

**Service Entrance Rated  
Power Frame Type  
Closed Transition**

**Power Series Transfer Switch**

**1000-5000 Amps**



Automatic Transfer Switch, 100% Service Entrance Rated  
1000 – 5000A, up to 600VAC, 50/60 Hz  
3 or 4 poles  
NEMA 1 or 3R  
Closed Transition with Inphase or Delayed  
UL1008 Listed  
CSA C22.2 No. 178 Certified

**CODES AND STANDARDS:**



UL1008 Listed



NFPA 70, 99, 110, 37



NEC 700, 701, 702, 708



ISO9001, 8528, 3046, 7637, Pluses #2b, 4



NEMA ICS10, MG1, 250, ICS6, AB1



ANSI C62.41



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



IEC 61000 EMC Testing & Measuring



CSA C22.2 No. 178 Certified

**DESCRIPTION:**

Generac's Service Entrance Power Series Transfer Switch integrates automatic power switching with required disconnecting, grounding, and bonding for use as service entrance equipment. The integrated service entrance power switch meets all National Electrical Code requirements for service entrance use in a compact package. The switches are rated for full load transfers in critical operating, emergency, legally required, and optional power systems. Designed with integral over current protection and a 100% rated disconnect breaker for unmatched safety, performance, and reliability. The full assembly is listed to UL 1008 with exceptional 3 cycle withstand and close on ratings. Generac's Power Frame Type Transfer Switch has short time ratings for selective coordination and a high speed switching time of < 3 cycles to minimize the effect of power disturbances.

The control's color display and mimic bus diagrams simplifies programming, routine operation, data presentation, and setting adjustments. The intuitive, grouped data screens along with the supervisory and highly customizable data acquisition allow the user to customize to their needs. Standard features include Modbus® RTU, extensive user customizable input/ outputs, 450 event log with event capture for the most recent 12, with 3 phase sensing on both sources, plus load for voltage, frequency, sequencing, loss, and unbalance.

An automatic closed transition transfer switch (make-before-break) requires the normal and emergency sources to be synchronized. The controller monitors the voltage and frequency of both power sources with an anticipatory algorithm; phase angles must be within 8 electrical degrees. A synchronization timer is initiated (TSCT, 1-60 min adjustable) to complete the transfer and parallels 100ms or less. If the TSCT times out and the transfer switch has not reached synchronization, the transfer switch will remain connected to the current Source, and a failure to transfer alarm will be displayed. The switch can also be configured to operate in open transition mode if there is a fail to transfer in closed transition.

# Power Series, Service Entrance Rated Power Frame Type, Closed Transition

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## STANDARD FEATURES:

- High Withstand and Close on Ratings
- Safe manual transfer under load
- Front Access
- Cable or bus entry is Top, Bottom or Both
- Isolated Compartments for improved safety
- 4.3 inch Color Display
- Mimic diagram with Source Available and Connected LED indication
- Event logging and recording 450 time-stamped events
- System TEST pushbutton
- Programmable plant exerciser
- Field-selectable multi-tap transformer panel permits operation on a wide range of system voltages
- Modbus® RTU

## VOLTAGE AND FREQUENCY SENSING:

- 3-Phase under and over voltage sensing on normal and emergency sources
- 3-Phase under and over voltage sensing on load
- Under and over frequency sensing on normal and emergency
- Selectable settings: single or three phase voltage sensing on normal, emergency and load 50 or 60Hz
- Phase sequence sensing for phase sensitive loads

## CONTACTS:

- Source available:
  - Source-1 Present, 2-N.O. & 2 N.C.
  - Source-2 Present, 2-N.O. & 2 N.C.
- Switch position:
  - Source-1 Position, 1-N.O. & 1-N.C.
  - Source-2 Position, 1-N.O. & 1-N.C.
- Pre Transfer Contact: 1-N.O. & 1-N.C.

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## Standard Control Parameters Available

### CONTROL INPUTS (4 STANDARD):

- Monitor Mode
- Bypass Timers
- Lockout
- Manual Retransfer On/Off
- Manual Retransfer
- Slave In
- Remote Engine Test
- Preferred Source Selection
- Go to Emergency
- Emergency Inhibit
- Go to Neutral

### CONTROL OUTPUTS (4 STANDARD):

- Load sequence
- Selective Load shed
- Load bank control
- Pre/post-transfer
- Pre-transfer
- User remote control
- Source 1 available (standard)
- Source 2 available (standard)
- Source 1 connected
- Source 2 connected
- ATS not in automatic
- General alarm
- ATS in test
- Engine test aborted
- Cooldown in process
- Engine start contact status
- Generator 1 start status
- Generator 2 start status
- Emergency inhibit on

