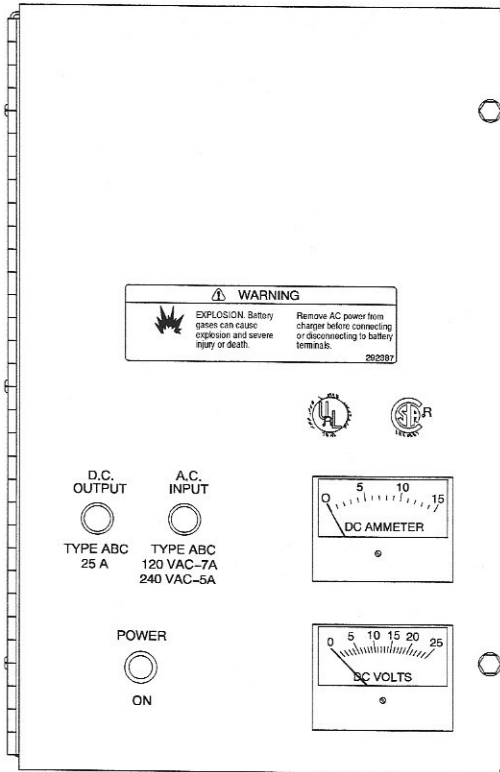


Industrial Generator Set Accessories

KOHLER POWER SYSTEMS

Float/Equalize Battery Charger

9001
KOHLER
 POWER SYSTEMS
 NATIONALLY REGISTERED



Standard Features

- Kohler automatic battery chargers feature two charging modes to keep lead-acid and nickel-cadmium batteries fully charged without overcharging. The battery charger automatic float-to-equalize operation maintains battery voltage with no manual intervention.
- Temperature compensation feature prevents overcharging or undercharging battery at high/low ambient temperatures.
- Current-limiting circuitry prevents battery charger from overload at low battery voltage and during a short circuit. The ten amp DC current limit allows the battery charger to remain connected to the battery during engine cranking.
- Battery charger complies with NFPA 110 code requirements when equipped with optional alarm circuit board. Alarm board features low battery voltage, high battery voltage, and battery charger malfunction alarm contacts.

Specifications

| Loose Battery Charger Kit No. | Installed Battery Charger Kit Nos. | NFPA 110 Alarm Outputs | Output | | Number of Cells | |
|--|------------------------------------|------------------------|---|------|-----------------|-------|
| | | | Voltage | Amps | Lead Acid | Ni-Cd |
| PAD-292862 | — | No | 12 | 10 | 6 | 9 |
| PAD-292863 | — | Yes | | | | |
| PAD-292864 | GM28562-KA2, -KA4 | No | 24 | | 12 | 18 |
| PAD-292865 | GM28562-KA1, -KA3 | Yes | | | | |
| AC Input Voltage, Frequency | | | 120/240 VAC, 50/60 Hz | | | |
| DC Voltage Regulation | | | ±1% | | | |
| Weight (battery charger without mounting brackets) | | | 11.8 kg (26 lb.) | | | |
| Dimensions, L x D x H (battery charger without mounting brackets) | | | 271 x 143 x 422 mm (10.67 x 5.63 x 16.63 in.) | | | |

Note: Installed battery charger kits are available on selected generator set models. See your authorized distributor for availability.

Automatic Float to Equalize

When the battery loses its charge, the battery charger operates in the High Rate Constant Current Mode until the battery voltage rises to the preset equalize level.

At the preset equalize level, the battery charger switches to the constant voltage Equalize Mode until the current required to maintain this voltage drops to 50% of the battery charger's high rate current.

The battery charger then switches to the lower constant voltage Float Mode when the battery nears full charge. The battery charger continues to operate in this mode until AC input power disconnects or the current required to maintain the battery at the float voltage setting exceeds 6 amps.

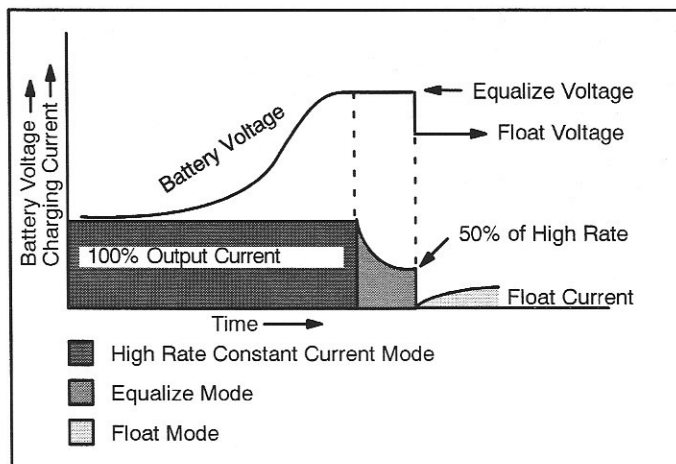


Figure 1

Temperature Compensation

The battery charger compensates for battery temperature using a negative temperature coefficient. The battery charger provides temperature compensation of $-2\text{mv}/^\circ\text{C}$ per cell over the ambient temperature range of -40°C up to 60°C . The temperature compensation automatically adjusts the float and equalize voltage settings to prevent the battery from overcharging at high ambient temperatures and undercharging at low ambient temperatures.

