Power Generation

RA series
Transfer Switches

The RA Automatic Transfer Switch is integrated with the RS series genset. These products are Listed to UL 1008, the Standard for Transfer Switch Safety. The switch and generator set combination is specifically designed for a simplified, quicker installation.

These UL 1008 switches are suitable for standby power systems in residential and light commercial applications. These RA products adhere to National Electrical Code (NEC) and National Fire Protection Association (NFPA) requirements.

The RA transfer switch monitors utility power 24 hours a day and 7 days a week. When utility power becomes unsatisfactory or fails; the generator set is signaled to start, then automatically transfers the load. When stable utility voltage returns, the transfer switch will automatically switch electrical load from the generator to the utility. No action is required by the home owner.

The RA switch is also available in Service Entrance models. A service entrance version is also UL 1008 listed and makes use of a UL 489 listed circuit breaker.

Features

Mechanically interlocked contactor

- Long-life, high pressure, silver alloy contact resists burning and pitting
- A powerful and economical solenoid drives the mechanism

UL 489 Listed circuit breaker

Solid bus bar connection

- Between circuit breaker and transfer switch

Neutral and ground bar

- Fully rated
- Bonding jumper on neutral and ground
- Silver plated copper ground and neutral bus

Ease of connection

- Solderless screw type terminals for external power connections

Transfer switch mechanism

- A powerful and economical solenoid powers RA Transfer Switches.
- Independent break-before-make action is common for 2-pole.
- Mechanical interlock prevents simultaneous closing of normal and emergency contacts.
- Electrical interlocks prevent simultaneous closing signals to normal and emergency contacts and interconnection of normal and emergency sources through the control wiring.
- Long-life, high pressure, silver alloy contacts resist burning and pitting. Contacts are mechanically held in both normal and emergency positions for reliable, quiet operation.

Specifications

Voltage rating	Transfer switches up to 240 VAC, 50 Hz or 60 Hz.
Amperage rating	Transfer switches rated for 100, 200 and 400 A continuous amperes.
Arc interruption	Multiple leaf arc chutes cool and quench the arcs. Barriers prevent interphase flashover.
Neutral bar	A full current-rated neutral bar is standard on enclosed 2-pole transfer switches.
Auxiliary contacts	Two contacts rated at 5A continuous at 100 VAC or 2.5A continuous at 200 VAC (one for each source) are provided for customer use. Wired to terminal block for easy access.
Storage temperature	-25˚C (-13˚F) to 55˚C (131˚F)
Humidity	Up to 90% @ 20˚C
Altitude	Up to 2,000 m (6,561 ft) without derating
Total transfer time (source-to-source)	Will not exceed 100 msecs with normal voltage applied to the actuator.
Manual operation handles	Transfer switches are equipped with a removable operating handle which allows operation during servicing in order to facilitate troubleshooting with sources of power disconnected

UL 1008 withstand and closing ratings

Transfer switch ampere	Coordinated molded case breakers
100A	22,000
200A	22,000
100A SE	10,000
200A SE	10,000
400A	35,000
400A SE	35,000

Enclosures

Wire bend space complies with 2013 NEC.

Dimensions - transfer switch in UL type 3R enclosure

Model and Amp rating	Height		Width		Depth		Weight		
	in	Mm	in	mm	in	mm	lb	kg	Outline drawing
100 A	24.0	619	17.0	433	7.4	187	33	15	A044R213
200 A	27.1	688	18.2	463	7.4	187	46	21	A044R213
100A SE	23.3	591	19.8	503	7.2	182	58	26	A044R213
200A SE	23.3	591	19.8	503	7.2	182	58	26	A044R213
400 A	36.9	937	24.9	633	11.1	282	64.5	29.3	A049Z141
400A SE	47.9	1217	23.4	594	11.3	287	95.6	43.4	A049Z141

Transfer switch lug capacities

Model and Amp rating	Size
100A	#14 AWG to 2/0 CU/AL
200A	#6 AWG to 300 MCM CU/AL
400A	3/0 to 600 MCM and #4 to 250 MCM

Service entrance transfer switch lug capacities

Model and Amp rating	Size		
	Utility	Load, neutral and generator	Ground
100A SE	#4 AWG to 300 MCM CU/AL	#14 AWG - 2/0 CU/AL	#14 AWG - 1/0 CU/AL
200A SE	#4 AWG to 300 MCM CU/AL	#6 AWG - 300 MCM CU/AL (transfer switch and neutral only) #14 AWG - 2/0 CU/AL (generator)	#14 AWG - 1/0 CU/AL
400A SE	#2 to 250 MCM	3/0 to 600 MCM	#6 to 3/0

Submittal details

Description	Part #	Rating	Voltage	Enclosure
RA112N3	A045P692	100 A	120/240 V 1 phase	3R
RA212N3	A045P694	200 A	120/240 V 1 phase	3R
RA112S3	A045P696	100 A SE	120/240 V 1 phase	3R
RA212S3	A045P697	200 A SE	120/240 V 1 phase	3R
RA412N3	A050W633	400 A	120/240 V 1 phase	3R (Aluminum)
RA412S3	A050W853	400 A SE	120/240 V 1 phase	3R (Aluminum)

Certifications

All switches are UL 1008 Listed with UL Type Rated cabinets and UL Listed CU-AL terminals.

All switches comply with NEMA ICS 10.

All switches comply with NFPA 70.

Power Generation

Our energy working for you.™
www.cumminspower.com

North America
1400 73rd Avenue N.E.
Minneapolis, MN 55432 USA

Phone 763 574 5000
Fax 763 574 5298

Asia Pacific
10 Toh Guan Road #07-01
TT International Tradepark
Singapore 608838

Phone 65 6417 2388
Fax 65 6417 2399

Brazil
Rua Jati, 310
Guarulhos – Sao Paulo
CEP – 07180-140

Phone 55 11 2186 4195
Fax 55 11 2186 4729

Europe, CIS, Middle East & Africa
Manston Park Columbus Ave.
Manston Ramsgate
Kent CT 12 5BF United Kingdom

Phone 44 1843 255000
Fax 44 1843 255902

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