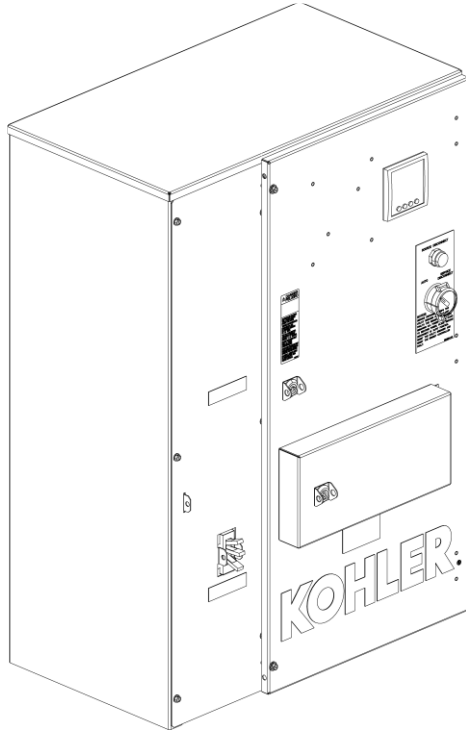


Automatic Transfer Switches Contactor-Based Service Entrance

ISO 9001
KOHLER
NATIONALLY REGISTERED



Controller

- Decision-Maker® MPAC 1500

Ratings

Model	Current	Voltage, Frequency
KUS	70-4000 amps	208-600 VAC 50/60 Hz
KUP	150-4000 amps	

Transfer Switch Standard Features

- UL 1008 listed (cULus) file #E58962 (automatic)
- IBC seismic certification available
- Contactor-based service entrance ATS
- 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
- Design suitable for emergency and standby applications on all classes of load, 100% tungsten rated through 400 amps
- Silver alloy main contacts
- Gold-flashed engine start contacts rated 2 amps @ 30 VDC/250 VAC
- Front-accessible contacts for easy inspection
- Front-replaceable main and arcing contacts (800-4000 amps)
- Reliable, field-proven solenoid mechanism
- Switching mechanisms lubricated for the expected life of the transfer switch
- Internal manual operating handle
- Main shaft auxiliary position-indicating contacts rated 10 amps @ 32 VDC/250 VAC
- NEMA type 1, 12, 3R, 4, and 4X enclosures available
- Standard one-year limited warranty. Extended limited warranties are available.

Standard-Transition Models (KUS)

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

Programmed-Transition Models (KUP)

- Programmed-transition operation
- 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-before-make power contacts)
- Solid or switched neutral

Utility-Side Circuit Breakers

- Standard and high-fault circuit breakers are available
- 80% or 100% circuit breakers
- Thermal magnetic breakers available up to 250 Amps
- Electronic trip breakers available for 70-4000 Amps
- See the Circuit Breaker Table for specific offerings

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 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.

Controller Accessories

- **Accessory Modules**
 - Alarm Module
 - External Battery Supply Module (Included as standard)
 - Input/Output Module
 - High-Power Input/Output Module
- **Controller Disconnect Switch**
- **Current Sensing Kit**
- **Padlockable User Interface Cover**

Codes and Standards

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

- 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 2009, referencing ASCE 7-05 and ICC-ES AC-156
 - IBC 2012, referencing ASCE 7-10 and ICC-ES AC-156
 - IBC 2015, referencing ASCE 7-10 and ICC-ES AC-156
 - IBC 2018, referencing ASCE 7-16 and ICC-ES AC-156
- Underwriters Laboratories UL 1008 (cULus), Standard for Automatic Transfer Switches for Use in Emergency Standby Systems file #E58962 (automatic)

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 10 amps @ 32 VDC/250 VAC)		
Switch Rating, Amps	Number of Contacts Indicating Normal, Emergency	
	KUS	KUP
30-230	2, 2	N/A
260-600	8, 8	—
150-600	—	8, 8
800-1200	8, 8	8, 8
1600-4000	8, 8	7, 7

Cable Sizes

Note:

Cable size data is subject to change. Refer to the transfer switch dimension drawings and wiring diagrams for planning and installation.