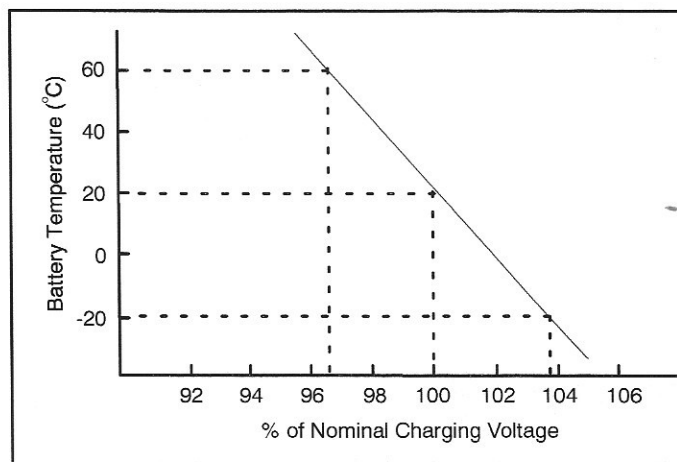


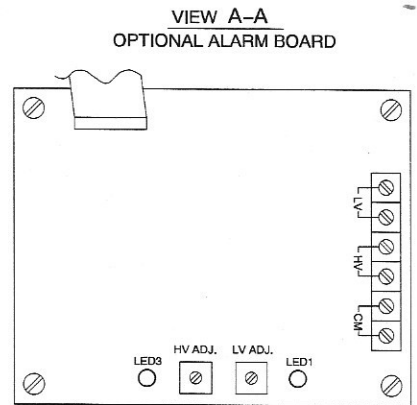
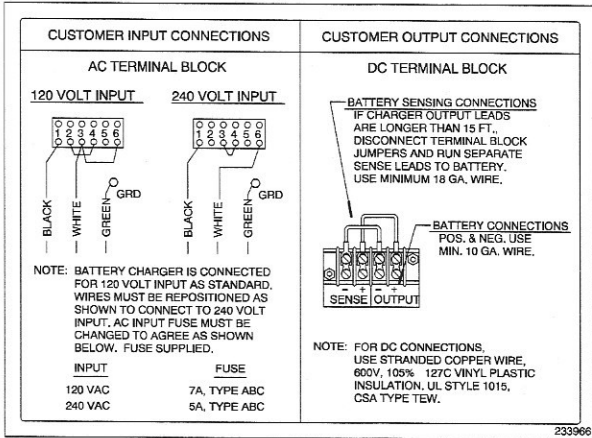
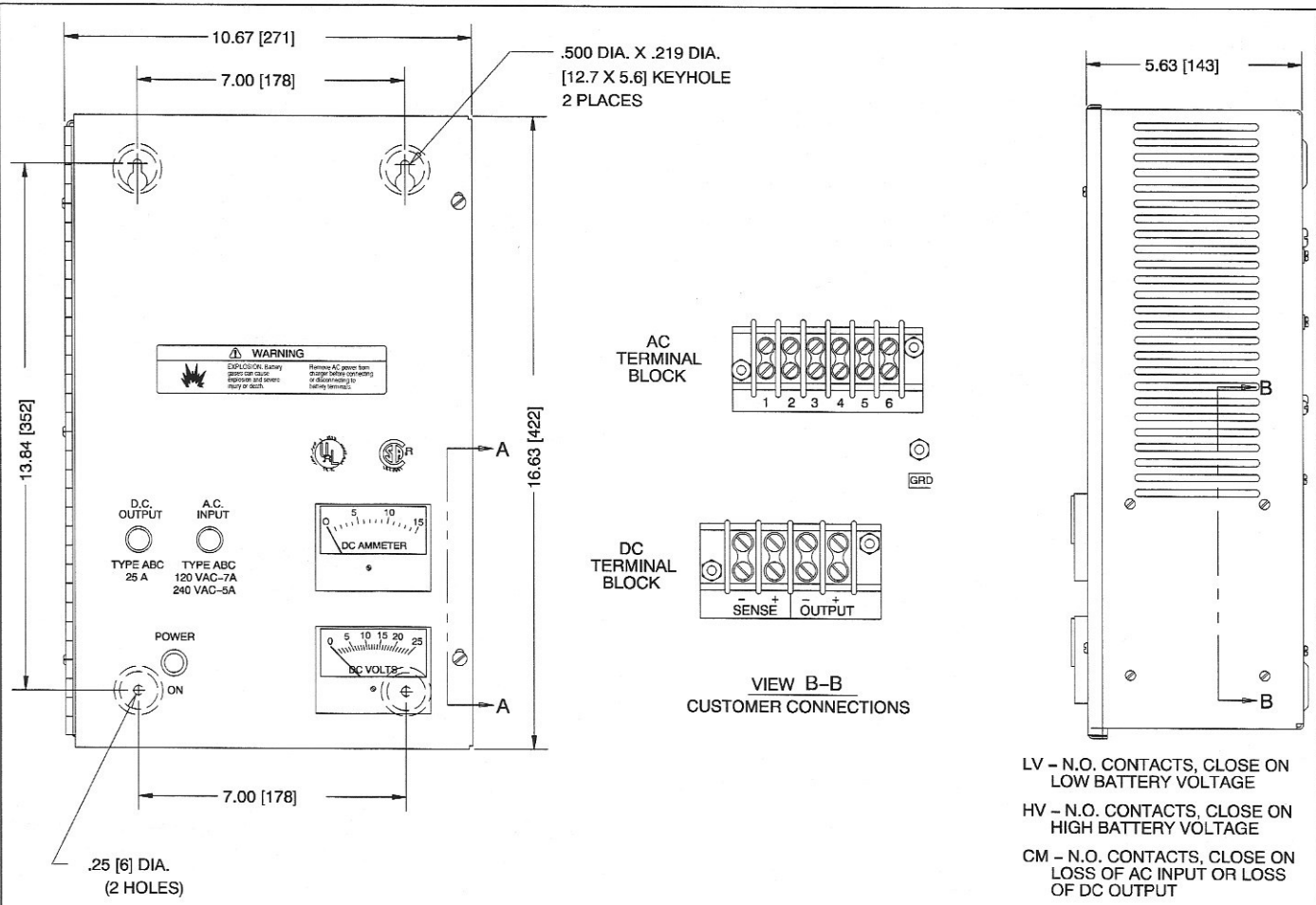
Figure 2

Standard Features

- **Ammeter and voltmeter** indicate battery charging rate with 5% full-scale accuracy. POWER ON lamp indicates battery charger is operating.
 - **AC input and DC output fuses** prevent battery charger damage from abnormal overload and short-circuit conditions.
 - **Operational temperature range** is from -40°C (-40°F) to 60°C (140°F). Battery charger float and equalize voltage automatically adjust throughout the temperature range.
 - **Reverse polarity protection circuitry** prevents battery charger from energizing if improperly connected.
 - **Internal terminal blocks** for AC input and DC output/sensing lead connections.
 - **DC voltage regulation** of $\pm 1\%$ from no load to full load and AC input line voltage variations of $\pm 10\%$.
 - **UL listed/CSA certified.**
 - **Wall-mount, slotted enclosure** with knockouts for customer conduit installation.
 - **Reconnection blocks** allow operation at 120 or 240 volts AC, single phase, 50 or 60 hertz.
 - **Battery charger circuitry protected** from AC line and DC load voltage spikes and transients.
 - **Terminal block** for remote battery sensing leads.
 - **Automatic float-to-equalize operation** with individual potentiometer adjustments. Charge up to 12 lead-acid or 18 nickel-cadmium battery cells.
 - **No adjustments are necessary** for lead-acid or nickel-cadmium batteries.
 - **Oversized transformer and SCR heatsink** allow constant current charging at 10 amps up to the equalize voltage setting for fastest battery charging.
- Note:** The battery charger will discharge the engine starting battery(ies) when the battery charger is connected to the battery(ies) and is not connected to an AC power supply. To prevent engine starting battery(ies) discharge, install battery charger relay kit GM39659.

KOHLER CO., Kohler, Wisconsin 53044 USA
 Phone 920-565-3381, Fax 920-459-1646
 For the nearest sales and service outlet in the
 US and Canada, phone 1-800-544-2444
 KohlerPowerSystems.com

Kohler Power Systems
 Asia Pacific Headquarters
 7 Jurong Pier Road
 Singapore 619159
 Phone (65) 6264-6422, Fax (65) 6264-6455



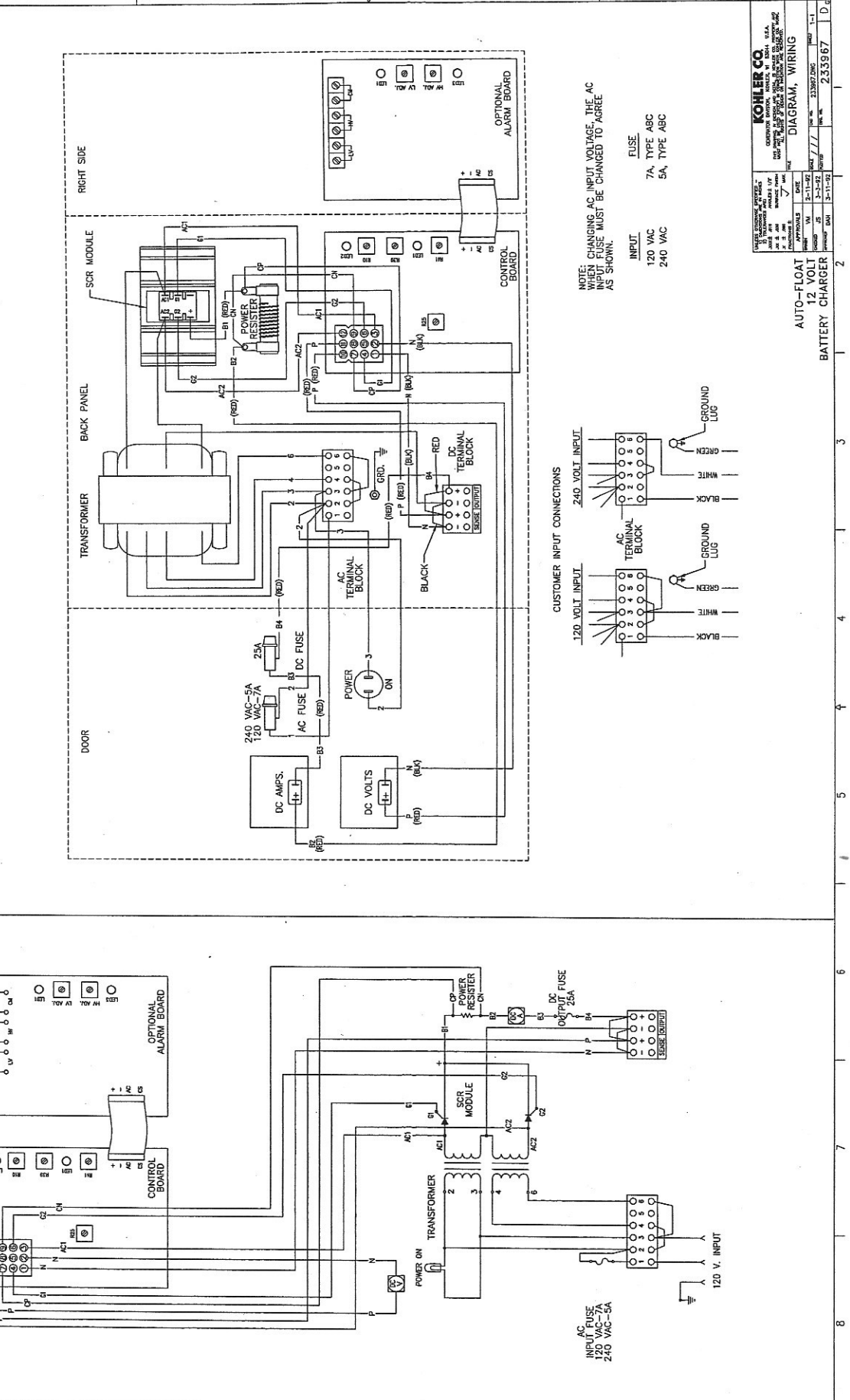
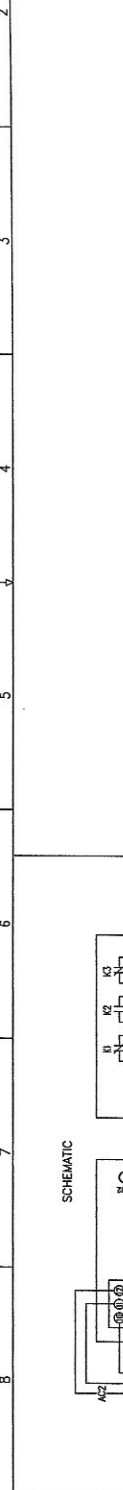
ADV-5971

