

Power Series Transfer Switch

100 – 1,600 Amps

Bypass Isolation · Contactor Type · Closed Transition

- Bypass Isolation Transfer Switch
- 100 – 1,600 A, Up to 600 VAC, 50/60 Hz
- 3 or 4 Poles
- NEMA 1, 3R, or 4X (400 A and Below)
- Closed Transition
- UL1008 Listed
- CSA C22.2 No. 178 Certified



Image used for illustration purposes only

Codes and Standards

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



UL 1008 Listed



CSA C22.2 No. 178 Certified



NFPA 37, 70, 99, 110



NEC 700, 701, 702, 708



NEMA ICS10, MG1, 250, ICS6, AB1



ANSI C62.41



IEC 61000 EMC Testing and Measuring



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

Description

Generac's Bypass Isolation Contactor Type Transfer Switches are double-throw with an over center design to ensure safe, positive transfer between power sources. The switches are 3-cycle rated to ease breaker selection and coordination. The mechanism is field proven and operated via a reliable, compact solenoid for high speed transfer of loads between power sources. The contacts are silver composite for long life, resisting pitting or burning. The switches are rated for full load transfers in critical operating, emergency, legally required, and optional power systems.

Typical bypass isolation switch controllers only control the ATS contactor. Generac's design allows the switch controller to remain active in both the ATS and bypass modes, thus providing control to either contactor. This ability of the controller to remain active and control the bypass isolation contactor provides "N+1" redundancy of a second fully functioning ATS. The control's 4.3 inch color display and mimic bus diagram 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 configure to their needs. Standard features include Modbus® RTU, extensive user customizable input/ outputs, 450 event log with capture for the most recent 12 events, with three 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. The switch will operate in open transition mode if there is a fail to transfer in closed transition, and a Closed Transition Fail error will be displayed.

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STANDARD FEATURES

GENERAL

- Double-Throw, Solenoid-Operated Transfer Mechanism
- Isolated Compartments for Improved Safety
- Entry is Top and/or Bottom, Front Access
- Single Motion Rack-Out with Doors Closed
- Field-Selectable Multi-Tap Transformer Panel Permits Operation on a Wide Range of System Voltages
- Mimic Diagram with Source Available and Connected LED Indication
- ATC-900 controller
- System TEST Pushbutton
- Programmable Plant Exerciser
- Modbus® RTU
- Operating Temperature -4 ° to 158 °F (-20 ° to 70 °C)

VOLTAGE AND FREQUENCY SENSING

- Three Phase Under and Over Voltage Sensing on Normal and Emergency Sources, Plus Load
- Under and Over Frequency Sensing on Normal, Emergency and Load
- Three Phase Sequence Sensing for Phase Sensitive Loads
- Three Phase Voltage Unbalance and Loss Sensing

CONTACTS

- Source Available:
 - Source-1 Present, 1-N.O. and 1-N.C.
 - Source-2 Present, 1-N.O. and 1-N.C.
- Switch Position:
 - Source-1 Position, 3-N.O. and 3-N.C.
 - Source-2 Position, 3-N.O. and 3-N.C.

STANDARD CONTROL PARAMETERS

- Up to 20 Parameters Available with Expandable Input/Output Modules

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
- ATS on Bypass
- 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
- ATS on Bypass

