Models - KBS/KBP/KBC
Automatic Transfer Switches
Mechanically Operated Bypass/Isolation

Controller
- Decision-Maker® MPAC 1500

Ratings

Model	Current	Voltage, Frequency
KBS	150-4000 amps	208-600 VAC 50/60 Hz
KBP		
KBC		

Transfer Switch Standard Features
- UL 1008 listed file # E108981
- CSA certification available
- IBC and HCAI seismic certification available
- Bypass/isolation switches for uninterrupted power to the load during switch maintenance and testing
- Available in 2, 3, or 4 pole configurations
- Integral solid neutral provides line-to-neutral monitoring
- Electrically operated, mechanically held mechanism
- High withstand and close-on ratings
- Fully rated for use as a manual 3-position transfer switch
- Heavy duty mechanical interlocks
- Bypass switch and contactor position indicators
- Drawout contactor for ease of maintenance
- Design suitable for emergency and standby applications on all classes of load, 100% tungsten rated through 400 amps
- Reliable, field-proven solenoid mechanism
- Switching mechanisms lubricated for life
- Main shaft auxiliary contacts
- Front-connected style available for some amperages
- Standard one-year limited warranty. Extended limited warranties are available.

Standard Transition Models (KBS)
- Standard-transition transfer time less than 100 milliseconds (6 cycles @ 60 Hz)
- Double-throw, mechanically interlocked design (break before make)
- Solid, switched, or overlapping neutral

Programmed Transition Models (KBP)
- Programmed-transition operation provides a center OFF position that allows residual voltages in the load circuits to decay
- Programmable OFF time
- Double-throw, mechanically interlocked design (break both sides)
- Solid or switched neutral

Closed Transition Models (KBC)
- Closed-transition transfer switches operate with no power interruption during transfer and retransfer when both sources are within specified parameters (make before break)
- Quick-make, quick-break bypass switch operation for load transfer between live sources
- Source parallel times are less than 100 milliseconds (6 cycles @ 60 Hz)
- Adjustable extended transfer time relay (ensure that the setting complies with applicable codes)
- Solid or switched neutral

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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”
- 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
- Modbus communication is standard
- 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
- 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
- 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
- California HCAI pre-approval is available. (Accessory kit required.)
- Underwriters Laboratories UL 508, Standard for Industrial Control Equipment
- Underwriters Laboratories UL 1008, Standard for Automatic Transfer Switches for Use in Emergency Standby Systems, file # E108981

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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

UL-Listed Solderless Screw-Type Terminals for External Power Connections	
Switch Rating, Amps	**Normal, Emergency, and Load Terminals Per Phase and Neutral**
	Range of Wire Sizes, Copper or Aluminum *
150-400	(1) #4 AWG to 600 KCMIL
	(2) 1/0 AWG to 250 KCMIL
600	(2) #2 AWG to 600 KCMIL
800-1200 F	(3) #1 AWG to 600 KCMIL
800-1200 S	(4) 1/0 AWG to 750 KCMIL
1600-2000	(6) 1/0 AWG to 750 KCMIL
2600-3000	(10) 1/0 AWG to 750 KCMIL
4000	(12) 1/0 AWG to 750 KCMIL

F: Front-connected
S: Standard rear-connected
* Use 75°C minimum Cu/Al wire for power connections.

Extended Transfer Time Adjustable Relay (Model KBC) Specifications	
Power	12 or 24 VDC (customer-supplied)
Connections	12-20 AWG
Output type	Relay contacts, DPDT (2 form C)
Rating	10 amps max. resistive at 240 VAC
Note: Customer-supplied shunt trip on emergency source circuit breaker is required.	

Source Synchronization Settings (Model KBC)		
Parameter	**Default**	**Adjustment Range**
Voltage differential	5%	0-5%
Frequency differential	0.1 Hz	0-0.3 Hz
Phase angle	10 deg.	0-10 deg.

Auxiliary Position Indicating Contacts (rated 10 amps @ 32 VDC/250 VAC)			
Switch Rating, Amps	**Number of Contacts Indicating Normal, Emergency**		
	KBS	**KBP**	**KBC**
150-600	8, 8	6, 6	5, 5
800-1200	8, 8	7, 7	7, 7
1600-4000	8, 8	7, 7	6, 6

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Weights and Dimensions

Note: Weights and dimensions are provided for reference only. 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 bypass/isolation transfer switches in NEMA type 1 enclosures. See the transfer switch dimension drawings for other enclosure types.

