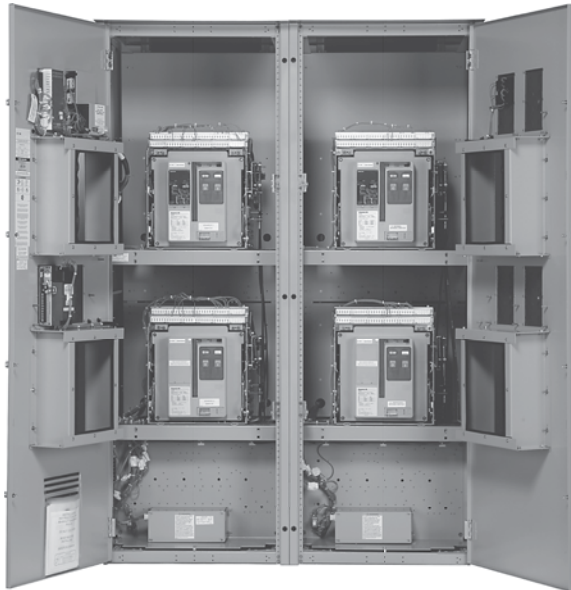


# Ideal for critical applications requiring selective coordination



Bypass Isolation 3200A (Without Deadfront)

The Eaton Magnum® bypass isolation automatic transfer switch is designed to provide unmatched performance, reliability and versatility for critical standby power applications. The switches are equipped with the Eaton ATC-900 controller that provides operational simplicity and field configuration capability, coupled with enhanced diagnostic and troubleshooting capabilities. A bypass isolation transfer switch may be used to provide emergency power to life safety and other critical loads where concurrent maintainability of the main transfer switch, without interruption of power to the load, is either desirable or required.

## Electrical ratings

- Operating temperature –20° to +70°C (–4° to +158°F)
- Ratings 200, 300, 400, 600, 800, 1000, 1200, 1600, 2000, 2500, 3200, 4000, 5000A
- Three- or four-pole (fourth pole is fully rated)
- Up to 600 Vac, 60 Hz or 50/60 Hz
- NEMA® 1, 3R
- UL® 1008 listed up to 4000A
- UL 891 5000A ratings

## Industrial design highlights

- Freestanding enclosure
- High withstand ratings
  - 100 kA standard 3-cycle rating
  - 85 kA standard 30-cycle rating
- Dual drawout on ATS and bypass
- Deadfront
- Safe manual transfer under load
- Electrically operated
- Magnum stored energy mechanism
- Quick make / quick break—switching times (<3 cycles)
- Multi-tap transformer
- True four-pole switched neutral
- Mechanically interlocked
- Integral overcurrent trip option
- Integrated service entrance rating option
- OSHPD listed

## Standard features

- ATC-900 controller
- Drawout cassette on ATS and bypass
- Source available contacts:
  - Source 1 available 1NO/1NC
  - Source 2 available 1NO/1NC
- Switch position contacts:
  - Source 1 position 1NO/1NC
  - Source 2 position 1NO/1NC
- Source 1 and Source 2 sensing:
  - Undervoltage/underfrequency
  - Overvoltage/overfrequency