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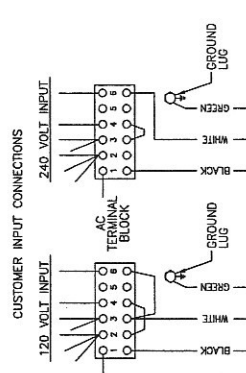
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| | | | |
|-----|--------|-----|------|
| REV | DATE | BY | CHKD |
| 1 | 2-1-55 | ... | ... |
| 2 | ... | ... | ... |
| 3 | ... | ... | ... |
| 4 | ... | ... | ... |
| 5 | ... | ... | ... |
| 6 | ... | ... | ... |
| 7 | ... | ... | ... |



NOTE: CHANGING AC INPUT VOLTAGE, THE AC INPUT FUSE MUST BE CHANGED TO AGREE AS SHOWN.

| | |
|---------|--------------|
| INPUT | FUSE |
| 120 VAC | 7A, TYPE ABC |
| 240 VAC | 5A, TYPE ABC |



| | |
|-------------|-----------------|
| MODEL | 233967 |
| DATE | 3-11-52 |
| REV | 1-1 |
| BY | ... |
| CHKD | ... |
| APP'D | ... |
| DESIGNED BY | ... |
| ENGINEER | ... |
| DATE | ... |
| SCALE | ... |
| TITLE | DIAGRAM, WIRING |

KOHLER CO.
 2500 W. 10TH AVENUE, DENVER, COLORADO, U.S.A.
 120 VOLT INPUT FUSE MUST BE CHANGED TO AGREE AS SHOWN.

AUTO-FLOAT 12 VOLT BATTERY CHARGER

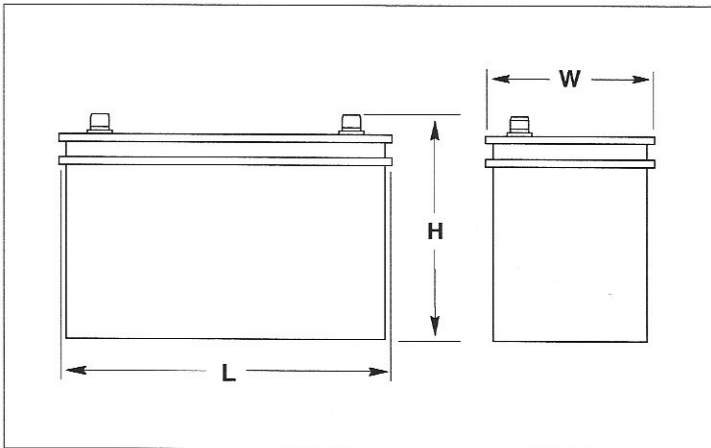
Industrial Generator Set Accessories

KOHLER POWER SYSTEMS

System Batteries

9001
KOHLER
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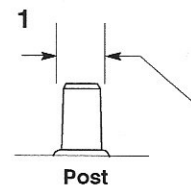
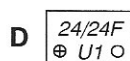
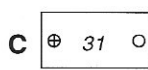
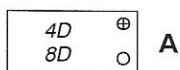
Typical Overall Dimensions



- Kohler Co. selects batteries to meet the engine manufacturer's specifications and to comply with NFPA requirements for engine-cranking cycles.
- Heavy-duty starting batteries are the most cost-effective means of engine cranking and provide excellent reliability in generator set applications.
- Batteries are rated according to SAE standard J-537. All batteries are 12-volt and have lead-calcium or lead-antimony plates with sulfuric acid electrolyte.
- Most generator set battery kits offer dry-charged or wet-charged batteries.
- Tough polypropylene cases protect against life-shortening vibration and impact damage.
- Removable cell covers allow checking of electrolyte specific gravity.

Battery Specifications

Battery Post Layouts A-D and Style 1



Positive, 17.48 dia.
 Negative, 15.88 dia.
 15.88 height
 1:9 taper

Notes: Dimensions are in mm; 25.4 mm equals 1 inch.
 BCI group numbers shown in italics.

Gas Models with 24-Volt Engine Electrical Systems

| Models | Charge Type* | Battery Kit Number | Battery Part Number | Battery Qty. per Kit | BCI Group Size | Battery SAE Dimensions, mm (in.) | | | Cold Cranking Amps at -18°C (0°F) Min. | Reserve Capacity Minutes at 27°C (80°F) Minimum | Battery Post Layout and Style |
|---------------------|--------------|--------------------|---------------------|----------------------|----------------|----------------------------------|--------------|--------------|--|---|-------------------------------|
| | | | | | | L | W | H | | | |
| 135-180RZD/ RZDB | Wet | GM14225-KP3 | 324586 | 2 | 31 | 333.2 (13.1) | 173.0 (6.8) | 239.8 (9.4) | 950 | 200 | C/1 |
| | | | 256984 | 1 | 24F | 270.0 (10.6) | 171.5 (6.8) | 225.6 (8.9) | 650 | 130 | D/1 |
| 200-275RZD/ RZDB | Wet | GM14225-KP3 | 324586 | 2 | 31 | 333.2 (13.1) | 173.0 (6.8) | 239.8 (9.4) | 950 | 200 | C/1 |
| | | | 256984 | 1 | 24F | 270.0 (10.6) | 171.5 (6.8) | 225.6 (8.9) | 650 | 130 | D/1 |
| 400RZW | Dry | GM22296-KP1 | GM22348 | 2 | 4D | 525.3 (20.7) | 220.5 (8.7) | 251.0 (9.9) | 1000 | 320 | A/1 |
| 600/800RZW | Dry | GM22297-KP1 | GM22349 | 2 | 8D | 527.1 (20.8) | 282.4 (11.1) | 276.4 (10.9) | 1150 | 400 | A/1 |
| | Wet | GM34404-KP1 | GM34399 | 2 | 8D | 527.1 (20.8) | 282.4 (11.1) | 276.4 (10.9) | 1150 | 400 | A/1 |

* Charge type:

Dry-charged batteries do not contain electrolyte. Supply and add electrolyte per instructions enclosed with each kit.

Wet-charged batteries contain electrolyte and have removable covers.

Note: All models have a single starter motor. Batteries are for applications below and above 0°C (32°F).

Gas/Gasoline Models with 12-Volt Engine Electrical Systems

| Models | Charge Type* | Battery Kit Number | Battery Part Number | Battery Qty. per Kit | BCI Group Size | Battery SAE Dimensions, mm (in.) | | | Cold Cranking Amps at -18°C (0°F) Min. | Reserve Capacity Minutes at 27°C (80°F) Minimum | Battery Post Layout and Style |
|-----------|--------------|--------------------|---------------------|----------------------|----------------|----------------------------------|-------------|-------------|--|---|-------------------------------|
| | | | | | | L | W | H | | | |
| 20RZ | Wet | PA-256985 | 256984 | 1 | 24F | 270.0 (10.6) | 171.5 (6.8) | 225.6 (8.9) | 650 | 130 | D/1 |
| 30-125RZG | Wet | PA-256985 | 256984 | 1 | 24F | 270.0 (10.6) | 171.5 (6.8) | 225.6 (8.9) | 650 | 130 | D/1 |
| 30RZGB | Wet | PA-256985 | 256984 | 1 | 24F | 270.0 (10.6) | 171.5 (6.8) | 225.6 (8.9) | 650 | 130 | D/1 |
| 50RZGB | Wet | PA-256985 | 256984 | 1 | 24F | 270.0 (10.6) | 171.5 (6.8) | 225.6 (8.9) | 650 | 130 | D/1 |

* Charge type:

Dry-charged batteries do not contain electrolyte. Supply and add electrolyte per instructions enclosed with each kit.