Model	Amps	Dimensions mm (in.)			Weight kg (lb.) *			Dimension Drawing
		Height	Width †	Depth	2-Pole	3-Pole	4-Pole	
KBS KBP KBC	150-600	2162 (85)	864 (34)	711 (28)**	431 (950)	431 (950)	431 (950)	ADV-8600
	800 F	2311 (91)	965 (38)	813 (32) ‡	—	635 (1400)	635 (1400)	ADV-8601
	1000-1200 F	2311 (91)	965 (38)	864 (34) ‡	—	635 (1400)	635 (1400)	ADV-8601
	800-1200 S	2311 (91)	965 (38)	1219 (48) §	—	708 (1560)	708 (1560)	ADV-8602
	1600-2000	2311 (91)	965 (38)	1524 (60) §	—	1070 (2360)	1152 (2540)	ADV-8603
KBS	2600-3000	2311 (91)	965 (38)	1829 (72) §	—	1240 (2730)	1525 (3360)	ADV-8604
KBP KBC	2600-3000	2311 (91)	965 (38)	1829 (72) §	—	1325 (2920)	1611 (3550)	ADV-8604
KBS KBP KBC	4000	2311 (91)	1524 (60)	2438 (96) ‖	—	2269 (5000)	2358 (5200)	ADV-8605

F: Front-connected
S: Standard rear-connected
* Approximate weights
† Optional pull boxes will increase the width. Pull box is required for bottom cable entry on 400-600 amp units. See Transfer Switch Accessories for available pull boxes (for NEMA type 1 enclosures only).
‡ Handles extend 159 mm (6.25 in.). Standard enclosures for 800 amp models are suitable for top and upper left side cable entrance only.
§ Recommended clearance to enclosure: 0.9 m (3 ft.) from rear, 1.2 m (4 ft.) from front [0.64 m (25 in.) required for transfer switch drawout].
‖ Recommended clearance to enclosure: 0.9 m (3 ft.) from rear, 1.5 m (5 ft.) from front [0.9 m (3 ft.) required for transfer switch drawout].
** Both bypass switch manual operation handle and transfer switch carriage manual crank handle can be removed. Also note that the transfer switch carriage manual crank handle can be left in place and folded down. Recommended front clearance is 32 in. minimum.

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Withstand and Close-On Ratings (WCR)

Standard, Programmed, and Closed-Transition Models

Maximum current in RMS symmetrical amperes when coordinated with customer-supplied fuses or circuit breakers. All values are available symmetrical RMS amperes and tested in accordance with the withstand and close-on requirements of UL 1008. Application requirements may permit higher withstand ratings for certain size switches. Contact the factory for assistance.

Note: For specific breaker ratings, refer to the next table.

Switch Rating, Amps	Withstand Current Ratings in RMS Symmetrical Amperes							Short Time Ratings (sec.) ‡							
	Current-Limiting Fuses				Time-Based Rating *			480 V Max.				600 V Max.			
	Amps @ 480 V	Amps @ 600 V	Amps, Max.	Fuse Class	Amps @ 240 V	Amps @ 480 V	Amps @ 600 V	.13	.2	.3	.5	.1	.13	.3	.5
150 225 260 400 600	200kA	200kA	600	J	65kA	42kA †	35kA	7500A		—		—			
			800	L											
800-1200 FC	200kA	200kA	1200	L	50kA	50kA	50kA	36kA		—		36kA		—	
800-1200	200kA	200kA	1600	L	50kA	50kA	50kA	36kA		—		36kA		—	
1600-2000	200kA	200kA	3000	L	100kA	100kA	100kA	42kA		36kA		42kA		—	
2600 3000	200kA	200kA	4000	L	125kA	125kA	100kA	42kA		36kA		42kA		—	
4000	200kA	200kA	5000	L	100kA	100kA	100kA	85kA	65kA			65kA			

* Based on 0.050 seconds (approximately 3 cycles). Applicable to breakers with instantaneous trip elements.
† Applicable to 2-pole, 3-pole, and conventional 4-pole switches only. Overlapping neutral switches have “any” breaker ratings of 35kA, 0.050 seconds at 480 V.
‡ Short time ratings are provided for applications involving breakers that utilize trip delay settings for system selective coordination.
FC = Front Connected

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Ratings with Specific Manufacturer's Circuit Breakers

The following charts list power switching device withstand and close-on ratings (WCR) in RMS symmetrical amperes for circuit breakers from specific manufacturers. Ratings apply to both open-and programmed-transition models. Circuit breakers are supplied by the customer.

