

Levine Electronics and Electric Line Card

Serving Georgia, Alabama, Florida,
Mississippi, Tennessee, Arkansas,
North Carolina and South Carolina

The Team

Outside

John Levine, PE (*GA*)

Rich Lussier (*GA, TN*)

Billy Sanders (*AL,MS,FL Pan*)

Adam Norrell (*AL,MS,FL Pan*)

Carlin Boswell (*FL, S. GA*)

Maurice Allen (*AL, GA, TN*)

Michael Kahn (*GA*)

Kris Vance (*FL*)

Jeff Shallbetter (*FL*)

Jay Johnson (*Global*)

Terrence Smith (*TN*)

Scott Benson (*AL*)

Trent Yates (*AL and GA*)

West Francus (*GA*)

Inside

Ava Maguire

Doris Sherrill

Bill Walters

Brooke Sever

Austin Broadfoot

Barbara Sanders

Sarah Nottke

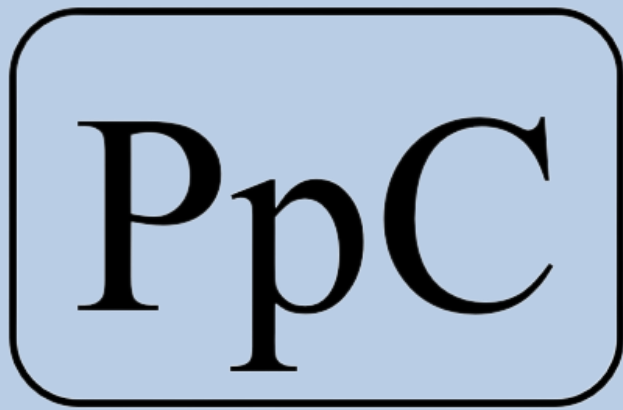
Logan Martin

Kyle Walding

David Drishpon

Ximena Alvarado

Patrick Ahern



Power plus Controls

- Sister Company to Levine Electronics and Letric, Inc.
- Electrical Distributor to assist Customers and Distributors to find hard to find items, reconditioned equipment, emergency equipment
- Service Arm for L³



GE VERNOVA

GE Multilin and ITI

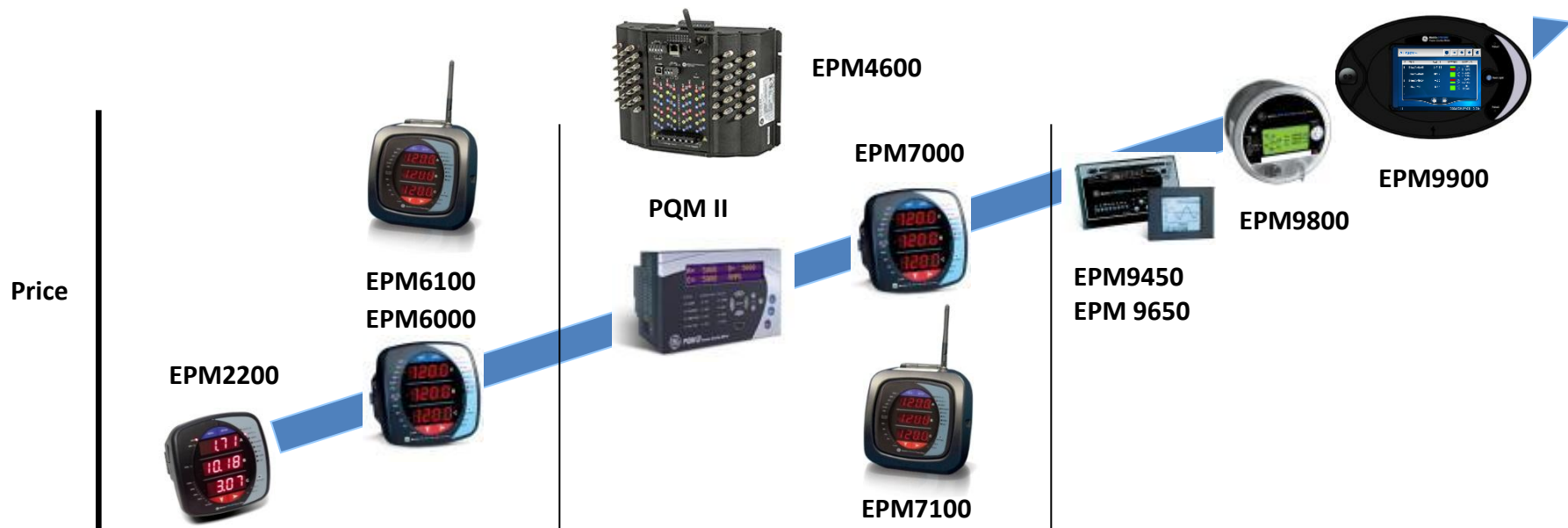




GE VERNOVA

GE Multilin Meters

GE Multilin has a full spectrum of advanced metering



Basic Power Monitoring

- Replacement of Analog Meters
- Campus Monitoring
- Energy Management

Power Quality & Cost Management

- Generator over and under voltage
- Over frequency monitoring
- Continuous monitoring
- Voltage Studies

