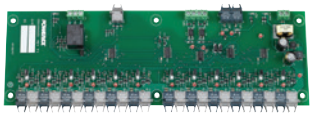
Medium Voltage SCR & Rectifier Assemblies

HV SCR Power Stack

- 5MW, 24kV SCR based power section
- Designed for low partial discharge (low corona)
- Scalable to other voltage and current ratings
- Air cooled, modular design



Fiber Optic Fan Out Board

- Receives SCR gate commands from external controller
- Fans out command to multiple level of SCRs
- Receives and processes feedback from gate boards

Gate Power Supply

- Current loop supplies power to all the SCR levels
- Provides excellent voltage isolation between SCRs and controls and also provides high BIL capability

Overview

Powerex is your source for Medium Voltage SCR and rectifier assemblies in a wide range of ratings and configurations.

Applications

- Motor controls – Medium Voltage converters
  - SCR power bridges for solid state starters
  - SCR based input rectifiers
  - Crowbar systems for motor drives
- Wind power (alternative energy) – Converters available as diodes or SCRs
- Static var compensation
- Resistance heating
- Inductive heating – Input rectifiers
- Load commutated inverter power section for retrofits
- Uninterruptible power supplies – SCR transfer switches and input rectifiers
- Mining – SCR power bridges, solid state starters and input rectifiers
- Power distribution – SCR based switches
- Thyristor controlled reactors

Powerex complements its rectifier products with IGBT assemblies for inverters, converters, choppers, and full or half wave bridge units. These assemblies can also be combined to provide a system-wide solution.

HV Fiber Optic SCR Gate Drive Board

- Receives and conditions power from an isolated loop power supply current transformer, allowing for high voltage isolation
- Provides fiber optic triggering of gates
- Provides fiber optic status feedback for temperature and power supply health monitoring

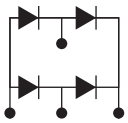
How to Select the Proper Assembly for Your Needs

Areas to consider when selecting the proper assembly.

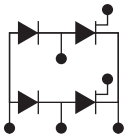
Application: _____

Type of circuit:

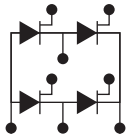
Single phase bridge



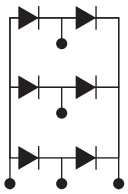
Single phase half controlled bridge



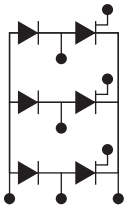
Single phase full controlled bridge



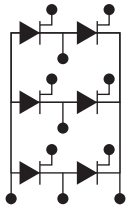
Three phase bridge



Three phase half controlled bridge



Three phase full controlled bridge



Power Topology: _____

Electrical parameters:

Source MVA: _____

Maximum continuous output current (amps): _____

Maximum overload:

Output DC current (amps): _____

Overload duration (seconds): _____

Input voltage (volts): _____

(VAC-RMS for single phase, VAC-RMS line-to-line for three phase)

Line frequency:

☐ 50 Hz or ☐ 60 Hz Other _____ Hz

Distance to source: _____

Distance to load: _____

Environmental parameters:

Maximum ambient temperature (°C): _____

Humidity (0-95% non-condensing): _____

Maximum altitude (feet above sea level): _____

With this information, Powerex engineers can design the proper assembly to fit your application needs.

For more information:
visit: http://www.pwrx.com/summary/assembly-rectifier.aspx
email: globalsales@pwrx.com
phone: 724-925-7272, Option 3 (Applications Engineering Assistance)

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