

MD350 | 12.9L | 350 kW

INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency

GENERAC® | **INDUSTRIAL
POWER**

Standby Power Rating

350 kW, 438 kVA, 60 Hz

Prime Power Rating*

315 kW, 394 kVA, 60 Hz



*Built in the USA using domestic and foreign parts

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

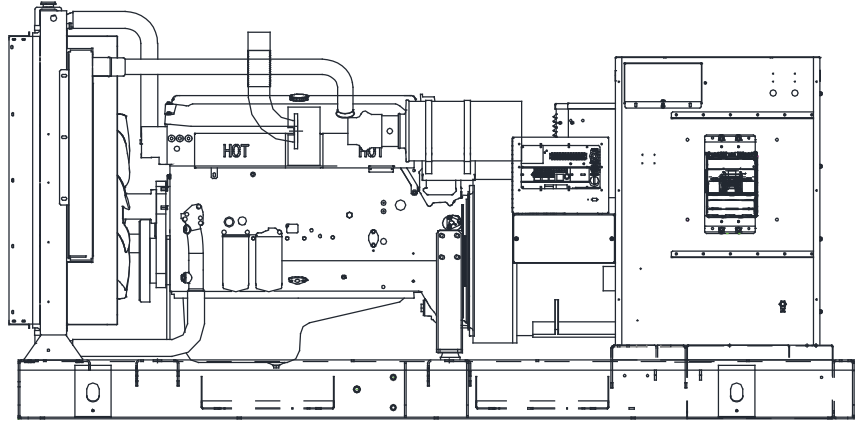


Image used for illustration purposes only

Codes and Standards

Generac products are designed to the following standards:



UL2200, UL508, UL142, UL489



NFPA 37, 70, 99, 110



NEC700, 701, 702, 708



ISO 3046, 7637, 8528, 9001



NEMA ICS10, MG1, 250, ICS6, AB1



ANSI C62.41



IBC 2009, CBC 2010, IBC 2012,
ASCE 7-05, ASCE 7-10,
ICC-ES AC-156 (2012)

Powering Ahead

For over 50 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.

STANDARD OPTIONS

ENGINE SYSTEM

- Oil Drain Extension
- Heavy Duty Air Cleaner
- Fan Guard
- Stainless Steel Flexible Exhaust Connection
- Factory Filled Oil & Coolant
- Radiator Duct Adapter (Open Set Only)

Fuel System

- Fuel Lockoff Solenoid
- Secondary Fuel Filter

Cooling System

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

Electrical System

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

ALTERNATOR SYSTEM

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

GENERATOR SET

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

ENCLOSURE (if selected)

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

TANKS (if selected)

- UL 142
- Double Wall
- Vents
- Sloped Top
- Sloped Bottom
- Factory Pressure Tested (2 psi)
- Rupture Basin Alarm
- Fuel Level
- Check Valve In Supply and Return Lines
- Rhino Coat™ - Textured Polyester Powder Coat Paint
- Stainless Steel Hardware

CONTROL SYSTEM

Digital G Paralleling Control Panel -
Touchscreen

Program Functions

- Programmable Crank Limiter
- 7-Day Programmable Exerciser
- Special Applications Programmable Logic Controller
- RS-232/485 Communications
- 3 Phase Sensing Digital Voltage Regulator
- 2-Wire Start Capability
- Date/Time Fault History (Event Log)
- Isochronous Governor Control
- Waterproof/Sealed Connectors
- Audible Alarms and Shutdowns
- Not in Auto (Flashing Light)
- Auto/Off/Manual Switch
- E-Stop (Red Mushroom-Type)

- NFPA110 Level I and II (Programmable)
- Customizable Alarms, Warnings, and Events
- Modbus® protocol
- Predictive Maintenance Algorithm
- Sealed Boards
- Password Parameter Adjustment Protection
- Single Point Ground
- 16 Channel Remote Trending
- 0.2msec High Speed Remote Trending
- Alarm Information Automatically Annunciated on the Display

Full System Status Display

- Power Output (kW)
- Power Factor
- kW Hours, Total & Last Run
- Real/Reactive/Apparent Power
- All Phase AC Voltage
- All Phase Currents

- Oil Pressure
- Coolant Temperature
- Coolant Level
- Engine Speed
- Battery Voltage
- Frequency

Alarms and Warnings

- Oil Pressure
- Coolant Temperature
- Coolant Level
- Engine Overspeed
- Battery Voltage
- Alarms & Warnings Time and Date Stamped
- Snap Shots of Key Operation Parameters During Alarms & Warnings
- Alarms and Warnings Spelled Out (No Alarm Codes)

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

CONFIGURABLE OPTIONS

ELECTRICAL SYSTEM

- 10A UL Battery Charger
- Battery Warmer

ALTERNATOR SYSTEM

- Alternator Upsizing
- Anti-Condensation Heater
- Tropical Coating

CIRCUIT BREAKER OPTIONS

- Main Line Circuit Breaker
- Electronic Trip Breakers

GENERATOR SET

- GenLink® Communications Software (English Only)
- IBC Seismic Certification
- 2 Year Extended Warranty
- 5 Year Warranty
- 5 Year Extended Warranty
- 7 Year Extended Warranty
- 10 Year Extended Warranty

ENCLOSURE

- Weather Protected
- Level 1 Sound Attenuation
- Level 2 Sound Attenuation
- Steel Enclosure
- Aluminum Enclosure
- Up to 200 MPH Wind Load Rating*
- AC/DC Enclosure Lighting Kit

CONTROL SYSTEM

- NFPA 110 Compliant 21-Light Remote Annunciator
- Remote Relay Assembly (8 or 16)
- Oil Temperature Sender with Indication Alarm
- Remote E-Stop (Break Glass-Type, Surface Mount)
- Remote E-Stop (Red Mushroom-Type, Surface Mount)
- Remote E-Stop (Red Mushroom-Type, Flush Mount)
- Remote Communication - Modem
- Remote Communication - Ethernet
- 10A Run Relay
- Ground Fault Indication and Protection Functions

ENGINEERED OPTIONS

TANKS

- Overfill Protection Valve
- UL2085 Tank
- ULC S-601 Tank
- Special Fuel Tanks
- Vent Extensions

RATING DEFINITIONS

Standby - Applicable for a varying emergency load for the duration of a utility power outage with no overload capability.

Prime - Applicable for supplying power to a varying load in lieu of utility for an unlimited amount of running time. A 10% overload capacity is available for 1 out of every 12 hours. The Prime Power option is only available on International applications. Power ratings in accordance with ISO 8528-1, Second Edition.

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APPLICATION AND ENGINEERING DATA

ENGINE SPECIFICATIONS

General

Make	Iveco/FPT
EPA Emissions Compliance	Stationary Emergency
EPA Emissions Reference	See Emissions Data Sheet
Cylinder #	6
Type	In-Line
Displacement - L (cu in)	12.9
Bore - mm (in)	134.6 (5.3)
Stroke - mm (in)	149.9 (5.9)
Compression Ratio	16.5:1
Intake Air Method	Turbocharged/Aftercooled
Cylinder Head Type	4-Valved
Piston Type	Aluminum
Crankshaft Type	Dropped Forged Steel

Engine Governing

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

Lubrication System

Oil Pump Type	Gear
Oil Filter Type	Full Flow
Crankcase Capacity - L (qts)	35 (36.9)

Cooling System

Cooling System Type	Closed
Water Pump Type	Belt Driven Centrifugal
Fan Type	Pusher
Fan Speed (rpm)	2466
Fan Diameter - mm (in)	762 (30.0)

Fuel System

Fuel Type	Ultra Low Sulfur Diesel #2
Carburetor	ASTM
Fuel Filtering (microns)	5
Fuel Inject Pump Make	Electronic
Fuel Pump Type	Engine Driven Gear
Injector Type	Electronic
Engine Type	Pre-Combustion
Fuel Supply Line - mm (in)	12.7 (0.5)
Fuel Return Line - mm (in)	12.7 (0.5)

Engine Electrical System

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

ALTERNATOR SPECIFICATIONS

Standard Model	520 mm Generac
Poles	4
Field Type	Revolving
Insulation Class - Rotor	H
Insulation Class - Stator	H
Total Harmonic Distortion	<5%
Telephone Interference Factor (TIF)	<50

Standard Excitation	Permanent Magnet
Bearings	One - Pre Lubed & Sealed
Coupling	Direct, Flexible Disc
Load Capacity- Standby	100%
Prototype Short Circuit Test	Yes
Voltage Regulator Type	Full Digital
Number of Sensed Phases	3
Regulation Accuracy (Steady State)	±0.25%

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OPERATING DATA

POWER RATINGS

Standby			
Three-Phase 277/480 VAC @0.8pf	350 kW	Amps: 527	315 kW
Three-Phase 346/600 VAC @0.8pf	350 kW	Amps: 421	315 kW

STARTING CAPABILITIES (sKVA)

sKVA vs. Voltage Dip							
480 VAC							
Alternator	kW	10%	15%	20%	25%	30%	35%
Standard	400	387	581	775	968	1162	1356
Upsize 1	442	475	720	915	1145	1030	1290
Upsize 2	555	457	686	914	1143	1371	1600

FUEL CONSUMPTION RATES*

Fuel Pump Lift - ft (m)		Diesel- gph (lph)	
3 (1)		Percent Load	Standby
Total Fuel Pump Flow (Combustion + Return) gph (lph)		25%	8.4 (31.8)
		50%	14.5 (54.9)
		75%	20.1 (76.1)
		100%	25.3 (95.8)

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

COOLING

		Standby
Coolant Flow per Minute	gpm (lpm)	145 (552)
Heat Rejection to Coolant	BTU/hr	932,760
Inlet Air	cfm (m³/min)	19,070 (539.7)
Coolant System Capacity	gal (L)	16.6 (63)
Maximum Radiator Backpressure	in H ₂ O	0.5

COMBUSTION AIR REQUIREMENTS

Standby	
Flow at Rated Power cfm (m³/min)	1195 (33.8)

ENGINE

Standby		
Rated Engine Speed	rpm	1800
Horsepower at Rated kW**	hp	530
Piston Speed	ft/min	1770
BMEP	psi	313

EXHAUST

Standby		
Exhaust Flow (Rated Output)	cfm (m³/min)	2988 (84.6)
Max. Backpressure (Post Silencer)	in Hg (Kpa)	1.5 (5.1)
Exhaust Temp (Rated Output - Post Silencer)	°F (°C)	1076 (580)
Exhaust Outlet Size (Open Set)	mm (in)	88.9 (3.5) NPT (male)

** 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.

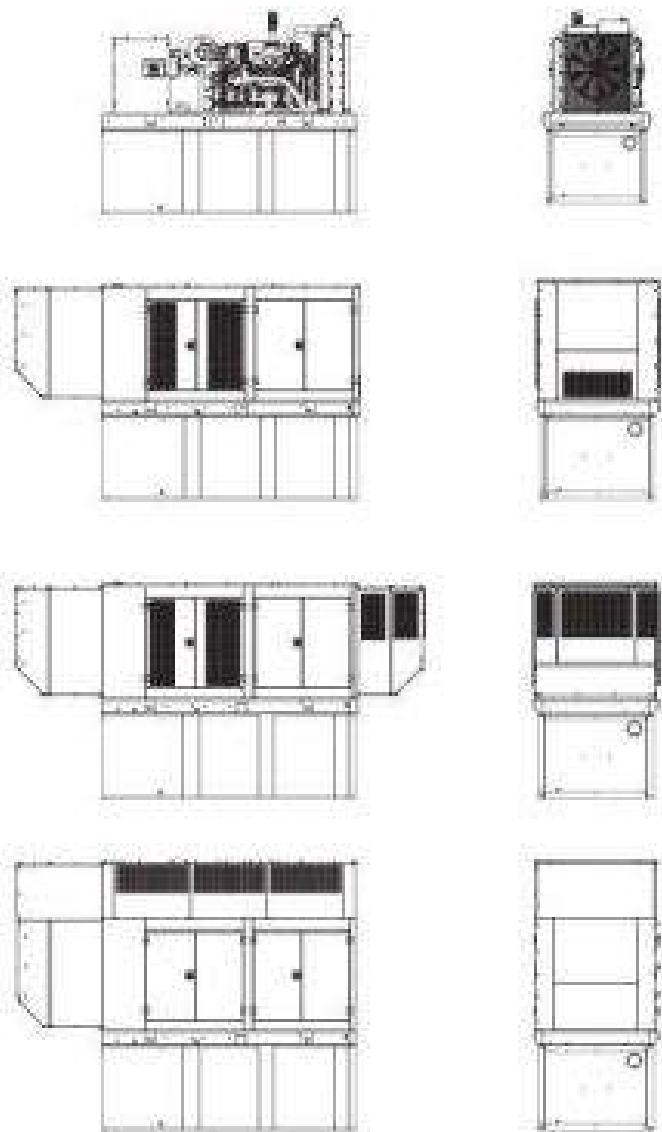
Please consult a Generac Power Systems Industrial Dealer for additional details. All performance ratings in accordance with ISO3046, BS5514, ISO8528 and DIN6271 standards.

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DIMENSIONS AND WEIGHTS*



OPEN SET (Includes Exhaust Flex)

Run Time Hours	Usable Capacity Gal (L)	L x W x H (in (mm))	Weight lbs (kg)
No Tank	-	137.5 (3493) x 57.6 (1463.1) x 67.8 (1722.3)	7330
7	183	137.5 (3493) x 57.6 (1463.1) x 80.8 (2052.3)	8278 (3755)
17	438	137.5 (3493) x 57.6 (1463.1) x 92.8 (2357.3)	8590 (3897)
27	693	137.5 (3493) x 57.6 (1463.1) x 104.81 (2662.3)	8893 (4026)
37	946	208.3 (5291.5) x 57.6 (1463.1) x 122 (3100.3)	10355 (4697)
52	1325	277.76 (7055) x 57.6 (1463.1) x 121 (3072.3)	11370 (5158)

STANDARD ENCLOSURE

Run Time Hours	Usable Capacity Gal (L)	L x W x H (in (mm))	Weight lbs (kg)	
			Enclosure Only Steel	Enclosure Only Aluminum
No Tank	-	174.7 (4437) x 57.7 (1460) x 77.8 (1977)		
7	183	174.7 (4437) x 57.7 (1460) x 90.83 (2307)		
17	438	174.7 (4437) x 57.7 (1460) x 102.83 (2612)	1295 (588)	501 (227)
27	693	174.7 (4437) x 57.7 (1460) x 114.84 (2917)		
37	946	208 (5283) x 57.7 (1460) x 132 (3355)		
52	1325	278 (7061) x 57.7 (1460) x 130.98 (3327)		

LEVEL 1 ACOUSTIC ENCLOSURE

Run Time Hours	Usable Capacity Gal (L)	L x W x H (in (mm))	Weight lbs (kg)	
			Enclosure Only Steel	Enclosure Only Aluminum
No Tank	-	200 (5084) x 57.7 (1460) x 78 (1981)		
7	183	200 (5084) x 57.7 (1460) x 91 (2311)		
17	438	200 (5084) x 57.7 (1460) x 103 (2616)	1470 (667)	935 (425)
27	693	200 (5084) x 57.7 (1460) x 115 (2921)		
37	946	208.32 (5291.5) x 57.7 (1460) x 118 (2997)		
52	1325	277.76 (7055) x 57.7 (1460) x 118 (2997)		

LEVEL 2 ACOUSTIC ENCLOSURE

Run Time Hours	Usable Capacity Gal (L)	L x W x H (in (mm))	Weight lbs (kg)	
			Enclosure Only Steel	Enclosure Only Aluminum
No Tank	-	180.6 (4588) x 57.7 (1460) x 107.2 (2724)		
7	183	180.6 (4588) x 57.7 (1460) x 120 (3048)		
17	438	180.6 (4588) x 57.7 (1460) x 132 (3353)	2515 (1141)	1131 (514)
27	693	180.6 (4588) x 57.7 (1460) x 144 (3658)		
37	946	290 (7366) x 57.7 (1460) x 116 (2946)		
52	1325	278 (7061) x 57.7 (1460) x 147 (3734)		

**GENERATOR
WILL COME
MOUNTED ON A
668 usable gallon
MI DEQ fuel tank**

* All measurements are approximate and for estimation purposes only.

