

# Service entrance rated contactor-based ATS



Featuring service entrance rated contactor-based  
ATS 600–1000 A

Ideal for service entrance application requiring  
UL® 1008 with a 100% load factor

Eaton has expanded its robust portfolio of automatic transfer switch (ATS) solutions with a contactor-based design specifically for service entrance applications. The updated ATS is not only compact and cost-effective, it is also simple to operate while offering a highly flexible selection of configurations to optimize protection against momentary losses of power.

Available with ratings from 40 to 1600 A, the UL 1008 100% rated innovative ATS design enables a small footprint due to integration of the ATS and the breaker into a single structure. Installation can be made directly at the point of service entrance, which can eliminate the need for separate upstream fault protection and respective power interconnections.

## FEATURES AND BENEFITS

### Enhanced flexibility

- Withstand current ratings across the entire line allow you to easily select the right transfer switch for your application
- Rated for 40–1600 A up to 480 V in two-, three- or four-pole configurations, and available in open in-phase transition or delayed transition styles
- Available with Eaton Series G® breaker featuring a 310+ electronic trip unit provides adjustable ratings and breaker curve shaping

### Improved performance

- Listed to UL 1008 with 100% load rating for reliable operation
- User-friendly front panel interface simplifies routine functions, programming and setting adjustments
- Seamless integration with Eaton's ATC-300+ and ATC-900 controllers for intelligent monitoring, control and programming

### Increased safety

- Separate compartments for the breaker and ATS section minimizes the potential for arc flash exposure
- Compartmentalized design reduces personal protection equipment (PPE) requirements during routine maintenance
- Optional 310+ trip unit with Arcflash Reduction Maintenance System™ can meet NEC® Section 240.87 for Arc Energy Reduction

### Simplified installation and maintenance

- Service entrance design helps eliminate the need for separate upstream fault protection and respective power interconnections
- Separate breaker and ATS compartments provide easier access to cable entrance areas
- Contactor-based design features less moving parts for increased reliability and space savings

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## DESIGN FEATURES

### Integrated service entrance rating

The service entrance rated contactor design has been tested and listed to UL 1008 as suitable for use as service equipment with a 100% load rating. The integrated breaker and automatic transfer switch listing to UL 1008 eliminates application or sizing concerns when applying an ATS needing 100% load rating.



### Separate compartments for ATS and breaker—600 to 1000 A, NEMA 1

The standard design includes a separate deadfront compartment for the incoming breaker and separate compartment for the ATS. This innovative design provides simplified access to cable entrance areas and can reduce personal protection equipment (PPE) requirements when performing installation or routine maintenance.



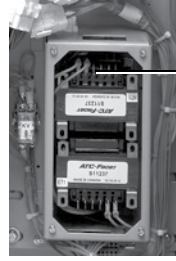
### Electronic trip unit on SE breaker

The service entrance breaker is an Eaton Series G breaker with the 310+ trip unit that provides adjustable rating and breaker curve shaping. The trip unit comes with either LSI or LSIIG curve shaping capability. The long delay and short delay functions enable the breaker curves to be manipulated for upstream and downstream breaker coordination.



### Arcflash Reduction Maintenance System

The Eaton 310+ electronic trip units address the NEC Section 240.87 for Arc Energy Reduction. These molded-case circuit breakers provide two approved methods to reduce arc energy: energy-reducing maintenance switching with local status indicator and zone selective interlocking.



Transformer panel allows for easy field changes to voltage configurations

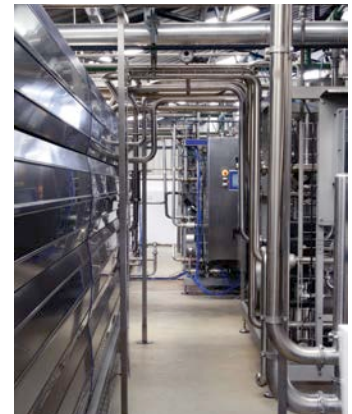
### Multi-tap voltage selector

Allows the transfer switch to be readily applied on most system voltages by connecting to the proper terminals. Available system voltages include 120, 208, 220, 240, 277 or 480 Vac, 60 Hz. Units 600 A or larger include the quick reconnect design multi-tap transformer.



### Breaker operation

The upstream service rated breaker includes a door-mounted keyed switch that will allow the breaker to be tripped to the OFF position and electrically locked out. The keyed switch is a three-position switch that has a normal position, ATS to neutral position, and disconnect position that indicates the breaker has been tripped. Once in the disconnect position, the key may be removed. In addition, there is a ship loose handle hasp that allows the breaker handle to be mechanically locked out.



