

# Standby Power Rating

## 40 kW 60 Hz

Liquid Cooled  
Gas Engine  
Generator Sets

Model Numbers:

05221  
05221T



Ultra Quiet Mode  
For Low Noise Exercise  
- 60 dB(A) at 23 feet

### GENERAC 3.9L ENGINE

Naturally Aspirated  
Gaseous Fueled

UL 2200 Listed



Model 5221T is equipped with a  
200 amp NEMA 3R Transfer Switch  
with Service Disconnect.  
Transfer Switch available for Model 5221.

## STANDARD EQUIPMENT

- All input connections in one single area
- High coolant temperature shutdown
- Low oil pressure shutdown
- Low coolant level automatic shutdown
- Overspeed automatic shutdown
- Crank timer
- Exercise timer
- Oil drain extension
- Cool flow radiator
- Closed coolant recovery system
- UV/Ozone resistant hoses
- Watertight state of the art electrical connectors
- Mainline circuit breaker
- Radiator drain extension
- Battery charge alternator
- 2 Amp static battery charger
- Battery cables
- Battery rack
- Fan and belt guards
- Isochronous governor

## FEATURES

- Innovative design and fully prototype tested
- UL2200 Listed
- Solid state frequency compensated voltage regulator
- Dynamic and static battery charger
- Sound attenuated acoustically designed enclosure
- Ultra Quiet Mode for low noise level exercise
- Acoustically designed engine cooling system
- High flow low noise factory engineered exhaust system
- R100 digital control panel
- State of the art digital control system
- Watertight electrical connectors
- Rodent proof construction
- High efficiency, low distortion Generac designed alternator
- Vibration isolated from mounting base
- Matching Generac transfer switches engineered and tested to work as a system
- All components easily accessible for maintenance
- Electrostatically applied powder paint



# APPLICATION & ENGINEERING DATA



## GENERATOR SPECIFICATIONS

TYPE .....	Synchronous
ROTOR INSULATION .....	Class H
STATOR INSULATION .....	Class H
TOTAL HARMONIC DISTORTION .....	<3.5%
TELEPHONE INTERFERENCE FACTOR (TIF) .....	<50
ALTERNATOR OUTPUT LEADS 3 PHASE.....	4 wire
BEARINGS .....	Sealed Ball
COUPLING .....	Flexible Disc
LOAD CAPACITY (STANDBY RATING) .....	40 kW
EXCITATION SYSTEM.....	Direct

**NOTE: Generator rating and performance in accordance with ISO8528-5, BS5514, SAE J1349, ISO3046, and DIN6271 standards.**

## VOLTAGE REGULATOR

TYPE .....	Electronic
SENSING .....	Single Phase
REGULATION .....	± 1%
FEATURES.....	V/F Adjustable Adjustable Voltage and Gain LED Indicators

## GENERATOR FEATURES

Revolving field heavy duty generator  
Directly connected to the engine  
Operating temperature rise 120 °C above a 40 °C ambient  
Insulation is Class H rated at 150 °C rise  
All models are fully prototyped tested

## CONTROL PANEL FEATURES

- |  |   |
|--|---|
| <input type="checkbox"/> SEVEN LED INDICATOR LIGHTS  | <input type="checkbox"/> ADDITIONAL FUNCTIONS   |
| <ul style="list-style-type: none"><li>• System ready</li><li>• Low fuel pressure</li><li>• Low battery</li><li>• Low oil pressure</li><li>• High coolant temp/low coolant temp</li><li>• Overspeed</li><li>• Overcrank</li></ul> | <ul style="list-style-type: none"><li>• Utility sensing</li><li>• Delay on utility failure for engine start</li><li>• Engine warm-up before transfer</li><li>• Delay to retransfer to utility</li><li>• Engine cooldown timer</li><li>• Exerciser not set</li></ul> |
- INTERNAL FUNCTIONS:
- 3 position switch (auto, off and manual)
  - 2 wire start for any transfer switch
  - Communicates with the Generac RTS transfer switch
  - Built-in 7 day exerciser
  - Selectable engine speed at exercise
  - Governor controller is built into the master control board
  - Temperature range -40 °C to 70 °C