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

4

3

SH 1/2 REV A WINDCHILL VERSION A.1

1

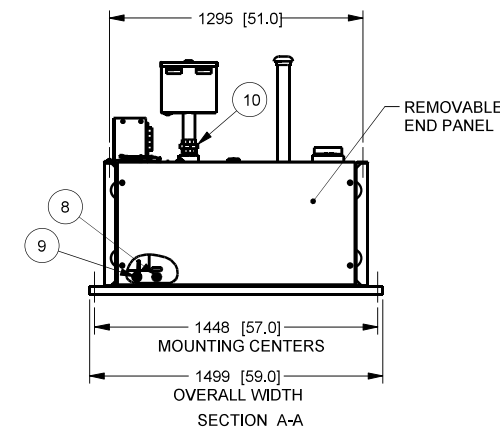
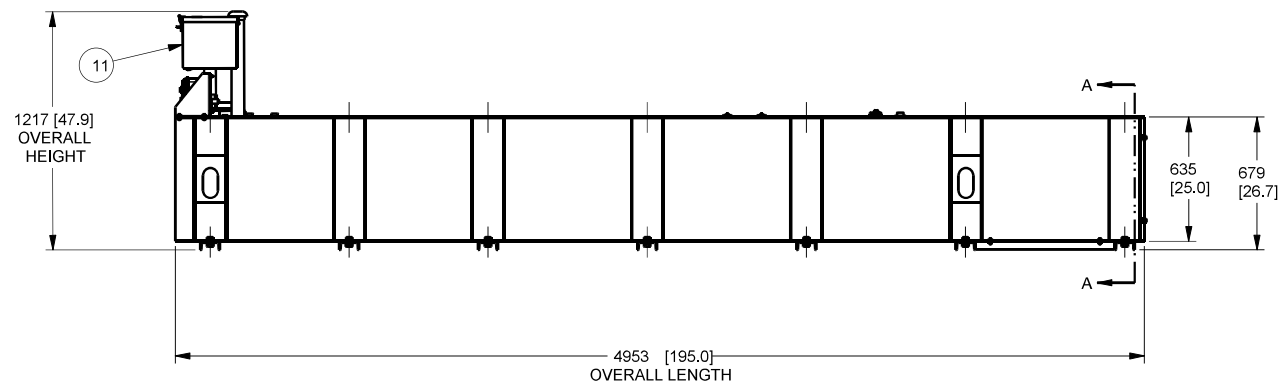
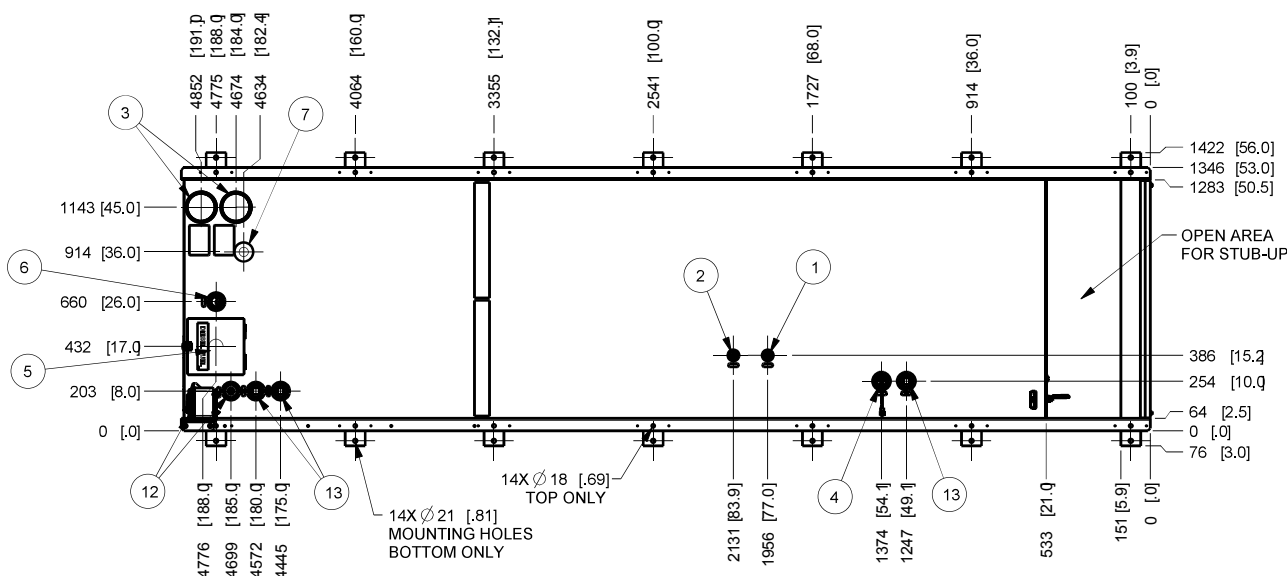
ITEM #	TANK FITTING	FUNCTION:
1	1/2" NPT COUPLING	FUEL SUPPLY
2	1/2" NPT COUPLING	FUEL RETURN
3	5" NPT WELD FLANGE	EMERGENCY VENT
4	FUEL SENSOR	FUEL LEVEL
5	2" NPT WELD FLANGE	FUEL FILL
6	2" NPT WELD FLANGE	VISUAL FUEL LEVEL
7	2" NPT WELD FLANGE	VENT
8	1/2" NPT FITTING	DRAIN
9		LEAK DETECTOR
10	2" NPT WELD FLANGE	OVERFILL PREVENTION VALVE
11	2" NPT WELD FLANGE	5 GALLON SPILL/FILL
12	2" NPT WELD FLANGE	90% FILL ALARM PANEL & SENSOR
13	2" NPT WELD FLANGE	SPARE, CUSTOMER USE

TANK P/N - REVISION	A0000300462
TOTAL TANK CAPACITY	2612 ltr [690 gal]
USABLE TANK CAPACITY	2528 ltr [668 gal]
DRY WEIGHT	1141 kg [2515 lbs]

TANK IS UL-142 LISTED
TANK IS STATE SPECIFIC LABELED.

B

B



A

A

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

NOTE:
1. MOUNTING BOLTS/STUDS FOR BASETANK TO MOUNTING SURFACE
SHALL BE .625"-11 GRADE 5. (USE STANDARD SAE TORQUE SPECS).
2. DIMENSIONS ARE IN MILLIMETERS [INCHES].

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ANY PURPOSE OTHER THAN FOR WHICH IT IS SUPPLIED WITHOUT
THE EXPRESS WRITTEN CONSENT OF GENERAC POWER SYSTEMS.
(GENERAC POWER SYSTEMS 2015)

ELECTRONICALLY APPROVED
INSIDE WINDCHILL

INSTALLATION DRAWING

4

3

2

1

GENERAC				
TITLE				
BASETANK 690 GALLON TOTAL/668 GALLON USEABLE EXT F-GROUP				
ISSUE DATE: 06/27/19				
SIZE B	CAGE NO N/A	DWG NO A0000301378	REV A	
SCALE 0.040	WT-KG		SHEET	1 of 2

TX301 Series Transfer Switch

600 Amps

Service Entrance Rated · Contactor Type · Open and Delayed Transition

GENERAC | **INDUSTRIAL
POWER**

- Automatic Transfer Switch
- 600A up to 600V VAC, 60 Hz, 100% current rated
- Single or Three Phase
- 2, 3, or 4 Poles
- NEMA 1 or 3R
- Open and Inphase or Open with Delayed Transition
- ETL Listed to UL 1008
- High Withstand and Closing Ratings



Image used for illustration purposes only

Codes and Standards

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



cETL Listed



NFPA 70, 99, 110



NEC 700, 701, 702, 708

Description

Generac's patented* contactor type transfer switches are double-throw robust switch construction with inherent interlocks for safe positive transfer between power sources. The contacts are silver composite for long life, resisting pitting or burning. The switches are rated for full load transfers in mission critical, emergency, legally required, and optional power systems.

The microprocessor based controller provides the customers with the flexibility to program a comprehensive group of set points to match the application needs. The controller has two programmable inputs and one programmable output as standard and is available with an optional expansion board for up to four programmable inputs and outputs. The LCD displays real time and historical information with time-stamped events. The integrated plant exerciser can be configured in off, daily, day of week, biweekly, and monthly intervals with user selectable run time. Standard features of the controller include three phase sensing on both sources, phase unbalance, phase reversal, load shed, emergency inhibit, and communications.

*Patent Number: US 11,227,728 B2

TX301 Series Transfer Switch

600 Amps

Service Entrance Rated · Contactor Type · Open and Delayed Transition

GENERAC® | **INDUSTRIAL
POWER**

STANDARD FEATURES

GENERAL

- Small Footprint, Results in Easy Mounting and Installation for Reduced Time and Costs
- Floor Mounted, Wall Secured
- Cable Entry is Top or Bottom
- Double-Throw, Stored Energy Transfer Mechanism
- Can be Electrically Isolated while Energized
- Graphical LCD-Based Display for Programming, System Diagnostics and Help Menu Display Mimic
- Diagram with Source Available and Connected
- Method of Transfer: Open with Inphase Transition
- Mechanically Interlocked to Prevent Connection of Both Sources
- Modbus® RTU
- TXC 100 Controller
- Operating Temperature -4 ° to 158 °F (-20 ° to 70 °C)
- Removable Top and Bottom Plates for Ease of Entry
- Voltage Agnostic*
- High Withstand and Closing Ratings
- Heater Kit Standard on All 3R Enclosures
- Auxiliary Input Includes: Permissive Inputs (24VDC)
- General Alarm Indication
- 2 Year Standard Warranty

VOLTAGE AND FREQUENCY SENSING

- Three Phase Under and Over Voltage Sensing on Normal and Emergency Sources
- Under and Over Frequency Sensing on Normal and Emergency
- Selectable Settings: Single or Three Phase Voltage
- Sensing on Normal and Emergency 60 Hz
- Phase Sequence Sensing for Phase Sensitive Loads

START CIRCUIT

- 2-wire Start
- 3-wire Start from C Contact for Circuit Monitoring

DIGITAL OUTPUTS

- Switch Position Indication (2 Form C)
- Signal Before Transfer (Elevator)
- General Alarm

DIGITAL INPUTS

- Emergency Inhibit (Permissive & Load Shed)
- Go to Emergency
- Manual Generator Retransfer

CONTROLS

- Front Programmable Control Reduces PPE Needs and Arc Flash Hazard
- Built in Battery Backup – Increases Switch Reliability and Reduces Switch Transition Time to Alternate Source
- Battery Backup Able to Power the Controller for up to 60 Minutes in the Event of No Source Availability
- Generator Battery Backup for Controller
- Accessible USB Port for Easy Data Downloads, Firmware Updates without Requiring PPE, Reducing the Risk of Arc Flash
- All Amp Nodes Offered with Delayed Transition
- Heater Programmable through Control for Desired Temperature and Humidity Settings
- Front Accessible Customer Connections
- Time-Stamped Event History Log
- Programmable Exerciser – Daily, Weekly, Biweekly, Monthly

* 480 V 3-Wire Systems and all 600 V systems must be specified at time of ordering for Transformer Kit to be included

AVAILABLE OPTIONS

- Time Delay in Neutral Transition (TDN) or Inphase with a Default to Time Delay in Neutral Transfer
- Remote Annunciator
- 3R Padlockable Cover for Controller (Standard on 3R Enclosure)
- CTs for Integrated Metering
- Heater Option for Temperature and Humidity Control (Standard on 3R Enclosure)
- Expandable Input/Output Board Module Includes: 4 Relay Outputs and 4 Optically Isolated Inputs
- 2 Year Extended Limited Warranty
- 5 Year Basic Limited Warranty
- 5 Year Extended Limited Warranty
- 7 Year Extended Limited Warranty
- 10 Year Extended Limited Warranty

ENGINEERED OPTIONS

- Transient Voltage Surge Suppressor (TVSS)
- Manual Generator Retransfer Switch
- Go to Emergency Switch

CONVERSION KITS

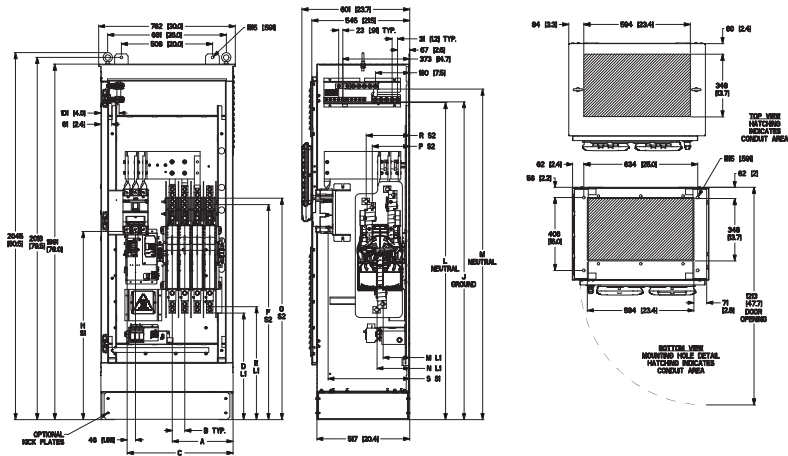
- 480 V Transformer Kit for 3-Wire Systems
- 600 V Transformer Kit

TX301 Series Transfer Switch

600 Amps

Service Entrance Rated · Contactor Type · Open and Delayed Transition

UNIT DIMENSIONS*

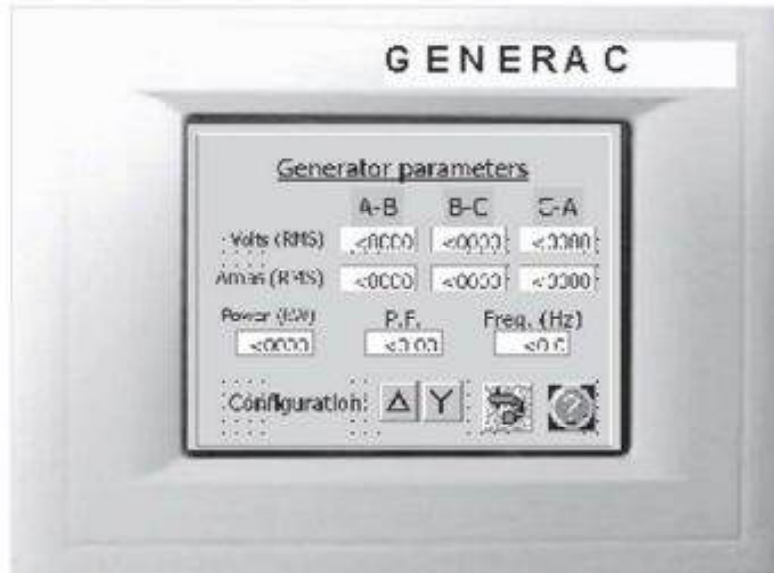


Service Entrance Rated, Contactor Type, Open and Delayed Transition, 600 A, Type 1 and 3R		
Description		600A 2 & 3 Pole
in (mm)	A (Dim)	13.3 (339)
	B (Dim)	2.7 (70)
	C (Dim)	23.2 (590)
	D (Dim)	23.4 (594)
	E (Dim)	24.8 (629)
	F (Dim)	47.2 (1199)
	G (Dim)	48.6 (1234)
	H (Dim)	41.3 (1048)
	J (Dim)	69.7 (1771)
	K (Dim)	69.5 (1766)
	L (Dim)	72.5 (1841)
	M (Dim)	5.8 (148)
	N (Dim)	7.2 (182)
	P (Dim)	8.2 (208)
	R (Dim)	9.5 (242)
	S (Dim)	17.9 (455)
Cu/Al	Normal 75 °C Wire	(2) 600 - 2/0
	Normal Wire Lug Torque lb/in (Nm)	450 (50.8)
	Standby/Load Source 75 °C Wire	(2) 750 - 2
	Standby/Load Wire Lug Torque lb/in (Nm)	620 (50.8)
	Neutral Connection	(8) 600 - 4 or (16) 250 - 1/0
	Neutral Wire Lug Torque lb/in (Nm)	375 (31.1)
	Ground Connection	(10) 350 - 6
	Ground Wire Lug Torque lb/in (Nm)	275 (31.1)
lbs (kg)	Weight	2-Pole: 445 (201.8)
		3-Pole: 465 (210.9)

UL 1008 Withstand and Closing Ratings		
Ampere Rating	Service Entrance (kA)	Voltage (V)
600	100	Up to 480
600	35	Up to 600

POWERMANAGER®

Digital Control Platform (PM-DCP)



Touch Screen Information Panel

Features

Totally Integrated Control

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

The PowerManager® Digital Control Platform (PM-DCP) is configured as the PowerManager® Genset Controller (PM-GC) for stand-alone gensets, the PowerManager® Parallel Controller (PM-PC) for gensets in a Modular Power System configuration, and the PowerManager® System Controller (PM-SC) for the systematic control of the Modular Power Systems.

