EXHIBIT E

ES2189124

Four (4) 600KW Quote No. 0020582878

ACF Standby Systems
Power Generation

GENERAC | INDUSTRIAL POWER

Bill of Material

Date: May, 2022

Reference: FSA - City of Naples WRF Four (4) 600kW in Parallel for a total of 2400kW System

We are pleased to offer the following quote for the above project:

FSA20-EQU 18.0: HEAVY EQUIPMENT

20582878

Four (4) 600kW Diesel Generators

FSA Item #	Qty	Description	
		Unit #1 #2, #3 & #4	
130	4	500kW Generator Package Specification	SD500
130	4	Upgrade Generators to 600kW Package	SD600
130	4	Upgrade to Modular Paralleling System	MD600
130	1	Upgrade to Power Zone Permissive Load Shed Nema 3R	G0071500
130	4	Programing Generator	Service
130	4	Upsize Alternator	
130	4	Upgrade to Level 2 Aluminum Enclosure w/Wind Upgrade	
130	4	Upgraded to Alternator heater	
130	4	Upsize from 24 Hr to 96 Hr. Fuel Tank	
		* This was increase from 50% to 100% load	
130	1	Upgrade to OSHA Compliant Stairs Walkway	

* **Delivery & Start-up is included with the pricing per FSA**

* **Off-Loading by Others (Not included on FSA Pricing)**

* **Installation is not quoted on this proposal at this time**

Discount on all four (4) Units

Quantity 4 - Generac Industrial Diesel engine-driven generator set with turbocharged/aftercooled 6-cylinder 18.1L engine, consisting of the following features and accessories:

- Stationary Emergency-Standby rated - MPS - Parallel Unit - 2400kW MPS - 4X D18.1
- **600 kW Rating, wired for 277/480 VAC three phase, 60 Hz**
  - **900 Amps per unit @ 480VAC**
- **MPS - Parallel Unit**
- Permanent Magnet Excitation
- With Up-sized 832 kW alternator: K0832124Y23
- MLCB, 100% rated, LSI Electronic Trip - Series G - NG Frame
- With Trips and Aux - Left Hand Side (LH)
  - 1000 Amp
- 225 AH, 1155 CCA Group 8D Batteries, with rack, installed
- Coolant Heater, 2500W - 240VAC
- Heavy Duty Air Cleaner
- Battery Charger, 10 Amp - 120VAC - NFPA 110 compliant, installed
- Alternator Strip Heater - 120VAC - 150Watts per Heater
- Engine Run Relay
- Flush Mount Annunciator Kit
- Oil Temp Sender
- Std set of 3 Manuals
- 2-Year Comprehensive Warranty
- MD0600KG22181D18PPLY2

Enclosures for each unit

- Level 2 Acoustic Enclosure, Aluminum
  - Industrial Grey Baked-On Powder Coat Finish
- 180 MPH Wind Rating
- UL2200
- EPA Certified
- Power Zone Digital Control Panel for Single or MPS Generators
  - Meets NFPA 99 and 110 requirements
  - Temp Range -40 to 70 degrees C
  - Humidity 2 – 95% (Non Condensing)
  - UL6200
  - C-ETL-US
  - CE
  - FCC
  - IEC801 (Radiated Emissions, Susceptibility, and Surge Immunity)
  - 7” Resistive Color Touchscreen
    - Built-in Wi-Fi, Bluetooth, and Webserver
    - IP65 (front)
    - Auto/Manual/Off key switch, Alarm Indication, Not in Auto Indication, audible alarm, emergency stop switch
  - Dual Core Digital Microprocessor
    - RS485, Ethernet and CANbus ports
  - All engine sensors are 4-20ma for minimal interference
    - Sensors: Oil Pressure, optional Oil Temp, Coolant Temp and Level, Fuel Level/Pressure (where applicable), Engine Speed, DC Battery Voltage, Run-time Hours, Generator Voltages, Amps, Frequency, Power, Power Factor

        - Alarm Status: Low or High AC Voltage, Low or High Battery Voltage, Low or High Frequency, Pre-low or Low Oil Pressure, Pre-high or High Oil Temp (optional), Low Water Level and Temp, Pre-high or High Engine Temp, High, Low, and Critical-low Fuel Level/Pressure (where applicable), Overcrank, Over and Under Speed, Unit Not in Automatic
        - Programmable I/O
        - Built-in PLC for special applications
    - Engine function monitoring and control:
        - Full range standby operation; programmable auto crank, Emergency Stop, Auto-Off-Manual switch
        - Isochronous Governor
            - 0.25% digital frequency regulation with: soft-start ramping - adjustable, gain - adjustable, overshoot limit - adjustable
        - 3 Phase RMS Voltage Sensing
            - +/-0.5% digital voltage regulation with: soft-start voltage ramping - adjustable, loss of sensing protection - adjustable, negative power limit - adjustable, Hi/Lo voltage limit - adjustable, V/F slope and gain - adjustable, fault protection

Other accessories included with this package:

- Quantity 1 - POWER ZONE PERMISSIVE/LOAD SHE
    - PZ Permissive/Load Shed-NEMA3R
- Quantity 4 - 21 LIGHT ANN MODBUS W/RRP SURF
- Quantity 4 - FLUSH MOUNT ANNUNCTOR KIT GREY

Quantity 4 - Start-Up :

- Initial Start-Up and Testing with Four (4) Hr. Load Bank

Quantity 4 - FOB Factory - Freight allow to job-site Offloading by others (Not included on FSA Pricing)
Installation is not quoted on this Proposal at this time.

4,550 Gallon CPS "Enviroshield Economy" UL 142, FDEP Subbase Fuel Tank (EQ# 533):

- Approximate Dimensions: 276" L x 114" W x 48" H (estimated dry weight: 10,500lbs)
- Capacity based on 96 hours @ 41.4gph (100% Load) **3,980 Useable Gallons**
- 10ga Mild Steel Primary Tank, 7ga Mild Steel Secondary Tank
- Rupture Basin with FDEP Approved Leak Detection Switch (Madison M-7000 EQ#682)
- Mechanical Fuel Level Gauge (Kreuger Model H)
- Provide and Install (1) Rochester Spiral Type Fuel Gauge (8680) with Generac Sender.
- Supply and Return Connections
- 2" Fill with Lockable Cap with FDEP Spill Containment and Overfill Prevention Valve (Morrison 9095AA-0200AV EQ#851)
- Normal and Emergency Vent Fittings Installed Per UL-142
- Low Level Fuel Alarm Switch (Madison M-7000 EQ#682) Set @ 35% Remaining Capacity Wired to Generator Control Panel (final termination to terminal strip to be done by installing technician)
- High Level Fuel Alarm Switch (Madison M-7000 EQ#682) Set @ 90% Tank Capacity Wired to Generator Control Panel (final termination to terminal strip to be done by installing technician)
- Cable Stub Up Opening Under Circuit Breaker
- Generator Set to be Mounted on Tank Flanges
- 2 Lifting Points per Side (4 Total) for Lifting Generator Set, Enclosure and Tank (Empty)
- Tank coated with Two Part Epoxy Primer and painted Gloss Black.

EXHIBIT E

One set of OSHA Platforms and Stairs for all five (5) units is included on this proposal

OSHA Compliant Stairs and Walkways:
Coastline Power Solutions to Provide the Following:

OSHA Compliant Stairs and Walkways:

- (3) Set of OSHA Compliant Stairs and Railings and Walkway with Railings: 145” Long x 40” Wide x 48” Tall (to be located between generator sets).
- (2) Set of OSHA Compliant Stairs and Railings and Walkway with Railings: 145” Long x 40” Wide x 48” Tall (to be located at the end of the generator sets).
- (1) Set of OSHA Compliant Walkway: 689” Long x 40” Wide x 48” Tall.
- Railings to be Constructed of 1 ½” Aluminum Tube.
- Steps and Walkways Constructed of Extruded Aluminum
- Leveling Pads
- Stairs Set to be Shipped Loose and Assembled on Site by Others
- ***Designed to Work with (4) SD600 with (3) Sets of Conjoining Platforms, (2) Sets of End Platforms and a Full Length Set of Platforms Across the Rear of All the Units.***

Ship under Vacuum:

- Tank sealed and shipped under vacuum per Florida Administrative Code Chapter 62-762 and NFPA30
- Tank Vacuum to be Verified and Documented per NFPA-30 Immediately upon receipt and placement at the job site.

Notes

1. This Quotation is based upon Engineering Specifications _____ & Drawings _____. No other sections shall apply.

2. Quotation is valid for 60 days. If not released to production within 60 days, pricing, delivery extension and escalation charges may apply.

3. ACF Standby Systems is not responsible for any delays in delivery due to Act of Nature, explosion, fire, strikes, accidents, war, terrorism, flood, accidents, or other causes beyond our company control. Quoted shipping schedules are not guaranteed and subject to change without notice. In no case is ACF Standby Systems responsible for incidental or consequential damages.

4. ACF Standby Systems does not accept liquidated damages as a part of third-party contracts.

5. Equipment will be invoiced (and payment expected according to ACF's Terms and Conditions) at the time of shipment or when ready to ship from point of origin. Delays by the buyer may result in storage fees and/or additional freight charges.

6. Completed equipment to be delivered to a 3rd party manufacturer for further fabrication will be invoiced upon shipment to the 3rd party manufacturer.

7. The warranty is that of the above-named manufacturer(s). Refer to the manufacturer’s warranty statement for details. No special warranty is implied. The Manufacturer’s warranty begins on the day of start-up or 6 months after shipment, whichever occurs first, not substantial completion. It is the contractor’s responsibility to coordinate start-up along with the date of substantial completion.

8. If the generator set is not installed and ready for startup within 6 months of shipment it will require long term storage procedures. Please refer to the Operation and Maintenance Manual for such requirements. All costs related to long term storage is the responsibility of the purchaser. Failure to follow these procedures may void warranty and affect equipment operation. Contact ACF Standby Systems for assistance.

EXHIBIT E

9. Additional sets of O&M manuals are available at an additional cost. The manufacturer's standard format shall apply. Custom O&M manuals will be available at an additional charge.

10. Startup services will not proceed until the buyer's account is current and in good standing.

11. Quotation does not include offloading, rigging, anchoring, installation, exhaust plumbing, exhaust insulation, fuel or permitting.

12. ACF Standby Systems is not responsible for testing of fuel tank(s) provided by any party. Fuel tank testing, as required by FDEP (Florida Department of Environmental Protection) Chapters 62-761 and 62-762, is the responsibility of the installing Contractor and Generator Permit Applicant. ACF Standby Systems LLC is not responsible for damages or costs incurred by any party, when a fuel tank is filled before field testing required under FDEP or testing mandated by a Local Inspector of Authority under FBC, is performed.

13. Pricing is subject to ACF Standby Systems' Payment Terms.

Terms and Conditions

This proposal is subject to ACF Terms and Conditions of Sale, attached.

Sincerely,

Carlos Aceituno

A-F, Inc.
A-F Standby Systems
Power Generation
http://acfstandbysystems.com/

Carlos Aceituno, E.E.
Director of Engineering & Sales
Direct (407) 450-5393
Fax (866) 566-4238
Email c.aceituno@acfpower.com

GENERAC | INDUSTRIAL POWER

FLORIDA SHERIFFS ASSOCIATION COOPERATIVE PURCHASING PROGRAM

ABC Associated Builders and Contractors, Inc. MEMBER

Acceptance of Quote

EXHIBIT E

MD600 | 18.1L | 600 kW

INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency

GENERAC® | INDUSTRIAL POWER

ES2189124

City of Naples

4 x 600kW Parallel System

Standby Power Rating
600 kW, 750 kVA, 60 Hz

Prime Power Rating*
540 kW, 675 kVA, 60 Hz

ISO 9001:2008

USA ENGINEERED & BUILT*
*Assembled in the USA using domestic and foreign parts

*EPA Certified Prime ratings are not available in the US or its Territories

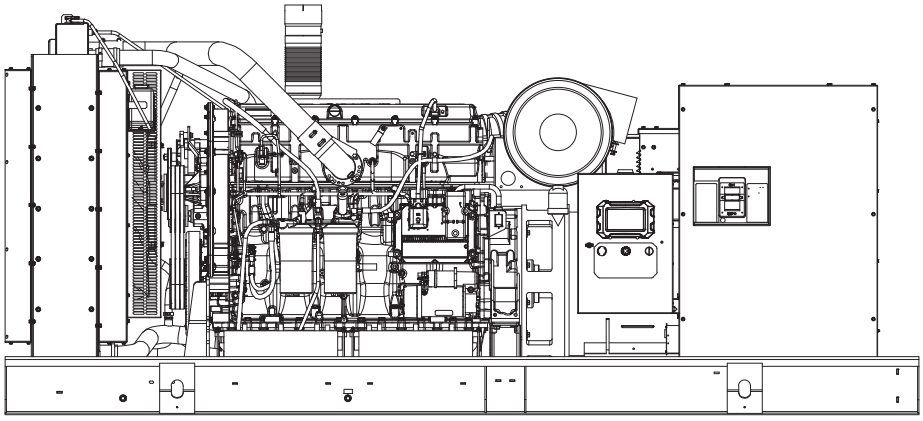


Image used for illustration purposes only

Codes and Standards

Not all codes and standards apply to all configurations. Contact factory for details.

UL2200, UL6200, UL1236, UL489, UL142

CSA C22.2, ULC S601

BS5514 and DIN 6271

SAE J1349

NFPA 37, 70, 99, 110

NEC700, 701, 702, 708

ISO 3046, 7637, 8528, 9001

NEMA ICS10, MG1, 250, ICS6, AB1

ANSI C62.41

Powering Ahead

For over 60 years, Generac has provided innovative design and superior manufacturing.

Generac ensures superior quality by designing and manufacturing most of its generator components, including alternators, enclosures and base tanks, control systems and communications software.

Generac gensets utilize a wide variety of options, configurations and arrangements, allowing us to meet the standby power needs of practically every application.

Generac searched globally to ensure the most reliable engines power our generators. We choose only engines that have already been proven in heavy-duty industrial applications under adverse conditions.

Generac is committed to ensuring our customers' service support continues after their generator purchase.

EXHIBIT E

MD600 | 18.1L | 600 kW

INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency

GENERAC® | INDUSTRIAL POWER

STANDARD FEATURES

ENGINE SYSTEM

- Oil Drain Extension
- Heavy Duty Air Cleaner
- Level 1 Fan and Belt Guards (Open Set Only)
- Stainless Steel Flexible Exhaust Connection
- Critical Silencer (Enclosed Units Only)
- Factory Filled Oil and Coolant
- Radiator Duct Adapter (Open Set Only)

FUEL SYSTEM

- Primary Fuel Filter
- Secondary Fuel Filter

COOLING SYSTEM

- Closed Coolant Recovery System
- UV/Ozone Resistant Hoses
- Factory-Installed Radiator
- 50/50 Ethylene Glycol Antifreeze
- Radiator Drain Extension

ELECTRICAL SYSTEM

- Battery Charging Alternator
- Battery Cables
- Battery Tray
- Rubber-Booted Engine Electrical Connections
- Solenoid Activated Starter Motor

ALTERNATOR SYSTEM

- UL2200 GENprotect™
- 12 Leads (3-Phase, Non 600V)
- Class H Insulation Material
- Vented Rotor
- 2/3 Pitch
- Skewed Stator
- Auxiliary Voltage Regulator Power Winding
- Amortisseur Winding
- Permanent Magnet Excitation
- Sealed Bearings
- Automated Manufacturing (Winding, Insertion, Lacing and Varnishing)
- Full Load Capacity Alternator
- Protective Thermal Switch
- Main Line Circuit Breaker

GENERATOR SET

- Internal Genset Vibration Isolation
- Separation of Circuits - High/Low Voltage
- Separation of Circuits - Multiple Breakers
- Wrapped Exhaust Piping (Enclosed Units Only)
- Standard Factory Testing
- 2 Year Limited Warranty (Standby Rated Units)
- 1 Year Limited Warranty (Prime Rated Units)
- Silencer Mounted in the Discharge Hood (Enclosed Units Only)

ENCLOSURE (If Selected)

- Rust-Proof Fasteners with Nylon Washers to Protect Finish
- High Performance Sound-Absorbing Material (Sound Attenuated Enclosure)
- Gasketed Doors
- Upward Facing Discharge Hoods (Radiator and Exhaust)
- Stainless Steel Lift Off Door Hinges
- Stainless Steel Lockable Handles
- RhinoCoat™ - Textured Polyester Powder Coat Paint

FUEL TANKS (If Selected)

- UL 142/ULC S601
- Double Wall
- Vents
- Sloped Top
- Sloped Bottom
- Factory Pressure Tested (2 psi)
- Rupture Basin Alarm
- Fuel Level
- Check Valve in Supply and Return Lines
- RhinoCoat™ - Textured Polyester Powder Coat Paint

CONTROL SYSTEM

Power Zone® Pro Sync Controller

- NFPA 110 Level 1 Compliant
- Engine Protective Functions
- Alternator Protective Functions
- Digital Engine Governor Control
- Digital Voltage Regulator
- Multiple Programmable Inputs and Outputs
- Remote Display Capability
- Remote Communication via Modbus® RTU, Modbus TCP/IP, and Ethernet 10/100
- Alarm and Event Logging with Real Time Stamping
- Expandable Analog and Digital Inputs and Outputs
- Remote Wireless Software Update Capable
- Wi-Fi®, Bluetooth®, BMS, and Remote Telemetry
- Built-In Programmable Logic Eliminates the Need for External Controllers Under Most Conditions
- Ethernet Based Communications Between Generators
- Programmable I/O Channel Properties
- Built-In Diagnostics
- Arc Flash Maintenance Mode (When Properly Equipped)

Alarms and Warnings

- Low Oil Pressure
- Low Coolant Level
- High/Low Coolant Temperature
- Sensor Failure
- Oil Temperature
- Over/Under Speed
- Over/Under Voltage
- Over/Under Frequency
- Over/Under Current
- Over Load
- High/Low Battery Voltage
- Battery Charger Current
- Phase to Phase and Phase to Neutral Short Circuits (I^2T Algorithm)

7 Inch Color Touch Screen Display

- Resistive Color Touch Screen
- Sunlight Readable (1400 NITS)
- Easily Identifiable Icons
- Multi-Lingual
- On Screen Editable Parameters
- Key Function Monitoring
- Three Phase Voltage, Amperage, kW, kVA, and kVAr
- Selectable Line to Line or Line to Neutral Measurements
- Frequency
- Engine Speed
- Engine Coolant Temperature
- Engine Oil Pressure
- Engine Oil Temperature
- Battery Voltage
- Hourmeter
- Warning and Alarm Indication
- Diagnostics
- Maintenance Events/Information

PARALLELING CONTROLS

- Auto-Synchronization Process
- Isochronous Load Sharing
- Reverse Power Protection
- Maximum Power Protection
- Electrically Operated, Mechanically Held Paralleling Switch
- Sync Check System
- Independent On-Board Paralleling
- Optional Programmable Logic Full Auto Back-Up Controls (PLS)
- Shunt Trip and Auxiliary Contact

EXHIBIT E

MD600 | 18.1L | 600 kW

INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency

GENERAC® | INDUSTRIAL POWER

APPLICATION AND ENGINEERING DATA

ENGINE SPECIFICATIONS

General

Make	Perkins
Cylinder #	6
Type	In-Line
Displacement - In^3 (L)	1,106.36 (18.13)
Bore - in (mm)	5.71 (145)
Stroke - in (mm)	7.20 (183)
Compression Ratio	14.5:1
Intake Air Method	Turbocharged/Aftercooled
Cylinder Head Type	4-Valve
Piston Type	Aluminum
Crankshaft Type	I-Beam Section

Engine Governing

Governor	Electronic Isochronous
Frequency Regulation (Steady State)	±0.25%

Lubrication System

Oil Pump Type	Gear Driven
Oil Filter Type	Full Flow
Crankcase Capacity - qt (L)	47.55 (45)

Cooling System

Cooling System Type	Centrifugal
Fan Type	Pusher
Fan Speed - RPM	1,439
Fan Diameter - in (mm)	38 (965)

Fuel System

Fuel Type	Ultra Low Sulfur Diesel #2
Carburetor	ASTM
Fuel Filtering (Microns)	Primary 10 - Secondary 2
Fuel Inject Pump	Electronic
Injector Type	MEUI
Engine Type	Pre-Combustion
Fuel Supply Line - in (mm)	0.5 (12.7) NPT
Fuel Return Line - in (mm)	0.5 (12.7) NPT

Engine Electrical System

System Voltage	24 VDC
Battery Charger Alternator	70 A
Battery Size	See Battery Index 0161970SBY
Battery Voltage	(2)-12 VDC
Ground Polarity	Negative

ALTERNATOR SPECIFICATIONS

Standard Model	K0600124Y23
Poles	4
Field Type	Revolving
Insulation Class - Rotor	H
Insulation Class - Stator	H
Total Harmonic Distortion	<3%
Telephone Interference Factor (TIF)	<50
Standard Excitation	Permanent Magnet
Bearings	Single Sealed Cartridge
Coupling	Direct via Flexible Disc
Prototype Short Circuit Test	Yes
Voltage Regulator Type	Digital
Number of Sensed Phases	All
Regulation Accuracy (Steady State)	±0.25%

EXHIBIT E

MD600 | 18.1L | 600 kW

INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency

OPERATING DATA

POWER RATINGS - DIESEL

		Standby
Three-Phase 277/480 VAC @0.8pf	600 kW	Amps: 902
Three-Phase 346/600 VAC @0.8pf	600 kW	Amps: 722

MOTOR STARTING CAPABILITIES (skVA)

skVA vs. Voltage Dip

277/480 VAC	30%
K0600124Y23	1,560
K0832124Y23	2,800

FUEL CONSUMPTION RATES*

Fuel Pump Lift - ft (m)
12 ft (3.7)

Total Fuel Pump Flow (Combustion + Return) gph (Lph)
121 (457)

Diesel - gph (Lph)

Percent Load	Standby
25%	18.4 (69.7)
50%	28.2 (88.7)
75%	35.6 (124.8)
100%	41.4 (156.7)

* Fuel supply installation must accommodate fuel consumption rates at 100% load.

COOLING

		Standby
Coolant Flow	gpm (Lpm)	114.1 (432)
Coolant System Capacity	gal (L)	15.5 (58.6)
Heat Rejection to Coolant	BTU/hr (kW)	1,589,760 (466)
Air Flow (Fan Air Flow Across Radiator) - Open Set	cfm (m^3/min)	30,088 (852)
Maximum Operating Ambient Temperature	°F (°C)	122 (50)
Maximum Operating Ambient Temperature (Before Derate)	See Bulletin No. 0199280SSD	
Maximum Additional Radiator Backpressure	in H_2O (kPa)	0.5 (0.12)

COMBUSTION AIR REQUIREMENTS

	Standby
Flow at Rated Power - cfm (m^3/min)	1,836 (52)

ENGINE

		Standby
Rated Engine Speed	RPM	1,800
Horsepower at Rated kW**	hp	909
Piston Speed	ft/min (m/min)	2,161 (659)
BMEP	psi (kPa)	361 (2,489)

EXHAUST

		Standby
Exhaust Flow (Rated Output)	cfm (m^3/min)	5,085 (144)
Maximum Allowable Backpressure (Post Silencer)	inHg (kPa)	2.13 (6.9)
Exhaust Temperature (Rated Output - Post Turbo)	°F (°C)	1,155 (624)

** Refer to "Emissions Data Sheet" for maximum bHP for EPA and SCAQMD permitting purposes.

Deration – Operational characteristics consider maximum ambient conditions. Derate factors may apply under atypical site conditions.
Please contact a Generac Power Systems Industrial Dealer for additional details. All performance ratings in accordance with ISO3046, BS5514, ISO8528, and DIN6271 standards.
Standby - See Bulletin 0187500SSB
Prime - See Bulletin 0187510SSB

EXHIBIT E

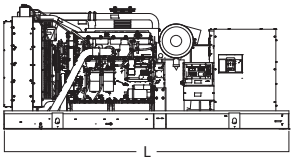
MD600 | 18.1L | 600 kW

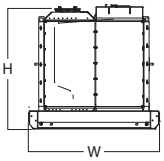
INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency

GENERAC® | INDUSTRIAL POWER

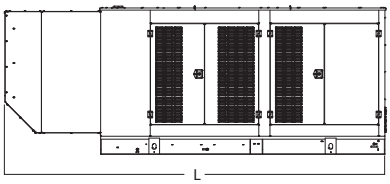
DIMENSIONS AND WEIGHTS*

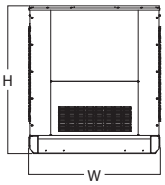




OPEN SET

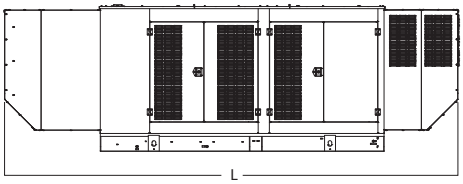
Run Time - Hours	Usable Capacity - Gal (L)	L x W x H - in (mm)	Weight - lbs (kg)
No Tank	-	154.4 (3,923) x 71.0 (1,803) x 67.5 (1,715)	8,520 - 10,778 (3,464 - 4,889)
8	334 (1,264)	158.5 (4,025) x 71.0 (1,803) x 81.5 (2,071)	10,195 - 12,453 (4,224 - 5,649)
24	1,001 (3,789)	158.5 (4,025) x 71.0 (1,803) x 103.5 (2,629)	11,120 - 13,378 (4,643 - 6,068)
24	1,001 (3,789)	228.0 (5,791) x 71.0 (1,803) x 92.5 (2,350)	11,670 - 13,928 (4,893 - 6,318)
48	2,002 (7,578)	290.0 (7,366) x 71.0 (1,803) x 103.5 (2,629)	13,370 - 15,628 (5,664 - 7,089)

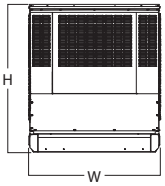




WEATHER PROTECTED ENCLOSURE

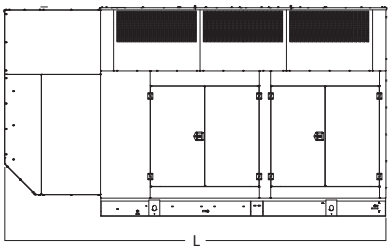
Run Time - Hours	Usable Capacity - Gal (L)	L x W x H - in (mm)	Weight (Enclosure Only) - lbs (kg)
No Tank	-	207.4 (5,268) x 71.0 (1,800) x 80.0 (2,032)	Steel: 2,267 (1,129) Aluminum: 1,180 (536)
8	334 (1,264)	207.4 (5,268) x 71.0 (1,800) x 94.0 (2,388)	
24	1,001 (3,789)	207.4 (5,268) x 71.0 (1,800) x 116.0 (2,946)	
24	1,001 (3,789)	228.0 (5,791) x 71.0 (1,800) x 105.0 (2,667)	
48	2,002 (7,578)	290.0 (7,366) x 71.0 (1,800) x 116.0 (2,946)	

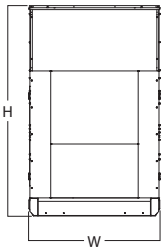




LEVEL 1 SOUND ATTENUATED ENCLOSURE

Run Time - Hours	Usable Capacity - Gal (L)	L x W x H - in (mm)	Weight (Enclosure Only) - lbs (kg)
No Tank	-	247.5 (6,285) x 71.0 (1,800) x 80.0 (2,032)	Steel: 3,273 (1,485) Aluminum: 1,613 (732)
8	334 (1,264)	247.5 (6,285) x 71.0 (1,800) x 94.0 (2,388)	
24	1,001 (3,789)	247.5 (6,285) x 71.0 (1,800) x 116.0 (2,946)	
24	1,001 (3,789)	247.5 (6,285) x 71.0 (1,800) x 105.0 (2,667)	
48	2,002 (7,578)	290.0 (7,366) x 71.0 (1,800) x 116.0 (2,946)	





LEVEL 2 SOUND ATTENUATED ENCLOSURE

Showing: without Fuel Tank

SEE COASTLINE POWER SOLUTIONS DRAWINGS FOR FUEL TANK AND STAIRS

* All measurements are approximate and for estimation purposes only.

YOUR FACTORY RECOGNIZED GENERAC INDUSTRIAL DEALER

Specification characteristics may change without notice. Dimensions and weights are for preliminary purposes only. Please contact a Generac Power Systems Industrial Dealer for detailed installation drawings.

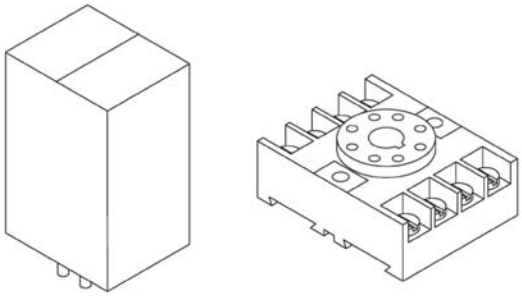
SPEC SHEET

Generac Power Systems, Inc. | P.O.Box 8 | Waukesha, WI 53189
P: (262) 544-4811 ©2021 Generac Power Systems, Inc. All rights reserved. All specifications are subject to change without notice.

Part No. A0001404643
Rev. A 06/14/2021

EXHIBIT E

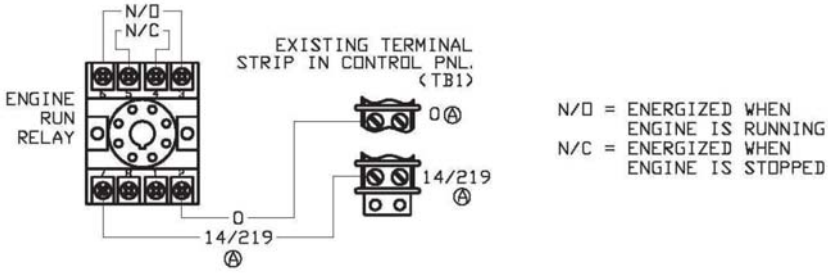
ENGINE RUN RELAY



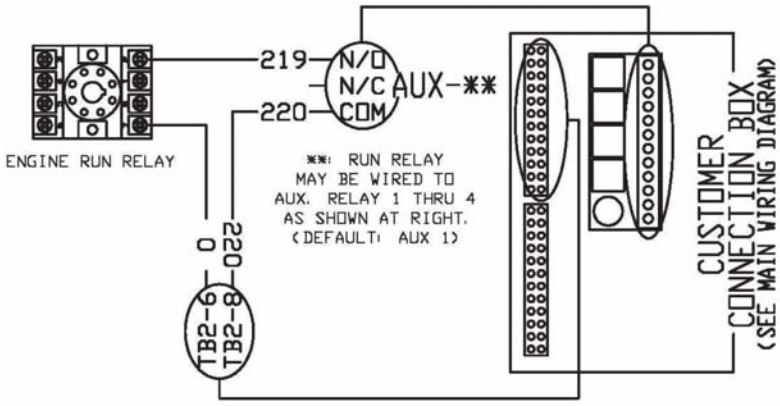
- For use with Generac's Digital Control Platforms
- 10 Amp Contact Rating
- 12 or 24 Volt DC Input
- Contact Open or Closure on Engine Run

Contacts	
Type	DPDT
Material	Silver
Rating	UL 10A @ 240VAC 10A @ 30VDC
Coils	
Input Voltage	24VDC
Resistance	400 Ohms
Nominal Power	1.5W

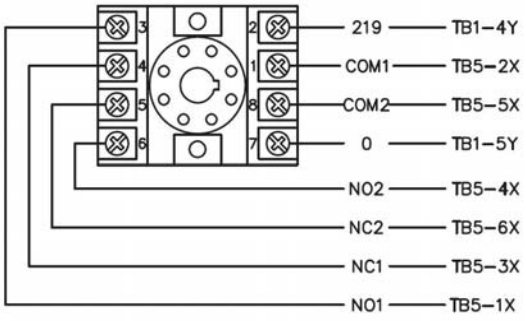
Wiring Diagram with E panel, H-100 Panel



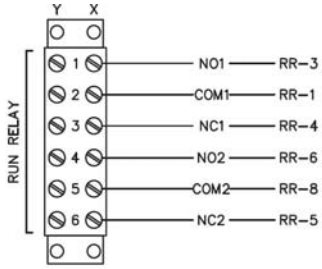
Wiring Diagram with PMDCP



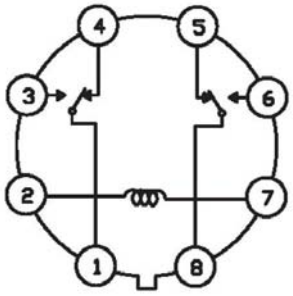
Wiring Diagram with Power Zone Pro Sync



TB5



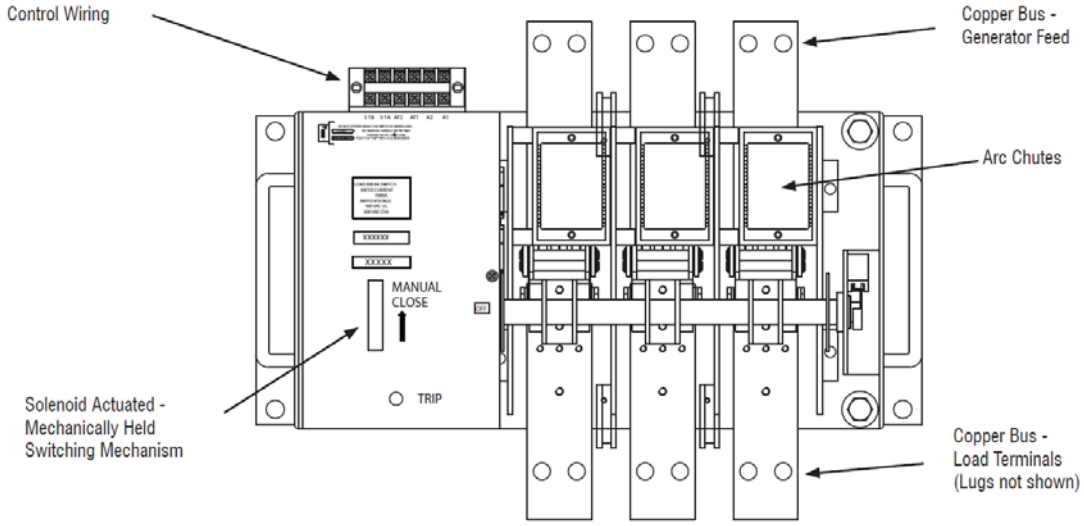
Pin Detail



 © 2019 Generac Power Systems, Inc. All rights reserved. All specifications are subject to change without notice.

EXHIBIT E

MPS Paralleling Switch



Features

Generac's paralleling switch is an integral, plant-mounted paralleling device. This unit-mounted switch allows Generac's Modular Power System (MPS) to parallel without external switchgear. Controlled by the genset's PowerManager® controller, these heavy duty switches are solenoid actuated, mechanically held, and serve as the customer connection point for each MPS generator set's power output cabling.

Specifications

Manufactured By ..... Generac Power Systems
Rating ..... Continuous (100% Rated)
Contact Material ..... Silver Plated Copper
Arc Chutes ..... Heavy Duty
Switching Mechanism ..... Heavy Duty Solenoid Actuated - Mechanically Held
Life Test ..... 20,000 Cycles Minimum
Approval ..... UL/CSA
Connections ..... Bus Connections to Lugs
Features ..... Contacts May Be Inspected Visually Without Switch Disassembly

Contactor Rating	400 Amp	600 Amp	1,000 Amp
Withstand Rating	35,000	42,000	65,000
Lug (Quantity) Sizes*	(2) 250 mcm or (1) 600 mcm/phase	(2) #1 to 500 mcm/phase	(4) 4-0 to 500 mcm/phase
Bus Size (Inches)	1.57 x 0.20	1.38 x 0.59	2 x 0.59

*Contact Your Generac Industrial Dealer for Optional Lug Sizes

Generac Power Systems, Inc. | P.O. Box 8 | Waukesha, WI 53187
P: (262) 544-4811 © 2019 Generac Power Systems, Inc. All rights reserved. All specifications are subject to change without notice.

Part No. 0183530SBY
Rev. F 10/22/19

EXHIBIT E

GENERAC | INDUSTRIAL POWER

POWER ZONE® CONTROL PLATFORM
Power Zone® Pro Sync Controller

Features

The Generac Power Zone® Digital Control Platform is a fully integrated and multipurpose family of controllers for Generac's single and Modular Power Systems (MPS).

Standard Single Unit Control Features*
- Engine Protective Functions
- Alternator Protective Functions
- Digital Engine Governor Control
- Digital Voltage Regulator
- 7" Color Touch Screen
- Multi-Lingual
- Multiple Programmable Inputs and Outputs
- Remote Display Capability
- Remote Communication via Modbus® RTU, Modbus TCP/IP, Ethernet 10/100, SNMP
- Alarm and Event Logging with Real Time Stamping
- Expandable Analog and Digital Inputs and Outputs
- Wireless Software Update via Remote Computer
- Wi-Fi, Bluetooth, BMS and Remote Telemetry
- USB Port for Easy Log Data Downloads and Firmware Updates
- Analog Input Bias for Speed and Voltage◊
- E-mail Notifications for Alarm Conditions and Log Data†

Additional Standard Parallel Control Features**
- Paralleling Control (Synchronizing)
- Reverse Power
- Loss of Synchronization Between Gensets
- Load and VAR Sharing

Standard System Control Features
- Built-In PLC Logic Eliminates the Need for External Controllers Under Most Conditions
- Ethernet Based Communications Between Gensets
- Programmable I/O Channel Properties
- Built-In Diagnostics

Customer Ports
- 1 - RS485 - Modbus RTU (Main Controller)
- 1 - RJ45 - Remote Annunciator Panel/Remote Relay Panel (Main Controller)
- 1 - CANBus - Power Zone® Accessories (Main Controller)
- 1 - RJ45 - Modbus TCP/IP or Ethernet 10/100 (Display)
- 2 - Type A USB (Display)

PLC (Built-In Programmable Logic Controller)
- Boolean Logic Programming (Ladder)
- 16 Timers
- 16 Counters
- Counter Reset
- Configurable Through Software Tool

Protections
- Low Oil Pressure
- Low Coolant Level
- High/Low Coolant Temperature
- Sender Failure
- Oil Temperature
- Over/Under Speed
- Over/Under Voltage
- Over/Under Frequency
- Over/Under Current
- Over Load
- Battery Voltage
- Battery Charger Current
- Phase to Phase and Phase to Neutral Short Circuits (I^2T Algorithm)

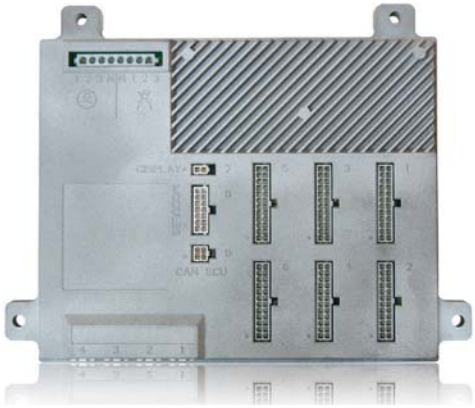
* For SG and SD Models
** For MG and MD Models

◊ Not Available in Parallel Controller
† Requires Use of a Network Accessible Authenticated or Open SMTP Server

Part No. 10000024063
Rev. J 07/06/20

EXHIBIT E

POWER ZONE® CONTROL PLATFORM
Power Zone® Pro Sync Controller



Voltage Regulation (Single or Three Phase Module Options)
- Digital Control
- Three Phase Sensing††
- Variable V/F Slope Settings and Adjustable Gains
- Negative Power Limit
- Soft Start Ramping
- Loss of Sensing Protection
- Components Encapsulated for Total Protection
- Paralleling Function for Power Zone®-DSP and Power Zone®-GSP ‡
- Fault Protection (I^2T Function)‡
- High Voltage Limit
- Low Voltage Limit
- Maximum Power Limit
- ±0.5% Voltage Regulation
- ±0.1% Stability

Display (Touch Screen)
- Resistive Color Touch Screen
- Hi-Brite (1400 NITS)
- Easy Identifiable Icons
- Multi-Lingual
- IP65 Rated
- On Screen Editable Parameters
- Key Function Monitoring
  - Three Phase Voltage, Amperage, kW, kVa, and kVAr
  - Selectable Line to Line or Line to Neutral Measurements
  - Frequency
  - RPM
  - Engine Coolant Temperature
  - Engine Oil Pressure
  - Engine Oil Temperature
  - Battery Voltage
  - Warning and Alarm Indication
  - Diagnostics
  - Maintenance Events/Information
  - Hourmeter

Governor Module
- Soft Start Ramping (Multiple Steps)
- Synchronizing Function for Power Zone®-DSP and Power Zone®-GSP Only ‡
- Fully Adjustable Gain (PID)

Qualification Testing
- Life Test in Environmental Chamber
- Temperature Rating -40° C to +60° C
- Humidity 2% to 95% (Non Condensing)
- Vibration Tested and Protected

Connections§
- 27 - Digital Outputs (Open Drain, 35 VDC, 1.7A)
  - 6 Fast PWM Capable
  - 1 High Current
- 20 - Digital Inputs Maximum
  - 6 Fast PWM Capable
- 12 - General Purpose Analog Inputs
- 4 - Fast Analog Inputs
- 4 - Analog Outputs (0-10 VDC)
- 1 - E-Stop Relay Output
- 7 - Current Sense Inputs
- 2 - High Voltage Sense Inputs (Three Phase + Neutral)
- 2 - Magnetic Pickup Inputs
- 1 - Coolant Sensor Input
- 4 - Ethernet Ports
- 3 - CANBus Channels
- 1 - RS-485 Ports
- 2 - Switchable +12V Power Outputs

Codes And Standards
- UL 6200
- C-ETL-US
- CE
- FCC
- NFPA 110 (Software Programmable for Level 1 or 2)§§

Control Panel And Touch Screen
- Auto/Off/Manual
  - Operation Through Key Switch
  - Indication Through Touchscreen
- Alarm Acknowledge Button
- Audible Alarm and Silence
- Emergency Stop
- Not in Auto Indication

†† With Select Voltage Regulators
‡ Configurable Option

§ Actual I/O May Vary Due to Configuration
§§ With Additional Optional Remote Annunciator

Part No. 10000024063
Rev. J 07/06/20

EXHIBIT E

POWER ZONE® CONTROL PLATFORM
Permissive and Load Shed Assembly (P&L)

Model G0071490 NEMA 1 Rated Panel
Model G0071500 NEMA 3R Rated Panel

Model G0071490 pictured

Features

The P&L Assembly is a panel used in a Power Zone® MPS that permits Automatic Transfer Switches (ATS) to close to emergency power via a Permissive signal or commands ATSs to shed load (trip to Neutral) via a Load Shed signal according to the available generator power and the estimated ATS load requirements.

The P&L provides up to six levels of Permissive capability and six levels of Load Shed capability which can be individually configured for kW load rating. The P&L outputs Permissive and Load Shed control signals are connected to the ATSs through relay contacts.

The P&L Assembly monitors the Ethernet messages from each generator on the MPS network to determine the MAC address and IP address of each module. The P&L Controller receives information from each generator via Ethernet at a 1 Hz rate. This information is used to determine the appropriate P&L operation.

