Transfer switch RSS residential

> Specification sheet

100 - 200 Amp

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Description

The RSS Automatic Transfer Switch combines dependability and flexibility in a small, economical package. RSS switches are suitable for standby power systems in residential and light commercial applications. The RSS100 and RSS200 products are built to satisfy the back up power requirements of virtually any residential or light commercial application.

The RSS residential products are Listed to UL 1008, the Standard for Transfer Switch Safety. Cummins Onan residential products adhere to National Electrical Code (NEC) and National Fire Protection Association (NFPA) requirements.

RSS transfer switches monitor utility power 24 hours a day and 7 days a week. When utility power becomes unsatisfactory or fails; the controller signals the generator to start, then 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.

UL	All switches are UL 1008 Listed with UL Type Rated cabinets and UL Listed CU-AL terminals.
CSA	All switches are certified to CSA C22.2 No. 178 up to 120/240 VAC.
NEMA	All switches comply with NEMA ICS 10.
NFPA	All switches comply with NFPA 70, 99 and 110.

Features

Mechanically interlocked contactor

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

Fully automatic control

- User-friendly front panel is configurable without special tools
- 12 hour exercise offset
- Selectable exercise at repeatable intervals

Battery charger

- Integrated, automatic 2 amp regulated charger
- Simplifies installations and reduces overall installation costs.

Neutral and ground bar

- Fully rated
- Silver plated copper ground and neutral bus

Ease of connection

- Solderless screw type terminals for external power connections

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Transfer switch mechanism

- A powerful and economical solenoid powers RSS Transfer Switches.
- Independent break-before-make action.
- 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 and 200 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 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

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PowerCommand® microprocessor control

- Simple, easy-to-use control provides transfer switch information and operator controls
- LED lamps for source availability and source connected indication, exercise mode, and test mode. LED status lamps also provided for control set-up and configuration.
- Control pushbuttons to initiate test, override time delays, and set exercise time.
- Integral exerciser clock
- Control is prototype-tested to withstand voltage surges per EN 60947-6-1.
- Gold-flashed generator start contacts

Control functions

Voltage sensing: All phases on the normal source and single phase on generator source. Normal Source Pickup: adjustable 90-95%, Dropout: adjustable 70-90% of nominal voltage; Generator Source Pickup: 90%, dropout: 75% of nominal voltage.

Frequency sensing: Generator Source Pickup: 90% of nominal frequency; Dropout: 75% of nominal frequency.

Exerciser clock: Switch is furnished with an integral engine exerciser configurable for operation on a 7, 14, 21, or 28-day cycle with a fixed exercise period duration of 20 minutes. A 12-hr exerciser time offset allows for the convenient setting of exercise time without the need to activate the timer. Software selectable capability allows for the exercising of the generator with or without load.

Time-delay functions

Engine start: Prevents nuisance genset starts due to momentary power system variation or loss. Adjustable: 0-10 seconds; default: 3 seconds.

Transfer normal to emergency: Allows genset to stabilize before application of load. Prevents power interruption if normal source variation or loss is momentary. Adjustable 0-300 seconds, default 5 seconds.

Retransfer emergency to normal: Allows the utility to stabilize before retransfer of load. Prevents needless power interruption if return of normal source is momentary. Adjustable 0-30 minutes, default 10 minutes.

Genset stop: Maintains availability of the genset for immediate reconnection in the event that the normal source fails shortly after transfer. Allows gradual genset cool down by running unloaded. Adjustable 0-30 minutes, default 10 minutes.

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UL 1008 withstand and closing ratings

Transfer switch ampere	Coordinated molded case breakers
100 A	22,000
200 A	22,000

Enclosures

The transfer switch and control are mounted in a lockable enclosure. Wire bend space complies with 2008 NEC.

Dimensions - transfer switch in UL type 3R enclosure

	Height		Width		Depth		Weight		
Amp rating	in	Mm	in	mm	in	mm	lb	kg	Outline drawing
100	24.0	619	17.0	433	6.7	157	33	15	0500-4502
200	27.1	688	18.2	463	6.7	170	46	21	0500-4503

Transfer switch lug capacities

Amp rating	Size
100	14 AWG to 2/0 CU/AL
200	6 AWG to 300 MCM CU/AL

Submittal details

Description	Part #	Rating	Voltage	Enclosure
RSS 100-6634	0306-5190	100 Amp	120/240V, 1 phase	3R
RSS 200-6635	0306-5252	200 Amp	120/240V, 1 phase	3R

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