UL-Listed Solderless Screw-Type Terminals for External Power Connections						
Range of Wire Sizes, Copper or Aluminum ‡						
Model	Switch Rating, Amps	Emergency and Load (per phase)	Normal	Emergency and Load Neutral	Neutral (3-pole)	Ground
KUS	70-150	(1) #14 AWG to 4/0 AWG	(1) #14 AWG to 3/0 AWG	—	(3) #14 AWG to 4/0 AWG	(3) #6 AWG to 3/0 AWG
	200-225	(1) #14 AWG to 4/0 AWG <i>Cu only</i>	(1) 3/0 AWG to 350 MCM	—	(3) #14 AWG to 4/0 AWG <i>Cu only</i>	(3) #6 AWG to 3/0 AWG
KUP	150	(1) #4 AWG to 600 KCMIL or (2) #2 AWG to 250 KCMIL	(1) #14 AWG to 3/0 AWG	—	(3) #4 AWG to 600 KCMIL or (6) 1/0 AWG to 250 KCMIL	(3) #4 AWG to 600 KCMIL or (6) 1/0 AWG to 250 KCMIL
	200-225		(1) 3/0 AWG to 350 MCM	—		
KUS KUP	250	(1) #4 AWG to 600 KCMIL or (2) #2 AWG to 250 KCMIL	(1) #1 AWG to 600 MCM (TM) (2) 2/0 AWG to 500 MCM (ET)	—	(3) #4 AWG to 600 KCMIL or (6) 1/0 AWG to 250 KCMIL	(3) #4 AWG to 600 KCMIL or (6) 1/0 AWG to 250 KCMIL
	400		(1) #1 AWG to 600 MCM (TM) (2) 2/0 AWG to 500 MCM (ET)	—		
	600	(2) #2 AWG to 600 KCMIL	(3) 3/0 AWG to 500 MCM	—	(6) #2 AWG to 600 KCMIL	(3) #4 AWG to 600 KCMIL or (6) 1/0 AWG to 250 KCMIL
	800	(4) 1/0 AWG to 750 MCM	(3) 3/0 AWG to 500 MCM	—	(12) 1/0 AWG to 750 MCM	NEMA 1: (3) #4 AWG to 500 MCM NEMA 3R/4/4X/12: (3) #4 AWG to 600 MCM or (6) 1/0 AWG to 250 MCM
	1000-1200		(4) 3/0 AWG to 500 MCM	—		
	1600-2000	(6) 1/0 AWG to 750 MCM	(6) 1/0 AWG to 750 MCM	(12) 1/0 AWG to 750 MCM	(12) 1/0 AWG to 750 MCM	(4) #4 AWG to 500 MCM
	2500-3000	(12) 1/0 AWG to 750 MCM	(12) 1/0 AWG to 750 MCM	(24) 1/0 AWG to 750 MCM	(12) 1/0 AWG to 750 MCM	
	4000	(12) 1/0 AWG to 750 MCM	—	—	—	(36) 1/0 AWG to 750 KCMIL

‡ Use 75°C minimum Cu/Al wire for power connections.

Utility Source Circuit Breakers WCR Levels Standard and Programmed-Transition Models

All values are available symmetrical RMS amperes and tested in accordance with the withstand and close-on requirements of UL1008. Application requirements may permit higher withstand ratings for certain size switches. Contact the factory for assistance.