- Auto/Off/Manual Key Switch
- Lockable Enclosure Handle with Key
- Rugged Steel Enclosure
  - NEMA 1 for Indoor Use
  - NEMA 3R for Indoor or Outdoor Use with Enclosure Heater
- Field Replaceable Module
- Field Reprogrammable via Ethernet
- Fault Display (LED)
- “Configure Me” Button
- Settings Fully Programmable via Power Zone® Display
- Spare RS-485 Communication Port
- Three Ethernet Ports
- Relay Statuses Indicated through LEDs
- Available Auto/Manual and 2-wire Start Digital Inputs Along with 14 “Gen Run”/Spare Input Signals to Support Back-Up Permissive and Load Shed Functionality

Part No. 10000024902
Rev. C 08/13/19

EXHIBIT E

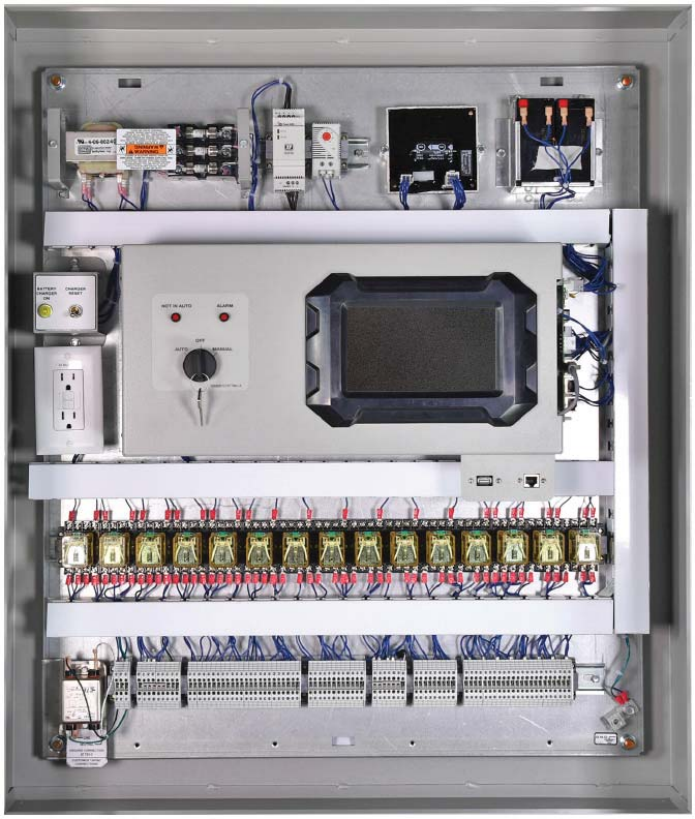
POWER ZONE® CONTROL PLATFORM
Permissive and Load Shed Assembly (P&L)

Operation

Normal ATS Mode- This mode is intended for multiple generators and multiple ATS installations. In this mode, the P&L will receive information from the Power Zone® Generator Controllers to activate Permissives and Load Sheds according to the capacity of generators on the bus. As generators are brought on to the bus, Permissives are activated and Load Sheds are deactivated in the order programmed.

Special ATS Mode- This mode is intended for multiple generators and a single ATS, where the Load Sheds can be utilized for controlling devices other than ATSs (electronically tripped breakers). In this mode, the P&L will receive information from the Power Zone® Generator Controllers and when the generator bus capacity has been reached, the Permissive output will be activated for the one ATS in the system. Load Sheds will be activated according to the capacity of generators on the bus.

Backup Mode - This mode is intended to be a backup should the Generator Communications fail. In this mode if the necessary backup mode wiring has been installed, the P&L will continue to activate Permissives and Load Sheds during a loss of generator communications.

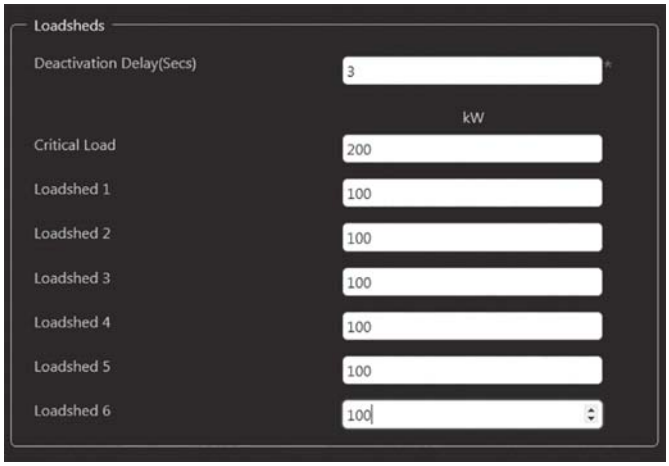


Touch Screens

Home Screen

Permissives Screen

Load Shed Screen



Part No. 10000024902
Rev. C 08/13/19

EXHIBIT E

POWER ZONE® CONTROL PLATFORM
Permissive and Load Shed Assembly (P&L)

Specifications

Environmental and Mechanical
Operating Temperature ..... -14°F to 122°F (-10°C to 50°C)
Humidity ..... 0 to 95% Non Condensing
Pollution Degree 2
Enclosure ..... Type 1/NEMA 1 or Type 3R/NEMA 3R
Weight ..... 125 lbs (56.7 kg) Max
Altitude ..... 9,843 ft (3,000 m) Max

Power Supply
Source ..... Regulated Power Supply
Voltage ..... 120 VAC Single Phase (1PH) 60 Hz
Power Usage ..... 7 Amps (2 Amps Battery Charger, 5 Amps Heater, Power Outlet Amps Not Included)
Supply Cable ..... 3 Wires, Double Insulated

Power Outlet
Voltage ..... 120 VAC Single Phase (1PH) 60 Hz
Current ..... 5 Amps Max

Total Power Requirement
Power Supply and Power Outlet ..... 10 Amps Max

Communication (Ethernet)
Number of Ports 3
Communication Link ..... 4 Wires - RJ-45 - 2 Wire Receive and 2 Wire Transmit
Communication Cable ..... Shielded Cat5e - 2 Twisted Pairs
Maximum Cable Length ..... 328 ft (100 m)
Baud Rate Auto-detect ..... 10/100 Mbps

Digital Inputs/Outputs
Input ..... 0 V to 5 VDC, 1.5 mA Max, 200 Hz
Output ..... 0 V to Vopen-drain VDC, Vbattery Max, 0.5 A Max Sink

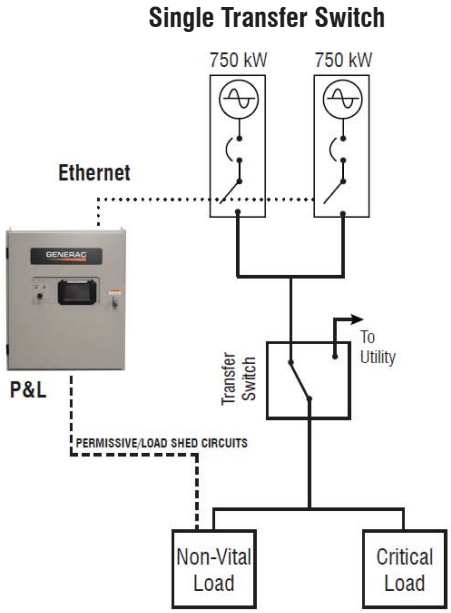
Relay Outputs
Ratings ..... 240 VAC Max, 30 VDC, 5 Amps Relay Output

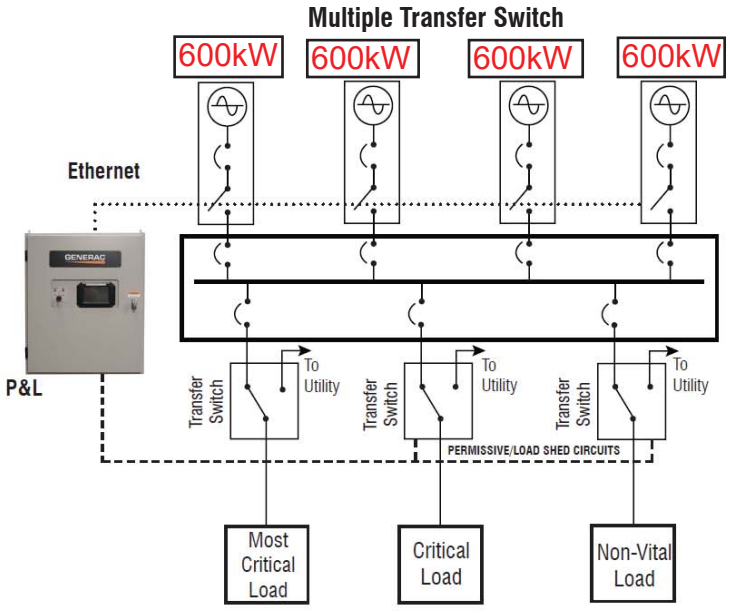
Part No. 10000024902
Rev. C 08/13/19

EXHIBIT E

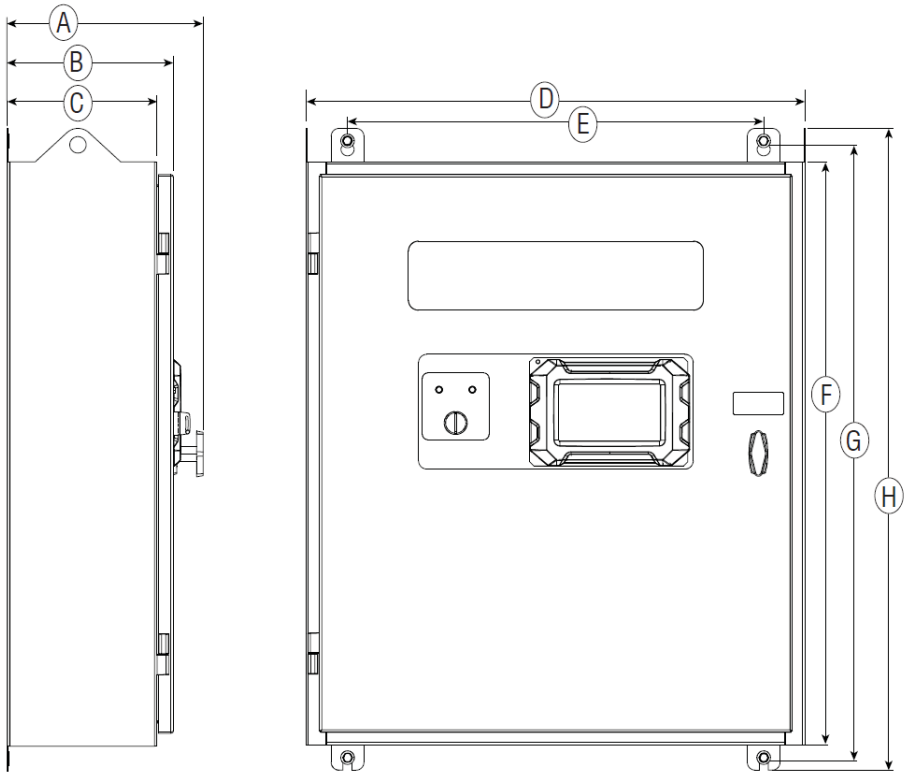
POWER ZONE® CONTROL PLATFORM
Permissive and Load Shed Assembly (P&L)

Configurations





Dimensions



A	11.76 in (298.6 mm)
B	10.0 in (253.6 mm)
C	9.0 in (228.6 mm)
D	30.0 in (762.0 mm)
E	25.0 in (635.0 mm)
F	35.0 in (889.0 mm)
G	37.0 in (939.8 mm)
H	38.5 in (977.9 mm)

 © 2019 Generac Power Systems, Inc. All rights reserved. All specifications are subject to change without notice.

EXHIBIT E

GENERAC | INDUSTRIAL POWER

ALTERNATOR DATA SHEET

K0832124Y23

General Characteristics

Voltages (V)	380, 208/240, 480	Number of Leads	12
Frequency (Hz)	60	Winding Type	Reconnectable
Phases	3	Air Flow (CFM)	7,021
Speed (RPM)	1,800	Total Harmonic Distortion (%)	<5
Excitation System	PMG	Largest Single Harmonic Value (%)	<3.5
Insulation Class	H	Telephone Interference Factor (TIF)	<50
Winding Pitch	2/3	Reference Part Number	OJ9648, OJ9655, GTA352AIDE

Ratings @ 0.8PF Based on 40˚C Ambient

Voltage (V)	80˚C Rise		105˚C Rise		125˚C Rise		150˚C Rise	
	kW	kVA	kW	kVA	kW	kVA	kW	kVA
380	525	656	602	752	656	820	718	898
208/240	541	676	624	780	698	873	730	912
480	644	805	744	930	832	1,040	868	1,085

Reactance Base Data at 480V, 1,040 kVA, 1,800 RPM, 60 Hz, 3Ø

Description	Value
Stator Resistance, Line to Neutral, High Wye Connection (Ω)	0.002
Rotor Resistance (Ω)	2.375
Exciter Stator Resistance - PMG (Ω)	10.25
Exciter Rotor Resistance - PMG (Ω)	Contact Factory
Excitation Winding Resistance - PMG (Ω)	Contact Factory
Xd, Direct Axis Synchronous Reactance (p.u.)	2.4
X2, Negative Sequence Reactance (p.u.)	0.135
X0, Zero Sequence Reactance (p.u.)	0.021
X'd, Direct Axis Transient Reactance (p.u.)	0.174
X"d, Direct Axis Subtransient Reactance (p.u.)	0.124
Xq, Quadrature Axis Synchronous Reactance (p.u.)	0.887
T'd, Direct Axis Transient Short Circuit Time Constant (s)	0.138

Description	Value
T"d, Direct Axis Subtransient Short Circuit Time Constant (s)	0.0012
T'do, Direct Axis Transient Open Circuit Time Constant (s)	1.923
Ta, Short Circuit Time Constant of Armature Winding (s)	0.024
Phase Sequence CCW-NDE	T1, T2, T3
Voltage Balance, L-L or L-N (%)	Contact Factory
Deviation Factor (%)	Contact Factory
High Wye Connection, Sustained 3Ø Short Circuit Current (%) - PMG Only	Contact Factory
X/R	Contact Factory
Short Circuit Ratio	0.42
Heat Rejection (BTU/hr) - 100% Rated Load, 480V, 0.8PF, 120°C Temperature Rise	Contact Factory

Reference: Mil-STD-705B
All Ratings are Nominal

Part No. 0175620SSB
Rev. C 4/16/20

EXHIBIT E

GENERAC | INDUSTRIAL POWER

ALTERNATOR DATA SHEET
K0832124Y23

skVA

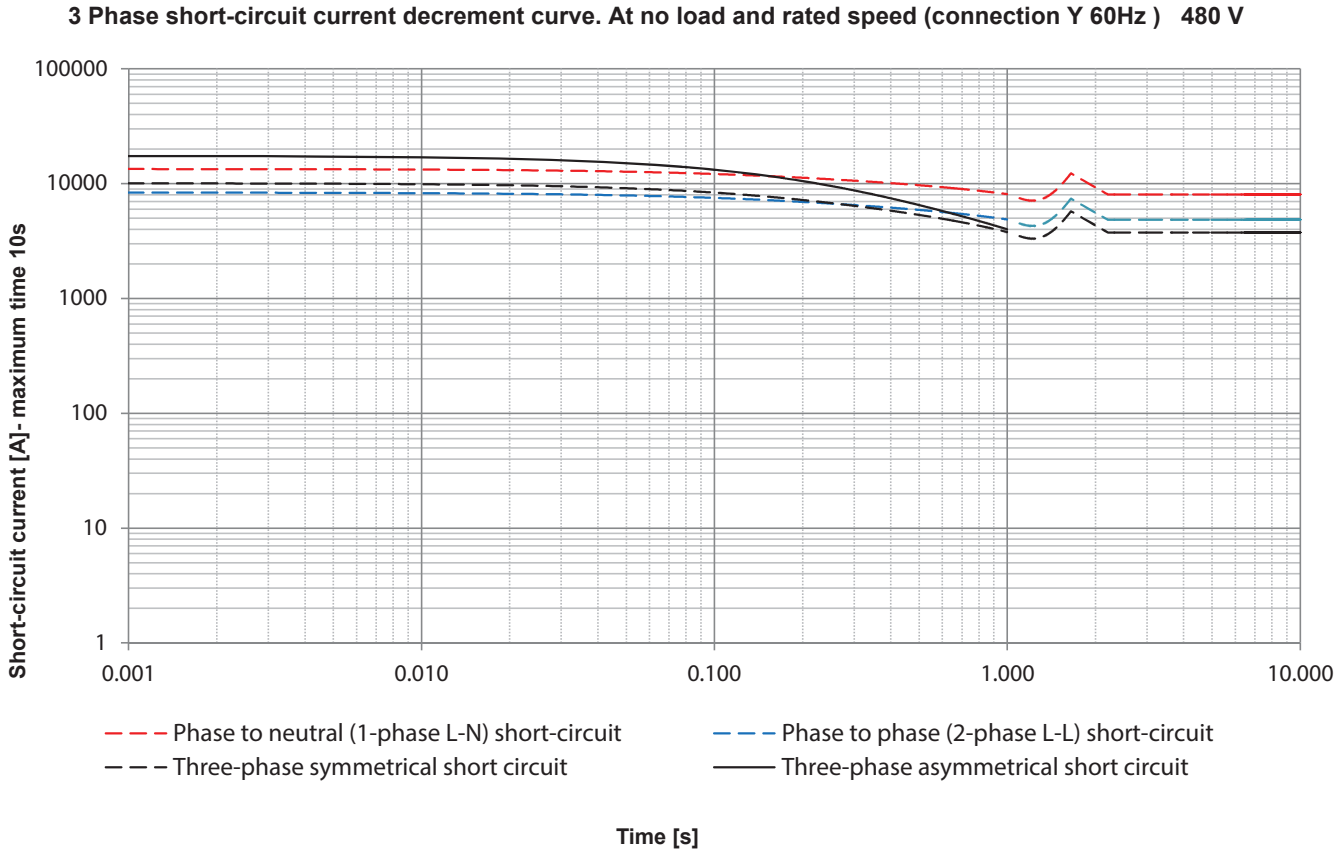
	10%	15%	20%	25%	30%
480V @ 0.3PF	650	1,025	1,450	1,900	2,500
480V @ 0.6PF	700	1,150	1,600	2,200	2,800
208/240V @ 0.3PF	475	750	1,050	1,425	1,850
208/240V @ 0.6PF	500	850	1,200	1,600	2,090
380V @ 0.3PF	400	625	900	1,175	1,500
380V @ 0.6PF	425	700	1,000	1,325	1,700

Efficiencies

*Rated Power	480V @ 0.8PF	480V @ 1.0PF	208/240V @ 0.8PF	208/240V @ 1.0PF	380V @ 0.8PF	380V @ 1.0PF
25%	86.5	89.1	85.6	88.3	85.2	88.2
50%	91.8	93.6	91.2	93.1	90.8	92.9
75%	93.4	94.9	92.8	94.4	92.5	94.1
100%	93.9	95.3	93.3	94.8	92.8	94.5

*Rated kVA value is rating kVA at 125°C Winding Tempeature Rise.

LOG LOG Decrement Curves



 © 2020 Generac Power Systems, Inc. All rights reserved. All specifications are subject to change without notice.

EXHIBIT E

GENprotect ™
Seamless Protection for Industrial Power Generators

GENprotect Operation

The design choice of an onsite power system using a Generac Industrial Power Generator assures your emergency power source is protected from unexpected power distribution faults. Typically, a generator will include some type of over-current device, such as a circuit breaker, or be protected by inherent design with the controller protecting the alternator through a protection algorithm. Generac's GENprotect generator protection system monitors the system current output and protects the alternator with extended security against fault scenarios that could occur within the site's downstream distribution system.

It is a common misconception that the alternator's main circuit breaker protects the alternator from a short circuit event. The main output breaker protects the cabling and provides a convenient disconnect. The characteristic trip curve for the industry standard thermal magnetic breaker (MCCB, molded case thermal magnetic or solid state) does not coordinate with the thermal damage limitation for an on-site generator. If circuit breakers are used for generator protection, a solid-state circuit breaker with full adjustments (Long Time, Short Time and Instantaneous, LSI) is required to coordinate the breaker protection curve within the generator thermal damage curve. Historically, this limitation was often accepted in system design since failures of the main generator feeder are extremely rare. Most short circuit events happen at a branch circuit, equipment level, where the fault is easily cleared by the smaller down stream breakers.

Given the mission critical nature of today's back-up power applications, it is more desirable to protect the system against even relatively rare failure modes. As generator controllers have become more powerful it is feasible for manufactures to supply coordinated short circuit protection integral to the generator control system, negating the need for a main-line circuit breaker.

Generac's GENprotect alternator protection algorithm monitors the generator output. If this monitoring senses short circuit current in excess of rated amps, GENprotect steps in to provide a controlled and safe approach to breaker coordination and alternator protection. GENprotect first limits the alternator short circuit current level to 300%. By limiting the available fault current, GENprotect extends the time the alternator can maintain fault current resulting in consistent breaker coordination. Without this functionality a line to neutral fault may be at 800% of rated current and need to be cleared within 1.4 seconds. The second function GENprotect performs is I2T thermal protection for the alternator. Since a short circuit event can heat the alternator so rapidly, it is not possible to protect the alternator by monitoring temperature. Instead GENprotect calculates the heat energy of the fault current. When this energy reaches the limits of NEMA MG1, GENprotect trips the generator off-line. This configuration ensures the alternator is protected and the power system is ensured 10 seconds of 300% fault current for breaker coordination.

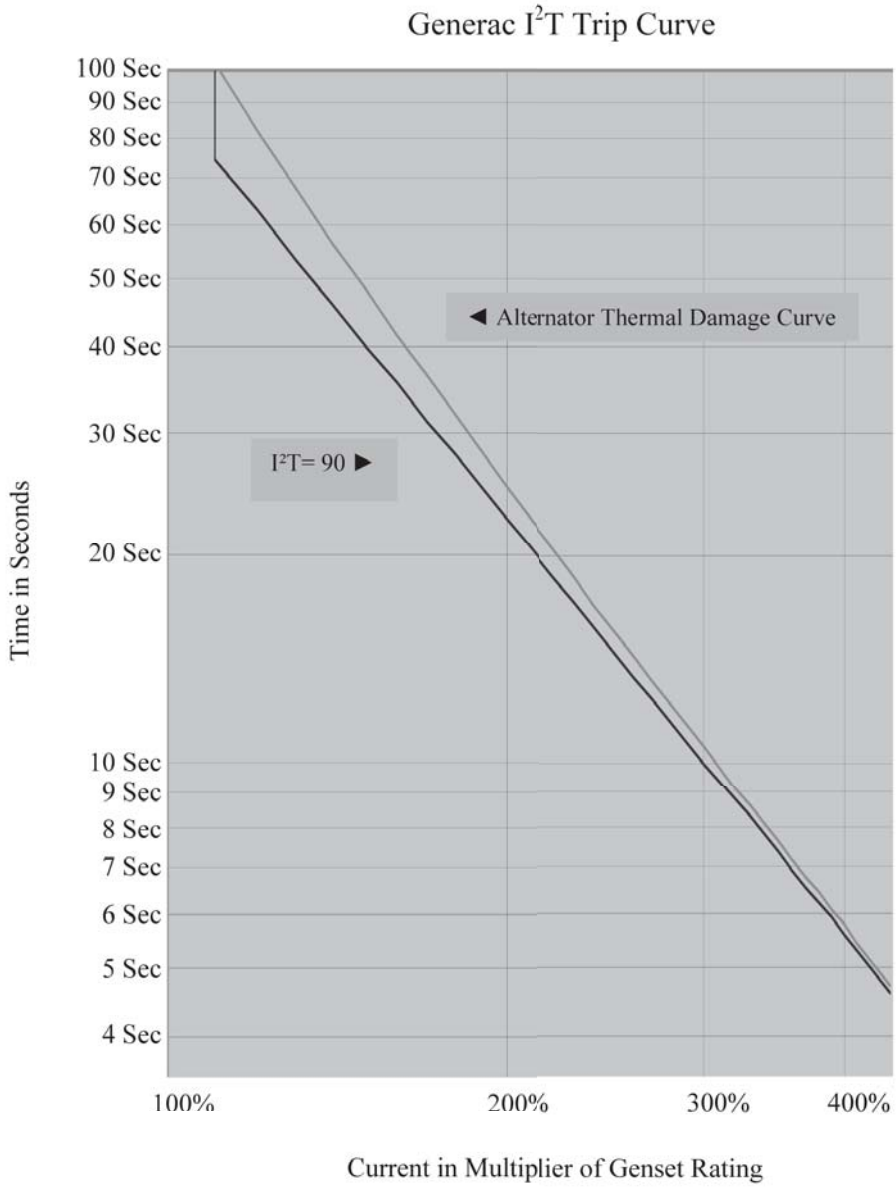
DESCRIPTION

- GENprotect is an alternator protection algorithm approved by UL.
- Protects alternator from damage due to shorts and electrical faults.
- Provides breaker coordination and alternator protection.
- Allows for use of multiple circuit breaker choices, including "no" breaker.

Doc. No 0187980SBY
Rev. D 06/13/19

EXHIBIT E

GENprotect ™
Seamless Protection for Industrial Power Generators



The above Figure shows the Generac GENprotect thermal protection curve for use in protection and coordination studies. The alternator Thermal Damage Curve is shown just to the right of the GENprotect protection curve. If the alternator load is greater than the thermal damage protection curve for the alternator, the generator set will trip off-line. For example, an overload current of 110% for 75 seconds causes an overload alarm and will trip the generator off-line, shutting down the engine. GENprotect will provide generator protection over a full range of time and current, from instantaneous faults to overloads lasting several minutes. An advantage of GENprotect over a MCCB is that GENprotect allows for downstream breakers to clear faults without tripping the generator off-line, providing selective coordination with the first level of downstream breakers.

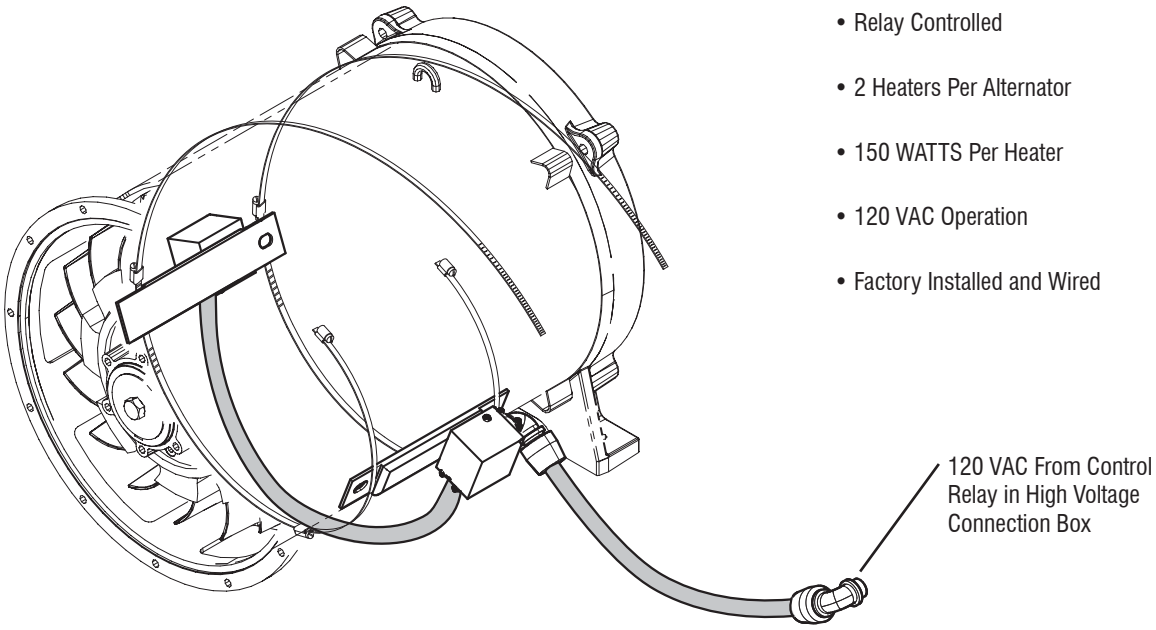
Generac Power Systems, Inc. | P.O. Box 8 | Waukesha, WI 53187
P: (262) 544-4811 © 2019 Generac Power Systems, Inc. All rights reserved. All specifications are subject to change without notice.

Doc. No 0187980SBY
Rev. D 06/13/19

EXHIBIT E

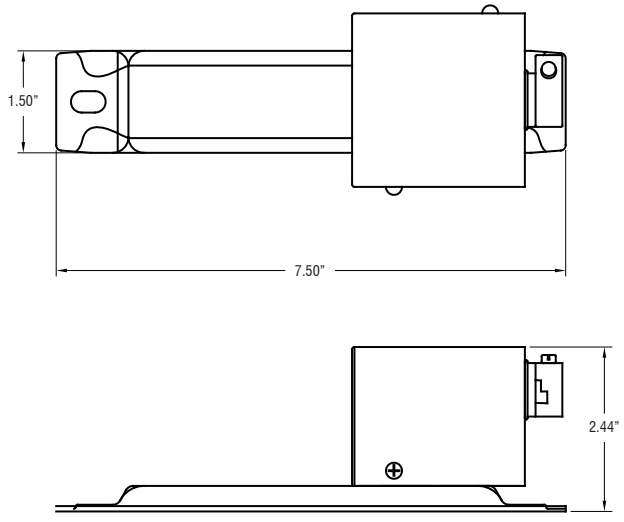
GENERAC | INDUSTRIAL POWER

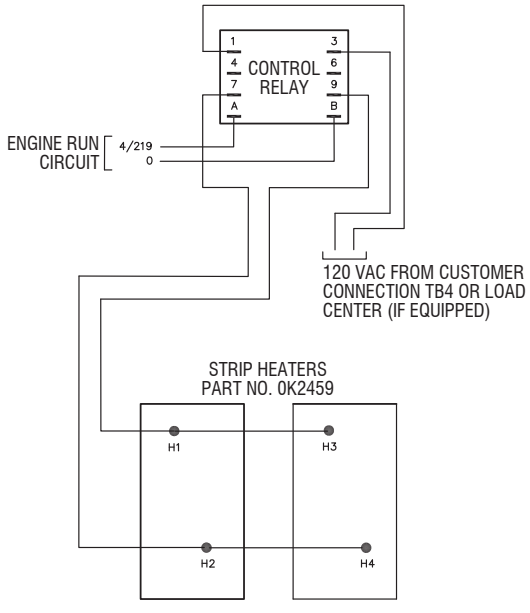
ALTERNATOR STRIP HEATER 120 VAC



Typical Heater Location on Alternator

- Relay Controlled
- 2 Heaters Per Alternator
- 150 WATTS Per Heater
- 120 VAC Operation
- Factory Installed and Wired





WIRING DIAGRAM

Generac Power Systems, Inc. | P.O. Box 8 | Waukesha, WI 53187
P: (262) 544-4811 © 2019 Generac Power Systems, Inc. All rights reserved. All specifications are subject to change without notice.

Part No. 0603480SSD
Rev. E 06/14/19

EXHIBIT E

INDUSTRIAL GENSET - BATTERY INDEX

• Warranty by Exide Corp. • Exide e-mail: tbgna@exide.com • 800-782-7848 National Hot line

INDUSTRIAL SPARK-IGNITED GENSETS - AVAILABLE BATTERIES

Engine	System Voltage	Battery Quantity	GENERAC PART # 058208 (Group 24F)	077483 (Group 26)	058665 (Group 27F)	061119 (Group 31)	061104 (Group 8D)	BT0015A02 (Group 8D)
G2.4	12	1		X				
G4.5	12	1			X	X		
G9.0	12	1			X	X		
G14.2	24	2					X	
G21.9	24	2					X	
G25.8	24	2					X	
G33.9	24	4					X	
G49.0	24	4					X	X

INDUSTRIAL DIESEL GENSETS - AVAILABLE BATTERIES

Engine	System Voltage	Battery Quantity	GENERAC PART # 058665 (Group 27F)	061119 (Group 31)	061104/BT0015A00 (Group 8D)	BT0015A02 (Group 8D)
D2.2 Perkins	12	1	X	X		
D3.3 Perkins	12	1		X		
D4.5 FPT	12	1		X		
D6.7 FPT 100, 130kW	12	1 or 2†		X		
D6.7 FPT 150, 175kW	12	2†		X		
D8.7 FPT	24	2		X		
D10.3 FPT	24	2		X	X	
D12.9 FPT	24	2		X	X	
D12.5 Perkins	24	2			X	
D15.2 Perkins	24	2			X	
D16.0 Volvo	24	2		X	X	
D18.1 Perkins	24	2			X	
D30.6 Perkins	24	2			X	X
D33.9 MHI	24	2			X	X
D37.1 MHI	24	4			X	X
D49.0 MHI	24	4			X	X
D65.4 MHI	24	4			X	X

Part Number	Group Number*	Nominal CCA @ 0° F	DIMENSIONS (in) NOMINAL L	W	H
058208	24F	525	6.75	10.63	9.00
077483	26	525	6.75	8.25	7.75
058665	27F	700	6.75	12.50	9.00
061119	31	925	6.75	13.00	9.40
061104/ BT0015A00	8D	1,200	11.00	20.80	10.00
BT0015A02	8D	1,400	11.00	20.80	10.00

All batteries are 12V, 6 cell construction, lead calcium type.
For 24V systems, batteries are wired in series.

X Battery available with electrolyte and installed in genset.
† Single or dual-paralleled battery options are available on 100 and 130kW. Single-battery option not available on 150 and 175kW.
* BCI Group Size reference.

 © 2022 Generac Power Systems, Inc. All rights reserved. All specifications are subject to change without notice.

Part No. 0161970SBY
Rev. N 4/5/2022

EXHIBIT E

GENERATOR ENCLOSURES

DESCRIPTION

GENERAC POWER SYSTEMS' generator enclosures provide year-round weather protection for your power equipment. Engineered with functionality and value in mind, the enclosure design benefits are unique in that the enclosures utilize dimensionally matched components for either a weather protective configuration or a sound attenuated/acoustic configuration. With common components used between design, modification and on-site upgrades can be accomplished with ease.

The enclosure design offers several benefits over the "standard enclosures" of other manufacturers. Generac's enclosures have been created with the goal of maximizing the customer's product performance satisfaction while maintaining the functionality of reducing exterior noise levels and discouraging product tampering.

Although others may require a "premium" for a self-enclosed exhaust system, rugged steel panel construction or protective polyethylene washers under all exterior panel fasteners, Generac includes these and several other features on every enclosure configuration. Be sure to compare. Generac Enclosures offer additional design enhancement extras that other "standard enclosures" do not.

Doc No. 0163180SBY
Rev. E 06/10/19

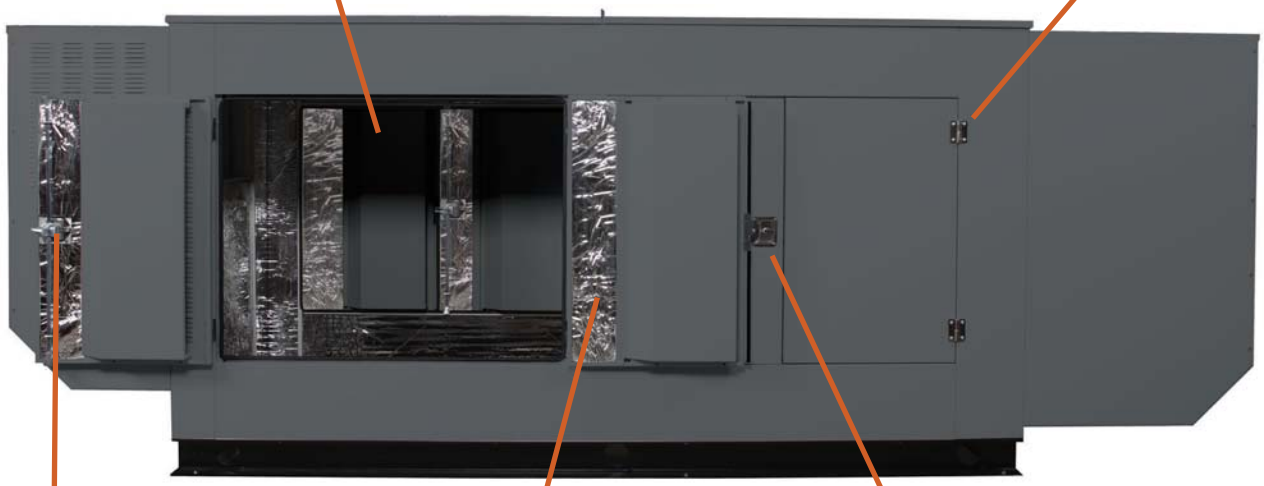
EXHIBIT E

GENERATOR ENCLOSURES

Post-Free Twin Doors
Provide Large, Unobstructed Service Access

Gasket-Free, Interconnected Roof Panel Joint
Drip-Free, Maintenance-Free

Heavy Gauge, Stainless Steel, Partial Pin Hinges with Nylon Spacers
Durable, Corrosion-Free, Removable Doors



Two-Point Door Latch System
Ensures Proper Seal Preventing Water Ingress and Sound Egress

Dense, Closed-Cell Foam Insulation with Reflective Silver Mylar Layer
Improved Sound Attenuation Without Damaging Effects From Radiant Heat Exposure

Lockable Turn and Tuck Stainless Steel Latch Handle
Corrosion-Free, Non-Protruding and Secure

Doc No. 0163180SBY
Rev. E 06/10/19

EXHIBIT E

GENERAC | INDUSTRIAL POWER

GENERATOR ENCLOSURES

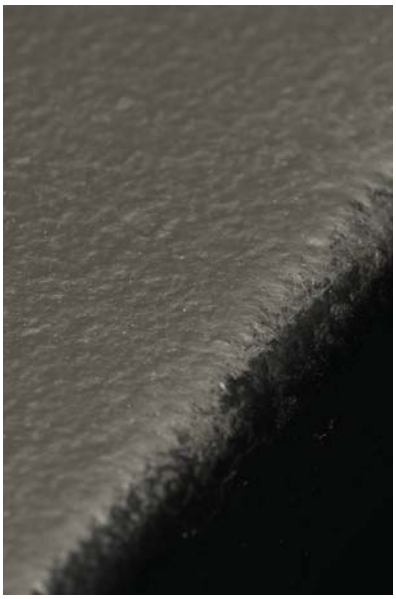
FEATURES:	BENEFITS:
Dimensional matching of acoustic and non-acoustic enclosure designs	Reduces variation in fuel tank pricing, inventory; removes need to change out fuel tank or retrofit
Standardized enclosure components *	Ease of retrofit or upgrade to acoustic system; reduced parts inventory, costs
Enclosure mounted directly to unit baseframe	Simplified delivery and installation with enclosure and unit in single component design
Electrostatically painted panels	Maximum protection from weather elements
12 or 14 gauge steel based on kW rating	Maximum sound attenuation, protection and product life
Aluminum Enclosure optional	Prevents corrosion in coastal regions
Stainless steel door latch and hinge hardware	Provides extended component life; maximum protection against rusting
Stainless steel door latch strike plate	Maximum protection against enclosure paint damage from door latch pin
Door hinges utilize slip-pin design	Provides quick door removal for full-unit access
Polyethylene gasketing under door hinges	Additional protection for enclosure paint finish
Keyed door latches	Protection for equipment and personnel
Large removable access doors	Ease of maintenance
Relocation of access doors	Provides improved access to MLCB on all units
Redesigned door gasketing	Improved sealing quality from sound and weather elements
Weather resistant aluminum roof design with drip ledge	Provides optimum moisture/rain runoff from unit
Cabled and gasketed radiator access cover	Provides improved radiator access and additional protection from weather elements
Acoustic roof panels manufactured with mechanical retention pins	Increased acoustic foam retention within unit
Polyethylene washers under all panel fasteners	Additional paint finish protection from stainless steel fastener
Internally fastened enclosure panels (where possible)	Provides streamlined unit appearance
Additional roof panel stiffener	Added overall compartment rigidity and acoustic foam panel retention
Self-enclosed exhaust system	Provides safe unit operation; no enclosure hot spots; streamlined unit appearance
Discharge air duct has been designed with minimal fasteners	Ease of removal and access to exhaust system
Stainless steel exhaust band clamps	Provides extended component life; ensures proper exhaust seal
Drain holes within air ducts	Enables maximum water run-off
Rodent-proof, tamper proof enclosure design	Safety and security for personnel and equipment
Redesigned baseframe lifting lugs	Ease of unit relocation; prevents compartment damage from lifting straps
Up to 200 MPH wind kit options (Contact Factory for Availability)	Meets locally enforced wind requirements

* Consult Generac Power Systems, Inc. for installation drawings for specific configurations and dimensions.

 © 2016 Generac Power Systems, Inc. All rights reserved. All specifications are subject to change without notice.

EXHIBIT E

RhinoCoat™



Generac's RhinoCoat™ finish system provides superior durability as a standard for all Generac Industrial enclosures, tanks and frames.*

Testing Standards

Generac's RhinoCoat™ finished surfaces are subjected to numerous tests. These include:

- ASTM D - 1186 - 87.....2.5+ MIL Paint Thickness
- ASTM D - 3363 - 92a.....Adequate Material Hardness
- ASTM D 522 - B.....Resistant to Cracking
- ASTM D 3359 - B.....Exceptional Adhesion
- ASTM B117 D 1654.....Resistant to Salt Water Corrosion
- ASTM D1735 D 1654.....Resistant to Humidity
- ASTM 2794 93 (2004).....Exceptional Impact Resistance
- SAEJ1690 - UV Specifications.....UV Protection

In addition to the testing standards above, Generac adds the following test requirements more specific to generator applications:

- Resistant to Typical Oils
- Resistant to Typical Fuels
- Resistant to Typical Antifreeze
- Resistant to Distilled Water

Primary Codes and Standards

*RhinoCoat™ powder coat paint is durable and corrosion resistant however it is not a rust preventative. Generac pretreats all powder coated parts to assist with resistance to corrosion.

Generac Power Systems, Inc. | P.O. Box 8 | Waukesha, WI 53187
P: (262) 544-4811 © 2019 Generac Power Systems, Inc. All rights reserved. All specifications are subject to change without notice.

Part No. 0180230SBY
Rev. F 11/16/19

EXHIBIT E

GENERAC | INDUSTRIAL POWER

EATON CIRCUIT BREAKER DATA
100% Rated LSI Electronic Trip

AMPS	VOLTS	ACCESSORIES	EATON PART #	SERIES	FRAME	GENERAC PART #
300	600	No Accessories	LGE340032WCX1Y17	G	LG-FRAME	0H9321EH0N
		Shunt Trip and Aux. Contacts	LGE340032WCA2__*X1Y17			0H9321EH__**
350		No Accessories	LGE340032WCX1Y17			0H9321EH0N
		Shunt Trip and Aux. Contacts	LGE340032WCA2__*X1Y17			0H9321EH__**
400		No Accessories	LGE340032WCX1Y17			0H9321EH0N
		Shunt Trip and Aux. Contacts	LGE340032WCA2__*X1Y17			0H9321EH__**
450		No Accessories	LGE360032GC			0H9324EH0N
		Shunt Trip and Aux. Contacts	LGE360032GCA2__*			0H9324EH__**
500		No Accessories	LGE360032GC			0H9324EH0N
		Shunt Trip and Aux. Contacts	LGE360032GCA2__*			0H9324EH__**
600		No Accessories	LGE360032GC			0H9324EH0N
		Shunt Trip and Aux. Contacts	LGE360032GCA2__*			0H9324EH__**
700		No Accessories	CMDLB3800FT32WZ02	C	M-FRAME	0H9325EH0N
		Shunt Trip and Aux. Contacts	CMDLB3800FT32WA13S02Z02			0H9325EHBN
800		No Accessories	CMDLB3800FT32WZ02			0H9326EH0N
		Shunt Trip and Aux. Contacts	CMDLB3800FT32WA13S02Z02			0H9326EHBN
900		No Accessories	NGS312032MCZ08	G	NG-FRAME	0H9327EH0N
		Shunt Trip and Aux. Contacts	NGS312032MCA12S03Z08			0H9327EHBN
1,000		No Accessories	NGS312032MCZ08			0H9328EH0N
		Shunt Trip and Aux. Contacts	NGS312032MCA12S03Z08			0H9328EHBN
1,200		No Accessories	NGS312032MCX23Y08			0H9329EH0N
		Shunt Trip and Aux. Contacts	NGS312032MCA12S03Y08			0H9329EHBN
1,400		No Accessories	RGH316032MCY22		RG-FRAME	0H9360EH0N
		Shunt Trip and Aux. Contacts	RGH316032MCA12S21Y22			0H9360EHBN
1,600		No Accessories	RGH316032MCY22			0H9361EH0N
		Shunt Trip and Aux. Contacts	RGH316032MCA12S21Y22			0H9361EHBN
2,000		No Accessories	RGH320032MC			0H9367EH0N
		Shunt Trip and Aux. Contacts	RGH320032MCA12S21			0H9367EHBN

To finish part numbers with either a * or ** Please see data below:

* 12V System, Use - S4
24V System, Use - S6

** 12V System, Use CN
24V System, Use BN

 © 2020 Generac Power Systems, Inc. All rights reserved. All specifications are subject to change without notice.

