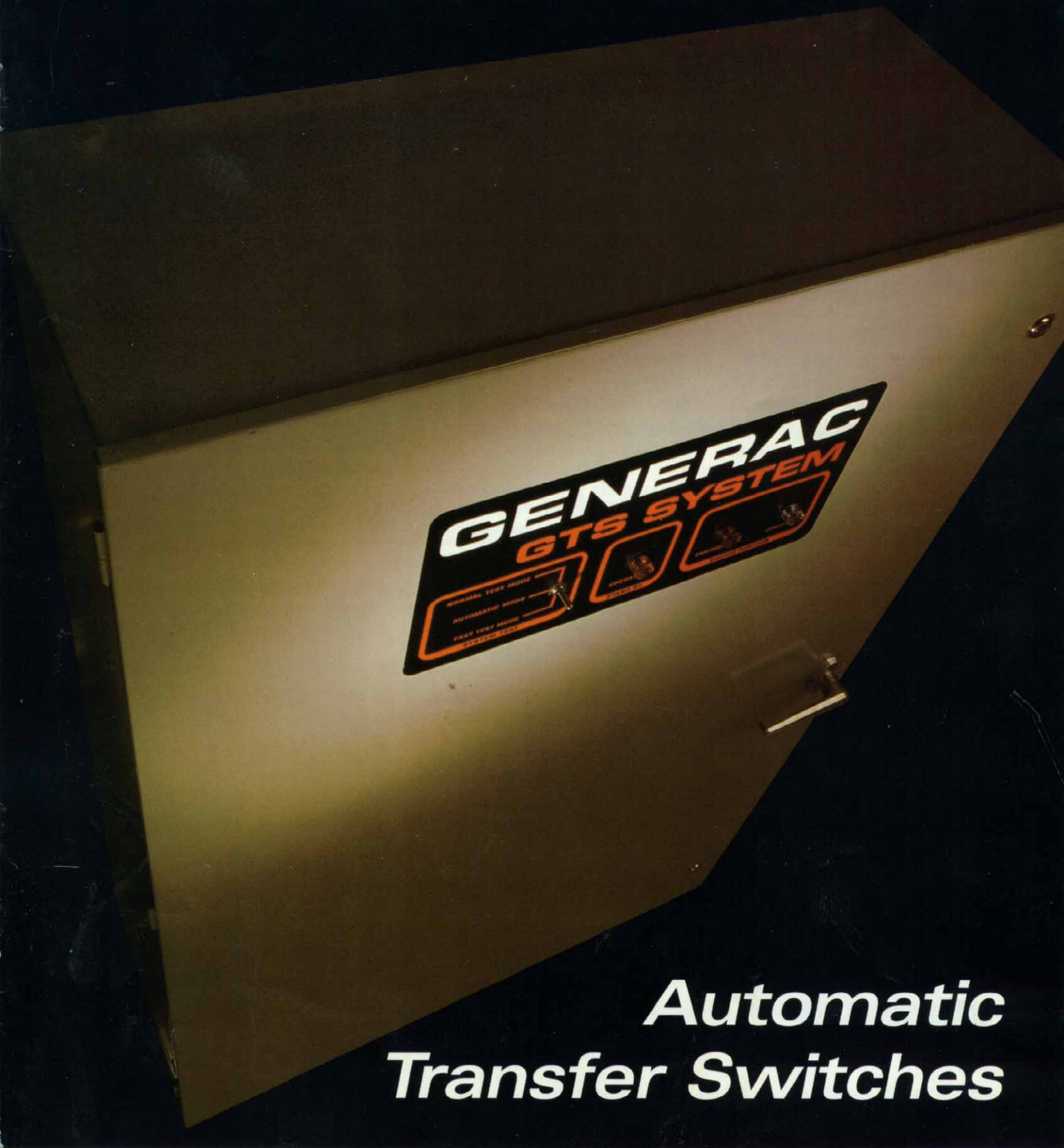
GENERAC®
POWER SYSTEMS



Automatic Transfer Switches

Transfer switches guaranteed to generate satisfaction

Single source manufacturing

For over 35 years, Generac has been the leading single source manufacturer in the industry. We custom design and manufacture standby generators and transfer switches to our customers' exact specifications.

