

Intelligent Transfer Switch

Service Entrance Rated Load Center with Generator Control and Load Transfer Mechanism

- Conversion kit for generator-ready load center includes load transfer mechanism, microprocessor controller, and wiring harnesses (assembly required)
- Complete unit includes conversion kit plus load center* and enclosure (assembly required)
- Load center* kits with enclosures are available without the conversion kit
- Optional load shed kits are available

Standard Features

- UL 67 listed and tested to UL 1008
- Service entrance rated automatic transfer switch with prewired Square D® type QO® load centers*
- Suitable for service entrance or sub-panel use
- Compatible with all Kohler® 8.5-30RES generator sets
- 240 VAC/60 Hz
- 150, 200, and 225 amp models available
- Two-pole, single-phase open-transition transfer switch
- Transfer mechanism electrically and mechanically interlocked
- Solid neutral
- Transfer mechanism manually operable for maintenance purposes
- Two enclosures available:
 - Type 1, for indoor installation, up to 40 circuits;* can be installed flush to the wall or on the surface
 - Type 3R, up to 28 circuits;* padlockable and approved for indoor or outdoor installation
- 5-year limited warranty

MPAC™ 550 Controller Features

- User-friendly controller interface with easy-to-read international symbols
- LED indication:
 - Source available, utility and generator set
 - Source connected, utility or generator set
 - Test running, with or without load
 - Exercise running, with or without load
 - System fault
- Engine start contact: provides contact closure to start the generator set
- Load control contact: disconnects selected load before transfer to standby
- Test button (with or without load)
- Exercise set button:
 - Weekly 20-minute generator set exercise
 - With or without load
- Single-phase voltage sensing on both sources, $\pm 5\%$
- Line-to-line frequency sensing, $\pm 2\%$
- Fixed time delays (Optional accessory board allows time delay adjustment)

* Branch circuit breakers are not provided. Obtain Square D® type QO® circuit breakers locally as required for the application. Square D® and QO® are registered trademarks of Schneider Electric.

Application Data

Environmental Specifications	
Operating temperature	-10°C to 40°C (-14°F to 104°F) without derating -10°C to 60°C (-14°F to 140°F) with derating
Storage temperature	-40°C to 75°C (-40°F to 167°F)
Humidity	5 to 95% noncondensing

Contact Ratings	
Engine start	0.5 A @ 125 VAC; 2 A @ 30 VDC SPST normally closed (NC)
Load control	10 A @ 120 VAC SPST normally open (NO)

Source Sensing	
Undervoltage dropout	85%
Undervoltage pickup	90%
Underfrequency dropout	90%
Underfrequency pickup	96%

Time Delays			
Time Delay	Factory Setting	Adjustment with Accessory Board ‡	
		Range	Increment
Engine Start	3 sec.	1-10 sec.	1 second
Transfer from Normal to Emergency	3 sec.	1-10 sec.	1 second
Retransfer from Emergency to Normal	6 min.	3-30 min.	3 minutes
Engine Cooldown	5 min.	1-10 min.	1 minute
Exercise Run Time	20 min.	5-50 min.	5 minutes
Exercise Interval	1 week	1 week/2 week (DIP switch)	
Failure to Acquire Emergency Source	78 sec.	NA	
Undervoltage Dropout	0.5 sec.	NA	
Underfrequency Dropout	1 sec.	NA	

‡ Accessory board is required for time delay adjustments.
NA = not adjustable.

Weights and Dimensions			
Enclosure	Number of Circuits	Weight, kg (lb.)	Dimensions, H x W x D, mm (in.)
Type 1	40	11.4 (25.0)	1000 x 362 x 95 (39.4 x 14.25 x 3.75)
Type 3R	28	19.10 (42.0)	858 x 375 x 115 (33.8 x 14.8 x 4.5)

Cable Sizes	
Connection	Range of Wire Sizes, Cu/Al
Normal Source, 150-225 A	#4 AWG to 300 kcmil
Emergency Source	#14 to 2/0 AWG
Neutral	#4 AWG to 300 kcmil
Ground	#12 to 1/0 AWG Cu

Main and Generator Circuit Breaker Ratings †	
Description	Rating, Amps
Main circuit breaker Type QOM2-VH	225
	200
	150
Generator set circuit breaker Type QO2	125
	100
	90
	80
	70
	60
	50

† Main and generator source circuit breakers are included with the transfer switch. Branch circuit breakers are not included. Obtain Square D® type QO® branch circuit breakers locally as required.

Circuit Breakers for Optional Load Shed Kits §	
Description	Rating, Amps
Remote control circuit breakers Type QO-PLILC	15, 1-pole
	20, 1-pole
	30, 2-pole
	40, 2-pole
	50, 2-pole
	60, 2-pole

§ Remote control circuit breakers are not included with the load shed kit. Obtain remote control breakers separately as required for the application. See Accessories.