Wet-charged batteries contain electrolyte and have removable covers.

Note: All models have a single starter motor. Batteries are for applications below and above 0°C (32°F).

Diesel Models with 24-Volt Engine Electrical Systems

| Models | Charge Type* | Battery Kit Number | Battery Part Number | Battery Qty. per Kit | BCI Group Size | Battery SAE Dimensions, mm (in.) | | | Cold Cranking Amps at -18°C (0°F) Min. | Reserve Capacity Minutes at 27°C (80°F) Minimum | Battery Post Layout and Style |
|-------------------------|--------------|--------------------|---------------------|----------------------|----------------|----------------------------------|--------------|--------------|--|---|-------------------------------|
| | | | | | | L | W | H | | | |
| 50-230REOZJB | Wet | PA-336071 | 256984 | 2 | 24F | 270.0 (10.6) | 171.5 (6.8) | 225.6 (8.9) | 650 | 130 | D/1 |
| 80-180REOZJC | Wet | PA-336071 | 256984 | 2 | 24F | 270.0 (10.6) | 171.5 (6.8) | 225.6 (8.9) | 650 | 130 | D/1 |
| 200REOZP/ REOZPB | Dry | PA-324589 | 324587 | 2 | 31 | 333.2 (13.1) | 173.0 (6.8) | 239.8 (9.4) | 950 | 200 | C/1 |
| | Wet | PA-324588 | 324586 | 2 | | | | | | | |
| 200REOZJC | Wet | PA-324588 | 324586 | 2 | 31 | 333.2 (13.1) | 173.0 (6.8) | 239.8 (9.4) | 950 | 200 | C/1 |
| 230-300REOZDB | Wet | PA-324588 | 324586 | 2 | 31 | 333.2 (13.1) | 173.0 (6.8) | 239.8 (9.4) | 950 | 200 | C/1 |
| 230-450REOZDD | Wet | PA-324588 | 324586 | 2 | 31 | 333.2 (13.1) | 173.0 (6.8) | 239.8 (9.4) | 950 | 200 | C/1 |
| 275-500REOZV | Wet | PA-324588 | 324586 | 2 | 31 | 333.2 (13.1) | 173.0 (6.8) | 239.8 (9.4) | 950 | 200 | C/1 |
| 350/400REOZD/ REOZDC | Wet | PA-324588 | 324586 | 2 | 31 | 333.2 (13.1) | 173.0 (6.8) | 239.8 (9.4) | 950 | 200 | C/1 |
| 350/400REOZVC | Wet | PA-324588 | 324586 | 2 | 31 | 333.2 (13.1) | 173.0 (6.8) | 239.8 (9.4) | 950 | 200 | C/1 |
| 450REOZDB | Dry | PA-324589 | 324587 | 2 | 31 | 333.2 (13.1) | 173.0 (6.8) | 239.8 (9.4) | 950 | 200 | C/1 |
| | Wet | PA-324588 | 324586 | 2 | | | | | | | |
| 450REOZD-4† | Dry | PA-324589 | 324587 | 2 | 31 | 333.2 (13.1) | 173.0 (6.8) | 239.8 (9.4) | 950 | 200 | C/1 |
| | Wet | PA-324588 | 324586 | 2 | | | | | | | |
| | Dry | PA-354066 | 354148 | 4 | 31 | 333.2 (13.1) | 173.0 (6.8) | 239.8 (9.4) | 700 | 150 | C/1 |
| | Wet | PA-354065 | 354147 | 4 | | | | | | | |
| 450/500REOZVB | Wet | PA-324588 | 324586 | 2 | 31 | 333.2 (13.1) | 173.0 (6.8) | 239.8 (9.4) | 950 | 200 | C/1 |
| 500-1000ROZD-4† | Dry | PA-324589 | 324587 | 2 | 31 | 333.2 (13.1) | 173.0 (6.8) | 239.8 (9.4) | 950 | 200 | C/1 |
| | Wet | PA-324588 | 324586 | 2 | | | | | | | |
| | Dry | PA-354066 | 354148 | 4 | 31 | 333.2 (13.1) | 173.0 (6.8) | 239.8 (9.4) | 700 | 150 | C/1 |
| | Wet | PA-354065 | 354147 | 4 | | | | | | | |
| 600REOZM† | Wet | PA-324588 | 324586 | 2 | 31 | 333.2 (13.1) | 173.0 (6.8) | 239.8 (9.4) | 950 | 200 | C/1 |
| | Wet | PA-354065 | 354147 | 4 | 31 | 333.2 (13.1) | 173.0 (6.8) | 239.8 (9.4) | 700 | 150 | C/1 |
| 650-1000REOZDB | Dry | GM22297-KP1 | GM22349 | 2 | 8D | 527.1 (20.8) | 282.4 (11.1) | 276.4 (10.9) | 1150 | 400 | A/1 |
| | Wet | GM34404-KP1 | GM34399 | 2 | | | | | | | |
| 750/800REOZM | Dry | GM22297-KP1 | GM22349 | 2 | 8D | 527.1 (20.8) | 282.4 (11.1) | 276.4 (10.9) | 1150 | 400 | A/1 |
| | Wet | GM34404-KP1 | GM34399 | 2 | | | | | | | |
| 900/1000REOZM | Wet | GM34404-KP1 | GM34399 | 2 | 8D | 527.1 (20.8) | 282.4 (11.1) | 276.4 (10.9) | 1150 | 400 | A/1 |
| 1250-2000REOZM | Dry | GM28546-KP1 | GM22349 | 4 | 8D | 527.1 (20.8) | 282.4 (11.1) | 276.4 (10.9) | 1150 | 400 | A/1 |
| | Wet | GM34405-KP1 | GM34399 | 4 | | | | | | | |
| 1350-2000REOZDB | Dry | GM28546-KP1 | GM22349 | 4 | 8D | 527.1 (20.8) | 282.4 (11.1) | 276.4 (10.9) | 1150 | 400 | A/1 |
| | Wet | GM34405-KP1 | GM34399 | 4 | | | | | | | |
| 2500/2800REOZD | Dry | GM28546-KP1 | GM22349 | 4 | 8D | 527.1 (20.8) | 282.4 (11.1) | 276.4 (10.9) | 1150 | 400 | A/1 |
| | Wet | GM34405-KP1 | GM34399 | 4 | | | | | | | |

* Charge type:

Dry-charged batteries do not contain electrolyte. Supply and add electrolyte per instructions enclosed with each kit.

Wet-charged batteries contain electrolyte and have removable covers.

† Models have a single starter motor. Select a kit with two batteries for applications at 0°C (32°F) and above.

Select a kit with four batteries for applications below 0°C (32°F).

Note: Models 400 kW and smaller and 500REOZV have a single starter motor. Batteries are for applications below and above 0°C (32°F).

Diesel Models with 12-Volt Engine Electrical Systems

| Models | Charge Type* | Battery Kit Number | Battery Part Number | Battery Qty. per Kit | BCI Group Size | Battery SAE Dimensions, mm (in.) | | | Cold Cranking Amps at -18°C (0°F) Min. | Reserve Capacity Minutes at 27°C (80°F) Minimum | Battery Post Layout and Style |
|---------------|--------------|--------------------|---------------------|----------------------|----------------|----------------------------------|-------------|-------------|--|---|-------------------------------|
| | | | | | | L | W | H | | | |
| 10REOD/REOZD | Wet | PA-324553 | 324367 | 1 | 31 | 208.0 (8.2) | 179.4 (7.1) | 196.9 (7.8) | 675 | 90 | C/1 |
| 15REOD/REOZD | Wet | PA-324553 | 324367 | 1 | 31 | 208.0 (8.2) | 179.4 (7.1) | 196.9 (7.8) | 675 | 90 | C/1 |
| 20REOD/REOZD | Wet | PA-324553 | 324367 | 1 | 31 | 208.0 (8.2) | 179.4 (7.1) | 196.9 (7.8) | 675 | 90 | C/1 |
| 20ROZJB | Wet | PA-256985 | 256984 | 1 | 24F | 270.0 (10.6) | 171.5 (6.8) | 225.6 (8.9) | 650 | 130 | D/1 |
| 20-80REOZJB | Wet | PA-256985 | 256984 | 1 | 24F | 270.0 (10.6) | 171.5 (6.8) | 225.6 (8.9) | 650 | 130 | D/1 |
| 80/100REOZJC | Wet | PA-256985 | 256984 | 1 | 24F | 270.0 (10.6) | 171.5 (6.8) | 225.6 (8.9) | 650 | 130 | D/1 |
| 100-180REOZJB | Wet | PA-336692 | 324586 | 1 | 31 | 333.2 (13.1) | 173.0 (6.8) | 239.8 (9.4) | 950 | 200 | C/1 |
| 135-180REOZJC | Wet | PA-336692 | 324586 | 1 | 31 | 333.2 (13.1) | 173.0 (6.8) | 239.8 (9.4) | 950 | 200 | C/1 |

*** Charge type:**

Dry-charged batteries do not contain electrolyte. Supply and add electrolyte per instructions enclosed with each kit.

