

# EXELTECH

## MX Product Guide

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REVISION 4.1



TL9000



This document represents the capabilities of only the most basic MX Systems. Please contact us for questions regarding MX accessories or configurations not shown in this document.

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# MX Inverter Electrical Specs

**Input Power Requirements (PER EACH POWER MODULE):**

MODEL	NORMAL VDC	MINIMUM VDC CUT-OFF / ALARM	MAXIMUM VDC	RATED CURRENT	FUSE	PEAK CURRENT
12 VDC	13.8 VDC	10.4 / 10.6 VDC	16.5 VDC	98 A	140 A	111 A
24 VDC	27.6 VDC	19 / 21 VDC	33 VDC	49 A	80 A	56 A
32 VDC	36.8 VDC	26.5 / 28 VDC	45 VDC	36.8 A	60 A	42 A
48 VDC	55.2 VDC	41.5 / 42.5 VDC	62 VDC	24.5 A	-	27.7 A
66 VDC	75.9 VDC	57.5 / 58.5 VDC	91 VDC	17.8 A	40 A	20 A
108 VDC	124 VDC	94 / 95 VDC	149 VDC	10.9 A	20 A	12.4 A

**Output Power (PER EACH POWER MODULE):**

CONTINUOUS POWER	SURGE POWER (3 SECS)	NO LOAD POWER	OUTPUT VOLTAGE	OUTPUT CURRENT	WEIGHT LBS.
1000 W	2200 W	20 W	230 +/- 6%	4.3 A	7.5
1000 W	2200 W	20 W	120 +/- 6%	8.5 A	7.5
1000 W	2200 W	20 W	100 +/- 6%	10 A	7.5

**Recommended Input Wire Sizes (For Variable Distances from the Battery):**

**General information**

CONDITIONS	MINIMUM	TYPICAL	MAXIMUM
WAVEFORM	-	SINUSOIDAL	-
LINE REGULATION	-	0.1%	0.5%
LOAD REGULATION	-	0.3%	0.5%
DISTORTION	-	1.5%	2%
FREQUENCY	-0.1%	NOMINAL	+0.1%

# MX Components Overview

**Inverter Modules** - The backbone of any MX Inverter System. Each module is capable of producing 1000W continuous power output.

**Master Module** - Contains all circuits required to operate. It can produce power in a system by itself and can also operate additional slave modules. The Master Module is not hot-swappable.

**Power Module** - Similar to a master module but cannot operate independently. It requires a master module or control card to operate. Hot-swappable as long as the system maintains the capacity required to power the load.

**Control Card** - Sets the AC voltage and provides all the signals needed for slave modules to operate properly. Only one is required per phase but a second control card can be added for redundancy. A monitoring module is needed to switch to the second control card in the event of a control card failure. They are hot-swappable but require one control card in each phase to be active at all times of operation.

## MX Components Overview - Continued

**Monitoring Modules** - Several monitoring modules are available for MX Inverter Systems. These modules display inverter status and cause control cards to toggle in the event of a failure. Only one monitoring card is used per phase.

**Alarm Card** - Provides LED indicators and dry contact alarms for inverter conditions.

**Transfer Switch** - Utilizes a simple AC relay to switch between the inverter and an alternate AC source (40 Amps Max). Provides LED indicators and dry contact alarms for inverter conditions.

### **System Monitor I Card-**

***Note: For all new systems use System Monitor 2 Card***

This is a more advanced version of the alarm card that offers fewer dry contact alarms but adds LCD display and remote monitoring over Ethernet. It also reports AC and DC current and voltage. This card can only be used in single phase applications.

## MX Components Overview - Continued

### Monitoring Modules Continued -

**System Monitor II Card** – This is an upgrade up from the System Monitor I Card that is compatible with multiphase applications. System Monitor II can also provides remote monitoring via SNMP v1. Available in 5, 10, and 20kW models.

**Solid State Transfer Switch** – Available in 5, 10, and 20kW models. The 5kW module offers the same features as the System Monitor II Card but provides solid state SCR-based switching with zero transfer time between the inverter and alternate AC source. The 10 and 20kW models are typically paired with System Monitor II Cards to achieve full functionality. Available in single-phase MX systems. Multi-phase systems see Static Transfer Switch System.