EXHIBIT E

EATON CIRCUIT BREAKER DATA LUG INFORMATION

Eaton Series C Circuit Breaker Lugs

			Standard Lug	
Amps	Series	Frame	Eaton Part #	Wire (QTY) Size
15-70	C	G	-	(1) #10-1/0
15-100	C	F	3T100FB	(1) #14-1/0
125-200	C	F	3TA225FD	(1) #4-4/0
225	C	F	3TA225FDK	(1) #6-300MCM
250	C	J	TA250KB	(1) #4-350MCM
300	C	K	TA350K	(1) 250-500MCM
350-400	C	K	3TA400K	(2) 3/0-250MCM
450-500	C	L	TA602LD	(2) 3/0-350MCM
600	C	L	3TA603LDK	(2) 400-500MCM
700-800	C	M	TA800MA2	(3) 3/0-400MCM
900-1,000	C	N	T1200NB3	(4) 3/0-400MCM
1,200	C	N	TA1201NB1	(3) 500-750MCM

Eaton Series G Circuit Breaker Lugs

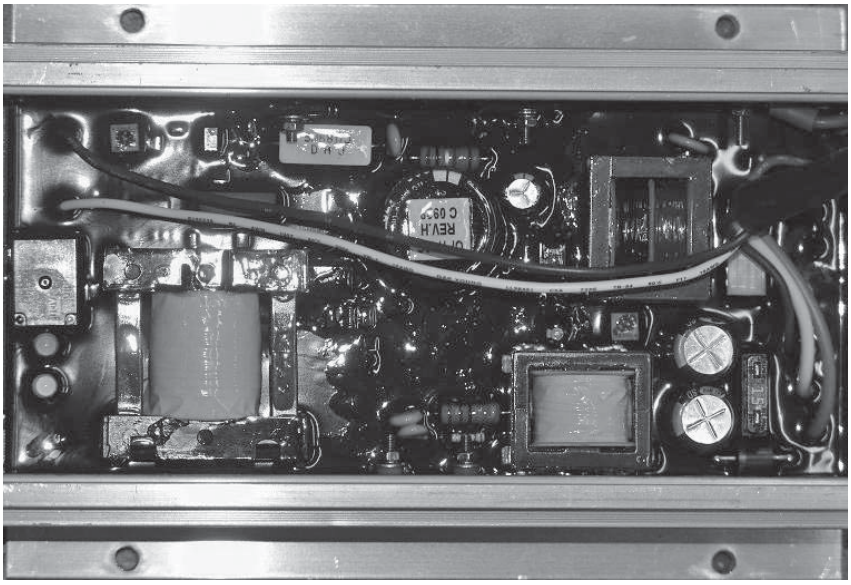
			Standard Lug	
Amps	Series	Frame	Eaton Part #	Wire (Qty) Size
50-250	G	JG	TA250FJ	(1) #8-350MCM
300-600	G	LG	3TA632LK	(2) #2-500MCM
900-1,200	G	NG	TA1201NB1	(3) 500-750MCM
1,400-1,600	G	RG	T1600RD	(4) 1-600MCM
2,000	G	RG	Lugs Not Included	
2,500	G	RG	Lugs Not Included	

 © 2019 Generac Power Systems, Inc. All rights reserved. All specifications are subject to change without notice.

EXHIBIT E

GENERAC | INDUSTRIAL POWER

BATTERY CHARGER
2.5 amp and 10 amp



Battery charger shown from inside of control panel enclosure. Connections are made via an attached harness.

The Generac 2.5 amp 12 volt and 10 amp 12/24 volt battery chargers are designed to work with Generac Industrial Controls to provide the ultimate in automatic battery voltage maintenance.

The 2.5 amp charger is self-regulating and produces instantaneous output current adjustments to keep the battery charged to an optimum level. Battery voltage is read on the control panel digital display.

The 10 amp charger has automatic float and equalize control. It precisely monitors the battery's voltage and automatically activates the correct charging mode. The charge rate is limited and controlled to efficiently and safely maintain ideal battery levels under varying conditions.

The equalize system uses a control circuit to limit charging current to 10 amps. When battery voltage drops below a preset level, charging current increases to 5 amps and then to the 10 amp charge rate if needed. When the battery reaches maximum charge, the charger switches to float mode to supply just enough current to maintain the battery at or above 13/26 volts. Battery voltage and charging current are read at the control panel digital display.

Specifications	2.5A	10A
Nominal Input	120 VAC	120 VAC
Operating AC Line Voltage Range	108 to 132 VAC	108 to 132 VAC
Input AC Line Frequency	50/60 Hz	50/60 Hz
Battery Fuse	N/A	15 A
Nominal Charge Rate	2.5 A	10 A
Equalize Voltage	N/A	13.8/27.6 V
Float Voltage	13.4 V	13.0/26.0 V
Current @ Equalize to Float Transition	N/A	5 A
Battery Under-voltage shutdown	N/A	11/22 V
LED Indicators	No	Yes
AC Line Voltage	N/A	Green LED
Battery Connected and Charging	N/A	Yellow LED
Battery Current Drain	30 mA	30 mA
AC Line Connection	Connector Plug	Connector Plug
Battery Connection	Connector Plug	Connector Plug
Control Connection		AC Power Fail Form Relay Form C 2 A Rating
CUL Recognized	Yes	Yes
NFPA 110 Compliant	No	Yes
AGM Compatible	No	Yes
UL1236	No	Yes
CSA 22.2 No. 107	No	Yes

Generac Power Systems, Inc. | P.O. Box 8 | Waukesha, WI 53187
P: (262) 544-4811 © 2019 Generac Power Systems, Inc. All rights reserved. All specifications are subject to change without notice.

Part No.0191900SBY
Rev. E 08/12/19

EXHIBIT E

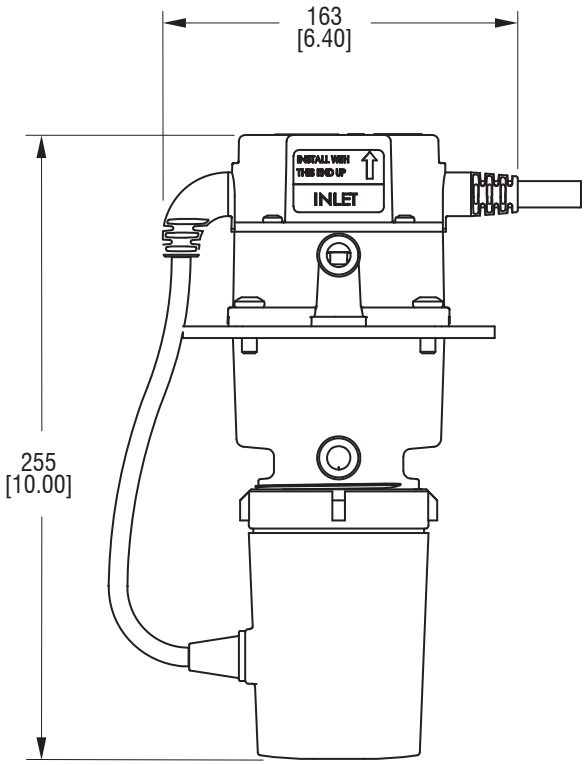
GENERAC | INDUSTRIAL POWER

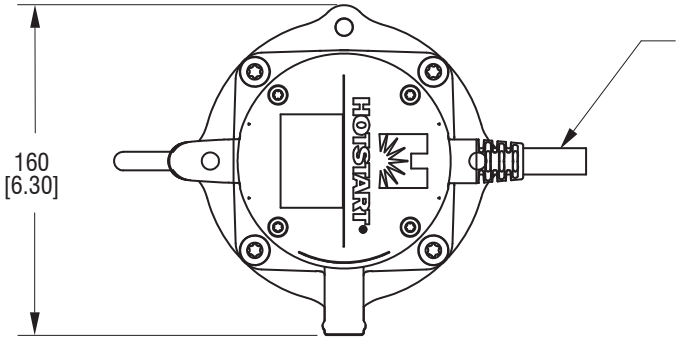
COOLANT HEATER OPTION
2500 WATT, 240V

SPECIFICATIONS

- HOTSTART® HOTFLOW™ CTM25210-N00
- WATTS: 2500
- VOLTAGE: 240VAC SINGLE PHASE
- FIXED THERMOSTAT: 100/120° F
- FLOW RATE: 3.5 GPM @ 3 PSI
- UL/C-US LISTED

c UL us LISTED





CORD LENGTH: 1220 [48.00]

DIMENSIONS: mm [INCHES]

Generac Power Systems, Inc. | P.O. Box 8 | Waukesha, WI 53187
P: (262) 544-4811 © 2015 Generac Power Systems, Inc. All rights reserved. All specifications are subject to change without notice.

Part No. 0K5958
Rev. B 04/14/15

EXHIBIT E

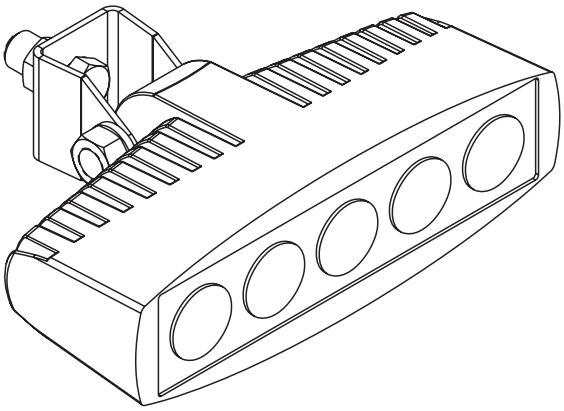
AC/DC LED LIGHT KITS FOR ENCLOSED UNITS ONLY

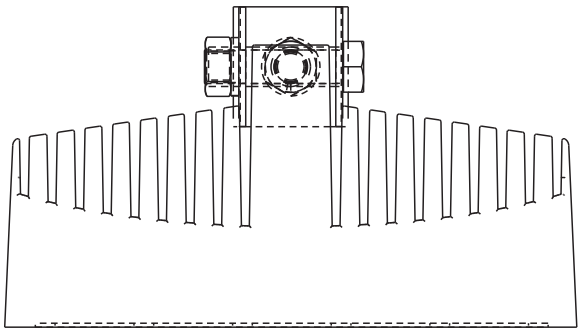
Description

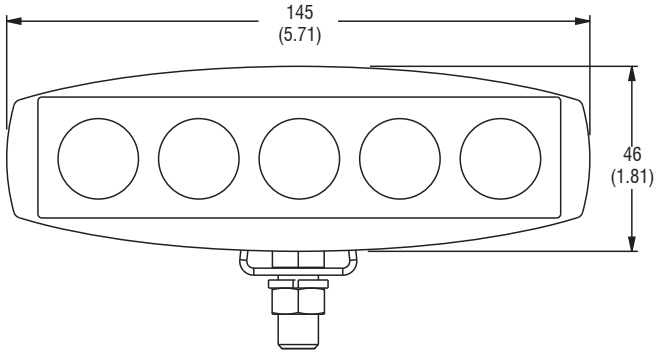
6” Oval 15 WATT Heavy Duty High Powered LED Work Light

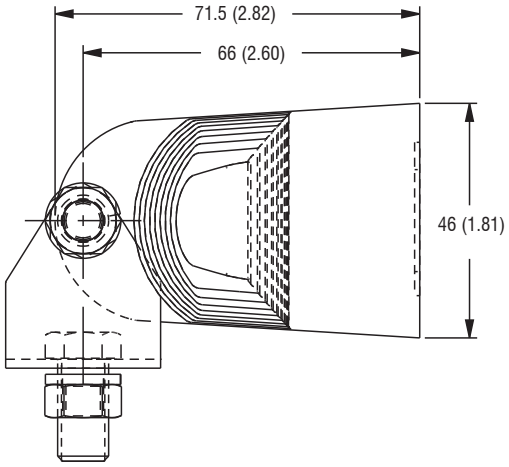
Specifications

- Beam Angle: 45°
- LED Color: Cool White
- LED Type: Epistar
- Light Output: 780 Lumens
- RoHS Compliant
- Power Consumption: 11.61 WATTS
- Operating Voltage: 9~32 VDC
- Color Temperature 6,000 K
- Color Rendering Index: 69
- IP Rating: Waterproof IP68
- Construction: Aluminum, Black Finish
- Beam Pattern: Flood
- Oil and Weather Resistant Wiring
- Adjustable Mount Angles









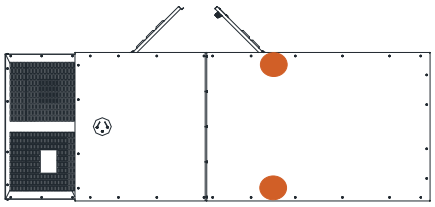
Dimensions: mm (inches)

Part No. 0L6697
Rev. D 11/06/19

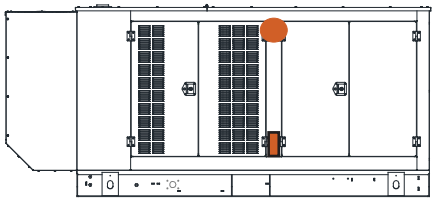
EXHIBIT E

AC/DC LED LIGHT KITS FOR ENCLOSED UNITS ONLY

Top View



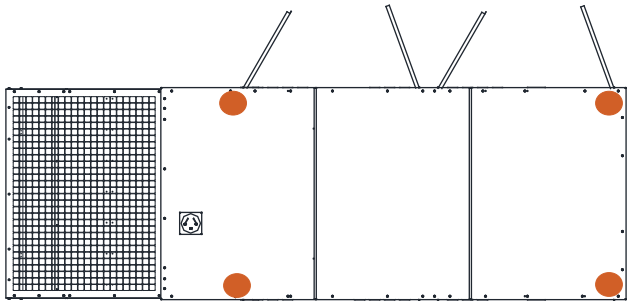
Side View



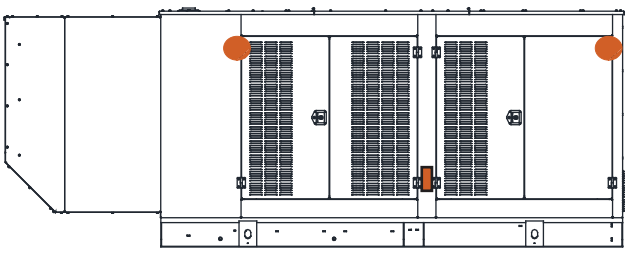
A-D Group Enclosures

- 2 Light Assemblies
- Diesel: 2.2L - 6.7L
- Gas: 4.5L - 9.0L

Top View



Side View



E-H Group Enclosures

- 4 Light Assemblies
- Diesel: 8.7L - 18.1L
- Gas: 14.2L - 33.9L

Legend

- Light Assembly
- Power Supply Box And Switch

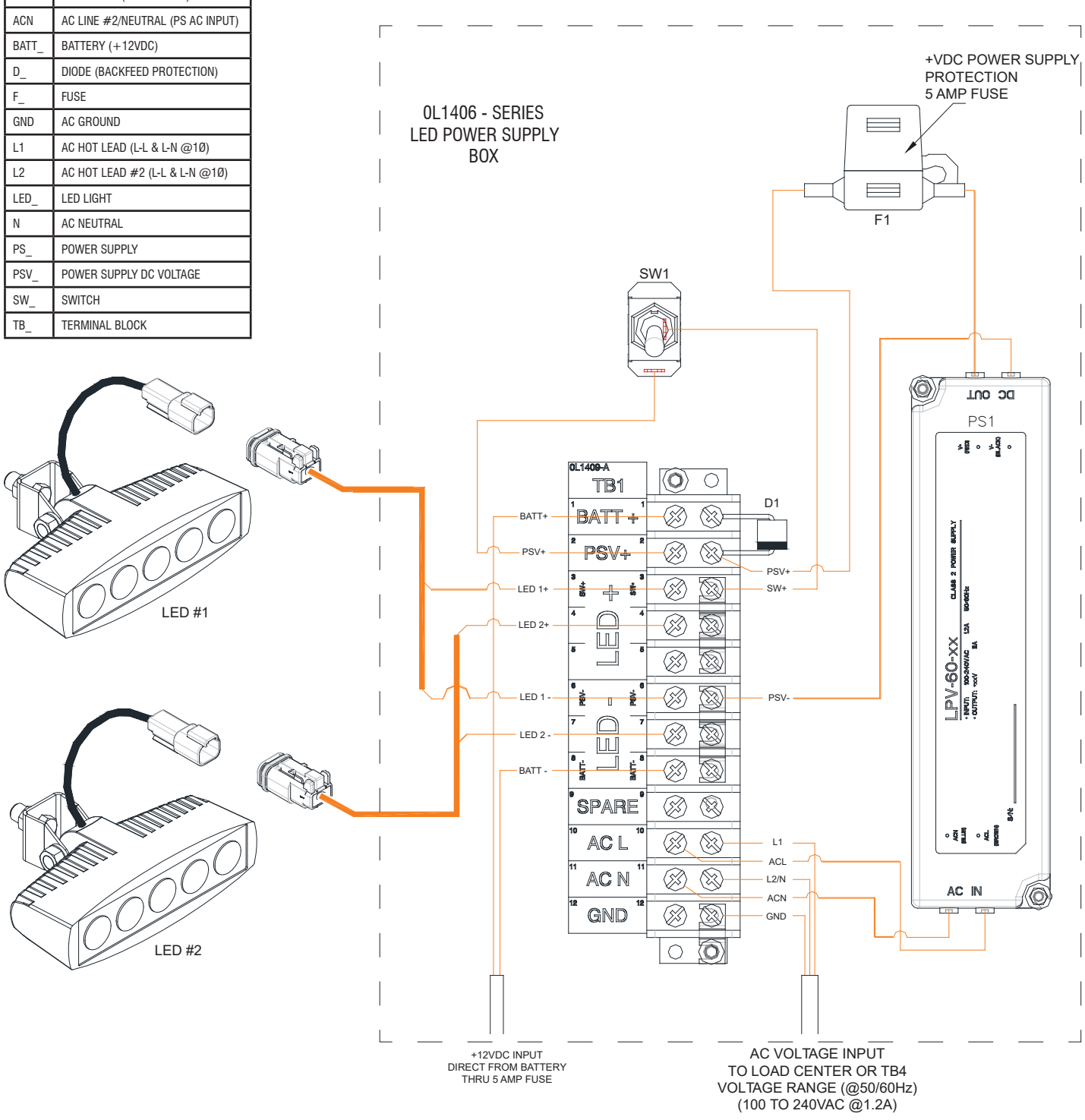
Part No. 0L6697
Rev. D 11/06/19

EXHIBIT E

AC/DC LED LIGHT KITS FOR ENCLOSED UNITS ONLY

POWER SUPPLY NOTES
AC INPUT: 1000-240VAC @ 1.2A @50-60HZ
LINE-TO-NEUTRAL OR LINE-TO-LINE
DC OUTPUT: 12VDC 25A (60W)

LEGEND	
ACL	AC LINE #1 (PS AC INPUT)
ACN	AC LINE #2/NEUTRAL (PS AC INPUT)
BATT_	BATTERY (+12VDC)
D_	DIODE (BACKFEED PROTECTION)
F_	FUSE
GND	AC GROUND
L1	AC HOT LEAD (L-L & L-N @1Ø)
L2	AC HOT LEAD #2 (L-L & L-N @1Ø)
LED_	LED LIGHT
N	AC NEUTRAL
PS_	POWER SUPPLY
PSV_	POWER SUPPLY DC VOLTAGE
SW_	SWITCH
TB_	TERMINAL BLOCK



P: (262) 544-4811 © 2016 Generac Power Systems, Inc. All rights reserved. All specifications are subject to change without notice.
Part No. 0L6697
Rev. D 11/06/19

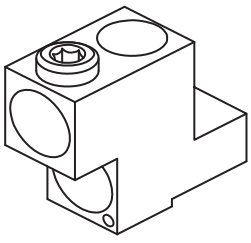
EXHIBIT E

GENERAC | INDUSTRIAL POWER

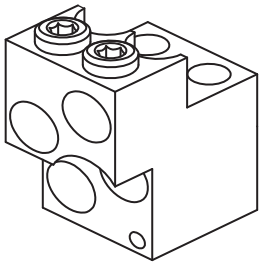
MPS GENERATOR SET
CUSTOMER CONNECTION LUGS

MPS UNIT	VOLTAGE	PARALLELING SWITCH RATING	STANDARD CUSTOMER CONNECTION LUG DATA*	
			CONDUCTOR SIZE/QTY PER PHASE	LUG PART NUMBER
6.8L/9.0L MG130	208, 240	600A	(2) 500MCM - #1	080433
	480, 600	400A	(1) 600MCM - #4 or (2) 250MCM - 1/0	0A7822
6.8L/9.0L MG150	208, 240	600A	(2) 500MCM - #1	080433
	480, 600	400A	(1) 600MCM - #4 or (2) 250MCM - 1/0	0A7822
12.9L/14.2L MG150	208, 480, 600	1000A	(4) 500MCM - 4/0	063925
12.9L/14.2L MG200	208, 480, 600	1000A	(4) 500MCM - 4/0	063925
12.9L/14.2L MG250	208, 480, 600	1000A	(4) 500MCM - 4/0	063925
12.9L/14.2L MG300	208, 480, 600	1000A	(4) 500MCM - 4/0	063925
21.9L MG350	480, 600	1000A	(4) 500MCM - 4/0	063925
21.9L MG400	480, 600	1000A	(4) 500MCM - 4/0	063925
21.9L MG450	480, 600	1000A	(4) 500MCM - 4/0	063925
25.8L MG500	208	2000A	(8) 750MCM - 1/0	063963
	240	1600A	(8) 750MCM - 1/0	063963
	480, 600	1000A	(4) 500MCM - 4/0	063925
10.3L MD300	208, 480, 600	1000A	(4) 500MCM - 4/0	063925
12.9L MD350	480, 600	1000A	(4) 500MCM - 4/0	063925
12.5L MD400	480, 600	1000A	(4) 500MCM - 4/0	063925
15.2L MD/MB500	480, 600	1000A	(4) 500MCM - 4/0	063925
18.1L MD/MB600	480, 600	1000A	(4) 500MCM - 4/0	063925
GEMINI MD1000	480, 600	(2) 1000A**	(6) 750MCM - 3/0	063963 & 0G5599**

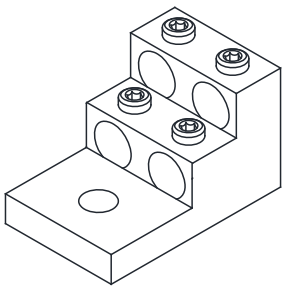
NOTES:
*Optional 3 X 750MCM lug kit is available for 1000A paralleling switch applications - see bulletin 0180040SBY for details.
**Customer connection lugs on Gemini units are located on separate lug blocks, not on the paralleling switches - see drawing 0G5215 for details.
Refer to specific MPS genset installation drawings for paralleling switch lug connection locations, stub areas, and other details.
All lugs are UL & CSA listed/approved.



080433
Set screw torque: 375 in/lbs



063925
Set screw torque: 375 in/lbs



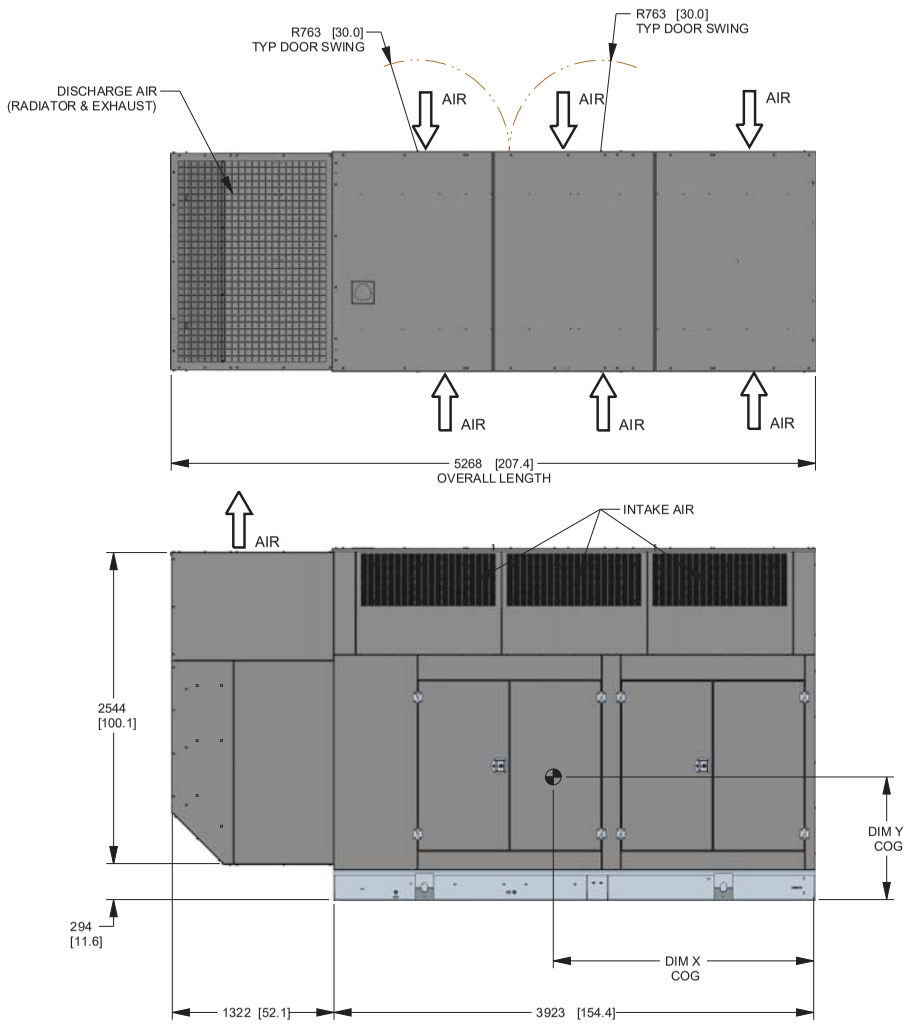
063963
Set screw torque: 500 in/lbs

INSTALLATION DRAWINGS
1 OF 1

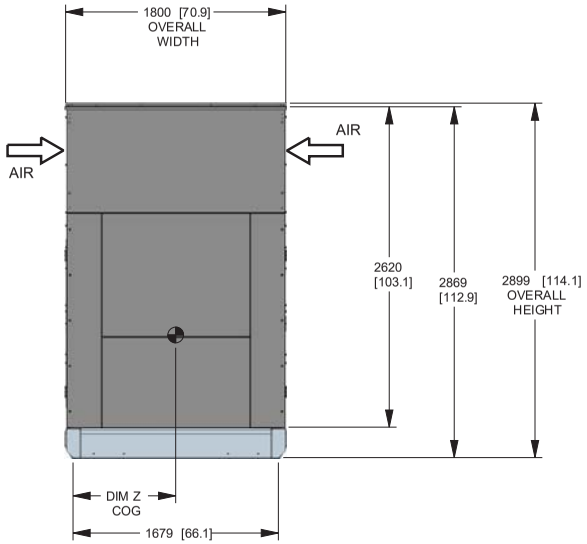
 © 2017 Generac Power Systems, Inc. All rights reserved. All specifications are subject to change without notice.

EXHIBIT E

SH	REV	WINDCHILL VERSION
1/1	E	E.2



FOR ALL STUB-UP, WEIGHT, AND COG DETAILS, SEE
CORRESPONDING OPEN SET DRAWING PER UNIT CONFIGURATION.



DRAWING CREATED FROM PRO/ENGINEER
3D FILE. ECO MODIFICATION TO BE
APPLIED TO SOLID MODEL ONLY.

DIMENSIONS ARE IN MILLIMETERS [INCHES]

INSTALLATION DRAWING

GENERAC POWER SYSTEMS OWNS THE COPYRIGHT OF THIS DRAWING WHICH IS SUPPLIED IN CONFIDENCE AND MUST NOT BE USED FOR ANY PURPOSE OTHER THAN FOR WHICH IT IS SUPPLIED WITHOUT THE EXPRESS WRITTEN CONSENT OF GENERAC POWER SYSTEMS.
©GENERAC POWER SYSTEMS 2013

ELECTRONICALLY APPROVED
INSIDE WINDCHILL

GENERAC

TITLE
L2A ENCLOSURE
D18.1L SD/MD 600-750 & SB/MB 600
PD/MD 540-675 & PB/WB 540

ISSUE DATE: 03/14/14

SIZE	CAGE NO	DWG NO	REV
B	N/A	0K1501C	E

SCALE	WT-KG	SHEET
0.025		1 of 1

EXHIBIT E

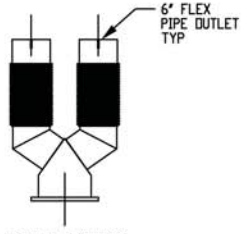
SH	REV	WINDCHILL VERSION
1/3	A	A.1

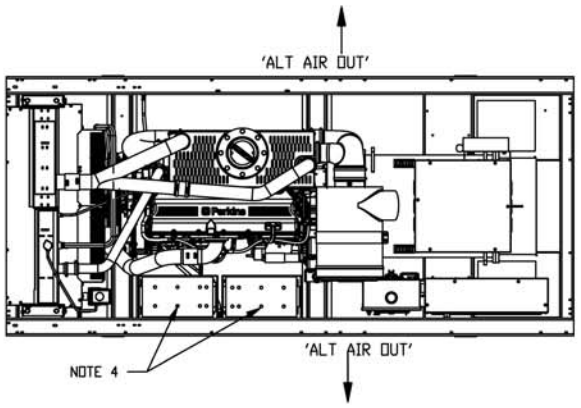
Notes:
1. CONTROL PANEL, (OPTIONAL BATTERY CHARGER INSIDE).
2. 120V, 20A GFCI & 250V, 15A OUTLET (OPTIONAL).
3. CONNECTION POINTS FOR CONTROL WIRES PROVIDED IN THE LOW VOLTAGE CONNECTION BOX (USE LOW VOLTAGE STUB-UP AREA).
4. BATTERY (24 VOLT NEGATIVE GROUND SYSTEM).
5. MAIN LINE CIRCUIT BREAKER (MLCB), AC LOAD LEADS. (DIMENSIONS MAY VARY DUE TO UNIT CONFIGURATION)
6. CENTER OF GRAVITY AND WEIGHT MAY CHANGE DUE TO UNIT OPTIONS.

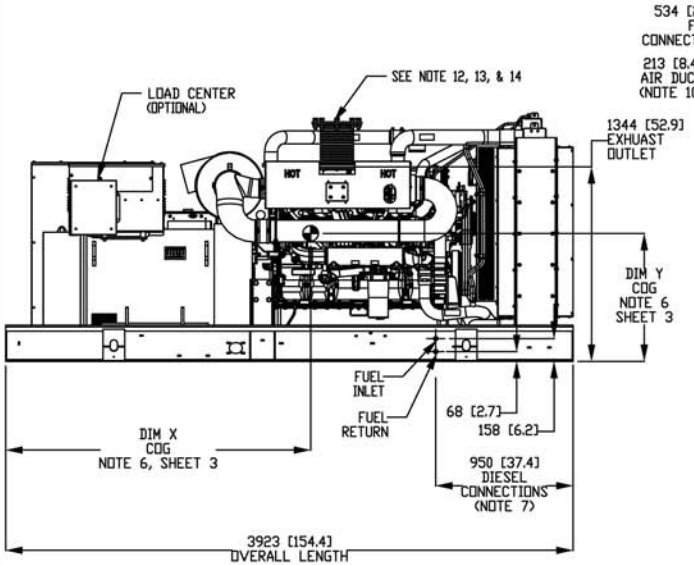
7. ENGINE SERVICE CONNECTIONS:
   INLET NATURAL GAS = N/A
   INLET DIESEL = 1/2" NPT FEMALE COUPLING
   RETURN DIESEL = 1/2" NPT FEMALE COUPLING
   OIL DRAIN = 1/2" NPT FEMALE COUPLING
   RADIATOR DRAIN = 1/2" NPT FEMALE COUPLING
   FLEX PIPE OUTLET = 8" I.D. ANSI FLANGE, DUAL 6" I.D. OPTIONAL
   EXHAUST OUTLET = 8" I.D. SAE FLANGE (TURBO CONNECTION)
***** SEE GENERATOR SIZING GUIDE FOR FUEL PIPE SIZING TO SUIT APPLICATION *****

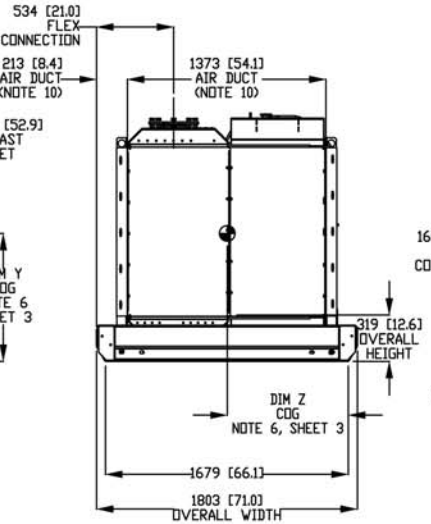
8. AUXILARY AC CONNECTION FOR UNIT OPTIONS ARE LOCATED IN HIGH VOLTAGE CONNECTION BOX, UNLESS AN OPTIONAL LOAD CENTER IS INSTALLED.
9. EXHAUST PIPES MAY BE ROTATED TO ALLOW MUFFLER TO POINT OUT TO THE RIGHT OR LEFT SIDE OF GENERATOR. (MAY NOT APPLY TO ALL UNITS)
10. GENERATOR SET MUST BE INSTALLED SUCH THAT FRESH COOLING AIR IS AVAILABLE AND DISCHARGE AIR FROM THE RADIATOR IS NOT RECIRCULATED.
11. BOTTOM OF GENERATOR SET MUST BE ENCLOSED TO PREVENT PEST INTRUSION AND RECIRCULATION OF DISCHARGE AIR AND/OR IMPROPER COOLING AIR FLOW.
12. EXHAUST SYSTEM MAXIMUM BACK PRESSUE = 27.71N H2O PRE SILENCER / 20IN H2O POST SILENCER AT 1800 RPM.
13. INSTALL EXHAUST BLANKETS ALONG THIS LINE.
14. CONNECT THE OPEN SET EXHAUST PER NFPA 37
15. BOLTS OR STUDS USED TO MOUNT UNIT TO PAD, OR BASE TANK, SHALL BE 5/8"-11 GRADE 5. USE STANDARD SAE TORQUE SPECS. (FOR INSTALLATION OF FUEL TANK TO PAD REFER TO INSTALL DRAWING OF THE BASE TANK)

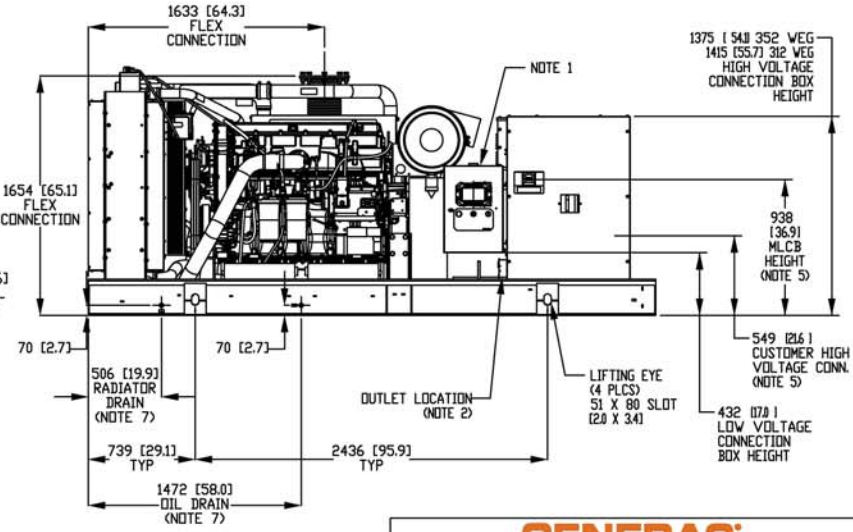
ADDITIONAL NOTES:
FOR WEIGHT AND CENTER OF GRAVITY DATA SEE NOTE 6, AND SHEET 3.











DRAWING CREATED FROM PRO/ENGINEER 3D FILE. ECO MODIFICATION TO BE APPLIED TO SOLID MODEL ONLY.

DIMENSIONS ARE IN MILLIMETERS [INCHES]

INSTALLATION DRAWING

GENERAC POWER SYSTEMS OWNS THE COPYRIGHT OF THIS DRAWING WHICH IS SUPPLIED IN CONFIDENCE AND MUST NOT BE USED FOR ANY PURPOSE OTHER THAN FOR WHICH IT IS SUPPLIED WITHOUT THE EXPRESS WRITTEN CONSENT OF GENERAC POWER SYSTEMS.
©GENERAC POWER SYSTEMS 2013

ELECTRONICALLY APPROVED INSIDE WINDCHILL

GENERAC

TITLE
OPEN SET
D18.1L MD600, WD540
MPS

ISSUE DATE: 05/13/21

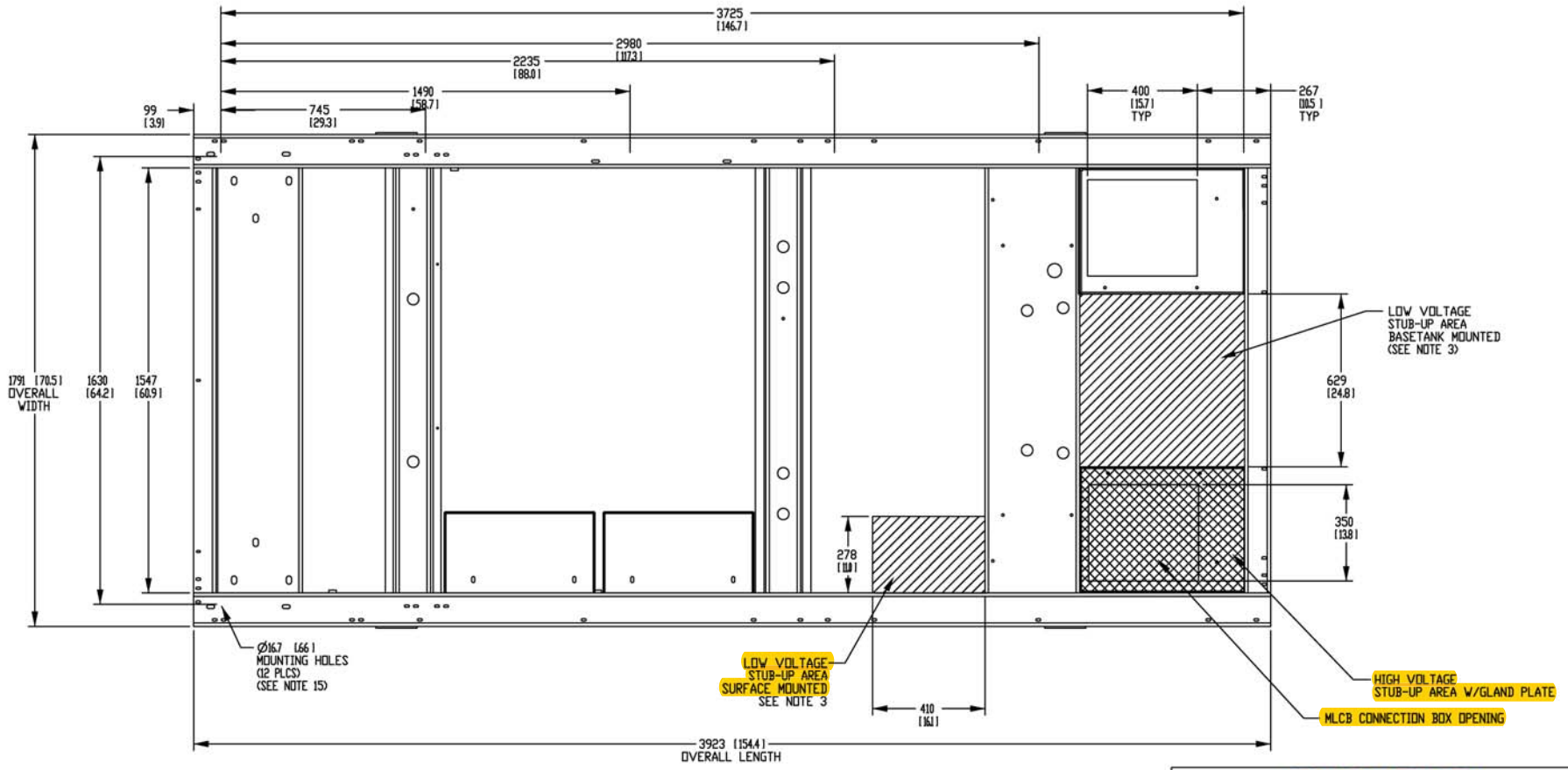
SIZE	CAGE NO	DWG NO	REV
B	N/A	A0001541468	A

SCALE	WT-KG	SHEET
0.030		1 of 3

EXHIBIT E

SH	REV	WINDCHILL VERSION
2/3	A	A.1

RECOMMENDED ELECTRICAL STUB-UP
(HIGH VOLTAGE STUD-UP) AC LOAD LEAD CONDUIT FOR PERMANENT MAGNET EXCITATION CONNECTION BOX
(LOW VOLTAGE STUD-UP)



DRAWING CREATED FROM PRO/ENGINEER 3D FILE. ECO MODIFICATION TO BE APPLIED TO SOLID MODEL ONLY.

DIMENSIONS ARE IN MILLIMETERS [INCHES]

INSTALLATION DRAWING

GENERAC POWER SYSTEMS OWNS THE COPYRIGHT OF THIS DRAWING WHICH IS SUPPLIED IN CONFIDENCE AND MUST NOT BE USED FOR ANY PURPOSE OTHER THAN FOR WHICH IT IS SUPPLIED WITHOUT THE EXPRESS WRITTEN CONSENT OF GENERAC POWER SYSTEMS.
© GENERAC POWER SYSTEMS 2013

ELECTRONICALLY APPROVED INSIDE WINDCHILL

GENERAC

TITLE: STUB-UP VIEW D18.1L MD600, WD540 MPS

ISSUE DATE: 05/13/21

SIZE	CAGE NO	DWG NO	REV
B	N/A	A0001541468	A

SCALE	WT-KG	SHEET
0.065		2 of 3

EXHIBIT E

SH	REV	WINDCHILL VERSION
3/3	A	A.1

OPEN SET

MODEL	VOLTAGE	WEIGHT	CENTER OF GRAVITY DIM X	CENTER OF GRAVITY DIM Y	CENTER OF GRAVITY DIM Z
SD/MD 600, PD/WD 540	480V	4,706 kg [10,375 lbs]	1734 [68.3]	631 [24.8]	837 [33.0]
SD600, PD540	208V & 240V				
SD/MD 600, PD/WD 540	600V	3,864 kg [8,520 lbs]	1937 [76.3]	650 [25.6]	837 [33.0]
SD600, PD540	208V, 240V UPSIZED ALT (723kw)	4,889 kg [10,778 lbs]	1705 [67.2]	628 [24.7]	838 [33.0]
SD/MD 600, PD/WD 540	480V UPSIZED ALT. (832kw)				
SD/MD 600, PD/WD 540	600V UPSIZED ALT. (730kw)	4,794 kg [10,569 lbs]	1720 [67.7]	630 [24.8]	837 [33.0]
SD/MD 600, PD/WD 540	600V UPSIZED ALT. (840kw)	4,627 kg [10,201 lbs]	1747 [68.8]	633 [24.9]	837 [33.0]

NOTE:
CENTER OF GRAVITY AND WEIGHT MAY CHANGE DUE TO UNIT OPTIONS.