Standard Features as a Single Unit Control

PowerManager® Generator Control (PM-GC)

- Engine Protective Functions
- Digital Engine Governor Control
- Digital Voltage Regulator
- Touch Screen
- Multiple Programmable Outputs and Inputs
- PLC Logic and Programming
- Remote Display Capability
- Communication via Modbus or CANbus
- Alarm and Event Logging with Real Time Stamping
- Built-in Diagnostics
- Spare Analog and Digital Inputs and Outputs
- Software Update via Remote Computer
- Built-in Modem and Dial-out Capability

Additional Standard Features as Parallel Control

PowerManager® Parallel Control (PM-PC)

- Paralleling Control (Synchronizing)
- Reverse Power
- Loss of Synchronization Between Gensets
- Load and VAR Sharing

Standard Features as System Control

PowerManager® System Control (PM-SC)

- Built-in PLC Logic Eliminates the Need for External Controllers Under Most Conditions
- Touch Screen for Local Control and Engine and Generator Information
- Remote Display and Programming via Laptop
- Internal Built-in Modem
- Communication Between Gensets via Standard Modbus Protocol
- Programmable I/O Channel Properties
- Alarm and Event Logging with Real Time Stamping
- Parameter Logging and Trending
- Built-in Diagnostics
- Selective Load Sharing
- Spare Analog and Digital Inputs and Outputs
- Software Updated via Remote Communication
- Dial-out Capability
- Separate Enclosure (24" x 30" x 9") NEMA 1

POWERMANAGER®

Digital Control Platform (PM-DCP)

Features - Continued

Voltage Regulation*

- 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
- RMS Sensing
- Paralleling Function on PM-PC
- Fault Protection (I²T Function) Optional
- High Voltage Limit
- Low Voltage Limit
- Maximum Power Limit
- ±0.5% Voltage Regulation
- ±0.1% Stability
- Adjustable via GenLink®

PLC (Built-in Programmable Logic Controller)

- Boolean Logic Programming (Ladder)
- 16 Timers
- 16 Counters
- Counter Reset
- Programmable in GenLink®
- Custom Configurable for Non-standard Options

Governor*

- Soft Start Ramping (Multiple Steps)
- Synchronizing Function on PM-PC Only
- Overshoot Limit and Control
- Fully Adjustable Gain (PID)

Connections**

- 28 - Digital Outputs (Open Collector 30V 200 mA)
- 4 - Analog Outputs (0 - 5 V)
- 24 - Digital Inputs Maximum
- 6 - Isolated Digital Inputs
- 17 - Analog Inputs Maximum

Qualification Testing

- Life Test in Environmental Chamber
- Temperature Rating -40° to +70°C
- Humidity 2% to 95%
- Vibration Tested and Protected
- Accelerated Testing MTBF >50,000 hours

Codes and Standards

- UL2200
- CSA
- NFPA 110 (Software Programmable for Level 1 and 2)
- NFPA 70
- IEC801 Radiated Emissions, Susceptibility and Surge Immunity

Display (Touch Screen)

- Interactive RS485 Interface to CPU
- 30 Pages Available with 10 Items per Page
- Touch Screen Parameter Page Changes
- Amps per Phase - Generator
- Amps per Phase - Utility
- Line to Line and Line to Neutral Volts - Utility and Generator
- Frequency
- RPM
- Engine Coolant Temperature
- Engine Oil Pressure
- Engine Oil Temperature
- Battery Voltage
- Power Factor
- kW
- kVAR
- Shutdown Messages
- Diagnostics
- Maintenance Information
- Hourmeter

Ports

- 2 - RS485
- 2 - RS232
- 1 - RJ45 Modem
- CANbus

Engine Shutdown Messages (Touch Screen)*

- Low Oil Pressure
- Low Coolant Level
- High Coolant Temperature
- Sender Failure
- Oil Temperature
- Overspeed, Underspeed - User Definable (Within Limits)

Overcurrent and Short Circuit Protection

- Protection Against Phase to Phase and Phase to Neutral Short Circuits (IT Algorithm) Optional

Flexibility

- Standby Controller PM-GC
- Paralleling Controller PM-PC
- System Controller PM-SC
- Common Control Platform via GenLink® Software
- Same Hardware = Less Service Stock

Control Panel and Touch Screen

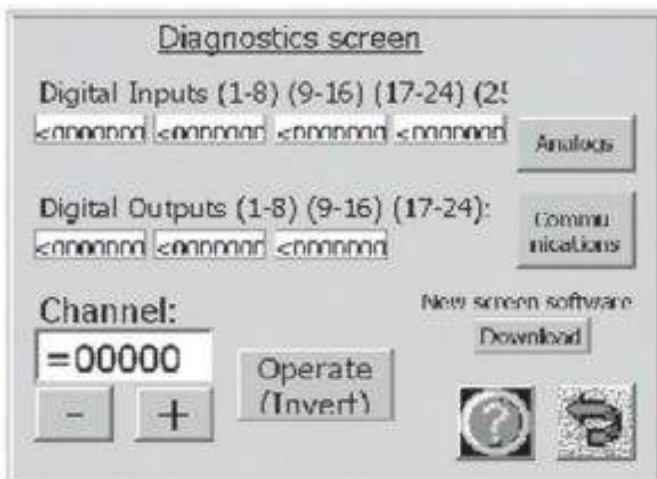
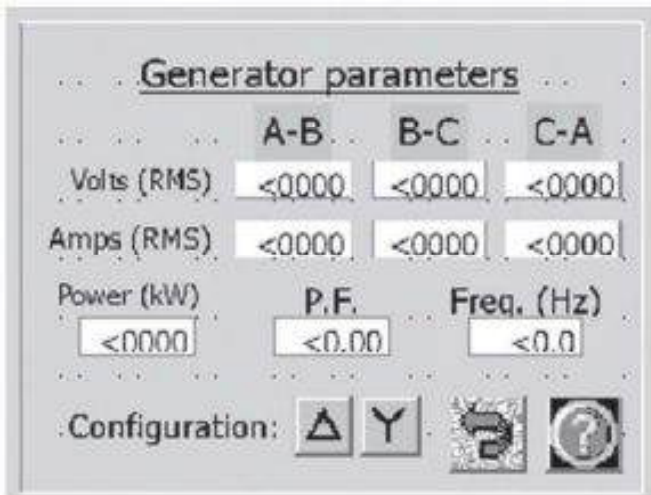
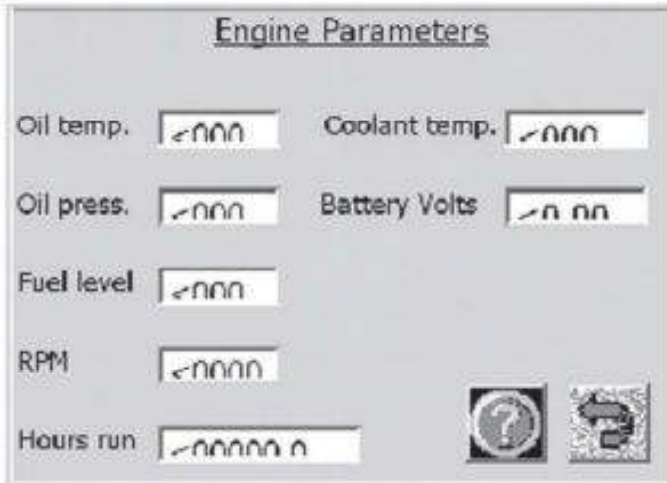
- Auto/Manual/Off Keyswitch
- Alarm LED
- Not in Auto LED
- Alarm Acknowledge Button
- Audible Alarm
- Emergency Stop

*Applies to PM-GC and PM-PC Only; Does Not Apply to PM-SC

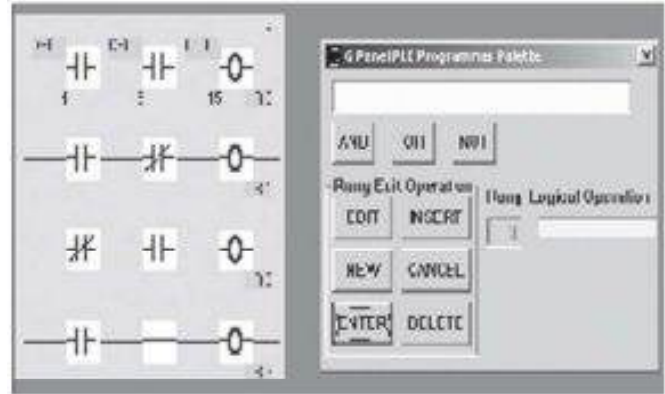
** Actual Number May Vary Due to Configuration of Genset Options

POWERMANAGER® Digital Control Platform (PM-DCP)

Typical Screens from Touch Screen Panel on Genset



Typical Screens from GenLink® for PLC



Main Processor Assembly

- Factory Sealed in a Die Cast Aluminum Tamper Resistant Enclosure
- No Internal Adjustments or Controls
- Watertight Output and Input Connections
- 5 - 30 V Input Power
- Motorola 32-bit Processor
- Built-in Protection from Voltage Spikes
- Built-in Diagnostics
- 4 - 20 mA Sender Input
- -40° to +70°C Temperature Range
- Multi-layer Circuit Board Technology with Surface Mount Components



Shown with Cover Removed (Back Side)

POWERMANAGER®

Digital Control Platform (PM-DCP)

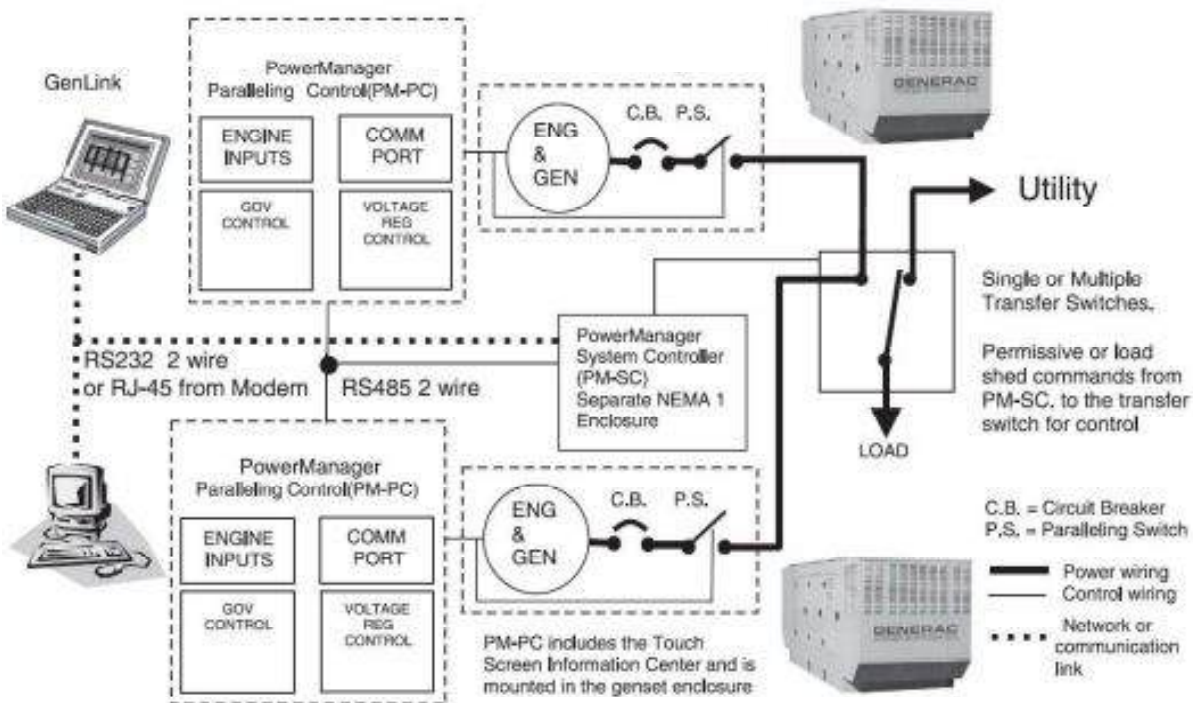
Key Components

- PM-GC Single Units Only
- PM-PC Paralleled Units
- PM-SC Controller for Multiple Paralleled Units (MPS)

Operation Sequence for MPS, with Single or Multiple Transfer Switches

1. Utility fail or brownout occurs.
2. Transfer switch sends a signal via a two-wire start to the PM-SC.
3. The PM-SC then sends a signal to each generator telling it to begin the start sequence.
4. The Generator Controller on each genset will monitor power up frequency and voltage. When the first generator reaches rated frequency and voltage, the PM-PC will close the generator contactor to the bus. The bus is now live.
5. The PM-SC will monitor the rest of the generators and sequence them to the bus as they reach their rated parameters. The PM-PC monitors phase sequence, voltage and frequency, and then determines when the contactor closes, but the PM-SC provides an interrupt to sequence the gensets and prevent two generators from closing at the same time.
6. When the appropriate number of gensets assigned to each transfer switch are up and closed on the bus, the PM-SC then allows that transfer switch to switch to the Emergency position.
7. If one generator does not start, programmable load shed contacts will open or prevent a switch from closing, which will reduce the load, then allow selected transfer switches to transfer to the emergency position with the available generators.
8. If emergency power is required within 10 seconds, a separate transfer switch for the critical loads is installed and powered from the main bus. As soon as the bus is live, the transfer switch will transfer and pick up the critical loads.
9. If a single genset is taken off line, the load shed contacts will drop a pre-programmed load and keep the remaining loads alive.
10. When Utility returns, the PM-SC will transfer the load back to the Utility side and then give disconnect commands to the generators and after a cool-down period will give a shutdown command to all generators.

Typical Arrangement - PowerManager®



POWERMANAGER®

System Controller (PM-SC)

Models

- 4975 PM-SC in NEMA 1 Enclosure
- 5039 PM-SC in NEMA 3R Enclosure
- 5047 PM-SC in NEMA 3R Enclosure with thermostatically controlled heater



PM-SC in NEMA 1 Enclosure

Features

As part of the PowerManager® Digital Control Platform, the PowerManager® System Controller (PM-SC) is a digital control box that acts as the master system coordinator for Generac's Modular Power System (MPS). The PM-SC provides a single point of remote communication to the system, facilitates the starting and stopping of the generators, helps fine-tune the generator load balancing, and manages priority loading and load shedding. The PM-SC utilizes an RS-485 data highway to communicate with each generator controller. The generator controller on each unit controls all generator operation including synchronizing and the primary load balancing functions. The role of the PM-SC is simply to facilitate normal system sequencing and data gathering.

After gathering information from each of the generator controllers, the PM-SC can easily provide generator information upstream to a building management system or to Generac's GenLink® operator interface software provided with the equipment. The PM-SC supports multiple communication ports utilizing Modbus protocol as well as a built-in modem.

The PM-SC can coordinate up to fifteen MPS generators and fully supports generators of different power outputs (load is shared proportionate to generator size). The PM-SC also supports single and multiple transfer configurations. The transfer switches can be from any manufacturer provided they utilize a standard two-wire start. The PM-SC supports load sequencing through three permissive and three load shed steps which can be used to sequence numerous load circuits.

The PM-SC is mounted in a NEMA 1 or NEMA 3R wall mounted enclosure and can be located anywhere within 3,000 feet of the generators, though it is often most convenient to locate it with the transfer switch equipment.

POWERMANAGER®

System Controller (PM-SC)

System Functions

The PM-SC

- Accepts a 2-wire Start Signal from Multiple ATS's
- Starts and Stops Generators via RS485
- Fine-tunes the Real and Reactive Generator Load Sharing via RS-485
- Priority Loads the System (3 Levels)
- Load Sheds During Generator Failure (3 Levels)
- Central Point of Communication and Control
 - RS-232, RS-485 and Modem
 - Modbus Protocol and GenLink® Interface Software
- Supports a System Level Remote Annunciator and Common Alarm Output
- Supports Backup Modes of Operation
 - Human Interaction (Standard)
 - Redundant Controls (Optional)

Normal Sequence of Operation

1. The automatic transfer switches (ATS's) monitor the utility voltage and provides a 2-wire generator start contact to the PM-SC.
2. The PM-SC then provides a start command to all generators via RS-485 communications.
3. Each generator will start independently.
4. The first generator that attains rated voltage and frequency performs dead bus arbitration with the PM-SC and then closes its internal paralleling switch connecting to the generator bus.
5. If an emergency system load requiring a 10 second start exists, the first unit to close onto the generator bus will typically pick up the emergency ATS immediately.
6. During this time, the PM-SC inhibits the transfer of the other ATS's via permissive relays.
7. The remaining generators will sync with the generator bus and close their individual paralleling switches.
8. As the generators are paralleled to the generator bus, the PM-SC sequentially signals the remaining ATS's to transfer onto the generator bus.
9. If a generator fails, load shed contacts are available to disconnect selected loads. Load shedding can be implemented at the transfer switches, with shunt trip breakers, through building automation, and by various other methods.
10. When utility supply returns, the ATS's remove the 2-wire start causing the PM-SC to issue a command to each generator control to disconnect from the generator bus.
11. Each generator will operate for the cool-down period and then shut down.

Key Features

- Controls up to 15 Paralleling Generators
- Touch Screen Display for Monitoring System and Individual Generator Status
- Diagnostics Capabilities at the Touch Screen and through GenLink® Software
- Data Logging and Trending Capabilities
- Real Time Clock and Calendar
- Programmable Exerciser
- Remote Monitoring using Modbus RTU Protocol or GenLink® Operator Interface Software
- Standard Internal Modem
- Priority Loading (3) and Load Shedding (3) Capability
- Programmable Spare I/O, 4 Auxiliary Inputs and 8 Auxiliary Outputs
- Integral Custom Logic Algorithm Allows Implementation of up to 47 Rungs of PLC Style Logic
- Three Position Key Switch for Operation Mode Selection (Auto/Off/Manual)
- Battery-backed DC Controls with AC Charger, Redundant 24VDC Input Available
- EEPROM Non-volatile Memory Assures Settings are Not Lost During Loss of Power
- Fuse-protected 120VAC GFI Convenience Duplex Receptacle (5A Max)
- UL 508 Listed

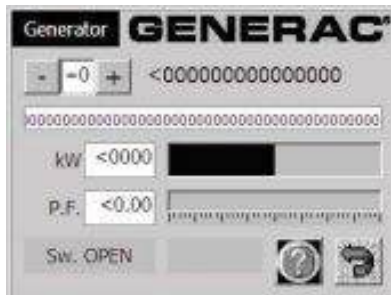
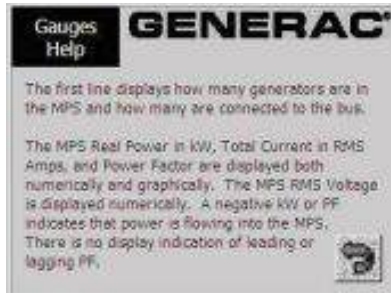
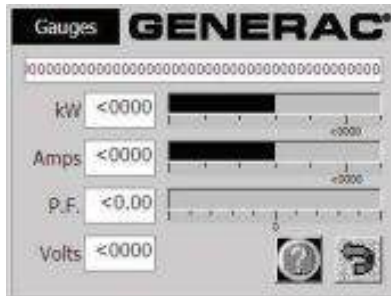
Optional and Backup Functionality

The MPS product line is designed to support operation even if a failure occurs to the PM-SC or to the RS-485 data highway. Standard backup mode allows human intervention to manually bring the generators on-line utilizing the capabilities built into the generator controllers. Load is then sequenced manually by actuating manual push buttons inside the PM-SC. An optional redundant load sequencing controller is available for sites which desire fully automatic backup operation.

