

ISO 9001
KOHLER
POWER SYSTEMS
NATIONALLY REGISTERED



MPAC® 500 Controller Features

- User-friendly interface with easy-to-read international symbols
- Source available and contactor position indicators
- LED indication of system faults
 - Failure to acquire standby source
 - Failure to transfer
 - Auxiliary switch fault
- Common fault contact: latches closed on system faults shown above
- Engine start contact: provides contact closure to start the generator set
- Load control contact: allows 5-minute delay in startup of selected loads
- 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

Standard Features

- UL listed
 - UL 1008 listed, file # E58962
 - Models with load centers use UL 67 listed components
- cUL listed
 - 100 and 200 amp models with load centers
- CSA certification available, file # LR58301 (not applicable to service entrance or load center models)
- 220/240 VAC, 50/60 Hz (selectable)
- 100, 200, and 400 amp models available
- 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
- Automatic transfer switches are 100% equipment rated and can be applied at the rated current without derating (except service entrance models; see below)
- 100 and 200 amp models available with or without prewired Square D type QO load center
 - 100 amp load center models use up to 16 circuit breakers (up to 8 tandem breakers can be used for a maximum of 24 circuits)
 - 200 amp load center models use up to 24 circuit breakers
 - 200 amp service entrance model with 42-circuit breaker load center is available
- Two enclosures available
 - NEMA Type 1 steel ANSI 49 gray enclosure for indoor installation. 100 amp and 200 amp models without load centers can be recess-mounted between wall studs (not service entrance model)
 - NEMA Type 3R corrosion-resistant aluminum ANSI 49 gray padlockable enclosure. Approved for indoor or outdoor installation
- Five-year limited warranty
- See page 5 for available accessories

Service Entrance Model Features

- 200 and 400 amp service entrance rated automatic transfer switches available
- Service disconnect circuit breaker on the normal (utility) source (80% rated)
- NEMA 3R aluminum ANSI 49 gray enclosure
- Circuit breaker for generator set battery charger
- See page 5 for available SE model accessories

Specifications

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

Contact Ratings	
Engine start	1 A @ 30 VDC SPST normally closed (NC)
Common fault	0.5 A @ 125 VAC; 2 A @ 30 VDC SPST normally open (NO)
Load control	10 A @ 120 VAC SPST normally open (NO)
Auxiliary contacts (optional)	10 A @ 250 VAC Form C

Source Sensing	
Undervoltage dropout	80%
Undervoltage pickup	85%
Underfrequency dropout	90%
Underfrequency pickup	96%

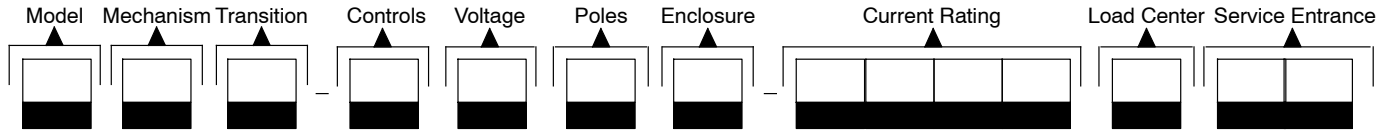
Time Delays			
Time Delay	Factory Setting	Adjustment with Accessory Board*	
		Range	Increment
Engine start	3 seconds	1- 10 seconds	1 second
Transfer from Normal to Emergency	3 seconds	1- 10 seconds	1 second
Retransfer from Emergency to Normal	6 minutes	3-30 minutes	3 minutes
Engine cooldown	5 minutes	1- 10 minutes	1 minute
Exercise run time	20 minutes	5- 50 minutes	5 minutes
Exercise interval	1 week	1 week/2 week (DIP switch)	
Load control connection delay	5 minutes	5 or 10 minutes (DIP switch)	
Failure to acquire Emergency source	78 seconds	NA	
Undervoltage dropout	0.5 second	NA	
Underfrequency dropout	3 seconds	NA	