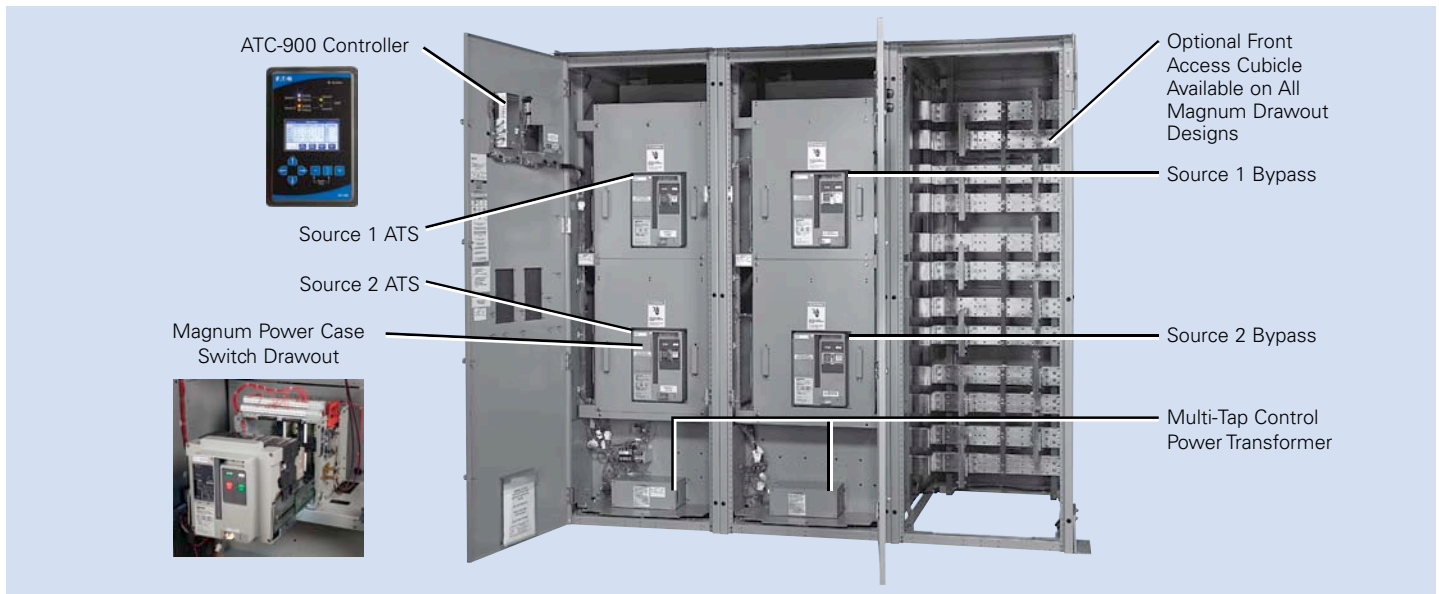
- Field-programmable time delays
  - Time delay engine start
  - Time delay normal to emergency
  - Time emergency to normal
  - Time delay engine cooldown
  - Time delay emergency failure
- LCD color-based display for programming, system diagnostics and Help menu
- Mimic diagram with source available and connected LED indication
- Four programmable inputs and outputs
- Standard Modbus® 485
- Password-protected access to control functions and set point programming.
- Two automatic plant exercisers—load or no load, daily, 7, 14, 28 or calendar date operation, 0–600 minute runtime

## Optional features

- Available UL 1449 Third Edition surge protection device (SPD)
- Automatic transfer operation with selectable (via programming) non-automatic or automatic retransfer with fail-safe
- Space heater with thermostat
- Digital multi-function power quality metering
- DC power input for uninterrupted monitoring of ATS status
- Integrated load metering
- Expandable I/O (up to 20 I/O total)
- Ethernet TCP/IP communications



Powering Business Worldwide



**2000A NEMA 1 Bypass Isolation**

**Dual drawout capability**

In a Magnum design bypass isolation switch, both the main ATS power case switches and the bypass power case switches are all drawout design. This standard feature allows the user the ability to withdraw, maintain or swap the assemblies.

**Selective coordination**

The Magnum bypass isolation switch is ideal for emergency, legally required standby systems or other critical operations requiring selective coordination. Magnum bypass switches up to 4000A are UL 1008 listed for 85 kA withstand rating for 30 cycles.

**Fast transfer time**

The Magnum transfer switch uses a high-speed transfer mechanism allowing open in-phase transfer on large ratings. This feature is factory selectable to be open in-phase transfer with a default to load voltage decay or a default to time delay neutral. The Magnum comes standard with a delayed transition.

**Integrated service entrance rating**

The factory addition of an optional overcurrent trip to the power case switch enables the bypass unit to be rated as a service entrance bypass isolation ATS. Selection of the overcurrent trip can be made from the series of Eaton Digitrip™ RMS trip units including the standard Digitrip 520 or optional 520M, 520MC or Digitrip 1150.

**Arcflash Reduction Maintenance System™**

The switch can be supplied with the optional Arcflash Reduction Maintenance System maintenance mode function with the selection of the Digitrip RMS 520MC or 1150 trip units. This feature will reduce arc flash incident energy that is generated on a fault condition.

**Multi-tap voltage selector**

Allows the transfer switch to be readily applied on most system voltages worldwide by connecting to the proper terminals. Available system voltages include 120, 208, 220, 230, 240, 380, 401, 415, 480 or 600 Vac, 50 or 60 Hz.