## MX Components Overview - Continued

### **Static Transfer Switch System:**

The STS System is a multi-component assembly designed to install into an accessory cage. The STS System works similar to the Solid-State Transfer Switch but is designed for a higher level of fault tolerance. It is available in 1, 2, and 3 phase configurations rated at 10kW or 20kW per phase. This system features SNMP V.1, Modbus over Ethernet, and programmable dry contact alarms.

# Features - Power Module

**DC VOLTS:** 12V, 24V, 32V, 48V, 66V, and 108VDC inputs are available.

**AC VOLTS:** Available in 100V, 117V, 230V AC output (+/- 6%) at 60Hz, 50Hz, and 400Hz (+/- 0.1%).

**POWER OUTPUT:** Each module is capable of 1000W continuous output.

**SURGE RATING:** Each module will produce 22 Amps for 3 seconds.

**LED BAR GRAPH:** Power modules have a bar graph to display output current.

**COOLING:** Each module controls a fan on the front panel by sensing temperature of the power module board.

**OVER TEMP PROTECTION:** Modules have over temperature protection and will shut down at 105C internal temperature.

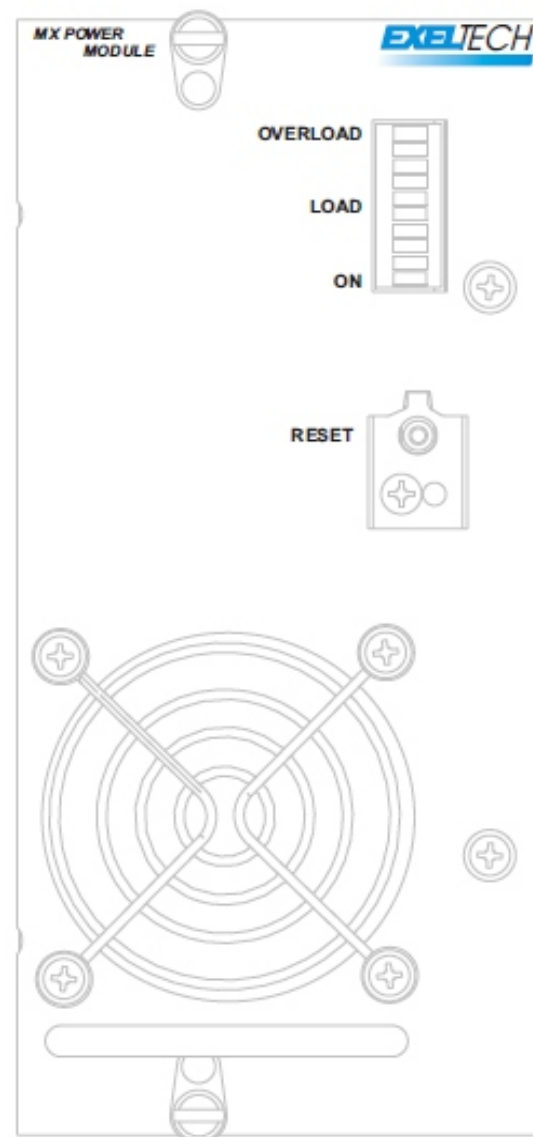
**OVER VOLTAGE PROTECTION:** Modules will shut down immediately if the DC voltage exceeds set limits.

**UNDER VOLTAGE PROTECTION:** The inverter will shut down when DC voltage drops below set limits.

**OVERLOAD / SHORT CIRCUIT PROTECTION:** Limits module surge to 22Amps for 3 seconds, then limits absolute power to 1000W.

**HOT SWAPPABLE:** Power modules can be added and removed at any time without disruption of power.

**N+1 Redundant:** Power modules load share evenly in each phase so in N+1 configuration any one power module can fail without disruption of power to the load.