CONFIGURABLE OPTIONS

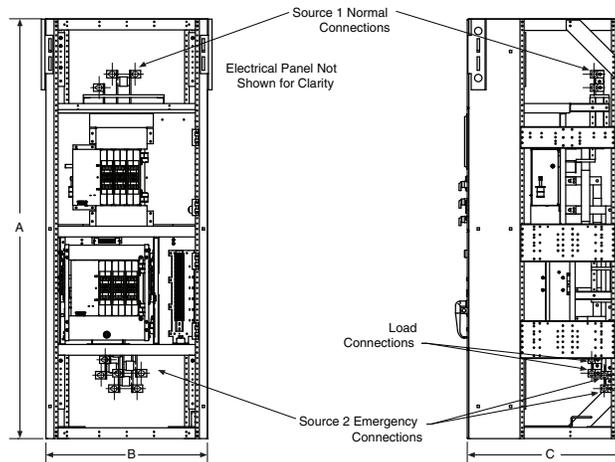
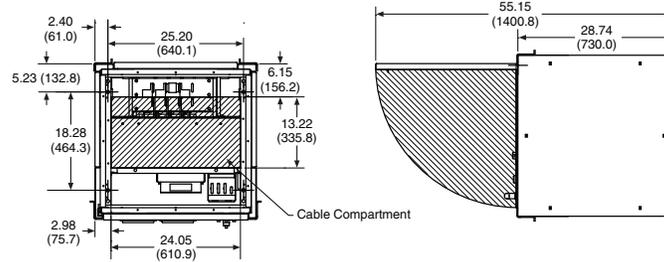
- Dual Draw Out
- Digital Multi-Function Power Quality Metering
- Ethernet Connectivity
- Remote Annunciator Panel with Control
- Remote Multi-Switch Annunciator Panel with Control
- 2 or 4 Position Selector Switch
- Transient Voltage Surge Suppression (TVSS)
- Padlockable Cover for Controller
- Padlockable Cover for Device Panel
- Selectable Retransfer
- Manual Generator Retransfer

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UNIT DIMENSIONS*



Note: Source 1 Normal, Source 2 Emergency and load connections are NOT factory or field reconfigurable.

Bypass Isolation 100 – 400 A, Fixed Bypass/Single Drawout

| Volts | Amperes | Enclosure Type (NEMA) | in (mm) | | | Cu/Al | | lbs (kg) |
|-------------------|-----------|-----------------------|--------------|--------------|--------------|---------------------------------------|--|--|
| | | | A (Height) | B (Width) | C (Depth) | Load Side, Normal and Standby Source | Neutral Connection | Weight |
| 480 and Below/600 | 100 – 200 | 1 | 78.1 (1,983) | 30.0 (762) | 29.3 (744) | (1) #6-350 MCM | (3) 1/0-750 MCM | 1,300 (590) 3-pole 1,360 (617) 4-pole |
| | | 3R | 78.1 (1,983) | 30.0 (762) | 47.6 (1,209) | (1) #6-350 MCM | (3) 1/0-750 MCM | 1,550 (703) 3-pole 1,650 (748) 4-pole |
| 480 and Below | 225 – 400 | 1 | 78.1 (1,983) | 30.0 (762) | 29.3 (744) | (1) 1/0-750 MCM or (2) 1/0-250 MCM | (3) 1/0-750 MCM | 1,300 (590) 3-pole 1,360 (617) 4-pole |
| | | 3R | 78.1 (1,983) | 30.0 (762) | 47.6 (1,209) | (1) 1/0-750 MCM or (2) 1/0-250 MCM | (3) 1/0-750 MCM | 1,550 (703) 3-pole 1,650 (748) 4-pole |
| 600 | 225 – 400 | 1 | 90.0 (2,286) | 40.0 (1,016) | 29.3 (744) | (2) 1/0-750 MCM or (4) 1/0-250 MCM | (6) 1/0-750 MCM or (12) 1/0-250 MCM | 1,550 (703) 3-pole 1,600 (726) 4-pole |
| | | 3R | 90.7 (2,304) | 40.4 (1,025) | 47.6 (1,209) | (2) 1/0-750 MCM or (4) 1/0-250 MCM | (6) 1/0-750 MCM or (12) 1/0-250 MCM | 1,600 (726) 3-pole 1,650 (748) 4-pole |