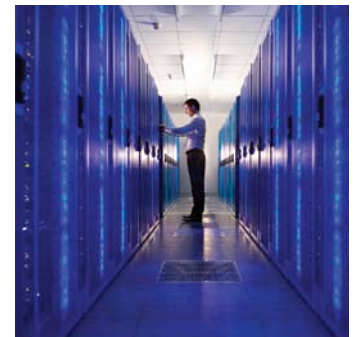
**Contact wear indication**

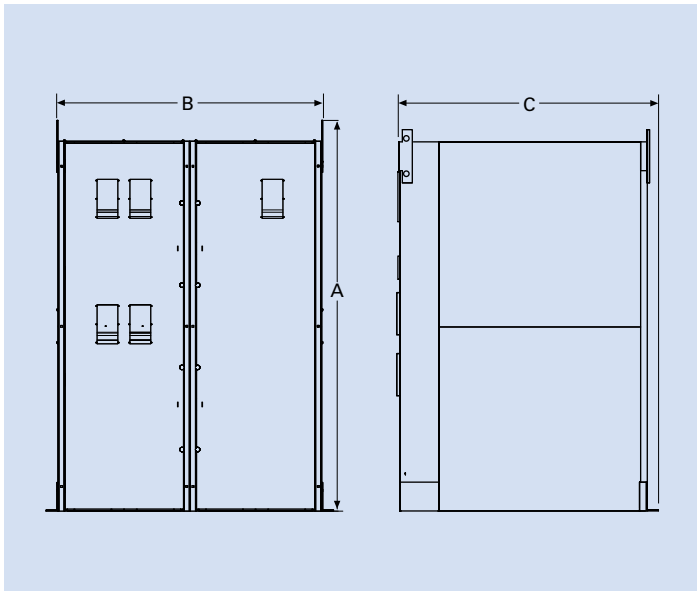
All Magnum switches include a contact wear indicator. The contact wear indicator is viewed by removing the arc chutes and shows if the contacts are good or if there is wear indicated.



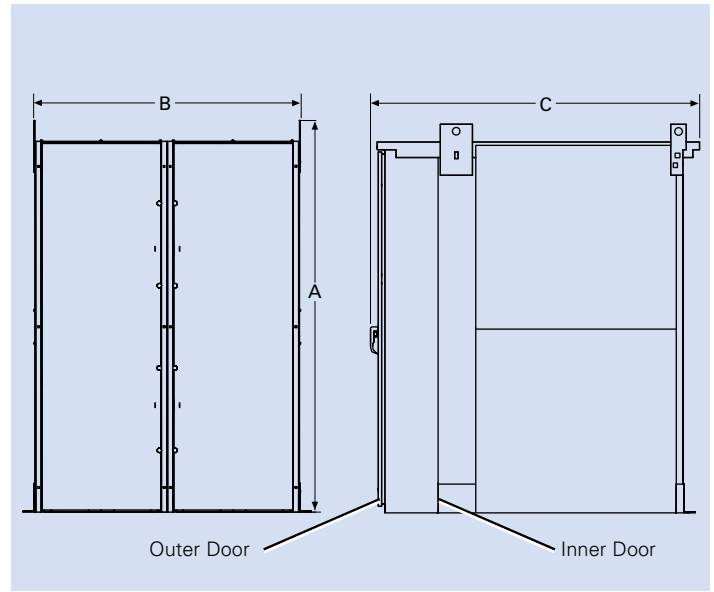
**ATC-900 controller**

Eaton's new ATC-900 controller brings ease of use, adaptability, supervisory and programming capabilities to mission-critical applications. The 4.3-inch color TFT display provides simple arrow keys for quick screen navigation. Event logging and recording of time-stamped events are easily viewed. Field configuration of I/O allows user adaptability to special requirements.





200-3200A Drawout NEMA 1

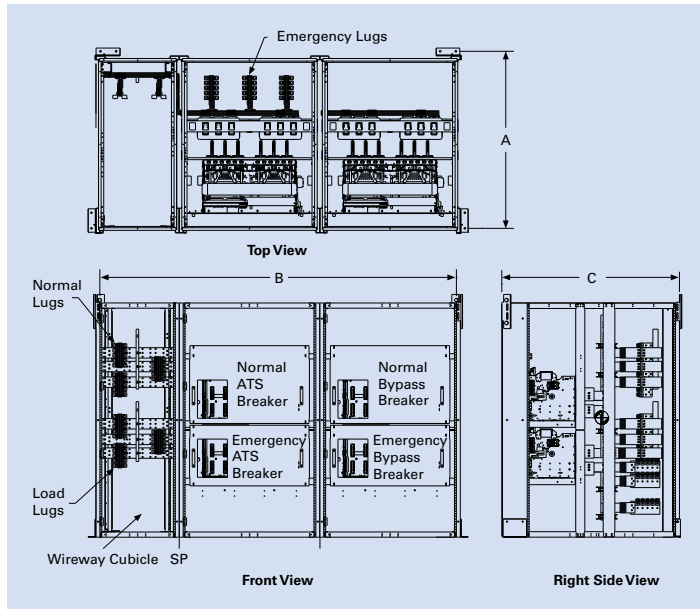


200-3200A Drawout NEMA 3R  
(Controller and Device Panels Mounted on Inner Door)

**Magnum bypass isolation drawout transfer switches**

Approximate dimensions in inches (mm).

