

Model: RXT

Automatic Transfer Switch 100-400 Amps





Covers have been removed for illustration.

#### Available Models

- 100, 200, and 400 amp standard and service entrance models are available.
- 150 and 300 amp service entrance models are also available.
- Combined interface/load management board is available on single-phase standard and service entrance models. (Not available on 3-phase or load center models.)
- 100 amp standard single-phase models are available with or without a 16-space load center. Up to 8 tandem breakers can be used for a total of 24 circuits.
- 100amp standard single phase model with a 12-space load center and a NEMA 1 enclosure is available as a standalone non-configurable spec (GM85273-SA\_).
- See page 7 for more information.

#### Model RXT Automatic Transfer Switch

The Model RXT automatic transfer switch is designed for use only with Kohler® generator sets equipped with RDC2 or DC2 generator set/transfer switch controls. The transfer switch operation is controlled by the RDC2/DC2 controller.

#### Standard Features

- Allows utility voltage display on the RDC2/DC2 generator set/transfer switch controller, available exclusively on Kohler® residential and light commercial generator sets
- UL listed
  - Models with load centers, UL 67 listed, file #E251086
  - Models without load centers, UL 1008 listed, file #E58962
- CSA certification, file #LR58301, is available for:
  - Standard ATS without load center (single and three-phase)
  - O Service entrance ATS 100 and 200 amp models
- Corrosion-resistant NEMA 3R aluminum enclosure
  - Padlockable
  - Approved for indoor or outdoor installation
  - o ANSI 49 gray
- NEMA 1 enclosure available on 100 amp load center models
- Contactor electrically and mechanically interlocked
- Double throw inherently interlocked design
- 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 breaker on the utility (normal) source side (80% rated)
- Five-year limited warranty

#### Standard Interface Board

- Standard interface board connects to the Model RDC2 or DC2 generator set/transfer switch controller.
- Includes a load control contact that provides a 5 minute time delay for startup of selected loads after transfer to the emergency source. Use for large motor loads.

# Combined Interface/Load Management Board

- Optional combined interface/load management board replaces the standard interface board and connects to the Model RDC2 or DC2 generator set/transfer switch controller.
- The combined board is available on single-phase standard and service entrance models.
  (Not available on 3-phase or load center models.)
- The combined board automatically manages up to six residential loads:
  - Up to four customer-supplied power relay modules can be connected for management of non-essential secondary loads.
  - Two HVAC relays are included for control of two independent air conditioner loads.

## **Specifications**

Standard Interface Board			
Controller interface connections A and B	#20 AWG shielded twisted-pair Belden 9402 or 8762 or equivalent		
Controller interface connections PWR and COM	#12-20 AWG (see ATS Installation Manual)		
Load control contact rating	10 A @ 250 VAC		
Load control connections	#12-18 AWG		

**Note:** For combined interface/load management board specifications, see page 3.

Environmental Specifications			
Operating temperature	−20°C to 70°C (−4°F to 158°F)		
Storage temperature	-40°C to 85°C (-40°F to 185°F)		
Humidity	5 to 95% noncondensing		

#### **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 certification available, file #LR58301 (not available for 150, 300, or 400 amp service entrance or 100 amp load center models). Must be selected when the transfer switch is ordered.
- NFPA 70, National Electrical Code
- NFPA 110, Emergency and Standby Power Systems
- NEMA Standard IC10-1993, AC Automatic Transfer Switches

				Cable Sizes			
	AL/CU UL-Listed Solderless Screw-Type Terminals for External Power Connections						
Switch Size, Amps	Switch	Phases	Range of Wire Sizes, Cu/Al				
			Normal and Emergency	Load	Neutral	Ground	
100	Standard	1	(1) #14 - 1/0 AWG	(1) #14 – 1/0 AWG	(5) #12 to 250 KCMIL (Cu) or (5) #10 to 250 KCMIL (Al)	(9) #6 – #14 AWG (4) #14 – 1/0 AWG	
	12-space load center (NEMA 1)	1	(1) #14 – 1/0 AWG	per customer-supplied circuit breaker	(13) #4 - 14 AWG or (1) #6 - 2/0 AWG		
	16-space load center (NEMA 3R)	1	(1) #14 – 1/0 AWG	per customer-supplied circuit breaker	(27) #4 - 14 AWG or (3) #4 - 1/0 AWG or (1) #6 - 2/0 AWG		
	Service Entrance	1	Normal: (1) #12 – 2/0 AWG Emerg: (1) #14 – 1/0 AWG	(1) #14 – 1/0 AWG	(5) #12 to 250 KCMIL (Cu) or (5) #10 to 250 KCMIL (Al)	(4) #14 – 1/0 AWG (9) #14 – #6 AWG	
	3-Phase	3	(1) #14 – 1/0 AWG	(1) #14 – 1/0 AWG	(3) #4 AWG – 600 KCMIL (6) 1/0 AWG – 250 KCMIL		
150 200	Service Entrance	1	Normal: (1) #4 – 300 KCMIL Emerg: (1) #6 – 250 KCMIL	(1) #6 – 250 KCMIL	(5) #12 to 250 KCMIL (Cu) or (5) #10 to 250 KCMIL (Al)		
	Standard	1	(4) //0 4)4/0 050 (/04/1)	(4) #0 050 KOMI	(5) #12 to 250 KCMIL (Cu) or	(9) #14 – #4 AWG (4) #14 - 1/0 AWG	
200	3-Phase	3	(1) #6 AWG – 250 KCMIL	(1) #6 – 250 KCMIL	(5) #10 to 250 KCMIL (AI)		
300 400	Service Entrance	1	Normal: : (1) #1 - 600 KCMIL or (2) #1 - 250 KCMIL Emerg: (2) #6 - 250 KCMIL	(2) #6 – 250 KCMIL	(3) #4 AWG – 600 KCMIL (6) 1/0 AWG – 250 KCMIL	(6) #6 – 3/0 AWG	
400	Standard	1			(3) #4 AWG – 600 KCMIL - (6) 1/0 AWG – 250 KCMIL	(6) #6 – 3/0 AWG	
	3-pole 208-240 V	3	(2) #6 – 250 KCMIL	(2) #6 – 250 KCMIL			
	3 or 4 pole 480 V	3	(1) #4 – 600 KCMIL (2) 1/0 – 250 KCMIL	(1) #4 – 600 KCMIL (2) 1/0 – 250 KCMIL	(5) 1/6 /WW = 250 NOWIE		