Wet-charged batteries contain electrolyte and have removable covers.

Note: All models have a single starter motor. Batteries are for applications below and above 0°C (32°F).

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9001
KOHLER
 POWER SYSTEMS
 NATIONALLY REGISTERED



Ratings

Voltage: 208-600 VAC 50/60 Hz

Current:

Open-Transition: 30-4000 amps

Programmed-Transition: 150-4000 amps

Standard Contactor Features

- Open-transition or programmed-transition modes of operation with either automatic or non-automatic control
- 2, 3, or 4 poles
- Electrically operated, mechanically held
- Double-throw, inherently interlocked design (break-before-make power contacts)
- Solid, switched, or overlapping neutral (make-before-break type)
- High withstand and closing ratings
- Design suitable for emergency and standby applications on all classes of load, 100% tungsten rated through 400 amps
- Open-transition transfer time less than 100 milliseconds (6 cycles @ 60 Hz)
- Silver alloy main contacts
- Front-accessible contacts for easy inspection
- Front-replaceable main and arcing contacts (600-4000 amps)
- Reliable, field-proven solenoid mechanism
- Switching mechanisms lubricated for life
- Internal manual operating handle
- Main shaft auxiliary contacts

Modbus® is a registered trademark of Schneider Electric.

MPAC 1000™ Controller Standard Features

- Microprocessor controller
- Real-time clock with battery backup
- Broadrange voltage sensing (208-600 VAC) with 2% accuracy on both sources
- Frequency sensing with 1% accuracy on both sources
- Environmentally sealed user interface
- Keypad with tactile feedback pushbuttons
- LED indicators
- Selectable operating modes
- Programmable inputs and outputs
- Load/no load exercise function
- Anti-single phasing protection
- Load control inputs and outputs
- Phase rotation sensing
- Time-stamped event log
- Gold-flashed engine start contacts
- Modbus® communication with network and setup connections

MPAC 1000™ Controller Programmable Features

- System voltage and frequency
- Adjustable over/undervoltage and over/underfrequency for the normal and emergency sources
- Adjustable time delays
- Commit/no commit transfer
- ABC/BAC phase rotation selection with error detection
- Resettable historical data
- In-phase monitor
- Password protection

Accessories

- Programmable input/output (I/O) modules with two inputs and six outputs (isolated SPDT form C contacts, output rating 2 amps @ 30 VDC/250 VAC); four I/O module maximum
- Three-stage charging, dual-output battery charger (6 amps @ 12 VDC/3 amps @ 24 VDC)
- Padlockable user interface cover
- Preferred source switch
- Supervised transfer control switch
- Setup software
- Load shed (forced transfer from Emergency to Off; programmed-transition models only)
- Line-to-neutral monitoring
- Chicago alarm module
- External battery supply module (allows extended engine start time delay)

Controller Features

Standard Controller Features

User Interface Keypad

- Start/end system test
- Set/end exercise
- End time delay
- Lamp test/service reset

User Interface Indicators

- Contactor position: Normal, Off, Emergency
- Source available: Normal, Emergency
- Service required: immediate, maintenance
- Not in automatic mode
- Four-stage time delay remaining
- Exercise: load, no load, set/disabled
- Test: load, no load
- Load control active: peak shave, load shed, pre/post-transfer signal
- In-phase monitor active

Selectable Operating Modes*

- 1 week/2 week manually set exercise (1 week)
- Disable/enable exercise (enable)
- Load/no load exercise (no load)
- Load/no load test (load)
- Enable/disable transfer (enable)

Programmable Inputs (factory settings)

- End time delay
- Peak shave/area protection

Outputs

- Generator engine start, normally closed gold-flashed contact rated 2 amps @ 30 VDC/250 VAC
- Pre-transfer load control, one normally open contact rated 10 amps @ 30 VDC/250 VAC
- One programmable output, factory-set to load bank control isolated SPDT form C contact rated 2 amps @ 30 VDC/250 VAC

Software Event Monitoring

Use a personal computer with the optional setup software or a Modbus® link to view historical data and system events.

- Historical data (total and resettable)
- System events (time and date-stamped)
- System faults (time and date-stamped)
- Line-to-line voltage
- System frequency
- Time delay active
- Time delay remaining
- System status
- Source available
- Contactor position
- Exerciser schedule, mode, and time remaining on active exercise

* Factory default settings are shown in parentheses. All settings are stored in non-volatile memory.

† System parameters set per order.

Communications

- Serial port for PC connection
- Modbus® network interface

Programmable Features

Use a personal computer with the optional setup software or a Modbus® link to view, select, or adjust programmable features.

Programmable Features*

- System voltage†
- System frequency†
- Single/three-phase operation†
- Open/programmed-transition operation†
- ABC or CBA phase rotation (ABC)
- In-phase monitor (disabled)
- Commit/no commit switch (no commit)
- User-defined password
- Calendar mode exerciser (up to 21 events)

Programmable Inputs and Outputs

Use a personal computer with the optional setup software or a Modbus® link to define inputs and outputs.

Programmable Inputs

- End time delay input (default)
- Inhibit transfer
- Low battery fault
- Load shed (forced transfer to OFF; programmed-transition models only)
- Peak shave/area protection input (default)
- Remote common fault
- Remote test

Programmable Outputs

- Auxiliary switch fault
- Common fault
- Contactor position
- Exercise active
- Failure to acquire standby source
- Failure to transfer fault
- Generator engine start
- Load bank control (default)
- Load control (pre/post transfer, up to 9 outputs)
- Loss of phase fault
- Low backup battery
- Modbus®-controlled relay outputs (4 maximum)
- Not in automatic mode
- Non-emergency transfer
- Over and undervoltage faults
- Over and underfrequency faults
- Peak shave/area protection active
- Phase rotation error
- Source available
- Test active

Controller Features, continued

| Voltage and Frequency Sensing | | |
|-------------------------------|-----------------|-----------------------|
| Parameter | Default | Adjustment Range |
| Undervoltage pickup | 90% of nominal | 85%-100% of nominal |
| Undervoltage dropout | 90% of pickup | 75%-98% of pickup |
| Overvoltage dropout | 115% of nominal | 105%-135% of nominal* |
| Overvoltage pickup | 95% of dropout | 95%-100% of dropout |
| Voltage dropout time | 0.5 sec. | 0.1-9.9 sec. |
| Underfrequency pickup | 90% of nominal | 85%-95% of nominal |
| Underfrequency dropout | 99% of pickup | 95%-99% of pickup |
| Overfrequency dropout | 101% of pickup | 101%-105% of pickup |
| Overfrequency pickup | 110% of nominal | 105%-120% of nominal |
| Frequency dropout time | 3 sec. | 0.1-15 sec. |

* 690 volts, maximum

| Adjustable Time Delays | | |
|---|---------|------------------|
| Time Delay | Default | Adjustment Range |
| Engine start | 3 sec. | 0-6 sec. † |
| Preferred to standby | 1 sec. | 0-60 min. † |
| Standby to preferred | 15 min. | |
| Engine cooldown | 0 min. | |
| Failure to acquire standby source | 1 min. | |
| Pretransfer to preferred signal | 3 sec. | |
| Pretransfer to standby signal | 3 sec. | |
| Post-transfer to preferred signal | 0 sec. | |
| Post-transfer to standby signal | 0 sec. | |
| Off to standby (programmed-transition only) | 1 sec. | |
| Off to preferred (programmed-transition only) | 1 sec. | |

† Adjustable in 1 second increments. Can be extended to 60 minutes with an External Battery Supply Module Kit.