Ampere Rating	Number of Poles	A Height	B Width	NEMA 1		NEMA 3R		Standard Terminals	
				C Depth	Shipping Weight Lbs (kg)	C Depth	Shipping Weight Lbs (kg)	Normal Emergency and Load	Neutral
200-2000	2	90.00 (2286.0)	64.00 (1625.6)	60.00 (1524.0)	3100 (1407)	75.00 (1905.0)	4100 (1861)	(6) 3/0-750 kcmil	(24) 4/0-500 kcmil
200-2000	3	90.00 (2286.0)	64.00 (1625.6)	60.00 (1524.0)	3100 (1407)	75.00 (1905.0)	4100 (1861)	(6) 3/0-750 kcmil	(24) 4/0-500 kcmil
200-2000	4	90.00 (2286.0)	64.00 (1625.6)	60.00 (1524.0)	3700 (1680)	75.00 (1905.0)	4700 (2134)	(6) 3/0-750 kcmil	(24) 4/0-500 kcmil
2500-3200	2	90.00 (2286.0)	64.00 (1625.6)	60.00 (1524.0)	4700 (2134)	75.00 (1905.0)	5700 (2588)	(9) 3/0-750 kcmil	(30) 4/0-500 kcmil
2500-3200	3	90.00 (2286.0)	64.00 (1625.6)	60.00 (1524.0)	4700 (2134)	75.00 (1905.0)	5700 (2588)	(9) 3/0-750 kcmil	(30) 4/0-500 kcmil
2500-3200	4	90.00 (2286.0)	64.00 (1625.6)	60.00 (1524.0)	5400 (2452)	75.00 (1905.0)	6500 (2951)	(9) 3/0-750 kcmil	(30) 4/0-500 kcmil



4000-5000A Drawout NEMA 1

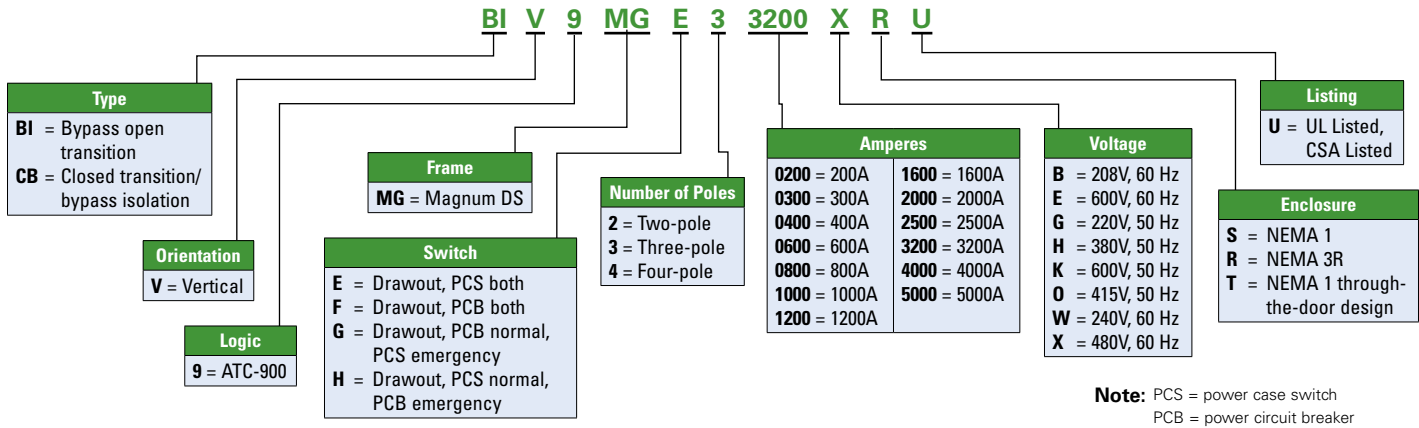
**Magnum bypass isolation drawout transfer switches**

