

**Bypass Isolation
Power Frame Type
Closed Transition**

Power Series Transfer Switch

1600-5000 Amps



Bypass Isolation Transfer Switch
1600 – 5000A, up to 600VAC, 50/60 Hz
3 or 4 poles
NEMA 1 or 3R
Closed Transition
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 Bypass, Power Frame Type Transfer Switch has exceptional 3 cycle withstand and close on ratings along with high speed switching time of < 3 cycles to minimize the effect of power disturbances. The power switching devices are interchangeable between the ATS and Bypass. The switching mechanism is enabled for safe manual transfer under load. With integral contact wear indication, preventative maintenance can be scheduled when convenient for the user ensuring maximum uptime. System parameters can be uploaded with a USB drive in moments, minimizing installation time.

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 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 parallel 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.

Bypass Isolation Power Frame Type, Closed Transition

STANDARD FEATURES:

- Single motion rack-out with doors closed
- Front Access
- Entry is Top or Bottom
- Isolated Compartments for improved safety
- Dual ATS capability – Bypass contactor can be controlled by the ATS controller in the bypass mode of operation. The 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 to control the Bypass isolation contactor provides “N+1” redundancy of a second fully functioning ATS.
- 4.3 inch Color Display
- Mimic diagram with Source Available and Connected LED indication
- Field-selectable multi-tap transformer panel permits operation on a wide range of system voltages
- Event logging and recording 450 time-stamped events
- System TEST pushbutton
- Programmable plant exerciser
- Modbus® RTU

VOLTAGE AND FREQUENCY SENSING:

- 3-Phase under and over voltage sensing on normal and emergency sources, plus load
- Under and over frequency sensing on normal, emergency, and load
- 3-Phase sequence sensing for phase sensitive loads
- 3-Phase voltage unbalance and loss sensing

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 Contacts: 1-N.O. & 1 N.C.

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
- ATS on Bypass
- Go to Neutral

CONTROL OUTPUTS (4 STANDARD):

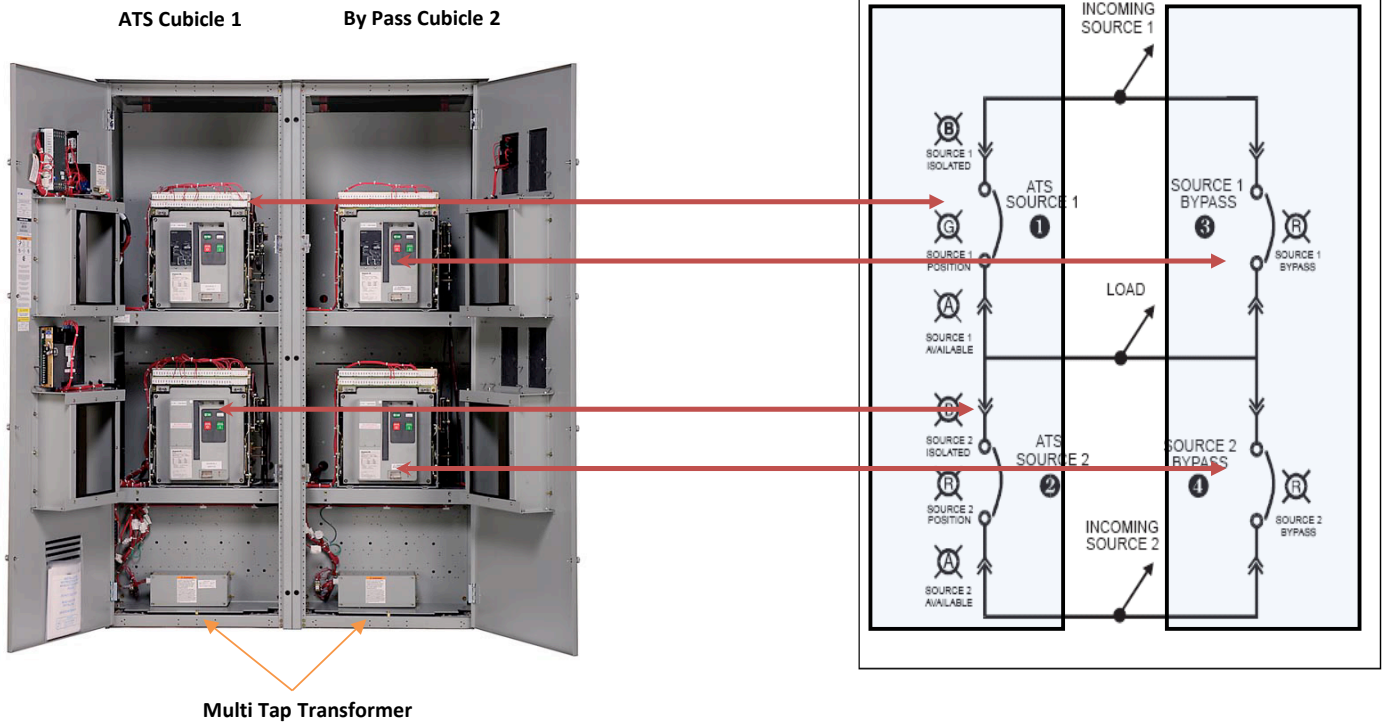
- Load sequence
- Selective Load shed
- Load bank control
- Pre/post-transfer
- Pre-transfer
- User remote control
- Source 1 available (standard)
- Source 2 available (standard)
- Source 1 connected
- Source 2 connected
- ATS not in automatic
- General alarm
- ATS in test
- Engine test aborted
- Cooldown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