Duty Rating %	Amperage	Trip Type	Withstand Current Ratings in RMS Symmetrical Amperes							
			Standard Fault				High Fault			
			LCB Frame	240 V, Max.	480 V, Max.	600 V, Max.	LCB Frame	240 V, Max.	480 V, Max.	600 V, Max.
80	70	Thermal Magnetic	HG	65kA	35kA	18kA	BJ	100kA	50kA	25kA
	100		HG	65kA	35kA	18kA	BJ	100kA	50kA	25kA
	150		HG	65kA	35kA	18kA	HL	125kA	85kA	25kA
	200		JG	65kA	30kA	N/A	JL	125kA	85kA	N/A
	225		JG	65kA	30kA	18kA	JL	125kA	85kA	42kA
	250		JG	65kA	35kA	18kA	JL	100kA	100kA	42kA
	70	Electronic Trip	HG	65kA	35kA	18kA	HL	125kA	85kA	25kA
	100		HG	65kA	35kA	18kA	HL	125kA	85kA	25kA
	150		HG	65kA	35kA	18kA	HL	125kA	85kA	25kA
	200		JG	65kA	30kA	N/A	JL	125kA	85kA	N/A
	225		JG	65kA	30kA	18kA	JL	125kA	85kA	42kA
	250		JG	65kA	35kA	18kA	JL	100kA	100kA	42kA
	400		LJ	65kA	50kA	25kA	LL	—	—	35kA
	600		PJ	65kA	50kA	25kA	PK	—	—	42kA
	800		PJ	65kA	65kA	25kA	PK	—	—	50kA
	1000		PJ	65kA	65kA	25kA	PK	—	—	50kA
	1200		PJ	65kA	65kA	25kA	PK	—	—	50kA
	1600		RL	100kA	100kA	50kA		—	—	—
	2000		RL	100kA	100kA	50kA		—	—	—
	100		70	Thermal Magnetic	HG	65kA	35kA	18kA	HL	125kA
100		HG	65kA		35kA	18kA	HL	125kA	85kA	25kA
150		HG	65kA		35kA	18kA	HL	125kA	85kA	25kA
200		JG	65kA		30kA	N/A	JL	125kA	85kA	N/A
225		JG	65kA		30kA	18kA	JL	125kA	85kA	42kA
250		JG	65kA		35kA	18kA	JL	100kA	100kA	42kA
70		Electronic Trip	HG	65kA	35kA	18kA	HL	125kA	85kA	25kA
100			HG	65kA	35kA	18kA	HL	125kA	85kA	25kA
150			HG	65kA	35kA	18kA	HL	125kA	85kA	25kA
200			JG	65kA	30kA	N/A	JL	125kA	85kA	N/A
225			JG	65kA	30kA	18kA	JL	125kA	85kA	42kA
250			JG	65kA	35kA	18kA	JL	100kA	100kA	42kA
400			LJ	65kA	50kA	25kA	LL	—	—	35kA
600			PJ	65kA	50kA	25kA	PK	—	—	42kA
800			PJ	65kA	65kA	25kA	PK	—	—	50kA
1000			PJ	65kA	65kA	25kA	PK	—	—	50kA
1200			PJ	65kA	65kA	25kA	PK	—	—	50kA
1600			RL	100kA	100kA	50kA		—	—	—
2000			RL	100kA	100kA	50kA		—	—	—
2500			RL	100kA	100kA	50kA		—	—	—
3000	RL	100kA	100kA	50kA		—	—	—		
4000	NW	100kA	100kA	100kA		—	—	—		

Withstand and Close-On Ratings (WCR) Standard and Programmed-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.

Model	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.				
		480 V Max.	600 V Max.	Amps, Max.	Fuse Class	Time, sec.	240 V, Max	480 V, Max	600 V, Max	.13	.2	.3	.5	.1	.13	.3	.5	
KUS	70	200kA	35kA	200	J	0.025	10kA	10kA	10kA	—				—				
	100	35kA	35kA	200	RK1	0.025	10kA	10kA	10kA	—				—				
	150									—				—				
	200	200kA	35kA	200	J	0.025	10kA	10kA	10kA	—				—				
		35kA	35kA	200	RK1					—				—				
	225 (480V)	100kA	—	300	J	0.025	10kA	10kA	—	—				—				
225 (600V)	200kA	200kA	600	J	0.05	65kA	42kA †	35kA	7500A	—				—				
			800	L						—				—				
KUP	150	200kA	200kA	600	J	0.05	65kA	42kA †	35kA	7500A	—				—			
				800	L	0.05	65kA	42kA †	35kA	7500A	—				—			
	225	200kA	200kA	600	J	0.05	65kA	42kA †	35kA	7500A	—				—			
				800	L	0.05	65kA	42kA †	35kA	7500A	—				—			
KUS KUP	250 400	200kA	200kA	600	J	0.05	65kA	42kA †	35kA	7500A	—				—			
				800	L	0.05	65kA	42kA †	35kA	7500A	—				—			
	600	200kA	200kA	600	J	0.05	65kA	42kA †	35kA	—	—				—			
				800	L	0.05	65kA	42kA †	35kA	—	—				—			
	800-1200	200kA	200kA	1600	L	0.05	50kA	50kA	50kA	36kA		—		36kA		—		
	1600-2000 S	200kA	200kA	3000	L	0.05	100kA	100kA	100kA	42kA		36kA		42kA		—		
	2600 3000	200kA	200kA	4000	L	0.05	100kA	100kA	100kA	42kA		36kA		42kA		—		
	4000	200kA	200kA	5000	L	0.05	100kA	100kA	100kA	85kA		65kA		65kA		—		