# Features - Control Card

**DC VOLTS:** 12V, 24V, 32V, 48V, 66V, and 108VDC inputs are available.

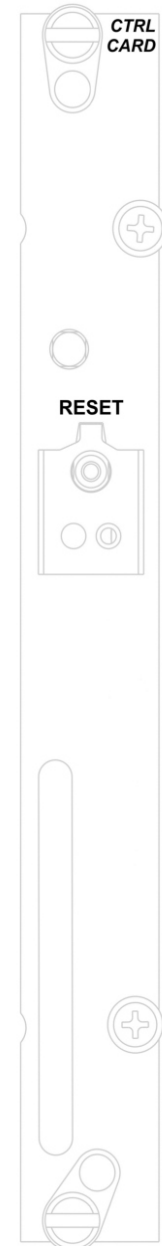
**AC VOLTS:** Available in 100V, 117V, 230V AC output (+/- 6%) at 60Hz, 50Hz, and 400Hz (+/- 0.1%).

**GREEN LED:** Indicates control card is active and providing signals to the power modules.

**HOT SWAPPABLE:** Control cards can be replaced without disruption to the load provided there is one active control card per phase.

**REDUNDANT:** A second control card can be added to each phase for redundancy. Control cards will automatically toggle in the event of a failure. In the event of control card failure, dual control cards receive the toggle signal from the monitoring module. e.g. Alarm Card, Transfer Switch, System Monitor I, System Monitor II, or Solid State Transfer Switch.

**SLAVE PHASE CONTROL CARDS:** Slave phase control cards are designated option 01. They must follow reference generated from phase 1 control card.



# Features - Alarm Card

## LED ALARMS:

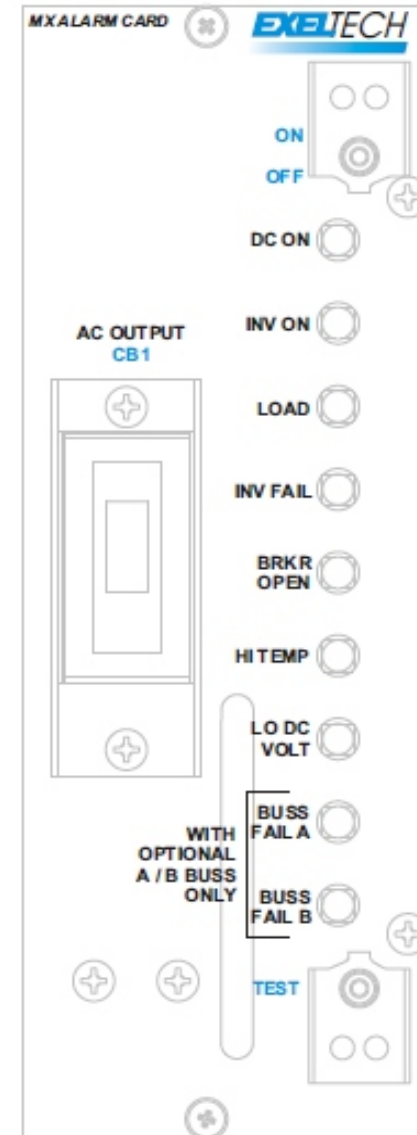
- DC ON LED:** Will be green (indicating inverter on) when the DC power is in specs.
- INV ON LED:** Green indicates that the inverter is operating within specified limits.
- LOAD LED:** Green indicates that output power is being supplied to the load.
- INV FAIL LED:** Red indicates AC voltage not present or out of limits.
- BRKR OPEN:** Red indicates that output power is NOT being supplied to the load because the breaker is open.
- HIGH TEMP LED:** Orange indicates an over temperature of a power module or control card. In conjunction with an Inverter Fail indicator, this likely indicates a Power Module failure.
- LOW VOLT DC LED:** Orange indicates the inverter is approaching low voltage shutdown.

## CONTACT CLOSURES (REMOTE ALARMS):

- MINOR ALARM:** Relay is energized in case of any "soft" failure. e.g. Module failure, over temp, low VDC.
- MAJOR ALARM:** Relay is energized in case there is no AC to the load. e.g. Breaker open or no output voltage.
- INV FAIL:** Relay is energized when AC voltage is out of limits, control card fail, power module failure.
- DC FAIL:** Relay is energized when the inverter is shut down because DC is out of limits.
- AC FAIL:** Relay is energized when AC voltage is not present or out of limits.