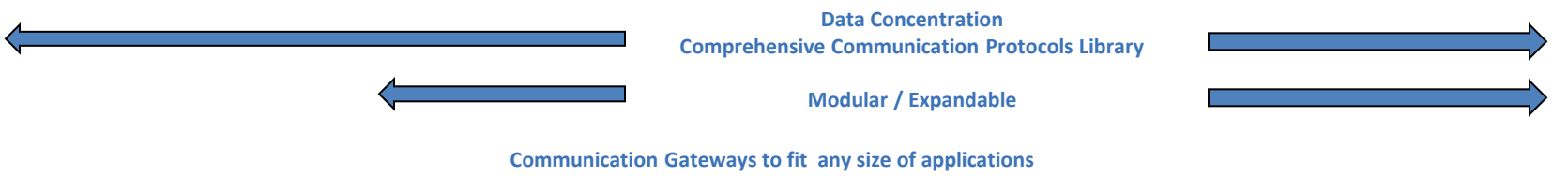
Advanced PQ Analysis

- Monitoring Transformer losses
- Monitoring transients
- Time of Use energy use



Applications

- | | | | | |
|--|---|--|--|--|
| <ul style="list-style-type: none"> • Mini Data Concentrator • Distribution Automation / Pole Mount applications. | <ul style="list-style-type: none"> • Small Point Count RTU • Digital Fault Recorder • Measurement • Bay Controller • M&D Equipment Integration | <ul style="list-style-type: none"> • Medium Centralized Systems. • Integration of Legacy devices. • Communication to Master Stations. | <ul style="list-style-type: none"> • IEC 61850 Systems • Cyber Security • Local HMI | <ul style="list-style-type: none"> • Large Centralized SCADA systems. • Large Serial Port density. |
|--|---|--|--|--|



GE provides power utilities and industrial organizations with a wide range of transformer monitoring solutions. For more than 35 years, we have developed advanced technological hardware and user-friendly software to enable continuous monitoring, detect impending issues and provide accurate diagnostics to help maximize critical asset operational uptime.





Circuit Breakers

Full range of circuit breakers featuring advanced self-blast interrupting technology for improved stability and reliability.



Disconnectors

High voltage disconnectors (disconnect switches) in flexible horizontal and vertical layout configurations up to 1,200 kV.



Instrument Transformers

Suite of high accuracy current and voltage measurement devices for the effective operation and management of T&D systems.



Voltage Regulators

GE's family of voltage regulator products, along with their dedicated controllers, support both substation and pole-mounted applications.



Bushings, Post Insulators & Surge Arresters



Capacitors & Reactors

GE's reactive power compensation solutions improve power quality by eliminating disturbances and improving power factor.

Tavrida Electric

Light Duty Breaker



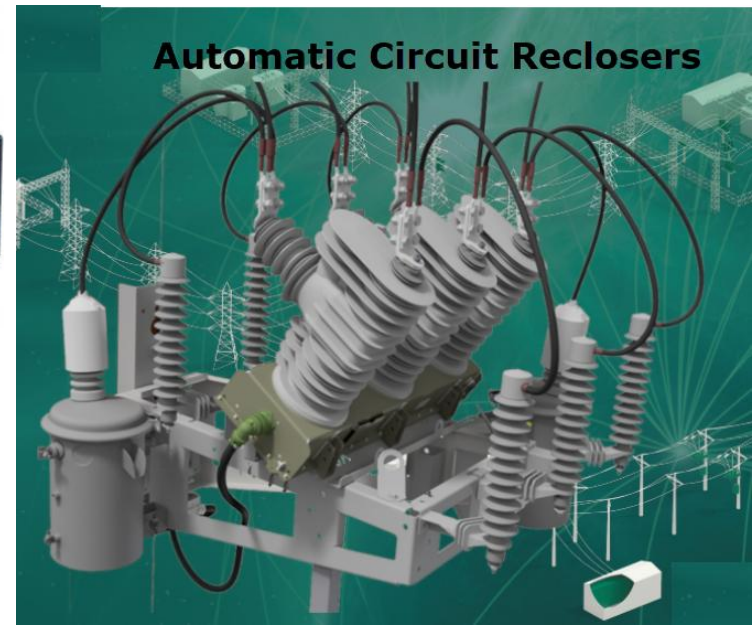
15 and 27 KV Breakers and Reclosers

Medium Duty Breaker



Heavy Duty Breaker

Automatic Circuit Reclosers





EP Industrial Solutions

ABB's Full UL rated Transfer Switch and Paralleling Switchgear portfolio



Open Style ATS

Enclosed ATS: Going to Market as ABB Zenith

TruONE



OEM general purpose, industrial & critical

- Open style ATS in standard or delayed transition
- 30-1200A, 200-480V ratings
- 2, 3 or 4 pole applications
- Modular all-in-one design with wide range of features in 3 controller levels