Switch Rating, amps	Molded-Case Circuit Breakers				
	WCR, amps RMS	Voltage, Max.	Manufacturer	Type	Max. Size, amps
150 225	65,000	240	GE	THQMV	225
				SGL1, SGL4, SGL6, SGP1, SGP4, SGP6	600
			Eaton/ Cutler Hammer	LDC, CLDC, HLD, CHLD	600
			Siemens/ITE	HLD6, HLXD6	600
			Square D	QG, QJ	250
	100,000		Square D	LJ (current limiting)	600
	125,000			LL (current limiting)	600
	200,000			LR (current limiting)	600
			Eaton/ Cutler Hammer	PD2 (current limiting)	225
				PD3 (current limiting)	600
	50,000	480	Eaton/ Cutler Hammer	HFDE, FDC, FDCE	225
				NHH	250
				JDC, JGU, JGX	350
				HKD, CHKD, KDC, HKDB, CHKDB, LHH	400
				HLD,CHLD, LDC, CLDC, LGH*, LGC*, LGU*, LGX*	600
				HMDLB, CHMDLB	800
			GE	SEL, SEP	150
				SFL, SFP, FEN, FEH	250
				TBC4	400
				FGN, FGH, FGL, FGP, SGL1, SGL4, SGL6, SGP1, SGP4, SGP6, TJL4V, TJL1S-6S, TBC6	600
				TB8	800
			Siemens/ITE	HDG, LDG	150
				HFD, HFD6, HFXD, HFXD6, HHFD6, HHFXD6, CFD6, HFG, LFG	250
				HJD, HJD6, HJXD, HJXD6, SHJD, SHJD6, HHJD6, HHJXD6, CJD6, SCJD6, HJG, LJG, LLG	400
				HLD6, HLXD6, HHLD6, HHLXD6, CLD6, SHLD6, SCLD6, HLG	600
			Square D	HJ, HL	150
				KC, KI, CF250L, NSF250	250
				CK400N, CK400NN, CK400H, CK400HH, CJ400L, NSJ400	400
				LC, DJ, DL, LI, NSJ600	600
				MasterPact STR 28D, PK, PJ, PL	800
	65,000			JJ (current limiting)	250
				LJ (current limiting)	600
	100,000			JL (current limiting)	250
				LL (current limiting)	600
			Eaton/ Cutler Hammer	PD2 (current limiting)	225
				PD3 (current limiting)	600
	200,000		Square D	JR (current limiting)	250
				LR (current limiting)	600
	42,000	600	Eaton/ Cutler Hammer	JGU, JGX, JGH	250
				KDC	400
				LDC, CLDC	600
			GE	TBC4	400
				SGL1, SGL4, SGL6, SGP1, SGP4, SGP6, FGP	600
			Siemens/ITE	HJD, CFD6	250
				HHJD6, HHJXD6, CJD6, SCJD6	400
				HHLD6, HHLXD6, CLD6, SCLD6, LNG, LPG, LGC*, LGU*, LGX*	600
			Square D	HJ, HL, HG	150
				KI, JJ, JL, JR, CF250L	250
				CK400H, CK400HH, CJ400L	400
				LI, MasterPact STR 28D, PK	600
	50,000			LL (current limiting)	600
	65,000		Eaton/ Cutler Hammer	PD3 (current limiting)	600
	100,000		Square D	LR (current limiting)	600

* With Digitrip 310+ LS or LSG Inst. Override set to 12X.