So every Generac transfer switch comes with more than just components that are individually designed to meet your needs. Each unit is carefully constructed and tested to assure superior performance. Our experience and expertise means greater attention to details, and that means dependability and satisfaction for everyone down the line.

A case for convenience

No transfer switch system is complete if it isn't practical. So even the enclosure surrounding your transfer switch controls is designed with convenience in mind.

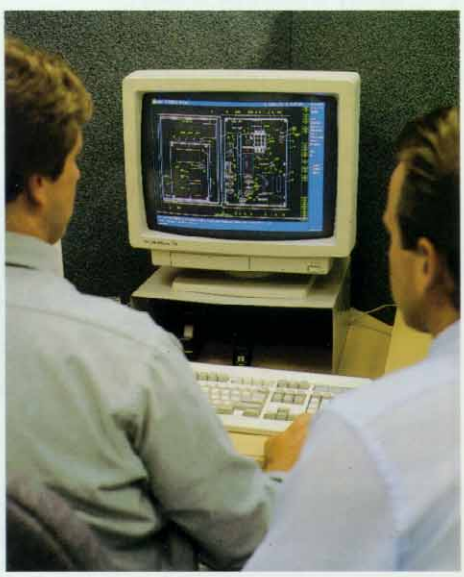
All controls you'll need for daily use are located on the front door of your transfer switch casing for ease of operation. Bright lamps indicate switch position, utility or emergency. A third lamp indicates standby operation. And a selector switch is included for convenient testing of the system. It can be set for normal test mode with full use of timers, fast test mode for testing all sequences in less than a minute or automatic mode which sets the system for normal operation.

There's even plenty of room for a voltmeter, ammeter, hour meter, frequency meter and phase selector switch which can be mounted on the door as options.

User friendly design

At Generac, we know that even the most sophisticated transfer-switch system is not practical if it is difficult to use. So our transfer-switch controls are designed to be amazingly simple to monitor, operate and maintain.

- All components are front adjustable and front removable.
- Gold-plated, engine starter contacts, which are specifically design for low voltage circuits, close automatically when utility power fails.
- All printed circuit boards have a conformal coating for environmental protection.
- Current carrying contacts are silver plated or made of silver alloy to provide resistance to welding, sticking and low voltage drop.
- Alloy contacts are shaped to give concentrated contact pressure for positive circuit continuity.



CSA and UL 1008 listed, of course

UL 1008 Underwriter's Laboratories test requirements for transfer switches.

Standard Tests

1. Overload tests at 600% normal current. 0.40-0.50 Power Factor at rated voltage.

Switch Ampere Rating	Number Of Operations	Rate Of Operation*
0-300	50	1 per minute
301-400	50	1 per 2 minutes
401-600	50	1 per 3 minutes
601-800	50	1 per 4 minutes
801-1600	50	1 per 5 minutes
1601-2500	25	1 per 5 minutes
2501 and up	3	1 per 5 minutes

2. Temperature rise check at 100% rated load continuously without exceeding specified temperature limits.

3. Endurance Test Operations. 0.75-0.80 Power Factor at rated voltage.

Ampere Rating	Rated Current	2 Times Rated Current	Without Current	Rate Of Operation*
0-300	3000	3000	–	1 per min.
301-400	2000	2000	–	1 per min.
401-800	1000	1000	1000	1 per min.
801-1600	750	750	1500	1 per 2 min.
1601 and up	500	500	2000	1 per 4 min.

4. Withstand and Closing Test

Switch Rating	Test Circuit Current
100 amps or less	5,000 amperes
101-400 amps	10,000 amperes
401 and up	20 times rating but not less than 10,000 amperes

