

# 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