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Switch Rating, amps	WCR, amps RMS	Volts, Max.	Molded-Case Circuit Breakers		
			Manufacturer	Type or Class	Max. Size, amps
260	65,000	240	GE	THQMV	225
				SGL1, SGL4, SGL6, SGP1, SGP4, SGP6	600
			Eaton/Cutler Hammer	LDC, CLDC, HLD, CHLD	600
	65,000		Siemens/ITE	HLD6, HLXD6	600
			Square D	QG, QJ	250
	100,000			LJ (current limiting)	600
	125,000			LL (current limiting)	600
	200,000			LR (current limiting)	600
			Eaton/Cutler Hammer	PD2 (current limiting)	225
				PD3 (current limiting)	600
	50,000	480	Eaton/Cutler Hammer	HFDE, FDCE, HFD, FDC, LHH	225
				JDC, JGH, JGC, JGU, JGX	250
				HKD, HKDB, CHKD, CHKDB, KDC	400
				HLD,CHLD, LDC, CLDC, LGH*, LGC*, LGU*, LGX*, NHH	600
				MDL, CMDL, HMDL, CHMDL, NGS, NGH, NGC, MDLB, CMDLB, HMDLB, CHMDLB	800
			GE	SFL, SFP, FEN, FEH	250
				TBC4	400
				TBC6, TJL4V, TJL1S-6S, SGL1, SGL4, SGL6, SGP1, SGP4, SGP6, FGN, FGH, FGL, FGP	600
				TBC8, TKL4V, TKH8S-12S, TKL8S-12S, SKH8, SKL8, SKP8, TB8	800
			Siemens/ITE	HFD6, HFXD6, HHFD6, HHFXD6, CFD6, HFG, LFG	250
				HJD6, HJXD6, SHJD6, HHJD6, HHJXD6, CJD6, SCJD6, HJG, LJG, LLG	400
				HLD6, HLXD6, SHLD6, HHLD6, HHLXD6, CLD6, SCLD6, HLG	600
				LMD, LMD6, LMXD, LMXD6, HLMD, HLMD6, HLMXD, HLMXD6, MD, MD6, MXD6, HMG, HMD6, HMXD6, SMD6, SHMD6, CMD6, SCMD6, LMG, MG	800
			Square D	KI, KC, CF250L, NSF250	250
				CK400N, CK400NN, CK400H, CK400HH, CJ400L, NSJ400	400
				LC, DJ, DL, LJ, LL, LR, LI, NSJ600	600
				CK800N, CK800NN, CK800H, CK800HH, MasterPact STR 28D, MJ, PK, PJ, PL	800
				CK1000HL	1000
				CK1200NN, CK1200HH	1200
	65,000			JJ (Current Limiting)	250
				LJ (current limiting)	600
	100,000			JL (Current Limiting)	250
				LL (current limiting)	600
	200,000			JR (Current Limiting)	250
				LR (current limiting)	600
			Eaton/Cutler Hammer	PD2 (current limiting)	225
				PD3 (current limiting)	600
	42,000	600	Eaton/Cutler Hammer	JGU, JGX	250
				KDC	400
				LDC, CLDC	600
			GE	TBC4	400
				TBC6, SGL1, SGL4, SGL6, SGP1, SGP4, SGP6, FGP	600
				TBC8, TKL4V, TKL8S-12S, SKL8, SKP8	800
			Siemens/ITE	HJD, CFD6	250
				HHJD6, HHJXD6, CJD6, SCJD6	400
				HHLD6, HHLXD6, CLD6, SCLD6	600
				HLMD6, HLMXD6, HMXD6, SHMD6, HMD6, CMD6, SCMD6, LMG, LNG, LPG, LGC*, LGU*, LGX*	800
			Square D	KI, JL, JR, JJ, CF250L	250
				CK400H, CK400HH, CJ400L	400
				LI	600
				CK800H, CK800HH, MasterPact STR 28D, PK	800
	50,000			LL (current limiting)	600
	65,000		Eaton/Cutler Hammer	PD3 (current limiting)	600
	100,000		Square D	LR (current limiting)	600

* With Digitrip 310+ LS or LSG Inst. Override set to 12X.