STD ENCLOSURE, STEEL

MODEL	VOLTAGE	WEIGHT	CENTER OF GRAVITY DIM X	CENTER OF GRAVITY DIM Y	CENTER OF GRAVITY DIM Z
SD/MD 600, PD/WD 540	480V	5,735 kg [12,643 lbs]	1988 [78.3]	746 [29.4]	795 [31.3]
SD600, PD540	208V & 240V				
SD/MD 600, PD/WD 540	600V	4,893 kg [10,787 lbs]	2193 [86.4]	782 [30.8]	797 [31.4]
SD600, PD540	208V, 240V UPSIZED ALT (723kw)	5,918 kg [13,047 lbs]	1956 [77.0]	739 [29.1]	795 [31.3]
SD/MD 600, PD/WD 540	480V UPSIZED ALT. (832kw)				
SD/MD 600, PD/WD 540	600V UPSIZED ALT. (730kw)	5,823 kg [12,838 lbs]	1973 [77.7]	743 [29.3]	795 [31.3]
SD/MD 600, PD/WD 540	600V UPSIZED ALT. (840kw)	5,656 kg [12,470 lbs]	2003 [78.9]	749 [29.5]	795 [31.3]

STD ENCLOSURE, ALUMINUM

WEIGHT	CENTER OF GRAVITY DIM "X"	CENTER OF GRAVITY DIM "Y"	CENTER OF GRAVITY DIM "Z"
5,241 kg [11,555 lbs]	1903 [74.9]	700 [27.6]	790 [31.1]
4,400 kg [9,700 lbs]	2115 [83.3]	731 [28.8]	792 [31.2]
5,425 kg [11,960 lbs]	1871 [73.7]	695 [27.4]	790 [31.1]
5,330 kg [11,751 lbs]	1887 [74.3]	697 [27.5]	790 [31.1]
5,163 kg [11,383 lbs]	1917 [75.5]	702 [27.6]	791 [31.2]

L1A ENCLOSURE, STEEL

MODEL	VOLTAGE	WEIGHT	CENTER OF GRAVITY DIM X	CENTER OF GRAVITY DIM Y	CENTER OF GRAVITY DIM Z
SD/MD 600, PD/WD 540	480V	6,191 kg [13,649 lbs]	1867 [73.5]	774 [30.5]	802 [31.6]
SD600, PD540	208V & 240V				
SD/MD 600, PD/WD 540	600V	5,349 kg [11,793 lbs]	2031 [80.0]	812 [32.0]	851 [33.5]
SD600, PD540	208V, 240V UPSIZED ALT (723kw)	6,374 kg [14,052 lbs]	1841 [72.5]	767 [30.2]	801 [31.5]
SD/MD 600, PD/WD 540	480V UPSIZED ALT. (832kw)				
SD/MD 600, PD/WD 540	600V UPSIZED ALT. (730kw)	6,279 kg [13,843 lbs]	1854 [73.0]	771 [30.4]	801 [31.5]
SD/MD 600, PD/WD 540	600V UPSIZED ALT. (840kw)	6,112 kg [13,475 lbs]	1878 [73.9]	777 [30.6]	802 [31.6]

L1A ENCLOSURE, ALUMINUM

WEIGHT	CENTER OF GRAVITY DIM "X"	CENTER OF GRAVITY DIM "Y"	CENTER OF GRAVITY DIM "Z"
5,438 kg [11,989 lbs]	1846 [72.7]	716 [28.2]	794 [31.3]
4,596 kg [10,133 lbs]	2036 [80.2]	748 [29.5]	796 [31.3]
5,621 kg [12,392 lbs]	1817 [71.5]	710 [28.0]	793 [31.2]
5,526 kg [12,183 lbs]	1832 [72.1]	713 [28.1]	794 [31.3]
5,359 kg [11,815 lbs]	1859 [73.2]	718 [28.3]	794 [31.3]

L2A ENCLOSURE, STEEL

MODEL	VOLTAGE	WEIGHT	CENTER OF GRAVITY DIM X	CENTER OF GRAVITY DIM Y	CENTER OF GRAVITY DIM Z
SD/MD 600, PD/WD 540	480V	6,344 kg [13,986 lbs]	2036 [80.2]	913 [36.0]	798 [31.4]
SD600, PD540	208V & 240V				
SD/MD 600, PD/WD 540	600V	5,502 kg [12,130 lbs]	2224 [87.6]	973 [38.3]	805 [31.7]
SD600, PD540	208V, 240V UPSIZED ALT (723kw)	6,527 kg [14,390 lbs]	2006 [79.0]	902 [35.5]	798 [31.4]
SD/MD 600 PD/WD 540	480V UPSIZED ALT. (832kw)				
SD/MD 600, PD/WD 540	600V UPSIZED ALT. (730kw)	6,432 kg [14,180 lbs]	2022 [79.6]	907 [35.7]	798 [31.4]
SD/MD 600, PD/WD 540	600V UPSIZED ALT. (840kw)	6,265 kg [13,812 lbs]	2050 [80.7]	917 [36.1]	798 [31.4]

L2A ENCLOSURE, ALUMINUM

WEIGHT	CENTER OF GRAVITY DIM "X"	CENTER OF GRAVITY DIM "Y"	CENTER OF GRAVITY DIM "Z"
5,503 kg [12,132 lbs]	1932 [76.1]	786 [31.0]	792 [31.2]
4,662 kg [10,278 lbs]	2136 [84.1]	833 [32.8]	794 [31.3]
5,687 kg [12,538 lbs]	1900 [74.8]	778 [30.6]	792 [31.2]
5,592 kg [12,328 lbs]	1916 [75.4]	782 [30.8]	792 [31.2]
5,425 kg [11,960 lbs]	1946 [76.6]	790 [31.1]	792 [31.2]

DRAWING CREATED FROM PRO/ENGINEER 3D FILE. ECO MODIFICATION TO BE APPLIED TO SOLID MODEL ONLY.

INSTALLATION DRAWING

GENERAC POWER SYSTEMS OWNS THE COPYRIGHT OF THIS DRAWING WHICH IS SUPPLIED IN CONFIDENCE AND MUST NOT BE USED FOR ANY PURPOSE OTHER THAN FOR WHICH IT IS SUPPLIED WITHOUT THE EXPRESS WRITTEN CONSENT OF GENERAC POWER SYSTEMS.
© GENERAC POWER SYSTEMS 2013

ELECTRONICALLY APPROVED
INSIDE WINDCHILL

GENERAC

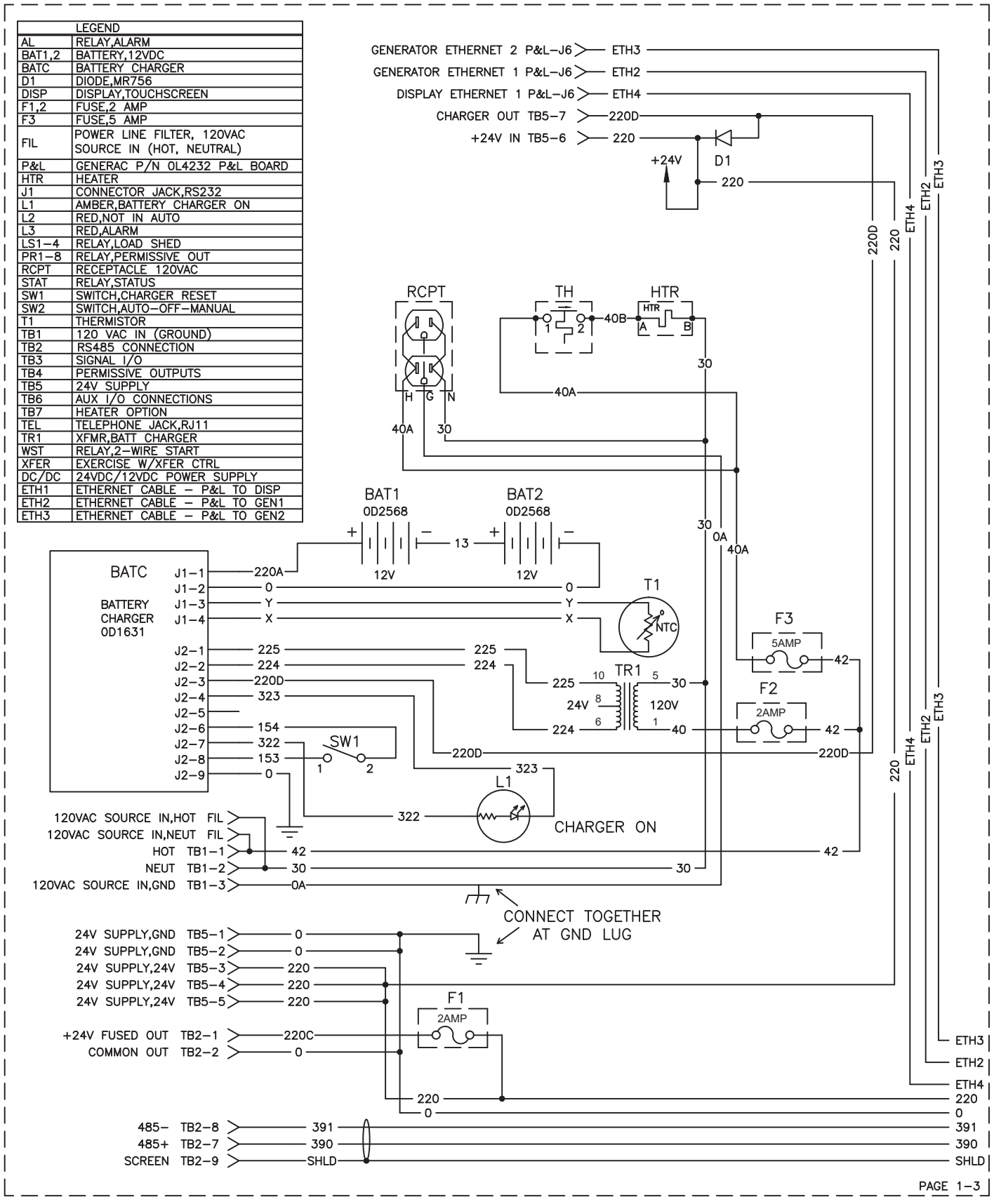
TITLE
WEIGHT & CENTER OF GRAVITY
D18.1L MD600, WD540
MPS

ISSUE DATE: 05/13/21			
SIZE B	CAGE NO N/A	DWG NO A0001541468	REV A
SCALE 0.030	WT-KG	SHEET 3 of 3	

EXHIBIT E

GROUP G

	LEGEND
AL	RELAY,ALARM
BAT1,2	BATTERY,12VDC
BATC	BATTERY CHARGER
D1	DIODE,MR756
DISP	DISPLAY,TOUCHSCREEN
F1,2	FUSE,2 AMP
F3	FUSE,5 AMP
FIL	POWER LINE FILTER, 120VAC SOURCE IN (HOT, NEUTRAL)
P&L	GENERAC P/N 0L4232 P&L BOARD
HTR	HEATER
J1	CONNECTOR JACK,RS232
L1	AMBER,BATTERY CHARGER ON
L2	RED,NOT IN AUTO
L3	RED,ALARM
LS1–4	RELAY,LOAD SHED
PR1–8	RELAY,PERMISSIVE OUT
RCPT	RECEPTACLE 120VAC
STAT	RELAY,STATUS
SW1	SWITCH,CHARGER RESET
SW2	SWITCH,AUTO–OFF–MANUAL
T1	THERMISTOR
TB1	120 VAC IN (GROUND)
TB2	RS485 CONNECTION
TB3	SIGNAL I/O
TB4	PERMISSIVE OUTPUTS
TB5	24V SUPPLY
TB6	AUX I/O CONNECTIONS
TB7	HEATER OPTION
TEL	TELEPHONE JACK,RJ11
TR1	XFMR,BATT CHARGER
WST	RELAY,2–WIRE START
XFER	EXERCISE W/XFER CTRL
DC/DC	24VDC/12VDC POWER SUPPLY
ETH1	ETHERNET CABLE – P&L TO DISP
ETH2	ETHERNET CABLE – P&L TO GEN1
ETH3	ETHERNET CABLE – P&L TO GEN2



SCHEMATIC DIAGRAM

PWR ZNE PRMSV LOAD SHED

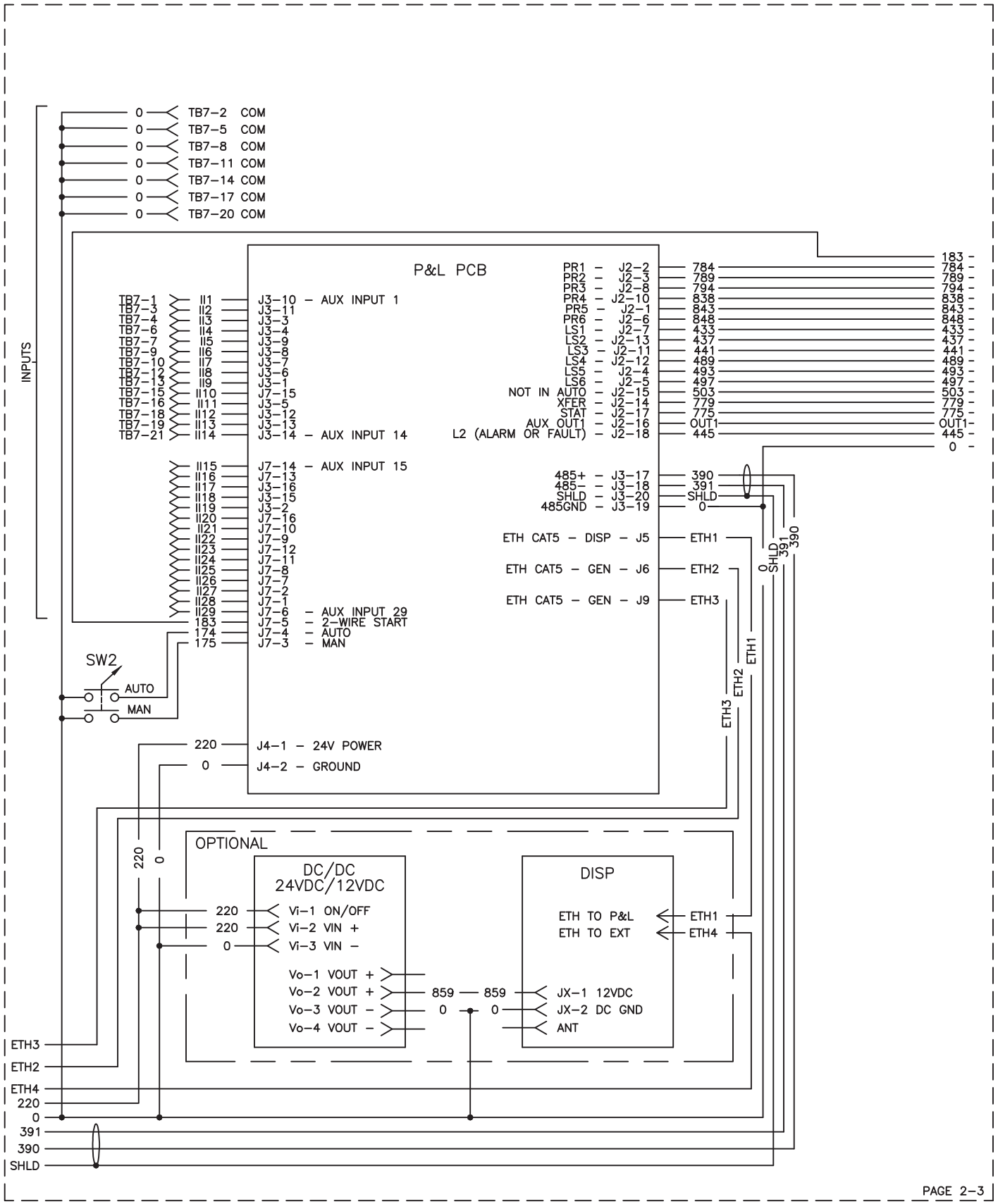
DRAWING #: 10000012490

REVISION: "E"

DATE: 08/24/18

EXHIBIT E

GROUP G



PAGE 2-3

SCHEMATIC DIAGRAM

PWR ZNE PRMSV LOAD SHED

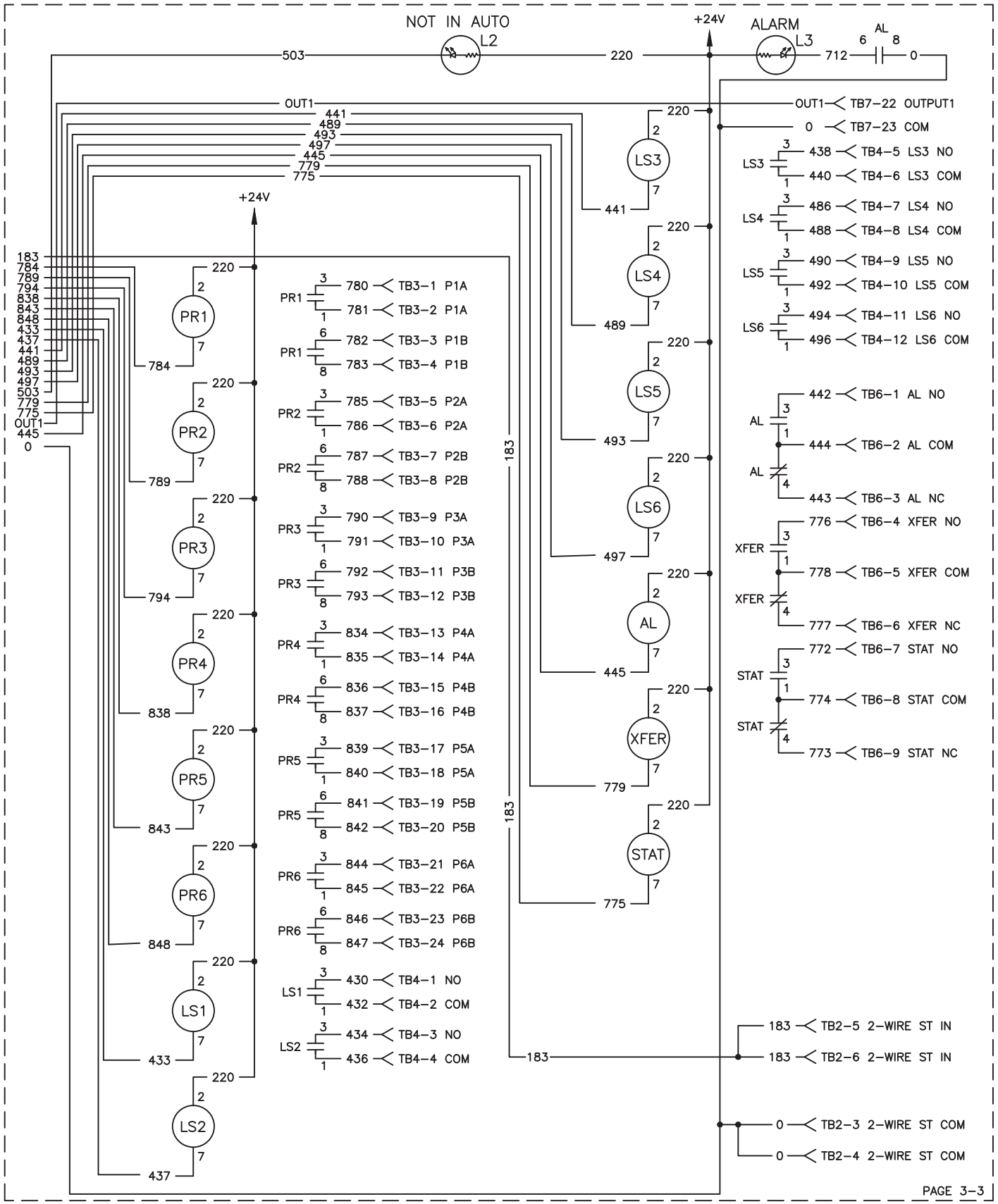
DRAWING #: 10000012490

REVISION: "E"

DATE: 08/24/18

EXHIBIT E

GROUP G



SCHEMATIC DIAGRAM

PWR ZNE PRMSV LOAD SHED

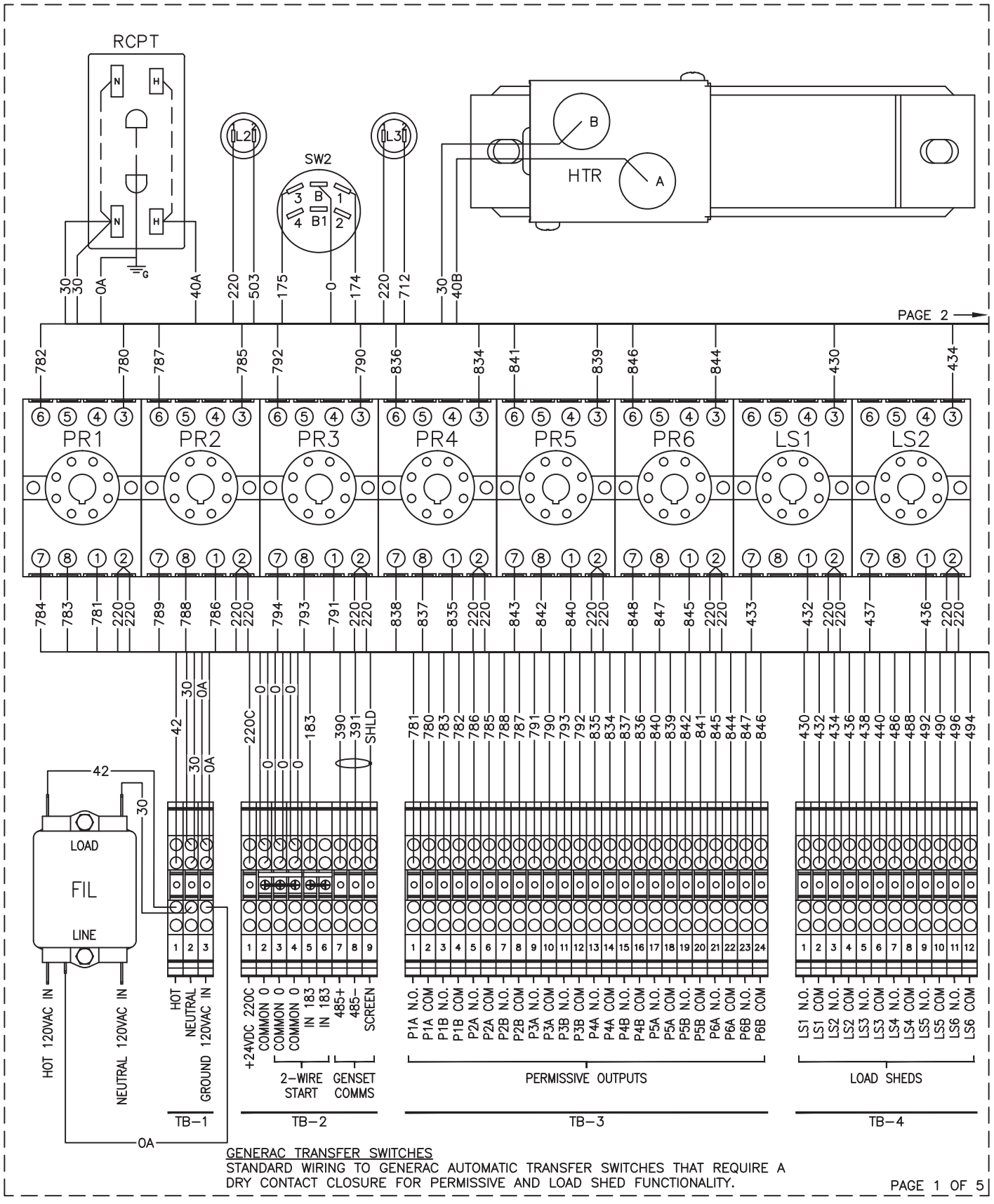
DRAWING #: 10000012490

REVISION: "E"

DATE: 08/24/18

EXHIBIT E

GROUP G



GENERAC TRANSFER SWITCHES

STANDARD WIRING TO GENERAC AUTOMATIC TRANSFER SWITCHES THAT REQUIRE A DRY CONTACT CLOSURE FOR PERMISSIVE AND LOAD SHED FUNCTIONALITY.

WIRING DIAGRAM

PWR ZNE PRMSV LOAD SHED

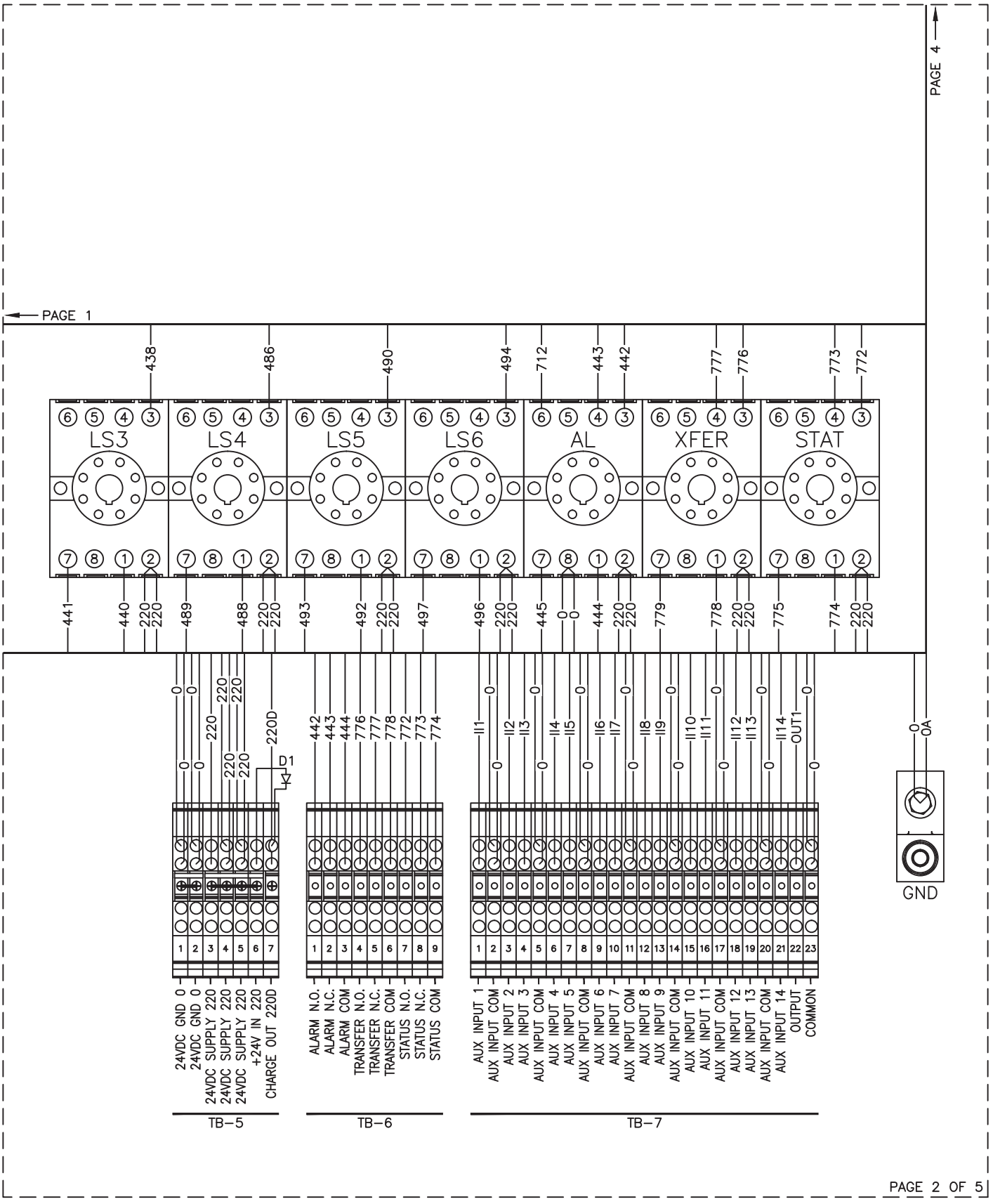
DRAWING #: 10000012491

REVISION: "E"

DATE: 08/27/18

EXHIBIT E

GROUP G



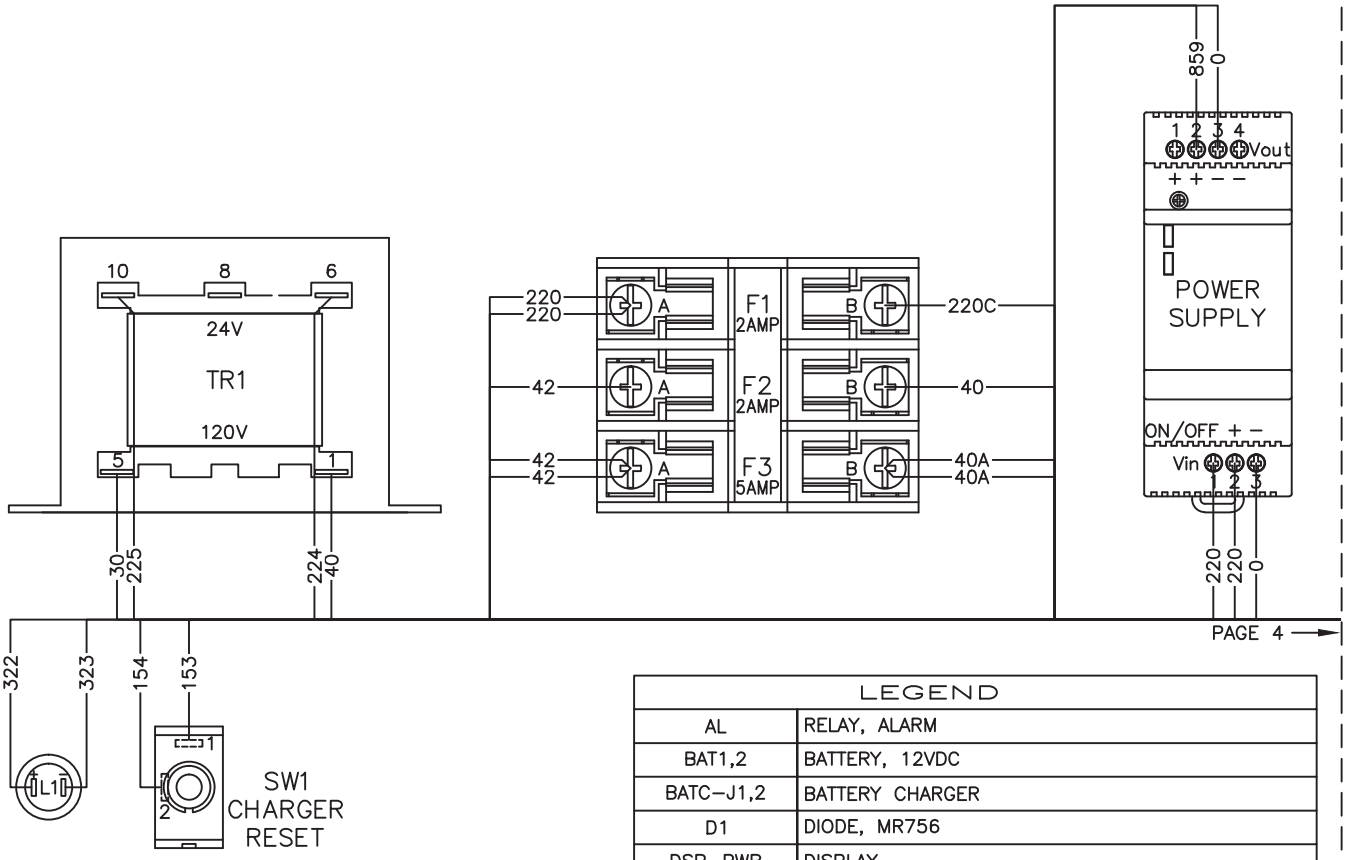
WIRING DIAGRAM

REVISION: "E"
DATE: 08/27/18

PWR ZNE PRMSV LOAD SHED
DRAWING #: 10000012491

EXHIBIT E

GROUP G



LEGEND	
AL	RELAY, ALARM
BAT1,2	BATTERY, 12VDC
BATC−J1,2	BATTERY CHARGER
D1	DIODE, MR756
DSP−PWR	DISPLAY
FIL	POWER FILTER 120VAC SOURCE IN (HOT, NEUTRAL)
F1,2,3	FUSE
GND	GROUND LUG
HTR	HEATER
L1	CHARGER ON LED
L2	NOT IN AUTO LED
L3	ALARM LED
LS1−4	RELAY, LOAD SHED
P&L−J2,3,4,7	PERMISSIVE AND LOAD SHED MODULE
PS	DC/DC POWER SUPPLY
PR1−8	RELAY, PERMISSIVE OUT
STAT	RELAY, STATUS
SW1	SWITCH, CHARGER RESET
SW2	SWITCH, AUTO−OFF−MAN
TB1	POWER FILTER 120VAC SOURCE IN (GROUND)
TB2	GENSET CONNECTION TERMINAL BLOCK
TB3	SIGNAL I/O TERMINAL BLOCK
TB4	PERMISSIVE OUTPUTS TERMINAL BLOCK
TB5	24VDC SUPPLY TERMINAL BLOCK
TB6	OUTPUT CONNECTIONS TERMINAL BLOCK
T1	THERMISTOR
TH	HEATER THERMOSTAT

WIRING DIAGRAM

PWR ZNE PRMSV LOAD SHED

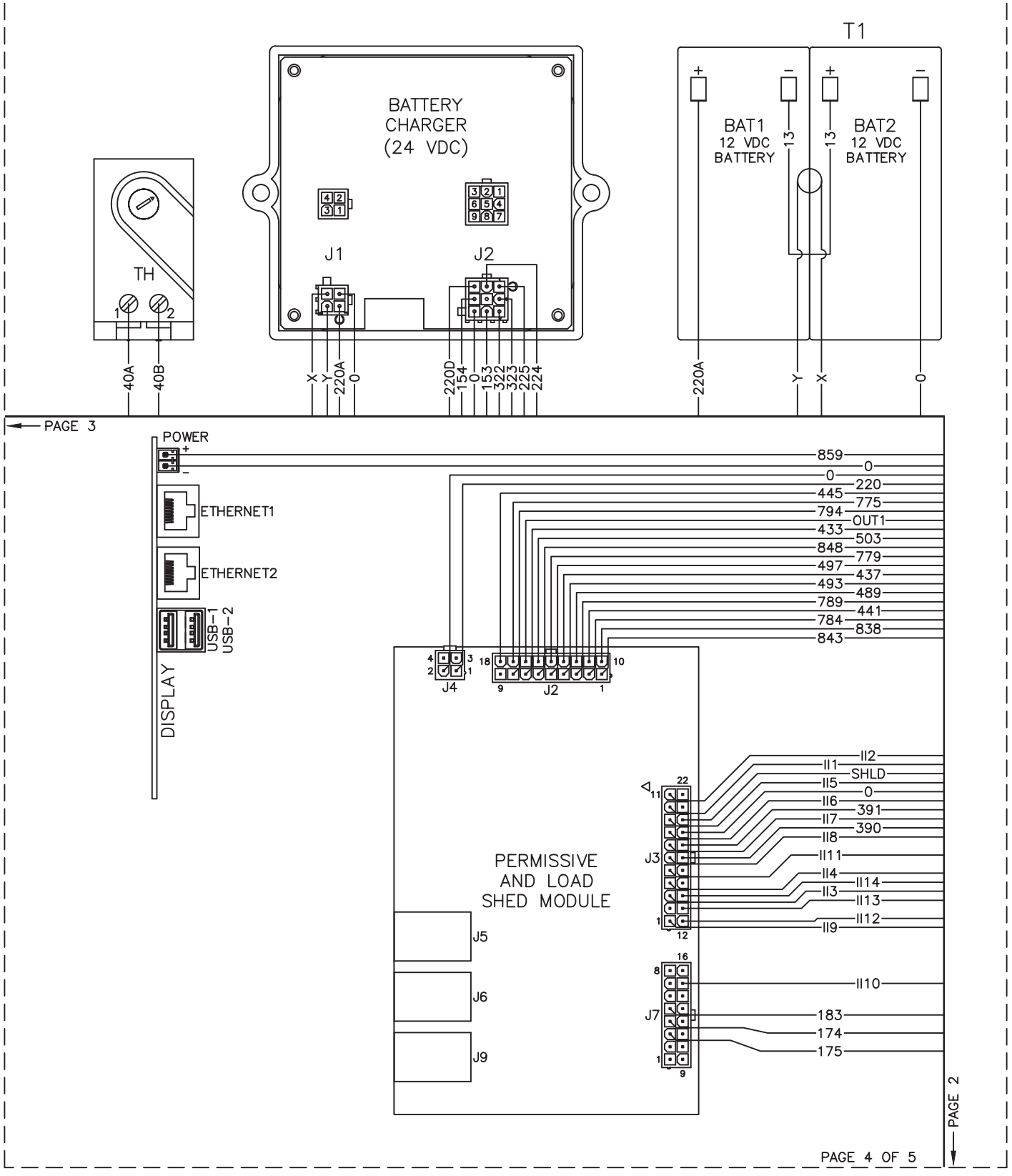
DRAWING #: 10000012491

REVISION: "E"

DATE: 08/27/18

EXHIBIT E

GROUP G



WIRING DIAGRAM

PWR ZNE PRMSV LOAD SHED

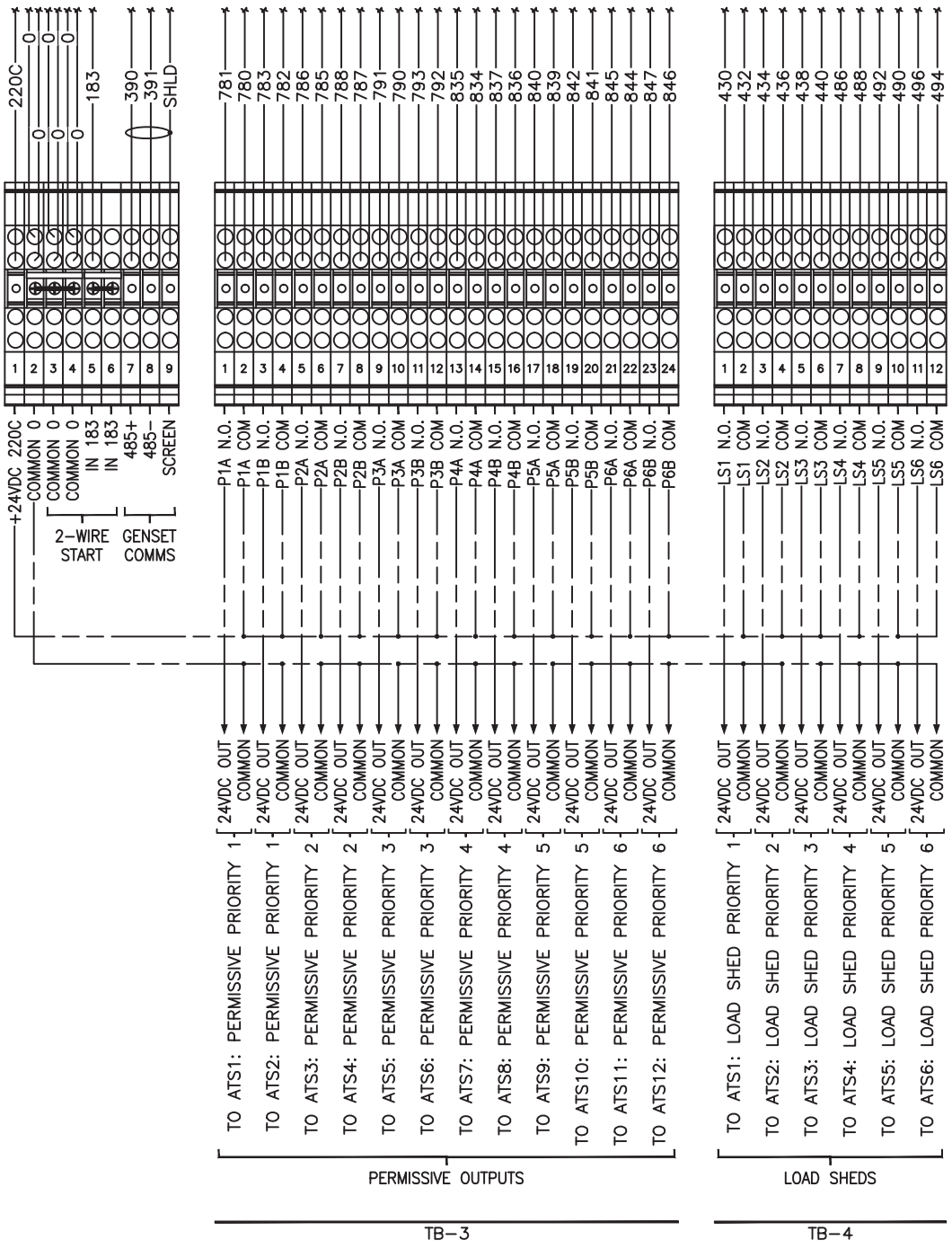
DRAWING #: 10000012491

REVISION: "E"

DATE: 08/27/18

EXHIBIT E

GROUP G



NON-GENERAC TRANSFER SWITCHES

ALTERNATIVE WIRING TO AUTOMATIC TRANSFER SWITCHES THAT REQUIRE 24VDC FOR PERMISSIVE AND LOAD SHED FUNCTIONALITY. FIELD WIRING BY OTHERS.