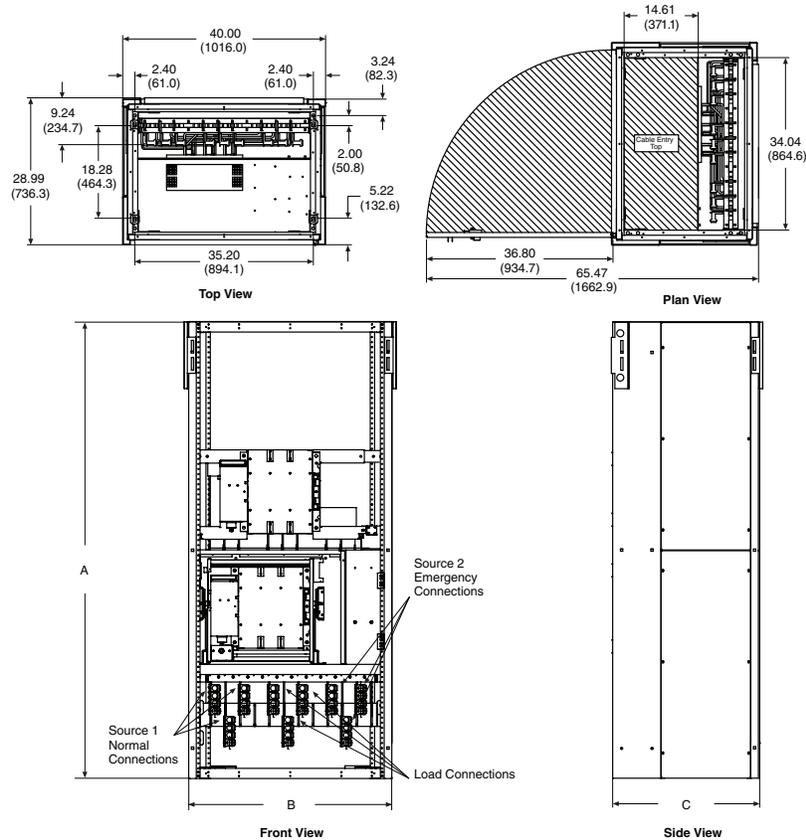
* All measurements are approximate and for estimation purposes only. Specification characteristics may change without notice. Please contact a Generac Power Systems Industrial Dealer for detailed installation drawings.

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UNIT DIMENSIONS*



Bypass Isolation 600 – 1,200 A, Fixed Bypass/Single Drawout

| Volts | Amperes | Enclosure Type (NEMA) | in (mm) | | | Cu/Al | | lbs (kg) |
|-------------------|-------------|-----------------------|--------------|--------------|--------------|---------------------------------------|--|--|
| | | | A (Height) | B (Width) | C (Depth) | Load Side, Normal and Standby Source | Neutral Connection | Weight |
| 480 and Below/600 | 600 | 1 | 90.0 (2,286) | 40.0 (1,016) | 29.0 (737) | (2) 1/0-750 MCM or (4) 1/0-250 MCM | (6) 1/0-750 MCM or (12) 1/0-250 MCM | 1,780 (807) 3-pole 1,820 (825) 4-pole |
| | | 3R | 90.7 (2,304) | 40.4 (1,025) | 47.6 (1,209) | (2) 1/0-750 MCM or (4) 1/0-250 MCM | (6) 1/0-750 MCM or (12) 1/0-250 MCM | 1,850 (839) 3-pole 1,890 (857) 4-pole |
| | 800 – 1,200 | 1 | 90.0 (2,286) | 40.0 (1,016) | 29.0 (737) | (4) 1/0-750 MCM or (8) 1/0-250 MCM | (12) 1/0-750 MCM | 1,900 (862) 3-pole 1,965 (891) 4-pole |
| | | 3R | 90.7 (2,304) | 40.4 (1,025) | 47.6 (1,209) | (4) 1/0-750 MCM or (8) 1/0-250 MCM | (12) 1/0-750 MCM | 2,035 (923) 3-pole 2,100 (952) 4-pole |