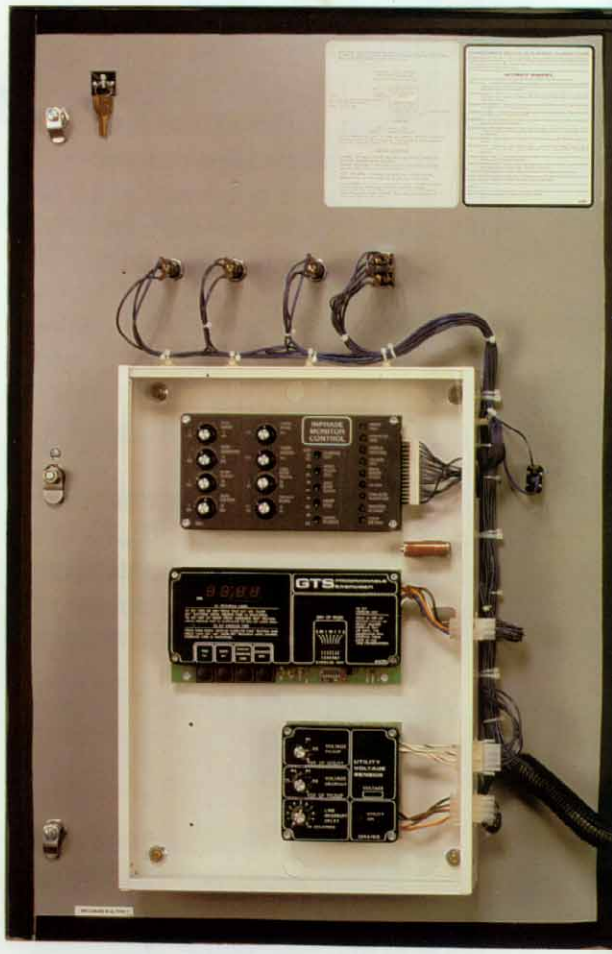
5. Dielectric voltage withstand (repeated) insulation test at twice maximum rated voltage but not less than 900 volts between live parts and ground, between poles with the switch in each position, and between line and load terminals with the switch closed in each position, and between control and power circuits.

NOTE: This test is also conducted after the endurance test, following the same procedure, except test potential is 1000 volts plus twice the maximum rated voltage.

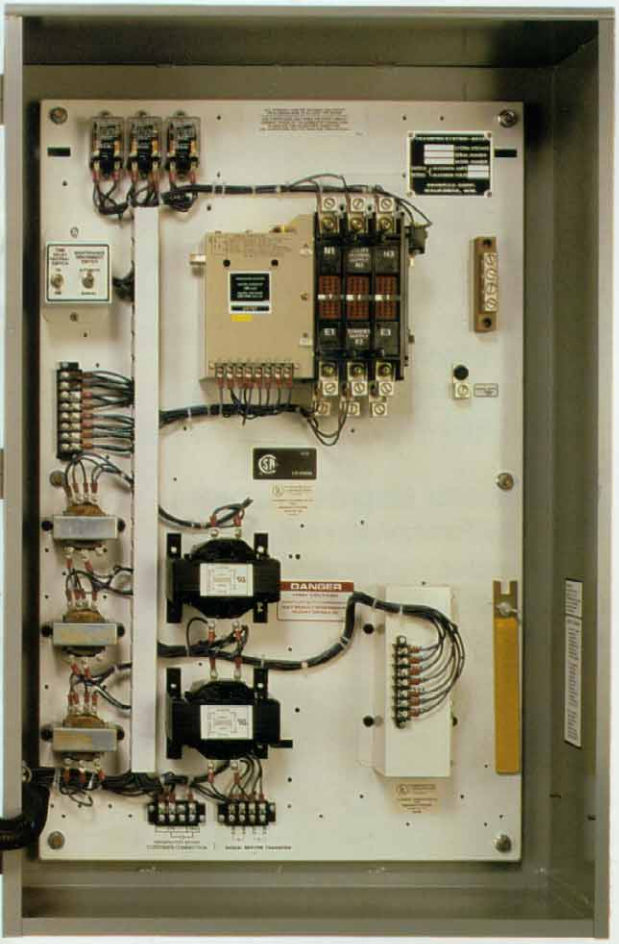
**May be conducted at a faster rate if agreeable to those concerned.*

