



Transfer Switch Standard Features

- UL 1008 listed, file #E108981
- CSA certification available
- IBC seismic certification available (NEMA 1 enclosures only)
- Bypass/isolation switches for uninterrupted power to the load during switch maintenance and testing
- Standard-transition or programmed-transition modes of operation
- Ratings of bypass switch and automatic transfer switch identical
- Available in 2, 3, or 4 pole configurations
- Electrically operated, mechanically held mechanism
- Double-throw, interlocked operation with mechanical and electrical interlocks
- Drawout mechanism to facilitate maintenance
- Quick-make, quick-break bypass switch operation for load transfer between live sources
- Silver tungsten alloy contacts
- Silver-plated, copper bus interconnection for the automatic transfer switch and bypass switch
- Suitable for emergency and standby applications on all classes of load, 100% tungsten rated through 400 amps
- NEMA type 1 enclosure
- Exceeds UL 1008 requirements for temperature rise after overload and endurance tests in unventilated enclosure
- Main shaft auxiliary position-indicating contacts rated 15 A @ 240 VAC
- Engine start contacts rated 10 A @ 32 VDC
- Solid or switched neutral
- Standard one-year limited warranty. Extended limited warranties are available.

Controller

- Decision-Maker® MPAC 1500

Ratings

Model	Current	Voltage, Frequency
KGS	150- 1200 amps	208- 600 VAC
KGP		50/60 Hz

Standard Transition Models (KGS)

- Standard-transition transfer time less than 100 milliseconds (6 cycles @ 60 Hz)

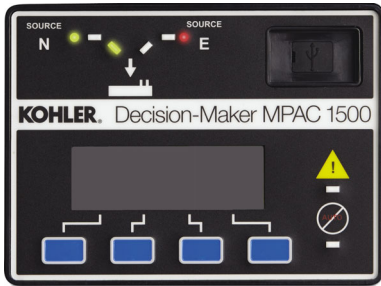
Programmed Transition Models (KGP)

- Programmed-transition operation provides a center OFF position that allows residual voltages in the load circuits to decay
- Programmable OFF time
- Dual DC solenoid drive

Automatic Transfer Switch Controller

The Decision-Maker® MPAC 1500 Automatic Transfer Switch Controller is used on bypass/isolation transfer switch models.

Decision-Maker® MPAC 1500 Controller



- LCD display, 4 lines x 20 characters, backlit
- Complete programming and viewing capability at the door using the keypad and LCD display
- LED indicators: Source available, transfer switch position, service required (fault), and “not in auto”
- Modbus communication is standard
- Programmable voltage and frequency pickup and dropout settings
- Programmable time delays
- Programmable generator exerciser
- Time-based load control
- Current-based load control (current sensing kit required)
- Two programmable inputs and two programmable outputs
- Up to four I/O extension modules available
- RS-485 communication standard
- Ethernet communication standard
- Three-source system
- Prime power

For more information about Decision-Maker® MPAC 1500 features and functions, see specification sheet G11-128.

