Key Topic

1 Three Phase UPS Systems
LP33 Series II
208VAC Transformerless UPS

TOPOLOGY
• Multi Mode UPS – DC & EM
• 208/120V, 3ph 4w input/output
• 15, 20, 30, 50, 60, 80, 100kva
• Output PF at 0.90
• PWM IGBT Rectifier & Inverter
• 4-6msec transfer EcoMode
• Fully Rated Bypass Static Switch

FEATURES/OPTIONS
• RPA Paralleling/ 4 units max
• SBM Battery Monitoring
• Remote Connectivity via SNMP, BMS, RASP
• Seismic Certifications
• Matching Ext Batt Cabinets
• Matching Ext MBP Cabinets
• Matching Inp Xfmr Cabinets
• Top Entry Sidecar
• Seismic Certifications

KEY SPECS
• Wide Input Voltage, 166-240V L-L
• Wide Input Frequency, 54-66 Hz
• Low Acoustic Noise, 50-65dbA
• Input Current THD < 10%
• Output Voltage THD < 2%
• Input PF > 0.98
• Up to 98% Efficient
• 150% Overload for 1 min
TLE MidPower Series, 50-150kVA @ 480VAC

- Transformerless, 3-Level IGBT
- 480/277VAC, 3phase 4wire
- Scalable using 50kW Power Blocks
- Configurable up to 3x50kW or 3x40kW
- Unity (1.0) Output PF
- Up to 96% Efficiency ; 98% EcoMode
- Parallel up to 6 units in RPA
- No internal redundancy
- Ventilation Front to Top
- Only Front Access Needed
- Connections Front/Bottom
- Matching Battery Cabinets
- Matching MBP Cabinets
- Matching 4x2 Cabinet
- Matching Distribution Cabinet
- Blackbox Diagnostics
- 2 Year Warranty
# TLE Series
## 480VAC Transformerless UPS

### TOPOLOGY/KEY SPECS
- Multi Mode UPS, DC & EM
- 480/277V 3ph, 3w or 4w
- 225, 250, 400, 500, 750, 1000kVA
- Unity (1.0) Output PF
- High 0.99 Input PF
- Less than 5% ICHD
- 3-Level IGBT Rectifier & Inverter
- Bypass Inductor
- Fully Rated Bypass Static Switch
- Small Industry Footprint
- Touch Screen Color Display
- Fast MTTR/250kw Power Blocks
- Internal MBP Capability

### FEATURES/OPTIONS
- Up to 97% Dbl Conv Eff
- Up to 99% eBoost Eff
- Multi-Module Designs:
  - RPA Parallel / 6 max
  - Catcher UPS
  - 2N Systems
  - Iso Ring Bus
- I/O Cable Saver Feature
- SBM Battery Monitoring
- Remote Connectivity via SNMP, BMS, RASP
- Matching Battery Cabinets
- Matching Ext MBP Cabinets
- Matching Ext 4x2 Cabinets

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Great for Datacenter/IT Applications
SG Series
480VAC Iso-Transformer UPS

TOPOLOGY/KEY SPECS
- Single Mode UPS, Dbl Conv
- Output Isolation ZigZag Xfmr
- 480/277V 3ph 3w/4w input & output
- 10, 20, 30, 40, 50, 80, 100, 120, 150kVA (at 0.8 OPF)
- 225, 300kVA (at 0.90 OPF) with eBoost capability
- Less than 7% ICHD (w/filter)
- 0.96 input pf
- 6-Pulse Thyristor Bridge Rectifier
- 2-Level PWM IGBT Inverter
- Fully Rated Bypass Static Switch
- Internal MBP Capability

FEATURES/OPTIONS
- Up to 95% Dbl Conv Eff
- Up to 99% eBoost Eff
- Multi-Module Designs:
  - RPA Parallel / 6 max
  - Catcher UPS
  - 2N Systems
- I/O Cable Saver Feature
- SBM Battery Monitoring
- Remote Connectivity via SNMP, BMS, RASP
- Seismic Certifications
- Matching Battery Cabinets
- Matching Ext MBP Cabinets
- Matching Ext 4x2 Cabinets
- Seismic Certifications
Zenith STS-3 Series
Three Phase
Static Transfer Switch