WIRING DIAGRAM

PWR ZNE PRMSV LOAD SHED

DRAWING #: 10000012491

REVISION: "E"

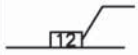
DATE: 08/27/18

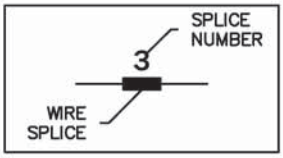
EXHIBIT E

LEGEND

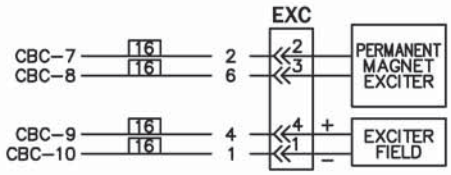
AC_	– AVR CONNECTOR	EXC	– EXCITER	WLS_	– COOLANT LEVEL SENDER
AH1	– ALARM HORN	FB_	– FUSE BLOCK	XMFR1	– TRANSFORMER
ALT	– DC CHARGE ALTERNATOR	FLS_	– FUEL LEVEL SENDER	Y_	– CAN BUS Y–CONNECTOR
AVR	– AUTOMATIC VOLTAGE REGULATOR	GFCI	– GROUND FAULT CURRENT INTERRUPT		
BC_	– BATTERY CHARGER CONNECTOR (20A)	GND	– GROUND BAR		
BCC	– BATTERY CHARGER CONNECTOR (10A)	LD	– LEAK DETECTOR		
BCH	– BATTERY CHARGER	MLCB	– MAIN LINE CIRCUIT BREAKER		
BPC	– BATTERY CHARGER POWER CONNECTOR	NEU	– NEUTRAL BUS		
BS	– POWER ZONE BASE STATION	OTS	– OIL TEMPERATURE SENDER		
BS_	– BASE STATION CONNECTOR	PWR	– POWER ZONE POWER CONNECTOR		
BSE_	– BASE STATION ETHERNET CONNECTOR	PZC	– MAIN POWER ZONE CONNECTOR		
BSG	– BASE STATION CHASSIS GROUND	R1	– RESISTOR		
BTP	– BATTERY CHARGER TEMP PROBE	RB_	– RELAY BOARD		
CB	– CIRCUIT BREAKER, EXCITER	RB_A	– RELAY BOARD CONNECTOR		
CBC	– (MLCB) CIRCUIT BREAKER CONNECTOR	RCC	– RELAY CONTACTOR CLOSE COIL		
CON	– CONTACTOR	SC	– START CONTACTOR		
CT_	– CURRENT TRANSFORMER	SM	– STARTER MOTOR		
CTC	– CURRENT TRANSFORMER CONNECTOR	ST	– SHUNT TRIP		
DB	– DIODE BRIDGE	SW1	– OFF/AUTO/MANUAL SELECT SWITCH		
DIS	– POWER ZONE DISPLAY	TB_	– TERMINAL BLOCKS		
ECU	– ENGINE CONTROL UNIT	TR	– CAN BUS TERMINATING RESISTOR		
ES1	– EMERGENCY STOP SWITCH	VSC	– VOLTAGE SENSING CONNECTOR		

NOTE: ALL WIRES 18 AWG 300V UL LISTED UNLESS SHOWN OTHERWISE





ALTERNATOR EXCITATION

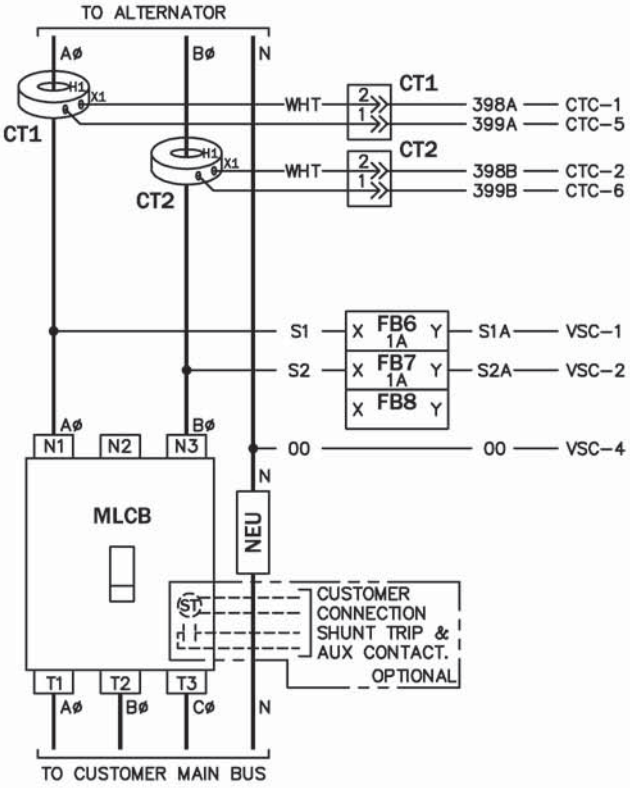


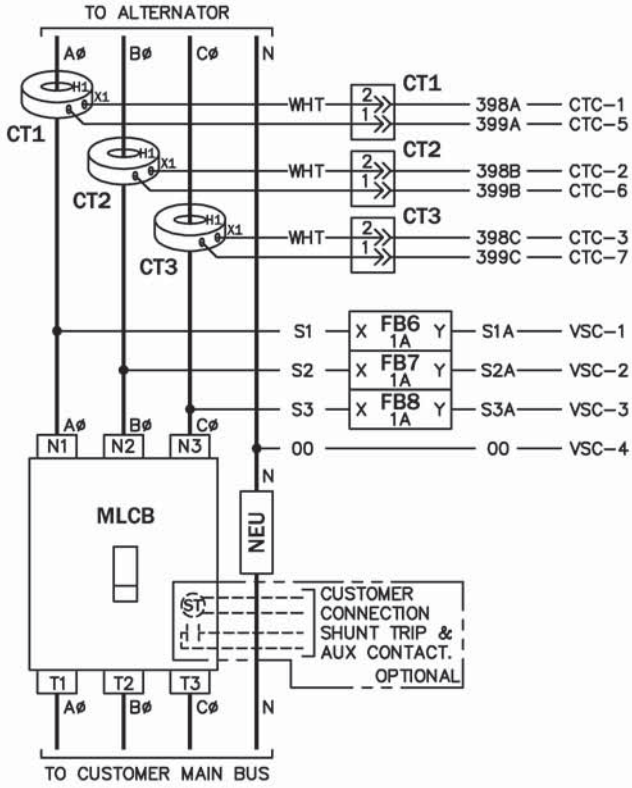
COMPONENTS LOCATED IN HIGH VOLTAGE CUSTOMER CONNECTION MODULE

CONNECTIONS FOR 1Ø UNIT

NOTE: ALL WIRES IN THIS SECTION ARE 600V RATED

CONNECTIONS FOR 3Ø UNIT



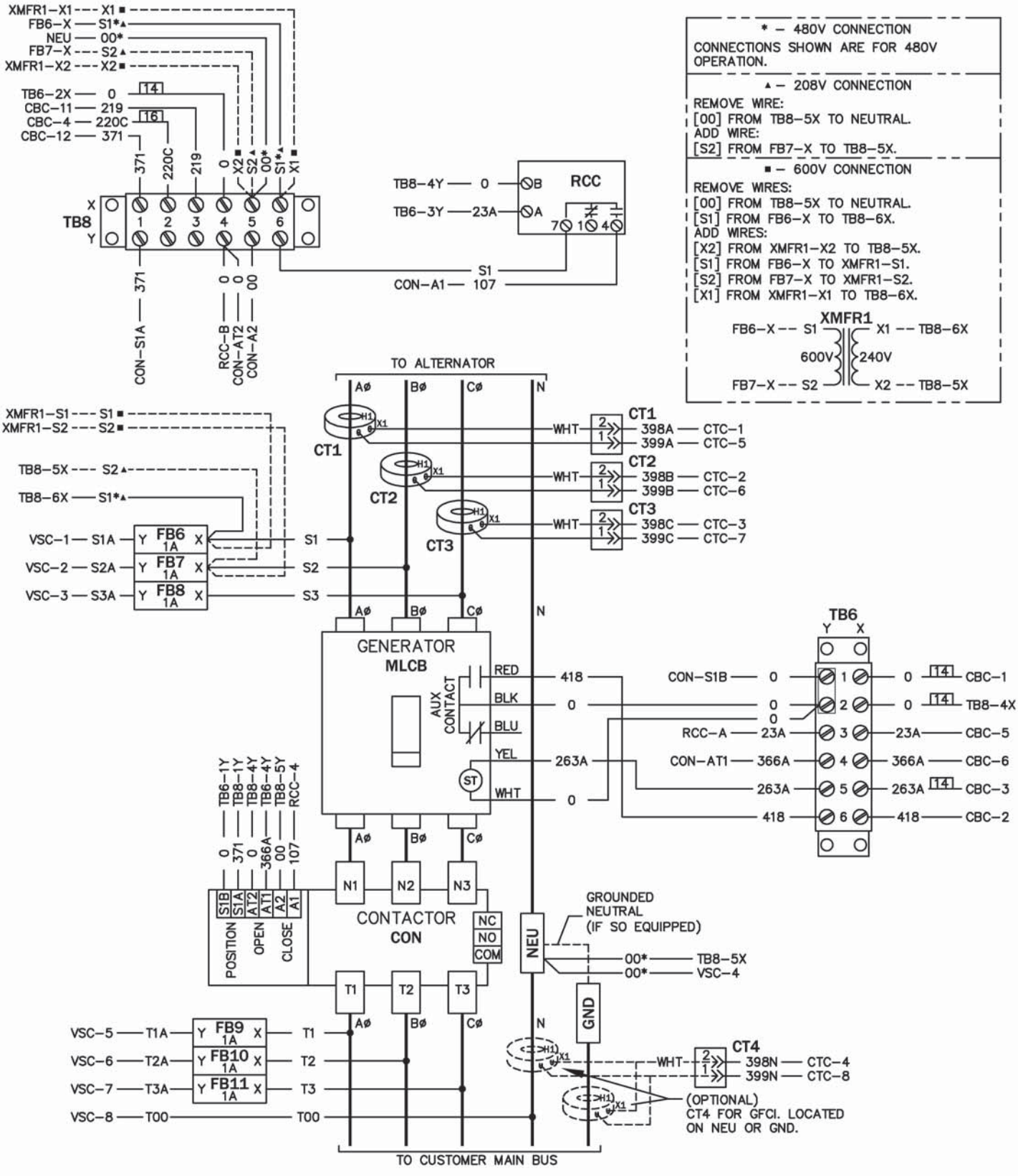


PAGE 1 OF 12

EXHIBIT E

COMPONENTS LOCATED IN HIGH VOLTAGE CUSTOMER CONNECTION MODULE

WIRING FOR MPS MOTORIZED MLCB OPTION



WIRING - DIAGRAM

REVISION: CN-0047126-A

DATE: 5/18/21

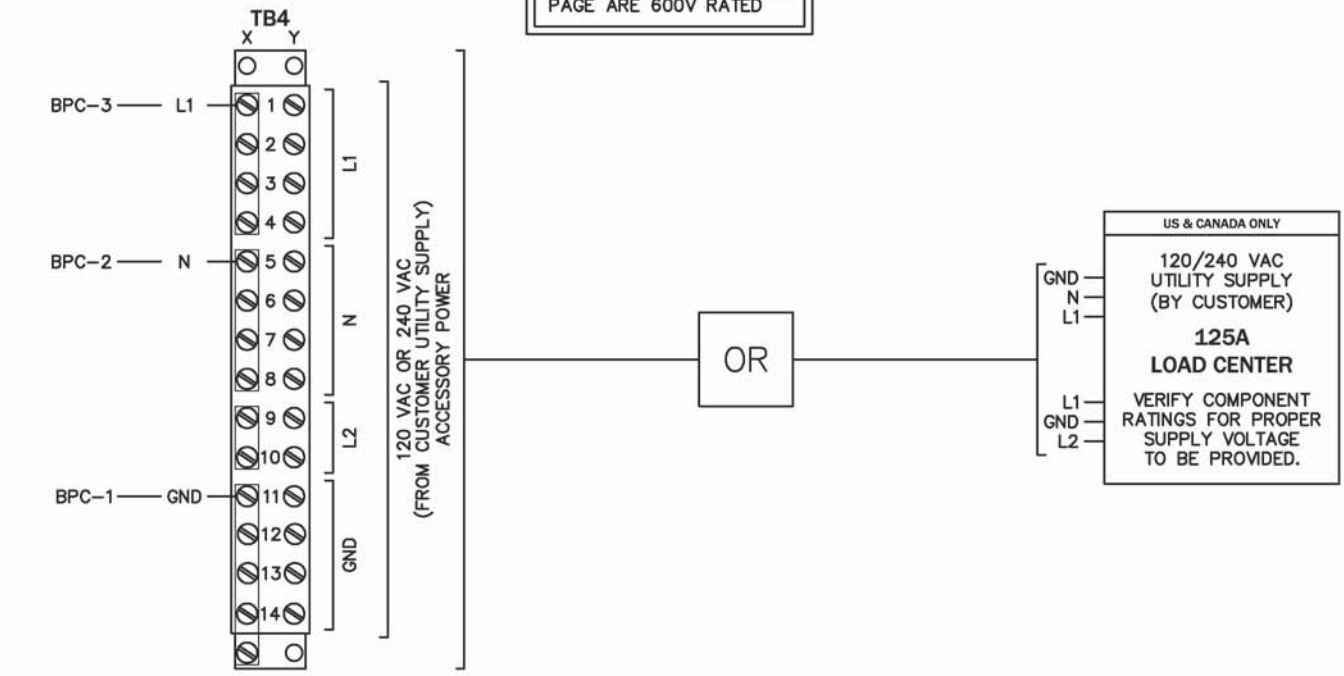
D12.5/15.2/18.1L (600KW) G22 PZPS

DRAWING #: A0000351498

EXHIBIT E

COMPONENTS LOCATED IN HIGH VOLTAGE CUSTOMER CONNECTION MODULE

NOTE: ALL WIRES ON THIS PAGE ARE 600V RATED

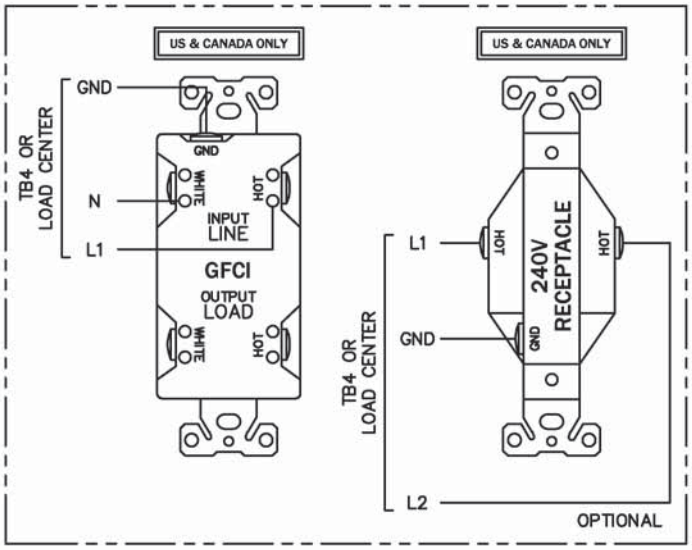


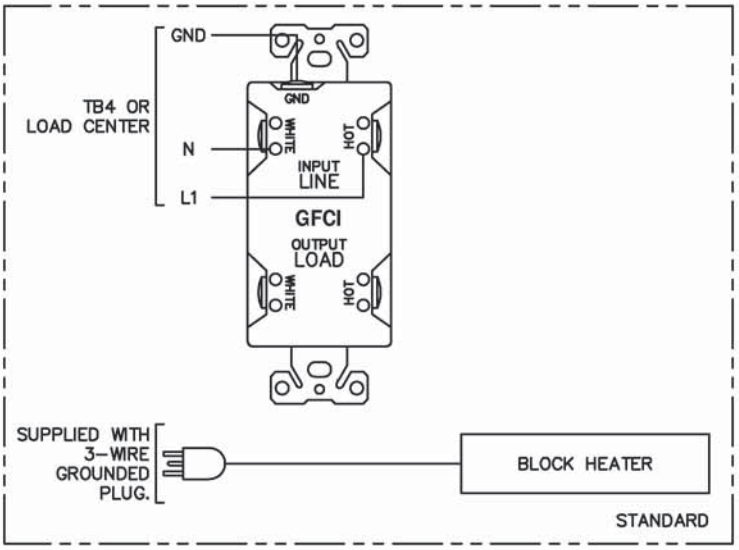
NOTE:
FOR FIELD WIRING TO CUSTOMER CONNECTIONS (TERMINAL STRIP)
MAXIMUM WIRE SIZE: #10 AWG
RECOMMENDED TIGHTENING TORQUE: 14 LB–IN

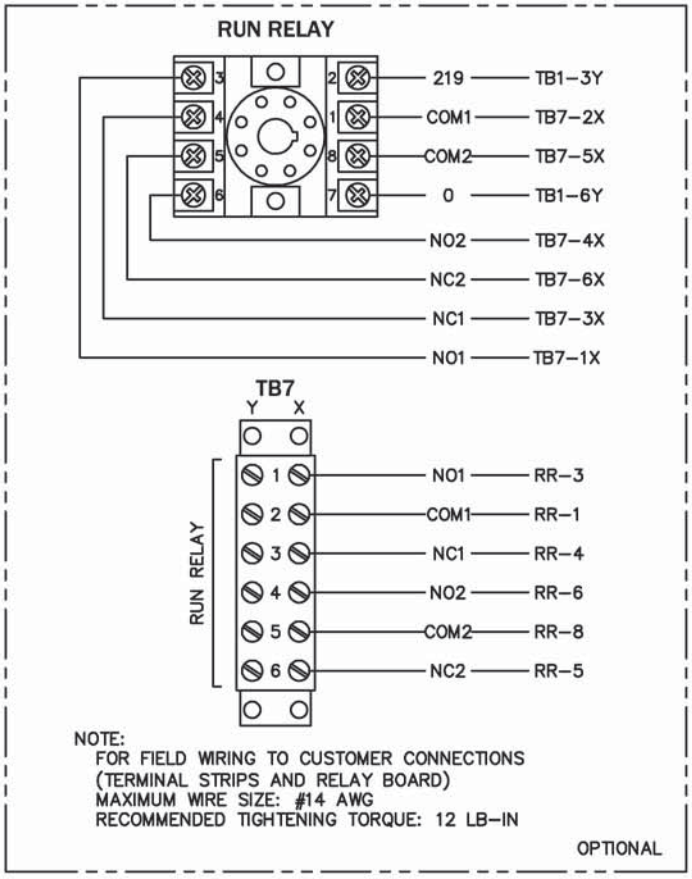
PAGE 3 OF 12

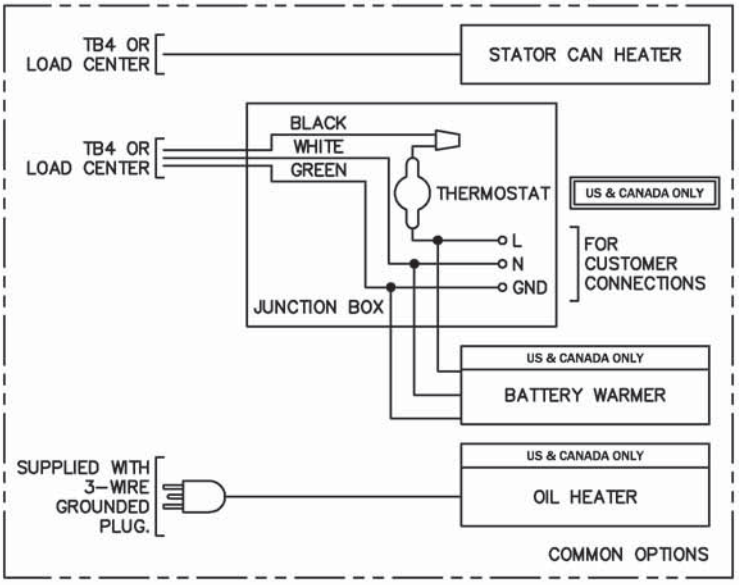
EXHIBIT E

COMPONENTS LOCATED IN HIGH VOLTAGE CUSTOMER CONNECTION MODULE

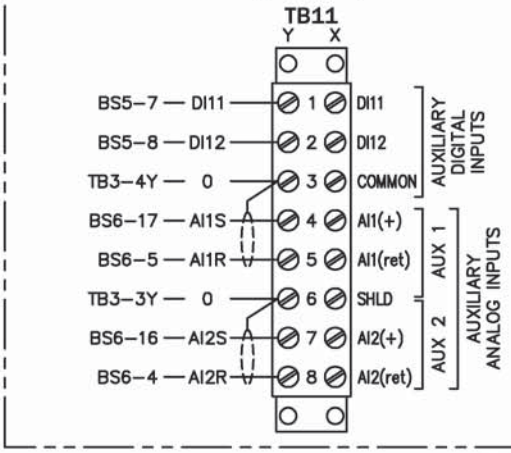








COMPONENTS LOCATED IN LOW VOLTAGE CUSTOMER CONNECTION PANEL
(LEFT SIDE)



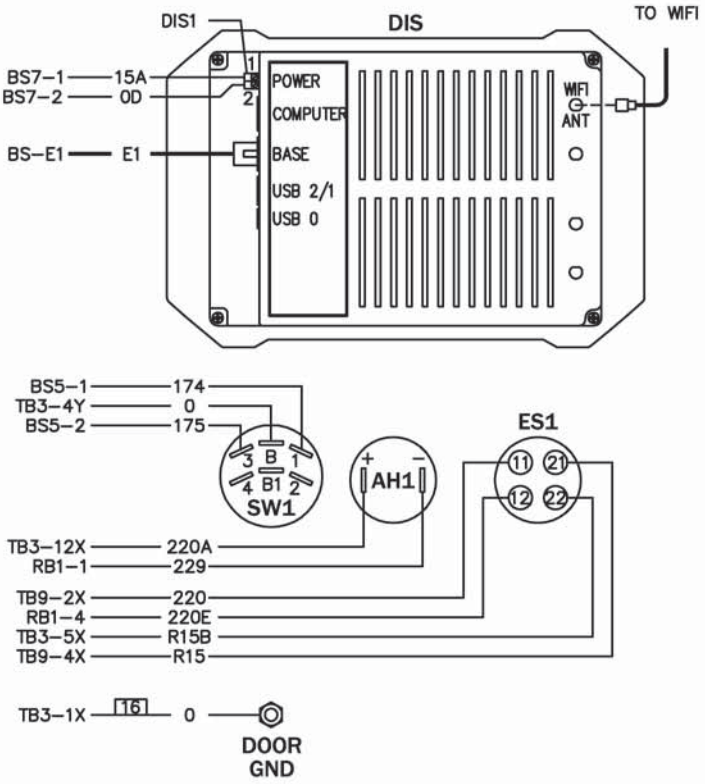
WIRING - DIAGRAM

REVISION: CN-0047126-A
DATE: 5/18/21

D12.5/15.2/18.1L (600KW) G22 PZPS
DRAWING #: A0000351498

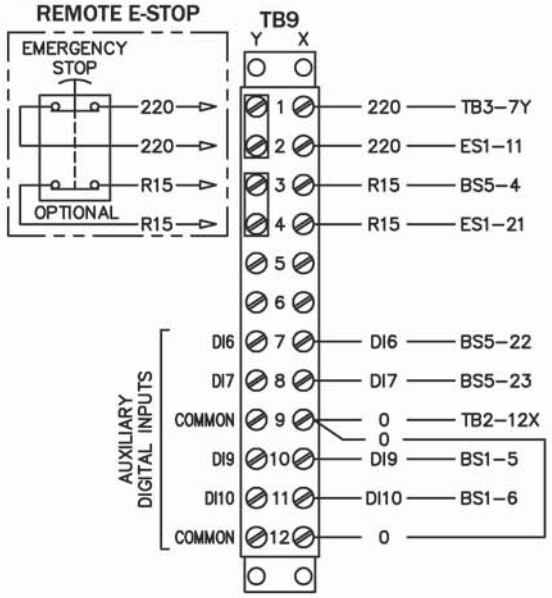
EXHIBIT E

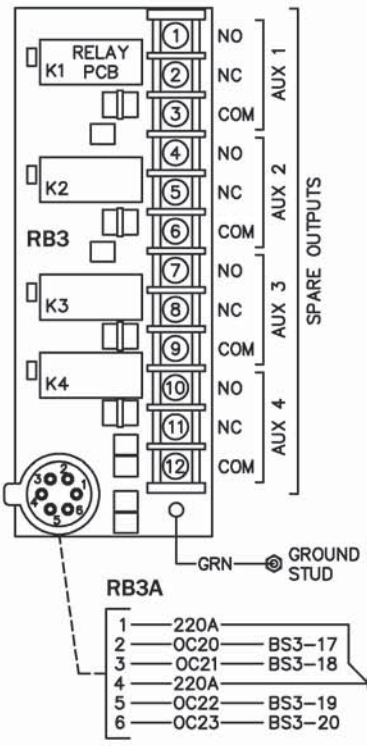
COMPONENTS LOCATED ON CONTROL PANEL DOOR

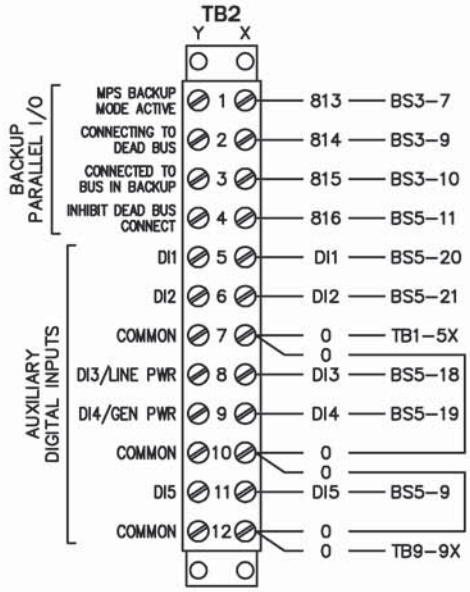


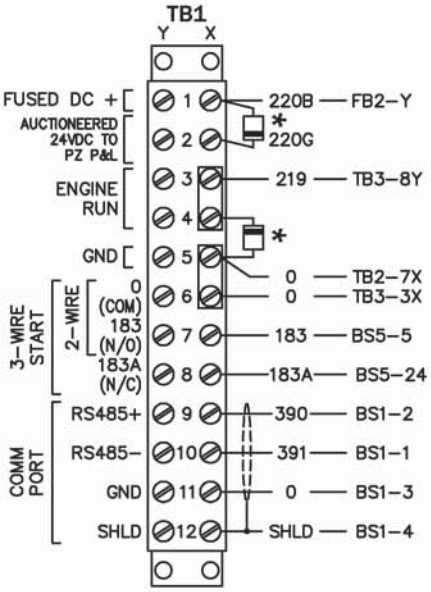
COMPONENTS LOCATED IN LOW VOLTAGE CUSTOMER CONNECTION PANEL

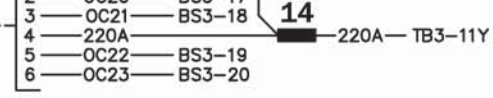
NOTE:
REMOVE TERMINAL BLOCK JUMPERS WHEN INSTALLING REMOTE E-STOP.











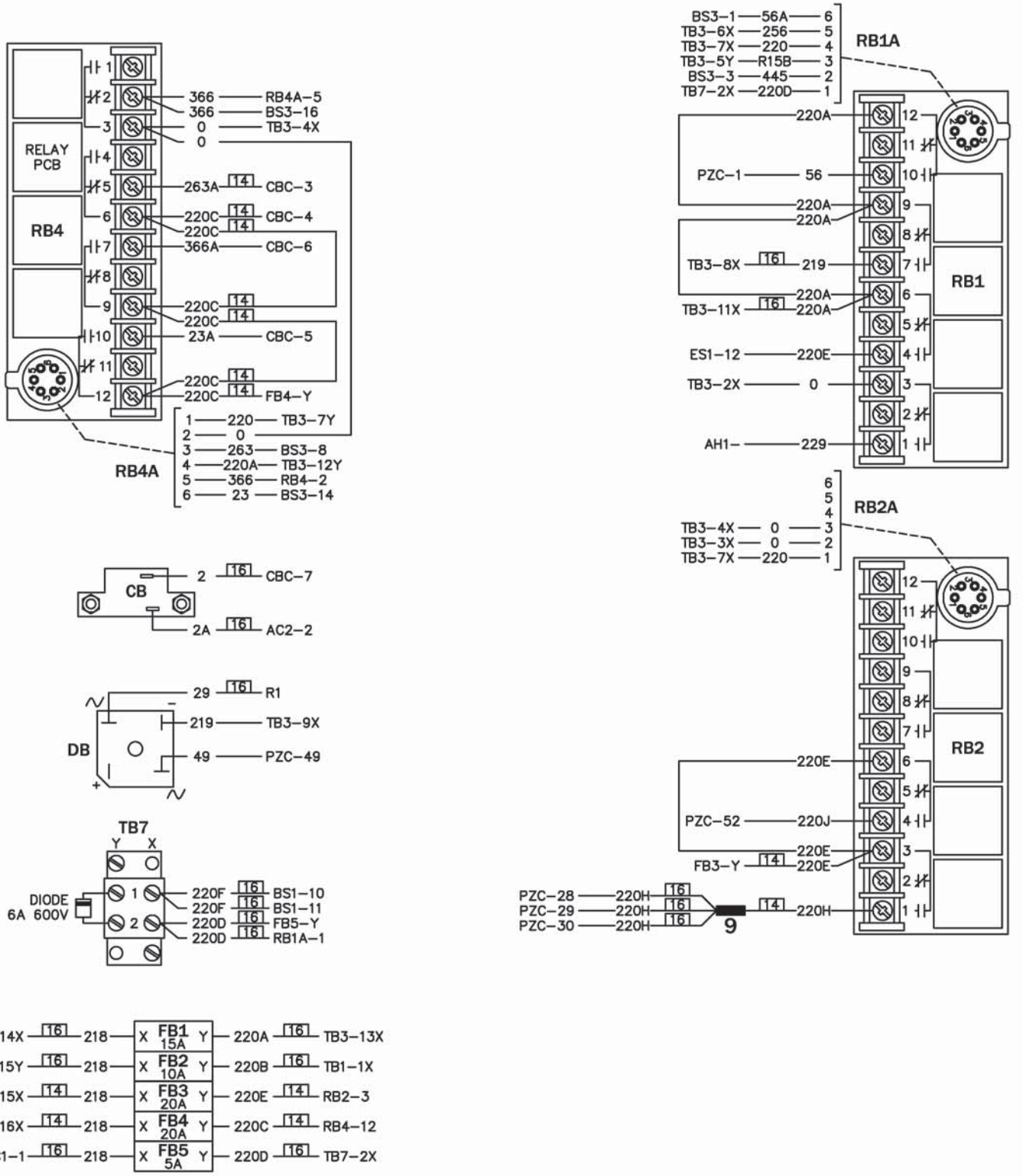
*NOTE: 6A, 600V DIODE LINE OF DIODE (CATHODE) MUST BE ORIENTATED THE SAME AS IN THE DRAWING.

NOTE:
FOR FIELD WIRING TO CUSTOMER CONNECTIONS (TERMINAL STRIPS AND RELAY BOARDS)
MAXIMUM WIRE SIZE: #14 AWG
RECOMMENDED TIGHTENING TORQUE: 12 LB-IN

PAGE 5 OF 12

EXHIBIT E

COMPONENTS LOCATED IN CONTROL PANEL
LEFT SIDE



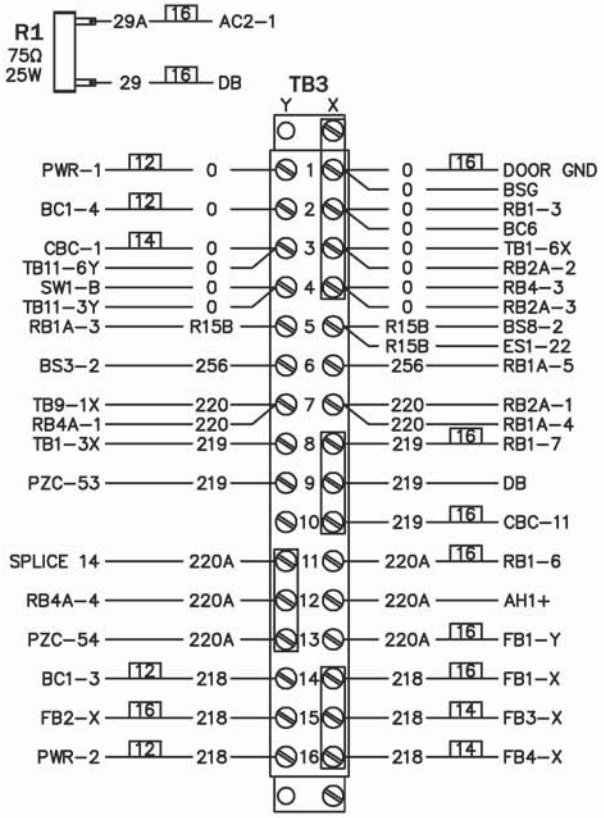
WIRING - DIAGRAM
D12.5/15.2/18.1L (600KW) G22 PZPS
DRAWING #: A0000351498

REVISION: CN-0047126-A
DATE: 5/18/21

PAGE 6 0F 12

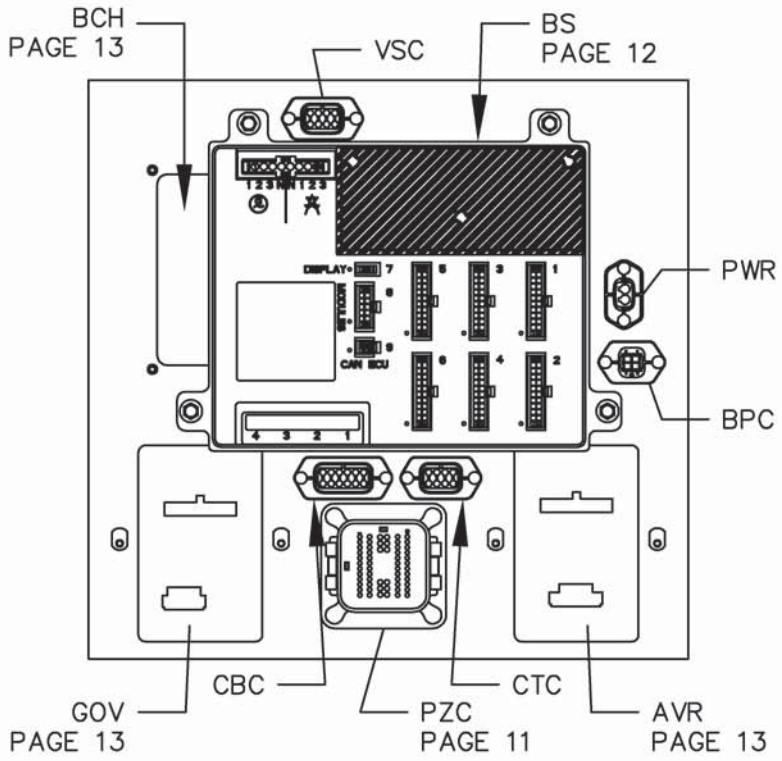
EXHIBIT E

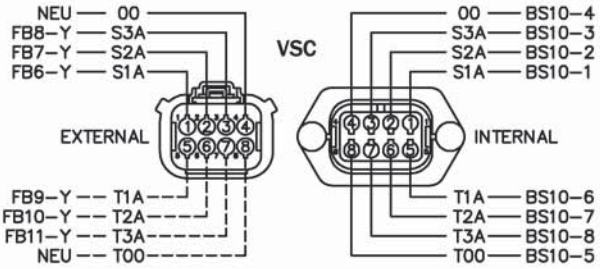
COMPONENTS LOCATED IN CONTROL PANEL
RIGHT SIDE

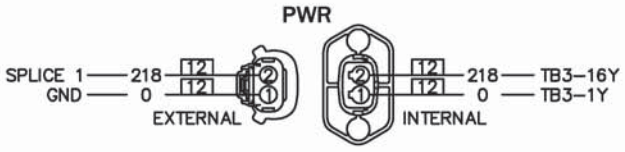


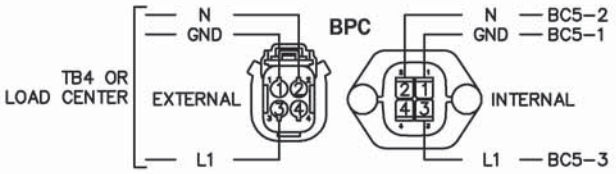
COMPONENTS LOCATED IN CONTROL PANEL

INTERNAL CONNECTORS SHOWN

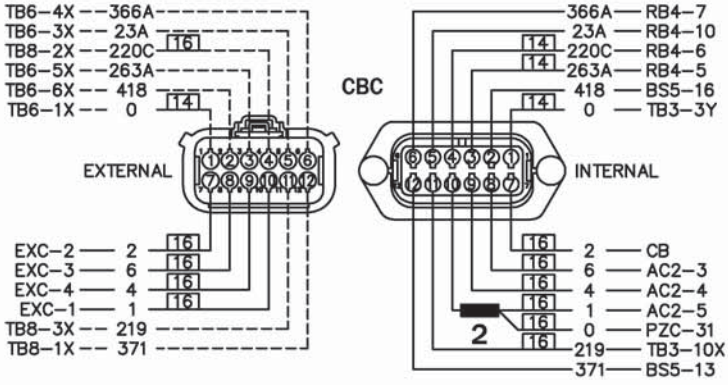


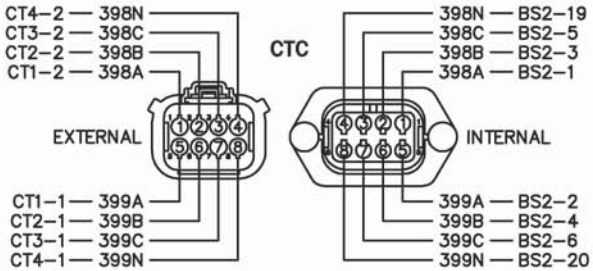






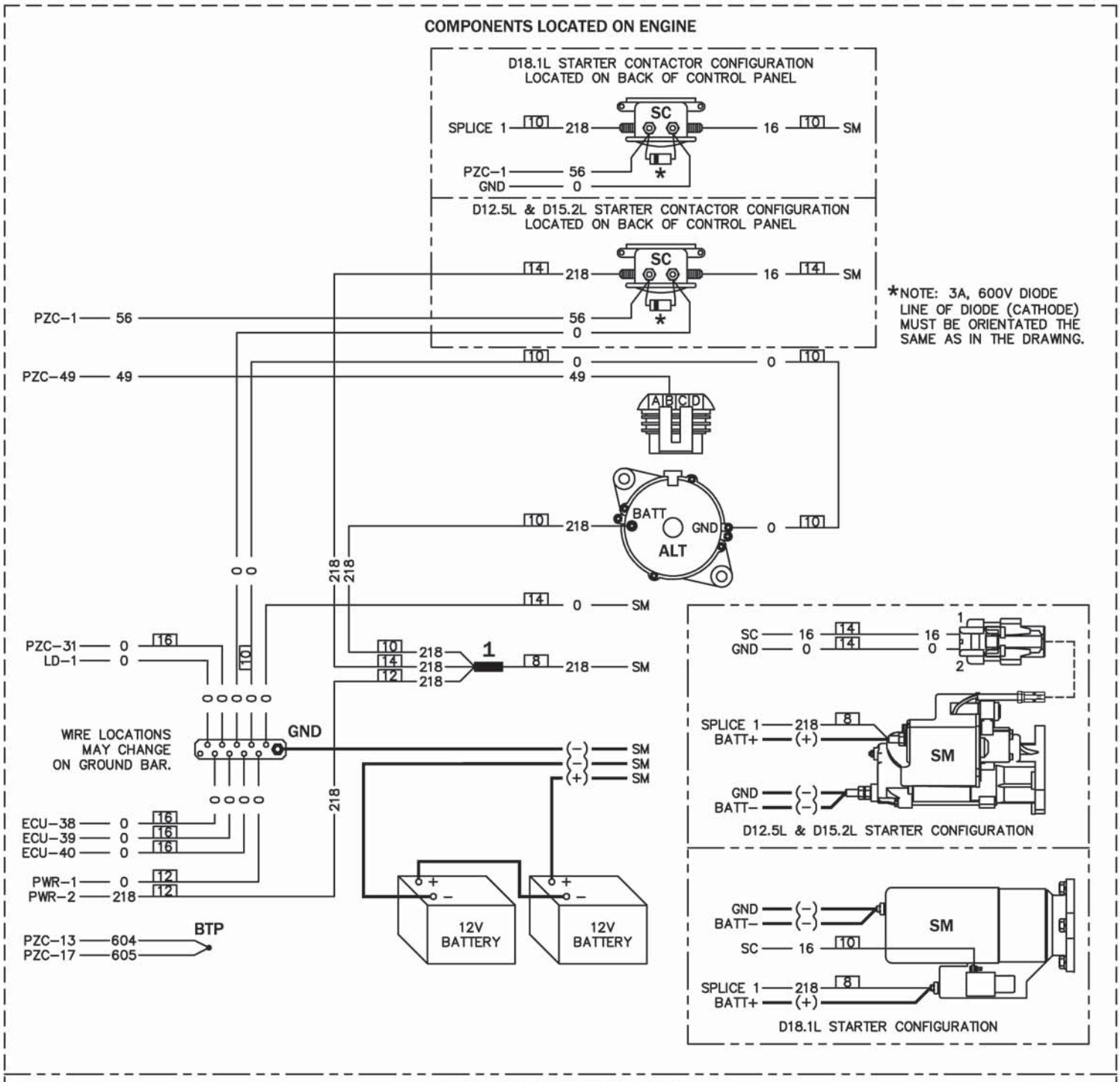
NOTE: THE DASHED WIRES IN CONNECTORS VSC AND CBC ARE POPULATED PER MPS APPLICATION.

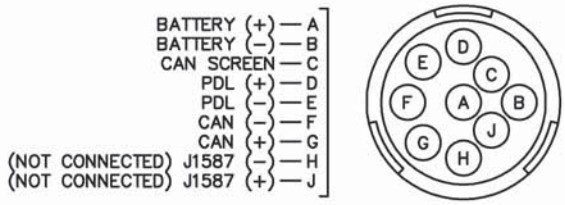




PAGE 7 OF 12

EXHIBIT E





WIRING - DIAGRAM

REVISION: CN-0047126-A

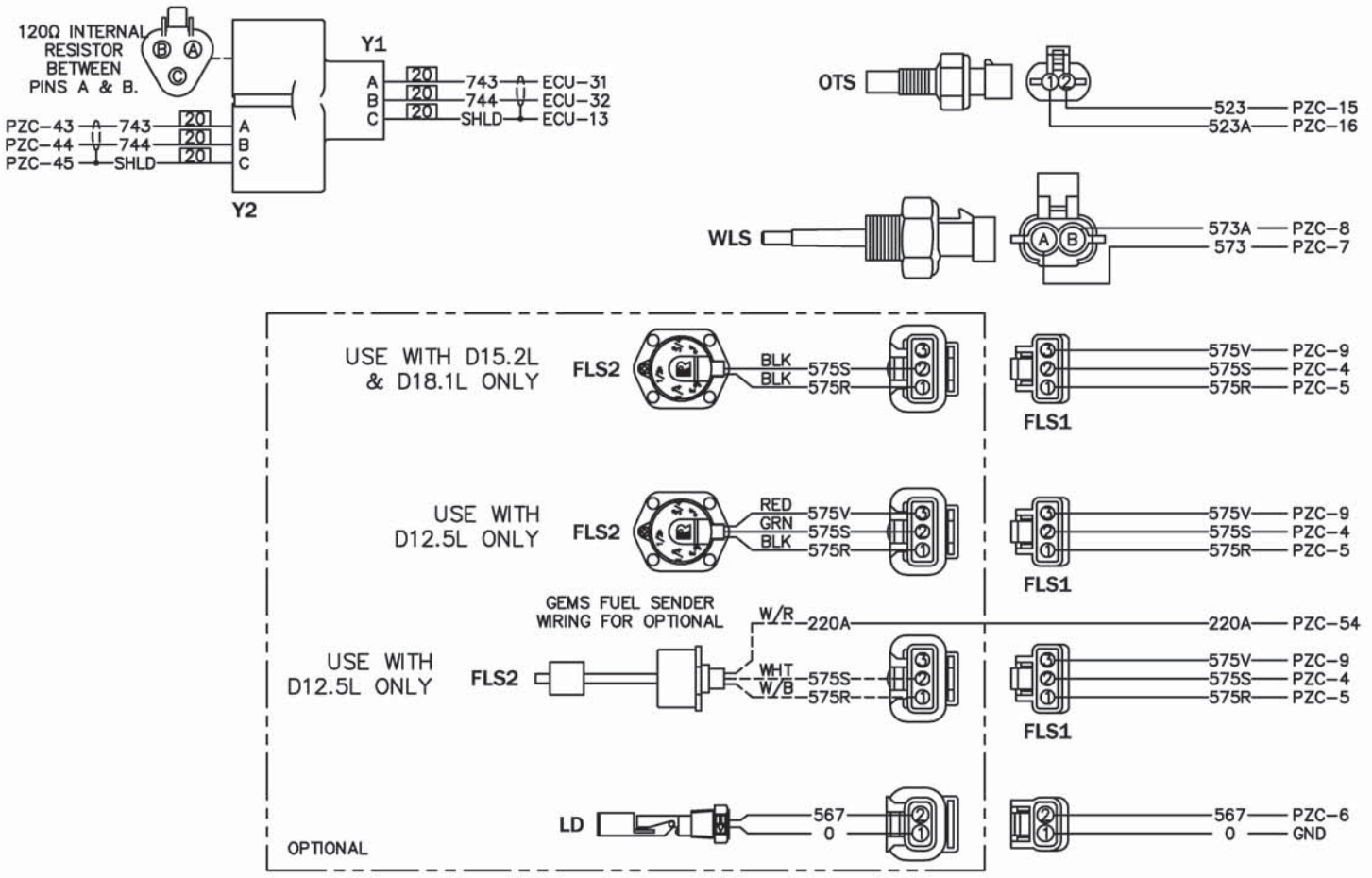
DATE: 5/18/21

D12.5/15.2/18.1L (600KW) G22 PZPS

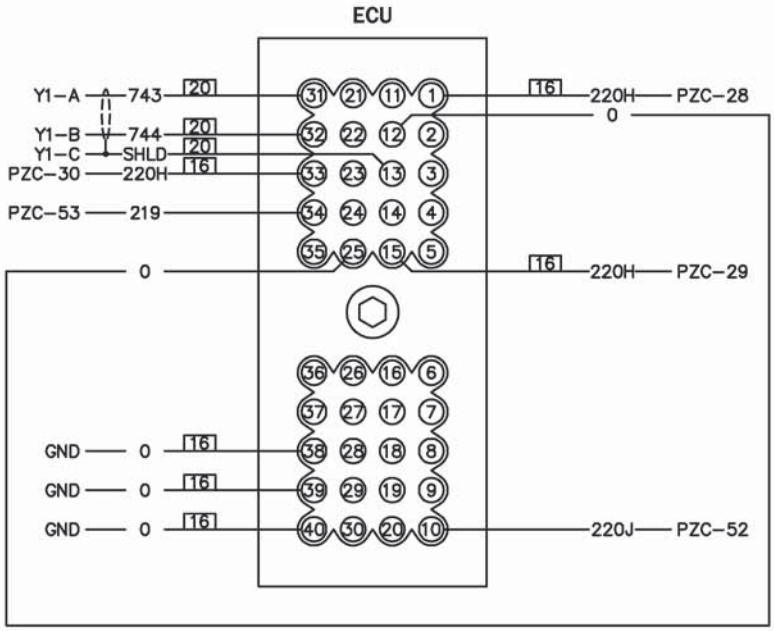
DRAWING #: A0000351498

EXHIBIT E

COMPONENTS LOCATED ON ENGINE



ENGINE CONTROL UNIT



PAGE 9 OF 12

EXHIBIT E

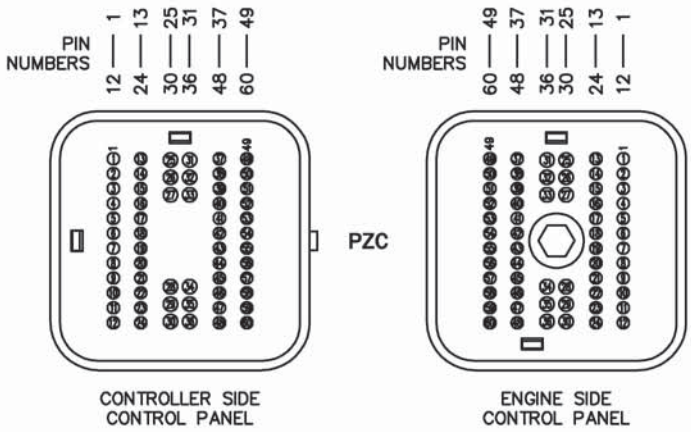
COMPONENTS LOCATED IN CONTROL PANEL

PIN	WIRE	FROM	TO
1	56	RB1–10	SC
2	–	–	–
3	–	–	–
4	575S	BS4–2	FLS1–2
5	575R	BS4–14	FLS1–1
6	567	BS5–3	LD–2
7	573	BS2–12	WLS–A
8	573A	BS2–11	WLS–B
9	575V	BS4–12	FLS1–3
10	–	–	–
11	–	–	–
12	–	–	–