* Applicable to breakers with instantaneous trip elements.
† Applicable to 2-pole, 3-pole, and conventional 4-pole switches only.
‡ Short time ratings are provided for applications involving breakers that utilize trip delay settings for system selective coordination.

Ratings with Specific Manufacturers' Circuit Breakers

The following charts list power switching device withstand and close-on ratings (WCR) in RMS symmetrical amperes for specific manufacturers' circuit breakers. Circuit breakers are supplied by the customer.

Model	Switch Rating, amps	WCR, amps RMS	Volts, Max.	Molded-Case Circuit Breakers		
				Manufacturer	Type or Class	Max. Size, amps
KUS	70	150,000	240	Square D	HR	250
		125,000			HL	150
		100,000			BJ, HJ	125
		65,000			BG, HG	125
		42,000			QG, QJ	90
		25,000			HD	150
		25,000			BD	125
		22,000			GE	THED
		85,000	480	Square D	HL, HR	150
		50,000			BJ	125
		35,000			HG, HJ	150
		18,000			BG	125
					BD, HD	125
					600	Square D
			BJ	125		
		HG	150			
BG	125					
14,000	600	Square D	HD	150		
			BD	125		

Model	Switch Rating, amps	WCR, amps RMS	Volts, Max.	Molded-Case Circuit Breakers				
				Manufacturer	Type or Class	Max. Size, amps		
KUS	150	150,000	240	Square D	HR	250		
		125,000			HL	150		
		100,000			BJ, HJ	125		
		65,000			JG, JJ, JL, JR	200		
		42,000			BG, HG	125		
		25,000			QG, QJ	200		
		22,000			HD	150		
		22,000			BD	125		
		85,000	480	Square D	GE	THED	150	
		50,000			HL, HR	150		
		35,000			BJ	125		
		25,000			HG, HJ	150		
		18,000			BG	125		
		18,000			JG, JJ, JL	200		
		25,000	600	Square D	BD, HD	125		
		18,000			HJ, HL, HR	150		
		14,000			BJ	125		
					HG	150		
	BG	125						
			HD	150				
			BD	125				
KUS	200 225	200,000	240	Square D	JR	250		
		125,000			JL	250		
		100,000			JJ	250		
		65,000			JG	250		
		42,000			QG, QJ	225		
		25,000			JD	250		
		85,000			480	Square D	JL, JR	250
		30,000					JG, JJ	250
	18,000	JD	250					
	14,000	JD, JG, JJ, JL, JR	250					
	200	14,000	600	Square D	JD, JG, JJ, JL, JR	250		
	225	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		
					HHL6, 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		
CK800H, CK800HH, MasterPact STR 28D, PK					800			
LL (current limiting)					600			
LR (current limiting)					600			
Eaton/Cutler Hammer	65,000		PD3 (current limiting)	600				

Model	Switch Rating, amps	WCR, amps RMS	Volts, Max.	Molded-Case Circuit Breakers				
				Manufacturer	Type or Class	Max. Size, amps		
KUP	150 200 225	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	
						LR (current limiting)	600	
		200,000			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, HHL6, 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
				200,000		Eaton/Cutler Hammer	PD2 (current limiting)	225
							PD3 (current limiting)	600
						Square D	JR (current limiting)	250
							LR (current limiting)	600
				42,000	600	Eaton/Cutler Hammer		JGU, JGX, JGH
			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					
		HHL6, 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					
		LL (current limiting)	600					
50,000								
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.