In addition to basic functionality, the PM-SC is designed to fully integrate with Generac's MTS digital transfer switches or Generac's soft load transfer switch controller. The PM-SC also supports integration of other optional functionality like generator capacity management and site-specific custom logic.

POWERMANAGER® System Controller (PM-SC)

Typical Screens from Touch Screen Panel



Operating Specifications

External Power

Supply Requirement 120VAC Single Phase
Internal Power 24VDC

Output Ratings

Relay Contacts 250VAC, 28VDC, 10A
Open Collector User Outputs 30V, 200mA

Environmental

Temperature 10° to 50°C
Humidity 0 to 95% Non-condensing

Packaging and Mounting

Enclosure Types Available NEMA 1 or NEMA 3R
Mounting Wall Mount
Weight 90 lbs
Dimensions 30" H x 24" W x 9" D
Finish Generac Gray RhinoCoat™

Main Processor Assembly

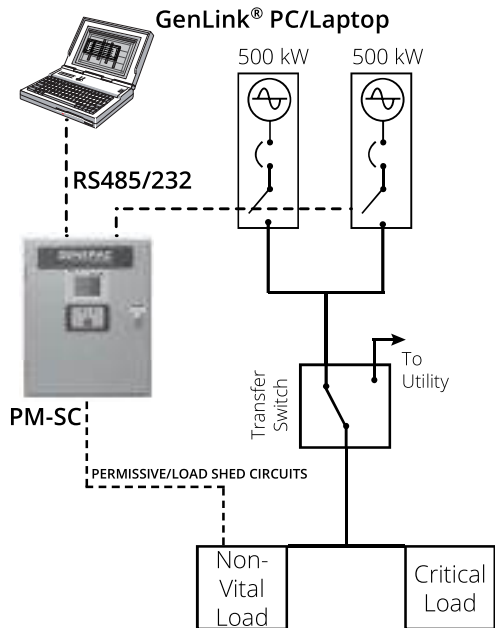
- Factory Sealed in a Die Cast Aluminum Tamper Resistant Enclosure
- No Internal Adjustments or Controls
- Watertight Output and Input Connections
- 5 - 30 V Input Power
- Motorola 32-bit Processor
- Built-in Protection from Voltage Spikes
- Built-in Diagnostics
- -40° to +70°C Temperature Range
- Multi-layer Circuit Board Technology with Surface Mount Components
- Plug-in/Plug-out Design



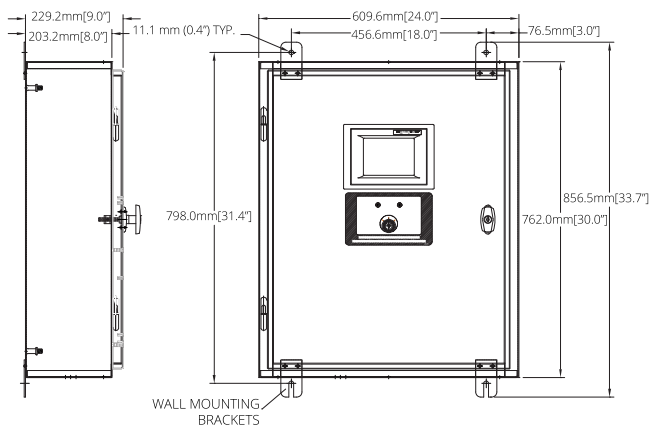
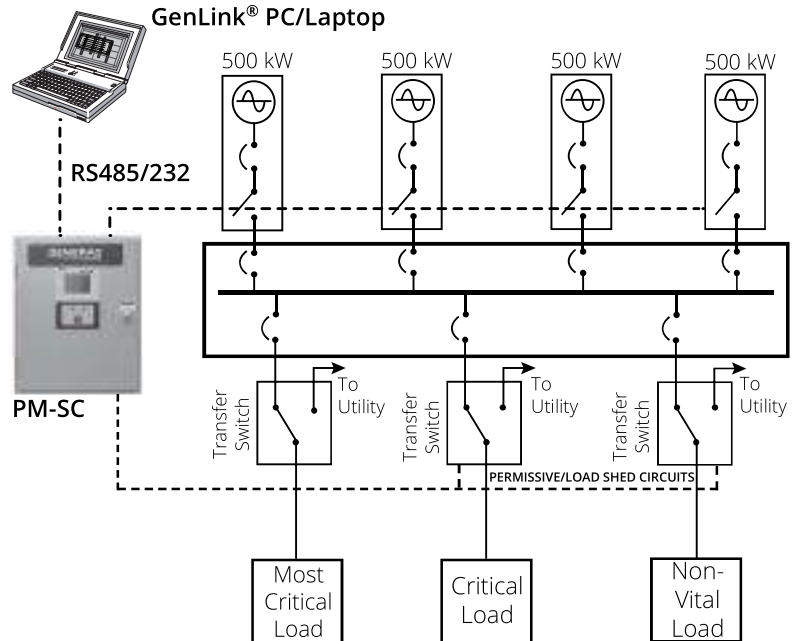
Shown with Cover Removed (Back Side)

POWERMANAGER® System Controller (PM-SC)

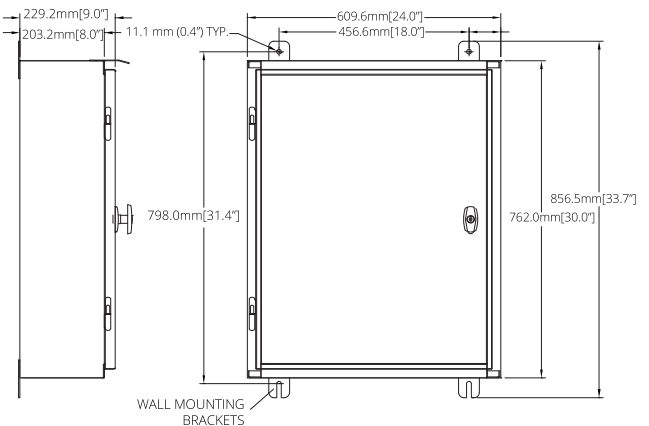
Single Transfer Switch Configuration



Multiple Transfer Switch Configuration



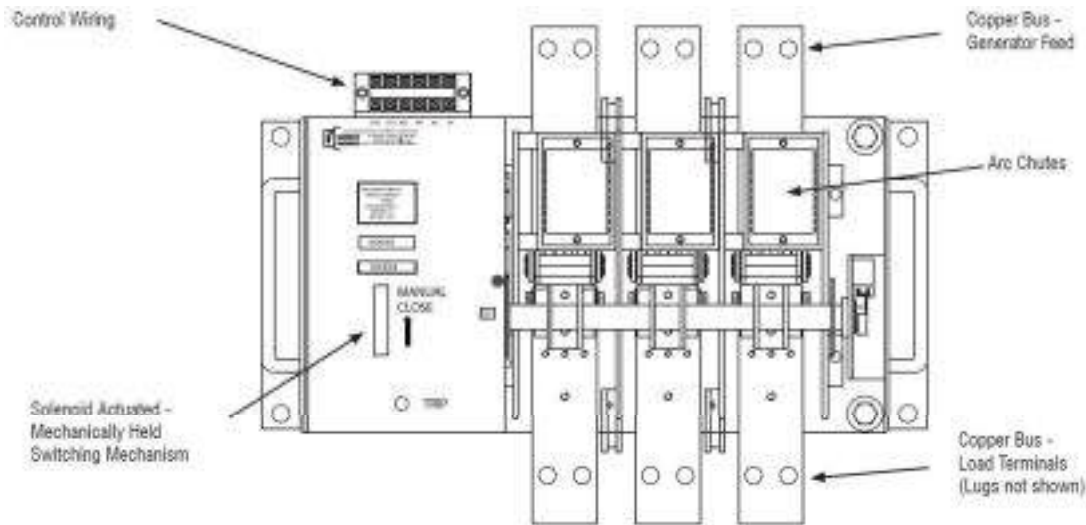
PM-SC in NEMA 1 Enclosure



PM-SC in NEMA 3R Enclosure

See Installation Drawings for Details

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

ALTERNATOR DATA SHEET

K0400064N21

General Characteristics

Voltages (V)	480	Number of Leads	6
Frequency (Hz)	60	Winding Type	Non-reconnectable
Phases	3	Air Flow (CFM)	Consult Factory
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	0L3722E01R

Ratings at 0.8 pf Based on 40°C Ambient

Voltage (V)	80°C Rise		105°C Rise		120°C Rise		150°C Rise	
	kW	kVA	kW	kVA	kW	kVA	kW	kVA
480	304	380	364	455	400	500	428	535

Base Data at 480V, 500 kVA, 1,800 RPM, 60 Hz, 3Ø

Description	Value
Stator Resistance, Line to Line, High Wye Connection (Ω)	0.0061
Rotor Resistance (Ω)	1.6500
Exciter Stator Resistance - PMG (Ω)	7.5900
Exciter Rotor Resistance - PMG (Ω)	0.3300
Excitation Winding Resistance - PMG (Ω)	1.0121
Xd, Direct Axis Synchronous Reactance (p.u.)	4.150
X2, Negative Sequence Reactance (p.u.)	0.250
X0, Zero Sequence Reactance (p.u.)	0.060
X'd, Direct Axis Transient Reactance (p.u.)	0.190
X''d, Direct Axis Subtransient Reactance (p.u.)	0.170
Xq, Quadrature Axis Synchronous Reactance (p.u.)	1.990
T'd, Direct Axis Transient Short Circuit Time Constant (s)	0.112

Description	Value
T''d, Direct Axis Subtransient Short Circuit Time Constant (s)	0.016
T'do, Direct Axis Transient Open Circuit Time Constant (s)	2.910
Ta, Short Circuit Time Constant of Armature Winding (s)	0.037
Phase Sequence CCW-NDE	T1, T2, T3
Voltage Balance, L-L or L-N (%)	2.5
Deviation Factor (%)	< 7
High Wye Connection, Sustained 3Ø Short Circuit Current (%) - PMG	300
X/R	14
Short Circuit Ratio	0.31
Heat Rejection (BTU/hr) - 100% Rated Load, 480V, 0.8pf, 120°C Temperature Rise	134,986

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

ALTERNATOR DATA SHEET

K0400064N21

skVA

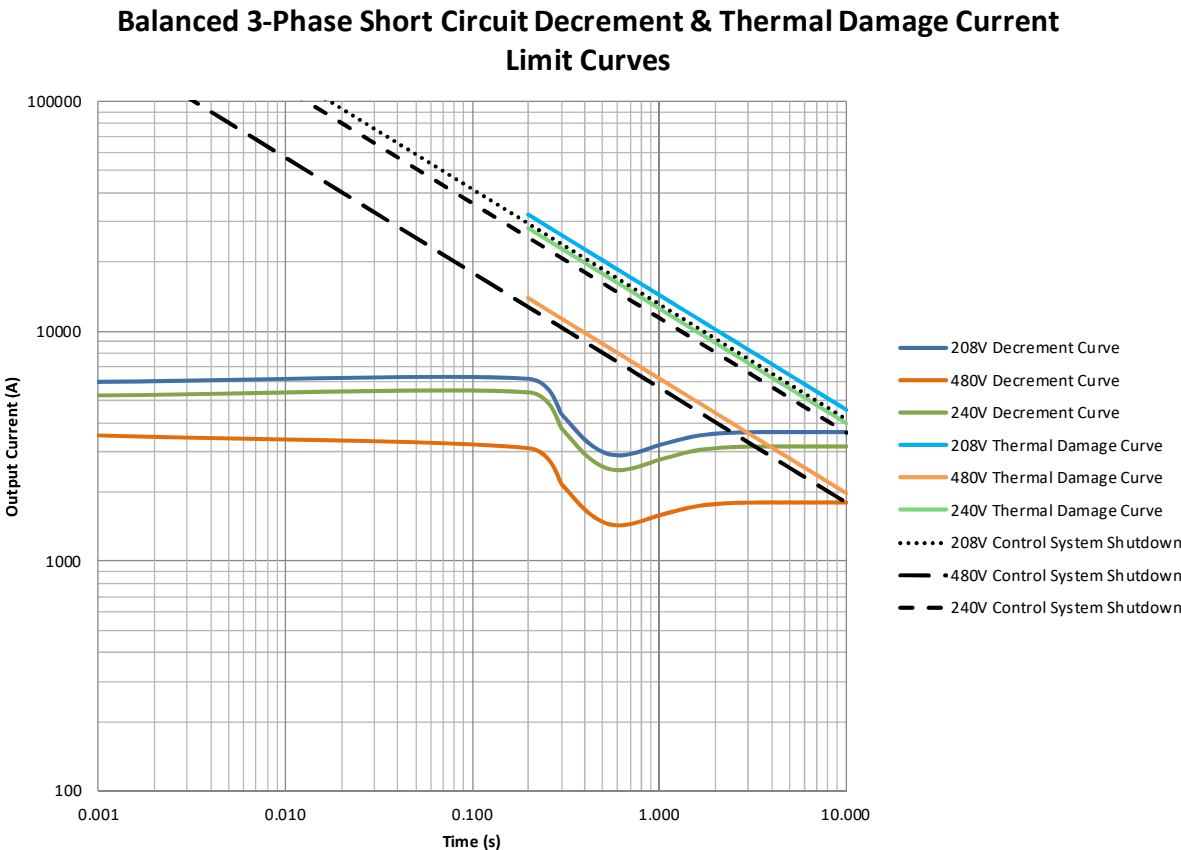
	10%	15%	20%	25%	30%	35%
480V @ 0.3PF	229	346	492	656	862	1,040
480V @ 0.6PF	264	400	561	732	953	1,174

Efficiencies

*Rated Power	480V @ 0.8 PF	480V @ 1.0 PF
20%	86.0	86.5
40%	90.0	91.1
60%	91.4	93.1
80%	91.4	93.7
100%	91.0	93.8

*Rated Power value is rating kW at 120°C Winding Temperature Rise and 0.8pf

LOG LOG Decrement Curve



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

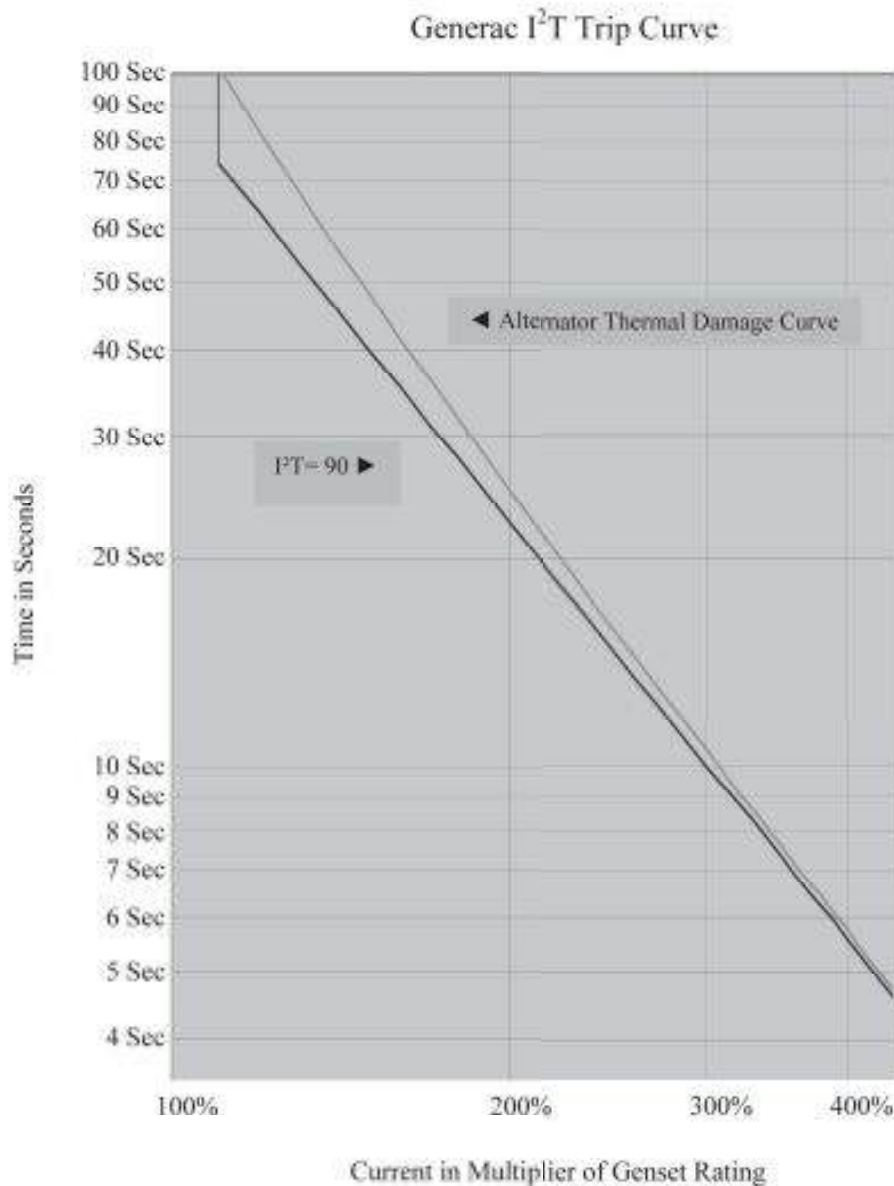
line to neutral fault may be at 800% of rated current and need to be cleared within 1.4 seconds. The second function GENprotect performs is I²T thermal protection for the alternator. Since a short circuit event can heat the alternator so rapidly, it is not possible to protect the alternator by monitoring 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.