PIN	WIRE	FROM	TO
13	604	BC8–1	BTP
14	–	–	–
15	523	BS6–20	OTS–2
16	523A	BS6–8	OTS–1
17	605	BC8–2	BTP
18	–	–	–
19	–	–	–
20	–	–	–
21	–	–	–
22	–	–	–
23	–	–	–
24	–	–	–

PIN	WIRE	FROM	TO
25	–	–	–
26	–	–	–
27	–	–	–

PIN	WIRE	FROM	TO
28	220H	SPLICE 9	ECU–1
29	220H	SPLICE 9	ECU–15
30	220H	SPLICE 9	ECU–33



PIN	WIRE	FROM	TO
31	0	SPLICE 2	GND
32	–	–	–
33	–	–	–

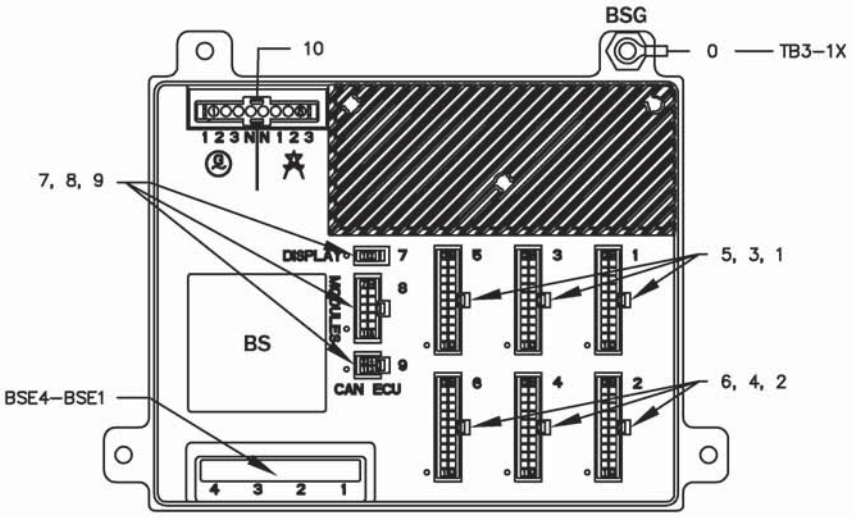
PIN	WIRE	FROM	TO
34	–	–	–
35	–	–	–
36	–	–	–

PIN	WIRE	FROM	TO
37	–	–	–
38	–	–	–
39	–	–	–
40	–	–	–
41	–	–	–
42	–	–	–
43	743	BS9–3	Y2–A
44	744	BS9–4	Y2–B
45	SHLD	BS9 (CUT)	Y2–C
46	–	–	–
47	–	–	–
48	–	–	–

PIN	WIRE	FROM	TO
49	49	DB	ALT
50	–	–	–
51	–	–	–
52	220J	RB2–4	ECU–10
53	219	TB3–9Y	ECU–34
54	220A	TB3–13Y	FLS2
55	–	–	–
56	–	–	–
57	–	–	–
58	–	–	–
59	–	–	–
60	–	–	–

EXHIBIT E

COMPONENTS LOCATED IN CONTROL PANEL



BS5

FROM	WIRE	PIN	PIN	WIRE	FROM
–	–	12	24	183A	TB1–8X
TB2–4X	816	11	23	DI7	TB9–8X
–	–	10	22	DI6	TB9–7X
TB2–11X	DI5	9	21	DI2	TB2–6X
TB11–2Y	DI12	8	20	DI1	TB2–5X
TB11–1Y	DI11	7	19	DI4	TB2–9X
BCC–8	505	6	18	DI3	TB2–8X
TB1–7X	183	5	17	–	–
TB9–3X	R15	4	16	418	CBC–2
PZC–6	567	3	15	–	–
SW1–3	175	2	14	–	–
SW1–1	174	1	13	371	CBC–12

BS3

FROM	WIRE	PIN	PIN	WIRE	FROM
–	–	12	24	–	–
–	–	11	23	–	–
TB2–3X	815	10	22	–	–
TB2–2X	814	9	21	–	–
RB4A–3	263	8	20	OC23	RB3A–6
TB2–1X	813	7	19	OC22	RB3A–5
–	–	6	18	OC21	RB3A–3
–	–	5	17	OC20	RB3A–2
–	–	4	16	366	RB4–2
RB1A–2	445	3	15	–	–
TB3–6Y	256	2	14	23	RB4A–6
RB1A–6	56A	1	13	–	–

BS1

FROM	WIRE	PIN	PIN	WIRE	FROM
–	–	12	24	–	–
TB7–1X	220F	11	23	–	–
TB7–1X	220F	10	22	0	BC1–2
–	–	9	21	–	–
–	–	8	20	–	–
–	–	7	19	–	–
TB9–11X	DI10	6	18	–	–
TB9–10X	DI9	5	17	–	–
TB1–12X	SHLD	4	16	–	–
TB1–11X	0	3	15	–	–
TB1–9X	390	2	14	–	–
TB1–10X	391	1	13	–	–

BS6

FROM	WIRE	PIN	PIN	WIRE	FROM
–	–	12	24	–	–
–	–	11	23	–	–
–	–	10	22	–	–
–	–	9	21	–	–
PZC–16	523A	8	20	523	PZC–15
–	–	7	19	–	–
–	–	6	18	–	–
TB11–5Y	AI1R	5	17	AI1S	TB11–4Y
TB11–8Y	AI2R	4	16	AI2S	TB11–7Y
–	–	3	15	–	–
–	–	2	14	–	–
–	–	1	13	–	–

BS4

FROM	WIRE	PIN	PIN	WIRE	FROM
PZC–9	575V	12	24	–	–
–	–	11	23	–	–
–	–	10	22	–	–
–	–	9	21	–	–
–	–	8	20	–	–
–	–	7	19	–	–
–	–	6	18	–	–
–	–	5	17	–	–
–	–	4	16	–	–
–	–	3	15	–	–
PZC–4	575S	2	14	575R	PZC–5
BCC–6	803V	1	13	–	–

BS2

FROM	WIRE	PIN	PIN	WIRE	FROM
PZC–7	573	12	24	–	–
PZC–8	573A	11	23	–	–
–	–	10	22	–	–
–	–	9	21	–	–
–	–	8	20	399N	CTC–8
–	–	7	19	398N	CTC–4
CTC–7	399C	6	18	–	–
CTC–3	398C	5	17	–	–
CTC–6	399B	4	16	–	–
CTC–2	398B	3	15	–	–
CTC–5	399A	2	14	–	–
CTC–1	398A	1	13	–	–

BS7

FROM	WIRE	PIN	PIN	WIRE	FROM
DIS1–1	15A	1	2	0D	DIS1–2

BS8

FROM	WIRE	PIN	PIN	WIRE	FROM
–	–	7	14	–	–
–	–	6	13	–	–
–	–	5	12	–	–
AC1–10	0F	4	11	15F	AC1–11
–	–	3	10	–	–
TB3–5X	R15B	2	9	744G	BC2–4
BC2–3	SHLD	1	8	743G	BC2–5

BS9

FROM	WIRE	PIN	PIN	WIRE	FROM
–	–	2	4	744	PZC–44
–	–	1	3	743	PZC–43

BS10

1 2 3 N N 1 2 3

	PIN	WIRE	FROM
GEN 1	1	S1A	VSC–1
GEN 2	2	S2A	VSC–2
GEN 3	3	S3A	VSC–3
GEN N	4	00	VSC–4
UTIL N	5	T00	VSC–8
UTIL 1	6	T1A	VSC–5
UTIL 2	7	T2A	VSC–6
UTIL 3	8	T3A	VSC–7

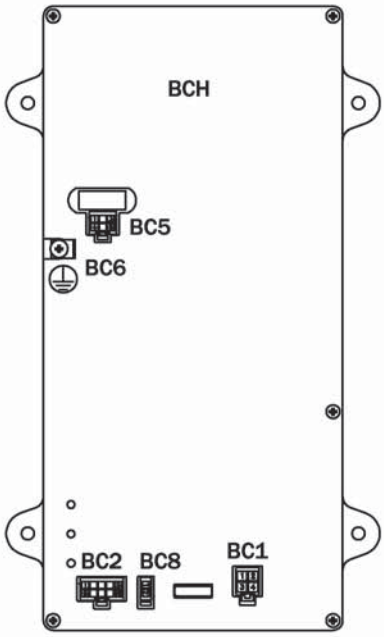
BSE1-BSE4

PORT	WIRE	TO	FUNCTION
BSE1	E1	DIS	DISPLAY TO BASE COM
BSE2	E2	GEN BUS	MPS GENERATOR TO GENERATOR COM
BSE3	E3	GEN BUS	MPS GENERATOR TO GENERATOR COM
BSE4	E4	AUX DEVICE	AUX OPTION COM

EXHIBIT E

COMPONENTS LOCATED IN CONTROL PANEL
BATTERY CHARGER

OPTIONAL 20 AMP BATTERY CHARGER



BCH

BC1

PIN	WIRE	FROM
1	218	FB5–X
2	0	BS1–22

PIN	WIRE	FROM
3	218	TB3–14Y
4	0	TB3–2Y

BC2

PIN	WIRE	FROM
1	–	–
2	–	–
3	SHLD	BS8–1
4	744G	BS8–9
5	743G	BS8–8

PIN	WIRE	FROM
6	–	–
7	–	–
8	SHLD	AC1–4
9	744G	AC1–5
10	743G	AC1–6

BC5

PIN	WIRE	FROM
1	GND	BPC–1
2	N	BPC–2
3	L1	BPC–3

PIN	WIRE	FROM
4	–	–
5	–	–
6	–	–

BC8

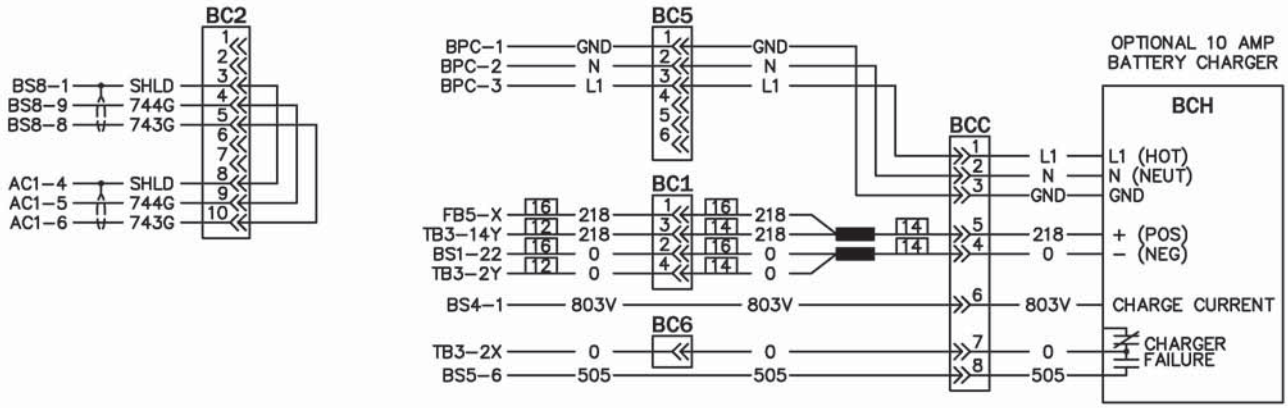
PIN	WIRE	FROM
1	604	PZC–13

PIN	WIRE	FROM
2	605	PZC–17

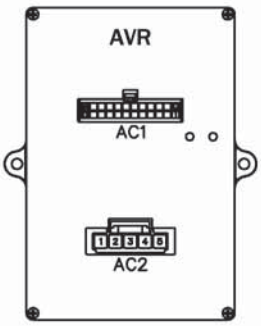
BC6

PIN	WIRE	FROM
–	0	TB3–2X

BATTERY CHARGER



AVR CONTROLLER



AVR

AC1

PIN	WIRE	FROM
1	–	–
2	–	–
3	–	–
4	SHLD	BC2–8
5	744G	BC2–9
6	743G	BC2–10
7	–	–
8	–	–
9	–	–
10	0F	BS8–4
11	15F	BS8–11
12	–	–

PIN	WIRE	FROM
13	–	–
14	–	–
15	–	–
16	–	–
17	744G	TR–B
18	743G	TR–A
19	–	–
20	–	–
21	–	–
22	–	–
23	–	–
24	–	–

TR — CAN BUS 120 Ω RESISTOR

AC2

PIN	WIRE	FROM
1	29A	R1
2	2A	CB
3	6	CBC–8
4	4	CBC–9
5	1	SPLICE 2

WIRING - DIAGRAM

REVISION: CN-0047126-A

DATE: 5/18/21

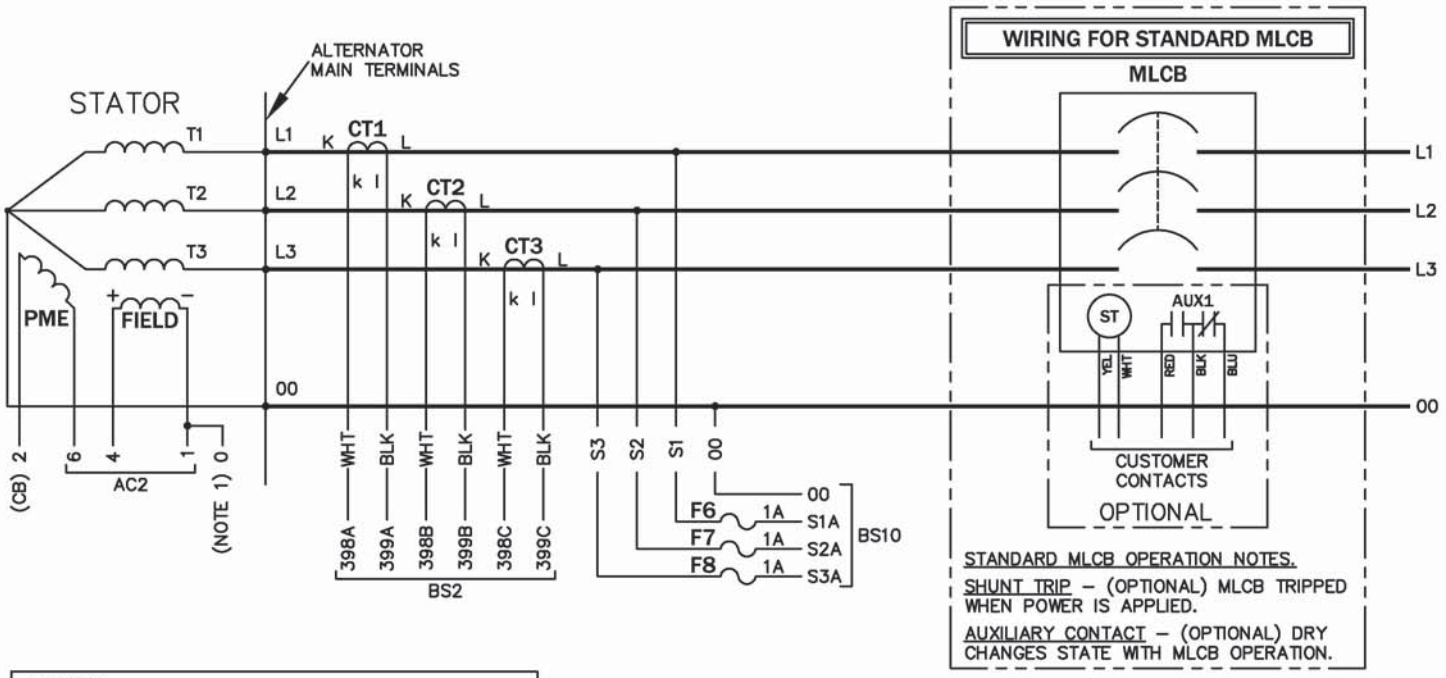
PAGE 12 0F 12

D12.5/15.2/18.1L (600KW) G22 PZPS

DRAWING #: A0000351498

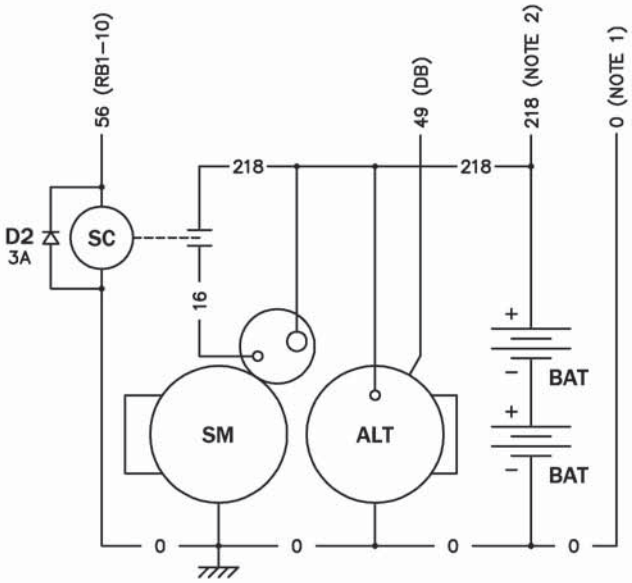
EXHIBIT E

GROUP G



NOTES:

1) WIRE# 0 IS CHASSIS GROUND (BATTERY –) UNLESS NOTED OTHERWISE.
2) WIRE# 218 IS UNFUSED +24VDC (BATTERY +).
3) WIRE# 219 IS FUSED +24VDC WHEN GENERATOR IS CRANKING OR RUNNING.
4) WIRE# 220 IS FUSED +24VDC WHEN E–STOP IS NOT ACTIVATED.
5) WIRE# 220A IS FUSED +24VDC FOR FACTORY GENERAL USE.
6) WIRE# 220B IS FUSED +24VDC FOR CUSTOMER GENERAL USE.
7) WIRE# 220C IS FUSED +24VDC FOR THE BREAKER SPRING RELEASE, SHUNT TRIP AND UNDERVOLTAGE RELEASE.
8) WIRE# 220D IS FUSED +24VDC FOR THE CONTROL MODULE, ALARM, AND WATCHDOG/OVERSPEED RELAYS.
9) WIRE# 220E IS FUSED +24VDC CONTROLLED BY GENERATOR CONTROL MODULE PRIOR TO E–STOP.
10) WIRE# 220F IS FUSED +24VDC FOR THE POWER ZONE CONTROL MODULE.
11) WIRE# 220G IS FUSED AUCTIONEERED +24VDC FOR POWER ZONE PERMISSIVE & LOAD SHED.
12) WIRE# 220H IS FUSED, UNSWITCHED +24VDC FOR THE ECU.
13) WIRE# 220J IS FUSED, SWITCHED +24VDC FOR THE ECU.



LEGEND

00 – NEUTRAL	CC – CLOSE COIL	OTS – OIL TEMPERATURE SENDER
AC_ – AVR CONNECTOR	CON – CONTACTOR	PME – PERMANENT MAGNET EXCITER
AH1 – ALARM HORN	CT_ – CURRENT TRANSFORMER	R1 – RESISTOR
ALT – DC CHARGE ALTERNATOR	D_ – DIODE	RB_ – RELAY BOARD
AUX_ – AUXILIARY CONTACT	DB – DIODE BRIDGE	RCC – RELAY CLOSE COIL
AVR – AUTOMATIC VOLTAGE REGULATOR	DIS – POWERZONE DISPLAY	SC – START CONTACTOR
BAT – BATTERY	ECU – ENGINE CONTROL UNIT	SM – STARTER MOTOR
BC_ – BATTERY CHARGER CONNECTOR (20A)	ES1 – EMERGENCY STOP SWITCH	ST – SHUNT TRIP
BCH – BATTERY CHARGER	F_ – FUSE BLOCK	SW1 – OFF/AUTO/MANUAL SWITCH
BS – POWER ZONE BASE STATION	FLS – FUEL LEVEL SENDER	TC – TRIP COIL
BS_ – BASE STATION CONNECTOR	GFCI – GROUND FAULT CURRENT INTERRUPT	TR – TERMINATING RESISTER
BSE_ – BASE STATION ETHERNET CONNECTOR	GND – GROUND BAR CONNECTION	WLS – COOLANT LEVEL SENDER
BTP – BATTERY CHARGER TEMP PROBE	LD – FUEL LEAK DETECTOR	XMFR1 – TRANSFORMER
CB – CIRCUIT BREAKER	MLCB – MAIN LINE CIRCUIT BREAKER	

SCHEMATIC - DIAGRAM

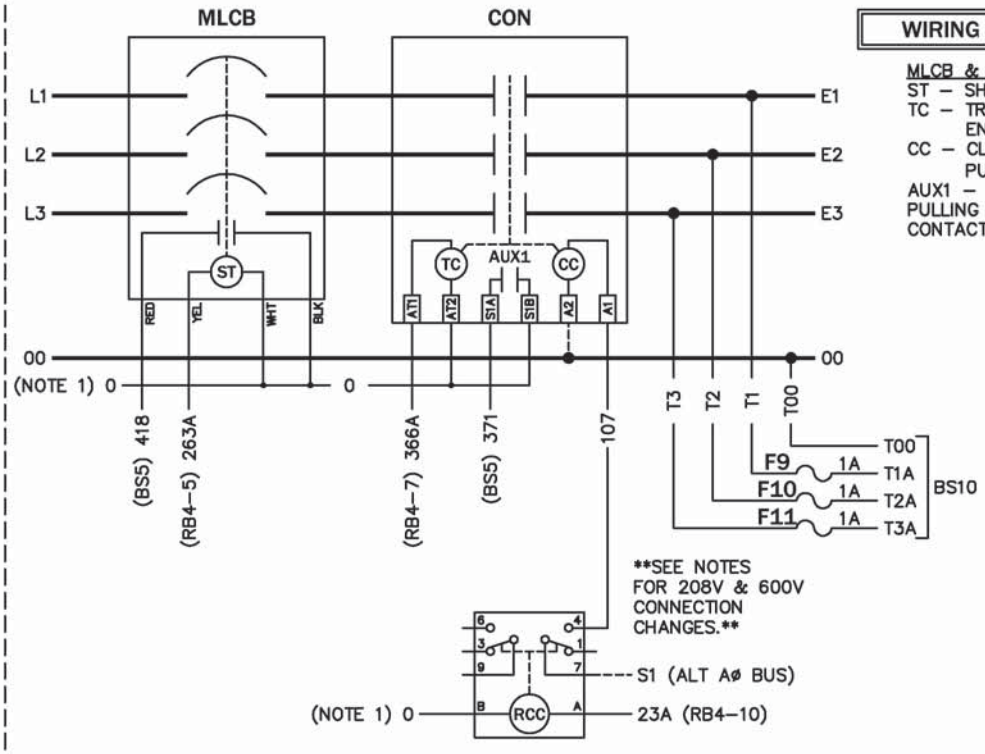
D12.5/15.2/18.1L (600KW) G22 PZPS

DRAWING #: A0000351499

REVISION: CN-0047126-A

DATE: 5/18/21

EXHIBIT E



WIRING FOR MLCB & CONTACTOR

MLCB & CON OPERATION NOTES.
ST – SHUNT TRIP, OPENS MLCB WHEN RB4–K2 DROPS OUT.
TC – TRIP COIL, OPENS CONTACTOR WHEN RB4–K3 IS ENERGIZED.
CC – CLOSE COIL, CLOSES CONTACTOR WHEN RCC IS PULSED. (PULSING PREVENTS COIL FROM OVERHEATING)
AUX1 – SIGNALS CONTACTOR OPEN OR CLOSED STATUS. PULLING FB4 TO WIRE 220C WILL DISABLE MLCB & CONTACTOR FUNCTIONS.

WIRING NOTE

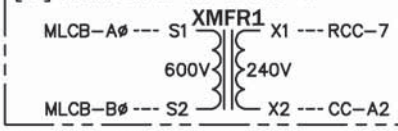
CONNECTIONS SHOWN ARE FOR 480V OPERATION.

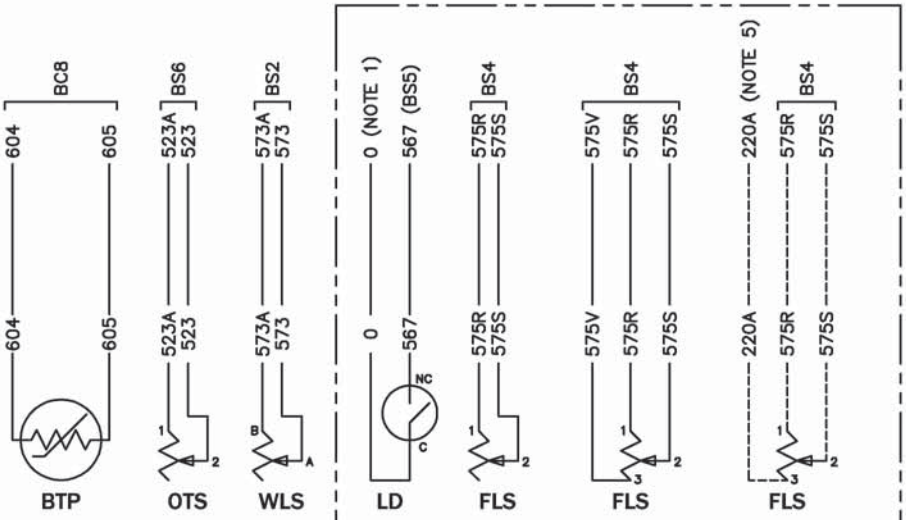
208V CONNECTION

REMOVE WIRE:
[00] FROM CC–A2 TO NEUTRAL.
ADD WIRE:
[S2] FROM ALT–Bø TO CC–A2.

600V CONNECTION

REMOVE WIRES:
[00] FROM CC–A2 TO NEUTRAL.
[S1] FROM ALT–Aø TO RCC–7.
ADD WIRES:
[X2] FROM XMFR1–X2 TO CC–A2.
[S1] FROM ALT–Aø TO XMFR1–S1.
[S2] FROM ALT–Bø TO XMFR1–S2.
[X1] FROM XMFR1–X1 TO RCC–7.



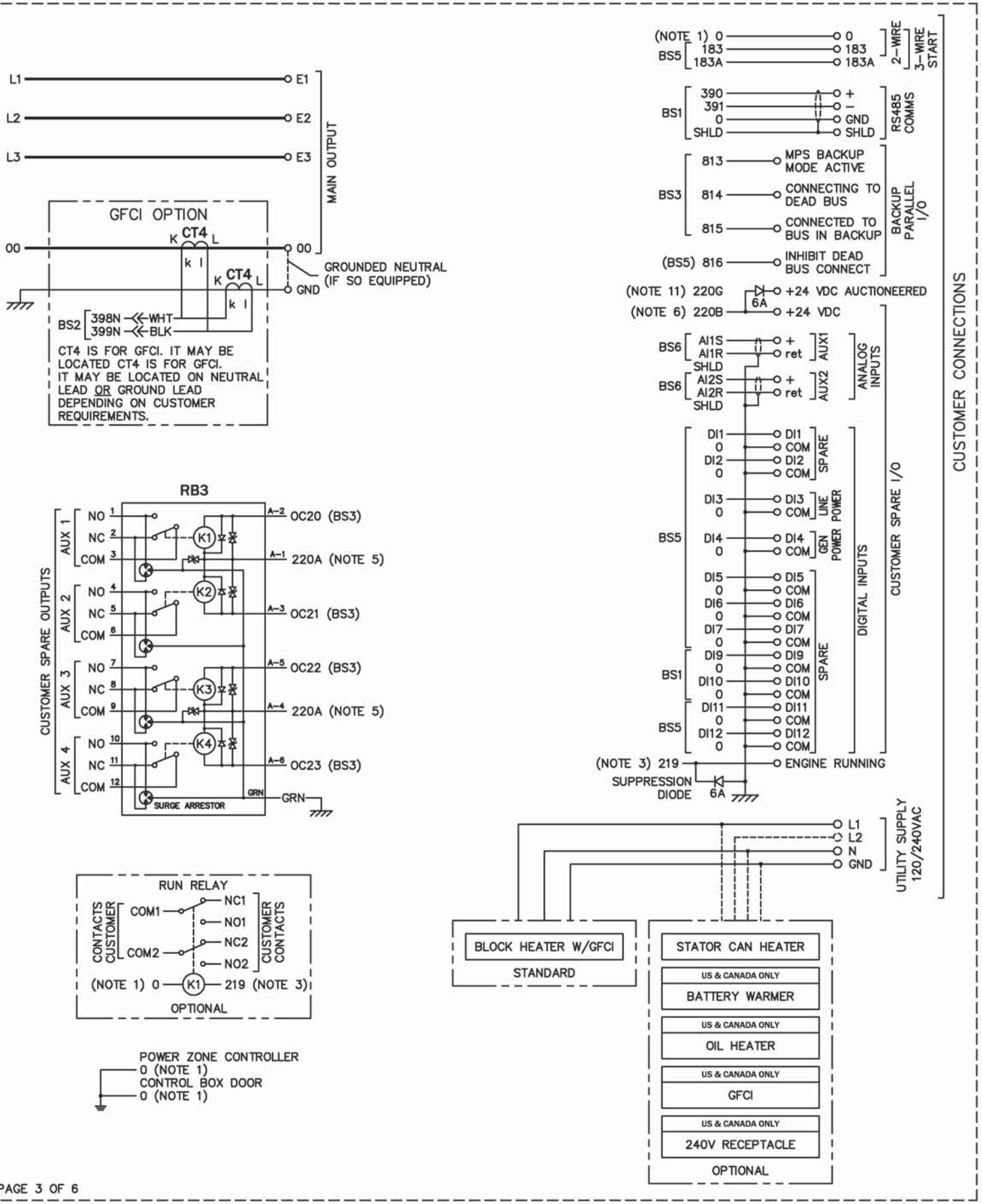


SCHEMATIC - DIAGRAM
D12.5/15.2/18.1L (600KW) G22 PZPS
DRAWING #: A0000351499

REVISION: CN-0047126-A
DATE: 5/18/21

EXHIBIT E

GROUP G



PAGE 3 OF 6

SCHEMATIC - DIAGRAM

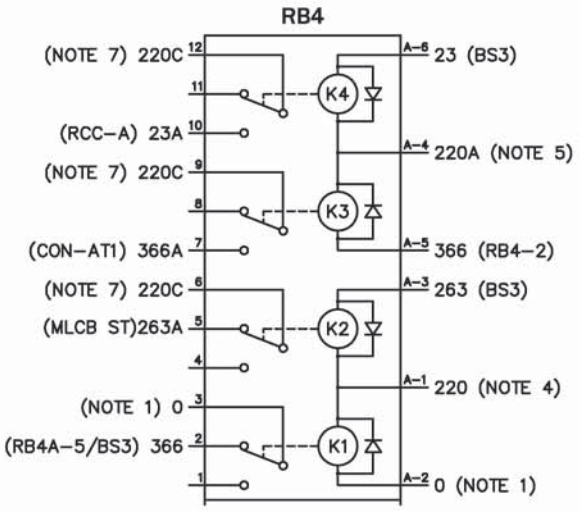
D12.5/15.2/18.1L (600KW) G22 PZPS

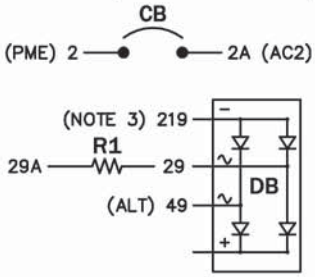
DRAWING #: A0000351499

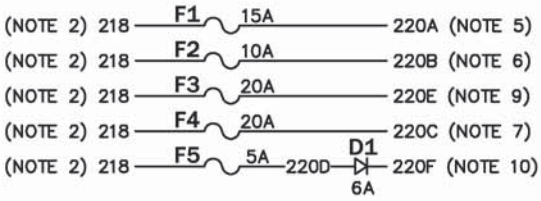
REVISION: CN-0047126-A

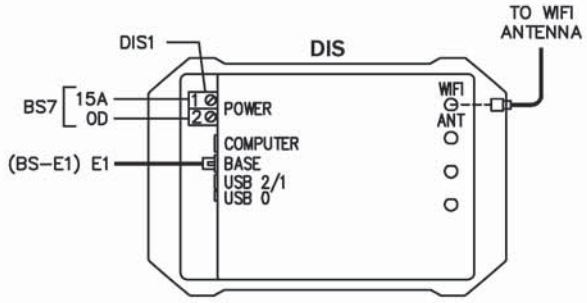
DATE: 5/18/21

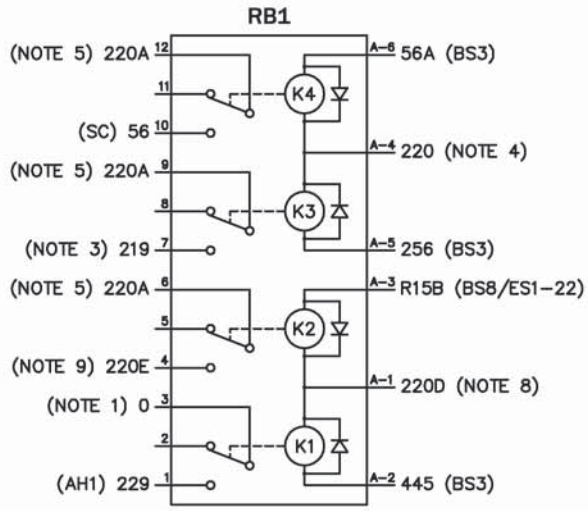
EXHIBIT E

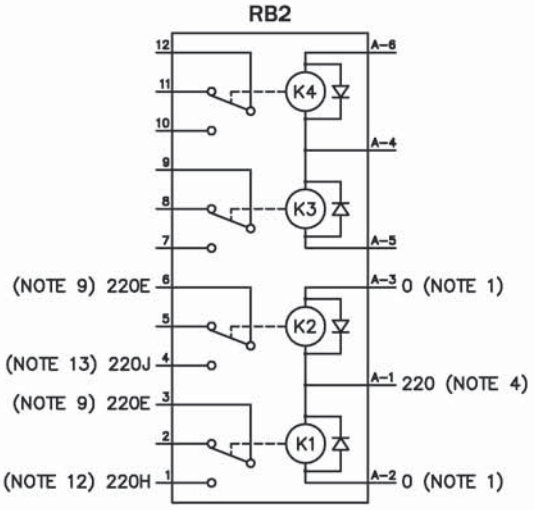


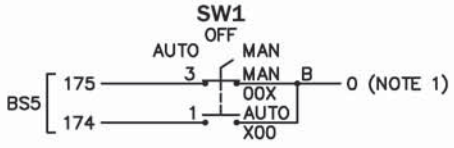


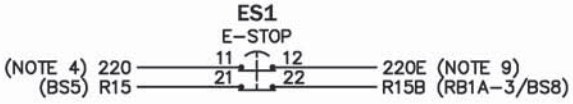












ECU CONNECTOR

PIN	WIRE	TO	FUNCTION
1	220H	RB2–1	NOTE 12
10	220J	RB2–4	NOTE 13
12	0	ECU–25	DIGITAL RETURN
13	SHLD	BS9 (CUT)	CAN BUS 3 SHIELD
15	220H	RB2–1	NOTE 12
25	0	ECU–12	ECU FREQUENCY SELECT
31	743	BS9–3	CAN BUS 3 HIGH
32	744	BS9–4	CAN BUS 3 LOW
33	220H	RB2–1	NOTE 12
34	219	DB/RB1–7	FUEL INJECTOR ENABLE
38	0	GND	NOTE 1
39	0	GND	NOTE 1
40	0	GND	NOTE 1

COMMUNICATIONS CONNECTOR (SUPPLIED WITH ECU HARNESS)

PIN	WIRE	TO	FUNCTION
A	–	–	BATTERY (+)
B	–	–	BATTERY (–)
C	–	–	CAN SCREEN
D	–	–	PDL (+)
E	–	–	PDL (–)
F	–	–	CAN (–)
G	–	–	CAN (+)
H	–	–	J1587 (–) (NOT CONNECTED)
J	–	–	J1587 (+) (NOT CONNECTED)

SCHEMATIC - DIAGRAM

REVISION: CN-0047126-A

DATE: 5/18/21

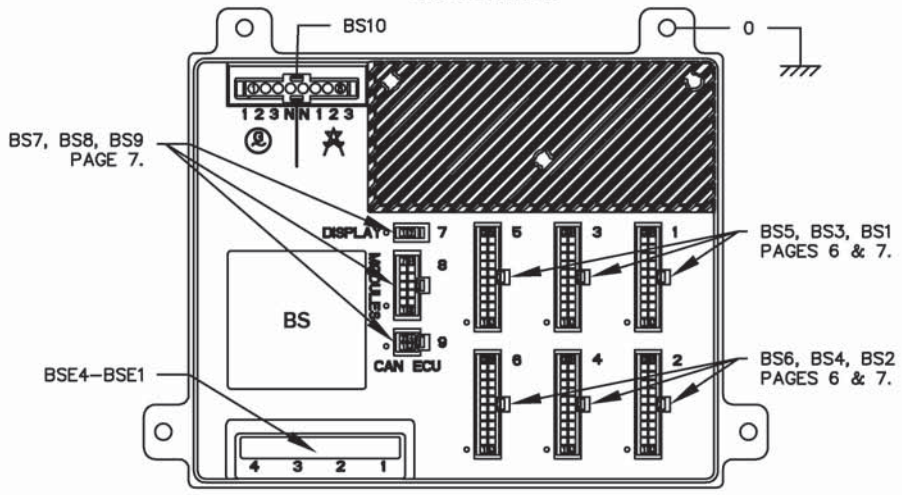
PAGE 4 OF 6

D12.5/15.2/18.1L (600KW) G22 PZPS

DRAWING #: A0000351499

EXHIBIT E

BASE STATION



BS1

PIN	WIRE	TO	FUNCTION
1	391	CUST CONN	RS485– (TRANSFER SWITCH)
2	390	CUST CONN	RS485+ (TRANSFER SWITCH)
3	0	CUST CONN	RS485 GND (TRANSFER SWITCH)
4	SHLD	CUST CONN	RS485 DRAIN (TRANSFER SWITCH)
5	DI9	CUST CONN	AUXILIARY DIGITAL INPUT 9
6	DI10	CUST CONN	AUXILIARY DIGITAL INPUT 10
10	220F	F5	NOTE 10
11	220F	F5	NOTE 10
22	0	GND	NOTE 1

BS2

PIN	WIRE	TO	FUNCTION
1	398A	CT1–2	GEN PHASE A CURRENT (+)
2	399A	CT1–1	GEN PHASE A CURRENT (–)
3	398B	CT2–2	GEN PHASE B CURRENT (+)
4	399B	CT2–1	GEN PHASE B CURRENT (–)
5	398C	CT3–2	GEN PHASE C CURRENT (+)
6	399C	CT3–1	GEN PHASE C CURRENT (–)
11	573A	WLS–B	COOLANT LEVEL (–)
12	573	WLS–A	COOLANT LEVEL (+)
19	398N	CT4–2	GEN NEUTRAL CURRENT (+)
20	399N	CT4–1	GEN NEUTRAL CURRENT (–)

BS3

PIN	WIRE	TO	FUNCTION
1	56A	RB1A–6	START RELAY
2	256	RB1A–5	FUEL RELAY
3	445	RB1A–2	ALARM RELAY
7	813	CUST CONN	BACKUP MODE ACTIVE (MPS)
8	263	RB4A–3	SHUNT TRIP RELAY
9	814	CUST CONN	CONNECTING TO DEAD BUS (MPS)
10	815	CUST CONN	CONNECTED TO BUS IN BACKUP (MPS)
14	23	RB4A–6	CLOSE GENERATOR TO BUS (MPS)
16	366	RB4–2	OPEN GENERATOR FROM BUS (MPS)
17	0C20	RB3A–2	SPARE RELAY 1
18	0C21	RB3A–3	SPARE RELAY 2
19	0C22	RB3A–5	SPARE RELAY 3
20	0C23	RB3A–6	SPARE RELAY 4

BS4

PIN	WIRE	TO	FUNCTION
1	803V	BCH	BATTERY CHARGER CURRENT
2	575S	FLS–2	FUEL LEVEL SIGNAL
12	575V	FLS–3	FUEL LEVEL (+)
14	575R	FLS–1	FUEL LEVEL (–)

BSE1-BSE4

PORT	WIRE	TO	FUNCTION
BSE1	E1	DIS	DISPLAY TO BASE COM
BSE2	E2	GEN BUS	MPS GENERATOR TO GENERATOR COM
BSE3	E3	GEN BUS	MPS GENERATOR TO GENERATOR COM
BSE4	E4	AUX DEVICE	AUX OPTION COM

BS5

PIN	WIRE	TO	FUNCTION
1	174	SW1	AUTO START
2	175	SW1	MANUAL START
3	567	LD–2	FUEL LEAK
4	R15	ES1–21	EMERGENCY STOP
5	183	CUST CONN	REMOTE START (N/O)
6	505	BCH	BATTERY CHARGER FAIL
7	DI11	CUST CONN	AUXILIARY DIGITAL INPUT 11
8	DI12	CUST CONN	AUXILIARY DIGITAL INPUT 12
9	DI5	CUST CONN	AUXILIARY DIGITAL INPUT 5
11	816	CUST CONN	INHIBIT DEAD BUS CONNECT (MPS)
13	371	CON–S1A	SIGNALS CONTACTOR POSITION
16	418	MLCB AUX	MLCB STATUS
18	DI3	CUST CONN	AUXILIARY DI3/LINE POWER
19	DI4	CUST CONN	AUXILIARY DI4/GENERATOR POWER
20	DI1	CUST CONN	AUXILIARY DIGITAL INPUT 1
21	DI2	CUST CONN	AUXILIARY DIGITAL INPUT 2
22	DI6	CUST CONN	AUXILIARY DIGITAL INPUT 6
23	DI7	CUST CONN	AUXILIARY DIGITAL INPUT 7
24	183A	CUST CONN	REMOTE START (N/C)

BS6

PIN	WIRE	TO	FUNCTION
4	AI2R	CUST CONN	ANALOG INPUT 2 (–)
5	AI1R	CUST CONN	ANALOG INPUT 1 (–)
8	523A	OTS–1	OIL TEMPERATURE (–)
16	AI2S	CUST CONN	ANALOG INPUT 2 (+)
17	AI1S	CUST CONN	ANALOG INPUT 1 (+)
20	523	OTS–2	OIL TEMPERATURE (+)

BS7

PIN	WIRE	TO	FUNCTION
1	15A	DIS1–1	DISPLAY POWER (+)
2	0D	DIS1–2	DISPLAY POWER (–)

BS8

PIN	WIRE	TO	FUNCTION
1	SHLD	BC2–3	CAN BUS 1 SHIELD
2	R15B	RB1A–3/ES1–22	OVERSPEED/WATCHDOG TO E–STOP
4	0F	AC1–10	AVR MODULE POWER (–)
8	743G	BC2–5	CAN BUS 1 HIGH
9	744G	BC2–4	CAN BUS 1 LOW
11	15F	AC1–11	AVR MODULE POWER (+)

BS9

PIN	WIRE	TO	FUNCTION
3	743	ECU–31	CAN BUS 3 HIGH
4	744	ECU–32	CAN BUS 3 LOW

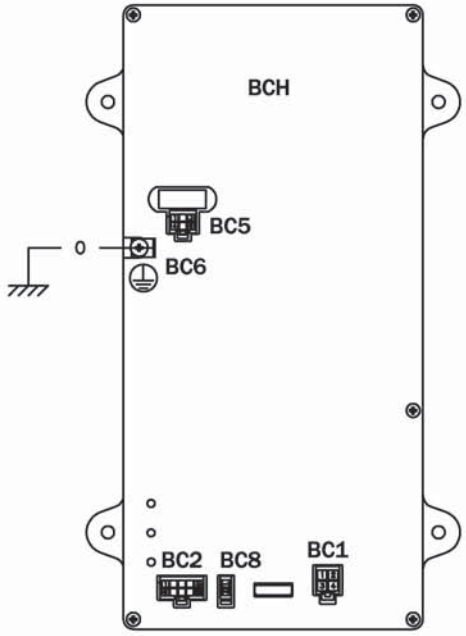
BS10

PIN	WIRE	TO	FUNCTION
1	S1A	FB6–Y	GENERATOR VOLTAGE SENSE AØ
2	S2A	FB7–Y	GENERATOR VOLTAGE SENSE BØ
3	S3A	FB8–Y	GENERATOR VOLTAGE SENSE CØ
4	00	NEUTRAL	GENERATOR VOLTAGE SENSE NEU
5	T00	NEUTRAL	UTILITY VOLTAGE SENSE NEU (MPS)
6	T1A	FB9–Y	UTILITY VOLTAGE SENSE AØ (MPS)
7	T2A	FB10–Y	UTILITY VOLTAGE SENSE BØ (MPS)
8	T3A	FB11–Y	UTILITY VOLTAGE SENSE CØ (MPS)

EXHIBIT E

BATTERY CHARGERS

OPTIONAL 20 AMP POWER ZONE BATTERY CHARGER



BC1

PIN	WIRE	TO	FUNCTION	
1	218	F5	BASE STATION SUPPLY POWER (+)	SEE NOTE
2	0	BS1–22	BASE STATION SUPPLY POWER (–)	
3	218	SM	BATTERY CHARGING (+)	
4	0	GND	BATTERY CHARGING (–)	

BC2

PIN	WIRE	TO	FUNCTION
1	–	–	–
2	–	–	–
3	SHLD	BS8–1	CAN BUS 1 SHIELD (IN)
4	744G	BS8–9	CAN BUS 1 LOW (IN)
5	743G	BS8–8	CAN BUS 1 HIGH (IN)
6	–	–	–
7	–	–	–
8	SHLD	AC1–4	CAN BUS 1 SHIELD (OUT)
9	744G	AC1–5	CAN BUS 1 LOW (OUT)
10	743G	AC1–6	CAN BUS 1 HIGH (OUT)

BC5

PIN	WIRE	TO	FUNCTION
1	GND	UTILITY	UTILITY AC GROUND
2	N	UTILITY	UTILITY AC NEUTRAL
3	L1	UTILITY	UTILITY AC POWER
4	–	–	–
5	–	–	–
6	–	–	–

BC6

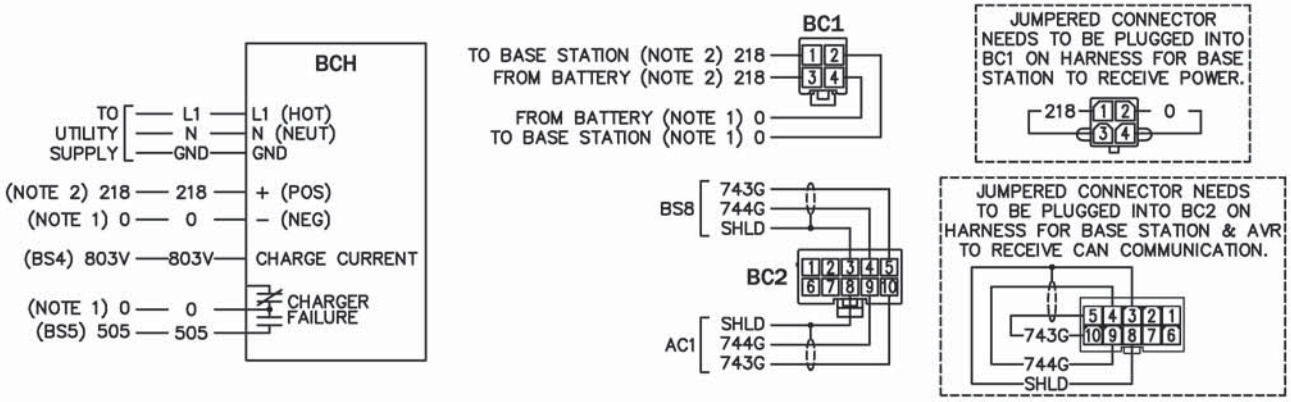
PIN	WIRE	TO	FUNCTION
–	0	GND	CHASSIS GROUND

BC8

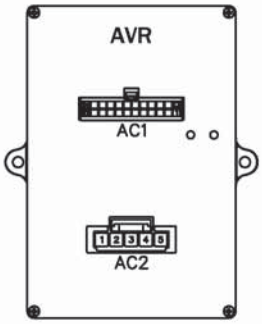
PIN	WIRE	TO	FUNCTION
1	604	BAT	BATTERY TEMP (THERMISTOR +)
2	605	BAT	BATTERY TEMP (THERMISTOR –)

NOTE:
THE BATTERY CHARGER CONTAINS A REGULATED POWER SUPPLY FOR THE BASE STATION. IF UTILITY POWER TO THE CHARGER IS LOST THE SUPPLY AUTOMATICALLY CONNECTS TO THE CHARGER LEADS. THIS ALLOWS THE BASE STATION TO RECIEVE POWER FROM THE BATTERIES.