ZTG- Series



Commercial, Infrastructure, Light Industrial, W/WW

- Standard transition
- 30-1200A, 200-480V ratings
- 2, 3, or 4 pole applications
- Enclosed in type 1 or type 3R enclosures

ZTS T-Series



Data Center, Finance, 24/7 Processes, General, Mission Critical

- Standard or delayed transition for transfer with a timed "off" position
- Ekip connectivity and advanced interface from 30-1200A,
- Extended ratings up to 3000A & 600Vac (2, 3, or 4 pole), and service entrance

ZTGSET- Series



Commercial Building, Light Industry and Infrastructure

- Standard, delayed, or closed transition for make-before-break switching
- Extended ratings up to 4000A & 600Vac (2, 3, or 4 pole), and service entrance
- Maintenance bypass available on all frames and transition types

ZTSSET- Series



Commercial Building, Light Industry and Infrastructure

- Specially-designed for critical applications, with built-in PQ metering, enhanced diagnostics, and connectivity
- Full color graphical display
- Standard, delayed, closed transition & bypass up to 4000A & 600Vac (2, 3 or 4 pole)

ABB Portfolio UL Rated Transfer Switch and Paralleling Switchgear Portfolio

- Critical Power- Power Switching

ATS Product Portfolio Overview



Application	Commercial and Light Industrial, Data Center	Commercial, Infrastructure, Light Industrial	Data Center, Finance, 24/7 Processes, General, Mission Critical	Commercial Building, Light Industry and Infrastructure	Commercial Building, Light Industry and Infrastructure
Product series	TruONE (OXA/OXB series)	ZTG Series	ZTS T-Series	ZTGSET- Series (Service Entrance Rated)	ZTSSET- Series (Service Entrance Rated)
Amp	30-1200 A	30-3000 A	30-3000 A	30-1200 A	30-1200 A
Controller Type	Level 2 (Dip) Level 3 (LCD) Level 4 (Touch)	Level 3 (LCD)	Level 4 (Touch)	Level 3 (LCD)	Level 4 (Touch)
Transition Type	Open Transition Delayed Transition	Open Transition Delayed Transition	Open Transition Delayed Transition	Open Transition Delayed Transition	Open Transition Delayed Transition
NEMA type enclosure	Open	1, 3R, 4, 4X, 12	1, 3R, 4, 4X, 12	1, 3R, 4, 4X, 12	1, 3R, 4, 4X, 12
Voltage Rating	200-480V	200-480V	200-480V	200-480V	200-480V
Frequency	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
Phase System	Single/Three Phase	Single/Three Phase	Single/Three Phase	Single/Three Phase	Single/Three Phase
Neutral Configuration	Switched Overlapping	Solid Switched	Solid Switched Overlapping	Solid Switched	Solid Switched Overlapping
Communication Option	Modbus RTU Serial Modbus TCP/IP Ethernet IP	Modbus RTU Serial Modbus TCP/IP Ethernet IP	Modbus RTU Serial Modbus TCP/IP Ethernet IP	Modbus RTU Serial Modbus TCP/IP Ethernet IP	Modbus RTU Serial Modbus TCP/IP Ethernet IP



EP Industrial Solutions

Single and Three Phase UPS

TLE Series



TLE Series UPS - 60 Hz,
225-1000kW



TLE Series UPS - CE, 30-
40kW



TLE Series UPS - CE, 40-
120kW Scalable



TLE Series UPS - 50 Hz,
160-400kW

SG Series



SG Series UPS - 60 Hz,
10-750kVA



SG Series UPS - 50 Hz,
10-600kVA, 400Vac

LP33 Series



LP33 Series II UPS - 15-
100kVa, UL Version
208/120VAC



LP33 Series I UPS 10-
120kVa, CE Version
380/400/415VAC



StormSwitch

- **Range:** 70A-3000A
- **Connectors:**
 - 400A Cam-style Male Quick Disconnects
- **Enclosure Construction:**
 - NEMA 3R GalvaSteel
 - 304SS and 316SS Options



TripleSwitch

- **Range:** 100A-3000A
- **Connectors:**
 - 400A Cam-style Male & Female Quick Disconnects
- **Enclosure Construction:**
 - NEMA 3R GalvaSteel
 - 304SS and 316SS Options





Liquid Filled Transformers



VIRGINIA - GEORGIA TRANSFORMER
ONE SOURCE-ONE COMMITMENT



- Distribution, Power, Rectifier, and Grounding Transformers
- UP to 1400MVA
- Primary Voltages up to 500KV



Liquid Filled Transformers



VIRGINIA - GEORGIA TRANSFORMER
ONE SOURCE-ONE COMMITMENT

PAD MOUNT LOOP FEED DEAD FRONT

- 500 kVA – 7000 kVA
- 15 KV – 34.5 KV
- COPPER or ALUMINUM WINDING
- EFFICIENCY: PER DOE 2016 EFFICIENCY
- BIL HV 150 - 200KV, LV 30 - 45 KV
- DELTA / GROUNDED WYE
- TEMPERATURE RISE 65° C
- FLUID - MINERAL OIL
- VOLTAGE ADJUSTMENT +5% TO -5% IN 2.5% STEPS
- GAUGES - PRV, PRESSURE/VACUUM LEVEL, TEMP.
- PAINT - POWDER COAT BAKED EPOXY
- ANSI 61 (OTHER COLORS AVAILABLE)
- RADIATORS: GALVANIZED, BOLT-ON /
- STAINLESS STEEL DOOR HINGES
- PADLOCKING AND PENTA HEAD BOLT,
- 3 POINT LATCHING
- 1" OIL DRAIN VALVE
- PRV, PRESSURE/VACUUM LEVEL, TEMP.