## ENGINE SPECIFICATIONS

MAKE .....	Generac
MODEL .....	V Type
CYLINDERS .....	6
DISPLACEMENT .....	3.9 Liter
BORE .....	3.91
STROKE .....	3.31
COMPRESSION RATIO .....	9.1:1
INTAKE AIR SYSTEM.....	Naturally Aspirated
VALVE SEATS .....	Precision ground
LIFTER TYPE .....	Hydraulic

## GOVERNOR SPECIFICATIONS

TYPE .....	Electronic
FREQUENCY REGULATION .....	Isochronous
STEADY STATE REGULATION .....	± .25%
ADJUSTMENTS	
Speed .....	Yes
Droop .....	Yes

## ENGINE LUBRICATION SYSTEM

OIL PUMP .....	Gear
OIL FILTER .....	Full flow cartridge
CRANKCASE CAPACITY .....	4 Quarts

## ENGINE COOLING SYSTEM

TYPE .....	Closed
WATER PUMP .....	Belt driven
FAN SPEED.....	2190
FAN DIAMETER.....	22 inches
FAN MODE.....	Pusher

## FUEL SYSTEM

FUEL TYPE .....	Natural gas, propane vapor
CARBURETOR .....	Down Draft
SECONDARY FUEL REGULATOR .....	Standard
FUEL SHUT OFF SOLENOID .....	Standard
OPERATING FUEL PRESSURE VAPOR SYSTEMS .....	Nat. Gas 5" to 14" H <sub>2</sub> O .....LP Vapor 5" to 14" H <sub>2</sub> O

## ELECTRICAL SYSTEM

BATTERY CHARGE ALTERNATOR .....	12V 30 Amp
STATIC BATTERY CHARGER .....	2 Amp
RECOMMENDED BATTERY .....	Group 24 525CCA
SYSTEM VOLTAGE .....	12 Volts