## ON / OFF SWITCH ON FRONT PLATE

**TEST BUTTON:** Simulates inverter output failure and should cause alarms to activate and control card to toggle.



# Features - Transfer Switch

**ON / OFF SWITCH ON FRONT PLATE**

**40 AMP OUTPUT BREAKER**

**AC RELAY WITH 4 msec TRANSFER TIME**

**PRIMARY SOURCE SELECT SWITCH**

**LED ALARMS:**

**DC VOLTS LED:** Will be green (indicating inverter on) when the DC power is in specs. Will be orange when the DC power is in the warning range of low voltage. Will be red when the DC power is out of range or the inverter is off.

**MODULE FAIL LED:** Red indicates an inverter module failure or control card failure.

**TEMP LED:** Indicates an over temperature condition exists. In conjunction with an Module Fail indicator, this likely indicates a Power Module failure.

**LOAD LED:** Green indicates that output power is being supplied to the load. Red indicates no output power.

**UTIL LED:** Green indicates utility voltage is within the specified limits. Red indicates utility failed.

**INV LED:** Green indicates inverter is operating within the specified limits. Red indicates inverter failed.

**UTIL SOURCE LED:** Green indicates utility is supplying power to the load.

**INV SOURCE LED:** Green indicates inverter is supplying power to the load.

**PRIMARY REVERSE:** Orange indicates primary select switch operation is currently reversed by remote source selection.

**CONTACT CLOSURES (REMOTE ALARMS):**

**MINOR ALARM:** Relay is energized in case of any "soft" failure. e.g. Module failure, Inverter failure, unit in bypass.

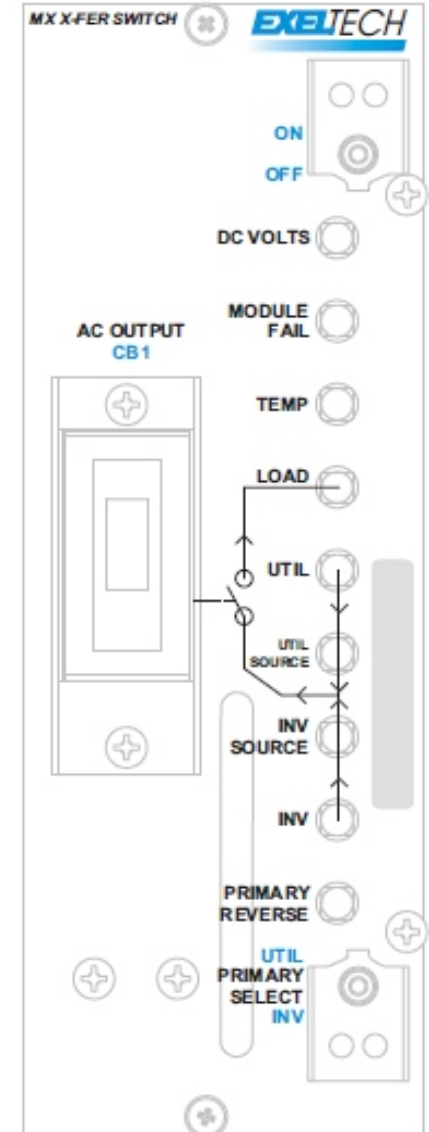
**MAJOR ALARM:** Relay is energized in case there is no AC to the load. e.g. Breaker open, inverter and utility failed or out of limits.