E2X Pad Mount Transformer

Dry Type Transformers

- ❑ Capacity: 9 KVA thru 10 MVA
- ❑ Voltage: up to 34.5 KV
- ❑ Winding Configurations
 - Multiple Pulse (6, 12, 18, 24, etc.)
 - Unit Substation
 - Mining
 - Scott T Connection
 - Custom Medium Voltage Dry-Type
- ❑ Buy U.S. Statutes
 - Made in USA
 - ARRA (American Recovery and Reinvestment Act)
 - BAA (Buy American Act & Buy America Provisions)
 - TAA (Trade Agreements Act)
 - SPPA 73 P.S. 1881 (Steel Products Procurement Act)



Cast Resin Transformers

➤ Cast Resin Power Transformers:

- From 150kVA to 45MVA
- Primary Voltages up to 34.5kV
- Transformers are rigidly bound in epoxy via a vacuum casting process
- Cast resin types highest on evolutionary spectrum of transformer technology
- Epoxy cast coils arranged coaxially around an iron core





Post Glover

"The Resistor Specialists"



High Resistance Grounding

Post Glover's industry leading PulserPlus.Net™ is an integral part of a system wide 98% arc-flash prevention strategy as well as providing 24/7 system reliability. The only digital HRG system on the market delivers flexible defense and the ability to communicate with your existing network protection package.

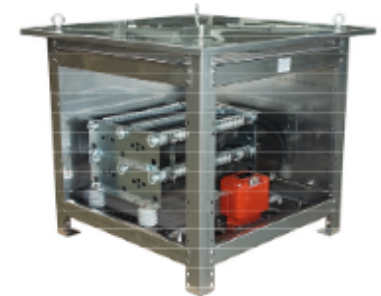
- UL and C-UL certified
- Available for Delta connected networks
- Low and medium voltage designs
- Stand-alone or switchgear cubicle installation



Low Resistance Grounding

Standardized, pre-engineered packages allow for quick shipment and reduce your cost. Customers rely on our extensive experience to efficiently deal with unique applications.

- Available UL and CSA certifications eliminate field inspections
- Current transformers
- Special enclosure finish and materials
- Elevating structures
- Special side or top entrance/exit bushings
- Custom ratings



MOTOR CONTROL

Relying on the industry's most innovative resistor manufacturer with over 100 years of experience takes the guesswork out of your motor control applications. With all resistor elements made from rugged, specialty stainless steel alloys, Post Glover is the one source for original or replacement resistors.

- Crane control resistors for all sizes of electric overhead cranes
- Wound rotor, induction and squirrel cage motor resistors





AMR
PEMCO



Batteries and Battery Chargers

- Nickel Cadmium
 - Pocket Plate
 - Sintered / PBE
- Vented Lead Acid
 - OPzS (tubular)
 - Pasted Plate
- VRLA
 - Gel
 - AGM
- Battery Chargers
- Battery Racks and Cabinets





EnerSys Batteries



POWERSAFE® GN BATTERIES



POWERSAFE® M SERIES
(DDM) BATTERIES



NORTHSTAR® RED BATTERY®



NORTHSTAR® UPS BATTERY



NORTHSTAR® HT RED
BATTERY®



DATASAFE® DXC BATTERIES



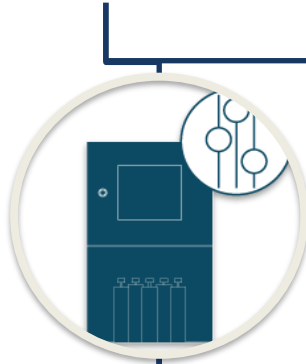
DATASAFE® XE BATTERIES



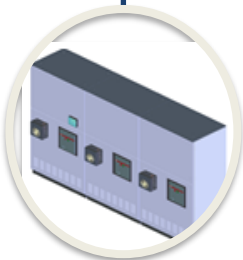
DATASAFE® D BATTERIES

PRODUCT LINE OFFERING

PQ SOLUTIONS



Equalizer (EQ)



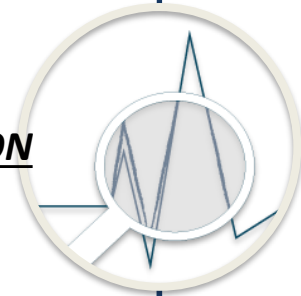
Activar Plus (AP)



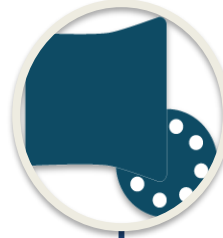
Activar (AR)



