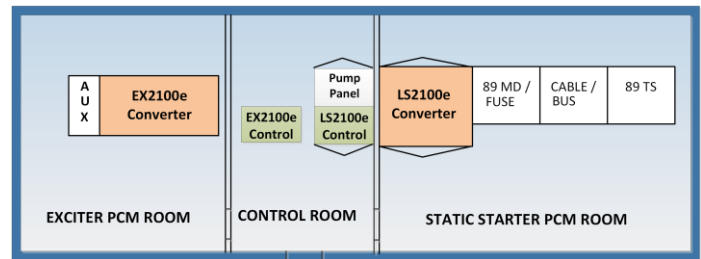




Arc Flash Mitigation for Control Systems

fact sheet

GEA-S1287A



Typical Arc Flash Mitigated LEC Arrangement

The EX2100e excitation and LS2100e static starter control systems are available with optional separation from the power converters for 7F and 9F turbine generator LCI Exciter Compartment (LEC) installations. With this option, controls are located in a separate room to isolate personnel from the arc flash hazards of the power converters.

While such an arrangement greatly reduces the risks of shock, burn, and injury, the extent of arc flash hazards is not known until the site-specific installation is evaluated; therefore, GE recommends that an arc flash assessment be conducted before each installation.

Performance

The LS2100e control is composed of Power Conversion Modules (PCMs), a control cabinet, and a cooling water pump cabinet. Separating controls and cooling system cabinets from the power conversion cabinets allows the addition of a protective barrier to protect maintenance personnel.

The EX2100e control is composed of PCMs and a control cabinet. The 100 mm control systems also include an auxiliary cabinet, a high level ac entry cabinet, and a dc exit cabinet. The EX2100e control is available with optional detachment to provide greater flexibility and safety in locating the equipment in control room installations.

LEC Design Features

GE provides this LEC design to reduce the Hazard Risk Category Number (HRC#) and associated required Personal Protective Equipment (PPE) per NFPA™-70E, Electrical Safety in the Workplace (2012). Features include:

- Thicker gauge wall panels
- Additional hardware and fastening material to increase the strength of the attachment of the wall panels to the enclosure base and roof members
- Additional supports to secure heating, ventilation, and air conditioning (HVAC) wall-mounted units
- Arc-resistant LEC rear access doors
- Arc blast pressure relief dampers in the PCM areas
- Stronger doors and door frames
- Special door hardware for interlocks and similar devices to prevent entry to PCM areas during operation

Benefits

List the benefits of this product/feature here:

- High level of protection against arc flash and arc blast hazards
- Reduction of required PPE in the control room area due to separation of high power electrical cabinets
- Reduction of noise levels in the control room area while the equipment is energized

For further assistance or technical information, contact the nearest GE Sales or Service Office, or an authorized GE Sales Representative.

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