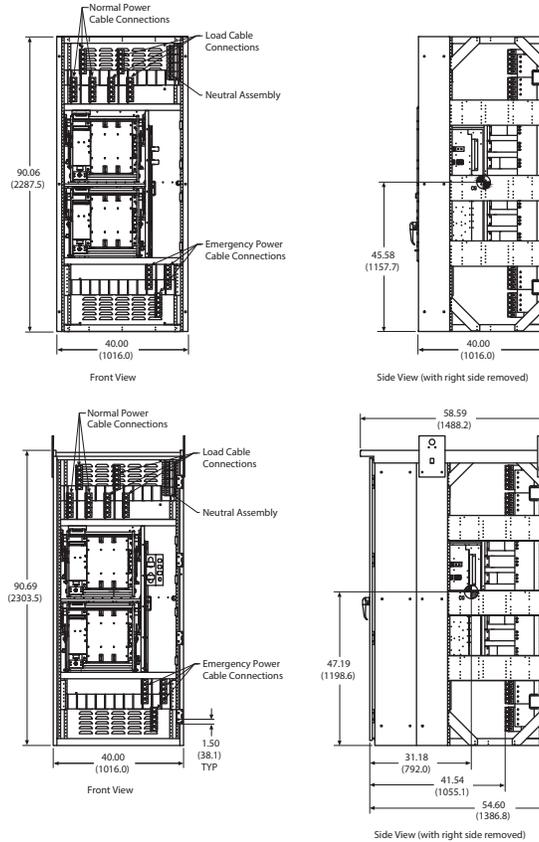
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UNIT DIMENSIONS*



Bypass Isolation 1,600 A, Dual Drawout

| Volts | Amperes | Enclosure Type (NEMA) | in (mm) | | | Cu/Al | | lbs (kg) |
|---------------|---------|-----------------------|--------------|--------------|--------------|--|--------------------|--|
| | | | A (Height) | B (Width) | C (Depth) | Load Side, Normal and Standby Source | Neutral Connection | Weight |
| 480 and Below | 1,600 | 1 | 90.0 (2,286) | 40.0 (1,016) | 40.0 (1,016) | (5) 1/0-750 MCM or (10) 1/0-250 MCM | (16) 1/0-750 MCM | 2,170 (984) 3-pole 2,425 (1,100) 4-pole |
| | | 3R | 90.7 (2,304) | 40.0 (1,016) | 58.6 (1,488) | (5) 1/0-750 MCM or (10) 1/0-250 MCM | (16) 1/0-750 MCM | 2,526 (1,146) 3-pole 2,800 (1,027) 4-pole |

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SPECIFICATIONS

UL 1008 Withstand and Closing Ratings

| Ampere Rating | Any Breaker (0.05 sec) | | Specific Breaker ¹ | | Rating when Used with Upstream Fuse | | | |
|---------------|--------------------------------|-------------------|--------------------------------|-------------------|-------------------------------------|-----------------|-----------|-------------------------|
| | 480 V and Below Max (kA) | 600 V Max (kA) | 480 V and Below Max (kA) | 600 V Max (kA) | Rating (kA) | Test Voltage | Fuse Type | Maximum Fuse Amperes |
| 100 | 30 | 22 | 50 | 35 | 100 | 480 | RK5 | 200 |
| 200 | 30 | 22 | 50 | 35 | 100 | 600 | RK5 | 400 |
| 400 | 30 | 42 | 50 | 68 | 200 | 600 | RK5 | 600 |
| 600 | 50 | 42 | 65 | 65 | 200 | 600 | L | 1,200 |
| 800 | 50 | 42 | 65 | 65 | 200 | 600 | L | 1,200 |
| 1,000 | 50 | 42 | 65 | 65 | 200 | 600 | L | 1,600 |
| 1,200 | 50 | 42 | 65 | 65 | 200 | 600 | L | 1,600 |
| 1,600 | 50 | – | 65 | – | 200 | 480 | L | 2,000 |

¹ See specific breaker list available on GenConnect