METERING & PROTECTION



PQ METERS



PQSCADA Sapphire



**G4K
(Fixed)**



**G4500
(Portable)**



**G5 Multifunction
Meter
(2018 Q3 Est. Launch)**

- ❖ The SPS product line includes a full complement of metal enclosures and buildings, low voltage controls and full switchgear systems up to 38kV



IEEE 1558 and
IEEE 891 Switchgear





Generator Paralleling Switchgear and Low Voltage Switchgear and Switchboards

- Voltage Rating: Up to 27KV
- Ampacity: Up to 10,000A
- Short Circuit Current Rating: Up to 200kA
- UL891, UL1558, & Metal Clad Available
- Suitable for Service Entrance Equipment
- Nema Type 1,3R,4,or 12 Enclosures
- Corrosive Environment Enclosures Available
- Front, Rear, and Side Access, optional future expansion provisions
- Engineering Design flexibility allows for custom sheet metal and bussing to allow for bus duct, cable, and transformer connections



Padmount Switchgear

- ❖ 5-35kV Padmount and Submersible Vacuum Switchgear

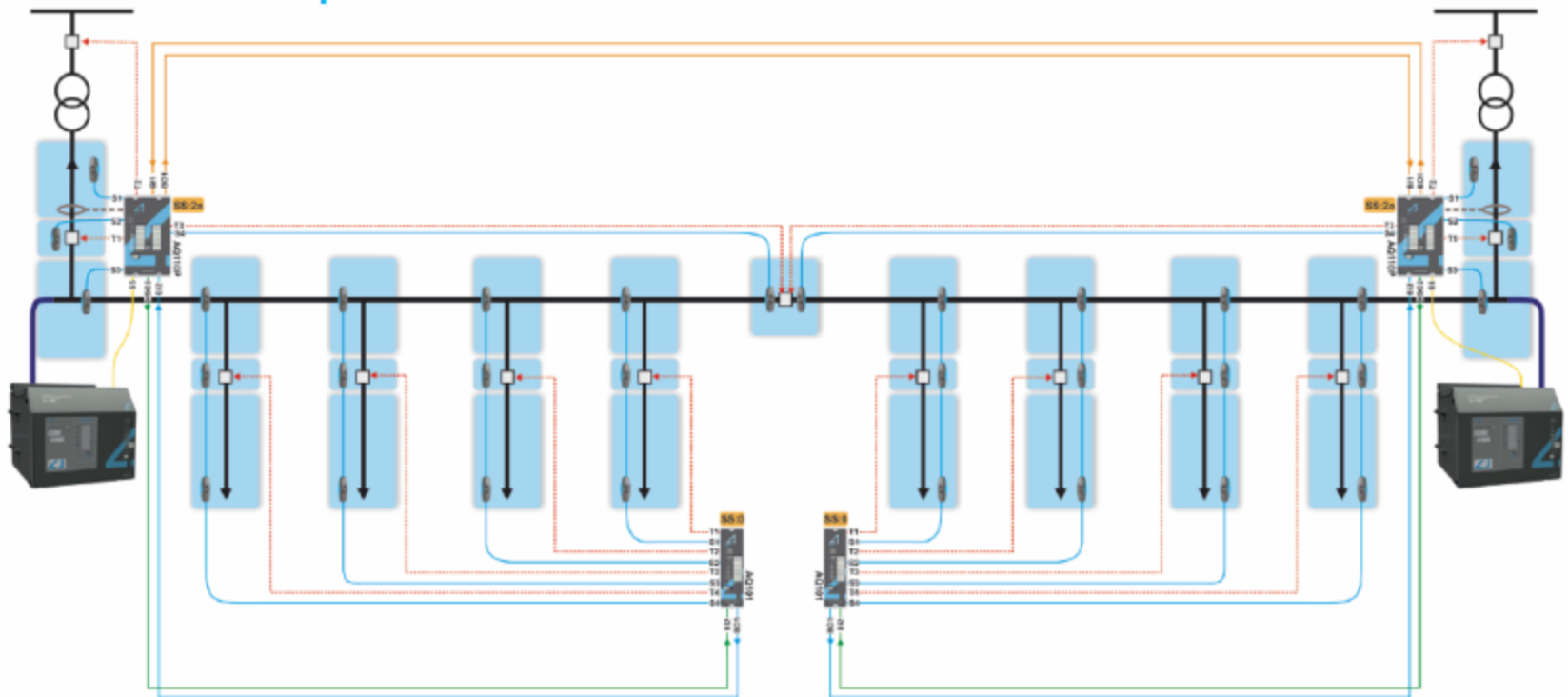


Grid Smart. Grid Tough.



• Arcteq Arc Flash Quenching Systems

- **ELIMINATES** the need for all arc-rated PPE clothing.
- *Why “redirect” or “vent” when you can ELIMINATE?*
- The ultimate solution for mitigating arc flash hazards.
- Minimizes damage to critical equipment assets.
- Meets IEEE C37.20.7-2007 Arc Resistant Switchgear requirements.
- Protects both switchgear and downstream assets such as MCCs.
- Guaranteed low-voltage arc quenching in 6 milliseconds.
- Guaranteed medium-voltage (up to 15 kV) arc quenching in 6 milliseconds.
- Less than 1.2 calories per cm² incident energy at the Working Distance.
- Available in both new and retrofit applications – UL Listed.