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Switch Rating, amps	Molded-Case Circuit Breakers				
	WCR, amps RMS	Voltage, Max.	Manufacturer	Type	Max. Size, amps
400	65,000	240	GE	THQMV	225
				SGL1, SGL4, SGL6, SGP1, SGP4, SGP6	600
			Eaton/ Cutler Hammer	LDC, CLDC, HLD, CHLD	600
	200,000			PD2 (current limiting)	225
				PD3 (current limiting)	600
	65,000		Siemens / ITE	HLD6, HLXD6	600
			Square D	QG, QJ	250
	100,000			LJ (current limiting)	600
	125,000			LL (current limiting)	600
	200,000			LR (current limiting)	600
	50,000	480	Eaton/ Cutler Hammer	JGH, JGC, NHH	250
				HKD, CHKD, KDC, HKDB, CHKDB, LHH	400
				CHLD, LDC, CLDC, LGH*, LGC*, LGU*, LGX*	600
				MDL, CMDL, HMDL, CHMDL, NGS, NGH, NGC, MDLB, CMDLB, HMDLB, CHMDLB	800
				NGU	1600
			GE	TBC4	400
				TBC6, TJL4V, TJL1S- 6S, SGL1, SGL4, SGL6, SGP1, SGP4, SGP6, FGN, FGH, FGL, FGP	600
				TBC8, TKL4V, TKH8S- 12S, TKL8S- 12S, SKH8, SKL8, SKP8, TB8	800
			Siemens / ITE	HFD6, HFXD6, HFG, LFG	250
				HJD6, HJXD6, SHJD6, HHJD6, HHJXD6, CJD6, SCJD6, HJG, LLG, LJG	400
				HLD6, HLXD6, SHLD6, HHLD6, HHLXD6, CLD6, SCLD6, HLG	600
				LMD6, LMXD6, HLMD6, HLMXD6, MD6, MXD6, HMD6, HMXD6, SMD6, SHMD6, CMD6, SCMD6, HMG, LMG	800
			Square D	CK400N, CK400NN, CK400H, CK400HH, CJ400L, NSJ400	400
				LC, DJ, DL, LJ, LL, LR, LI, NSJ600	600
				CK800N, CK800NN, CK800H, CK800HH, MJ	800
				CK1000HH	1000
				PK, PJ, PL, MH, MasterPact STR 28D, CK1200HH	1200
	65,000			LJ (current limiting)	600
	100,000			LL (current limiting)	600
	200,000			LR (current limiting)	600
	100,000		Eaton/ Cutler Hammer	PD3 (current limiting)	600
	42,000	600	Eaton/ Cutler Hammer	KDC	400
				LDC, CLDC, LGC*, LGU*, LGX*	600
	65,000			PD3 (current limiting)	600
	42,000		GE	TBC4	400
				TBC6, SGL1, SGL4, SGL6, SGP1, SGP4, SGP6, FGP	600
				TBC8, TKL4V, TKL8S- 12S, SKL8, SKP8	800
			Siemens / ITE	HHJD6, HHJXD6, CJD6, SCJD6	400
				HHLD6, HHLXD6, CLD6, SCLD6	600
				HLMD6, HLMXD6, HMXD6, SHMD6, HMD6, CMD6, SCMD6, LMG	800
				LNG, LPG	1200
			Square D	CK400H, CK400HH, CJ400L	400
				LI	600
				CK800H, CK800HH	800
				MasterPact STR 28D, PK	1200
	50,000			LL (current limiting)	600
	100,000			LR (current limiting)	600

* With Digitrip 310+ LS or LSG Inst. Override set to 12X.