Model	Switch Rating, amps	WCR, amps RMS	Volts, Max.	Molded-Case Circuit Breakers			
				Manufacturer	Type or Class	Max. Size, amps	
KUS KUP	260	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		65,000	QG, QJ	250	
				100,000	LJ (current limiting)	600	
				125,000	LL (current limiting)	600	
				200,000	LR (current limiting)	600	
		Eaton/Cutler Hammer		200,000	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				
	Square D		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, HHL6, HHLXD6, CLD6, SCLD6, HLG	600	
	Square D		200,000		LMD, LMD6, LMXD, LMXD6, HLMD, HLMD6, HLMXD, HLMXD6, MD, MD6, MXD6, HMG, HMD6, HMXD6, SMD6, SHMD6, CMD6, SCMD6, LMG, MG	800	
					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			
		JJ (current limiting)		250			
		LJ (current limiting)		600			
		JL (current limiting)		250			
LL (current limiting)		600					
JR (current limiting)	250						
LR (current limiting)	600						
Eaton/Cutler Hammer	200,000	PD2 (current limiting)	225				
		PD3 (current limiting)	600				

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

Model	Switch Rating, amps	WCR, amps RMS	Volts, Max.	Molded-Case Circuit Breakers		
				Manufacturer	Type or Class	Max. Size, amps
KUS KUP	260	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	
		LL (current limiting)			600	
		Eaton/Cutler Hammer		PD3 (current limiting)	600	
Square D	LR (current limiting)	600				
	50,000					
	65,000					
	100,000					

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

Model	Switch Rating, amps	WCR, amps RMS	Volts, Max.	Molded-Case Circuit Breakers			
				Manufacturer	Type or Class	Max. Size, amps	
KUS KUP	400	65,000	240	GE	THQMV	225	
					SGL1, SGL4, SGL6, SGP1, SGP4, SGP6	600	
				Eaton/Cutler Hammer	LDC, CLDC, HLD, CHLD	600	
					PD2 (current limiting)	225	
				PD3 (current limiting)	600		
				Siemens/ITE	HLD6, HLXD6	600	
		Square D	QG, QJ	250			
			LJ (current limiting)	600			
			LL (current limiting)	600			
			LR (current limiting)	600			
		200,000	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	
				TBC4	400		
				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	
				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			
		LJ (current limiting)	600				
		LL (current limiting)	600				
		LR (current limiting)	600				
		Eaton/Cutler Hammer	PD3 (current limiting)	600			
		65,000	600	Eaton/Cutler Hammer	KDC	400	
					LDC, CLDC, LGC*, LGU*, LGX*	600	
		42,000	600	Eaton/Cutler Hammer	PD3 (current limiting)	600	
					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			
	LL (current limiting)	600					
LR (current limiting)	600						
50,000							
100,000							

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

Model	Switch Rating, amps	WCR, amps RMS	Volts, Max.	Molded-Case Circuit Breakers		
				Manufacturer	Type or Class	Max. Size, amps
KUS KUP	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
					LJ (current limiting)	600
		LL (current limiting)	600			
		LR (current limiting)	600			
		200,000	Eaton/Cutler Hammer	PD2 (current limiting)	225	
				PD3 (current limiting)	600	
		50,000	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	
		50,000	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, HHL6, 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	
				PL1200	1200	
			85,000	Eaton/Cutler Hammer	LJ (current limiting)	600
					LL (current limiting)	600
					LR (current limiting)	600
		65,000	Eaton/Cutler Hammer	PD3 (current limiting)	600	
				JGC	250	
				TBC4	400	
		100,000	Eaton/Cutler Hammer	LDC, CLDC	600	
				TBC6, SGL1, SGL4, SGL6, SGP1, SGP4, SGP6, FGP	600	
				TBC8, TKL4V, TKL8S- 12S, SKL8, SKP8	800	
		42,000	GE	SKL12, SKP12	1200	
				HHL6, HHLXD6, CLD6, SCLD6	600	
				HLMD6, HLMXD6, HMXD6, SHMD6, HMD6, CMD6, SCMD6, LMG	800	
		42,000	Siemens/ITE	HND6, HNXD6, HNG, LNG, SHND6	1200	
				LI	600	
				CK800H, CK800HH	800	
50,000	Square D	CK1000HL	1000			
		CK1200H, CK1200HH, NT- H, NT- L, NT- LF, NT- L1, MasterPact STR 28D, PK	1200			
		LL (current limiting)	600			
65,000	Eaton/Cutler Hammer	PD3 (current limiting)	600			
		LR (current limiting)	600			
100,000	Square D	LR (current limiting)	600			