CORE RATINGS

• Amps: 150, 250, 400, 600, 800, 1000, 1200, 1600
• Input: 480VAC 3ph 3w, 60Hz
  o 208, 400, 600VAC optional
• Output: 480VAC 3ph 3w, 60Hz
  o 208, 400, 600VAC optional
• Transfer Time: 4-6msec typical
Zenith STS-3 Series
Three Phase Static Transfer Switch

FEATURES

- 2,000,000 Hours MTBF
- 500% overload for 10 seconds
- Multiple Redundancy Assemblies
- Redundant Operator Panel
- SNMP & Modbus RTU Communications
- Rigorous Factory Testing
  - 6000 operations at 150% load
  - 50 operations at 600% load
- Multi-functional LCD Touch Screen Display
- Compact Footprint
- Front Access for Maintenance
- Front/Side Access for Installation
- Door-in-door construction
- Modular, Drawout Assemblies
- ETL Listed to UL1008 Standards
- Hi-Res Color Touch Screen Display
3 Critical Power Distribution
Series MDU
Model MDU-CL, Classic Design

**ELECTRICAL SPECS**
- KVA: 50, 75, 100, 125, 150, 200, 225, 300
- Input: 480VAC 3ph 3w + gnd
- Output: 208/120VAC 3ph 4w + gnd
- Freq: 60 or 50Hz
- Efficiency: 98%

**FEATURES/OPTIONS**
- Nema 1 Enclosure w/removable panels
- Door-in-door construction; door locks
- Top or bottom entry
- Up to 8 GE Panelboards
- Up to 8 GE Subfeed CBs
- Up to 2 Side Cars for distribution
- Intelligent Monitor with true RMS metering
- Modbus RTU Communications
- Transient Network, Surge Suppression, Lightning Arrestor options
Series MDU
Model MDU-HP, High Power Design

ELECTRICAL SPECS
• KVA: 400, 500, 625, 750, 1000
• Input: 480VAC 3ph 3w + gnd
• Output: 208/120VAC 3ph 4w + gnd
• Freq: 60Hz
• Subfeed CBs: 100, 150, 225, 250, 400, 600A
• Efficiency: 98%

FEATURES/OPTIONS
• Nema 1 Enclosure
• Door-in-door construction; door locks
• Top or bottom entry
• GE 250-600A Subfeed CBs w/opt electr trip
• Subfeed Monitoring available
• Intelligent Monitor with true RMS metering
• Modbus RTU Communications
• Transient Network, Surge Suppression, Lightning Arrestor options
MDU Features

TRANSFORMER SPECS
• K13 Rated; DOE2016 Compliant
• Class R insulation, 150\(^\circ\) C rise
• Common & Traverse noise protection
• 200% Output Neutral
• 60 or 50Hz

BRANCH CIRCUIT MONITORING
• Solid Core CTs on each pole
• Data Acquisition Board
• BCMS Basic – Branch Ckt Current Readings
• BCMS Plus – Panelboard Current, Voltage, KVA, KW, PF, Freq, kVAR, & THDv Readings
• Local readings on the Intelligent Monitor
• Remote readings via Modbus RTU or optional SNMP
STS-3 / MDU-CL Combo Unit
Three Phase Static Transfer Switch with Output PDU

FEATURES
- Using STS-3 Unit plus 50-300kva PDU
- Matching Cabinetry
- VSS Feature
  PDU inrush limited to 1.5X on STS transfers

STS-3 Unit + MDU-CL Model
Series RDU
Model RDU-CL, Classic Design

ELECTRICAL SPECS
- Voltage: 208/120VAC 3ph 4w + gnd
- Mains: Qty 1, 2, or 4
  225 or 400A (CB or MCS)
- Frequency: 60 or 50Hz

FEATURES
- Nema 1 Enclosure w/removable front, side & rear panels, 2ft x 2ft footprint
- Door-in-door construction; door locks
- Top or bottom entry
- Up to 4 GE Panelboards
- Optional BCMS Basic or Plus