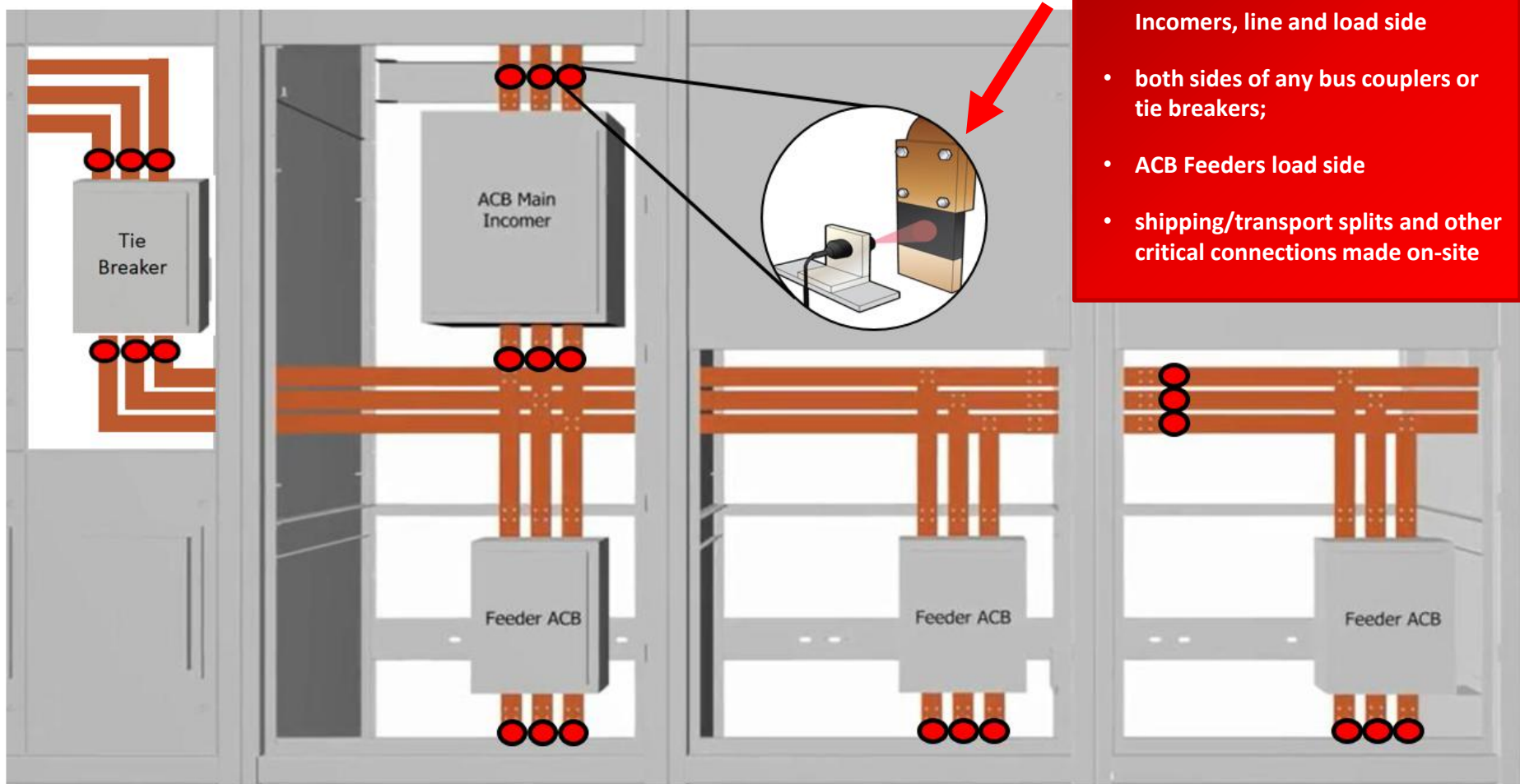




We also can
monitor Cables



24x7 Thermal Monitoring MV, LV, MCC Switchgear and Transformers: IR



Busbar Joints

- IR Sensors monitor ACB Main Incomers, line and load side
- both sides of any bus couplers or tie breakers;
- ACB Feeders load side
- shipping/transport splits and other critical connections made on-site

TECHNIBUS

METAL ENCLOSED BUS SOLUTIONS



Segregated and Non-Segregated Bus



Iso-Phase Bus

Advanced Systems –
Precision Fabrication
and More



Bus Bar Fabrication

ENGINEERING
TOMORROW

Danfoss

6 YEAR

Breadth and depth in **expert products**

DrivePro[®] Extended
Warranty

VLT[®]