OPTIONAL 10 AMP BATTERY CHARGER (NON–POWER ZONE)



AVR MODULE



AC1

PIN	WIRE	TO	FUNCTION	
4	SHLD	BC2–8	CAN BUS 1 SHIELD	
5	744G	BC2–9	CAN BUS 1 LOW	
6	743G	BC2–10	CAN BUS 1 HIGH	
10	0F	BS8–4	AVR MODULE POWER (–)	
11	15F	BS8–11	AVR MODULE POWER (+)	
17	744G	TR–B	TERMINATING RESISTOR	TR 120Ω
18	743G	TR–A	TERMINATING RESISTOR	

AC2

PIN	WIRE	TO	FUNCTION
1	29A	R1	EXCITER FIELD BOOST POWER INPUT
2	2A	CB	PME PHASE A INPUT (AFTER CB)
3	6	EXC–3	PME PHASE B INPUT
4	4	EXC–4	EXCITER FIELD POWER OUTPUT (+)
5	1	EXC–1	EXCITER FIELD POWER OUTPUT (–)

SCHEMATIC - DIAGRAM

REVISION: CN-0047126-A

DATE: 5/18/21

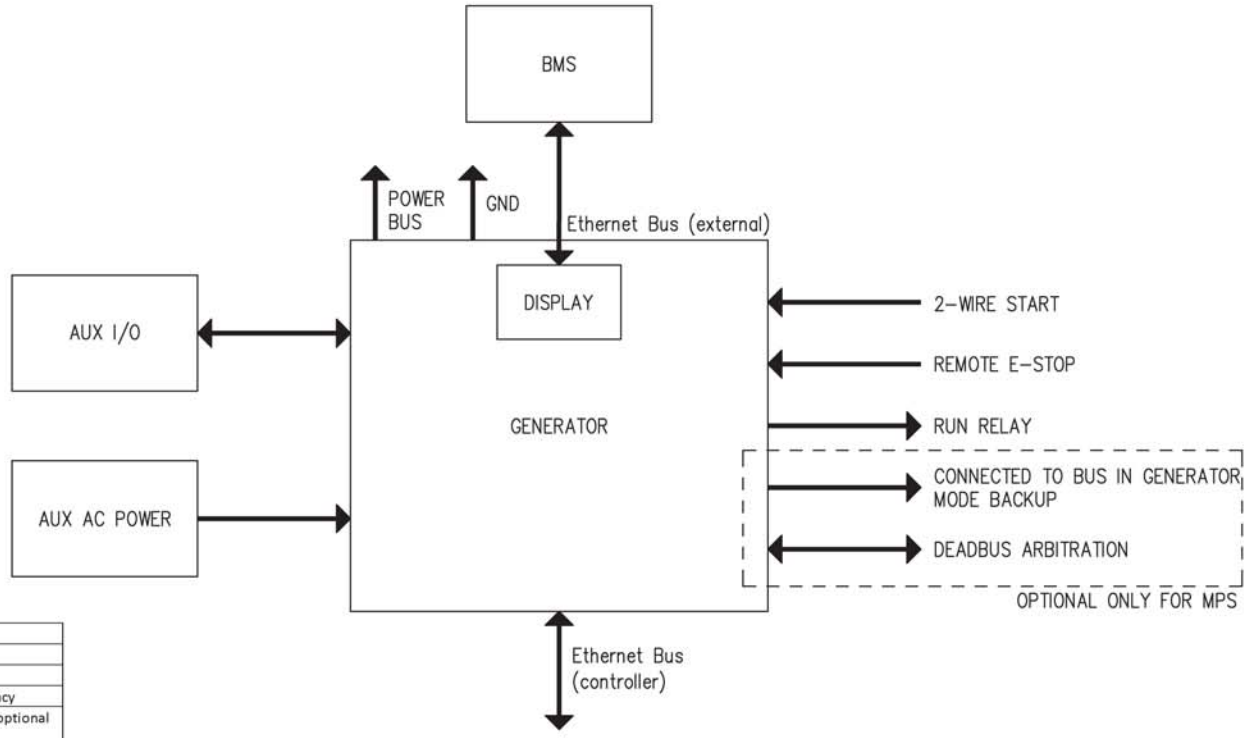
PAGE 6 OF 6

D12.5/15.2/18.1L (600KW) G22 PZPS

DRAWING #: A0000351499

EXHIBIT E

SH 1/4 | REV B | WINDCHILL VERSION N/A



Reference	
MPS	Modular Power System. Parallel generator system.
BMS	Building Management System using Modbus TCP/IP.
Remote E-Stop	Remote Emergency Stop to shutdown the generator incase of emergency
Run Relay	This is an optional wiring used by the customer to activate/deactivate optional features based on generator running status.
2-Wire Start	Transfer switches sense loss of normal power and initiate a system start through this function.
Connected to bus in Backup	Output from generator to P&L to indicate that the generator is connected to power bus.
Deadbus Arbitration	This function ensures that only one generator is closing into the dead bus when operating with failed communications.
Aux I/O	Each generator has 4 configurable relay outputs, 4 configurable inputs and 2 configurable analog inputs for customer special use.
Aux AC Power	Generator utilizes load center to power the block heater, battery charger etc. (refer to generator Specs for wiring details).
Ethernet Bus	Not indicated in the above picture, but the Ethernet Bus is used to connect a wide range of devices to the generator, like RAP/RRP, P&L and other generators. There are two networks - controller and external
Display	It can be accessed through PC/Tablet/Smartphone using Wifi/Bluetooth.

INSTALLATION DRAWING

GENERAC POWER SYSTEMS OWNS THE COPYRIGHT OF THIS DRAWING WHICH IS SUPPLIED IN CONFIDENCE AND MUST NOT BE USED FOR ANY PURPOSE OTHER THAN FOR WHICH IT IS SUPPLIED WITHOUT THE EXPRESS WRITTEN CONSENT OF GENERAC POWER SYSTEMS. ©GENERAC POWER SYSTEMS 2013

ELECTRONICALLY APPROVED INSIDE WINDCHILL

GENERAC

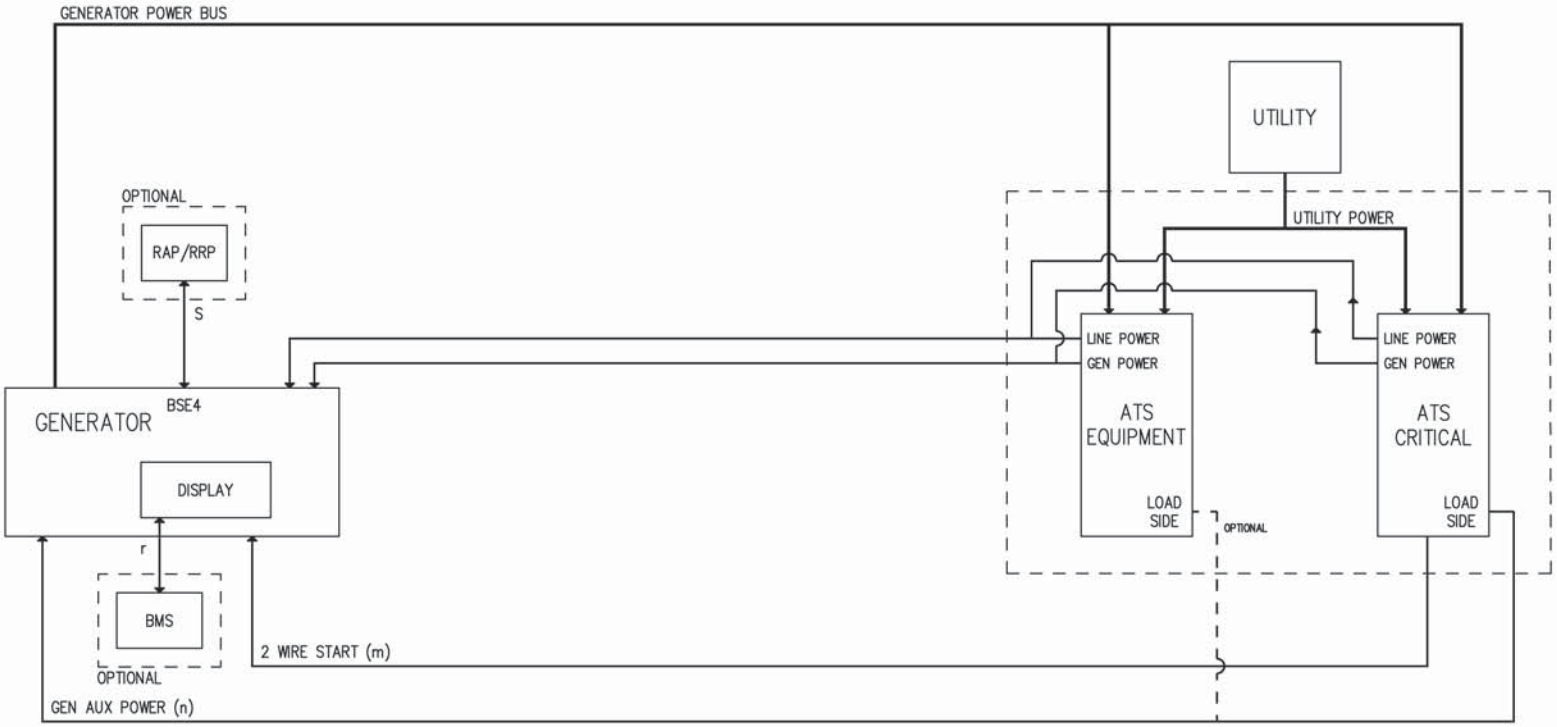
TITLE
INTERCONNECT DRAWING
POWER ZONE PRO SYNC

ISSUE DATE: 05/22/18					
SIZE B	CAGE NO N/A	DWG NO 10000034013			REV C
SCALE N/A	WT-KG N/A			SHEET 1 of 8	

EXHIBIT E

SH 2/4	REV B	WINDCHILL VERSION N/A

INTERCONNECT DRAWING SINGLE GENERATOR



NOTES:
- DISPLAY IS CONNECTED TO ETHERNET PORT 1 OF MAIN CONTROLLER

GENERAC

TITLE
INTERCONNECT DRAWING
POWER ZONE PRO SYNC

ISSUE DATE: 05/22/18

SIZE	CAGE NO	DWG NO	REV
B	N/A	10000034013	C

SCALE	N/A	WT-KG	N/A	SHEET	2 of 8

INSTALLATION DRAWING

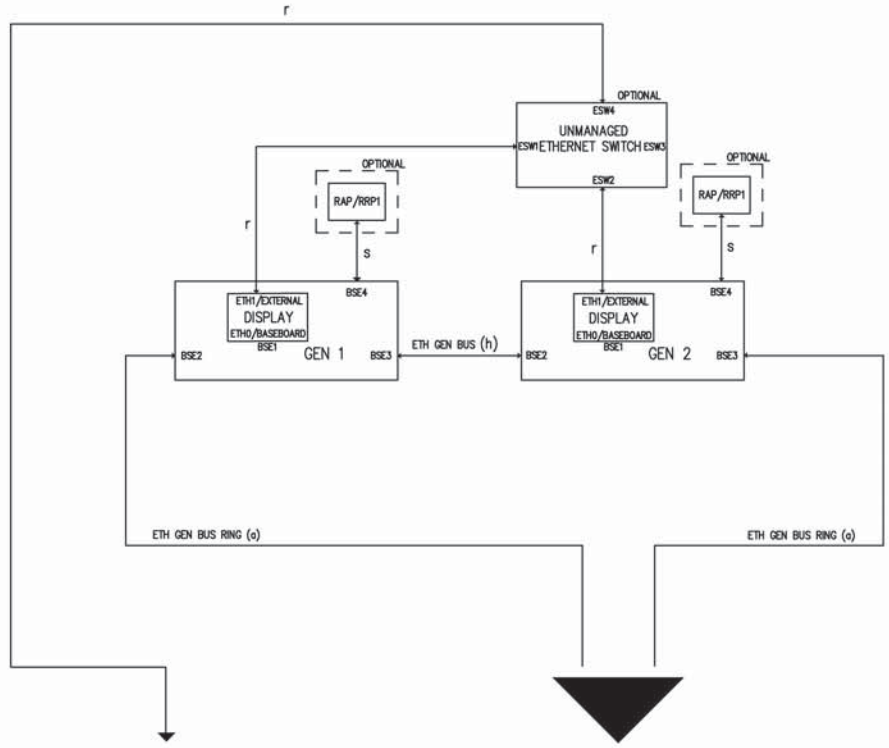
GENERAC POWER SYSTEMS OWNS THE COPYRIGHT OF THIS DRAWING WHICH IS SUPPLIED IN CONFIDENCE AND MUST NOT BE USED FOR ANY PURPOSE OTHER THAN FOR WHICH IT IS SUPPLIED WITHOUT THE EXPRESS WRITTEN CONSENT OF GENERAC POWER SYSTEMS.
©GENERAC POWER SYSTEMS 2013

ELECTRONICALLY APPROVED
INSIDE WINDCHILL

EXHIBIT E

SH 3/4	REV B	WINDCHILL VERSION N/A	

INTERCONNECT TWO GENERATOR MPS



TO BUIILDING

NOTES:
1. SHOWING GENERATOR ETHERNET CONNECTIONS ONLY
2. DO NOT CHANGE CONFIGURATION OF THE CONNECTIONS IN ANY WAY
3. UNMANAGED ETHERNET SWITCH NOT SUPPLIED BY GENERAC (UPS BACKED POWER SUPPLY RECOMMENDED)
4. GENERAC RECOMMENDS ANTAIRA P/N LNX-800AT (8 PORT) OR LNX-500AT (5 PORT) UNMANAGED ETHERNET SWITCH

INSTALLATION DRAWING

GENERAC POWER SYSTEMS OWNS THE COPYRIGHT OF THIS DRAWING WHICH IS SUPPLIED IN CONFIDENCE AND MUST NOT BE USED FOR ANY PURPOSE OTHER THAN FOR WHICH IT IS SUPPLIED WITHOUT THE EXPRESS WRITTEN CONSENT OF GENERAC POWER SYSTEMS.
©GENERAC POWER SYSTEMS 2013

ELECTRONICALLY APPROVED
INSIDE WINDCHILL

GENERAC

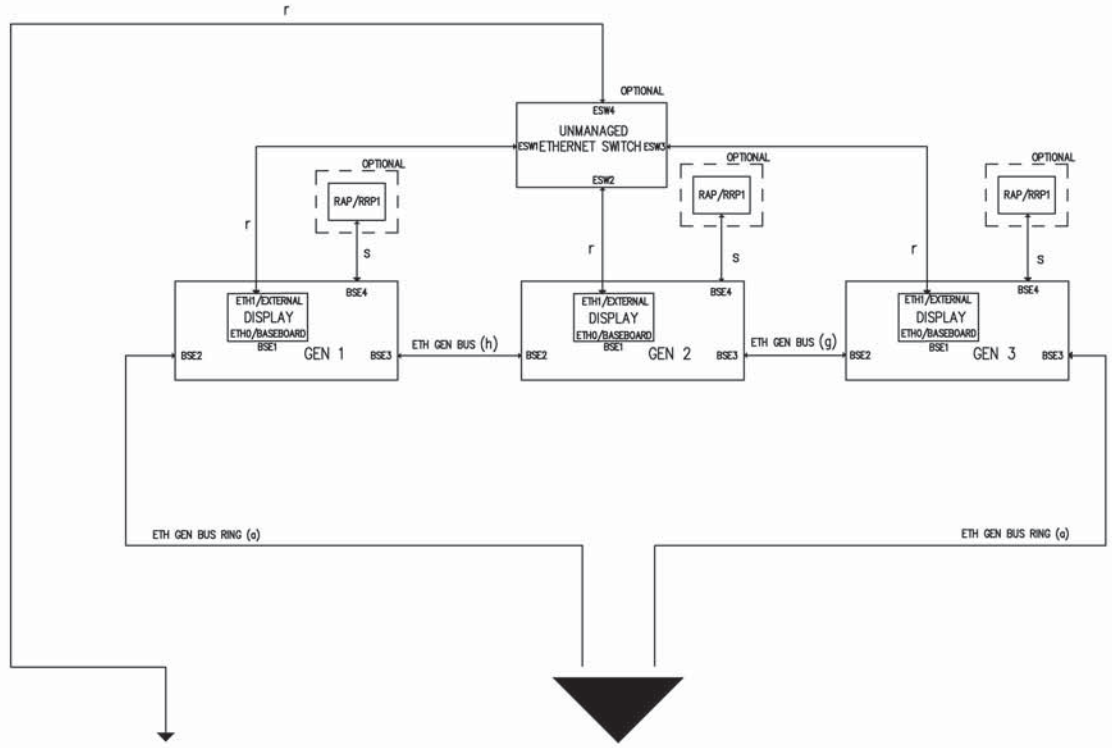
TITLE
INTERCONNECT DRAWING
POWER ZONE PRO SYNC

ISSUE DATE: 05/22/18			
SIZE B	CAGE NO N/A	DWG NO 10000034013	REV C
SCALE N/A	WT-KG N/A	SHEET 3 of 8	

EXHIBIT E

SH	REV	WINDCHILL VERSION
3/4	B	N/A

INTERCONNECT THREE GENERATOR MPS



TO BUIILDING

NOTES:
1. SHOWING GENERATOR ETHERNET CONNECTIONS ONLY
2. DO NOT CHANGE CONFIGURATION OF THE CONNECTIONS IN ANY WAY
3. UNMANAGED ETHERNET SWITCH NOT SUPPLIED BY GENERAC (UPS BACKED POWER SUPPLY RECOMMENDED)
4. GENERAC RECOMMENDS ANTAIRA P/N LNX-800AT (8 PORT) OR LNX-500AT (5 PORT) UNMANAGED ETHERNET SWITCH

INSTALLATION DRAWING

GENERAC POWER SYSTEMS OWNS THE COPYRIGHT OF THIS DRAWING WHICH IS SUPPLIED IN CONFIDENCE AND MUST NOT BE USED FOR ANY PURPOSE OTHER THAN FOR WHICH IT IS SUPPLIED WITHOUT THE EXPRESS WRITTEN CONSENT OF GENERAC POWER SYSTEMS. ©GENERAC POWER SYSTEMS 2013

ELECTRONICALLY APPROVED
INSIDE WINDCHILL

GENERAC

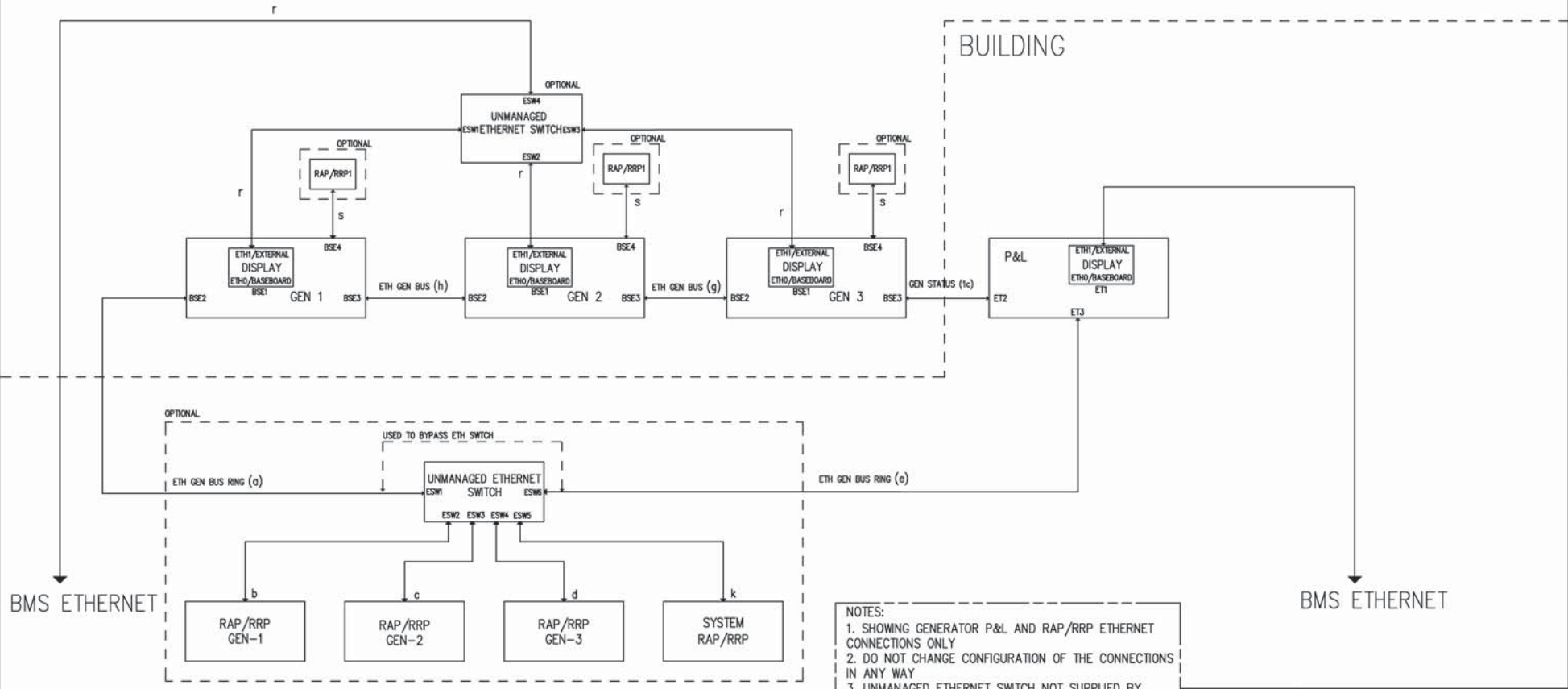
TITLE
INTERCONNECT DRAWING
POWER ZONE PRO SYNC

ISSUE DATE:	05/22/18			
SIZE	CAGE NO	DWG NO		REV
B	N/A	10000034013		C
SCALE	N/A	WT-KG	N/A	SHEET 4 of 8

EXHIBIT E

SH 3/4	REV B	WINDCHILL VERSION N/A

INTERCONNECT THREE GENERATOR MPS WITH P&L AND RAP/RRP



NOTES:
1. SHOWING GENERATOR P&L AND RAP/RRP ETHERNET CONNECTIONS ONLY
2. DO NOT CHANGE CONFIGURATION OF THE CONNECTIONS IN ANY WAY
3. UNMANAGED ETHERNET SWITCH NOT SUPPLIED BY GENERAC (UPS BACKED POWER SUPPLY RECOMMENDED)
4. ETHERNET SWITCH NOT SUPPLIED BY GENERAC (UPS BACKED POWER SUPPLY RECOMMENDED)
5. GENERAC RECOMMENDS ANTAIRA P/N LNX-800AT (8 PORT) OR LNX-500AT (5 PORT) UNMANAGED ETHERNET SWITCH

INSTALLATION DRAWING

GENERAC POWER SYSTEMS OWNS THE COPYRIGHT OF THIS DRAWING WHICH IS SUPPLIED IN CONFIDENCE AND MUST NOT BE USED FOR ANY PURPOSE OTHER THAN FOR WHICH IT IS SUPPLIED WITHOUT THE EXPRESS WRITTEN CONSENT OF GENERAC POWER SYSTEMS. ©GENERAC POWER SYSTEMS 2013

ELECTRONICALLY APPROVED INSIDE WINDCHILL

GENERAC

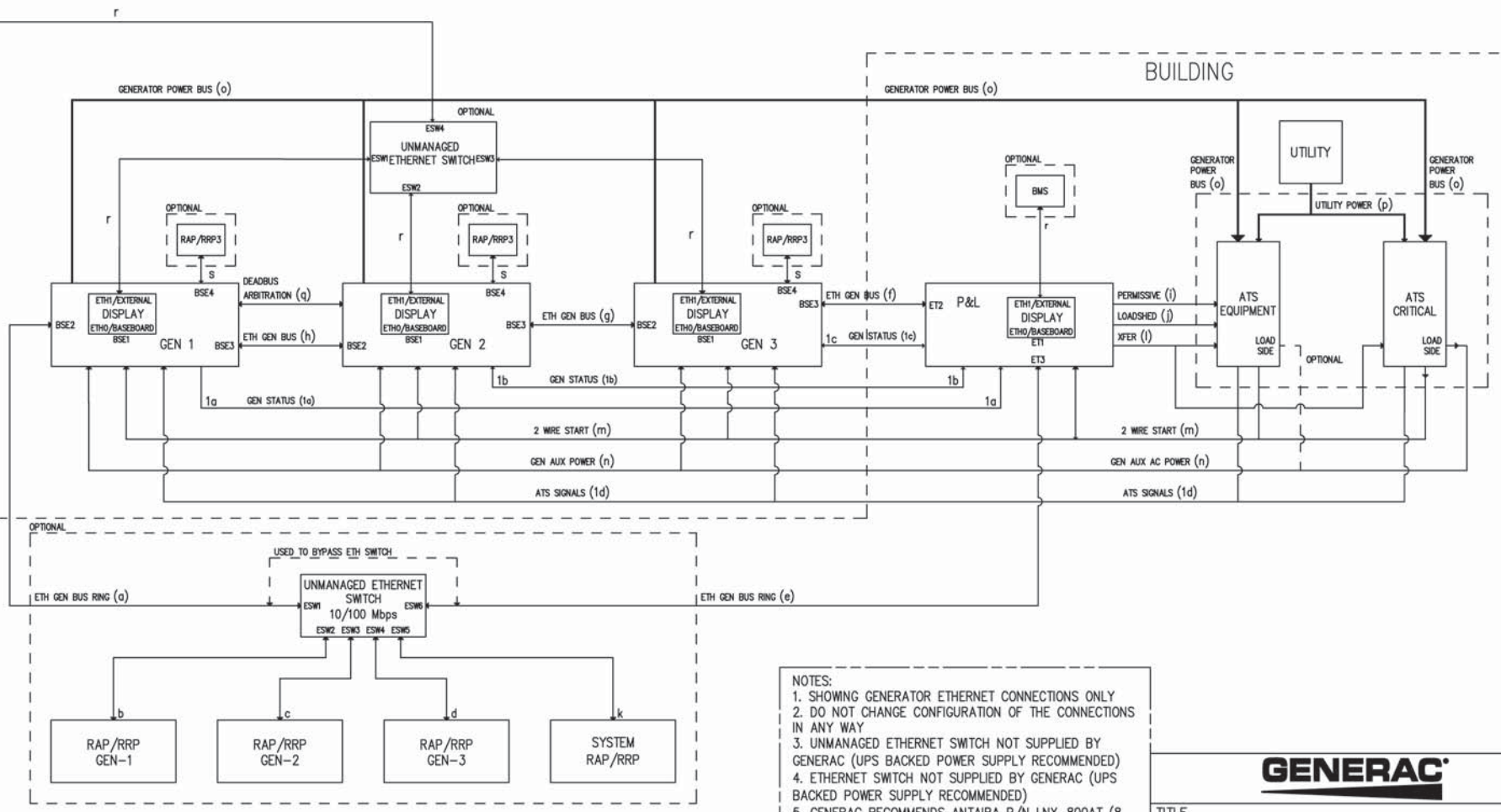
TITLE
INTERCONNECT DRAWING
POWER ZONE PRO SYNC

ISSUE DATE: 05/22/18			
SIZE B	CAGE NO N/A	DWG NO 10000034013	REV C
SCALE N/A	WT-KG N/A	SHEET 5 of 8	

EXHIBIT E

SH 3/4	REV B	WINDCHILL VERSION N/A	

INTERCONNECT DRAWING MPS SYSTEM WITH ATS



NOTES:
1. SHOWING GENERATOR ETHERNET CONNECTIONS ONLY
2. DO NOT CHANGE CONFIGURATION OF THE CONNECTIONS IN ANY WAY
3. UNMANAGED ETHERNET SWITCH NOT SUPPLIED BY GENERAC (UPS BACKED POWER SUPPLY RECOMMENDED)
4. ETHERNET SWITCH NOT SUPPLIED BY GENERAC (UPS BACKED POWER SUPPLY RECOMMENDED)
5. GENERAC RECOMMENDS ANTAIRA P/N LNX-800AT (8 PORT) OR LNX-500AT (5 PORT) UNMANAGED ETHERNET SWITCH

INSTALLATION DRAWING

GENERAC POWER SYSTEMS OWNS THE COPYRIGHT OF THIS DRAWING WHICH IS SUPPLIED IN CONFIDENCE AND MUST NOT BE USED FOR ANY PURPOSE OTHER THAN FOR WHICH IT IS SUPPLIED WITHOUT THE EXPRESS WRITTEN CONSENT OF GENERAC POWER SYSTEMS. ©GENERAC POWER SYSTEMS 2013

ELECTRONICALLY APPROVED INSIDE WINDCHILL

GENERAC

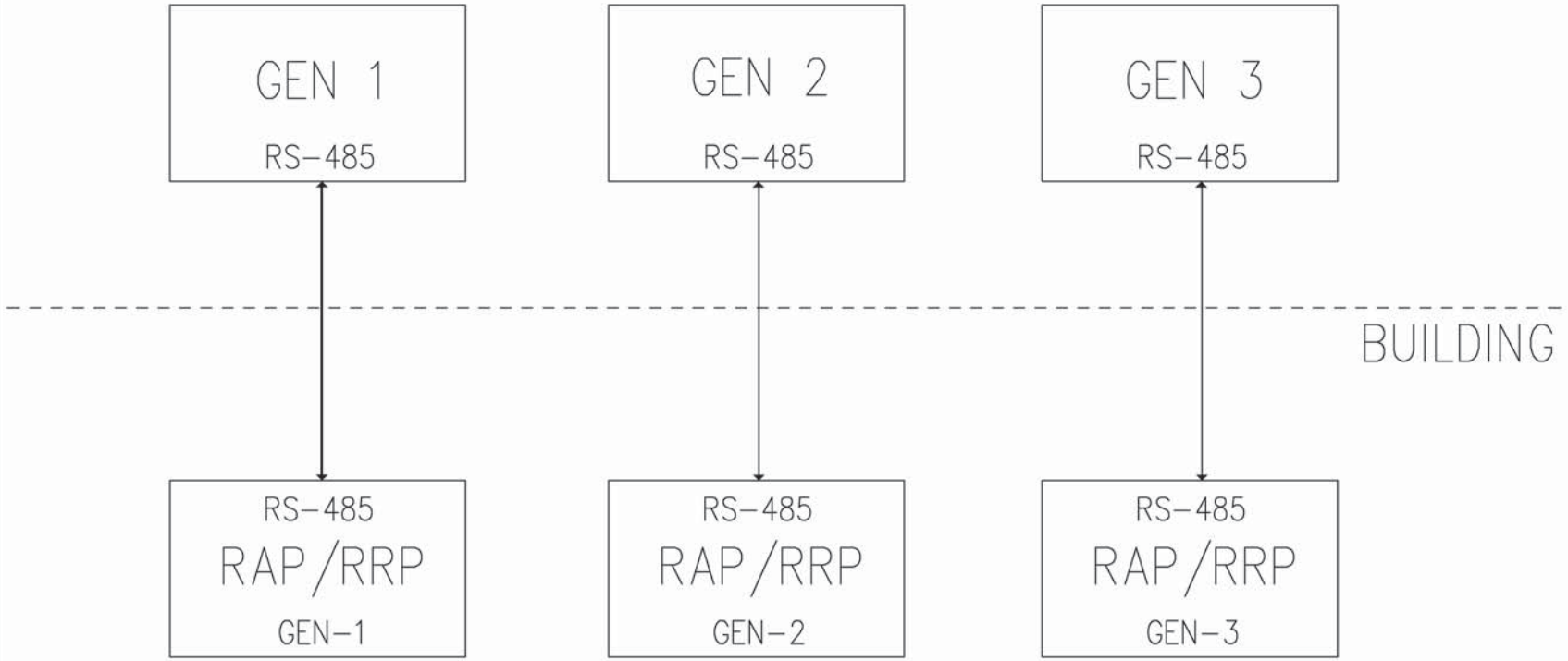
TITLE
INTERCONNECT DRAWING
POWER ZONE PRO SYNC

ISSUE DATE: 05/22/18			
SIZE B	CAGE NO N/A	DWG NO 10000034013	REV C
SCALE N/A	WT-KG N/A	SHEET 6 of 8	

EXHIBIT E

SH 4/4 | REV B | WINDCHILL VERSION N/A

INTERCONNECT THREE GENERATORS WITH RS-485 RAP/RRP



NOTES:

1. SHOWING GENERATOR TO RAP/RRP RS-485 CONNECTION ONLY

GENERAC POWER SYSTEMS OWNS THE COPYRIGHT OF THIS DRAWING WHICH IS SUPPLIED IN CONFIDENCE AND MUST NOT BE USED FOR ANY PURPOSE OTHER THAN FOR WHICH IT IS SUPPLIED WITHOUT THE EXPRESS WRITTEN CONSENT OF GENERAC POWER SYSTEMS. ©GENERAC POWER SYSTEMS 2013

ELECTRONICALLY APPROVED
INSIDE WINDCHILL

GENERAC

TITLE
INTERCONNECT DRAWING
POWER ZONE PRO SYNC

ISSUE DATE: 05/22/18

SIZE	CAGE NO	DWG NO	REV
B	N/A	10000034013	C

SCALE	WT-KG	SHEET
N/A	N/A	7 of 8

INSTALLATION DRAWING

EXHIBIT E

SH 4/4	REV B	WINDCHILL VERSION N/A	

Reference	
Single RAP/RRP	When a RAP/RRP (Remote Annunciator Panel/Remote Relay Panel) is configured as singleRAP/RRP, it receives data from only the configured generator and annunciates alarms and warnings of that generator.
System RAP/RRP	If configured as System RAP/RRP, receives data from every generator and announces alarms and warnings occuring on any of the generators.
P&L	Permissive and Loadshed panel controls the Permissives and Loadsheds of ATS .
Gen	Generator
Ethernet Switch	Used to forward data packets from one ethernet port to the other ethernet port.
ATS Critical	Automatic Transfer Switch used to connect Critical Loads
ATS Equipment	Automatic Transfer Switch used to connect regular non critical Loads
BSEx	Base Station Ethernet Port x
ESWx	Ethernet Switch Port x
ETx	P&L Ethernet Port x

Reference	Function	Cable	From	To	Class
a	Communication from generator to all peripherals in controller network	Shielded CAT 5E	BSE2 on Gen1	ESW1 on Ethernet Switch	2
b	Remote Annunciator communication in controller network	Shielded CAT 5E	Eth(J12) on RAP/RRP Gen 1	ESW2 on Ethernet Switch	2
c	Remote Annunciator communication in controller network	Shielded CAT 5E	Eth(J12) on RAP/RRP Gen 2	ESW3 on Ethernet Switch	2
d	Remote Annunciator communication in controller network	Shielded CAT 5E	Eth(J12) on RAP/RRP Gen 3	ESW4 on Ethernet Switch	2
e	Close loop connecting P&L in controller network	Shielded CAT 5E	ESW6 on Ethernet Switch	Eth 3 on P&L	2
f	P&L connection to Generator 3 or the last generator in the controller network.	Shielded CAT 5E	Eth 2 on P&L	BSE3 on Gen 3	2
g	Communication between generators in controller network	Shielded CAT 5E	BSE2 on Gen 3	BSE3 on Gen 2	2
h	Communication between generators in controller network	Shielded CAT 5E	BSE2 on Gen 2	BSE3 on Gen 1	2
i	Up to 6 Permissive relay outputs to ATS	18 AWG,300V AC	P&L Panel	ATS Equipment	2
j	Up to 6 Loadshed relay outputs to ATS	18 AWG,300V AC	P&L Panel	ATS Equipment	2
k	Remote Annunciator communication in controller network	Shielded CAT 5E	Eth(J12) on System RAP/RRP	ESW5 on Ethernet Switch	2
l	Excercise with load transfer	18 AWG,300V AC	P&L Panel	ATS Equipment	2
m	2 Wire Start	18 AWG,300V AC	ATS Critical/ATS Equipment	All Generators and P&L	2
n	Generator Auxiliary Power	Custom cable based on generator auxiliary	ATS Critical/ATS Equipment loadside	All Generators	POWER
o	Generator power bus connections to ATS Critical & ATS Equipment	Custom cable proportional to ATS specifications	Generator power bus connecting all	ATS Critical and ATS Equipment	POWER
p	Utility power bus connections for ATS	Custom cable proportional to ATS specifications	Utility power bus	ATS Critical and ATS Equipment	POWER
q	Deadbus Arbitration -2 signals. Can be setup for any 2 Gens (optional for MPS only)	18 AWG,300V AC	Gen 1	Gen 2	2
r	Bus communication in external network (optional)	Shielded CAT 5E	Any generator	All generators	2
s	Local generator Remote Annunciator communication in controller network	Shielded CAT 5E	Any generator	P & L	2
1d	ATS Contractor Position (Utility and Gen) Signal	18 AWG,300V AC	ATS Critical / ATS Equipment	P & L	2
1a	Gen status connected to bus in Generator backup mode (optional)	18 AWG,300V AC	Gen 1	P & L	2
1b	Gen status connected to bus in Generator backup mode (optional)	18 AWG,300V AC	Gen 2	BMS	2
1c	Gen status connected to bus in Generator backup mode (optional)	18 AWG,300V AC	Gen 3	Local gen RAP / RRP	2

INSTALLATION DRAWING

GENERAC POWER SYSTEMS OWNS THE COPYRIGHT OF THIS DRAWING WHICH IS SUPPLIED IN CONFIDENCE AND MUST NOT BE USED FOR ANY PURPOSE OTHER THAN FOR WHICH IT IS SUPPLIED WITHOUT THE EXPRESS WRITTEN CONSENT OF GENERAC POWER SYSTEMS. ©GENERAC POWER SYSTEMS 2013

ELECTRONICALLY APPROVED
INSIDE WINDCHILL

GENERAC

TITLE
INTERCONNECT DRAWING
POWER ZONE PRO SYNC

ISSUE DATE: 05/22/18			
SIZE B	CAGE NO N/A	DWG NO 10000034013	REV C
SCALE N/A	WT–KG N/A	SHEET 8 of 8	

EXHIBIT E

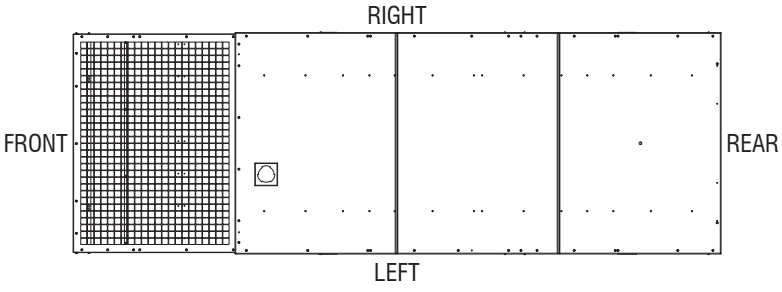
GENERAC | INDUSTRIAL POWER

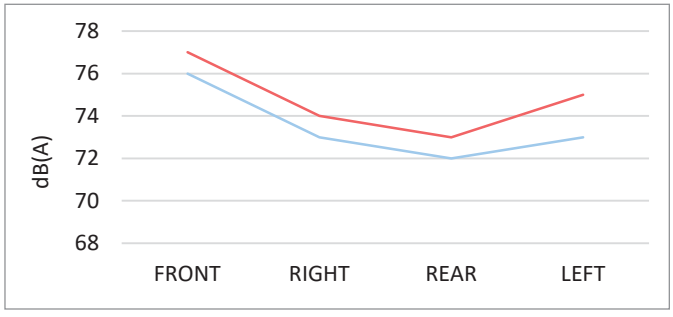
LEVEL 2 SOUND ATTENUATED ENCLOSURE

D18.1 Perkins, SD600

MICROPHONE LOCATION	60Hz NO-LOAD, dB(A) — DISTANCE: 7 METERS									
	OCTAVE BAND CENTER FREQUENCY (Hz)									
	31.5	63	125	250	500	1,000	2,000	4,000	8,000	dB(A)
FRONT	49	53	64	61	72	71	67	65	51	**76**
RIGHT	41	51	63	65	68	68	61	59	50	**73**
REAR	41	53	56	63	67	68	62	57	46	**72**
LEFT	39	48	56	64	70	69	63	55	47	**73**
AVERAGE:	**42**	**51**	**59**	**63**	**69**	**69**	**63**	**59**	**48**	**73**

MICROPHONE LOCATION	60Hz FULL-LOAD, dB(A) — DISTANCE: 7 METERS									
	OCTAVE BAND CENTER FREQUENCY (Hz)									
	31.5	63	125	250	500	1,000	2,000	4,000	8,000	dB(A)
FRONT	51	49	66	68	71	73	71	63	53	**77**
RIGHT	53	53	66	61	69	69	68	64	53	**74**
REAR	56	57	59	65	68	69	65	58	51	**73**
LEFT	50	56	62	66	72	69	65	56	48	**75**
AVERAGE:	**52**	**53**	**63**	**65**	**70**	**70**	**67**	**60**	**51**	**75**





- All positions at 23 feet (7 meters) from side faces of generator set.
- Test conducted on a 100 foot diameter asphalt surface.
- Sound pressure levels are subject to instrumentation, installation and testing conditions.
- Sound levels are ±2 dB(A).