**SOURCE:** Relay is energized when load is powered by the inverter source.

**INV FAIL:** Relay is energized when there is no AC out of the inverter.

**DC FAIL:** Relay is energized when the DC is out of limits.

**UTIL FAIL:** Relay is energized when utility is out of limits.



# Features - System Monitor 1

*Note: For all new systems use System Monitor 2 Card*

## LED ALARMS:

**STATUS LED:** Indicates alarm condition: green with no alarms, orange with minor alarm, red with major alarm.

## CONTACT CLOSURES (REMOTE ALARMS):

**MINOR ALARM:** Relay is energized if there is any “soft” failure. e.g. Module failure or control card failure.

**MAJOR ALARM:** Relay is energized if there is no AC to the load. e.g. Breaker open, inverter failed or out of limits.

**LCD DISPLAY:** Displays all alarms, AC and DC current and voltage.

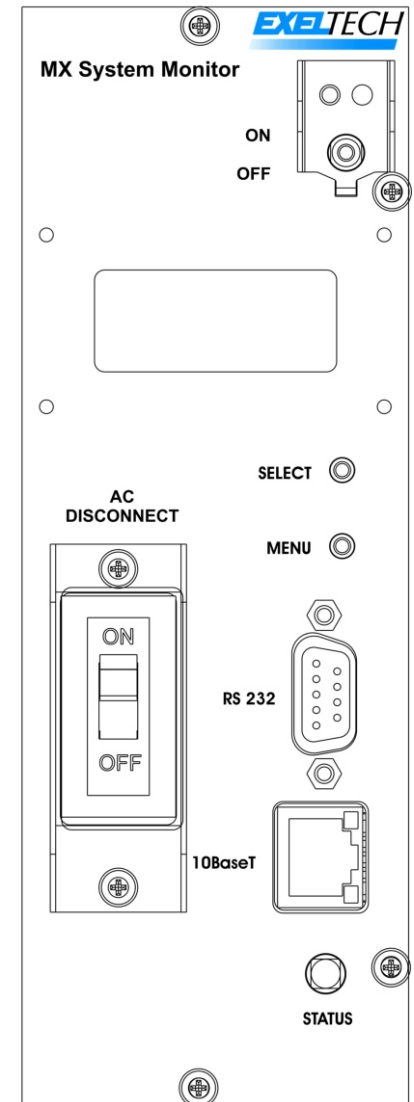
**DISPLAY BUTTONS:** Use to navigate the display menu tree.

**REMOTE MONITORING OVER ETHERNET:** Monitors all alarms, AC and DC current and voltage.

**10 BaseT / DHCP (default) / STATIC IP (configurable)**

**Product Status 1:** Lightweight Java based application with a simple GUI used to monitor system conditions and log condition history.

## ON / OFF SWITCH ON FRONT PLATE



# Features - System Monitor 2

## LED ALARMS:

**STATUS LED:** Indicates alarm condition: green with no alarms, orange with minor alarm, red with major alarm.

## CONTACT CLOSURES (REMOTE ALARMS):

**MINOR ALARM:** Relay is energized if there is any “soft” failure. e.g. Module failure or control card failure.

**MAJOR ALARM:** Relay is energized if there is no AC to the load. e.g. Breaker open, inverter failed or out of limits.

**LCD DISPLAY:** Displays all alarms, AC and DC current and voltage, and AC frequency.

**DISPLAY BUTTONS:** Use to navigate the display menu tree.

**REMOTE MONITORING OVER ETHERNET:** Monitors all alarms, AC and DC current and voltage, and AC frequency.

**10/100 / DHCP** (default) / **STATIC IP** (configurable)

**Product Status :** Lightweight Java based application with a simple GUI used to monitor system conditions and log conditions history.

**SNMP v1 Monitoring:** SNMP Traps over Ethernet can be used to monitor all system information. The “.mib” file is provided on the Exeltech website.

## ON / OFF SWITCH ON FRONT PLATE



# Features - Solid State Transfer Switch

## SOLID STATE SCR-BASED SWITCHING WITH ZERO TRANSFER TIME:

- Detect time inverter to commercial power: < 4 msec.
- Detect time commercial power to inverter: < 4 msec.
- Transfer time when changing primary: 0 msec.

## LED ALARMS:

**STATUS LED:** Indicates alarm condition: green with no alarms, orange with minor alarm, red with major alarm.

## CONTACT CLOSURES (REMOTE ALARMS):

**MINOR ALARM:** Relay is energized in there is any “soft” failure. e.g. Utility failure or bypass active.

**MAJOR ALARM:** Relay is energized in case there is no AC to the load. e.g. Inverter and utility failed or out of limits.

**LCD DISPLAY:** Reports all alarms, AC current, voltage and frequency for primary and secondary sources, DC current and voltage.

**DISPLAY BUTTONS:** Use to navigate the display menu tree.

**REMOTE MONITORING OVER ETHERNET:** Monitors all alarms, AC current, voltage and frequency for primary and secondary sources, DC current and voltage.

10/100 / DHCP (default) / STATIC IP (configurable)

**Product Status :** Lightweight Java based application with a simple GUI used to monitor system conditions and log conditions history.