Codes and Standards

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

- CSA C22.2 No. 178 certification available, file #LR58301
- EN61000-4-4 Fast Transient Immunity Severity Level 4
- EN61000-4-5 Surge Immunity Class 4 (voltage sensing and programmable inputs only)
- IEC Specifications for EMI/EMC Immunity:
 - CISPR 11, Radiated Emissions
 - IEC 1000-4-2, Electrostatic Discharge
 - IEC 1000-4-3, Radiated Electromagnetic Fields
 - IEC 1000-4-4, Electrical Fast Transients (Bursts)
 - IEC 1000-4-5, Surge Voltage
 - IEC 1000-4-6, Conducted RF Disturbances
 - IEC 1000-4-8, Magnetic Fields
 - IEC 1000-4-11, Voltage Dips and Interruptions
- IEC 60947-6-1, Low Voltage Switchgear and Control Gear; Multifunction Equipment; Automatic Transfer Switching Equipment
- IEEE Standard 446, IEEE Recommended Practice for Emergency and Standby Power Systems for Commercial and Industrial Applications
- IEEE 472 (ANSI C37.90A) Ring Wave Test
- NEMA Standard ICS 10-2005, Electromechanical AC Transfer Switch Equipment
- NFPA 70, National Electrical Code
- NFPA 99, Essential Electrical Systems for Health Care Facilities
- NFPA 110, Emergency and Standby Power Systems
- Underwriters Laboratories UL 508, Standard for Industrial Control Equipment
- Seismic certification in accordance with the International Building Code is available. (Accessory kit is required for seismic certification.)
 - IBC 2000, referencing ASCE 7-98 and ICC AC-156
 - IBC 2003, referencing ASCE 7-02 and ICC AC-156
 - IBC 2006, referencing ASCE 7-05 and ICC AC-156
 - IBC 2009, referencing ASCE 7-05 and ICC AC-156
 - IBC 2012, referencing ASCE 7-10 and ICC AC-156
- Underwriters Laboratories UL 1008, Standard for Automatic Transfer Switches for Use in Emergency Standby Systems, file #E108981

Application Data

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

Input and Output Connection Specifications	
Component	Wire Size Range
Main board I/O terminals	#12- 24 AWG
I/O module terminals	#14- 24 AWG

Auxiliary Position Indicating Contacts (rated 15 amps @ 240 VAC)		
Switch Rating, Amps	Number of Contacts Indicating Normal, Emergency	
	KGS	KGP
150- 400	3, 3	3, 3
600- 1200	2, 2	2, 2

Screw-Type Terminals for External Power Connections		
Switch Rating, Amps	Range of Wire Sizes *	
	Normal, Emergency, and Load Terminals (per phase)	Neutral
150- 225	(1) #6 to 250 KCMIL	(2) 1/0 to 250 KCMIL or (1) #4 AWG to 600 KCMIL
260- 400	(1) #4 AWG to 600 KCMIL	(1) #4 AWG to 600 KCMIL
600	(2) #2 AWG to 600 KCMIL	(6) #2 AWG to 600 KCMIL
800- 1200	(4) #2 AWG to 600 KCMIL	(12) #2 AWG to 600 KCMIL

* Use 60°C minimum wire for #14 to #1 AWG. Use 75°C minimum wire for 1/0 AWG and larger.

Weights and Dimensions

Note: Always use the transfer switch dimension drawing for planning and installation. Weights and dimensions may vary for different configurations. See your local distributor for dimension drawings.

Weights and dimensions are shown for standard-transition bypass/isolation switches in NEMA type 1 enclosures. Consult the factory for other enclosures.

Amps	Number of Poles	NEMA 1 Enclosure Dimensions, mm (in.)			Weight, kg (lb.)	ADV Drawing
		Height	Width	Depth		
150, 225, 260, 400	2, 3	2159 (85.0) *	762 (30.0)	789 (31.1)	580 (1280)	ADV-8606
	4	2159 (85.0) *	762 (30.0)	789 (31.1)	628 (1385)	
600	2, 3	2362 (93.0) *	914 (36.0)	756 (29.8) †	651 (1435)	ADV-8608
	4	2362 (93.0) *	1016 (40.0)	756 (29.8) †	699 (1540)	
800	2, 3	2362 (93.0) *	1016 (40.0)	756 (29.8) †	674 (1485)	
	4	2362 (93.0) *	1168 (46.0)	756 (29.8) †	721 (1590)	
1000, 1200	3	2362 (93.0) *	1016 (40.0)	756 (29.8) †	674 (1485)	
	4	2362 (93.0) *	1168 (46.0)	756 (29.8) †	721 (1590)	

* Height includes removeable 76 mm (3 in.) lifting eyes on 150- 1200 amp models.

† Depth includes door handle. Optional adapter bay for bottom cable entry adds 356 mm (14.0 inches) to the depth. (600- 1200 amp models only.)

