# **KOHLER** POWER SYSTEMS

Automatic Transfer Switch 100-200 Amps





100 Amp with Load Center



200 Amp



200 Amp Service Entrance

# Model RRT Automatic Transfer Switch

The Model RRT automatic transfer switch is designed for use only with Kohler® Model 14RES/RESL or 20RES/RESL generator sets equipped with RDC or DC generator set/transfer switch controls. The transfer switch operation is controlled by the RDC/DC integrated generator set/transfer switch controller, which is mounted on Model 14RES/RESL and 20RES/RESL generator sets.

### **Available Models**

- 100 amp with prewired Square D type QO load center uses up to 16 single-pole circuit breakers; NEMA 1 enclosure for indoor installation
- 200 amp with NEMA 3R ANSI 49 gray padlockable enclosure for outdoor or indoor installation (no load center)
- 200 amp service entrance-rated model with NEMA 3R enclosure for outdoor or indoor installation (no load center)

#### Standard Features

- Provides the low-speed quiet weekly diagnostic test function and smart engine cooldown on Kohler<sup>®</sup> Model 14RES/RESL and 20RES/RESL generator sets
- Allows utility voltage display on the RDC/DC integrated generator set/transfer switch controller, available exclusively on Kohler<sup>®</sup> Model 14RES/RESL and 20RES/RESL generator sets
- Interface board for connection to the Model RDC or DC generator set/transfer switch controller (mounted on Model 14RES/RESL and 20RES/RESL generator sets)
- UL listed
  - Models with load centers, UL 67 listed, file #E251086
  - Models without load centers, UL 1008 listed, file #E58962
- CSA certified, file #LR58301 (not applicable to service entrance models)
- 240 VAC, 100/200 Amps
- Two-pole, single-phase open-transition transfer switch
- Contactor electrically and mechanically interlocked
- Double throw inherently interlocked design
- Solid neutral
- Contactor manually operable for maintenance purposes
- Silver alloy main contacts
- Transfer switches are 100% equipment rated and can be applied at the rated current without derating (non-service entrance models)
- Service entrance models include disconnect circuit breakers on both sources (80% rated)
- Five-year limited warranty

<b>Environmental Specifications</b>				
Operating temperature:	$-20^{\circ}\text{C}$ to $70^{\circ}\text{C}$ ( $-4^{\circ}\text{F}$ to $158^{\circ}\text{F}$ )			
Storage temperature:	−40°C to 85°C (−40°F to 185°F)			
Humidity:	5 to 95% noncondensing			

Interface Module Specifications				
Load Control Contact Rating	10 A @ 250 VAC			
Load Control Wire Size	#12-18 AWG			
Controller Interface Connection Wire Size	(4) #12-24 AWG			

Cable Sizes  AL/CU UL-Listed Solderless Screw-Type Terminals for External Power Connections					
Switch Size, Amps	Normal and Emergency (per phase)	Load (per phase)	Neutral	Ground	
100 B	(1) #14 to 1/0 AWG	per customer-supplied circuit breaker	(1) #4 to 2/0 AWG (main) (30) #4 to 14 AWG (branch)	(9) #14 to #4 AWG	
200	(1) #6 AWG to 250 KCMIL	(1) #6 AWG to 250 KCMIL	(3) #6 AWG to 250 KCMIL	(9) #14 to #4 AWG	
200 SE	(1) #4 AWG to 300 KCMIL	(1) #6 AWG to 250 KCMIL	(1) #6 AWG to 250 KCMIL	(3) #14 to #1/0 AWG	

B = Load center model

SE = Service entrance model

### **Codes and Standards**

The ATS meets or exceeds the requirements of the following specifications:

- Underwriters Laboratories UL 67, Enclosed Panel Boards (load center models) file #E251086
- Underwriters Laboratories UL 1008, Standard for Automatic Transfer Switches for Use in Emergency Systems, file #E58962
- Underwriters Laboratories UL 508, Standard for Industrial Control Equipment
- CSA certified, file #LR58301 (not applicable to service entrance models)
- NFPA 70, National Electrical Code
- NFPA 110, Emergency and Standby Power Systems
- IEEE Standard 446, IEEE Recommended Practice for Emergency and Standby Power Systems for Commercial and Industrial Applications
- IEEE C37.90.1, 2000, EFT/Surge of Relay Systems