* Optional accessory board required for time delay adjustments
NA = not adjustable

Cable Sizes					
AL/CU UL-Listed Solderless Screw-Type Terminals for External Power Connections					
Switch Size, Amps	Range of Wire Sizes, Cu/Al				
	Normal (per phase)	Emergency (per phase)	Load (per phase)	Neutral	Ground
100	(1) #14 - 1/0 AWG			(5) #12 - 250 KCMIL(Cu) or (5) #10 - 250 KCMIL(Al)	(9) #14 - #6 AWG (4) #14 - 1/0 AWG
100 B	(1) #14 - 1/0 AWG		per customer-supplied branch circuit breakers	(26) #14 - #4AWG or (2) #14 - 1/0 AWG or (1) #6 - 2/0 AWG	
200	(1) #6 AWG - 250 KCMIL		(1) #6 AWG - 250 KCMIL	(5) #12 - 250 KCMIL(Cu) or (5) #10 - 250 KCMIL(Al)	
200 B	(1) #6 AWG - 250 KCMIL		per customer-supplied branch circuit breakers	(38) #14 - #4 AWG or (3) #14 - 1/0 AWG or (1) #4 AWG - 250 KCMIL	
200 BSE	(1) #4 - 300 KCMIL	(1) #6 - 250 KCMIL	per customer-supplied branch circuit breakers	(4) #12 - 250 KCMIL(Cu) or (4) #10 - 250 KCMIL(Al)	
200 SE	(1) #4 - 300 KCMIL	(1) #6 - 250 KCMIL	(1) #6 AWG - 250 KCMIL	(5) #12 - 250 KCMIL(Cu) or (5) #10 - 250 KCMIL(Al)	
400	(2) 1/0 - 250 KCMIL or (1) 4 AWG - 600 KCMIL			(3) #4 - 600 KCMIL (6) 1/0 - 250 KCMIL	(6) #6 - 3/0 AWG
400 SE	(1) #1 - 600 KCMIL or (2) #1 - 250 KCMIL	(2) 1/0 - 250 KCMIL or (1) 4 AWG - 600 KCMIL		(6) #4 - 600 KCMIL (12) 1/0 - 250 KCMIL	

B = Load center model
SE = Service entrance model

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



Kohler® Model Designation Key

This chart explains the Kohler® transfer switch model designation system. The sample model designation shown is for a Model R service entrance rated automatic transfer switch that uses a standard-transition contactor with MPAC® 500 electrical controls rated at 240 Volts/60 Hz with 2 poles, 3 wires, and solid neutral in a NEMA 3R enclosure with a current rating of 200 amperes and no load center.

SAMPLE MODEL DESIGNATION

RDT-CFNC-0200ASE

Model

R: Model R automatic transfer switch

Mechanism

D: Specific-breaker rated

Transition

T: Standard transition

Electrical Controls

C: MPAC® 500 (Microprocessor ATS Control)

Voltage/Frequency

F: 240 Volts/60 Hz
 (A jumper on the controller allows conversion to 50 Hz)

Number of Poles/Wires

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

Enclosure

A: NEMA 1 (steel) *
 C: NEMA 3R (aluminum)

Current Rating: Numbers indicate the current rating of the switch in amperes:

0100: 100 amps 0200: 200 amps 0400: 400 amps

Load Center

A: Without load center
 B: With load center (not available on 400 amp models)

Service Entrance:

SE: Service entrance model (200 and 400 amp models available)
 Blank: Not rated for service entrance

* NEMA 1 only: 100 and 200 amp models without load centers can be recess-mounted between wall studs. Optional wall-mount bezel available.

DISTRIBUTED BY:

Availability is subject to change without notice. Kohler Co. reserves the right to change the design or specifications without notice and without any obligation or liability whatsoever. Contact your local Kohler® generator distributor for availability.