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.

INDUSTRIAL GENSET - BATTERY INDEX

• Warranty by Exide Corp. • Exide e-mail: tbгна@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		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

DIMENSIONS (in) NOMINAL

Part Number	Group Number*	Nominal CCA @ 0° F	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.

* BCI Group Size reference.

GENERATOR ENCLOSURES



DESCRIPTION

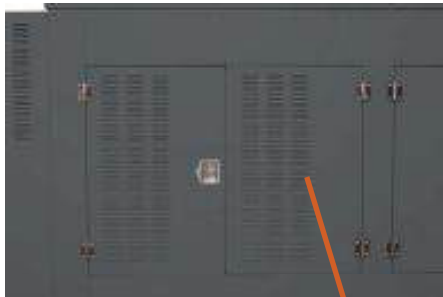
GENERAC POWER SYSTEMS' generator enclosures provide year-round weather protection for your power equipment. Engineered with functionality and value in mind, the enclosure design benefits are unique in that the enclosures utilize dimensionally matched components for either a weather protective configuration 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.

GENERATOR ENCLOSURES

Post-Free Twin Doors
Provide Large, Unobstructed
Service Access



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

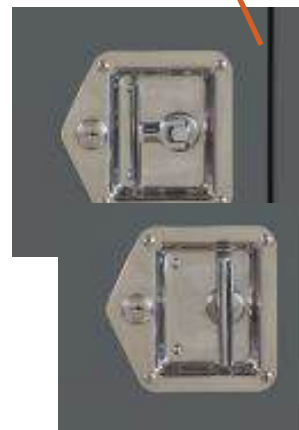
**Heavy Gauge, Stainless
Steel, Partial Pin Hinges with
Nylon Spacers**
Durable, Corrosion-Free,
Removable Doors



**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



GENERATOR ENCLOSURES

FEATURES:

Dimensional matching of acoustic and non-acoustic enclosure designs

Standardized enclosure components *

Enclosure mounted directly to unit baseframe

Electrostatically painted panels

12 or 14 gauge steel based on kW rating

Aluminum Enclosure optional

Stainless steel door latch and hinge hardware

Stainless steel door latch strike plate

Door hinges utilize slip-pin design

Polyethylene gasketing under door hinges

Keyed door latches

Large removable access doors

Relocation of access doors

Redesigned door gasketing

Weather resistant aluminum roof design with drip ledge

Cabled and gasketed radiator access cover

Acoustic roof panels manufactured with mechanical retention pins

Polyethylene washers under all panel fasteners

Internally fastened enclosure panels (where possible)

Additional roof panel stiffener

Self-enclosed exhaust system

Discharge air duct has been designed with minimal fasteners

Stainless steel exhaust band clamps

Drain holes within air ducts

Rodent-proof, tamper proof enclosure design

Redesigned baseframe lifting lugs

Up to 200 MPH wind kit options (Contact Factory for Availability)

BENEFITS:

Reduces variation in fuel tank pricing, inventory; removes need to change out fuel tank or retrofit

Ease of retrofit or upgrade to acoustic system; reduced parts inventory, costs

Simplified delivery and installation with enclosure and unit in single component design

Maximum protection from weather elements

Maximum sound attenuation, protection and product life

Prevents corrosion in coastal regions

Provides extended component life; maximum protection against rusting

Maximum protection against enclosure paint damage from door latch pin

Provides quick door removal for full-unit access

Additional protection for enclosure paint finish

Protection for equipment and personnel

Ease of maintenance

Provides improved access to MLCB on all units

Improved sealing quality from sound and weather elements

Provides optimum moisture/rain runoff from unit

Provides improved radiator access and additional protection from weather elements

Increased acoustic foam retention within unit

Additional paint finish protection from stainless steel fastener

Provides streamlined unit appearance

Added overall compartment rigidity and acoustic foam panel retention

Provides safe unit operation; no enclosure hot spots; streamlined unit appearance

Ease of removal and access to exhaust system

Provides extended component life; ensures proper exhaust seal

Enables maximum water run-off

Safety and security for personnel and equipment

Ease of unit relocation; prevents compartment damage from lifting straps

Meets locally enforced wind requirements

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

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

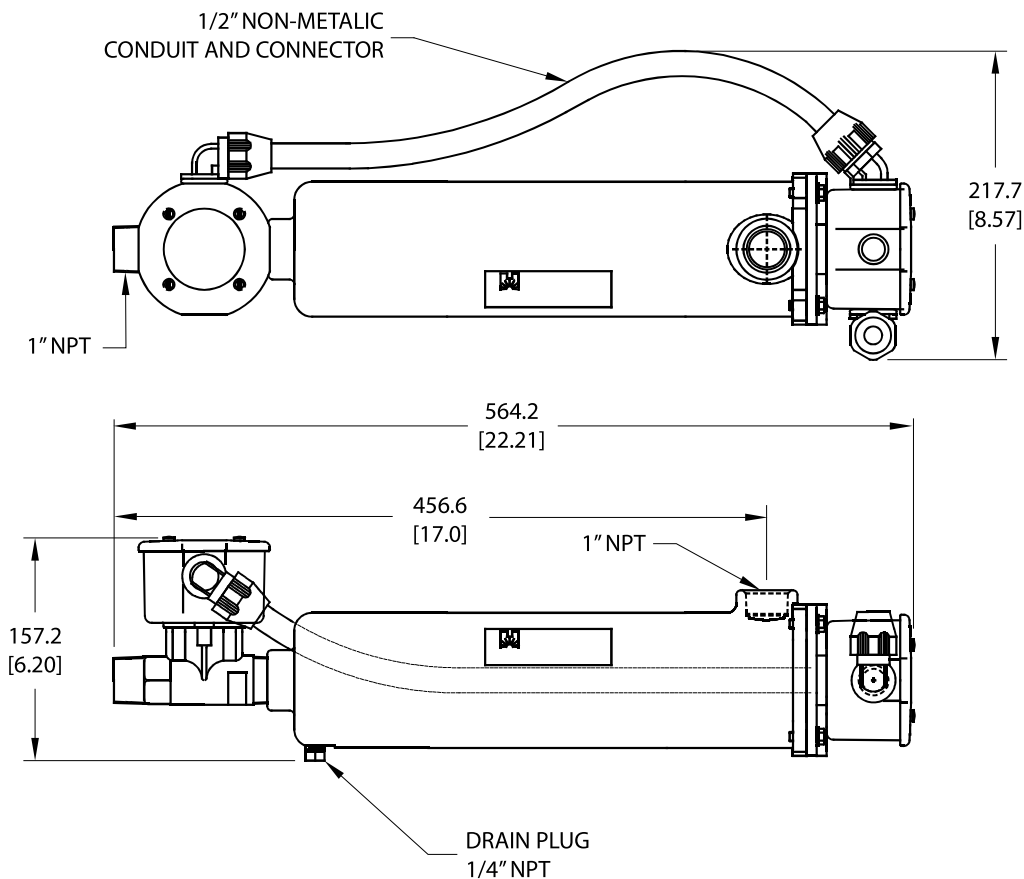
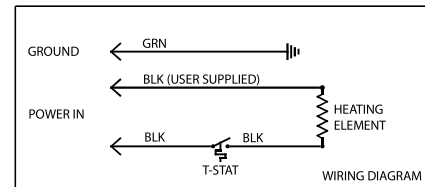
Primary Codes and Standards



*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.

COOLANT HEATER OPTION 4000 WATT, 208V

- HOTSTART® CL140810
- WATTS: 4000
- VOLTAGE: 208VAC SINGLE PHASE
- ON/OFF TEMP: 100/120° F
- INTERNAL BYPASS
- MAXIMUM PRESSURE: 125 PSI
- HEATER MUST BE MOUNTED HORIZONTALLY
- UL-C/US LISTED, CE COMPLIANT



DIMENSIONS: mm [INCHES]

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**

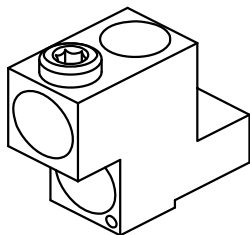
NOTES:

*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.

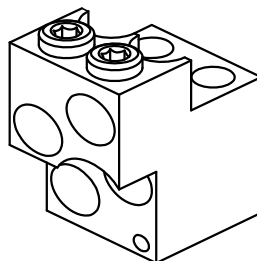
Refer to specific MPS genset installation drawings for paralleling switch lug connection locations, stub areas, and other details.

All lugs are UL & CSA listed/approved.



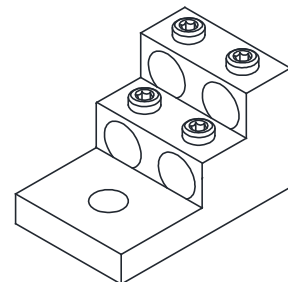
080433

Set screw torque: 375 in/lbs



063925

Set screw torque: 375 in/lbs



063963

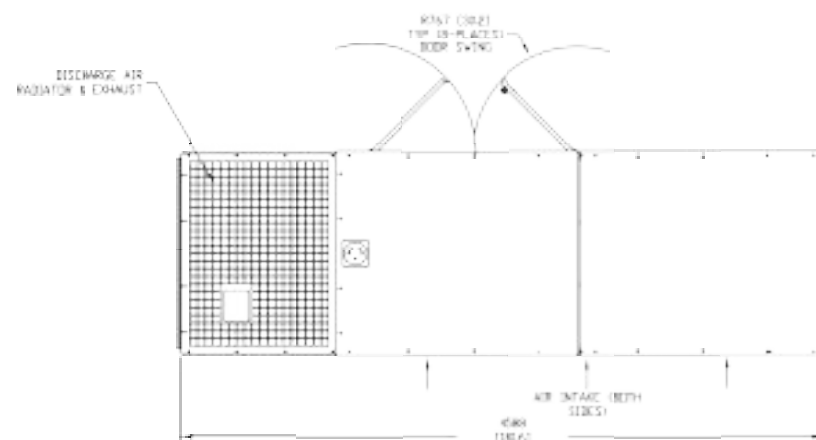
Set screw torque: 500 in/lbs

4

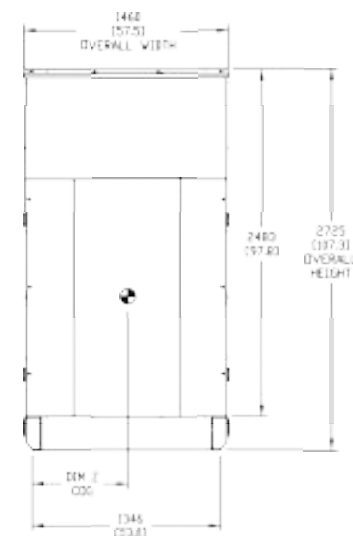
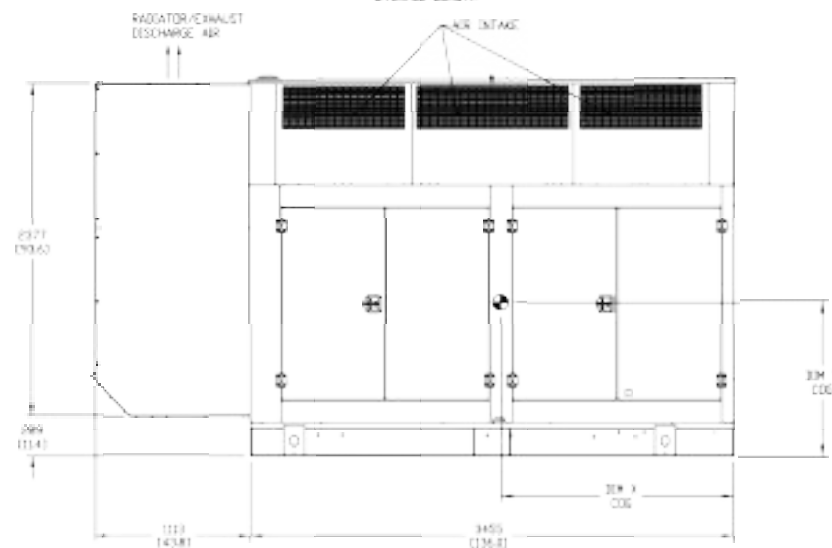
3

SH 1/1 REV D

1



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



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

DIMENSIONS ARE IN MILLIMETERS (INCHES)

INSTALLATION DRAWING

GENERAC

TITLE

L2A ENCLDSURE
D12 9L, 60HZ, SD/M0050, PB/W0315

DATE DATE 5/25/14

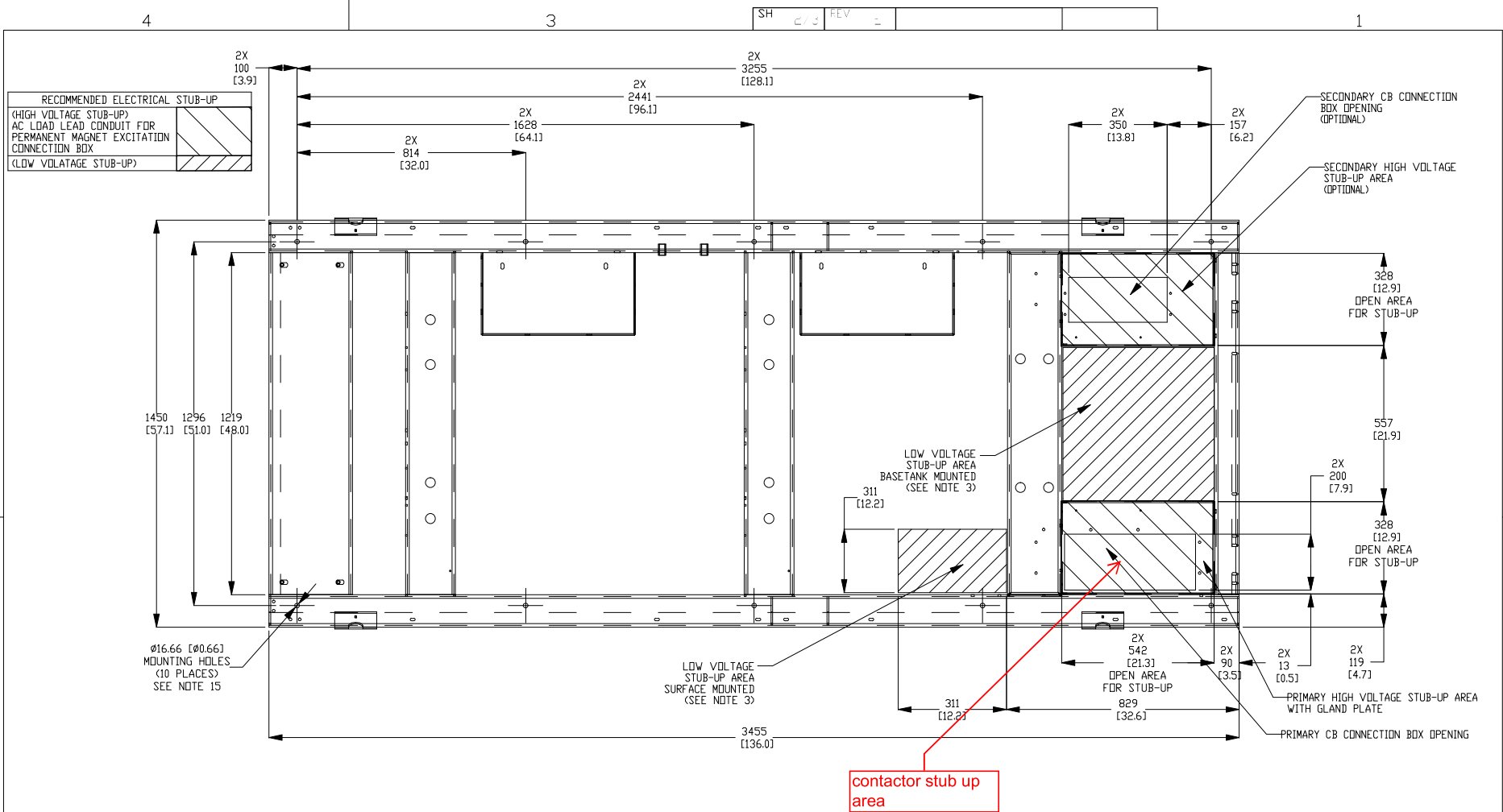
SIZE B CAGE NO N/A DWG NO 0J3432C

SCALE 0.05 WT-KG

SHEET 1 of 1

REV D

ELECTRICALLY APPROVED
DATE 5/25/14



DRAWING CREATED FROM PRO/ENGINEER
3D FILE. 3DD VALIDATION TO BE
APPLIED TO 3DD MODEL ONLY.