*Up to 20 available with Expandable Input/Output Modules*

## OPTIONAL FEATURES:

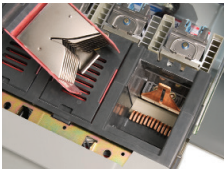
- Digital Multi-function Power Quality Metering
- Ethernet Connectivity
- Draw out construction
- Remote Annunciator Panel with Control
- Remote Multi-switch Annunciator Panel with Control
- TVSS
- Stainless steel cover for controller
- Selectable Retransfer
- Manual Generator Retransfer
- Space Heater with Thermostat
- Maintenance Selector Switch

## SERVICE ENTRANCE RATED:

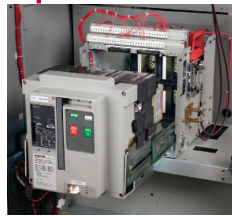
For service entrance and other applications, Digitrip solid-state trip units can be integrated into the power switching section. This eliminates the need for separate upstream protective devices, saving cost and space. Available with various combinations of long, short time, instantaneous, ground fault protection and communications. *Contact factory for optional trip units.*

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Contact Wear Indication



ATC-900 Controller



Drawout Power Case Switch or Breaker is Optional



Source 2

Keyed Switch for Service Entrance Option

## TRANSFER SWITCH WITHSTAND RATINGS:

### Systems Coordination Information—Withstand, Closing and Interrupting Ratings

Rating When Used with Upstream Circuit Breaker

Transfer Switch Ampere Rating	3 Cycle 600V (kA)	30 Cycle <sup>2</sup> 600V (kA)
1000	100	85
1200	100	85
1600	100	85
2000	100	85
2500	100	85
3000	100	85
3200	100	85
4000	100	85 <sup>1</sup>
5000	–	85 <sup>1</sup>

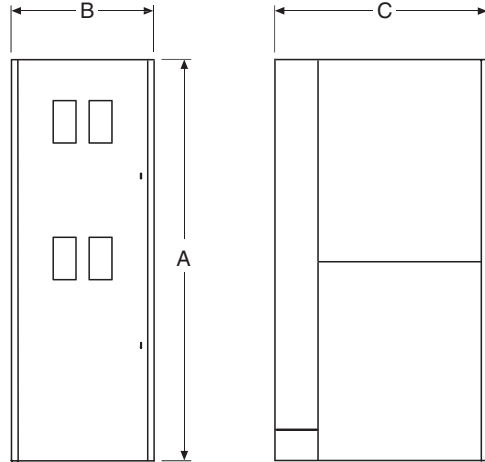
1. UL 1066 short-time rating

2. Ratings used for coordination with upstream breakers with short-time ratings

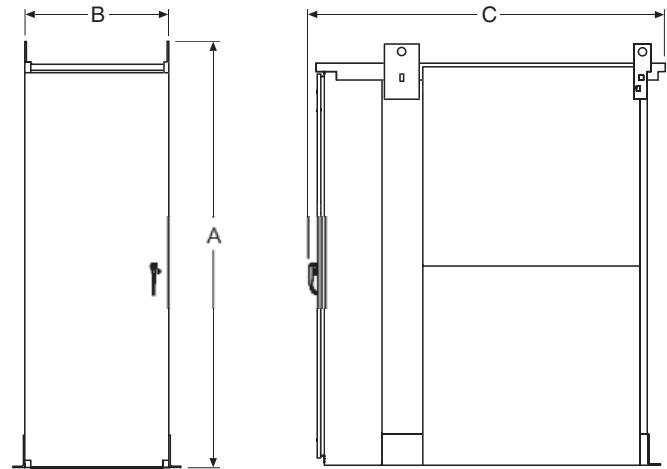
# Power Series, Service Entrance Rated Power Frame Type, Closed Transition

## UNIT DIMENSIONS:

1000–3200A Fixed-Mount NEMA 1



1000–3200A Fixed-Mount NEMA 3R



\*For enclosures alternative than NEMA 1 and 3R, contact factory.

### Power Frame Fixed-Mount Transfer Switches

Approximate Dimensions in Inches (mm)

NEMA 1 Enclosed Fixed-Mount Transfer Switch					
Ampere Rating	Poles	Height A	Width B	Depth C	Shipping Weight Lbs (kg)
1000-2000	3	90.00(2286.0)	32.00 (812.8)	48.00 (1219.2)	1050 (476)
1000-2000	4	90.00(2286.0)	32.00 (812.8)	48.00 (1219.2)	1250 (567)
2500-3200	3	90.00(2286.0)	44.00 (1117.6)	48.00 (1219.2)	1900 (863)
2500-3200	4	90.00(2286.0)	44.00 (1117.6)	48.00 (1219.2)	2000 (910)