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

Model	Switch Rating, amps	WCR, amps RMS	Volts, Max.	Molded-Case Circuit Breakers		
				Manufacturer	Type or Class	Max. Size, amps
KUS KUP	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					
65,000	600	Eaton/Cutler Hammer	Tri-Pac NB	800		
			RDC	2500		
		Siemens/ITE	CND	1200		
KUS KUP	1600 2000	150,000 200,000	480	Square D	MTZ2-LF	2000
					MTZ2-L1/L1F	2000

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 NEMA Type 1 enclosures, NEMA Type 3R enclosures and open units. See the transfer switch dimension drawings for other enclosure types.

Model	Amps	NEMA Type	Poles	Wires	Dimensions mm (in.)			Weight kg (lb.)			Dimension Drawing
					Height	Width	Depth	2-Pole	3-Pole	4-Pole	
KUS	70-225	1	2,3,4	3, 4	1000 (39)	693 (27)	489 (19)†	66 (145)	67 (148)	69 (151)	ADV-9983
		3R	2,3,4	3, 4	1000 (39)	693 (27)	500 (20)†	90 (199)	92 (202)	93 (205)	
	225-600	1	2,3,4	3, 4	1930 (76)	1005 (40)	571 (23)†	223 (492)	227 (500)	232 (511)	ADV-9984
		3R	2,3,4	3, 4	1930 (76)	1005 (40)	563 (22)†	237 (522)	240 (530)	245 (541)	
	800-1200	1	2,3,4	3, 4	2289 (90)*	963 (38)	721 (28)†	488(1075)	497 (1095)	519 (1145)	ADV-9985
		3R	2,3,4	3, 4	2289 (90)*	963 (38)	821 (32)†	501 (1105)	510 (1125)	533 (1175)	
	1600-2000	1	3,4	4	2289 (90)	963 (38)	1805 (71)	—	846 (1865)	875 (1930)	ADV-9986
		3R	3,4	4	2293 (90)	943 (37)	1993 (78)	—	982 (2165)	1011 (2230)	
	2500-3000	1	3,4	4	2289 (90)	963 (38)	1805 (71)	—	891 (1965)	921 (2030)	ADV-9986
		3R	3,4	4	2293 (90)	943 (37)	1993 (78)	—	1027 (2265)	1057 (2330)	
4000	1	3,4	4	2311 (91)	1524 (60)	1829 (72)	—	1581 (3485)	1662 (3665)	ADV-9987	
	3R	3,4	4	2530 (100)	1600 (63)	2304 (91)	—	1762 (3885)	1844 (4065)		
KUP	150-600	1	2,3,4	3, 4	1930 (76)	1005 (24)	593 (23)†	230 (507)	234 (515)	188 (526)	ADV-9984
		3R	2,3,4	3, 4	1930 (76)	1005 (24)	563 (22)†	243 (537)	247 (545)	188 (556)	
	800-1200	1	2,3,4	3, 4	2289 (90)*	963 (34)	721 (28)†	499 (1100)	512 (1130)	238 (1184)	ADV-9985
		3R	2,3,4	4	2289 (90)*	963 (34)	821 (32)†	512 (1130)	526 (1160)	238 (1214)	
	1600-2000	1	3,4	4	2289 (90)	963 (38)	1805 (71)	—	907 (2000)	556 (2065)	ADV-9986
		3R	3,4	4	2293 (90)	943 (37)	1993 (78)	—	1043 (2300)	1073 (2365)	
	2500-3000	1	3,4	4	2289 (90)	963 (38)	1805 (71)	—	977 (2155)	1007 (2220)	ADV-9986
		3R	3,4	4	2293 (90)	943 (37)	1993 (78)	—	1113 (2455)	1143 (2520)	
	4000	1	3,4	4	2311 (91)	1524 (60)	1829 (72)	—	1667 (3675)	1748 (3855)	ADV-9987
		3R	3,4	4	2530 (100)	1600 (63)	2304 (91)	—	1848 (4075)	1930 (4255)	

* Includes mounting feet.