Model RDU-WM, Wall Mount Design
- 9” deep, with 1 or 2 panelboards
Series RDU
Special Models

**Model RDU-MC, Mission Critical**
- Primary/Alternate Mains
- 225 or 400A GE Main CBs
- Make-before-break
- Sync Check Relay

Kirk Key Interlocks & Solenoid Key Release
Key Topic

4

Datacenter
Overhead
Busway
Series DPB
Distributed Power Busway

ELECTRICAL SPECS
• Bus Ratings (Amps):
  160/225/250, 400, 800
• Voltage:
  120 thru 600VAC, 3ph
• 3w or 4w, 100% Neutral
• Frequency:
  60 or 50 Hz
• Short Circuit Capacity:
  22KAIC @ 600VAC
  35KAIC @ 480VAC
  42KAIC @ 208VAC
• Copper bus bars
• Class H (220) insulation

FEATURES
• 20-30% less expensive than traditional cable/conduit installs
• Finger-safe, indoor rated bus system
• Multiple Rail lengths: 3, 5, 6, 10, 12 feet
• 99% Recyclable
• UL/ETL/CE/IEC approved & certified
• Interchangeable Tap-Off Boxes, 160-400 Amp
• End Feed/Bus Rail Monitoring, BCM Basic or Plus (optional)
• Near-wall mounting okay, due to straight-up Tap-Box install
• Flexible configuration via use of Elbows, Tees, & Cross units
• Options: 150% Neutral ; 100% Rated Isol Ground
Series DPB
Bus System Main Components

- Bus Rail Sections
- End Feed (monitoring optional)
- Custom Load Distribution (Tap-Off Boxes)
  - Standard or IEC
  - w/ whips
- Local Display Monitor (optional)
  - Standard or IEC (monitoring – opt)
  - Monitored with whips
Series DPB
Bus Rail Coupler Technology

• Improved Bus Rail Coupler is 50% less size, and doubled the number of contact points. Minimizes resistance and voltage drop.
• Tested for 60degr C ambient (200-400A)
• Compact design minimizes “Keep Out Area”, so more TapOff Boxes can be installed on the rails
• No special tools required for installation
• Supports BCMS communication cable for secure use of installation & maintenance
Series DPB
Tap-Off Boxes

TAP-OFF BOXES
• 160-400 Amp
• GE Branch Circuit Breakers, 10 or 22 KAIC
• Multiple Branch Cord Lengths available
• Multiple single & duplex receptacles/connectors available
• IEC/CE version receptacles & connectors available
• Branch Circuit Monitoring (optional)
Series DPB Busway
Tap-Off Box Connection to Bus Rail – Very Safe!

Two Step Process insures Safety and Electrical Integrity

**STEP 1: Mechanical Connection**
- All grounding connections engage & seat directly to the open channel.
- Top Mast connects mechanically to the bus rails. Set screws then insure alignment to rails. Rail design prevents backwards installation.

**STEP 2: Electrical Connection**
- Once Top Mast is mechanically secured, the cam action lever seats all electrical contacts against the phase bussing. Once energized, it locks down into position.
5 New GE UPS Products Coming Soon
Flywheel UPS, 50-1000kVA at 480VAC

- For Short Term Backup  Green Solution
- 480/277VAC 3ph 4w 60Hz
- 300kw Flywheel max power
- GE Series TLE or Series SG UPS Platforms
- Matching Flywheel Cabinetry
- Using Vycon Flywheel Technology
- Typically 15-40sec Ridethru
- Parallel up to 6 Flywheels
- Matching 600VDC Paralleling Cabinet Option
TLE Modular, 15-90kVA UPS at 208VAC

- 208/120VAC 3ph 4w 60Hz
- Modular design with N+X Internal Redundancy
- 15kva IGBT Power Modules; 6 max in the stack
- 0.90 Output PF
- Up to 93% Efficiency
- Ecomode up to 99% Efficiency
- Input THD < 3%; Input PF 99%
- Full DSP Control
- Battery management system
- Critical power/fault recording
- Conformal coated PCBs
- Monitor runtime of critical components
- Large LCD touch screen display
- 2 Year Warranty