NEMA 3R Enclosed Fixed-Mount Transfer Switch					
Ampere Rating	Poles	Height A	Width B	Depth C	Shipping Weight Lbs (kg)
1000-2000	3	90.00(2286.0)	32.00 (812.8)	63.00 (1600.2)	1600 (726)
1000-2000	4	90.00(2286.0)	32.00 (812.8)	63.00 (1600.2)	1600 (726)
2500-3200	3	90.00(2286.0)	44.00 (1117.6)	63.00 (1600.2)	2400 (1090)
2500-3200	4	90.00(2286.0)	44.00(1117.6)	63.00 (1600.2)	2500 (1135)

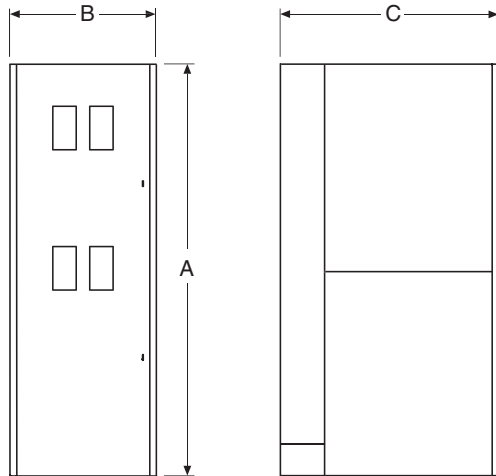
### Standard Terminals

Ampere Rating	Normal, Emergency, and Load	Neutral
1000-2000	(6) 3/0-750 MCM	(24) 4/0-500 MCM
2500-3200	(9) 3/0-750 MCM	(36) 4/0-500 MCM

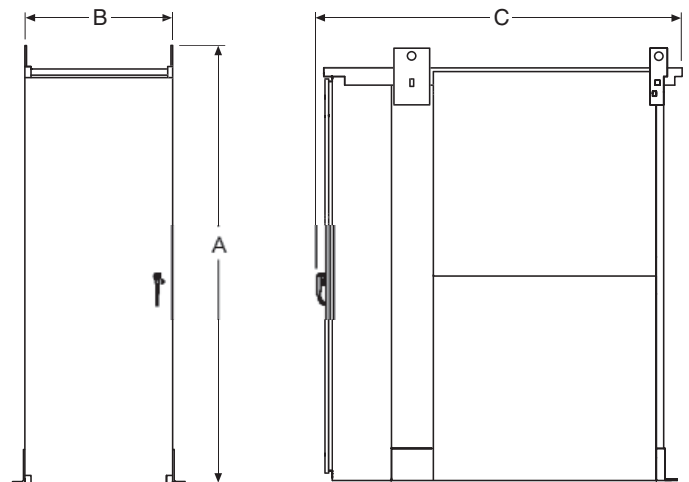
# Power Series, Service Entrance Rated Power Frame Type, Closed Transition

## UNIT DIMENSIONS:

1000–3200A Drawout NEMA 1



1000–3200A Drawout NEMA 3R



\*Seismic mounting brace adds an additional 3 inches to each side - front left and front right side and 3 inches additional to rear side.

### Power Frame Drawout Transfer Switches

Approximate Dimensions in Inches (mm)

NEMA 1 Enclosed Drawout Transfer Switch						NEMA 3R Enclosed Drawout Transfer Switch					
Ampere Rating	Poles	Height A	Width B	Depth C	Shipping Weight Lbs (kg)	Ampere Rating	Number of Poles	Height A	Width B	Depth C	Shipping Weight Lbs (kg)
1000-2000	3	90.00(2286.0)	32.00 (812.8)	60.00 (1524.0)	1600 (727)	1000-2000	3	90.00 (2286.0)	32.00 (812.8)	75.00 (1905.0)	2100 (953)
1000-2000	4	90.00(2286.0)	32.00 (812.8)	60.00 (1524.0)	1900 (864)	1000-2000	4	90.00(2286.0)	32.00 (812.8)	75.00 (1905.0)	2400 (1089)
2500-3200	3	90.00(2286.0)	44.00 (1117.6)	60.00 (1524.0)	2500 (1134)	2500-3200	3	90.00 (2286.0)	44.00 (1117.6)	75.00 (1905.0)	3000 (1362)
2500-3200	4	90.00(2286.0)	44.00 (1117.6)	60.00 (1524.0)	2800 (1270)	2500-3200	4	90.00 (2286.0)	44.00 (1117.6)	75.00 (1905.0)	3300 (1499)

### Standard Terminals

Ampere Rating	Normal, Emergency, and Load	Neutral
1000-2000	(6) 3/0-750 MCM	(24) 4/0-500 MCM
2500-3200	(9) 3/0-750 MCM	(36) 4/0-500 MCM

\*For 4000 and 5000A dimensions, please contact factory.