Application Data

| UL-Listed Solderless Screw-Type Terminals for External Power Connections | | |
|--|-----------------------------------|---|
| Normal, Emergency, and Load Terminals | | |
| Switch Rating (Amps) | Maximum Number of Cables per Pole | Range of Wire Sizes, Copper or Aluminum ‡ |
| 30-230 KCT | 1 | #14 AWG to 4/0 AWG ‡ |
| 260-400 KCT | 1 | #4 AWG to 600 MCM |
| | 2 | #1/0 AWG to 250 MCM |
| 150-400 2-, 3-pole KCP | 1 | #4 AWG to 600 MCM |
| | 2 | #1/0 AWG to 250 MCM |
| 150-400 4-pole KCP | 2 | #2 AWG to 600 MCM |
| 600 | 2 | #2 AWG to 600 MCM |
| 800-1200 | 4 | #1/0 AWG to 750 MCM |
| 1600-2000 | 6 | #1/0 AWG to 750 MCM |
| 2600-3000 | 12 | #1/0 AWG to 750 MCM |
| 4000 | Bus Bar | |

‡ 230 amp/600 volt use copper only

| Input and Output Connection Specifications | | |
|--|-----------------|-----------------|
| Component | Number of Wires | Wire Size Range |
| Terminal strip I/O terminals | 1 | #12-24 AWG |
| I/O module terminals | 1 | #14-24 AWG |

| Auxiliary Position Indicating Contacts (rated 10 amps @ 32 VDC/250 VAC) | | |
|---|---|-----------------------|
| Switch Rating (Amps) | Number of Contacts Indicating Normal, Emergency | |
| | Open-Transition | Programmed-Transition |
| 30-104 | 2, 2 | — |
| 150-400 | 2, 2 | 2, 2 |
| 150-400 § | — | 6, 6 |
| 600-800 | 2, 2 | 6, 6 |
| 1000-3000 | 8, 8 | 7, 7 |
| 4000 | 4, 4 | 4, 3 |

§ Programmed-transition with switched neutral

| Environmental Specifications | |
|------------------------------|--|
| Operating Temperature | -20°C to 70°C (-4°F to 158°F) |
| Storage Temperature | -40°C to 70°C (-40°F to 158°F) |
| Humidity | 5% to 95% noncondensing |
| Altitude | 0 to 3050 m (10000 ft.) without derating |

Codes and Standards

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

- Underwriters Laboratories UL 508, Standard for Industrial Control Equipment
- Underwriters Laboratories UL 1008, Standard for Automatic Transfer Switches for Use in Emergency Standby Systems
- Underwriters Laboratories Inc., listed to Canadian Safety Standards (cUL)
- NFPA 70, National Electrical Code
- NFPA 99, Essential Electrical Systems for Health Care Facilities
- NFPA 110, Emergency and Standby Power Systems
- IEEE Standard 446, IEEE Recommended Practice for Emergency and Standby Power Systems for Commercial and Industrial Applications
- NEMA Standard IC10-1993 (formerly ICS2-447), AC Automatic Transfer Switches
- EN61000-4-5 Surge Immunity Class 4 (voltage sensing and programmable inputs only)
- EN61000-4-4 Fast Transient Immunity Severity Level 4
- 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 Variations and Interruptions

Withstand Current Ratings (WCR) Open- and Programmed-Transition Models

Maximum current in RMS symmetrical amperes when coordinated with customer-supplied fuses or circuit breakers.

| Withstand Current Ratings in RMS Symmetrical Amperes§ | | | | | | | | |
|---|---------------------|----------------|----------------|--|------------------------|-------------|-----------------|-----------|
| Switch Rating, Amps | Any Circuit Breaker | | | Specific Circuit Breaker Max. Amps @ 480 VAC | Current-Limiting Fuses | | | |
| | Cycles @ 60 Hz | Amps @ 480 VAC | Amps @ 600 VAC | | Amps | Volts, Max. | Fuse Size, Amps | Type |
| 30* | 1.5 | 10,000 | 10,000 | N/A | 100,000 | 480 | 60 | LPS-RK, J |
| 70* 104* 150* | 1.5 | 10,000 | 10,000 | 22,000 | 200,000 | 480 | 200 | |
| 150† | 3 | 35,000 | 22,000 | 42,000 | 200,000 | 480 | 450 | |
| 200* | 1.5 | 10,000 | N/A | 22,000 | 200,000 | 480 | 200 | J |
| 230* | 1.5 | 10,000 | 22,000 | 22,000 | 100,000 | 480 | 300 | |
| 225† 260 400 | 3 | 35,000 | 22,000 | 42,000 | 200,000 | 480 | 600 | |
| 600 800 1000 1200 | 3 | 50,000 | 50,000 | 65,000 | 200,000 | 600 | 1600 | L |
| | 18 ** | 36,000 | 36,000 | | | | | |
| 1600‡ 2000‡ | 3 | 100,000 | 100,000 | N/A | 200,000 | 600 | 3000 | |
| | 30 ** | 65,000 | 65,000 | | | | | |
| 2600 3000 | 3 | 100,000 | 100,000 | N/A | 200,000 | 600 | 4000 | |
| | 30 ** | 65,000 | 65,000 | | | | | |
| 4000 | 3 | 100,000 | 100,000 | N/A | 200,000 | 480 | 6000 | |
| | 30 ** | 65,000 | 65,000 | | | | | |

* Open-transition models KCT only.

† Programmed-transition KCP models only.

‡ Optional front-connected service limited to 85,000 amps for specific and any breaker ratings.

§ 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 Kohler Co. for assistance.

** Short time ratings are provided for applications involving breakers that do not have instantaneous trips for systems coordination.

Ratings with Specific Manufacturers' Circuit Breakers

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

| Switch Rating, Amps | Molded-Case Circuit Breakers | | | | |
|---------------------|------------------------------|---------------|---------------|--|-----------------|
| | WCR, Amps RMS | Voltage, Max. | Manufacturer | Type | Max. Size, Amps |
| 70 * | 22,000 | 480 | Square D | FH | 80 |
| | | | | FC, FI | 100 |
| | | | | KA, KC, KH, KI, LA, LH | 250 |
| | | | GE | TB1 | 100 |
| | | | | TEL, THED, THLC1, THLC2 | 150 |
| | | | | TFL | 225 |
| | | | ITE | CED6, ED6, HED4, HED6 | 125 |
| | | | | CFD6 | 150 |
| | | | | FD6, FXD6, HFD6 | 250 |
| | | | Cutler-Hammer | FCL, Tri-Pac FB | 100 |
| | | | | FD, FDC, HFD | 150 |
| | | | | HJD, JD, JDB, JDC | 250 |
| | | | ABB | HKD, KD, KDB, KDC, LCL, Tri-Pac LA | 400 |
| | | | | S1 | 125 |
| S3 | 150 | | | | |
| Merlin Gerin | CE104, CE106 | 100 | | | |
| | | | | | |
| 104 * | 22,000 | 480 | Square D | FC, FI | 100 |
| | | | | KA, KC, KH, KI, LA, LH | 250 |
| | | | | TB1 | 100 |
| | | | GE | TEL, THED, THLC1, THLC2 | 150 |
| | | | | TFL | 225 |
| | | | | CED6, ED6, HED4, HED6 | 125 |
| | | | ITE | CFD6 | 150 |
| | | | | FD6, FXD6, HFD6 | 250 |
| | | | | FCL, Tri-Pac FB | 100 |
| | | | Cutler-Hammer | FD, FDC, HFD | 150 |
| | | | | HJD, JD, JDB, JDC | 250 |
| | | | | HKD, KD, KDB, KDC, LCL, Tri-Pac LA | 400 |
| | | | ABB | S1 | 125 |
| | | | | S3 | 150 |
| Merlin Gerin | CE104, CE106 | 100 | | | |
| | | | | | |
| 150 * | 22,000 | 480 | Merlin Gerin | CF250 | 250 |
| | | | | | |
| | | | GE | TEL, THED, THLC1 | 150 |
| | | | | TFL, THFK, THLC2 | 225 |
| | | | | SFL, SFP, TFJ, TFK | 250 |
| | | | | SGL4, SGP4, TLB4 | 400 |
| | | | ITE | CFD6, FD6, FXD6, HFD6 | 225 |
| | | | | CJD6, HHJD6, HHJXD6, HJD6, JD6, JXD6, SCJD6, SHJD6, SJD6 | 400 |
| | | | Square D | KA, KC, KH, KI | 250 |
| | | | | LC, LI | 300 |
| | | | | LA, LH | 400 |
| | | | Cutler-Hammer | FD, FDC, HFD | 150 |
| | | | | HJD, JD, JDB, JDC | 250 |
| | | | | LCL, Tri-Pac LA, HKD, KD, KDB, KDC | 400 |
| ABB | S3 | 150 | | | |
| | | | | | |
| 150 † | 42,000 | 480 | Merlin Gerin | CF250 | 250 |
| | | | | CJ400 | 400 |
| | | | GE | TEL, THED, THLC1, | 150 |
| | | | | TFL, THLC2 | 225 |
| | | | | SFL, SFLA, SFP | 250 |
| | | | | SGL4, SGP4, TB4, THLC4, TLB4 | 400 |
| | | | | SGLA, SGL6, SGP6, TB6 | 600 |
| | | | ITE | CFD6, HFD6 | 250 |
| | | | | CJD6, HHJD6, HHJXD6, HJD6, SCJD6, SHJD6 | 400 |
| | | | | CLD6, HHL6, HHLXD6, HLD6, SHLD6 | 600 |
| | | | Square D | KC, KI | 250 |
| | | | | LC, LI | 400 |
| | | | Cutler-Hammer | HJD, JDC | 250 |
| | | | | LCL, Tri-Pac LA, HKD, KDC | 400 |
| HLD | 600 | | | | |
| Tri-Pac NB | 800 | | | | |
| ABB | S3 | 150 | | | |
| | | | | | |
| Merlin Gerin | CF250 | 250 | | | |
| | CJ400 | 400 | | | |