DIMENSIONS ARE IN MILLIMETERS (INCHES)

GENERAC

TITLE
STUB-UP
D12.9L, 60HZ, MC350, WD315

ISSUE DATE: 5/19/24			
SIZE B	CAGE NO N/A	DWG NO 0J3438	REV E
QTY 0.024	WT-KG	SHEET 2 of 3	

INSTALLATION DRAWING

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ELECTRONICALLY APPROVED
(DATE: 5/19/24)

4

3

SH

3/13

REV

=

1

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

B

B

A

A

L2A ENCLOSURE, STEEL

MODEL	VOLTAGE	WEIGHT	CENTER OF GRAVITY DIM X	CENTER OF GRAVITY DIM Y	CENTER OF GRAVITY DIM Z	
S2/MLE 350, PL/WD 300	GEN-REC 480V	4,224 kg (9,310) lbs	154 (17.0)	1103 (199)	720 (164)	
S2/MLE 350, PL/WD 300	480V	4,414 kg (9,731) lbs	1532 (76.0)	991 (195)		
SD 350, PE 300	REC 300 x 240 V					
S2/MLE 350, PL/WD 300	400V JFSIZE 1 ALT, 600kW	4,290 kg (9,473) lbs	1564 (175)	993 (195)		
SD 350, PE 300	200V & 240V JFSIZE/2 ALT, 600kW	4,789 kg (10,595) lbs	1557 (71.7)	981 (197)		
SD 350, PE 300	208V & 210V JFSIZE/2 ALT, 600kW					
SD/MD 350-PL/WD 300	GEN-REC 480V	4,653 kg (10,275) lbs	1556 (77.2)	1005 (196)		
SD/MD 350-PL/WD 300	400V JFSIZE/2 ALT, 600kW	4,475 kg (9,869) lbs	1552 (74.3)	977 (192)		

DRAWING CREATED FROM PRO/ENGINEER
3D FILE. FOR MODIFICATION TO 3D
APPLY TO SELECT MODEL ONLY.

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ELECTRICALS APPROVED
(INCL. W/WORK)

GENERAC

TITLE
WEIGHT AND CENTER OF GRAVITY
D12.9L, 60HZ MD350, WD300

ISSUE DATE: 5/19/17			
SIZE B	CAGE NO N/A	DWG NO 0J3438	REV E
MTA 1	0.024	WT-KG	SHEET 3 of 3

4

3

2

1

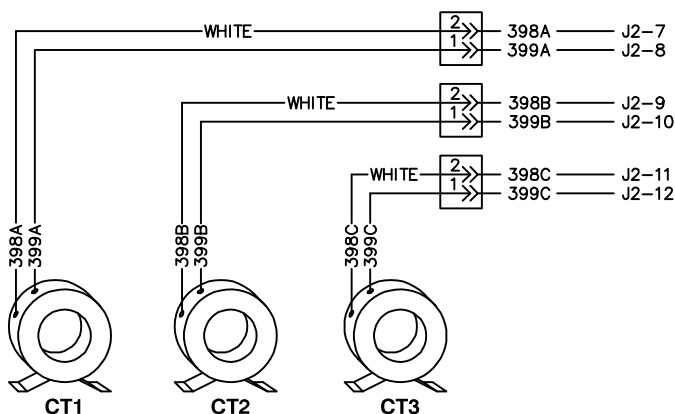
LEGEND

AH1 - ALARM HORN
 ALT - DC CHARGE ALTERNATOR
 AVR - AUTOMATIC VOLTAGE REGULATOR
 BC1 - VDB1 CONNECTOR
 BCC - BATTERY CHARGER CONNECTOR
 BCH - BATTERY CHARGER
 BCS - BATTERY CHARGER CURRENT SIGNAL
 BTC - BATTERY TEMPERATURE CONNECTOR
 BTP - BATTERY CHARGER TEMP PROBE
 CAND - CAN BUS DIAGNOSTIC CONNECTOR
 CB - CIRCUIT BREAKER, EXCITER
 COM - COMMUNICATIONS PORT
 CON - CONTACTOR
 CT - CURRENT TRANSFORMER

DB - DIODE BRIDGE
 EDC - ENGINE DIGITAL CONTROL
 ES1 - EMERGENCY STOP SWITCH
 EXC - EXCITER
 F - FUSE
 FLS - FUEL LEVEL SENDER
 GFCI - GROUND FAULT CURRENT INTERRUPT
 GND - GROUND BAR
 J - ENGINE CONTROL MODULE CONN.
 LD - LEAK DETECTOR
 LT1 - LIGHT, ALARM
 LT2 - LIGHT, NOT IN AUTO
 MLCB - MAIN LINE CIRCUIT BREAKER
 OI - OPERATOR INTERFACE (TOUCH SCREEN)
 R1 - RESISTOR

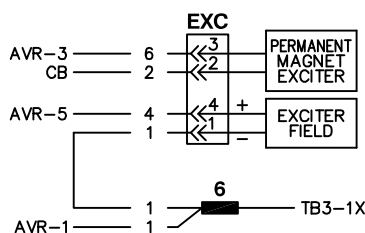
RB - RELAY BOARD
 RB_A - RELAY BOARD CONNECTOR
 RCC - RELAY CONTACTOR CLOSE COIL
 RST - RELAY CONTACTOR SHUNT TRIP
 RTC - RELAY CONTACTOR TRIP COIL
 SC - START CONTACTOR
 SM - STARTER MOTOR
 STC - SECONDARY TRIP COIL
 SW1 - OFF/AUTO/MANUAL SELECT SWITCH
 SWC - OPERATOR SWITCH CONNECTOR
 T1 - STEP DOWN TRANSFORMER
 TB - TERMINAL BLOCKS
 VDB1 - VOLTAGE DIVIDER BOARD
 WLS - COOLANT LEVEL SENDER

COMPONENTS LOCATED IN ALTERNATOR CONNECTION BOX

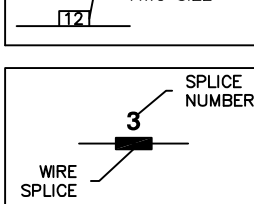


SEE DRAWING 0H9846 FOR CT WIRING.

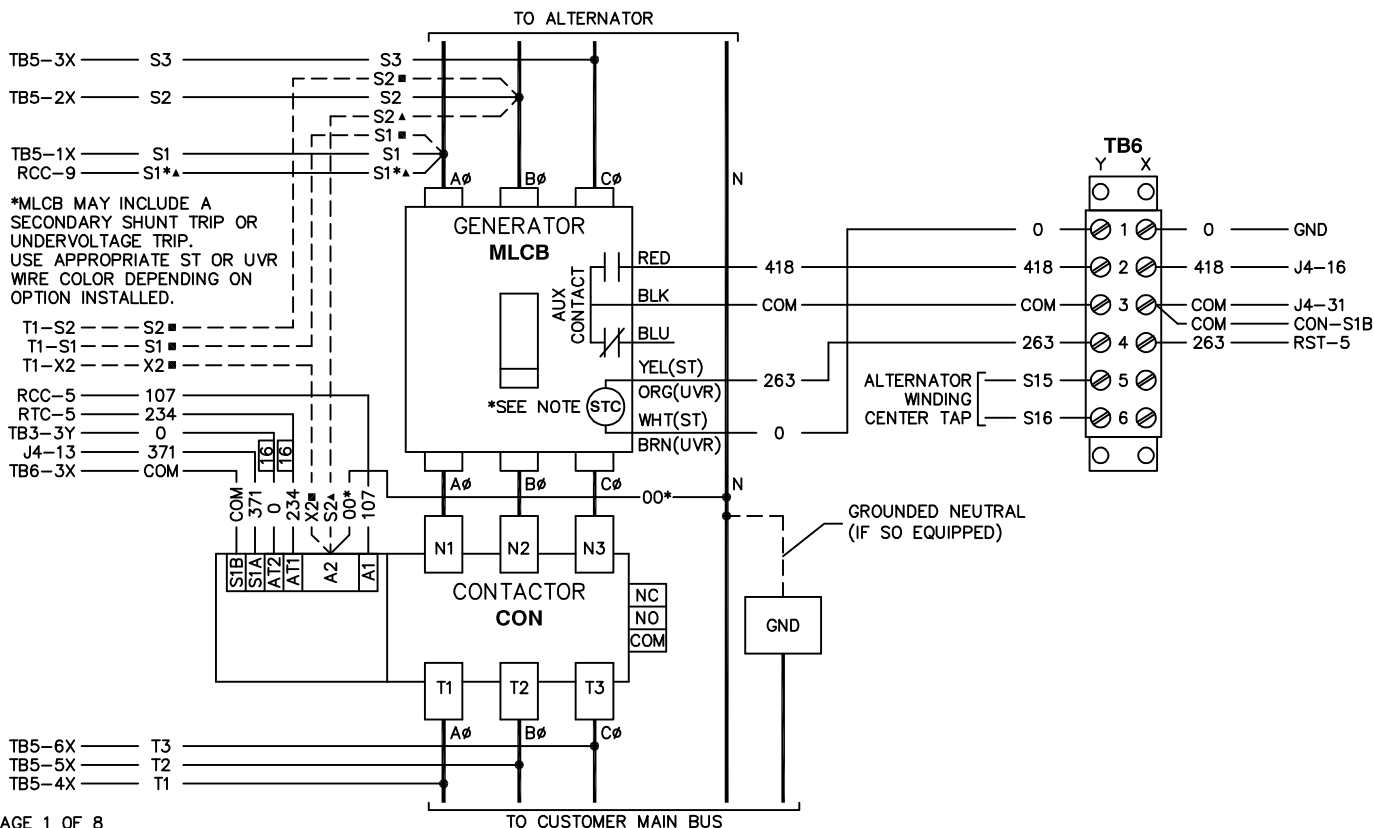
NOTE: ALL WIRES ON THIS PAGE ARE 600V RATED



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

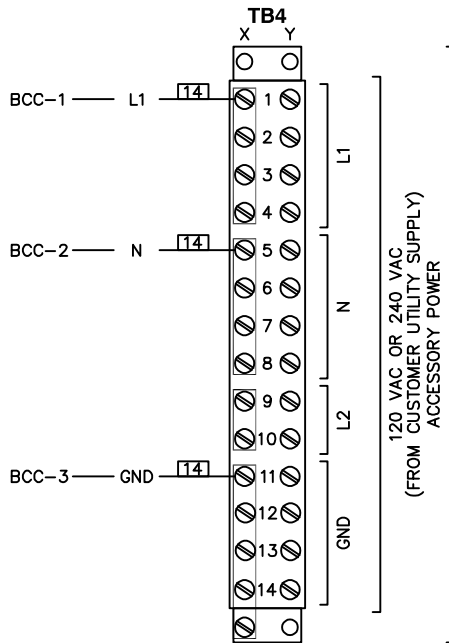


COMPONENTS LOCATED IN HIGH VOLTAGE CUSTOMER CONNECTION MODULE



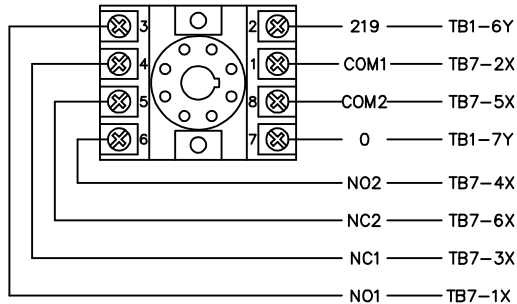
COMPONENTS LOCATED IN HIGH VOLTAGE CUSTOMER CONNECTION MODULE

NOTE: ALL WIRES ON THIS PAGE ARE 600V RATED

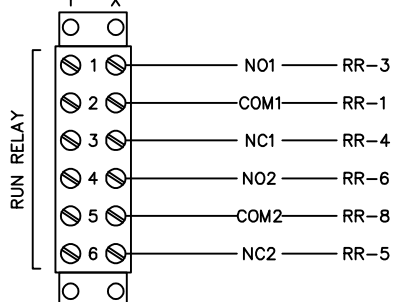


NOTE:
FOR FIELD WIRING TO CUSTOMER CONNECTIONS
(TERMINAL STRIP)
MAXIMUM WIRE SIZE: #10 AWG
RECOMMENDED TIGHTENING TORQUE: 14 LB-IN

RUN RELAY



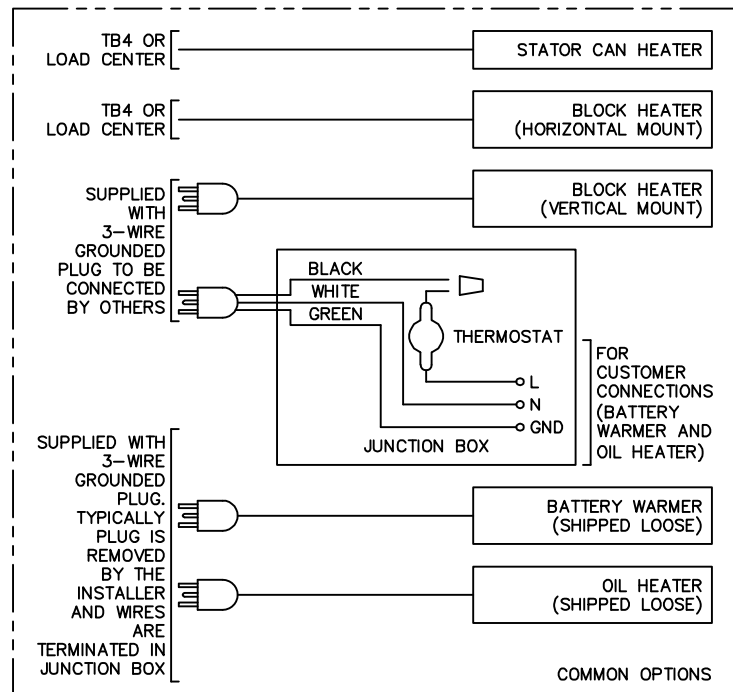
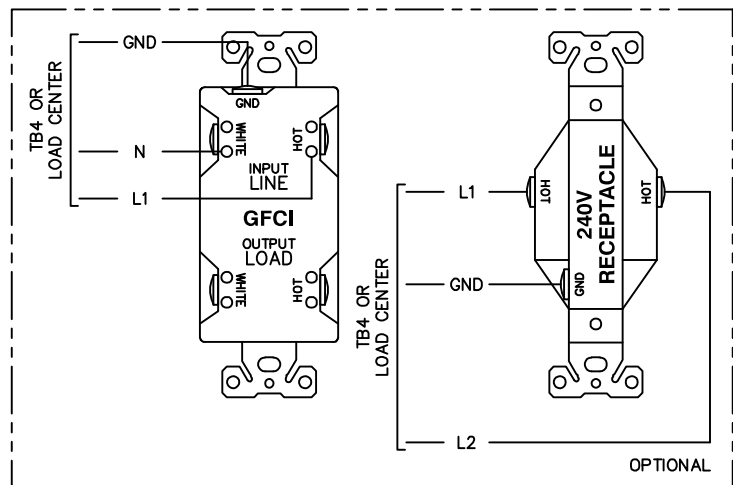
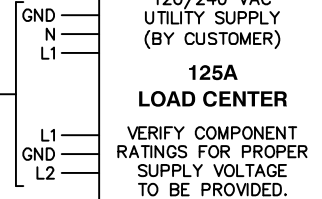
TB7



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

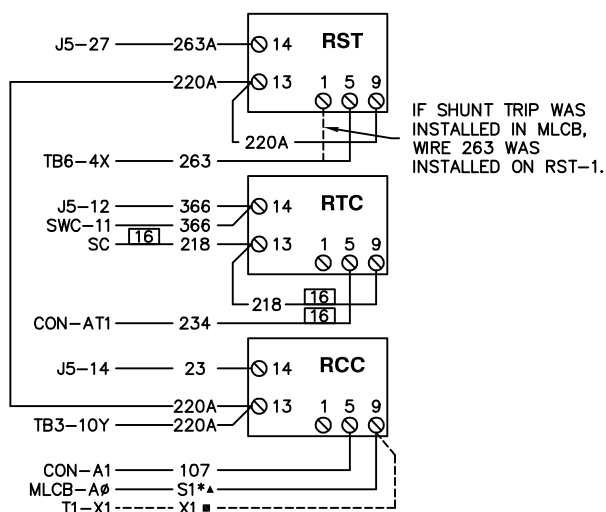
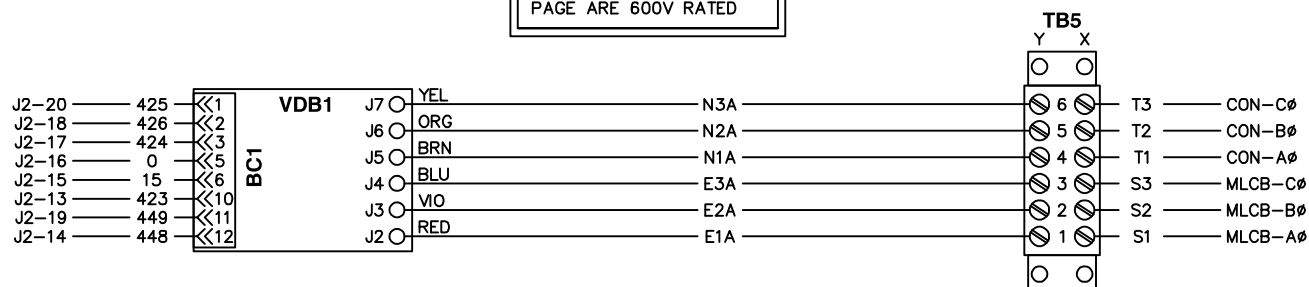
OPTIONAL

OR



COMPONENTS LOCATED IN HIGH VOLTAGE CUSTOMER CONNECTION MODULE

NOTE: ALL WIRES ON THIS
PAGE ARE 600V RATED



* - 480V CONNECTION
CONNECTIONS SHOWN ARE FOR 480V
OPERATION.

