kit and insulating rescue rod available at HV rooms.

☐ Compliant ☐ Partially Compliant ☐ Non-Compliant ☐ NA

Fire detection and suppression system functional in HV rooms.

☐ Compliant ☐ Partially Compliant ☐ Non-Compliant ☐ NA

Periodic mock drills conducted for electrical shock and fire incidents.

☐ Compliant ☐ Partially Compliant ☐ Non-Compliant ☐ NA

MAINTENANCE – ELECTRICAL PANELS & EQUIPMENT

All electrical panels are dust-free, sealed, and labeled with feeder names.

☐ Compliant ☐ Partially Compliant ☐ Non-Compliant ☐ NA

Panel doors have interlock systems to prevent opening under load.

☐ Compliant ☐ Partially Compliant ☐ Non-Compliant ☐ NA

Circuit breakers and isolators are tested for mechanical operation.

☐ Compliant ☐ Partially Compliant ☐ Non-Compliant ☐ NA

All cable terminations are tight and insulated with proper lugs and sleeves.

☐ Compliant ☐ Partially Compliant ☐ Non-Compliant ☐ NA

Busbars are properly insulated and color coded (R-Y-B-N).

☐ Compliant ☐ Partially Compliant ☐ Non-Compliant ☐ NA

Electrical insulation resistance (IR) testing conducted annually.

☐ Compliant ☐ Partially Compliant ☐ Non-Compliant ☐ NA

Earth continuity testing is performed for all equipment.

☐ Compliant ☐ Partially Compliant ☐ Non-Compliant ☐ NA

SAFETY – PPE & PERSONAL PROTECTION

All electrical technicians wear insulating gloves rated for voltage.

☐ Compliant ☐ Partially Compliant ☐ Non-Compliant ☐ NA

Arc flash suits, face shields, and boots are available for HV operations.

☐ Compliant ☐ Partially Compliant ☐ Non-Compliant ☐ NA

PPE inspection records are maintained and updated monthly.

☐ Compliant ☐ Partially Compliant ☐ Non-Compliant ☐ NA

Eye wash stations and rubber mats are placed near electrical panels.

☐ Compliant ☐ Partially Compliant ☐ Non-Compliant ☐ NA

Electrical personnel are prohibited from wearing metal jewelry or conductive items.

☐ Compliant ☐ Partially Compliant ☐ Non-Compliant ☐ NA

Emergency stop and isolation switches are accessible at all times.

☐ Compliant ☐ Partially Compliant ☐ Non-Compliant ☐ NA

SUPER CRITICAL - HIGH VOLTAGE SYSTEM SAFETY

All high-voltage systems are clearly labeled with warning signage.

☐ Compliant ☐ Partially Compliant ☐ Non-Compliant ☐ NA

Only authorized and trained personnel access high-voltage areas.

☐ Compliant ☐ Partially Compliant ☐ Non-Compliant ☐ NA

High-voltage cabinets and enclosures are kept locked when not in use.

☐ Compliant ☐ Partially Compliant ☐ Non-Compliant ☐ NA

Electric shock risk signage is displayed near all live panels and transformers.

☐ Compliant ☐ Partially Compliant ☐ Non-Compliant ☐ NA

High-voltage cables and terminations are intact with no visible damage or moisture.

☐ Compliant ☐ Partially Compliant ☐ Non-Compliant ☐ NA

TESTING & CALIBRATION - INSTRUMENTS & TOOLS

Voltage testers, clamp meters, and IR testers are calibrated annually.

☐ Compliant ☐ Partially Compliant ☐ Non-Compliant ☐ NA

Dielectric strength of insulating tools verified as per standard.

☐ Compliant ☐ Partially Compliant ☐ Non-Compliant ☐ NA

High-voltage gloves and mats undergo dielectric test every 6 months.

☐ Compliant ☐ Partially Compliant ☐ Non-Compliant ☐ NA

Ground resistance tester and insulation tester are maintained in good condition.

☐ Compliant ☐ Partially Compliant ☐ Non-Compliant ☐ NA