No Nonsense Standard Features

- 100% equipment rated. Can be applied at rated current, without derating.
- Rated for all classes of load, both resistive and reactive.
- All switches are completely factory wired, interconnected and tested prior to shipment.
- Electrically operated and mechanically held contacts for fast, positive engagement.
- Arc control-600 volt switches contain specially designed arc chutes to suppress and extinguish the arc.
- Safety disconnect switch cuts control power to the switch and prevents automatic start signal from being sent to generator. Used for maintenance and manual switch operation.
- Front access to all solid state control boards.
- Neutral connector block for termination of all neutral conductors.
- Status lights indicate switch positions and standby generator status.
- Standard construction advantages include provisions for installing accessories and easily accessible terminal blocks.
- Main contacting actuator coil is powered by the oncoming source to ensure reliable transfer.
- 2-wire start system is used for compatibility and ease of installation.
- 250 or 600 MCM Lug Kits. For 300 and 400 amp series switches.
- Transfer switch mechanism lubricated for life.
- 7-day exerciser starts and tests the generator every week, insuring reliable performance, with option to transfer on exercise.
- Fast transfer time of 160 milliseconds or less, exclusive of time delays.
- The normal source voltage is monitored across both lines of single phase switches, and all phases of normal power are monitored line to line in 3 phase switches.
- Test mode switch. The entire standby system can be tested in a normal or fast test mode.
- Solid state circuit boards are protected by a transparent safety shield inside a lockable metal enclosure.
- Single-pull double-throw auxiliary contacts.
- Switch will always seek the normal source when available.
- Manual operating handle. Mounted inside the enclosure.
- Suitable for emergency and prime power applications without modifications. Meets ratings requirements of article 700, 701 and 702 of the National Electric Code, C.S.A. and UL 1008.
- Compact design. All switches meet OSHA safety requirements.

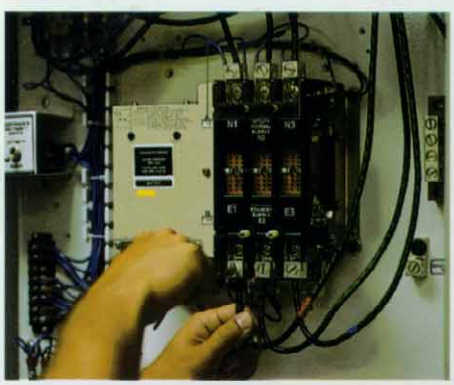


- Line Failure Sensing – circuitry monitors all phases and phase sequence of the utility service with dropout and pickup points, adjustable from 70% to 95%.
- Utility Interrupt Delay – timer overrides momentary line failure, adjustable from 0.1 to 10 seconds.
- Time Delay Neutral Switch – when "on," the contactor is held in the neutral position during transfer to allow for any voltage developed by the load to decay to a safe level. This minimizes voltage transients and maximizes main contact life. When immediate transfer is required, the switch would be placed on "off."



Designed for easy installation

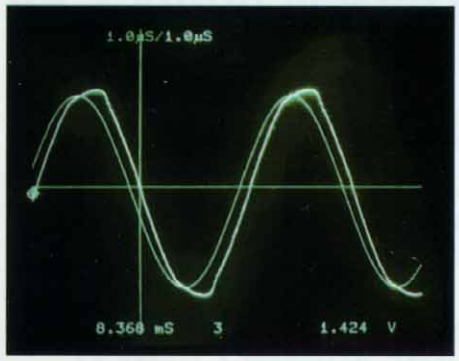
Our transfer switch cabinet is built for easy access with all the room inside that an electrician needs. That means faster, more convenient installation and easier maintenance.



Inphase monitor

Provides instantaneous transfer between two live voltage sources. Transfer occurs when the two source voltages are comparatively equal (maximum difference of 20° between sources).

If the inphase condition is not met, the system will automatically revert to the time delay neutral circuit.



The maximum differential between source sine waves allowed.

GTS Logic System Control/Inphase Monitor

LED status lights give visual readout of operation sequence:

- **Engine Warm-up.** Timer allows engine to operate at no load before GTS transfers load to generator set. Adjustable from 5 seconds to 3 minutes.
- **Engine Warm-up Bypass.** A switch allows the GTS to transfer the load to the generator set as soon as the preset voltage and frequency levels are reached.
- **Voltage Set.** Sets the minimum voltage required before the GTS will be allowed to transfer the load to the generator set. Adjustable from 70% to 90%.
- **Frequency Set.** Sets the minimum frequency required before the GTS will be allowed to transfer the load to the generator set. Adjustable from 80% to 90% of operating frequency.
- **Return to Utility Delay.** Timer keeps the load on the generator set until a stable utility line is present. Adjustable from 1 to 30 minutes.
- **Engine Cool Down.** Timer allows the engine to run at no load after the GTS transfers the load back to the utility line. Adjustable from 1 to 30 minutes.
- **Minimum Run.** Timer determines the shortest period of time the generator will run and insures adequate exercise periods. Adjustable from 5 to 30 minutes.
- **Exercise Load Switch.** Allows selection of exercise with or without load.