* Open-transition models KCT only

† Programmed-transition models KCP only

Ratings with Specific Manufacturers' Circuit Breakers, continued

| Switch Rating, Amps | Molded-Case Circuit Breakers | | | | | | | |
|----------------------------|---|-----------------------------|---------------|--|-----------------|----|------------------------------|-----|
| | WCR, Amps RMS | Voltage, Max. | Manufacturer | Type | Max. Size, Amps | | | |
| 200 * 230 * | 22,000 | 480 | GE | TFL, THFK, THLC2 | 225 | | | |
| | | | | SFL, SFP, TFJ, TFK | 250 | | | |
| | | | | SGL4, SGP4, TLB4 | 400 | | | |
| | | | ITE | CFD6, FD6, FXD6, HFD6 | 225 | | | |
| | | | | CJD6, HHJD6, HHJXD6, HJD6, JD6, JXD6, SCJD6, SHJD6, SJD6 | 400 | | | |
| | | | Square D | KA, KC, KH, KI | 250 | | | |
| | | | | LC, LI | 300 | | | |
| | | | | LA, LH | 400 | | | |
| | | | Cutler-Hammer | HJD, JD, JDB, JDC | 250 | | | |
| | | | | LCL, Tri-Pac LA, HKD, KD, KDB, KDC | 400 | | | |
| | | | Merlin Gerin | CF250 | 250 | | | |
| | | | | CJ400 | 400 | | | |
| 225 † 260 | 42,000 | 480 | GE | TFL, THLC2 | 225 | | | |
| | | | | SFL, SFLA, SFP | 250 | | | |
| | | | | SGL4, SGP4, TB4, THLC4, TLB4 | 400 | | | |
| | | | | SGLA, SGL6, SGP6, TB6 | 600 | | | |
| | | | | SKHA, SKLB, SKP8, TKL | 800 | | | |
| | | | | CFD6, FD6, FXD6, HFD6 | 250 | | | |
| | | | ITE | CJD6, HHJD6, HHJXD6, HJD6, JD6, JXD6, SCJD6, SHJD6, SJD6 | 400 | | | |
| | | | | CLD6, HHL6, HHLXD6, HLD6, SCLD6, SHLD6 | 600 | | | |
| | | | | CMD6, HMD6, HND6, MD6, MXD6, SCMD6, SHMD6, SMD6, SND6 | 800 | | | |
| | | | | KC, KI | 250 | | | |
| | | | Square D | LC, LI | 600 | | | |
| | | | | MH | 800 | | | |
| | | | | HJD, JDC | 250 | | | |
| | | | Cutler-Hammer | HKD, KDC, LCL, Tri-Pac LA | 400 | | | |
| | | | | HLD | 600 | | | |
| | | | | Tri-Pac NB | 800 | | | |
| | | | ABB | S5 | 400 | | | |
| | | | | S6 | 600 | | | |
| | | | Merlin Gerin | CF250 | 250 | | | |
| | | | | CJ400 | 400 | | | |
| | | | 400 | 42,000 | 480 | GE | SGL4, SGP4, TB4, THLC4, TLB4 | 400 |
| | | | | | | | SGLA, SGL6, SGP6, TB6 | 600 |
| SKHA, SKL8, SKP8, TKL | 800 | | | | | | | |
| ITE | CJD6, HHJD6, HHJXD6, HJD6, SCJD6, SHJD6 | 400 | | | | | | |
| | CLD6, HHJD6, HHLXD6, HLD6, SCLD6, SHLD6 | 600 | | | | | | |
| | CMD6, HMD6, HND6, MD6, MXD6, SCMD6, SHMD6, SMD6, SND6 | 800 | | | | | | |
| Square D | LC, LI | 600 | | | | | | |
| | MH | 800 | | | | | | |
| Cutler-Hammer | HKD, KDC, LCL, Tri-Pac LA | 400 | | | | | | |
| | HLD | 600 | | | | | | |
| | Tri-Pac NB | 800 | | | | | | |
| ABB | S5 | 400 | | | | | | |
| | S6 | 800 | | | | | | |
| Merlin Gerin | CJ600 | 600 | | | | | | |
| 600 800 1000 1200 | 65,000 | 480 | GE | TB8 | 800 | | | |
| | | | | Microversatrip TKL | 1200 | | | |
| | | | ITE | CLD6, HHL6, HHLXD6, HLD6, SCLD6, SHLD6 | 600 | | | |
| | | | | CMD6, HMD6, SCMD6, SHMD6 | 800 | | | |
| | | | | CND6, HND6, SCND6, SHND6 | 1200 | | | |
| | | | | CPD6 | 1600 | | | |
| | Square D | MH Series 2 | 1000 | | | | | |
| | | SE (LS Trip), SEH (LS Trip) | 2500 | | | | | |
| | 42,000 | 480 | Cutler-Hammer | Tri-Pac NB | 800 | | | |
| | | | | Tri-Pac PB | 1600 | | | |
| | | | | RDC | 2500 | | | |
| | | | ABB | S6 | 800 | | | |
| S7 | | | | 1200 | | | | |
| Merlin Gerin | | | CJ600 | 600 | | | | |
| CK1200 | 1200 | | | | | | | |

* Open-transition models KCT only

† Programmed-transition models KCP only

Weights and Dimensions

Weights and dimensions are shown for transfer switches in NEMA type 1 enclosures, type 3R enclosures, and open units. Consult the factory for NEMA type 12, 4, and 4X enclosures.

Note: This information is provided for reference only and should not be used for planning installation. Contact your local distributor for more detailed information.