Withstand and Close-On Ratings (WCR)

Switch Rating, amps	Withstand Current Ratings, Maximum Current in RMS Symmetrical Amperes When Coordinated with:											
	Current-Limiting Fuses							Molded-Case Circuit Breakers				
	Max. Fuse Size, amps	@ 240 VAC		@ 480 VAC		@ 600 VAC		Specific Manufacturers (see separate tables)			Any Breaker Ratings	
		Max. Rating, Amps	Class	Max. Rating, Amps	Class	Max. Rating, Amps	Class	Max. Amps @ 240 VAC	Max. Amps @ 480 VAC	Max. Amps @ 600 VAC	Max. Amps @ 480 VAC	Max. Amps @ 600 VAC
150 225 260 400	600	200 kA	J	200 kA	J	—	—	65 kA	100 kA	42 kA	35 kA	35 kA
	600	100 kA	RK5, RK1	100 kA	RK5, RK1	—	—					
600	750	—	—	200 kA	J, L, RK1, RK5	—	—	65 kA	50 kA	50 kA	42 kA	
800 1000 1200	3000	—	—	200 kA	L	—	—	85 kA	65 kA			

Withstand and Close-On Ratings with Coordinated Circuit Breakers

The following chart lists contactor withstand and close-on ratings (WCR) with specific manufacturer's circuit breakers.

Switch Rating	Coordinated Circuit Breakers						
	Voltage	WCR, RMS Symmetrical Amperes	Manufacturer	Type or Class	Maximum Size, Amps		
150 200 225 260 300 400	240	65,000	General Electric	SEL, SEP, PE_N, PE_H, PE_L	150		
				SFL, SFP, PE_N, PE_H, PE_L	250		
				SGL, SGP	400		
				SGL, SGP, FGL, FGP	600		
			Schneider	LJ, LL, LR	600		
	480	50,000	Eaton	HJD, JDC, JGC, JGH, JGU, JGX	250		
				CHLD4, CLD, HLD4, CLDC, LDC, KDC, HKD, CHMDL4, CMDL4	400		
				CHLD6, HDL6, CHMDL6, CMDL6, CLDC, CLD6, LDC6, CLDC6	600		
				CHMDL8, HMDL8, MDL8, CMDL8	800		
			ITE/Siemens	CFD6, HFD6, HFXD6, HHFD6, HHFXD6	250		
				CJD6	400		
				CLD6, HHL6, HHLXD6, HLD6, HLXD6	600		
				CMD6, MD6, HMD6, HMXD6, MXD6	800		
			General Electric	SEL, SEP, PE_N, PE_H, PE_L	150		
				SFL, SFP, PE_N, PE_H, PE_L	250		
				SGL, SGP	400		
				FGL, FGP, SGL, SGP, PG_N, PG_H, PG_L, PG_P	600		
			Schneider	HJ, HL, HR	150		
				JJ, JL, JR	250		
				LJ, LL, LR	600		
				MJ	800		
				100,000	General Electric	PG_H, PG_L, PG_P	600
			600	42,000	Eaton	JGU, JGX	250
	CLDC4, KDC, LDC4	400					
	CLDC6, LDC6, NB Tri-Pac	600					
	NB Tri-Pac	800					
	ITE/Siemens	CFD6			250		
		CJD6, SCLD6			400		
CLD6, HHL6, HHLXD6, SCLD6		600					
CMD6, HMD6, HMXD6, SCMD6, SHMD6		800					
General Electric	THLC1, PE_H, PE_L	150					
	PE_H, PE_L	250					
	FGL4, FGP4, THLC4, TLB4	400					
	SGL, SGP, FGL6, FGP6, PG_L, PG_P	600					
	SKL8, SKP8	800					
Schneider	HJ, HL, HR	150					
	JJ, JL, JR	250					
	LJ, LL, LR	600					
	MJ	800					