- NEMA Standard IC10-1993, AC Automatic Transfer Switches
- ANSI C37.90.1 (IEEE472), 2000, EFT/Surge Relay Systems
- EN61000-4-5 Surge Immunity Class 4 (voltage sensing and programmable inputs only)
- EN61000-4-4 Fast Transient Immunity Severity Level 4
- IEC Specifications for EMI/EMC Immunity
  - O CISPR 11, Radiated and Conducted Emissions, Class B
  - o IEC 61000-4-2, 2001, Electrostatic Discharge
  - o IEC 61000-4-3, 2002, Radiated Immunity
  - IEC 61000-4-4, 2001, Electrical Fast Transients (Bursts)
  - IEC 61000-4-5, 2001, Surge Voltage Immunity
  - o IEC 61000-4-6, 2003, Conducted RF Immunity
  - IEC 61000-4-8, Magnetic Field Immunity
  - O IEC 61000-4-11, Voltage Dips and Interruptions

## **Contactor Ratings with Coordinated Circuit Breakers**

The transfer switches are UL listed at 240 VAC maximum. The following table lists contactor withstand current ratings (WCR) for 100–200 ampere non-service entrance rated switches with specific manufacturer's circuit breakers per UL and Canadian safety standards. Suitable for control of motors, electric discharge lamps, tungsten filament lamps and electric heating equipment where the sum of motor full-load ampere ratings and the ampere ratings of other loads do not exceed the ampere rating of the switch and the tungsten load does not exceed 30 percent of switch rating.

The transfer switch is rated for use on a circuit capable of delivering not more than 10,000 RMS symmetrical amperes at 240 VAC maximum, but no greater than the interrupting capacity of the selected breaker.

	WCR Ratings	with Specific Manu	facturer's Molded-Case Circuit Breakers	
Switch Rating, Amps	WCR, RMS Symmetrical Amps @ 240 VAC	Manufacturer	Type or Class	Maximum Size, Amps
		FCL, FB, QCHW, GB, GHB, GC, GHC, GD, EHD	100	
		Eaton/Cutler-Hammer	FDB, FD, HFD, FDC, CA, CAH	150
			FI, FC, FA, FH	100
			QOM1, QOM1-VH	125
		Square D	Q2, Q2-H. Q2H	175
		QOM2, QOM2-VH	225	
100	100 10,000		QB, QD, QG, GJ	250
		Siemens	CED6, ED2, ED4, ED6, HED4, HED6, QP(Q2125), QPH(Q2125H)	125
			QJ2, QJH2	150
			THQB, THQC, THHQB, THHQC	100
		GE	THHQL, TQDL, THQDL	125
			SE, TQD, THQD, THED	150
			CSR/BHW, FD, HFD	225
			JD, JDB, HJD	225-250
		Eaton/Cutler-Hammer	JDC	250
			DK, KD, KDB, HKD, KDC, LCL, LA	400
		Square D	Q2. QOM2, QOM2-VH, Q2-H, Q2H	225
200	10,000		KI, KA, KH, KC, QB, QD, QG, QJ	250
			LE, LX, LXI, LC, LI, LA, LH	400
		Siemens	FD6-A, FXD6-A, HFD6, CFD6	250
			TQDL, THQDL	125
		GE	THLC2	225
			SF	250

#### Service Entrance Transfer Switch Ratings

The service entrance transfer switch is factory-equipped with normal and emergency source disconnect circuit breakers.

Suitable for control of motors, electric discharge lamps, tungsten filament lamps and electric heating equipment where the sum of motor full-load ampere ratings and the ampere ratings of other loads do not exceed the ampere rating of the switch and the tungsten load does not exceed 30 percent of switch rating. The transfer switch is rated for use on a circuit capable of delivering not more than 22,000 RMS symmetrical amperes at 240 VAC maximum.

Switch Rating, Amps	WCR, RMS Symmetrical Amps at 240 VAC			
200 *	22,000			
* Continuous load current not to exceed 80% of switch rating.				

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## **Model Designation**

Model	Size, Amps	Enclosure Type	Description
RRT-JFNA-0100B-SA*	100	NEMA 1	With load center, up to 16 customer-supplied circuit breakers. For indoor installation only.
RRT-JFNC-0200A-SA*	200	NEMA 3R	No load center. Rated for outdoor installation.
RRT-JFNC-0200ASE-S	200	NEMA 3R	Service entrance rated, no load center. Rated for outdoor installation.

# **Weights and Dimensions**

Enclosure Type	Amps	mps Load Center Weight, kg (lb.) Dimensions, H x W		W x D, mm (in.)		
NEMA 1	100	16 circuits	12.3	(27.0)	610 x 330 x 154	(24.0 x 13.0 x 6.0)
NEMA 3R	200	None	15.0	(33.0)	613 x 340 x 177	(24.1 x 13.4 x 7.0)
	200 SE †	None	32.7	(72.0)	863 x 471 x 167	(34.0 x 18.5 x 6.6)
† Service entrance	model	1				,

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