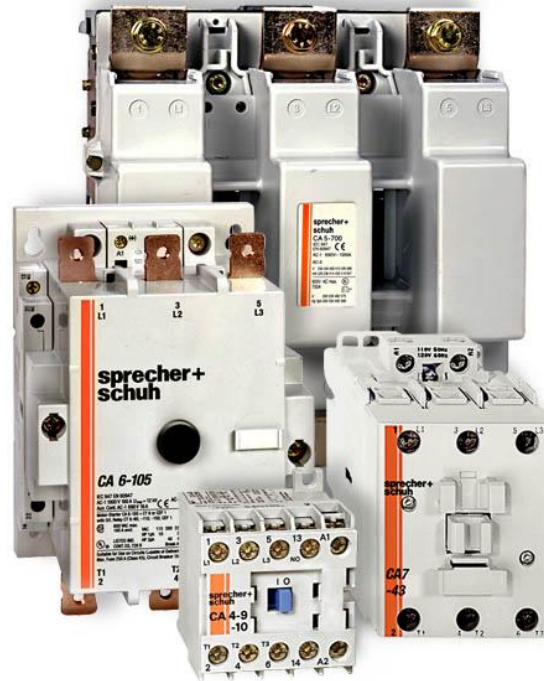
VACON[®]



Manual Motor Control

Contactors

Softstarters



Overloads

Disconnects



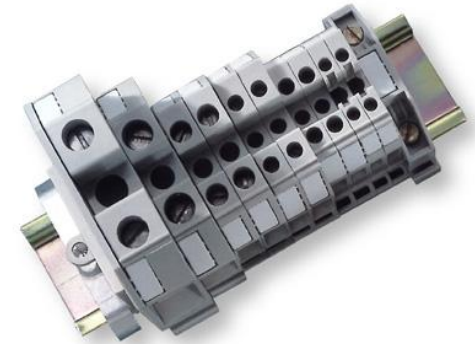
Auer Signal Lights



Timing Relays



Terminal Blocks



Mini Circuit Breakers



Pushbuttons



Comsys

Practical Solution to Eliminate Harmonics

ADF Product Range 208-690Volts



ADF
P25

ADF
P100

ADF
P100N

ADF P300

ADF
P200

ADF PPM300

ADF P700

Harmonic Mitigating Solutions Summary

GOOD

- RLW Line Reactors
 - 30 – 35% THID performance
 - Buffer for surges, transients, and power line disturbances
 - Economical insurance policy for system reliability

BETTER

- Matrix E-Series Harmonic Filter
 - 8 – 12% THID at full load
 - 12 – 17% THID at 40% load
 - Economical solution for harmonic mitigation
 - Supports compliance of IEEE-519
 - Meet international harmonic distortion requirements of 10 – 15%



- Matrix AP harmonic Filter
 - Adaptive passive technology changes the inductance for better performance at light loads
 - 5% THID at full load
 - 8% THID at 30% load
 - Lower kVAR; generator compatible
 - Meets IEEE-519 requirements



BEST



Dynapar offers a wide range of NorthStar, Hengstler and Dynapar magnetic and optical encoders, many of them available with dual sensor output for maximum uptime.



*NorthStar RIM Tach
8500 NexGen (RT8)*



HD35R Encoder



HS35R Encoder



*AC58
Encoder*

Timers and Relays



**SOLID STATE
CURRENT SENSOR**



**TRUE OFF DELAY
CUBE RELAY TIMER**



HVAC CONTROL



SOLID STATE TIMER



**CUSTOM
CURRENT SENSOR**



HEAT PUMP CONTROL



CUSTOM CONTROL



**MICROPROCESSOR
RECYCLE TIMER**



PUTTING **POWER** TO WORK in Water Irrigation Systems



Peltec 102 Recycle Timer
Universal voltage repeat cycle in
rail timer



UNIVERSAL VOLTAGE RELAY TIMERS & DIGITAL TIMERS

Available in a wide variety of
timing modes.



VOLTAGE & PHASE MONITORING CONTROLS

Phase monitoring available from
208 to 575 Volts. Voltage
monitoring from 24 to 276 Volts.



OVER / UNDER CURRENT SENSORS

For AC sensing from .1 to 20
amps.



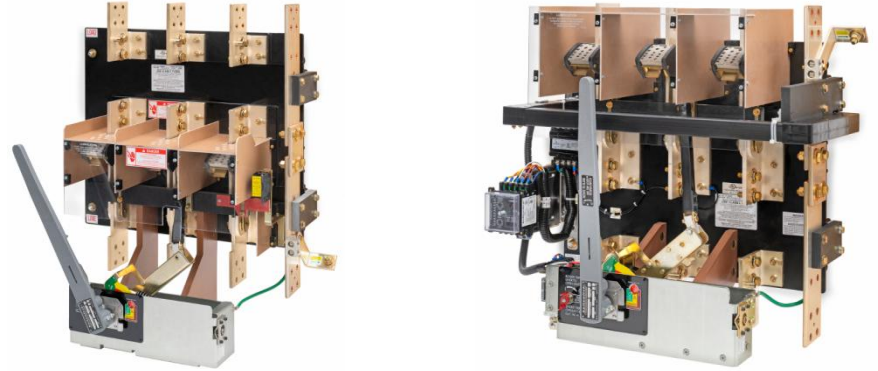
UNIVERSAL VOLTAGE POWER RELAYS

Available in 8 amp or 16 amp
outputs in 3PDT or SPDT.