Switch Rating	Coordinated Circuit Breakers				
	Voltage	WCR, RMS Symmetrical Amperes	Manufacturer	Type or Class	Maximum Size, Amps
600	480	65,000	Eaton	HLD, CHLD, LDC, CLDC	600
				HMDL, HMDLB, CHMDL, NB Tri Pac	800
			ITE/Siemens	CLD6, SHLD6, SCLD6, HLD6, HLDX6, HHL6, HHLXD6	600
				CMD6, HMXD6, HMD6, SCMD6, SHMD6, SCND6, SHND6	800
				HND6, HNXD6, CND6	1200
			General Electric	HRD6, HRXD6	1600
				SGH, SGL, SGP, PG_N, PG-H, PG-L, PG-P	600
				SKL, SKP, SKT, SKS	1200
			Schneider	LJ, LL, LR	600
	PJ	1200			
	MASTERPACT NW	1600			
	600	50,000	Eaton	LDC, CLDC	600
				NB Tri-Pac, DSL206	800
			Schneider	LI, LXI	600
				NC, NE, NX	800
				PK	1200
			ITE/Siemens	CLD6, HHL6, HHLXD6, SCLD6, SHLD6	600
				CMD6, HMD6, SCMD6, SCND6, SHMD6, SHND6	800
				CND6, SCND6	1200
			General Electric	TB6, SGL6, SGP6	600
				TB8, THP, THC, SKP8	800
SKP				1200	
800 1000 1200			480	85,000	Eaton
	ITE/Siemens	CMD6			800
		CND6			1200
		CPD6-HPD6			1600
	General Electric	SKL, SKP, SKS			1200
	65,000	Schneider	PJ	1200	
	600	65,000	Eaton	NB Tri Pac	800
				RDC, CRDC, PC, PCC, PB Tri Pac	1600
			Schneider	NC, NE, NX	1200
				PCF, PEF, PHF, PXF	1600
			ITE/Siemens	CMD6, SCMD6	800
				CND6, SCND6	1200
				CPD6, HPD6, HRD6	1600
			General Electric	THP, THC, TB8, SKP8	800
				SKP	1200
THP, THC, TRP				1600	
MG	MP16H1, MP16H2, MC16H1	1600			

Accessories

Accessories are available either factory-installed or as loose kits, unless otherwise noted.

Adapter Bays

- Available for 600- 1200 amp models

CSA Certification

Digital Meter

- Measure and display voltage, current, frequency, and power for both sources
- Programmable visual alarms for high voltage, low voltage, and high current
- Three digital outputs
- Serial port for optional network connections
- Password-protected programming menus
- Joystick operation
- Factory-installed

Extended Limited Warranties

- 2-year basic
- 5-year basic
- 5-year comprehensive
- 10-year major components

Export Packaging

Heater, Anti-Condensation

- Hygrostat-controlled 120 VAC strip heater (customer-supplied voltage source required)
- 100 or 250 watts (sized for enclosure)
- Protective 15 amp circuit breaker

Literature Kits

- Production literature kit (one kit is included with each transfer switch)
- Overhaul literature kit

Neutral Assembly

- Available as loose kit for open units

RSA III Remote Serial Annunciator

- Monitors the generator set
- Monitors Normal and Emergency source status and connection
- Monitors ATS common alarm
- Allows remote testing of the ATS
- For more information, see specification sheet G6- 139.

Pull Box

- Optional for 150- 260 amp units
- Required for bottom cable entry on 400- 600 amp units

Seismic Certification

- Certification depends on application and geographic location. Contact your distributor for details.
- Available for 150- 1200 amp KGS and KGP models with NEMA 1 enclosures

Surge Protection Device (SPD)

- SPD available for the normal source supply
- Surge protection reduces transient voltages to harmless levels
- Protection modes: L-L / L-N / L-G / N-G
- Replaceable phase and neutral cartridges for service
- Frequency: 50- 60 Hz
- Operating Temperature Range: - 40 to 176°F (- 40 to 80°C)
- Remote contacts for customer-supplied status indicators:
 - Contacts: 1 NO, 1 NC
 - Min Load: 12VDC / 10 mA
 - Max. Load: 250 VAC / 1 A
 - Wire Size (max.): 16AWG
- Fuse protection: 30 amps / 600 V
- UL 1449, 3rd Edition for Type 2 applications
- IEC 61-643-1, 2nd Edition T2/11
- See additional specifications below

Additional Controller Accessories

See the controller specification sheet for more information.