Ampere Rating	Number of Poles	A Height	B Width	C Depth	Shipping Weight Lbs (kg)
<b>NEMA 1 Enclosed Drawout Transfer Switch</b>					
4000	2 or 3	90.00 (2286.0)	137.00 (3479.8)	60.00 (1524.0)	6900 (3133)
4000	4	90.00 (2286.0)	137.00 (3479.8)	60.00 (1524.0)	7600 (3450)
5000	2 or 3	90.00 (2286.0)	137.00 (3479.8)	60.00 (1524.0)	7900 (3587)
5000	4	90.00 (2286.0)	137.00 (3479.8)	60.00 (1524.0)	8600 (3904)
<b>NEMA 3R Enclosed Drawout Transfer Switch</b>					
4000	2 or 3	90.00 (2286.0)	137.00 (3479.8)	75.00 (1905.0)	7900 (3587)
4000	4	90.00 (2286.0)	137.00 (3479.8)	75.00 (1905.0)	8600 (3904)
5000	2 or 3	90.00 (2286.0)	137.00 (3479.8)	75.00 (1905.0)	8900 (4041)
5000	4	90.00 (2286.0)	137.00 (3479.8)	75.00 (1905.0)	9600 (4358)

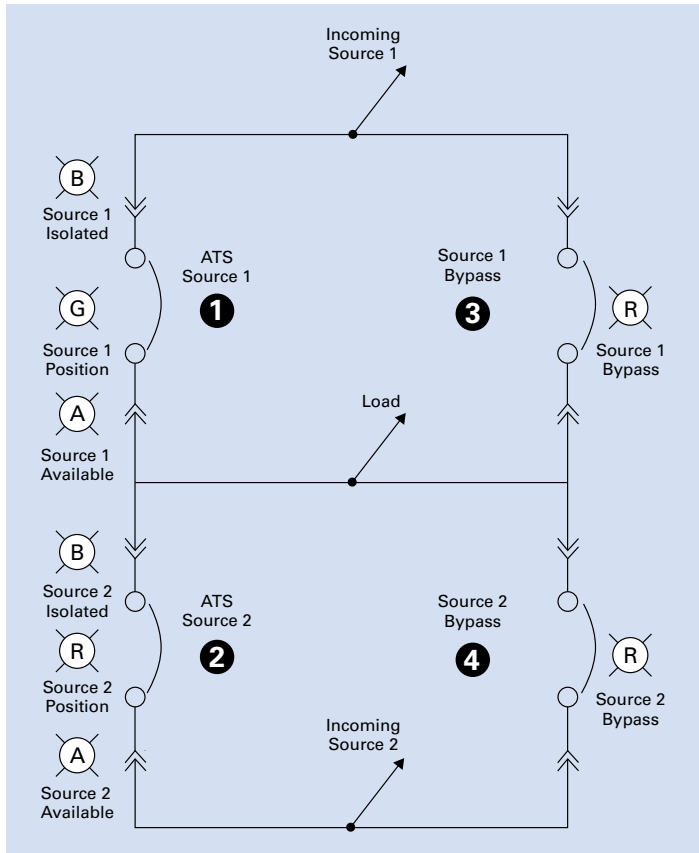
**Terminals**

Ampere Rating	Normal, Emergency and Load	Neutral
4000	(10) 3/0-750 kcmil	(48) 4/0-500 kcmil
5000	(12) 3/0-750 kcmil	(48) 4/0-500 kcmil

## Automatic Bypass Isolation Magnum-Based Transfer Switch Catalog Numbering System



## Bypass Isolation Diagram



Typical Bypass Isolation Switch Schematic

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

Transfer Switch Ampere Rating	3 Cycle Short-Circuit 600V (kA)	30 Cycle Short-Time 600V (kA)
<b>UL 1008</b>		
800	100	85
1000	100	85
1200	100	85
1600	100	85
2000	100	85
2500	100	85
3000	100	85
3200	100	85
4000	100	—
<b>UL 891</b>		
4000	—	85 ②
5000	—	85 ②

① Ratings used for coordination with upstream breakers with short-time ratings.

② UL 1066 short-time withstand rating.

## Fully rated fourth pole (switched neutral)

Eaton provides a fully rated switched neutral or fourth pole, meaning that the fourth pole has withstand, interrupt and closing ratings identical to the power contacts. The neutral pole is operated on a common shaft with the power contacts, thereby ensuring simultaneous opening and closing of the switched neutral.

Eaton's fully rated fourth pole eliminates typical problems with a three-pole overlapping neutral:

- Eliminates nuisance ground trips at the main due to circulating zero sequence harmonic current between sources
- Reduction in ground current due to isolated single ground point lowers arc-flash levels and reduces generator damage
- Eliminates potential for faults to propagate across overlapping neutral; fully rated fourth pole will handle as a normal operation
- Does not generate voltages that exceed normal phase voltage

**Note:** For more detail, reference Eaton white paper *Three- and Four-Pole Transfer Switching Characteristics*, IA08700002E.

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 Printed in USA  
 Publication No. PA140001EN / Z14948  
 March 2014