**STANDBY 40 kW**

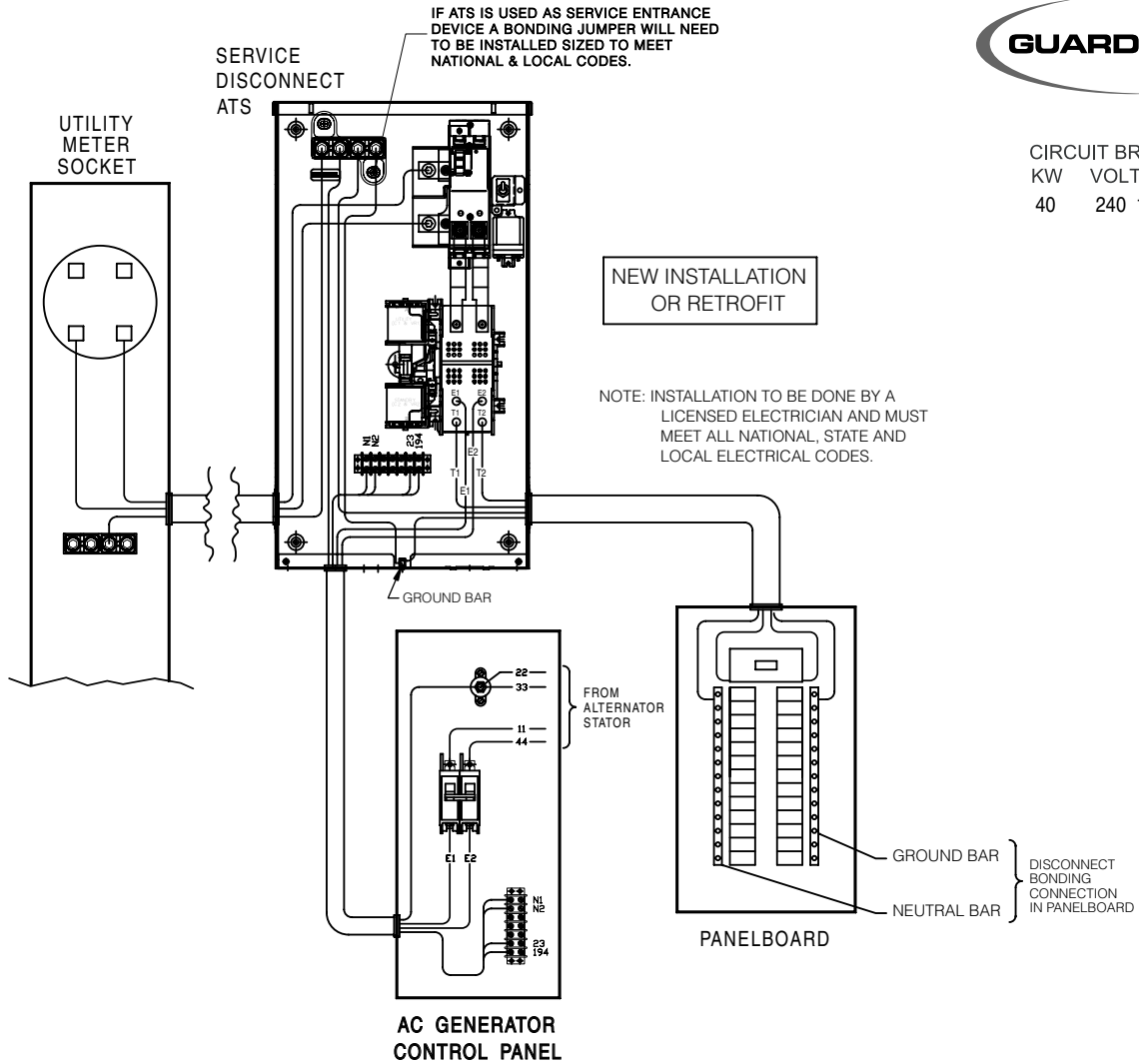
**OPERATING DATA**

		<b>STANDBY 40 kW</b>				
<b>KW RATING - LP/NG</b>		40/37				
<b>ENGINE SIZE</b>		3.9 Liter V-6				
<b>GENERATOR OUTPUT VOLTAGE/KW - 60Hz</b> 120/240V, 1-phase, 1.0 pf		<b>KW</b> LP 40 / NG 37	<b>AMP</b> LP 167 / NG 154.2		<b>CB Size</b> 175	
<b>GENERATOR LOCKED ROTOR KVA AVAILABLE @ VOLTAGE DIP OF 35%</b> Single phase		80				
<b>FUEL – Natural Gas and LP Vapor Only</b> Fuel consumption – 60Hz		<u>Exercise Cycle</u>	<u>25% Load</u>	<u>50% Load</u>	<u>75% Load</u>	<u>100% Load</u>
<b>N.G.ft.<sup>3</sup>/hr</b>		82	148	285	397	550
<b>LP ft<sup>3</sup> /hr.(gal./hr - for reference only)</b>		33.1 (.90)	58.9 (1.62)	113.4 (3.12)	158 (4.34)	218.9 (6.01)
<b>ENGINE COOLING</b>						
Air flow (inlet air including alternator and combustion air) ft <sup>3</sup> /min.		2725				
Coolant capacity US gal.		3.0				
Heat rejection to coolant BTU/hr.		154,000				
Max. operating air temp. on radiator °C (°F)		60 (150)				
Max. ambient temperature °C (°F)		50 (140)				
<b>COMBUSTION AIR REQUIREMENTS</b>						
Flow at rated power 60 Hz cfm		122				
<b>SOUND EMISSIONS IN DBA</b>						
Exercising at 7 meters		60				
Full load at 7 meters		73				
<b>EXHAUST</b>						
Exhaust flow at rated output 60 Hz cfm		318				
Exhaust temp. at muffler outlet °F		938				
<b>ENGINE PARAMETERS</b>						
Rated synchronous RPM 60 Hz		1800				
HP at rated KW 60 Hz		61				
<b>POWER ADJUSTMENT FOR AMBIENT CONDITIONS</b>						
Temperature Deration						
3% for every 10 °C above - °C		25				
1.65% for every 10 °F above - °F		77				
Altitude Deration						
1% for every 100 m above - m		182				
3% for every 1000 ft. above - ft.		600				
<b>TRANSFER SWITCH SPECIFICATIONS (If so equipped)</b>						
No. of Poles		2				
Current Rating (amps)		200				
Voltage Rating (VAC)		250				
Service Disconnect Breaker		200 Amp HACR Type				
Utility Voltage Monitor (fixed)						
Pick-up		80%				
Dropout		60%				
Return to Utility		1 minute				
Exerciser 15 minutes weekly		Standard				
UL Listed		Standard				
Enclosure - NEMA 3R (Outdoor rated)		Standard				
Dimensions (H" x W" x D")		23.5 x 13.05 x 7.4				
Weight		50 lbs.				