† On 70- 1000 amp models, the NEMA type 3R enclosures have a security cover on the controller that extends 54 mm (2.1 in.) beyond the door.

Transfer Switch Accessories

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

- ❑ **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 and two Form A relay outputs
 - Serial port for optional network connections
 - Data logging
 - Factory-installed
- ❑ **Engine Start Circuit Monitor**
See Specification Sheet G6-165.
- ❑ **Energy Reduction Maintenance Setting (ERMS) System**
 - Available as optional, factory-installed equipment on 1200 Amp and larger KUS and KUP
 - Reduces the arc flash incident energy (AFIE) during energized service
 - Helps provide compliance with NEC requirements for arc flash reduction
 - Includes ERMS Maintenance Mode ON/OFF selector switch and maintenance mode indicator light
- ❑ **Export Packaging**
- ❑ **Extended Limited Warranties**
 - 2-year basic
 - 5-year basic
 - 5-year comprehensive
 - 10-year major components
- ❑ **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 set of literature is included with each transfer switch)
 - Overhaul literature kit
- ❑ **Load Shed Kit**
 - Forced transfer from Emergency to OFF for programmed-transition models
 - Customer-supplied signal (contact closure) is required for the forced transfer to OFF function
 - Factory-installed and loose kits available
- ❑ **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
 - 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 SPD specifications below

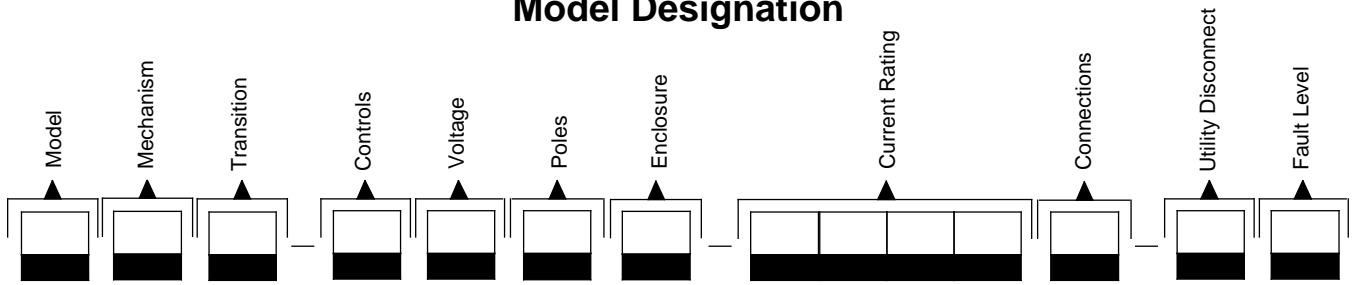
Seismic Certification

- ❑ **IBC Seismic Certification**
 - Certification depends on application and geographic location. Contact your distributor for details.
 - Available for the KUS/KUP model transfer switches with enclosures shown below:

ATS Size, Amps	Enclosure, NEMA Type:				
	1	3R	4	4X	12
70-1200	•	•	•	•	•
1600-4000	•	•			

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

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: KUS-DNTA-0400S-XS

Model

K: Kohler

Enclosure

A: NEMA 1
 B: NEMA 12
 C: NEMA 3R
 D: NEMA 4
 F: NEMA 4X

Mechanism

U: Service Entrance (Contactor-Based)

Current, Amps

0070	0400	2000
0100	0600	2500
0150	0800	3000
0200	1000	4000
0225	1200	
0250	1600	

Transition

S: Standard
 P: Programmed

Controller

D: Decision-Maker® MPAC 1500, Automatic

Connections

S: Standard

Utility Disconnect

U: 80% TM	W: 80% ET
V: 100% TM	X: 100% ET

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

Fault Level

S: Standard
 H: High Fault

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

Note:

Some selections are not available for every model. Contact your Kohler distributor for availability.

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