### Standard features

- Auxiliary relay contacts:
  - Source 1 present 2NO and 2NC
  - Source 2 present 2NO and 2NC
- Switch position indication contacts:
  - Source 1 position NO and 1NC
  - Source 2 position NO and 1NC
- Source 1 and Source 2 sensing:
  - Undervoltage/underfrequency
  - Overvoltage/overfrequency
  - Three-phase rotation protection
  - Three-phase voltage unbalance
  - Pretransfer signal contacts 1NO/1NC (with three-position mechanism)
  - Go to emergency (Source 2)
  - Seven field-programmable time delays
  - LCD-based display for programming, system diagnostics and Help message display
- Mimic diagram with source available and connected LED indication
- Time-stamped history log
- System TEST pushbutton
- Programmable plant exerciser—OFF, daily, 7-, 14-, 28-day interval selectable run time 0–600 minutes no load/load with fail-safe
- Modbus® RTU via RS-485
- Source 1 Eaton Series G breaker with 310+ electronic trip unit with LSI

### Electrical ratings

- Operating temperature –20 °C to +70 °C (–4 °F to +158 °F)
- Ratings 40, 80, 100, 150, 200, 225, 260, 400, 600, 800, 1000, 1200, 1600
- Two-, three- or four-pole (fourth pole is fully rated)
- Up to 480 Vac, 60 Hz
- NEMA® 1, 3R
- UL 1008 listed (CSA® C22.2 No. 178 certified), with 100% rated load capability

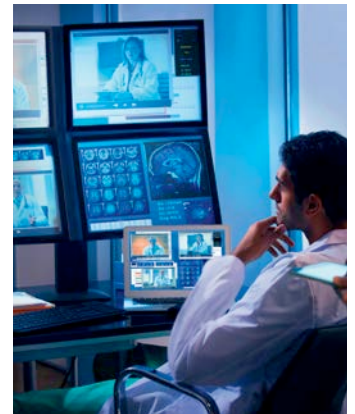
### Optional features

- Available UL 1449 Third Edition surge suppression device for power/controller, engine start circuit, phone and cable connections
- Space heater with thermostat
- Eaton IQ and Power Xpert® series metering
- Open in-phase transition, time delay neutral or in-phase with a default to time delay neutral transfer
- ATC-900 controller
- Source 2 Inhibit
- Manual retransfer
- Remote annunciator with control
- Ethernet communications (PXG Gateway)
- Breaker with LSIG electronic trip units
- Breaker with Arcflash Reduction Maintenance System

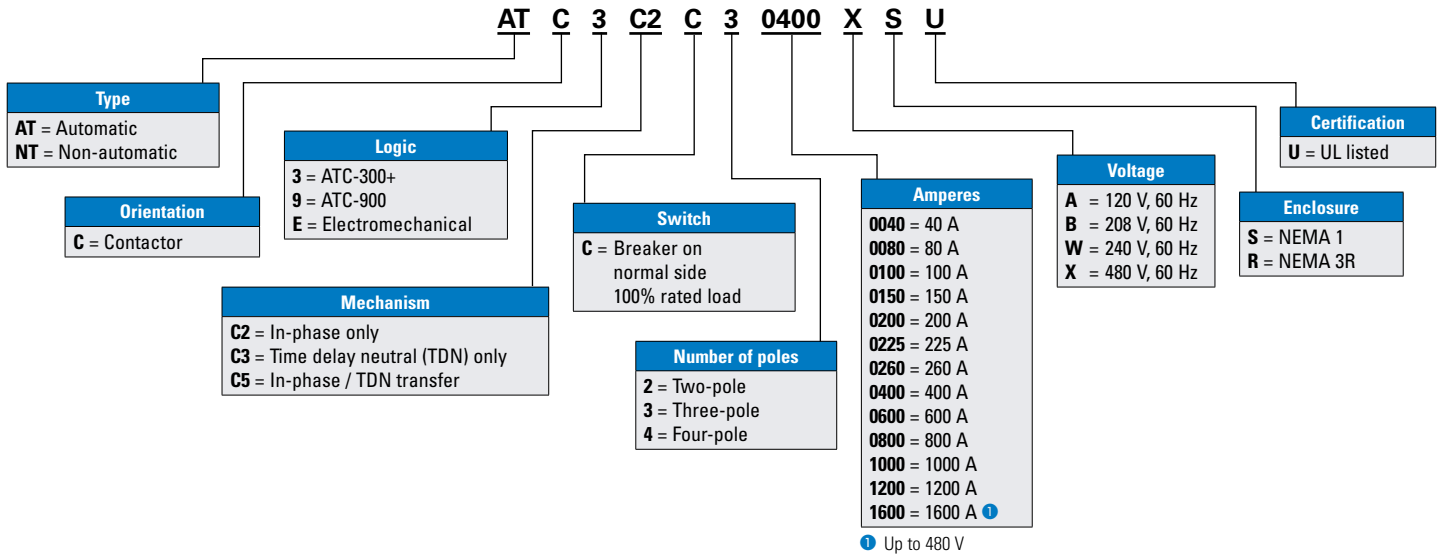
### Service entrance rated contactor-based transfer switch 40–1600 A, 100% load rating—dimensions and approximate shipping weight