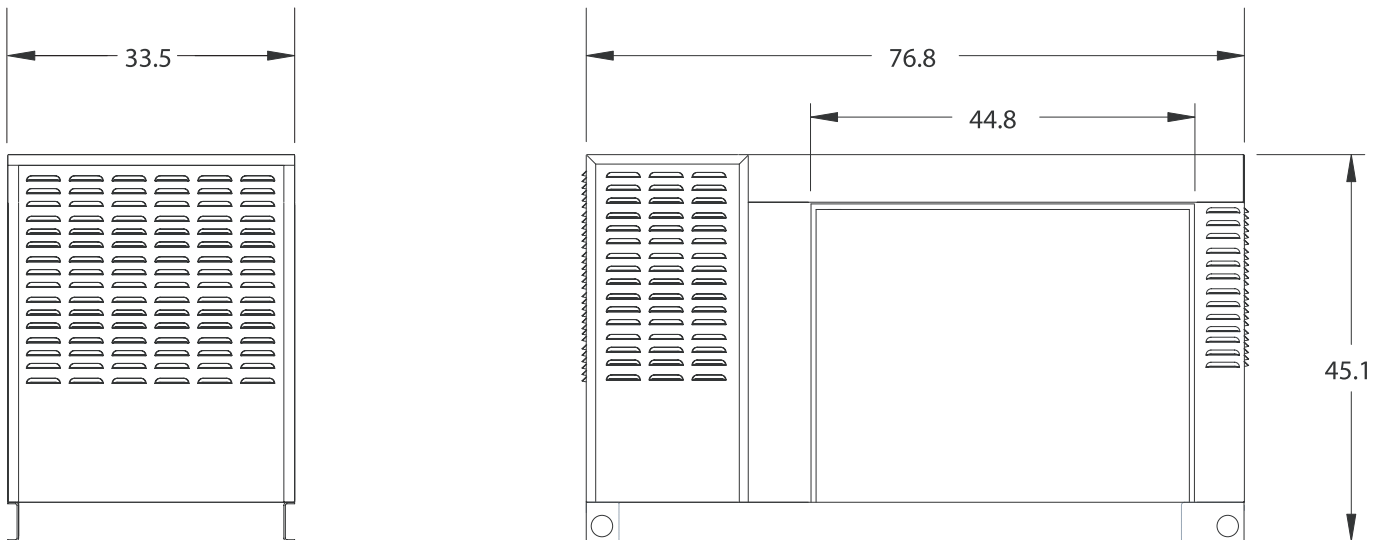
Rating definitions - Standby: Applicable for supplying emergency power for the duration of the utility power outage. No overload capability is available for this rating. (All ratings in accordance with BS5514, ISO3046 and DIN6271). (All ratings in accordance with BS5514, ISO3046, ISO8528 and DIN6271).

# INTERCONNECTIONS

STANDBY 40 kW



# INSTALLATION LAYOUT



UNIT WEIGHT 1658 LBS.