▲ - 208V CONNECTION

REMOVE WIRE:
[00] FROM CON-A2 TO NEUTRAL.

[S2] FROM GENERATOR BUS B0 TO CON-A2.

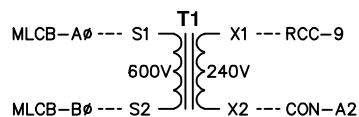
■ — 600V CONNECTION

REMOVE WIRES:
[00] FROM CON-A2 TO NEUTRAL.

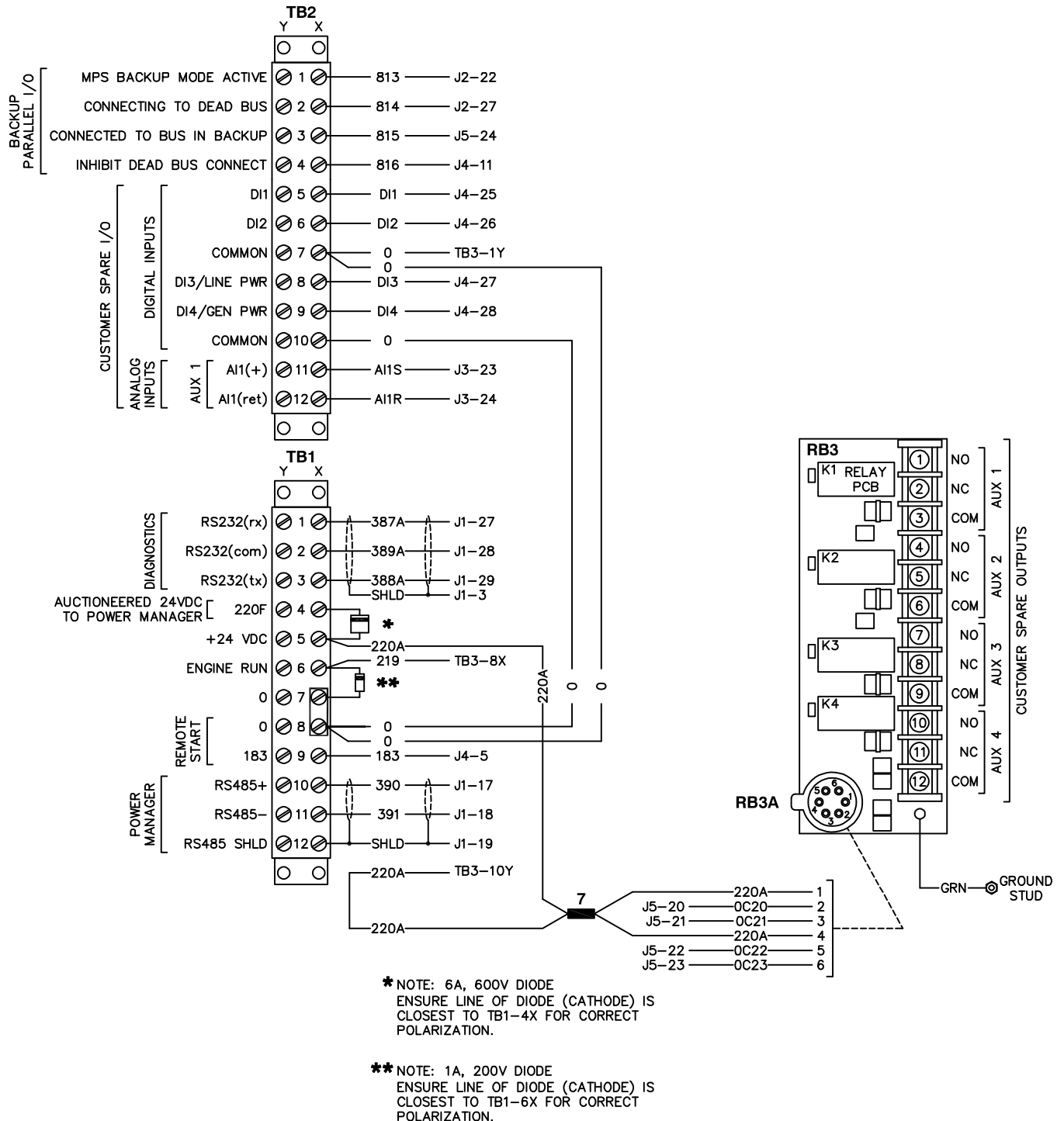
[S1] FROM MLCB-AØ TO RCC-9.
ADD WIRES:

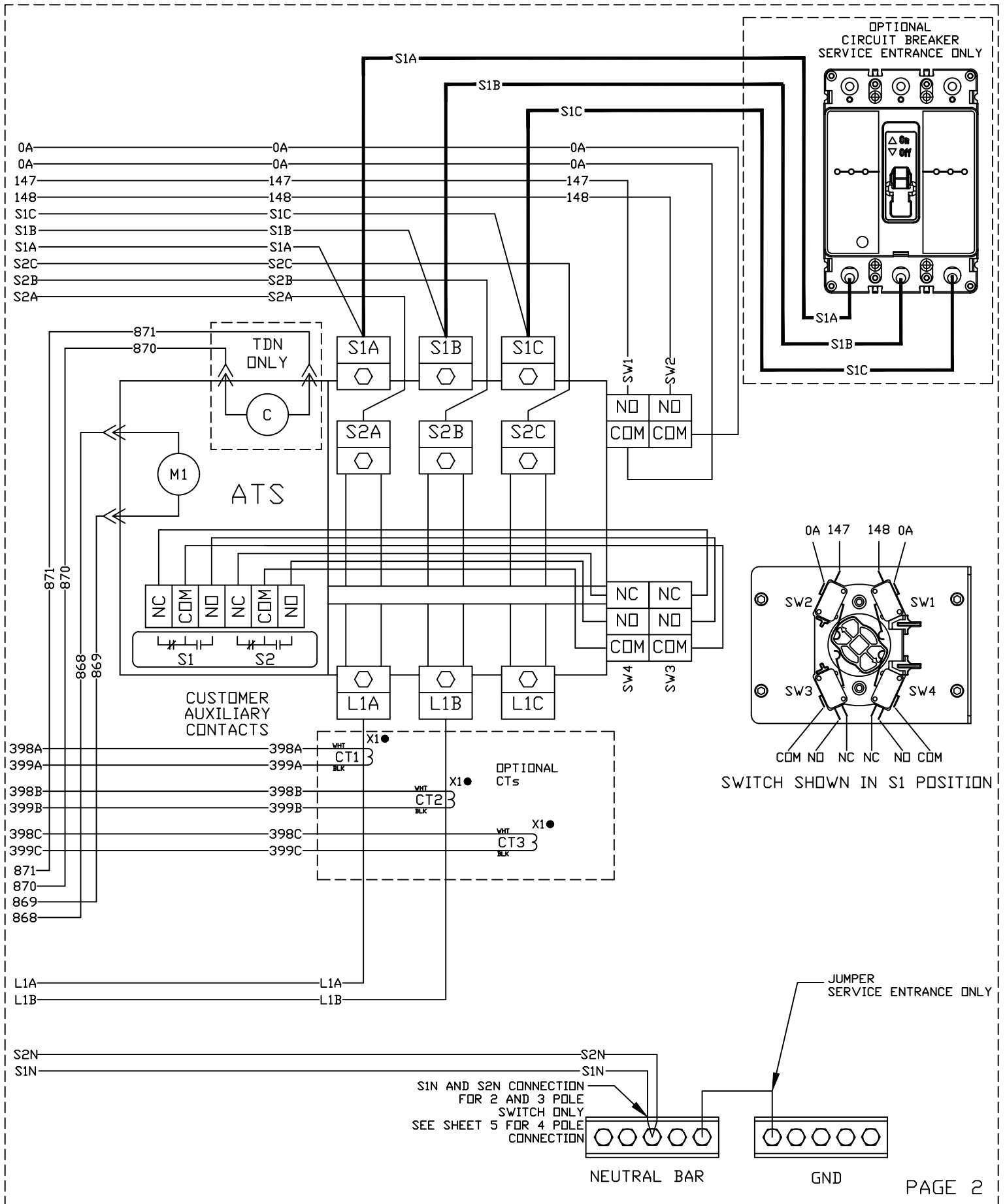
[X2] FROM T1-X2 TO CON-A2.
[S1] FROM MLCB-A0 TO T1-S1.
[C2] FROM MLCB-B1 TO T1-C2.

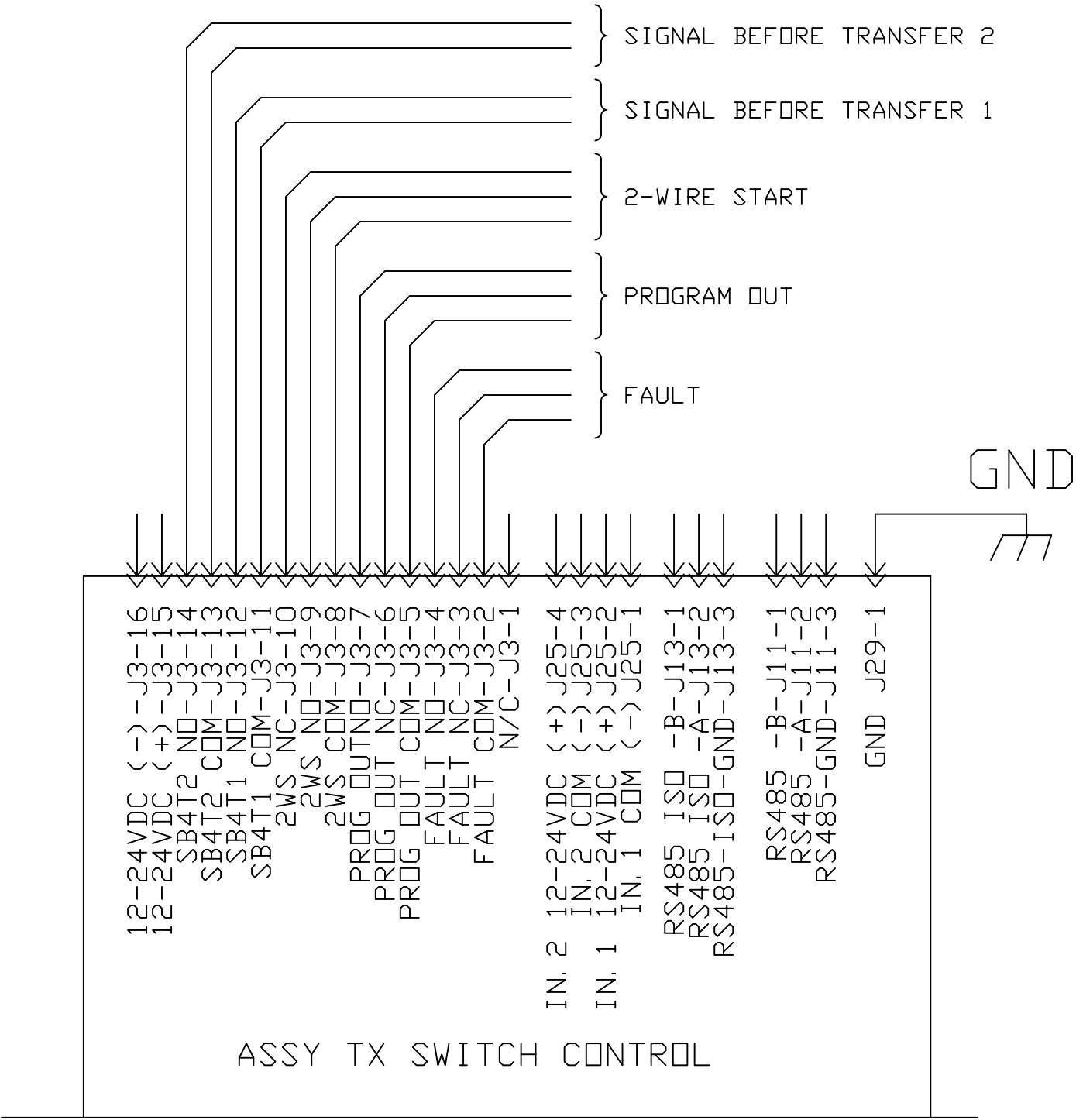
[S2] FROM MLCB-BØ TO T1-
[X1] FROM T1-X1 TO RCC-9.

