

Application note



Subject:
**Simplifying Insulation
 Monitoring in 1000 V DC Fast
 Charging Systems**

Industry:
EV Charging Stations

Product:
DRC61

Customer:
OEMs

CUSTOMER NEED

DC fast charging stations operate at voltages up to 1000 V DC. To ensure user safety, the insulation between the DC network and earth must be continuously monitored.

It is essential to quickly detect any insulation degradation caused by cables, environmental conditions, or faults in the connected vehicle.

OUR SOLUTION

DRC61 monitors insulation resistance in DC systems up to 1000 V DC.

It provides alarm and pre-alarm output signals and supports Modbus communication for configuration and diagnostics.

BENEFITS

- **Simplifies charger design** by enabling direct monitoring up to 1000 V DC without additional modules
- **Reduces panel space** requirements thanks to its compact housing
- **Enables fast fault response** through alarm and pre-alarm relay outputs
Improves system diagnostics via Modbus communication
- **Completes the DC monitoring architecture** when combined with DC energy meters