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Switch Rating, amps	Molded-Case Circuit Breakers				
	WCR, amps RMS	Voltage, Max.	Manufacturer	Type	Max. Size, amps
600	65,000	240	GE	THQMV	225
				SGL1, SGL4, SGL6, SGP1, SGP4, SGP6	600
			Siemens / ITE	HLD6, HLXD6	600
			Eaton/ Cutler Hammer	LDC, CLDC, HLD, CHLD	600
			Square D	QG, QJ	250
	100,000			LJ (current limiting)	600
	125,000			LL (current limiting)	600
	200,000			LR (current limiting)	600
			Eaton/ Cutler Hammer	PD2 (current limiting)	225
				PD3 (current limiting)	600
	50,000	480	Eaton/ Cutler Hammer	JGH, JGC, HFG, LFG	250
				HLD, CHLD, LDC, CLDC, LGH*, LGC*, LGU*, LGX*	600
				MDL, CMDL, HMDL, CHMDL, NGS, NGH, NGC, NGU, MDLB, CMDLB, NF	800
			GE	TBC6, TJL4V, TJL1S- 6S, SGL1, SGL4, SGL6, SGP1, SGP4, SGP6, FGN, FGH, FGL, FGP	600
				TBC8, TKL4V, TKH8S- 12S, TKL8S- 12S, SKH8, SKL8, SKP8, TB8	800
				SKL12, SK12P	1200
			Siemens / ITE	HLD6, HLXD6, SHLD6, HHLD6, HHLXD6, CLD6, SCLD6, HLG, LLG	600
				LMD6, LMXD6, HLMD6, HLMXD6, MD6, MXD6, HMD6, HMXD6, SMD6, SHMD6, CMD6, SCMD6, HMG, LMG	800
				HND6, HNXD6, SND6, SHND6, ND6, NXD6, HNG, LNG, CND6	1200
			Square D	LC, DJ, DL, LI, NSJ600	600
				CK800N, CK800NN, MJ	800
				MH, CK1200N, CK1200NN, CK1200H, CK1200HH, NT- H, NT- L1, NT- L, NT- LF, PK, PJ, PL	1200
				CM2000HH	2000
				CM2500HH	2500
	85,000			PL1200	1200
	65,000			LJ (current limiting)	600
	100,000			LL (current limiting)	600
	200,000			LR (current limiting)	600
	100,000		Eaton/ Cutler Hammer	PD3 (current limiting)	600
	42,000	600	Eaton/ Cutler Hammer	JGC	250
				TBC4	400
				LDC, CLDC	600
			GE	TBC6, SGL1, SGL4, SGL6, SGP1, SGP4, SGP6, FGP	600
				TBC8, TKL4V, TKL8S- 12S, SKL8, SKP8	800
				SKL12, SKP12	1200
			Siemens / ITE	HHLD6, HHLXD6, CLD6, SCLD6	600
				HLMD6, HLMXD6, HMXD6, SHMD6, HMD6, CMD6, SCMD6, LMG	800
				HND6, HNXD6, HNG, LNG, SHND6	1200
			Square D	LI	600
				CK800H, CK800HH	800
				CK1000HL	1000
				CK1200H, CK1200HH, NT- H, NT- L, NT- LF, NT- L1, MasterPact STR 28D, PK	1200
	50,000			LL (current limiting)	600
	65,000		Eaton/ Cutler Hammer	PD3 (current limiting)	600
	100,000		Square D	LR (current limiting)	600

* With Digitrip 310+ LS or LSG Inst. Override set to 12X.

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Switch Rating, amps	Molded-Case Circuit Breakers				
	WCR, amps RMS	Voltage, Max.	Manufacturer	Type	Max. Size, amps
800 1000 1200	65,000	480	Eaton/ Cutler Hammer	HLD, CHLD, LGH, LGC, LGU, LGX, LDC, CLDC	600
				HMDL, CHMDL, HMDLB, CHMDLB	800
				HND, CHND, NDC, CNDC, NF	1200
				NGH, NGC, NGU	1600
				RGH, RGC	2500
			GE	TBC6, TJL4V, SGL, SGP6	600
				TBC8, SKL8, SKP8	800
				SKL12, SKP12, TKL4V	1200
			Siemens/ITE	HLXD6, HHLXD6, HHLD6, CLD6, SHLD6, SCLD6, HLG, LLG	600
				HMXD6, HMD6, SHMD6, HMG, LMG, CMD6, SCMD6	800
				SHND6, CND6, HNXD6, HNG, LNG	1200
				HPG, LPG, HPD, HPD6, CPD6, HPXD, HPXD6, SHPD, SHPD6	1600
				HRD6, HRXD6	2000
			Square D	LI, LE LSI, LE LI, LX, LXI, LJ, LL, LR	600
				MJ, ME, MX, CK800H, CK800HH	800
				CK1000HL	1000
				NT-L1, NT-L, NT-LF, NE, NX, CK1200H, CK1200HH, PJ, PL	1200
				NW, RJ, RL, MTZ	1600
				PE, PX	2500
				SES, SE, SEH (LS or LSI TRIP)	3000
				SE (LI, LSI-E, and LI-E TRIP)	4000
				MasterPact STR 28D	6300
	150,000			MTZ2-16LF1	1600
	65,000	600	Eaton/Cutler Hammer	Tri-Pac NB	800
				RDC	2500
			Siemens/ITE	CND	1200
1600 2000 2600 3000	125,000	480	Square D	Masterpact NW-L	3000
1600 2000	150,000			MTZ2-LF	2000
	200,000			MTZ2-L1/L/LF	2000

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Models - KBS/KBP/KBC
Automatic Transfer Switches
Mechanically Operated Bypass/Isolation

Controller Accessories

- ❑ **Accessory Modules**
  - Alarm Module
  - External Battery Supply Module
  - Input/Output Module
  - High-Power Input/Output Module
- ❑ **Controller Disconnect Switch**
- ❑ **Current Sensing Kit**
- ❑ **Padlockable User Interface Cover**
- ❑ **Supervised Transfer Control Switch**

See the controller specification sheet for more information.

