KOHLER

# Models: KAS/KAP

## Automatic Transfer Switches
## Electrically Operated Bypass/Isolation

ISO 9001 KOHLER NATIONALLY REGISTERED

## Controller

- Decision-Maker® MPAC 1500

## Ratings

| Model | Current | Voltage, Frequency |
|---|---|---|
| KAS | 150- 600 amps | 208- 600 VAC 50/60 Hz |
| KAP | | |

## Transfer Switch Standard Features

- UL 1008 listed, file # E108981
- CSA certification available
- Bypass/isolation switches for uninterrupted power to the load during switch maintenance and testing
- Electrically operated: bypass the primary mechanism at the touch of a button
- One-line diagram with LEDs to indicate transfer switch and bypass status
- 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-connection standard
- Standard one-year limited warranty. Extended limited warranties are available.

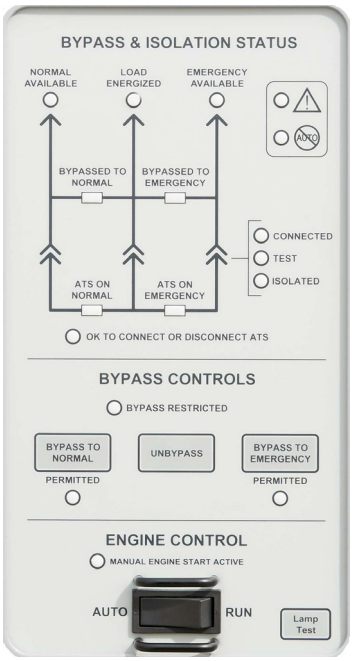
## Standard Transition Models (KAS)

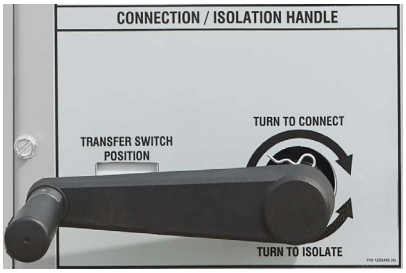
- Standard-transition transfer time less than 100 milliseconds (6 cycles @ 60 Hz)
- Double-throw, mechanically interlocked design (break before make)
- Solid, switched, or overlapping neutral

## Programmed Transition Models (KAP)

- 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

# Simple Bypass Operation


High visibility alarm and operating mode indicators

A simple one- line diagram indicates real- time switch and bypass status

Permitted and restricted operations indicated

Single button bypass operation

Manual engine start controls

A single handle connects and isolates transfer switch for inspection, testing, or service

# 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
- 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

# 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 |

**Auxiliary Position Indicating Contacts**
(rated 10 amps @ 32 VDC/250 VAC)

| Switch Rating, Amps | Number of Contacts Indicating Normal, Emergency | |
|---|---|---|
| | KAS | KAP |
| 150- 600 | 8, 8 | 7, 7 |

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

# Cable Sizes

**UL-Listed Solderless Screw-Type Terminals for External Power Connections**

| Switch Rating, Amps | Range of Wire Sizes, Copper or Aluminum * | |
|---|---|---|
| | Normal, Emergency, and Load Terminals Per Phase and Neutral | Ground |
| 150- 400 | (1) #4 AWG to 600 KCMIL or (2) 1/0 AWG to 250 KCMIL | (3) 600 KCMIL |
| 600 | (2) #2 AWG to 600 KCMIL | (6) 600 KCMIL |

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

# 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 | |
| KAS KAP | 150- 260 | 2162 (85.1) | 864 (34) | 711 (28)** | 431 (950) | 431 (950) | 431 (950) | ADV-9230 |
| | 150- 600 w/ 12" pull box † | 2162 (85.1) | 1168 (46) | 711 (28)** | 431 (950) | 431 (950) | 431 (950) | |
| | 150- 600 w/ 15" pull box † | 2162 (85.1) | 1245 (49) | 711 (28)** | 431 (950) | 431 (950) | 431 (950) | |

* Approximate weights
† Pull box is required for bottom cable entry on 400- 600 amp units; optional on 150- 260 amp units.
** 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.

# Withstand and Close-On Ratings (WCR)

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 | | | | | | | | | | | |

* 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.

# Ratings with Specific Manufacturers' 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<br>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.

| Switch Rating, amps | Molded-Case Circuit Breakers | | | | |
|---|---|---|---|---|---|
| | WCR, amps RMS | Voltage, Max. | Manufacturer | Type | Max. Size, amps |
| 260<br>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 |
| | 100,000 | | Square D | QG, QJ | 250 |
| | 125,000 | | | LJ (current limiting) | 600 |
| | 200,000 | | | LL (current limiting) | 600 |
| | | | | 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.

| 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.

| 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.

## 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**

❑ **Padlockable User Interface Cover**

❑ **Supervised Transfer Control Switch**

# 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**

❑ **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 kit 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 only

❑ **Pull Boxes**
- Required for bottom cable entry on 400- 600 amp units
- Optional for 150- 260 amp units
- Available in 305 and 381 mm (12 and 15 inch) widths

❑ **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.

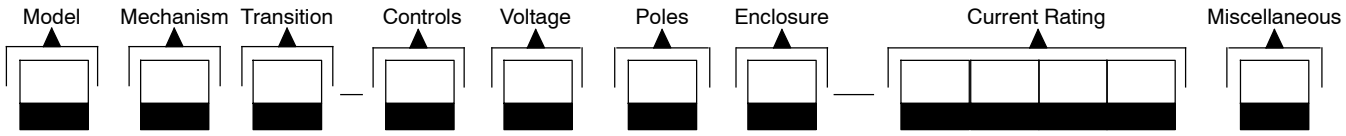
❑ **Surge Protection Device (SPD)**
- SPD available for the normal source supply
- Surge protection reduces transient voltages to harmless levels
- Protection modes: L-L / L-N / L-G / N-G
- Replaceable phase and neutral cartridges for service
- Frequency: 50- 60 Hz
- Operating Temperature Range: - 40 to 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

**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 |

KOHLER CO., Kohler, Wisconsin 53044 USA
Phone 920-457-4441, Fax 920-459-1646
For the nearest sales and service outlet in the US and Canada, phone 1-800-544-2444
KOHLERPower.com

# 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: KAS-DMVA-0400S**

**Model**

K: Kohler

**Mechanism**

A: Electrically Operated Bypass/Isolation

**Transition**

S: Standard

P: Programmed

**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 (KAS only)

**Enclosure**

A: NEMA 1

C: NEMA 3R

**Current, Amps**

0150

0225

0260

0400

0600

**Connections**

S: Standard

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

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