
PRODUCT BROCHURE

Cyberex® SuperSwitch®GT

200–1200A digital disconnect switch
Supporting the smart grid installation



SuperSwitch®GT

Cyberex® is proud to introduce the three phase SuperSwitch®GT, for integrating distributed energy sources with electrical power utility grids. The SuperSwitch®GT protects critical loads on any micro grid from power quality anomalies on the utility grid by instantly isolating it to provide reliable power.



Front view of SuperSwitch®GT



Why SuperSwitch®GT

- Protects micro grid from utility outage
- Protects utility from faults on the micro grid
- IEEE1547 protection – under/over voltage, under/over frequency and unintentional islanding protection
- Provides power quality function that has an adjustable over and under peak voltage level with an adjustable response time delay
- Detects instantaneous (fault) current
- Offers the capability to accept external open commands
- Enhanced monitoring of voltage, frequency, and phase difference at the DG side and utility side and will connect when conditions are within limits.
- Automatic calculation of the power flow for the unintentional islanding protection required per IEEE 1547
- Backed by world class service support.



Technical specifications

General

- 200–1200A
- 480 VAC, 3-phase, 3 or 4-wire (neutral not switched), 60Hz
- Exceeds ITIC requirements by disconnecting from failing utility in under 20ms
- Load protection with smooth, instantaneous transfer between micro and utility grid protection events, IEEE 1547 events, and power quality events.
- Automatic sensing and control automatic separation of microgrid and utility grid during system problem and reconnection back to the utility grid when the utility system is normal
- Offers synchronism check
- Based on silicon controlled rectifier (SCR) technology
- Offers necessary series protection to clear any internal faults caused by component failures
- Normal rating is 220% of the system rated voltage per IEEE 1547 Section 4.1.8.3.
- Communications capabilities through relays and modbus RTU (RS485) or modbus TCP/IP
- Easy interface to a SCADA system via modbus RTU (RS485) or modbus TCP/IP
- Optional NEMA 3R enclosure

Analog data provided

- kW
- kVAR
- PF
- RMS phase voltages
- RMS phase currents
- Symmetrical components

Digital data provided

- Switch open
- Switch closed
- Switch bypassed
- Auto mode selected
- Manual mode selected

The SuperSwitch®GT offers the following GUI controls

- **Local** – will connect and reconnect when conditions are within limits.
- **Off** – is disconnected and semiconductors are de-energized.
- **Remote** – accepts “connect” and “disconnect” commands from an external control system. If the connect command is given it will connect and disconnect when conditions are within limits of the SuperSwitch®GT internal controls.

Standards conformance

The SuperSwitch®GT shall operate in conformance with the following applicable standards:

- IEEE 1547 – standard for interconnecting distributed resources with electric power systems)
- ITIC

Order fulfillment

Prior to receipt of the confirmed order, the approval drawings set will contain the following information

- Physical arrangement and outline dimensions of equipment and equipment base details
- Weight of each shipping section
- Location in plan and elevation of incoming and outgoing terminals
- Space available for entrance of conduits
- Location in plan and elevation of all ground terminals
- Complete list and rating of all equipment devices to be furnished
- Single line diagram
- Complete interconnection diagrams for all internal and field wiring
- Complete details showing locations of all bus with bolting details
- Complete details for enclosures showing bolting details between sections
- Grid tie switch operating system description
- List of recommended spare parts

SuperSwitch®GT can be customized to meet various application needs. Therefore, we require the following with a request for quote:

- Basic specifications and one line
- Application and components involved such as wind, solar, DG etc.
- Site specifics
- Any special coordination or testing needs



Power Protection

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Additional information

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