Transfer Switch Accessories

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

- ❑ **CSA Certification**
- ❑ **Digital Meter**
  - Measure and display voltage, current, frequency, and power
  - 35 programmable alarms
  - LCD display, 67 x 62.5 mm (2.65 x 2.5 in.)
  - Pushbutton operation
  - Password-protected programming menus
  - Two digital inputs
  - Two digital outputs
  - Two Form A relay outputs
  - Serial port for optional network connections
  - Data logging
  - Factory-installed
- ❑ **Engine Start Circuit Monitor**
  - See Specification Sheet G6-165.
- ❑ **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 (included with transfer switch)
  - Overhaul literature kit
- ❑ **Load Shed Kit**
  - Forced transfer from Emergency to OFF for programmed-transition or closed-transition models
  - Customer-supplied signal (contact closure) is required for the forced transfer to OFF function
  - Factory-installed only
- ❑ **Pull Box**
  - Available in a variety of sizes for 150-3000 amp units in NEMA type 1 enclosures

Amps	Pull Box Width, mm (in.)
150-600	305 or 381 mm (12 or 15 in.)
800F	305 or 560 mm (12 or 22 in.)
800-1200S,1000-1200F	305, 460, or 560 mm (12, 18, or 22 in.)
1600-2000	460 or 610 mm (18 or 24 in.)
2600-3000	460 or 660 mm (18 or 26 in.)

- ❑ **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.
- ❑ **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 176ºF (-40 to 80ºC)
  - 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 SPD specifications below
- ❑ **Extended Limited Warranties**
  - 2-year basic
  - 5-year basic
  - 5-year comprehensive
  - 10-year major components

Seismic Certification

- ❑ **IBC Seismic Certification**
  - Certification depends on application and geographic location. Contact your distributor for details.
  - Available for 150-4000 amp models with NEMA 1 or NEMA 3R enclosures
- ❑ **California OSHPD Pre-Approval**
  - Available for 150-4000 amp models with NEMA 1 or NEMA 3R enclosures

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 3kAmps	at 10kAmp		
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

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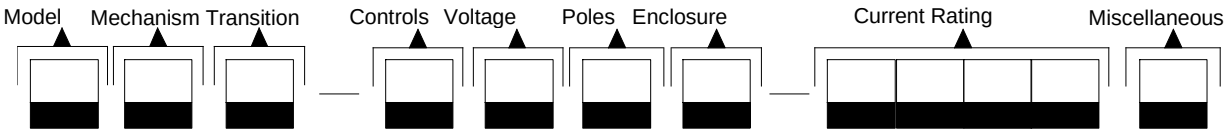
Models - KBS/KBP/KBC
Automatic Transfer Switches
Mechanically Operated Bypass/Isolation

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: KBS-DMVA-1200S

Model
K: Kohler

Mechanism
B: Mechanically Operated Bypass/Isolation

Transition
S: Standard
P: Programmed
C: Closed

Controller
D: Decision-Maker® MPAC 1500, Automatic

Voltage/Frequency

C:	208 Volts/60 Hz	K:	440 Volts/60 Hz
D:	220 Volts/50 Hz	M:	480 Volts/60 Hz
F:	240 Volts/60 Hz	N:	600 Volts/60 Hz
G:	380 Volts/50 Hz	P:	380 Volts/60 Hz
H:	400 Volts/50 Hz	R:	220 Volts/60 Hz
J:	416 Volts/50 Hz	S:	400 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
W: 4 Poles/4 Wires, Overlapping Neutral

Enclosure
A: NEMA 1
C: NEMA 3R

Current, Amps *

0150	0800	2600
0225	1000	3000
0260	1200	4000
0400	1600	
0600	2000	

* Some selections are not available on all models.

Connections
S: Standard
F: Front (800-1200amp only)

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

Availability is subject to change without notice. Discovery Energy, LLC reserves the right to change the design or specifications without notice and without any obligation or liability whatsoever. Contact your local authorized distributor for availability.

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