Accessory Modules

- Alarm Module
- External Battery Supply Module
- Input/Output Module
- High-Power Input/Output Module

Controller Disconnect Switch

Current Sensing Kit

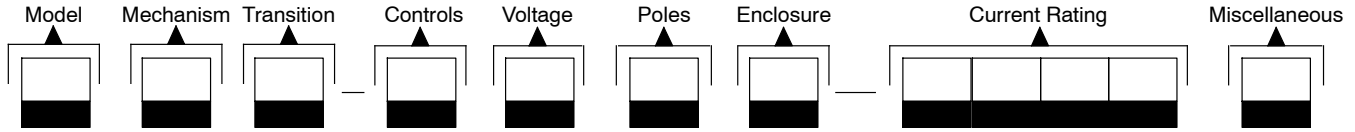
Line-to-Neutral Voltage Monitoring

Padlockable User Interface Cover

Supervised Transfer Control Switch

SPD Specifications								
Nominal Voltage (V ± 15%)	Max. Discharge Current (kA)	Phase	Poles	UL VPR 3rd Ed (L-N/N-G/L-G) (kV)	Limiting Voltage, (L-N/N-G/L-G) (kV)		Short Circuit Withstand Current (kA)	Maximum Continuous Operating Voltage (VAC)
					at 3kA	at 10kA		
240/120	40	Split	3	0.6 / 1.2 / 0.7	0.6 / 0.4 / 0.6	0.8 / 0.7 / 0.8	200	175 / 350
208/120	40	Wye	4	0.6 / 1.2 / 0.7	0.6 / 0.4 / 0.6	0.8 / 0.7 / 0.8	200	175 / 350
480/277	40	Wye	4	1.0 / 1.2 / 1.1	1.0 / 0.4 / 1.0	1.2 / 0.7 / 1.2	200	320 / 640
240/120	40	HLD	4	1.0 / 1.2 / 1.1	1.0 / 0.4 / 1.0	1.2 / 0.7 / 1.2	200	320 / 640
600/347	40	Wye	4	1.3 / 1.2 / 1.4	1.3 / 0.4 / 1.3	1.5 / 0.7 / 1.5	200	440 / 880

Model Designation



Record the transfer switch model designation in the boxes. The transfer switch model designation defines characteristics and ratings as explained below.

Sample Model Designation: KGS-DCTA-0400S

Model

K: Kohler

Mechanism

G: Bypass/Isolation

Transition

S: Standard

P: Programmed

Controller

D: Decision-Maker® MPAC 1500, Automatic

Voltage/Frequency

C: 208 Volts/60 Hz

D: 220 Volts/50 Hz

F: 240 Volts/60 Hz

G: 380 Volts/50 Hz

H: 400 Volts/50 Hz

J: 416 Volts/50 Hz

K: 440 Volts/60 Hz

M: 480 Volts/60 Hz

N: 600 Volts/60 Hz

P: 380 Volts/60 Hz

R: 220 Volts/60 Hz

Number of Poles/Wires

N: 2 Poles/3 Wires, Solid Neutral

T: 3 Poles/4 Wires, Solid Neutral

V: 4 Poles/4 Wires, Switched Neutral

Enclosure

A: NEMA 1*

* Contact the factory for other enclosure types.

Current, Amps †

0150 0600

0225 0800

0260 1000

0400 1200

† Some selections are not available on all models.

Connections

S: Standard

Note: Some selections are not available on all models. Contact your Kohler distributor for availability.

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