Up to 20 available with Expandable Input/Output Modules

OPTIONAL FEATURES:

- 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
- TVSS
- Stainless steel cover for controller
- Selectable Retransfer
- Manual Generator Retransfer

Bypass Isolation Power Frame Type, Closed Transition



UL 1008 Withstand and Close-On Ratings as Listed (kA):

Rating When Used with Upstream Circuit Breaker

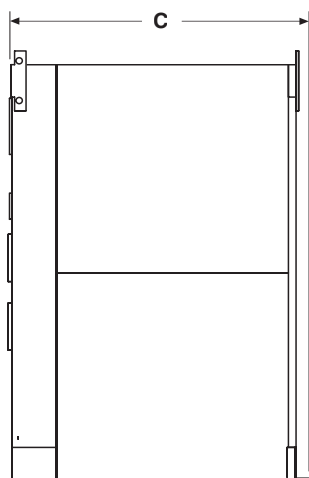
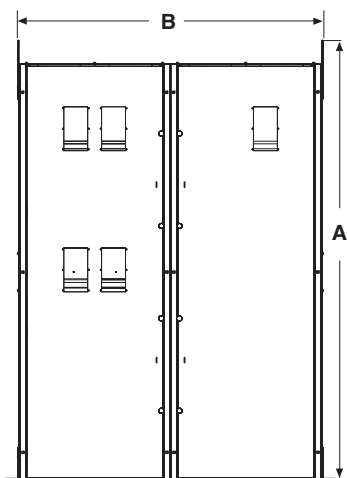
Transfer Switch Ampere Rating	3-Cycle 600V (kA)	30-Cycle 600V (kA)
1600	100	85
2000	100	85
2500	100	85
3200	100	85
4000	100	85 ¹
5000	—	85 ¹

1. UL1066 short-time withstand rating.

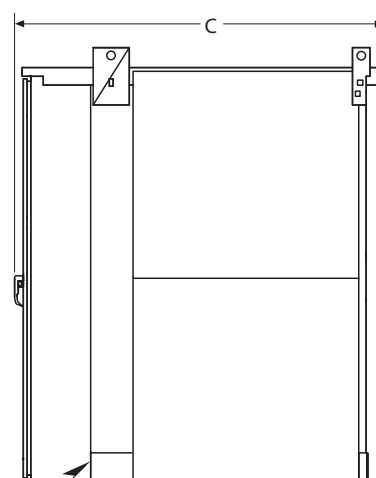
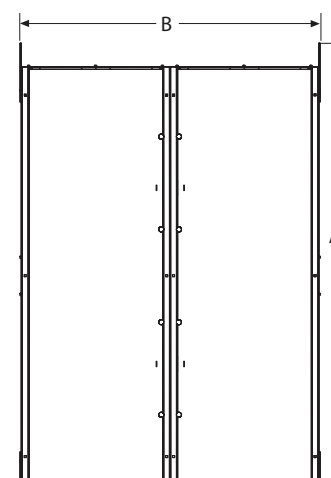
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UNIT DIMENSIONS:

1600–3200 Drawout/Single NEMA 1



1600–3200 Drawout/Single NEMA 3R



Door Within a Door Design

Bypass Isolation, Power Frame Drawout Transfer Switches

Approximate Dimensions in Inches (mm)

NEMA 1 Enclosed Drawout Transfer Switch					
Ampere Rating	Poles	Height A	Width B	Depth C	Shipping Weight Lbs (kg)
1600–2000	3	90.00 (2286.0)	64.00 (1625.6)	60.00 (1524.0)	3100 (1409)
1600–2000	4	90.00 (2286.0)	64.00 (1625.6)	60.00 (1524.0)	3700 (1682)
2500–3200	3	90.00 (2286.0)	64.00 (1625.6)	60.00 (1524.0)	4700 (2136)
2500–3200	4	90.00 (2286.0)	64.00 (1625.6)	60.00 (1524.0)	5500 (2500)

NEMA 3R Enclosed Drawout Transfer Switch					
Ampere Rating	Poles	Height A	Width B	Depth C	Shipping Weight Lbs (kg)
1600–2000	3	90.00 (2286.0)	64.00 (1625.6)	75.00 (1905.0)	3700 (1682)
1600–2000	4	90.00 (2286.0)	64.00 (1625.6)	75.00 (1905.0)	4300 (1955)
2500–3200	3	90.00 (2286.0)	64.00 (1625.6)	75.00 (1905.0)	5300 (2410)
2500–3200	4	90.00 (2286.0)	64.00 (1625.6)	75.00 (1905.0)	6000 (2730)

Standard Terminals

Dual rated Cu/Al

Ampere Rating	Normal, Emergency and Load	Neutral
1600	(6) 3/0–750 MCM	(24) 4/0–500 MCM
2000	(6) 3/0–750 MCM	(24) 4/0–500 MCM
2500	(9) 3/0–750 MCM	(30) 3/0–500 MCM
3200	(9) 3/0–750 MCM	(30) 3/0–500 MCM

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