Switching and Protection



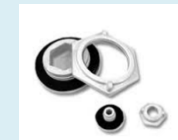
Boltswitch
Bolted Pressure Switches



Energy Storage



PowerSmiths





Wall Mount



Free-Standing



Disconnect



Commercial



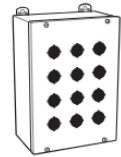
Modular



Consoles



Non-metallic



Pushbutton



Distribution



Accessories





**Control Transformer with F2
primary fusing**



**Control Transformer Base
Unit**



**F4 secondary fuse block
holder on SNC Control
Transformer allows easy
factory or field installation of
fuses/contactors**

Transformer Standard Voltages

- Primary: 220 x 440, 230 x 460, 240 x 480 – Secondary: 110/115/120 – 50/60 Hz
- Primary: 440/220/200, 460/230/208, 480/240 – Secondary: 110/23, 115/24, 120/25 – 50/60 Hz
- Primary: 460/230/208, 480/240, 440/220/200 – Secondary: 115/120/110 – 50/60 Hz
- Primary: 550/575/600 – Secondary: 110/115/120 – 50/60 Hz
- Primary: 120/240 – Secondary: 24 – 50/60 Hz

E-T-A Engineering Technology



Circuit Protection Devices



Relays & Solid State Remote Power
Controllers



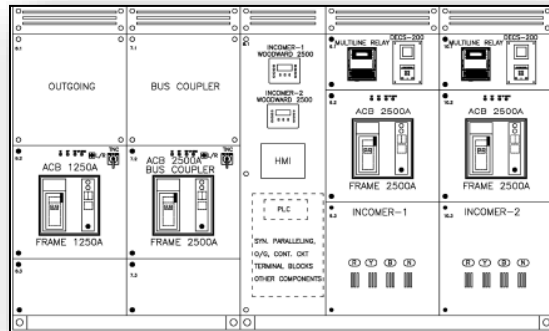
Power Management Systems



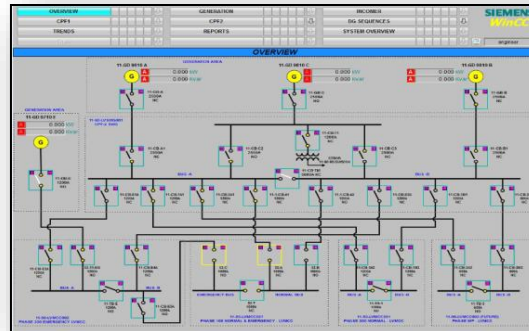
Intelligent Power Distribution Systems

SIBA Fuses

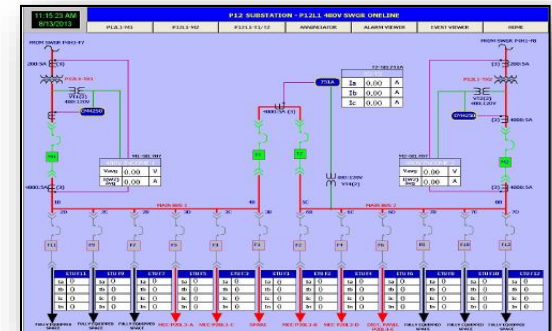




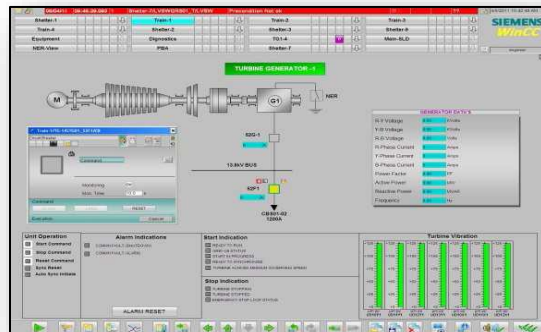
LV & MV paralleling switchgear.
Built to (UL / ANSI & IEC) standards.



Power management system
Generator based prime power ,back up.



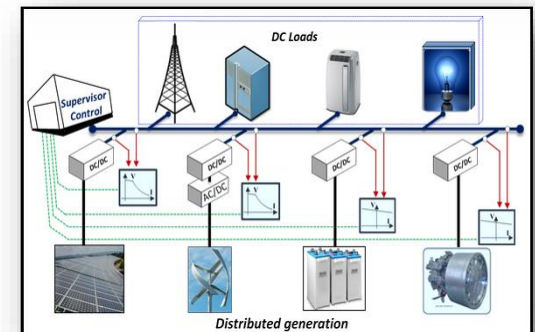
Switchgear automation - SCADA
main-tie-main, main-tie-generator



Turbine control, generator protection
Power plant - distributed control



Remote generator/asset monitoring
Geo Fence, RTU, remote control, 3G



Microgrid solutions
AC, DC, DC Storage solutions

Thank You!