Ampere rating	Enclosure	A (height)	B (width)	C (depth)	Normal	Emergency	Load	Neutral	Weight in lb (kg)
40–100 at 480 V	N1/N3R	54.60 (1386.8)	19.81 (503.2)	17.59 (446.8)	(1) #14–2/0	(1) #14–2/0	(1) #14–2/0	(3) #14–1/0	190 (86)
150–200 at 480 V	N1/N3R	54.60 (1386.8)	19.81 (503.2)	17.59 (446.8)	(1) #6–250 kcmil	(1) #6–250 kcmil	(1) #6–250 kcmil	(3) #6–250 kcmil	200 (91)
225–400 at 480 V	N1/N3R	79.00 (2006.6)	25.25 (641.4)	22.46 (570.5)	(1) 3/0–750 kcmil	(2) 3/0–250 kcmil	(2) 3/0–250 kcmil	(6) 250–500 kcmil	300 (136)
600–800 at 480 V	N1/N3R	79.00 (2006.6)	40.12 (1019.0) <sup>1</sup>	22.59 (573.8)	(4) 4/0–500 kcmil	(4) 1/0–750 kcmil	(4) 1/0–750 kcmil	(12) 4/0–500 kcmil	900 (409)
1000 at 480 V	N1	79.00 (2006.6)	40.37 (1025.4)	22.59 (573.8)	(4) 4/0–500 kcmil	(4) 1/0–750 kcmil	(4) 1/0–750 kcmil	(12) 4/0–500 kcmil	900 (409)
1200 at 480 V	N1	90.00 (2286.0)	40.00 (1016.0)	48.22 (1224.8)	(4) 500–1000 kcmil	(4) 1/0–750 kcmil	(4) 1/0–750 kcmil	(12) 4/0–500 kcmil	1400 (636)
1000–1200 at 480 V	N3R	90.00 (2286.0)	40.00 (1016.0)	62.50 (1587.5)	(4) 500–1000 kcmil	(4) 1/0–750 kcmil	(4) 1/0–750 kcmil	(12) 4/0–500 kcmil	1450 (658)
1600 at 480 V	N1	90.00 (2286.0)	40.00 (1016.0)	48.22 (1224.8)	(4) 500–1000 kcmil	(4) 1/0–750 kcmil	(4) 1/0–750 kcmil	(12) 4/0–500 kcmil	1600 (726)
	N3R	90.00 (2286.0)	40.00 (1016.0)	62.50 (1587.5)	(4) 500–1000 kcmil	(4) 1/0–750 kcmil	(4) 1/0–750 kcmil	(12) 4/0–500 kcmil	1650 (749)

<sup>1</sup> Four-pole is 44.07 (1119.4).



## Catalog numbering system



## UL 1008 short-circuit withstand and close-on ampere ratings

UL 1008 ampere rating	Mechanism	Withstand current ratings rms symmetrical
		480 V
40, 80, 100	C2	30,000
150, 200	C2	30,000
225, 260, 400	C2	50,000
40, 80, 100, 150, 200	C3, C5	50,000
225, 260, 400	C3, C5	50,000
600, 800, 1000, 1200	C3, C5	65,000
1600	C3, C5	65,000

## ATC-300+ and ATC-900 controller features

Description	Automatic controllers	
	ATC-300+	ATC-900
Basic transfer control, plant exerciser, time delays, self diagnostics and system settings	Standard	Standard
Source mimic diagram with LED indication	Standard	Standard
Engine test and start contact	Standard	Standard
Dual source control power input	Standard	Standard
Liquid crystal display (LCD)	Standard	Standard
Programmable set points and plant exerciser	Standard	Standard
Password protection	Standard	Standard
Time stamped history and event log	Standard	Standard
Time delay bypass	Standard	Standard
Go to source 2 control input	Standard	Standard
Pre-transfer and general alarm control outputs	Standard	Standard
Lockout and monitor modes	Standard	Standard
Source status output relay contacts	Standard	Standard
Modbus® RTU communication	Standard	Standard
Manual retransfer control input	Optional	Standard
Source 2 input / load shed input	Optional	Standard
USB port—profile and data management		Standard
Preferred source selection		Standard
Dual generator capability		Standard
User configurable inputs/outputs		Standard
Advanced diagnostics and troubleshooting with pre-/post-event data capture		Standard
Integrated load metering		Optional
Load management with selective load shed		Optional
DC voltage control power input		Optional
Three source ATS master/slave control		Optional
Modbus TCP/IP communication <sup>1</sup>	Optional	Optional

<sup>1</sup> Modbus TCP/IP ..... resources use of Modbus RTU port.

To learn more, contact your local sales representative or visit [Eaton.com/ats](http://Eaton.com/ats)

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