 © 2020 Generac Power Systems, Inc. All rights reserved. All specifications are subject to change without notice.

EXHIBIT E

STATEMENT OF EXHAUST EMISSIONS
2021 Perkins Diesel Fueled Generator

The measured emissions values provided here are proprietary to Generac and it's authorized dealers. This information may only be disseminated upon request to regulatory governmental bodies for emissions permitting purposes or to specifying organizations as submittal data when expressly required by project specifications, and shall remain confidential and not open to public viewing. This information is not intended for compilation or sales purposes and may not be used as such, nor may it be reproduced without the expressed written permission of Generac Power Systems, Inc.. The data provided shall not be meant to include information made public by Generac.

Generator Model:	**SD/MD600**	EPA Certificate Number:	**MCPXL18.1NYS-005**
kW_e Rating:	**600**	CARB Certificate Number:	**Not Applicable**
Engine Family:	**MCPXL18.1NYS**	SCAQMD CEP Number:	**545379**
Engine Model:	**2806C-E18TAG3**	Emission Standard Category:	**Tier 2**
Rated Engine Power (BHP)*:	**909**	Certification Type:	**Stationary Emergency CI (40 CFR Part 60 Subpart IIII)**
Fuel Consumption (gal/hr)*:	**41.4**		
Aspiration:	**Turbocharged/Aftercooled**		
Rated RPM:	**1,800**		

*Engine power and fuel consumption are declared by the engine manufacturer of record and the U.S EPA.

EMISSIONS BASED ON ENGINE POWER OF SPECIFIC ENGINE MODEL

These Values Are Actual Composite Weighted Exhaust Emissions Results Over the EPA 5-Mode Test Cycle

CO	NOx + NMHC	PM	
0.80	**5.20**	**0.07**	Grams/kW-hr
0.60	**3.88**	**0.05**	Grams/bhp-hr

- The stated values are actual exhaust emission test measurements obtained from an engine representative of the type described above.
- Values based on 5-Mode testing are official data of record as submitted to regulatory agencies for certification purposes. Testing was conducted in accordance with prevailing EPA protocol, which is typically accepted by SCAQMD and other regional authorities.
- No emissions values provided above are to be construed as guarantees of emission levels for any given Generac generator unit.
- Generac Power Systems, Inc. reserves the right to revise this information without prior notice.
- Consult state and local regulatory agencies for specific permitting requirements.
- The emission performance data supplied by the equipment manufacturer is only one element required toward completion of the permitting and installation process. State and local regulations may vary on a case-by-case basis and local agencies must be consulted by the permit application/ equipment owner prior to equipment purchase or installation. The data supplied herein by Generac Power Systems Inc. cannot be construed as a guarantee of installability of the generating set.

 © 2021 Generac Power Systems, Inc. All rights reserved. All specifications are subject to change without notice.

EXHIBIT E

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
2021 MODEL YEAR
CERTIFICATE OF CONFORMITY
WITH THE CLEAN AIR ACT

OFFICE OF TRANSPORTATION AND AIR QUALITY
ANN ARBOR, MICHIGAN 48105

Certificate Issued To: **Caterpillar Inc.**
(U.S. Manufacturer or Importer)

Certificate Number: **MCPXL18.1NYS-005**

Effective Date: 05/07/2020

Expiration Date: 12/31/2021

Byron J. Bunker, Division Director
Compliance Division

Issue Date: 05/07/2020

Revision Date: N/A

Model Year: 2021
Manufacturer Type: Original Engine Manufacturer
Engine Family: MCPXL18.1NYS

Mobile/Stationary Indicator: Stationary
Emissions Power Category: 560<kW<=2237
Fuel Type: Diesel
After Treatment Devices: No After Treatment Devices Installed
Non-after Treatment Devices: Electronic Control, Engine Design Modification

Pursuant to Section 111 and Section 213 of the Clean Air Act (42 U.S.C. sections 7411 and 7547) and 40 CFR Part 60, and subject to the terms and conditions prescribed in those provisions, this certificate of conformity is hereby issued with respect to the test engines which have been found to conform to applicable requirements and which represent the following engines, by engine family, more fully described in the documentation required by 40 CFR Part 60 and produced in the stated model year.

This certificate of conformity covers only those new compression-ignition engines which conform in all material respects to the design specifications that applied to those engines described in the documentation required by 40 CFR Part 60 and which are produced during the model year stated on this certificate of the said manufacturer, as defined in 40 CFR Part 60.

It is a term of this certificate that the manufacturer shall consent to all inspections described in 40 CFR 1068 and authorized in a warrant or court order. Failure to comply with the requirements of such a warrant or court order may lead to revocation or suspension of this certificate for reasons specified in 40 CFR Part 60. It is also a term of this certificate that this certificate may be revoked or suspended or rendered void *ab initio* for other reasons specified in 40 CFR Part 60.

This certificate does not cover engines sold, offered for sale, or introduced, or delivered for introduction, into commerce in the U.S. prior to the effective date of the certificate.

EXHIBIT E

GENERAC | INDUSTRIAL POWER

Certification of Quality

Generac Power Systems certifies that the products we manufacture have been built and tested in accordance with strict internal and external standards for quality. Our quality management system has been registered with the internationally recognized ISO 9001:2008 standard and our products comply with external standards that include, but are not limited to, CSA, NEMA, EGSA, ISO, and UL.

The Generac Quality Management System (GQMS) ensures the highest standards of quality at every level of production, from raw materials to the finished product. This includes receiving inspection, in-process checks, product and process audits, testing, final inspections, and shipping standards.

Tests of our products are performed in accordance with our internal procedures and controlled through the GQMS to ensure accuracy and effectiveness. The testing process and product designs comply with external standards which may include, but are not limited to: ISO 8528-5, ISO 3046, NFPA 99, NFPA 110, BS 5514, SAE J1349, and DIN 6271.

Generac Power Systems has over one million square feet of manufacturing space and over 2000 employees dedicated to designing and manufacturing power generation equipment in our multiple State of Wisconsin, USA factories. All of our installed and mobile generators are built with pride by our skilled American workforce to ensure our customers receive the quality that they expect from Generac.

We are committed to producing quality products for both our internal and external customers. We will continuously improve our processes and diligently measure all aspects of our business.

Daniel Waschow

Vice President of Quality
Generac Power Systems, Inc.
Waukesha, Wisconsin USA

 © 2015 Generac Power Systems, Inc. All rights reserved. All specifications are subject to change without notice.

EXHIBIT E

Generac Power Systems 2 Year (2C) Extended Limited Warranty for Industrial Standby Generators

For the period of warranty noted below, which begins upon the successful start-up and/or on-line activation of the unit, Generac Power Systems, Inc. "Generac" warrants that its Generator will be free from defects in material and workmanship for the items and period set forth below. Generac will, at its discretion, repair or replace any part(s) which, upon evaluation, inspection and testing by Generac or an Independent Authorized Service Dealer, is found to be defective. Any equipment that the purchaser/owner claims to be defective must be evaluated by the nearest Independent Authorized Service Dealer. Emissions components are excluded from coverage under this extended warranty. Emissions warranty coverage is detailed in a separate emissions warranty.

Warranty Coverage: Warranty coverage period is for Two (2) years or two-thousand (2,000) hours, whichever occurs first.

Warranty Coverage in Year(s) 1-2
Parts, Labor and Limited Travel

Limited Gearbox Coverage:

Year(s): 1-5 Coverage	Year(s): 6-10 Coverage
Limited Parts and Labor	Limited Parts Only

Guidelines:

1. Unit must be registered and proof of purchase available.
2. Any and all warranty repairs and/or concerns must be performed and/or addressed by an Independent Authorized Service Dealer, or branch thereof. Repairs or diagnostics performed by individuals other than an Independent Authorized Service Dealer not authorized in writing by Generac will not be covered.
3. This Warranty is transferable between ownership of original install site.
4. Generac supplied engine coolant heaters (block-heaters), heater controls and circulating pumps are only covered during the first year of the warranty provision.
5. Generac may choose to repair, replace or refund a piece of equipment in its sole discretion.
6. Enclosures are warranted against rust for the first year of ownership only. Damage caused after receipt of generator is the responsibility of the owner and is not covered by this warranty. Nicks, scrapes, dents or scratches to the painted enclosure should be repaired promptly by the owner.
7. Warranty only applies to permanently wired and mounted units.
8. Damage to any covered components or consequential damages caused by the use of a non-OEM part will not be covered by the warranty.
9. Proof of performance of all required maintenance must be available.
10. Travel allowance is limited to 300 miles maximum and seven and one half (7.5) hours maximum (per occurrence, whichever is less) round trip from the nearest Independent Authorized Service Dealer. Any additional travel required will not be covered.
11. Engines, driven components and fuel tanks used in Generac's standby power products system can carry a separate manufacturer's (OEM) warranty (the "OEM Warranties"), unless otherwise expressly stated. OEM Warranties are in addition to this Warranty. All warranty claims for defects in material and/or workmanship on Generac product OEM components, may be directed through the OEM distributor/dealer network. OEM Warranties may vary and are subject to change. Generac shall have no liability under OEM warranties.

The following will NOT be covered by this warranty:

1. Costs of normal maintenance (i.e. tune-ups, associated part(s), adjustments, loose/leaking clamps, installation and start-up).
2. Damage/failures to the generator caused by accidents, shipping, handling, or improper storage.
3. Damage/failures caused by operation with improper fuels, speeds, loads or installations other than what's recommended or specified by Generac Power Systems.
4. Damage to the generator due to the use of non-Generac parts and/or equipment, contaminated fuels, oils, coolants/antifreeze or lack of proper fuels, oil or coolants/antifreeze.
5. Failures due to normal wear and tear, accident, misuse, abuse, neglect, improper installation, improper sizing, or rodent, reptile, and/or insect infestation.
6. Rental equipment used while warranty repairs are being performed and/or any extraordinary equipment used for removal and/or reinstallation of generator (i.e. cranes, hoists, lifts, et. al.).
7. Planes, ferries, railroad, buses, helicopters, snowmobiles, snow-cats, off-road vehicles or any other mode of transport deemed not standard by Generac.
8. Products that are modified or altered in a manner not authorized by Generac in writing.
9. Starting batteries, fuses, light bulbs, engine fluids and any related labor.
10. Steel enclosures that rust as a result of improper installation, location in a harsh or salt water environment, or are scratched where the integrity of applied paint is compromised.
11. Units sold, rated or used for "Prime Power", "Trailer Mounted" or "Rental Unit" applications as defined by Generac. Contact an Independent Authorized Service Dealer for definitions.
12. Shipping costs associated with expedited shipping.
13. Additional costs for overtime, holiday or emergency labor costs for repairs outside of normal business hours.
14. Any incidental, consequential or indirect damages caused by defects in materials or workmanship, or any delay in repair or replacement of the defective part(s).
15. Failures caused by any act of God or external cause including without limitation, fire, theft, freezing, war, lightning, earthquake, windstorm, hail, water, tornado, hurricane, or any other matters which are reasonably beyond the manufacturer's control.

THIS WARRANTY SUPERSEDES ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. SPECIFICALLY, GENERAC MAKES NO OTHER WARRANTIES AS TO THE MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. ANY IMPLIED WARRANTIES WHICH ARE ALLOWED BY LAW, SHALL BE LIMITED IN DURATION TO THE TERMS OF THE EXPRESS WARRANTY PROVIDED HEREIN. SOME JURISDICTIONS DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU. GENERAC'S ONLY LIABILITY SHALL BE THE REPAIR OR REPLACEMENT OF PART(S) AS STATED ABOVE. IN NO EVENT SHALL GENERAC BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES, EVEN IF SUCH DAMAGES ARE A DIRECT RESULT OF GENERAC'S NEGLIGENCE. SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS. YOU ALSO HAVE OTHER RIGHTS UNDER APPLICABLE LAW.

FOR AUSTRALIA ONLY: Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.
FOR NEW ZEALAND ONLY: Nothing in this warranty statement excludes, restricts or modifies any condition, warranty right or remedy which pursuant to the New Zealand Legislation (Commonwealth or State) including the Fair Trading Practices Act of 1986 or the Consumer Guarantees Act 1993 ("CGA") applies to this limited warranty and may not be so excluded, restricted or modified. Nothing in this statement is intended to have the effect of contracting out of the provisions of the CGA, except to the extent permitted by that Act, and these terms are to be modified to the extent necessary to give effect to that intention. If you acquire goods from Generac Power Systems or any of its authorized resellers and distributors for the purposes of a business, then pursuant to section 43(2) of the CGA, it is agreed that the provisions of the CGA do not apply.

GENERAC POWER SYSTEMS, INC. • P.O. BOX 8 • Waukesha, WI, USA 53187
Ph: (888) GENERAC (436-3722) • Fax: (262) 544-4851

To locate the nearest Independent Authorized Service Dealer and to download schematics, exploded views and parts lists
visit our website: www.generac.com

Part No. 0J4299 Revision J (2/16)

EXHIBIT E

BUEHLER & BUEHLER
structural engineers

CERTIFICATE OF DESIGN COMPLIANCE

GENERAC

Issue Date: October 17, 2013
Editorial Update: November 28, 2018
B&B Job No: 2012-0311.00

Generac Generator Enclosures
Group F and H
Standard, L1A, & L2A Enclosures

The Generac Group F & H generator standard, L1A, and L2A enclosures have been evaluated and strengthened to be in compliance with the design wind forces in accordance with the International Building Code (IBC) 2009 and 2012, and American Society of Civil Engineers (ASCE) Minimum Design Loads for Buildings and Other Structures, ASCE 7-05 and ASCE7-10. Strengthening components are indicated on component sheets OK2935, OK2876$, and OK2878. Strap reinforcing (OK2935) occurs at the hood side(s). This certificate of design compliance is not intended for use in hospitals under OSHPD jurisdiction.

Wind Performance Criteria*:
V = 180 mph
Exposure = B, C, D
Roof Height = up to 60 feet
Risk Category = IV (Essential Facilities)
*Limited to regular shaped buildings as defined in ASCE 7-10 Section 29.1.

Scott R. Hooker, P.E., S.E.
President
Buehler & Buehler Structural Engineers, Inc.

REGISTERED PROFESSIONAL ENGINEER
SCOTT R. HOOKER
No. 3937
STRUCTURAL
STATE OF CALIFORNIA

Buehler & Buehler Structural Engineers, Inc. ■ 600 Q St. Suite 200, Sacramento, CA 95811 ■ Tel: (916) 443-0303 ■ Fax: (916) 443-0313 ■ www.bbse.com

EXHIBIT E

CERTIFICATE

This is to certify that

Generac Power Systems, Inc.

S45 W29290 Hwy. 59
Waukesha, WI 53189
United States of America

with the organizational units/sites as listed in the annex

has implemented and maintains a **Quality Management System**.

Scope:
Design, Manufacture, and Distribution of Power Products and Solutions.

Through an audit, documented in a report, it was verified that the management system fulfills the requirements of the following standard:

ISO 9001 : 2015

Certificate registration no.	10012920 QM15
Date of original certification	2013-12-09
Date of revision	2021-06-25
Date of certification	2021-07-16
Valid until	2024-07-15

DQS Inc.

Brad McGuire
Managing Director

EXHIBIT E

Annex to certificate
Registration No. 10012920 QM15

Generac Power Systems, Inc.

S45 W29290 Hwy. 59
Waukesha, WI 53189
United States of America

Location	Scope
10012920 **Generac Power Systems, Inc.** **S45 W29290 Hwy. 59** **Waukesha, WI 53189** **United States of America**	Design and Support of Power Products and Solutions.
10012922 **Generac Power Systems, Inc.** **211 Murphy Dr.** **Eagle, WI 53119** **United States of America**	Manufacture and Distribution of Power Products and Solutions.
10012923 **Generac Power Systems, Inc.** **757 N. Newcomb St.** **Whitewater, WI 53190** **United States of America**	Manufacture and Distribution of Power Products and Solutions.
10012924 **Generac Power Systems, Inc.** **900 N. Parkway** **Jefferson, WI 53549** **United States of America**	Manufacture of Power Products and Solutions.
10013528 **Generac Power Systems** **3815 Oregon St.** **Oshkosh, WI 54902** **United States of America**	Manufacture and Distribution of Power Products.
10017103 **Generac Mobile** **215 Power Drive** **Berlin, WI 54923** **United States of America**	Manufacture and Distribution of Power Products.

EXHIBIT E

Annex to certificate
Registration No. 10012920 QM15

Generac Power Systems, Inc.

S45 W29290 Hwy. 59
Waukesha, WI 53189
United States of America

Remote Location	Scope
10014175 **Generac Power Systems, Inc.** **351 Collins Road** **Jefferson, WI 53549** **United States of America**	The remote location at Jefferson, WI performs the following primary functions: Parts and Components Receiving, Inventory, Return and Reconditioning of Product, and Distribution to Generac Locations.
10017439 **Generac Mobile** **745 E. Knopf St.** **Berlin, WI 54923** **United States of America**	The remote location at Berlin, WI performs the following primary functions: Warehousing and Shipping.
10018422 **Generac Power Systems, Inc.** **303 Venture Court** **Janesville, WI 53546** **United States of America**	The remote location at Janesville, WI performs the following primary functions: Parts and Components Receiving, Kitting, Warehousing, Inventory, and Distribution to Generac locations.

EXHIBIT E

United States Environmental Protection Agency Warranty Statement
(Stationary Emergency Compression-Ignition Generators)

Warranty Rights, Obligations and Coverage

Your emission-related warranty covers only components whose failure would increase an engine's emissions of any regulated pollutant where they are designed, built, and equipped to be free from defects in materials and workmanship under applicable regulations of section 213 of the clean air act. To receive information about how to make an emission-related warranty claim, and how to make arrangements for authorized repairs call **1-800-333-1322** or **www.generac.com**. Emission- related warranty claims may be denied without proof of proper maintenance or use, accidents beyond the control of the manufacturer, or act of God. Proper maintenance is specified in the Owner's Manual. Usage is limited to stationary emergency operations and 100 hours per year for maintenance and readiness testing. The warranty period begins when the engine is placed into service. Warranty periods for compression ignition engines greater than 25 horsepower is five years. This warranty is applicable to compression-ignition generator models; equal to and larger than an SD80 starting 1/1/2011, equal to and larger than an SD35 starting 1/1/2012, and all compression-ignition generator models starting 1/1/2013.

Important Note

This warranty statement explains your rights and obligations under the Emission Control System Warranty, which is provided to you by Generac pursuant to federal law. Note that this warranty shall not apply to any incidental, consequential or indirect damages caused by defects in materials or workmanship or any delay in repair or replacement of the defective part(s). This warranty is in place of all other warranties, expressed or implied. Specifically, Generac makes no other warranties as to the merchantability or fitness for a particular purpose. Any implied warranties which are allowed by law, shall be limited in duration to the terms of the express warranty provided herein. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

EXHIBIT E

COASTLINE POWER SOLUTIONS

Customer Name:	ACF Power
Job Name:	South Florida WRF
Project Number:	20220088 Tanks & 20220086 Stairs Rev-1

Submittal Items

Item	Manufacturer	Model #
Normal Vent	Clay & Bailey	401
Emergency Vent	Clay & Bailey	244
Fuel Level Gauge	Kruger	H-2
Fuel Alarm Level Switches	Madison	M-7000
Spiral Fuel Gauge	Rochester	8680
3.5-6V Generac Sender	Rochester	A5DTS02770P
Skirtboard	Rubber Cal	70A
Tank Drawings	Coastline	20220088
Stairs and Platforms	Coastline	20220086

EXHIBIT E

Clay & Bailey Mfg. Co.

100 YEARS C&B

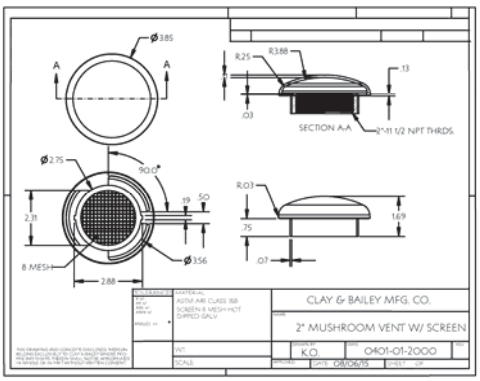
A CENTURY'S WORTH OF INNOVATION

Mushroom Vent

401

Features:

Mushroom style free flow vent is made of cast iron with a 8 mesh galvanized screen. Domed vent top prevents tank contamination from entering vent lines. NPT thread is standard. Also available in galvanized.



Cast iron Black

Part No.	Size	lbs	SCFH@ 2.5psi	A	B
0401-01-0750	3/4"	0.3	4,894	3/4"	1"
0401-01-1000	1"	0 5	8,711	1"	1 1/8"
0401-01-1250	1 1/4"	0.6	13,616	1 1/4"	1 1/2"
0401-01-1500	1 1/2"	0.7	19,532	1 1/2"	1 9/16"
0401-01-2000	2"	1.1	38,846	2"	1 11/16"
0401-01-4000	4"	2.5	54,873	4"	3"

Galvanized

Part No.	Size	lbs	2.5psi	A	B
0401-10-0750	3/4"	0.3	4,894	3/4"	1"
0401-10-1000	1"	0 5	8,711	1"	1 1/8"
0401-10-1250	1 1/4"	0.6	13,616	1 1/4"	1 1/2"
0401-10-1500	1 1/2"	0.7	19,532	1 1/2"	1 9/16"
0401-10-2000	2"	1.1	38,846	2"	1 11/16"
0401-10-4000	4"	2.5	54,873	4"	3"

6401 E. 40th St., Kansas City, Mo. 64129 • 1-800-821-6583 • F: 816-924-3903 • www.claybailey.com

EXHIBIT E

Clay & Bailey Mfg. Co.

A CENTURY'S WORTH OF INNOVATION

366 Female Thread High Flow Emergency Vent for Aboveground Storage Tanks

366 HF

Features:

All Aluminum Construction is lightweight for easy handling and installation. Also, no rust issues from scratches or weathering. Buna-N O Ring provides a vapor resistant seal. Spring Actuated Vent assures accurate opening pressure. Pressure relief set at <0.5 PSI. Clay & Bailey vents can be used in a variety of Aboveground Storage Tank Equipment installations where reliable fuel handling petroleum equipment is required.

Part #	Size	Weight /lbs.
0366-03-30HF	3"	3
0366-03-40HF	4"	4
0366-03-50HF	5"	5
0366-03-60HF	6"	6
0366-03-80HF	8"	7

Airflow

Size	W/Screen	W/O Screen
3"	**66,400 SCFH**	**71,750 SCFH**
4"	**114,800 SCFH**	**118,750 SCFH**
5"	**184,500 SCFH**	**200,250 SCFH**
6"	**237,000 SCFH**	**251,700 SCFH**
8"	**500,552 SCFH**	**531,289 SCFH**

c UL US LISTED

Clay & Bailey emergency vents comply with various codes – Petroleum Equipment Institute PEI RP200; Underwriters Laboratories Inc. UL-142, UL-2085, UL-2244, UL-2583; Underwriters Laboratories of Canada ULC-S601; National Fire Protection Agency NFPA 30, NFPA 30A; American Petroleum Institute API 2000.

Patent # 8171955

10/2018

6401 E. 40th St., Kansas City, Mo. 64129 • 1-800-821-6583 • F: 816-924-3903 • www.claybailey.com

EXHIBIT E

KRUEGER SENTRY GAUGE®

The Therma Gauge—Type H

Calibration: Consists of 3 pieces. Outer plastic piece, inner plastic piece, and a piece of paper in between.

Red Lock Nut: HDPE Plastic.

Bushing:
Aluminum bushing, can be 2" or 1.5".

HDPE Float: High Density Polyethylene Plastic.

Internal Rods: Standard construction is galvanized steel rods with brass rivets.

Part Number—
H-(size opening)-(tank depth)+(ext)-(list options)
Sample—H-2-48+12

What it is:

Top mounted liquid level gauge that can measure from 6 inches to 144 inches in depth. Bushing size can be 2" or 1.5". Gauges are custom made in house to fit your tank. Can also accommodate for double walls and pipe risers. The Type H Gauge has a 2 piece bushing construction that allows you to aim your swing arm away from walls, corners, and other obstructions.

Additional Options - Not included:

Audible Alarm Accessory: This add on feature can turn your mechanical gauge into an audible Hi or Lo level alarm.

LED At-A-Glance Accessory: Another add on feature. This can give your mechanical gauge remote reading capability.

Gauge Guard: A cover that protects the exposed plastic components on top of the gauge.

Replacement Parts -

H-Kit - Replaces all of the gauge components from the red lock nut and up. Includes: Red HDPE Plastic Nut, Duro Nitrile Gasket, Plastic Cellulose acetate inner and outer calibration.

HG-Kit-ALN - Replaces all of the gauge components from the red lock nut and up with upgraded parts. Includes: Aluminum Lock Nut, Duro Nitrile Gasket, Plastic Cellulose acetate outer calibration, Glass inner calibration.

Instructions for Operation:

This gauge is a simple volume reading tool. The top of the red indicator is an indication of your approximate fuel level in your tank. Once installed, you simply view the calibration to monitor your tank level. Indicator is calibrated in eighths of a tank on one side, and quarters of a tank on the other.

Krueger Sentry Gauge
1873 Siesta Lane
Green Bay, WI 54313

www.ksentry.com

KRUEGER SENTRY GAUGE®

Contact us for more info:
Ph: 920-434-8860
Fax: 920-434-8897

Email: info@ksentry.com

EXHIBIT E

Madison Co.
27 Business Park Dr.
Branford, CT 06405 US
Phone: 203-488-4477
Fax: 203-481-5036
Toll-free: 800-466-5383
Email: info@madisonco.com
Website: http://www.madisonco.com

Plastic Miniature Liquid Level Float Switches

Madison Company offers a complete line of standard Single Point Plastic Miniature Liquid Level Float Switches. Madison Company can also custom design specific liquid level switches for OEM applications that require unique materials, configurations and system interfaces.

High reliability of the magnetic reed switch technology assures repeatability at an economical price.

Features
- Single-point
- Magnetic float switch technology
- High reliability
- Wide selection of available materials
- Direct interface to controllers available

Each style switch is equipped with a means to indicate Normally Open (NO) or Normally Closed (NC) operation:

Vertical Switches: NO/NC operation is indicated by the position of a witness mark. NO is indicated by circle up; NC is indicated by circle down.

An ohmmeter or continuity meter may be used to verify the switch setting and operation. Simply connect the meter to the leads with the float hanging down away from the fitting and measure the switch. If the meter reads a short, then the switch is normally closed and will open on rise.

All switches are shipped in the NC position, unless otherwise specified. To change the contact operation, simply remove the retaining ring and float and reverse the float on the stem. The only exception to this is the subminiature switch (M3326/M3326-NO), for which operation must be specified when ordered, since the float is not reversible on this switch.

Results 1 - 8 of 8

Item #	Type	Stem Material	Float Material	Max. Temperature	Fittings	Nominal Current Rating(s)	Float SG	Max. Pressure
M8000-6PKG	Miniature Switch	Polypropylene	Polypropylene	105 ºC 221 ºF	1/8" NPT	30 VA SPST Switch	0.80	100 psig
M4008	Miniature Switch	Polypropylene	Buna-N	105 ºC	1/8" NPT	30 VA SPST Switch	0.45	150 psig
M7000-6PKG	Miniature Switch	PBT	Buna-N	105 ºC	1/8" NPT	30 VA SPST Switch	0.45	150 psig
M9000	Miniature Switch	Kynar	Buna-N	105 ºC	1/8" NPT	30 VA SPST Switch	0.85	15 psig
MS8000	Miniature Switch with Slosh Shield	Polypropylene	Polypropylene	105 ºC	1/8" NPT	30 VA SPST Switch	0.80	100 psig
MS4008	Miniature Switch with Slosh Shield	Polypropylene	Buna-N	105 ºC	1/8" NPT	30 VA SPST Switch	0.45	150 psig
MS7000	Miniature Switch with Slosh Shield	PBT	Buna-N	105 ºC	1/8" NPT	30 VA SPST Switch	0.45	150 psig
MS9000	Miniature Switch with Slosh Shield	Kynar	Buna-N	105 ºC	1/8" NPT	30 VA SPST Switch	0.85	15 psig

Results 1 - 8 of 8

EXHIBIT E

ROCHESTER GAUGES, INC.
ISO 9001:2008 CERTIFIED

8600

Magnetic Liquid-Level Gauge

Application

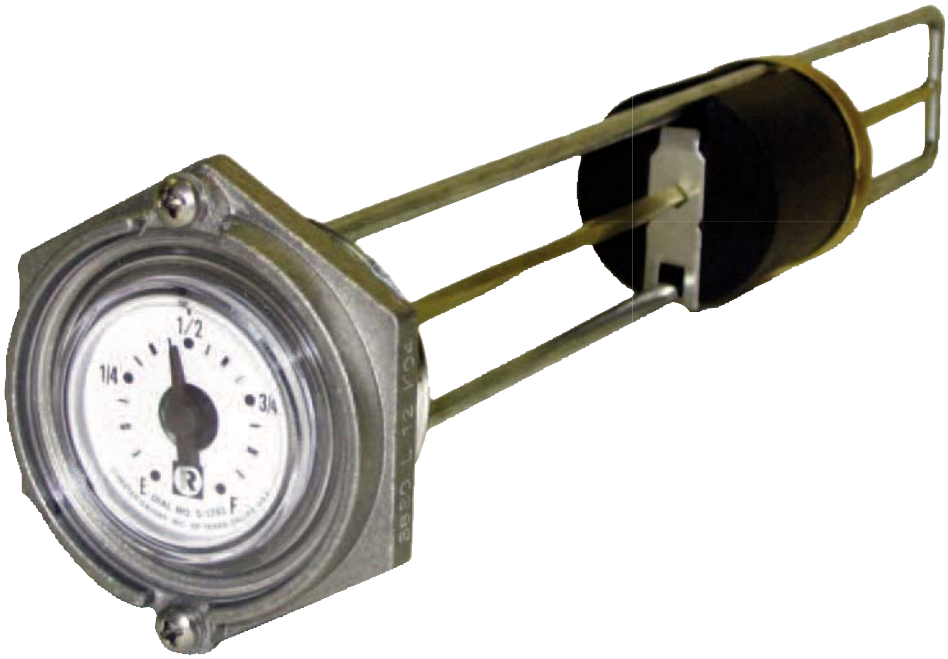
The 8600 Series Senior™ spiral gauges are designed for use in measuring liquid levels in hydraulic, lubricating or fuel-oil storage tanks, and gasoline and diesel fuel levels in stationary, standby and mobile generators. The 8600 Series is not recommended for off-road equipment.

General Information & Features

The 8640 spiral gauge incorporates a strong Alnico magnet capable of driving a TwinSite™ sender which provides a direct, fractional reading and also sends an electrical signal to a remote receiver.

The 8660 spiral gauge is supplied with an easy to read, side-view fractional dial. The model 8680 spiral gauge is equipped with a standard top reading fractional dial.

All 8600 Series spiral gauges have a 1 ½" MNPT tank connection and are suitable for tank pressures up to 25 psig maximum. They are designed for top mounting in tanks up to 36" deep and some models are UL listed for flammable liquids.



Model #	Sender or Dial Type
8640	Senior TwinSite™ Sender in choice of 0-30, 0-90, or 240-30 Ohm ranges. Specify your preference when ordering.
8660	#5025S00570 Senior™ side-reading fractional dial.
8680	#5844S01793 Senior™ direct-reading fractional dial.

* Materials and specifications are subject to change without notice.
Pressure ratings subject to change due to temperature and other environmental considerations.

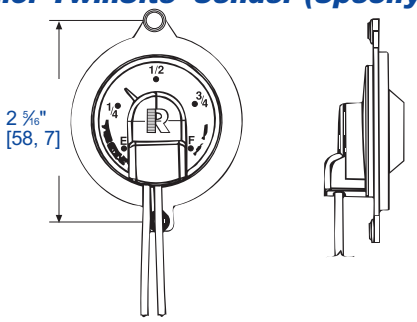
See reverse side for dimensional data, materials of construction, performance, and advice on how to order.

EXHIBIT E

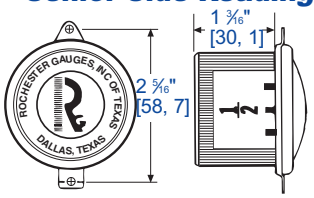
8600

Magnetic Liquid-Level Gauge

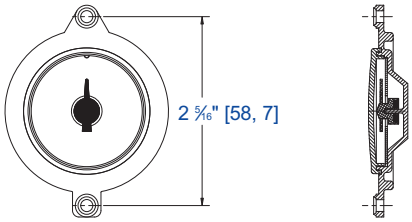
Senior TwinSite™ Sender (Specify ohm range)



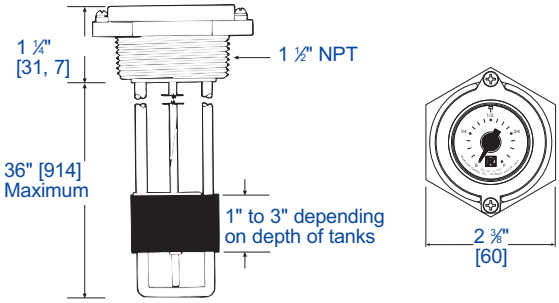
Senior Side-Reading Dial



Senior Dial



Standard Construction



General Specifications*

Mounting
Designed for top-mounting only.

Accuracy
Accuracy depends upon proper gauge sizing. Direct read dials +/-8%, TwinSite dials +/-12%. Accuracy may be less depending upon tank shape. Accuracy may be less near full and empty. Accuracy may be less if tank is not level. Device does not prevent overfill. All accuracy estimates are expressed as a percent of full scale.

Temperature
Standard operating range is -40°F to 158°F, -40°C to 70°C.

Humidity
Exposed portion should be painted for marine applications, less dial.

Shock
Shorter sizes are suitable for some mobile, off-road application.

Vibration
Shorter sizes are suitable for some mobile, off-road application.

Power
0.5 watts maximum for TwinSite™ versions.

Tank Pressure
0 to 25 psig [0 - 1, 7 Bar] maximum.

Approval
Direct indicating gauge. Available UL listed for flammable liquids. Some models UL recognized for marine service.

Note: For gauge installation instructions see MS-516 Spiral.

Materials of Construction*

Head
Die-cast zinc.

Guide Rod
Zinc-plated steel.

Centershaft
Brass.

Tie Plate, Guide & Bearing Pin
Stainless steel.

Float
Nitrile rubber.

Drive Magnet
Alnico.

Standard Dial
Polycarbonate, hermetically sealed.

Side-View Dial
Aluminum with polycarbonate crystal, hermetically sealed.

TwinSite™ Sender
Polyamide.

* Materials and specifications are subject to change without notice.
Pressure ratings subject to change due to temperature and other environmental considerations.

When ordering, specify:

1. Gauge model number.
2. Tank height.
3. Ohm range on TwinSite™ versions.
4. Riser height, if any.
5. Any special requirements.

01/03/2017

ROCHESTER GAUGES, INC.

The Measure of Excellence

11616 Harry Hines Blvd. • P.O. Box 29242 • Dallas, TX 75229 • (972) 241-2161 • *FAX* (972) 620-3374
Website http://www.rochestergauges.com • ***E-mail*** info@rochestergauges.com

EXHIBIT E

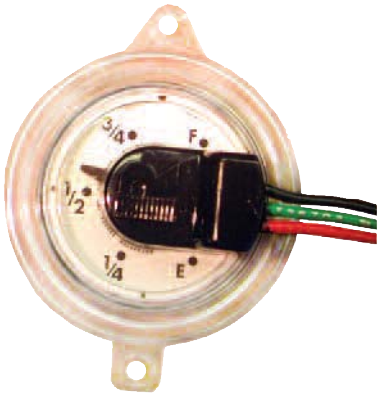
ROCHESTER GAUGES, INC.
ISO 9001:2008 CERTIFIED

TS014

Hall Effect TwinSite® For Industrial Liquid Level Gauges

Application

The Hall Effect TwinSite® is a magnetically-driven, voltage output sender with potted lead wires. Senders are utilized on stationary and mobile applications where direct reading plus an electrical signal to a remote fuel level monitor is required. Models are available to fit most Rochester Junior, Senior and Twinsite® applications.



Patents Pending

General Information & Features

A magnetic drive allows a signal from the float mechanism inside the tank to be transmitted through a solid, non-magnetic bulkhead without the necessity of dynamic seals or pressure-type conductors.

Previous designs of liquid level gauges for magnetically driven dials which produce an electrical output signal had the disadvantages inherent in using variable resistors with a wiper arm contact. There has been a need for a more reliable and simplified design for liquid level gauges which would provide an electrical output related to the liquid level in the tank.

Hall effect is a solid state technology with no moving contacts. It counts on the fact that a magnet bends the path of electrons moving through a semiconductor. The bending of the electrons can be detected and converted into ratiometric voltage output.

Hall effect sensors have been employed in various automotive applications such as for detecting throttle, fly wheel, and wheel positions. The magnetic connection of the Hall effect sensor is more reliable than systems that depend on the sliding contact of variable resistor devices. There is no sliding wiper contact, and is compatible with existing gauges equipped with weak drive magnets within the tank. The Hall Effect Twinsite® is advantageous in that it can be used as a retrofit on these tanks to provide an electrical output which can be utilized for remote monitoring of tank levels. With remote monitoring of tank levels, customers will be able to more efficiently monitor their liquid level usage.

The TwinSite® also provides an easy to read local indication. The bright, user friendly dial face is divided into fractional units.

The case is hermetically sealed by ultrasonic welding to melt and fuse the case into one solid piece. This keeps weather out, ensuring “no-fog” readability while greatly extending mechanical life. This Ultra Sonic weld process is highly reliable. The plastic case is capable of withstanding vibration and shock that would render comparable metal designs useless.

The plastic case is far more resistant to corrosion than any metal-cased version and is capable of withstanding broad variations in temperature. The plastic lens (and the rest of the case) is a special, chemical resistant material.

Electrical connections are sealed with redundant epoxy chambers. The connecting wires are also sealed behind this epoxy barrier. This sealing process presents an impervious barrier to water.

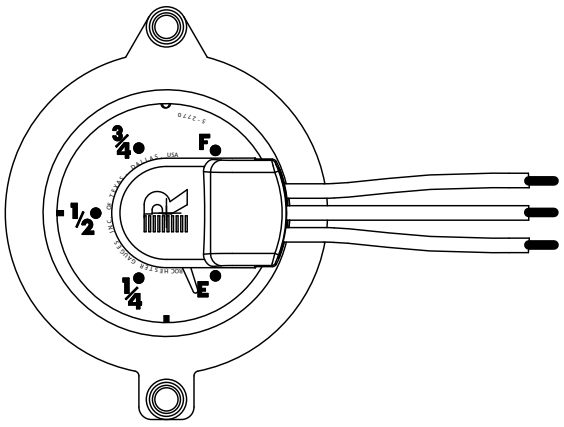
* Materials and specifications are subject to change without notice.

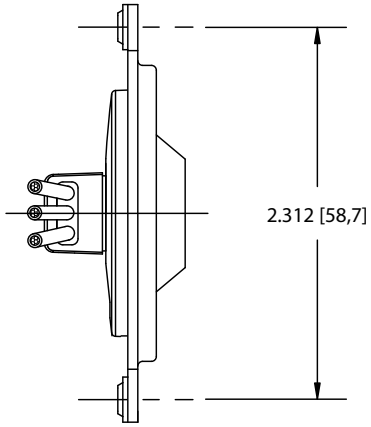
See reverse side for dimensional data, materials of construction, performance, and advice on how to order.

EXHIBIT E

TS014

Hall Effect TwinSite® For Industrial Liquid Level Gauges





Sr. screw-on mount

General Specifications*

Operating Temperature
-40°C to 80°C (-40°F to 176°F).
Accuracy
±4% (Float gauge errors not included.)
Hysteresis
Less than 1% typical.
Repeatability
±1%.
Operational Range
8-32 vdc.
Output Voltage
E=0.5 V
F=4.5 V
Resolution
Infinite.

When ordering, specify:

1. Junior or Senior.
2. Or part number.

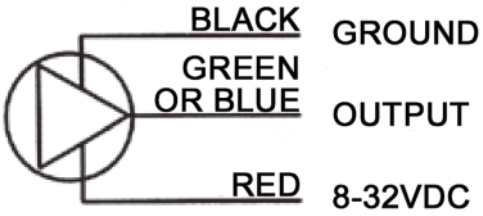
Materials of Construction*

Crystal & Case
Proprietary copolymer, ultrasonically sealed.
Dial
Painted aluminum.

* Materials and specifications are subject to change without notice.
Pressure ratings subject to change due to temperature and other environmental considerations.

How To Order

P/N	Style	Circuit
P5971S02770	Jr.	Internal Voltage Regulator
P5AAKS02770	Sr.	



WARNING! This sensor is not to be used as the primary means of determining high or low fuel condition. It must not be used in the absence of redundant systems in critical applications where there may be significant safety risk or financial exposure in the event of fuel overfill or fuel exhaustion condition. This sensor is not to be used for tank filling.

09/21/2017

ROCHESTER GAUGES, INC.

The Measure of Excellence

11616 Harry Hines Blvd. • P.O. Box 29242 • Dallas, TX 75229 • (972) 241-2161 • *FAX* (972) 620-3374
Website http://www.rochestergauges.com • ***E-mail*** info@rochestergauges.com

EXHIBIT E

Skirtboard - SBR Rubber - 70A

Specifications
March 2012

Description:	Skirtboard is a sturdy sheet product designed for use as conveyor skirtboard or belt wiper.
Compound:	SBR
Color:	Black
Weight:	Approximate weight per square foot: 1/8" weighs 1 lb.
Durometer:	65-75
Temperature Range:	-10 F to 190 F
Minimum Tensile:	725 PSI or 5 MPA
Finish:	Smooth
Minimum Elongation:	300%
Gauges:	1/8", 1/4", 3/8", 1/2", 3/4", 1", 1.5" (custom gauges up to 2” thick are available upon request)
Widths:	4", 6", 8", 10", 12", 36", 48" (custom widths up to 78” are available upon request)
Roll Length:	25 or 50ft.
Chemical Resistance:	Good resistance to Ethanol, Formaldehyde, Glycerin, Sea Water, Boric Acid, and Chlorine Solutions. Not suited for use with Oils, Fuels, Solvents, or Hydraulic Fluids. For Skirtboard's compatibility with your specific medium please consult a Rubber-Cal representative.
Applications:	Street Sweepers, Abrasion Resistant Applications, Snowplow Blades, Airfield Applications, General Industrial Padding and Gasketing
Flexibility:	This hard durometer (65-75) sheet rubber offers limited pliability and elasticity.
Custom Cuts:	In addition to hand fabrication, this product can be fabricated using laser, die, and water-jet cut. Please submit your drawings for a price quote.
Availability:	Popular gauges and widths and stock.

Rubber Cal

Specifications and/or prices are subject to change without prior notice.
© 2014 Rubber-Cal all rights reserved.
Rubber-Cal, Inc.
620 West Warner Ave
Santa Ana, CA 92707
800-370-9152
www.rubbercal.com