POWER EQUIPMENT

Benefits Sheet: SGRS

Ferroresonant SwitchGear Regulator Systems



Unique high- and low-voltage stab connectors

Advantages

- Provide easy powerpack connection to bus bar and all control and monitoring wiring
- High-voltage feeds through auto-aligning stab connector located in rear of bay so there is no high-voltage on the door. Eliminates need for L-823 connectors/wiring on CCR output.
- Input power/control and monitoring feeds through a low-voltage stab connector located in the rear of the bay. There is no need to manually connect power or control wiring.
- Each powerpack is hot-swappable, eliminating costly shutdowns
- No tools required to remove powerpack from bay (except for seismic version)
- Quick electrical disconnect from bus bar allows routine maintenance to be done by one person using a battery- operated powerpack lift in about 15 minutes

Benefits

- Faster maintenance by fewer workers reduces labor costs
- · Significantly increases safety

Removable powerpacks using battery-operated lift

Advantages

- Hot-swappable powerpacks reduce downtime when changing out a powerpack
- 2.5-30 kW powerpacks easily slide in and out of the power bays
- Battery-operated lift allows work to be done by a single maintenance person
- One person with lift takes 15 minutes for routine maintenance vs. 3 people taking 6-8 hours to replace an individual CCR

Benefits

- Easy to service, saves on labor costs and eliminates costly shutdowns
- Only need one spare regulator on hand for 2.5-30 kW lineups, reducing material costs and inventory needs

Ability to combine different powerpack sizes in a single SGRS lineup

Advantages

 50 and 70 kW air-cooled ferroresonant CCRs are available in a single bay and can be combined with 2.5-30 kW CCRs in a single lineup

Benefits

- · Provides increased flexibility to meet airport needs
- Spare equipment is minimized because only one spare power-pack of the largest CCR size is needed for a 2.5-30 kW SGRS lineup

Space saving

Advantages

- An SGRS system uses up to 67% less space in a vault
- · For new construction, can build a smaller vault
- Can use space in existing vault for other purposes, such as a maintenance shop
- · Can expand power distribution system without building a new vault

Benefits

- Reduces expenditures on building, maintenance and operation
- Reduces the cost of new vault or the expansion of an existing power distribution system

Pre-wired at factory

Advantages

- · All the high-voltage wiring is pre-wired and in the rear of the bay
- Easier for contractor to install
- No expensive maze of cabling needed to connect an SGRS lineup.
 One cable to the input power bay is all that's needed to connect the SGRS lineup to power.

Benefits

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- · Reduced installation costs
- · Increased safety



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POWER EQUIPMENT

Benefits Sheet: SGRS

Optional integrated series cutout bay

Advantages

- Allows the series circuit to be disconnected from the regulator in a simple and safe manner during maintenance or testing, eliminating downtime
- Provides the ability to isolate faulty components quickly without affecting the entire system or airport operations
- Insulation resistance measurement between the series circuit and ground is possible without disconnecting the series cable
- Each series cutout can be locked for security measures

Benefits

- Allows appreciable time reduction and enhanced safety for maintenance personnel, especially at airports with a large number of series circuits
- · Operational and material cost savings
- · Eliminates costly shutdowns
- · Increased security

Rollers have safety lock

Advantages

· Keeps CCRs immobile in the bay or on the lift

Renefits

 Safer and easier to service compared to stacked regulators that are bolted together



All-in-one enclosure

The enclosure contains CCRs, control and monitoring equipment, power system, and current protection

Advantages

- No exposed wires or cables
- · No high-voltage on the door
- Eliminates the need for separate input power wiring to individual CCRs
- · Only one connection to input power bay

Benefits

- · Significant increase in safety
- Significant decrease in space requirements
- · Easier to install



Modular design

Advantages

- · Easy to install
- Easy to add bays
- Easy to upgrade powerpack size
- Future expansion location for IRMS in powerpack
- Functionality upgrades: current, voltage, wattage, lamps-out monitoring, and IRMS

Benefits

- · Flexibility to meet airport needs
- Cost saving because airport can easily increase capacity without having to increase vault size or build a new building
- Upgrade expenses are reduced

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