| Model | Amps | Poles | NEMA Type | Dimensions mm (in.) | | | Weight kg (lb.) | | |
|---------------------------|-------------|-------|-------------|---------------------|------------|-------------|-----------------|-------------|------------|
| | | | | Height | Width | Depth | 2-Pole | 3-Pole | 4-Pole |
| KCT Open-Transition | 30-200 | 2,3,4 | 1, 3R | 791 (31) | 450 (18) | 314 (12.4)‡ | 28 (62) | 30 (65) | 31 (68) |
| | 230-400 | 2,3,4 | 1, 3R | 1223 (48) | 560 (22) | 362 (14.3)‡ | 52 (115) | 56 (123) | 59 (131) |
| | 600-1000 | 2,3,4 | 1, 3R | 1932 (76)* | 864 (34) | 515 (20.3)‡ | 220 (485) | 231 (510) | 238 (525) |
| | 1200 | 3,4 | 1 | 2286 (90) | 963 (38) | 686 (27) | — | 356 (785) | 379 (835) |
| | | 3,4 | 3R | 2286 (90) | 641 (25.2) | 717 (28.2) | — | 356 (785) | 379 (835) |
| | 1600-2000 | 3,4 | 1 | 2286 (90) | 965 (38) | 1220 (48) | — | 472 (1040) | 494 (1090) |
| | | 3,4 | 3R | 2286 (90) | 940 (37) | 1434 (56.4) | — | 472 (1040) | 494 (1090) |
| | 1600-2000F† | 3,4 | 1 | 2286 (90) | 963 (38) | 688 (27) | — | 472 (1040) | 494 (1090) |
| | 2600-3000 | 3,4 | 1 | 2286 (90) | 963 (38) | 1524 (60) | — | 649 (1430) | 679 (1495) |
| | | 3,4 | 3R | 2286 (90) | 641 (25.2) | 1738 (68.4) | — | 649 (1430) | 679 (1495) |
| 4000 | 3,4 | 1 | 2286 (90) | 1168 (46) | 1829 (72) | — | 1043 (2300) | 1089 (2400) | |
| KCP Programmed-Transition | 150-400 | 2,3 | 1, 3R | 1702 (67)* | 610 (24) | 514 (20.2)‡ | 179 (395) | 183 (403) | — |
| | | 4 | 1, 3R | 1932 (76)* | 864 (34) | 515 (20.3)‡ | — | — | 238 (525) |
| | 600-1000 | 2,3,4 | 1, 3R | 1932 (76)* | 864 (34) | 515 (20.3)‡ | 220 (485) | 231 (510) | 238 (525) |
| | 1200 | 3,4 | 1 | 2286 (90) | 965 (38) | 686 (27) | — | 463 (1020) | 485 (1070) |
| | | 3,4 | 3R | 2286 (90) | 940 (37) | 717 (28.2) | — | 463 (1020) | 485 (1070) |
| | 1600-2000 | 3,4 | 1 | 2286 (90) | 963 (38) | 1220 (48) | — | 533 (1175) | 556 (1225) |
| | | 3,4 | 3R | 2286 (90) | 940 (37) | 1434 (56.4) | — | 533 (1175) | 556 (1225) |
| | 1600-2000F† | 3,4 | 1 | 2286 (90) | 963 (38) | 688 (27) | — | 533 (1175) | 556 (1225) |
| | 2600-3000 | 3,4 | 1 | 2286 (90) | 963 (38) | 1524 (60) | — | 735 (1620) | 765 (1685) |
| | | 3,4 | 3R | 2286 (90) | 940 (37) | 1738 (68.4) | — | 735 (1620) | 765 (1685) |
| 4000 | 3,4 | 1 | 2286 (90) | 1168 (46) | 1829 (72) | — | 1115 (2457) | 1160 (2557) | |
| KCT Open-Transition | 30-200 | 2,3,4 | Open Unit § | 787 (31) | 445 (17.5) | 296 (11.6) | 8 (17) | 9 (20) | 11 (23) |
| | 230-400 | 2,3,4 | | 1219 (48) | 457 (18.0) | 330 (13.0) | 17 (37) | 21 (45) | — |
| | 600-1000 | 2,3,4 | | 1829 (72) | 864 (34) | 508 (20) | 68 (150) | 78 (170) | 90 (196) |
| | 1200 | 2,3,4 | | 2210 (87) | 965 (38) | 584 (23) | 68 (150) | 78 (170) | 90 (196) |
| | 1600-2000 | 3,4 | | 2286 (90) | 965 (38) | 1219 (48) | — | — | — |
| | 1600-2000F† | 3,4 | | 2210 (87) | 965 (38) | 635 (25) | — | 190 (420) | 213 (470) |
| | 2600-3000 | 3,4 | | 2286 (90) | 965 (38) | 1524 (60) | — | 213 (470) | 243 (535) |
| | 4000 | 3,4 | | 2286 (90) | 1168 (46) | 1828 (72) | — | 545 (1200) | 590 (1300) |
| KCP Programmed-Transition | 150-400 | 2,3 | Open Unit § | 1600 (63) | 610 (24) | 445 (17.5) | 20 (45) | 24 (53) | — |
| | | 4 | | 1829 (72) | 864 (34) | 508 (20) | — | — | 108 (235) |
| | 600-1000 | 2,3,4 | | 1829 (72) | 864 (34) | 508 (20) | 80 (175) | 94 (205) | 108 (235) |
| | 1200 | 2,3,4 | | 2210 (87) | 965 (38) | 584 (23) | 80 (175) | 94 (205) | 108 (235) |
| | 1600-2000 | 3,4 | | 2286 (90) | 965 (38) | 1219 (48) | — | — | — |
| | 1600-2000F† | 3,4 | | 2210 (87) | 965 (38) | 635 (25) | — | 252 (555) | 274 (605) |
| | 2600-3000 | 3,4 | | 2286 (90) | 965 (38) | 1524 (60) | — | 300 (660) | 329 (725) |
| | 4000 | 3,4 | | 2286 (90) | 1168 (46) | 1828 (72) | — | 611 (1347) | 657 (1447) |

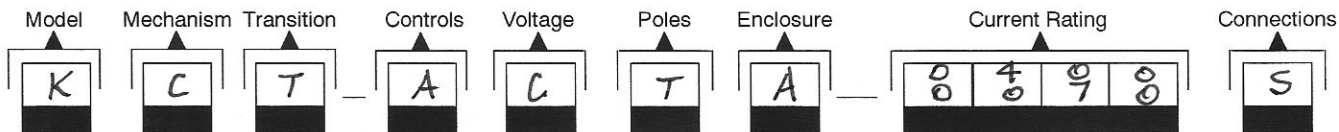
* Includes mounting feet

† F = Front connected

‡ On 30-1000 amp models, the NEMA type 3R enclosures have a security cover on the controller that extends 54 mm (2.1 in.) beyond the door.

§ Dimensions shown for open units are the minimum required enclosure size. Open units weights are shipping weights for the contactor only.

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



Kohler® Model Designation Key

This chart explains the Kohler® transfer switch model designation system. The sample model designation shown is for a Model K automatic transfer switch that uses an open-transition contactor with MPAC 1000™ electrical controls rated at 480 volts/60 Hz, 3 poles, 4 wires, and solid neutral in a NEMA 1 enclosure with a current rating of 400 amperes. Not all possible combinations are available.

SAMPLE MODEL DESIGNATION

KCT-AMTA-0400S

Model
 K Model K automatic transfer switch

Mechanism
 C Automatic
 B: Bypass Isolation (See G11-81)
 N: Non-automatic

Transition
 T Open-Transition
 P: Programmed-Transition

Electrical Controls
 A MPAC 1000™ (Microprocessor ATS Controls)

Voltage/Frequency

| | | |
|---|--------------------|--------------------|
| <input checked="" type="radio"/> C: 208 Volts/60 Hz | H: 400 Volts/50 Hz | N: 600 Volts/60 Hz |
| D: 220 Volts/50 Hz | J: 416 Volts/50 Hz | P: 380 Volts/60 Hz |
| F: 240 Volts/60 Hz | K: 440 Volts/60 Hz | S: 220 Volts/60 Hz |
| G: 380 Volts/50 Hz | M: 480 Volts/60 Hz | |

Number of Poles/Wires

| | |
|---|---|
| N: 2-pole, 3-wire, solid neutral | Z: 3-pole, 4-wire, integral solid neutral (Solid neutral mounted on the contactor. Not available on all amperages.) |
| <input checked="" type="radio"/> T: 3-pole, 4-wire, solid neutral | |
| V: 4-pole, 4-wire, switched neutral | |
| W: 4-pole, 4-wire, overlapping neutral | |

Enclosure

| | | |
|---|-------------|--------------|
| <input checked="" type="radio"/> A: NEMA 1† | C: NEMA 3R‡ | F: NEMA 4X§ |
| B: NEMA 12§ | D: NEMA 4§ | G: Open unit |

† Standard on 30-4000 A models.
 ‡ Available to order on 30-3000 A models. Contact the factory for 4000 A models.
 § Available to order on 30-1000 A models. Contact the factory for larger units.

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

| | | | | |
|---------------------------------------|------------|---------------------------------------|------|------|
| 0030 | 0200 (KCT) | <input checked="" type="radio"/> 0400 | 1200 | 2600 |
| <input checked="" type="radio"/> 0070 | 0225 (KCP) | 0600 | 1600 | 3000 |
| 0104 | 0230 (KCT) | 0800 | 2000 | 4000 |
| 0150 | 0260 | 1000 | | |

Power Connections
 S: Standard
 F: Front bus (available on 1600 and 2000 A models only)

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