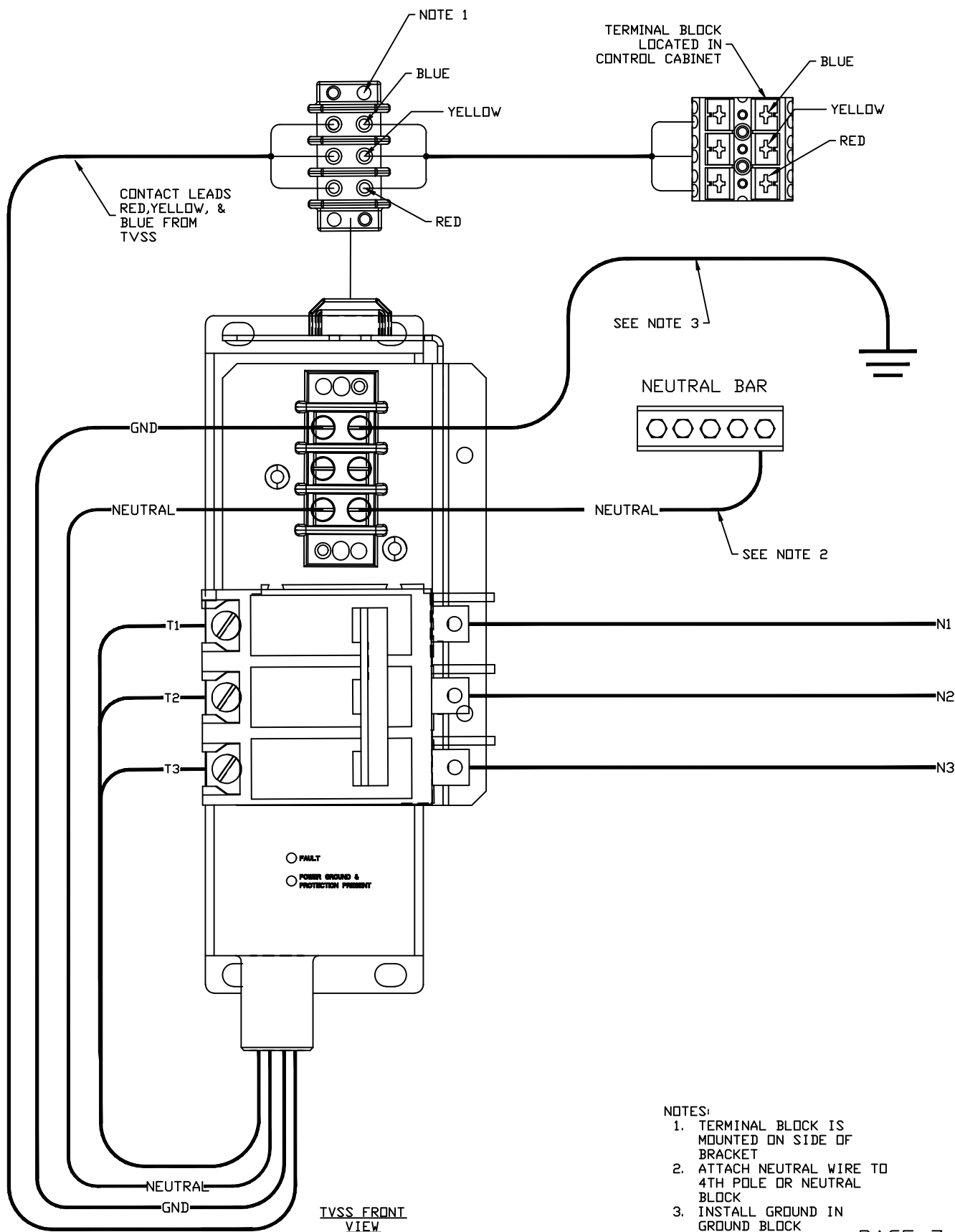


COMPONENTS LOCATED ON LOW VOLTAGE CUSTOMER CONNECTION PANEL

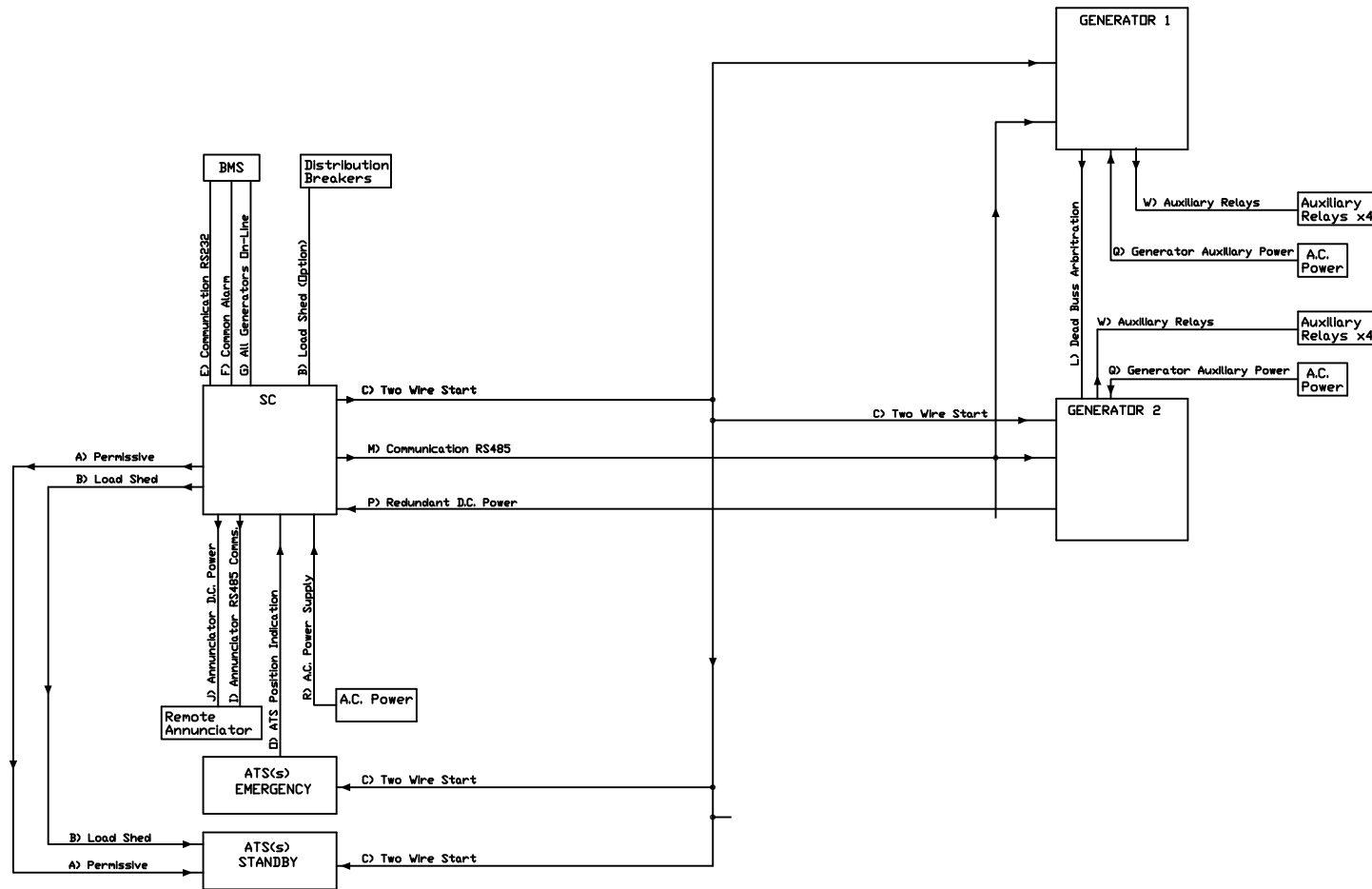








OK4532



PAGE: 1 OF 2

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CONTROL INTERCONNECT MODULAR POWER SYSTEMS

**GENERAC POWER
SYSTEMS**
Waukesha
P.O. BOX 8
WAUKESHA, WIS. 53187

STANDARD WIRING CONFIGURATION

FILE NAME OK4532.DWG SIZE B

SCALE NTS FIRST USE

DWG NO. REV

ISSUE DATE:6/3/2013

OK4532

*

INSTALLATION DRAWING

OK4532

Reference	Description				
SC	Power Manager System Controller - Controls start/sop sequencing.				
ATS	Automatic Transfer Switch				
Gen	Generator				
BMS	Building Management system				
Reference	Function	Wire	From	To	
A	Permissive to transfer (priority loading)	2/14	SC"TB4" (1-12)" Permissive 1,2,3	ATS "Inhibit"	
B	Load shed to ATS	2/14	SC"TB3" (1-12)" Load shed 1,2,3	ATS "LS"	
C	Initiate system start "Two Wire Start"	2/14	SC"TB1 (6-8)" Two Wire start	ATS "Two wire start"	
D	ATS position indication	3/14	ATS Position Contacts	SC"TB6 (4-6) Aux Inputs	
E	External RS232 communications	3/18 Twisted & Shielded	SC"TB3" Diagnostics	BMS	
F	Common alarm	2/14	SC "TB3 (7-9)" Alarm	BMS	
G	All Generator On-Line	1/14	SC"TB3 (13-15)" Status	BMS	
I	Remote Annunciator Communication	2/18 Twisted & shielded	SC"TB1" (9-11)"Comms	Connector J10 (4-6)	
J	Annunciator DC Power	2/14	SC"TB1 (1-2)" Charger Out	Annunciator 24+ and 0 GND	
L	Dead buss arbitration	2/14	Gen 1 "TB6 (4)" WIRE 816	Gen 2 "TB6 (2) WIRE 814	
M	Generator RS485 comms	2/18 Twisted & shielded	SC"TB1" (9-11)"Genset Comms	Gen "TB1 (10-12)" Genset Comms	
P	Redundant DC power to SC	2/14	Gen "TB1 (1)" +24 VDC	SC "TB3" +24 IN 220	
Q	Generator auxiliary power	2/14	Auxiliary Power Panel	Gen Load Center	
R	System Controller power	2/14	Auxiliary Power Panel	SC TB2 (1-3)" 120 VAC Power	
W	Customer Auxiliary Relays (x4)	2/14 per point monitored	Gen "RB3 "Aux 1-4"	Custom Wiring	

Reference	Function
A) "Permissive"	This function is normally connected to the transfer switches inhibit transfer function. This is to ensure adequate generator capacity is available prior to transferring the ATS connected load onto the generator bus. - Within the system the first load step (step 0) occurs when all non-inhibited transfer switches come on line. - These are usually the emergency loads coming onto the generator bus with the first generator. - The SC then has 3 permissive steps to sequence load steps 1,2, and 3. - The SC provides 2 output contacts for each load step. - If more transfer switches must be controlled, the standard output contacts can be interposed to control any number of transfer switches. - The logic for when the permissives are given is based on the number of generators on-line and is fully configurable.
B) "Load Shed"	This function is utilized to reduce system load upon the failure of one or multiple generators. Typically implemented by either tripping transfer switches to neutral, shunt tripping circuit breakers in distribution, or via facility automation. - The SC has 3 load shed steps with a single contact per step. - If more transfer switches must be controlled, the standard output contacts can be interposed to control any number of transfer switches. - If the ATS has a single input for Inhibit transfer & load shed, the SC permissive output will de-energized supporting load shedding. - The logic for when the permissives are given is based on the number of generators on-line and is fully configurable.
C) "Two Wire Start"	The transfer switches sense loss of normal power and initiate a system start through this function. - All transfer switches start contact will terminate in parallel at the SC. - The two wire start at the SC will then be jumpered to each of the generators forming a redundant start. - The redundant start is utilized when normal system RS485 communications are lost.
D) "ATS Position"	Required if ATS switch position is to be indicated on the remote annunciator. Typically only connect emergency load transfer switches to this function.

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Reference	Function
E) "RS232 Communications"	Remote monitoring communications via Modbus RTU protocol. Converter options available for RS485 or Ethernet. - This is normally used by building management systems to gather detailed status. - For mission critical applications, consider also hardwiring "common alarm" and "on-line" status from each generator.
F) "Common Alarm"	Annunciates with contact closure that all generators are operating and connected together
G) "Generators On-Line"	Annunciates with contact closure that all generators are operating and connected together.
I) "Annunciator Communication"	Passes all alarms and status points from the System controller to remote annunciator panel.
J) "D.C. Power"	Fused +24 VDC to power the remote annunciator.
L) "Dead Buss Arbitration"	This function ensures that only one generator is closing into the dead bus when operating with failed communications. - Under normal operation dead bus arbitration is performed by communications with the SC. - Under normal operation, first generator up to rated conditions energizes the dead bus. - If communication are failed, either generator 1 or 2 can energize the dead bus automatically.
M) "RS485 Communication"	Provides all communication and controls between System Controller (SC) and the Generators. - Communications are used for start/stop, dead bus arbitration, and fine tuning the load balancing. - Synchronizing, protection, and basic load balancing function at a generator level.
P) "Redundant D.C. Power SC"	Provides redundant +24 VDC power from generator 1 to the System Controller. - The SC also has internal DC power from an internal battery and charger.
Q) "Generator Auxiliary Power"	Generator utilizes a 240V, 50 Amp load center to power the block heater, battery charger etc. - Power must be provided to this load center from a facility distribution panel on generator power.
R) "SC A.C. Power"	SC is powered by an internal battery which is supported with a 120VAC charger. - This 120V charger power must be powered from a facility distribution panel that is on generator power.
W) "Generator Auxiliary Relays"	Each generator has 4 programmable relays for customer special use. - The relay functions are fully configurable.

PAGE: 2 OF 2

CONTROL INTERCONNECT MODULAR POWER SYSTEM

STANDARD WIRING CONFIGURATION

ISSUE DATE: 6/3/2013

**GENERAC POWER
SYSTEMS**
Waukesha
P.O. BOX 8
WAUKESHA, WIS. 53187

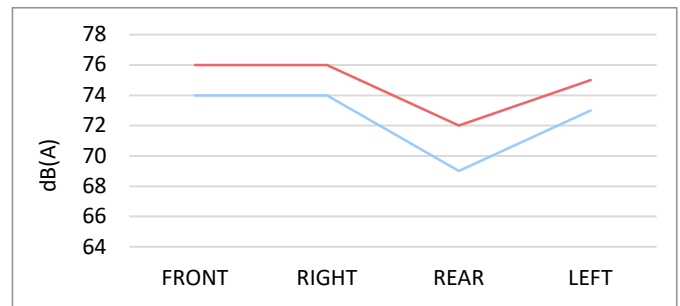
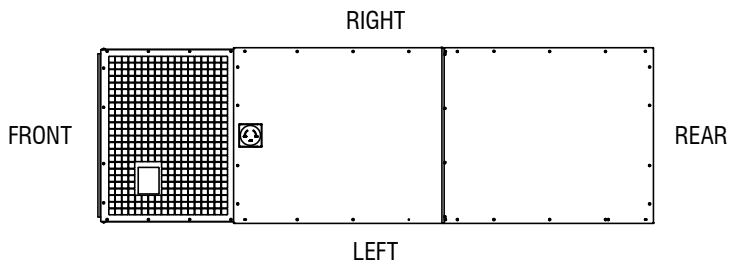
FILE NAME	OK4532.DWG	SIZE	B
SCALE	NTS	FIRST USE	
DWG NO.	OK4532	REV	*

INSTALLATION DRAWING

LEVEL 2 SOUND ATTENUATED ENCLOSURE D12.9L FPT, SD350

60Hz NO-LOAD, dB(A)										DISTANCE: 7 METERS
MICROPHONE LOCATION	OCTAVE BAND CENTER FREQUENCY (Hz)									
	31.5	63	125	250	500	1,000	2,000	4,000	8,000	dB(A)
FRONT	41	53	61	62	70	66	66	66	60	74
RIGHT	38	53	63	63	71	64	64	60	55	74
REAR	38	53	60	61	65	60	58	57	49	69
LEFT	40	52	62	63	69	64	64	60	56	73
AVERAGE	39	53	61	62	69	63	63	61	55	72

60Hz FULL-LOAD, dB(A)										DISTANCE: 7 METERS
MICROPHONE LOCATION	OCTAVE BAND CENTER FREQUENCY (Hz)									
	31.5	63	125	250	500	1,000	2,000	4,000	8,000	dB(A)
FRONT	41	57	64	64	72	67	67	67	63	76
RIGHT	40	57	66	64	72	66	67	65	61	76
REAR	38	55	62	62	68	63	61	65	53	72
LEFT	38	55	65	63	71	65	66	64	61	75
AVERAGE	39	56	64	63	71	65	65	65	59	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).

STATEMENT OF EXHAUST EMISSIONS

2024 FPT 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/MD350	EPA Certificate Number:	RFPXL12.9IGR-004
kW _e Rating:	350	CARB Certificate Number:	Not Applicable
Engine Family:	RFPXL12.9IGR	SCAQMD CEP Number:	511711
Engine Model:	F3BE9685A-E	Emission Standard Category:	Tier 3
Rated Engine Power (BHP)*:	530	Certification Type:	Stationary Emergency CI
Fuel Consumption (gal/hr)*:	27.02		(40 CFR Part 60 Subpart IIII)
Aspiration:	Turbocharged/Aftercooled		
Rated RPM:	1,800		

*Engine power 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	
0.70	3.78	0.03	Grams/kW-hr
0.515	2.780	0.022	Grams/bhp-hr

These Values are 100% Load Data Exhaust Emissions Results.

CO	NOx + NMHC	PM	
0.6	3.98	0.01	Grams/kW-hr
0.441	2.927	0.07	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.

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

Generac Power Systems 5 Year (5C) Limited Warranty Extension for Industrial Transfer Switch Systems

Generac and purchaser hereby amend ("Amendment") the term of the original warranty for the transfer switch ("Original Warranty") from the term originally stated in the Original Warranty to a term of five (5) years ("Term Extension"). If purchaser's Original Warranty had already expired, this Amendment revives the Original Warranty and replaces its term with the Term Extension. This Amendment also amends warranty coverage in the Original Warranty to the coverage listed below from years 1-5 ("Coverage Extension"). The Coverage Extension shall not retroactively apply to cover any warranty work performed before the date of the Amendment. For clarity purposes only, the amended warranty is stated below in full.

For the period of warranty noted below, which begins (or began, whichever applicable) upon the successful start-up and/or on-line activation/registration of the unit, Generac Power Systems, Inc. (Generac) warrants that its transfer switch 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.

Warranty Coverage in Year(s) 1-5
Parts, Labor and Limited Travel

Guidelines:

- Unit must be registered and proof of purchase available.
- 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 Independent Authorized Service Dealers not authorized in writing by Generac will not be covered.
- Warranty is transferable between ownership of original installation site.
- Generac may choose to repair, replace or refund a piece of equipment in its sole discretion.
- Warranty only applies to permanently wired and mounted units.
- Enclosures are warranted for the first year of ownership only. Damage caused after receipt of transfer switch 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.
- Proof of performance of all required maintenance must be available.
- Travel allowance is limited to 300 miles maximum or 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.

The following will NOT be covered by this warranty:

- Costs of normal maintenance (i.e. associated part(s), adjustments, installation or start-up).
- Damage to the transfer switch system caused by accidents, shipping, handling or improper storage.
- Damage/failures caused by operation with loads or installations other than what's recommended or specified by Generac. Unauthorized modification/misapplication will not be warranted unless authorized by Generac in writing.
- Rental equipment used while warranty repairs are being performed and/or any extraordinary equipment used for removal and/or reinstallation of transfer switch (i.e. cranes, hoists, lifts, etc.).
- Planes, ferries, railroad, buses, helicopters, snowmobiles, snowcats, off-road vehicles or any other mode of transport deemed not standard by Generac.
- Failures due to normal wear and tear, accident, misuse, abuse, neglect, improper installation, or improper sizing.
- Damage to any covered components or consequential damages caused by the use of a non-OEM part will not be covered by this warranty.
- Damage related to rodent, reptile, and/or insect infestation.
- Repairs or diagnostics performed by individuals other than Independent Authorized Service Dealers not authorized in writing by Generac.
- 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.
- Fuses, light bulbs and any related labor.
- 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.
- 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.
- Shipping costs associated with expedited shipping.
- 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).
- Any unit built/manufactured prior to 2014 models.
- Overtime, holiday or emergency labor.
- Living or travel expenses of person(s) performing service, except as specifically included within the terms of a specific unit warranty period.

THIS WARRANTY SUPERSEDES ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. SPECIFICALLY, GENERAC MAKES NO OTHER WARRANTIES AS TO 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 LIMITED 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. PURCHASER'S SOLE AND EXCLUSIVE REMEDY AND 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 COULD ALSO HAVE OTHER RIGHTS FROM STATE TO STATE.

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