Certifications, Codes and Standards

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

- UL listed under Underwriters Laboratories UL 67, Enclosed Panel Boards
- Tested to Underwriters Laboratories UL 1008, Standard for Automatic Transfer Switches for Use in Optional Standby Systems
- NFPA 70, National Electrical Code®, Article 702
- NEMA Standard IC10-1993, AC Automatic Transfer Switches
- IEC 61000-4-2, 2001: ESD—Electrostatic Discharge, Level 3
- IEC 61000-4-3, 2002: Radiated Immunity, Level 2
- IEC 61000-4-4, 2001: EFT/Burst Immunity, Severity Level 3
- IEC 61000-4-5, 2001: Surge Immunity, Severity Level 4
- IEC 61000-4-6, 2003: Conducted RF Immunity, Level 2
- FCC Part 15, Radiated Emissions, Class B
- FCC Part 15 Using CISPR 11 Conducted Emissions, Class B

Short Circuit Current Rating

Maximum continuous loads not to exceed 80% of the ampere rating of any overcurrent device installed.

RMS Symmetrical Amperes at 240 VAC, Max.	Integral Main Catalog Designation or Fuse Class (Max. A) *	Branch Circuit Breaker Catalog Description (Max. A)
10,000	QO(125) Emergency (Generator)	† QO(125) and QOT
22,000	QOM-VH(200) Normal (Utility)	† QO(125) and QOT

* See circuit breaker for voltage and interrupting rating. The rating is equal to the lowest interrupting rating of any circuit breaker installed. Refer to branch or main circuit breakers for individual ratings. Additional or replacement branch or main circuit breaker or service disconnect MUST have an interrupting rating equal to or greater than that of the circuit breaker with the lowest interrupting rating presently installed.

† QO includes QO-GFI, QO-EPD, and QO-AFI.

Accessories

Accessory Board

- Alarm horn indicates system faults
- Adjustable time delays:
 - Engine start
 - Engine cooldown
 - Preferred to standby
 - Standby to preferred
 - Exercise duration
- Inputs and Outputs:
 - Remote start/stop input (loaded)
 - Generator set supplying load output: 10 A @ 120 V SPST normally open (NO) contact
- Dip switches:
 - Momentary/maintained external start/stop input: Selects momentary (1 second) push button or maintained contact closure for remote start/stop signal
 - Audible alarm disable

Load Center Kits (conversion kit not included)

- Type 1 (indoor) enclosure with load center, available with 150, 200, or 225 amp main circuit breaker
- Type 3 (outdoor) enclosure with load center, available with 150 or 200 amp main circuit breaker

Load Shed Kit, One Module

- For Type 1 or Type 3 enclosures
- Disconnects selected loads before transfer to the generator set
- Kit includes one load shed module and communication harness
- Requires remote control (RC) circuit breakers
- Connect up to six RC circuit breakers

Note: To install two modules in one Type 1 enclosure, order the two-module kit.

Load Shed Kit, Two Modules

- For Type 1 enclosures only
- Disconnects selected loads before transfer to the generator set
- Kit includes two load shed modules and communication harnesses
- Two-module kit is required for installation of two load shed modules in a Type 1 enclosure
- Requires remote control (RC) circuit breakers
- Connect up to six RC circuit breakers to each load shed module, for a maximum of 12 RC breakers

Remote Control Circuit Breakers

- Required for load shed modules
- Maximum six 1- or 2-pole circuit breakers per load shed module

15 Amp, 1-pole

20 Amp, 1-pole

30 Amp, 2-pole

40 Amp, 2-pole

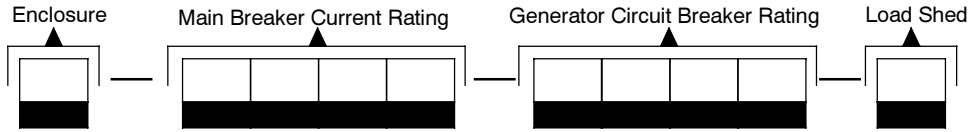
50 Amp, 2-pole

60 Amp, 2-pole

Literature Kits

- Literature is provided with every unit
- Additional literature kits are available

RSB-GFN



Kohler® Model Designation Key

This chart explains the Kohler® transfer switch model designation system. The sample model designation shown is for a Model RSB Intelligent Transfer Switch with MPAC™ 550 electrical controls rated at 240 volts/60 Hz, 2 poles, 3 wires, and solid neutral in a Type 1 enclosure with a 200 amp main circuit breaker, a 125 amp generator circuit breaker, and no load shed modules.

SAMPLE MODEL DESIGNATION

RSB-GFNA-0200-0125-N

Model

R: Kohler

Mechanism

SB: Intelligent Transfer Switch, Service Entrance Rated

Electrical Controls

G: MPAC™ 550 (Microprocessor ATS Controls)

Voltage/Frequency

F: 240 Volts/60 Hz

Number of Poles/Wires

N: 2-pole, 3-wire, solid neutral

Enclosure

A: Type 1 Complete
 B: Conversion Kit for Type 1 Indoor Load Center (no enclosure) *
 C: Type 3R Complete
 D: Conversion Kit for Type 3R Outdoor Load Center (no enclosure) *

Main Circuit Breaker Rating, in Amps

0150 0200 0225 0000 †

Generator Circuit Breaker Rating

0050 0070 0090 0125
 0060 0080 00100

Load Shed

N: No load shed modules
 S: With load shed module(s)

* Order a conversion kit for locations that already have a Square D® Intelligent Load Center installed.

† Conversion kits are available without a main circuit breaker for installations that already include a type QOM main circuit breaker with control taps.

Note: Load centers do not include branch circuit breakers. Obtain Square D® type QO® breakers locally as required for the application.

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