**Note:** Data is subject to change. Refer to the transfer switch dimension drawings and wiring diagrams for planning and installation.

## **Optional Combined Interface/Load Management Board**

The RXT transfer switch is available with either a standard interface board or a combined interface/load management board. The combined board allows load management as described below.

#### **Load Management**

- The combined load management board disconnects non-critical loads to prevent generator overload, in compliance with NEC.
- The combined load management board monitors generator current and frequency to determine when to add or shed loads. This monitoring prevents frequency drops that can damage valuable electronics like computers and televisions.
- Load management allows the use of a smaller generator set.

#### Operation

- Loads are automatically added or shed based on generator capacity.
- The load control system uses dynamic logic to prevent shedding important loads unnecessarily when air conditioning, refrigerator, or water pump motors start (patent pending).
- The load management board and generator communicate to provide smart power management. The time to shed loads decreases as each load is shed to quickly adapt to critical power requirements.
- Load shed power level and frequency setpoints can be adjusted using a personal computer (laptop) and Kohler® SiteTech™ software, which is only available to Kohlerauthorized distributors and dealers.

#### **Priority Setting**

- Loads are added and shed according to their priority. Load 1 is the top priority, which is added first and shed last. Load 6 is the lowest priority.
- Less critical loads can be turned off automatically when essential appliances are running.
- Load priorities are hard-wired at installation.

## Viewing Load Shed Outputs with OnCue® Plus

- Use Kohler's OnCue® Plus Generator Management System (sold separately) to view load status (On or Off) for loads connected to the load shed relays.
- Use OnCue® Plus to remotely monitor when loads are shed or added.
- The load shed outputs can be labeled in OnCue® Plus.

#### **Current Transformer**

- The combined load management board option includes a 400 amp current transfomer (CT) for load monitoring.
- A larger diameter CT is available for applications that require larger cables.
- A 500 amp CT is available for use with a 60RCL generator.
- See the table below for current transformer specifications and optional kit numbers.

### **Load Shed Specifications**

Connection	Rating	Connection
Pilot Relays*	125VAC, 10 A total (general purpose) 120VAC, 125VA (pilot duty)	#12-20 AWG
HVAC Relays (qty. 2)	125VAC, 10 A (general purpose) 120VAC, 125VA (pilot duty)	#12-20 AWG
RBUS Communication and Power Connections to the RDC2/DC2 controller	0.5 A @ 12 VDC	Use Belden #9402 or equivalent 20 AWG shielded, twisted-pair communications cable †

<sup>\*</sup> Four (4) pilot relays are provided for customer-supplied normally closed load-switching contactors/relays. The combination of four load relay outputs cannot exceed 10 amps total current draw. Kohler® power relay modules are recommended.

#### **Current Transformer Specifications**

Ratio (Amps:VAC)	Outer Diameter mm (in.)	Inner Diameter mm (in.)	Service Part Number	Sales Kit Part Number	CT Availability
400:3	63.5 (2.5)	28.7 (1.13)	GM83929	N/A	Included with combined board
400:3	111.8 (4.4)	57.2 (2.25)	GM17250	GM17250-KP1-QS	Sold Separately
500:3	171.5 (6.75)	108.0 (4.25)	GM60264	GM17250-KP2-QS	Sold Separately (use with 60RCL)

<sup>†</sup> For long distances, use an equivalent shielded, twisted-pair cable for RBUS connections and individual 12-20 AWG wires (qty. 2) for power connections.