The few options for the few who need them

- **Logic System Control.** Fully adjustable timer settings. LED indication for system status and simple field service. (See description on previous page.)

- **NEMA Enclosures.** NEMA 3R, NEMA 4, NEMA 4X and NEMA 12.

- **Quick change, Multi-Voltage Panel.** Multiple phase/voltage configurations with a single switch. Available on switches up to 400 amps.

- **Auxiliary Contacts.** One SPDT is standard. Additional sets are available.

- **Programmable Exerciser.** Permits selection of "days of the week" and "time of the day". Visible digital chronograph used to select times. Allows exercising from one to seven days a week.

Programmable Exerciser

- **Exterior Meter Package.** Enables you to monitor the system parameters with the door closed.

- **Fourth Pole.** GTS transfer switches may be ordered with fourth pole for switching the neutral conductor.

- **Preferred Source Selector Switch.** Used to select which power supply will be considered the normal source.

- **Manual Selector Switch.** 3 positions: normal – automatic – standby

- **Manual "Return to Normal"** (electrically operated). Allows the customer to select when the switch will transfer back to normal.

- **Remote Automatic Control Circuit.** This switch can start the generator and transfer the load to emergency from a remote location.

- **Signal Before Transfer Contacts.** Adjustable from 0.1 –10 seconds. This option sends a signal to special loads prior to transfer. Often used to prevent elevators from stopping between floors.

- **Generator Mounted Transfer Switch.** The transfer switch can be mounted on the generator set for indoor as well as outdoor applications.

Generator Mounted Transfer Switch

Automatic Transfer Switches

Transfer Switches from 100 to 2600 Amps							
Model	**Rated Amps**	**Rated Volts**	**No. of Poles**	**Height**	**Width**	**Depth**	**Weight**
GTS010W	100	600	3,4	36	24	11	180
GTS015W	150	600	3,4	48	30	13	265
GTS020W	200	600	3,4	48	30	13	265
GTS030W	300	600	3,4	48	30	13	325
GTS040W	400	600	3,4	48	30	13	325
GTS060N	600	600	3,4	60*	36	19	650
GTS080N	800	600	3,4	60*	36	19	700
GTS100N	1000	600	3,4	60*	36	19	700
GTS120N	1200	600	3,4	72*	48	25	1100
GTS160N	1600	600	3,4	72*	48	25	1100
GTS200N	2000	600	3,4	80*	46	48	1300
GTS260N	2600	600	3,4	80*	46	48	1700

* Cabinet is free standing.
Dimensions shown are approximate. Contact your Generac Dealer for certified dimension drawings.
DO NOT USE THESE DIMENSIONS FOR INSTALLATION PURPOSES.

Electric Ratings (Tested in Accordance with UL 1008 – Withstanding & Closed Ratings)

600 Volt Series									
Rated Amperes	**100**	**150/200**	**300/400**	**600**	**800**	**1000**	**1200/1600**	**2000**	**2600**
Fuse Protected									
Available RMS Symmetrical Fault Current, Amp @ 250 V	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000
Protective Device Continuous Rating (Max.) Amp	200	400	600	800	1200	1600	2000	2500	4000
Fuse Class	J,T	J,T	J,T	L,T	L	L	L	L	L
Circuit Breaker Protected									
Available RMS Symmetrical Fault Current, Amp @ 250 V	14,000	25,000	35,000	42,000	65,000	65,000	65,000	85,000	85,000
Protective Device Continuous Rating (Max.) Amp	150	300	600	750	1250	1250	2000	2500	3500

* *IMPORTANT: Withstand tests have been conducted at 480 volts in accordance with UL standards. Consult factory for withstand/closing ratings at lower and higher voltages.*

Generac transfer switches and standby generators are supported by the most experienced distributors in the nation. Like us, they take pride in guaranteeing your full satisfaction from start to finish.

All Generac distributors maintain complete service facilities and are fully staffed with their own electrical and mechanical experts. Original Generac parts are stocked at each location for the installation and maintenance of your entire Generac System. With detailed specification data, computerized "instant" quotes, custom engineering assistance, factory training and a complete post-installation service program, they can provide you with more before-and-after sales support than practically anyone else in the field.

Single source manufacturing, full service warranty support and a commitment to complete customer satisfaction. It all adds up to more quality and service than you may ever need.

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