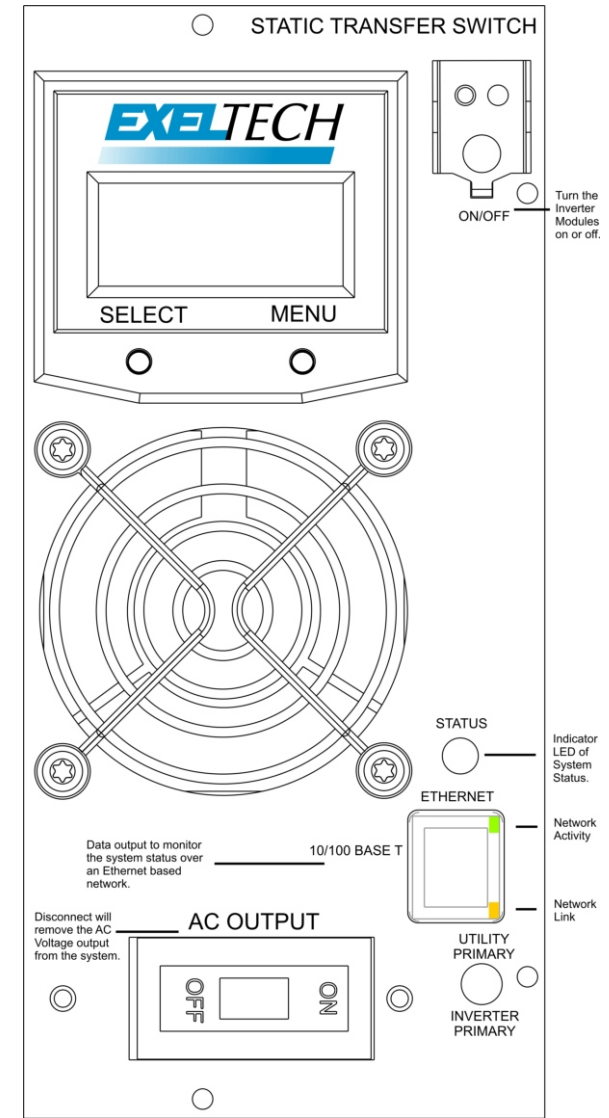
**SNMP v1 Monitoring:** SNMP Traps over Ethernet can be used to monitor all system information. The “.mib” file is provided on the Exeltech website.

**FORCED CONVECTION COOLING:** Fan is operated based on internal SCR temperature and load power level.

**PRIMARY SOURCE SELECT SWITCH**

**ON / OFF SWITCH ON FRONT PLATE**

**RECOMMENDED TO BE USED WITH MAINTENANCE BYPASS SWITCH**



# Features - Static Transfer Switch System

## **SOLID STATE SCR-BASED SWITCHING WITH ZERO TRANSFER TIME:**

Detect time inverter to commercial power: < 4 msec.  
Detect time commercial power to inverter: < 4 msec.  
Transfer time when changing primary: 0 msec.

## **LED ALARMS:**

**LED Phase Indicators:** Indicates the status of the primary and secondary source as well as the status of the MBS.

**LED Status Indicators:** Displays the overall status of the STS System.

**LED Source Indicators:** Three LED indicators per phase display the Inverter, Utility, and Output Status for each phase.



## **CONTACT CLOSURES (REMOTE ALARMS):**

**PROGRAMMABLE ALARMS:** Two programmable relay alarms are available on the backplane.

**REMOTE MONITORING OVER ETHERNET:** Monitors all alarms, AC and DC current and voltage, and AC frequency.

10/100/ DHCP (default) / **STATIC IP** (configurable)

**Product Status:** Lightweight Java based application with a simple GUI used to monitor system conditions and log conditions history.

**SNMP v1 Monitoring:** SNMP Traps over Ethernet can be used to monitor all system information. The “.mib” file is provided on the Exeltech website.

**Modbus TCP/IP:** System status information is also available via Modbus communications over Ethernet. Modbus tables are available on the Exeltech website.

**FORCED CONVECTION COOLING:** Fan is operated based on internal SCR temperature and load power level.

**PRIMARY SOURCE SELECT SWITCH**

**RECOMMENDED TO BE USED WITH MAINTENANCE BYPASS SWITCH**

# MX 7" Inverter Series

## 1KW – 2KW



# MX 7" Single Phase 2KW Master Module

## Specifications

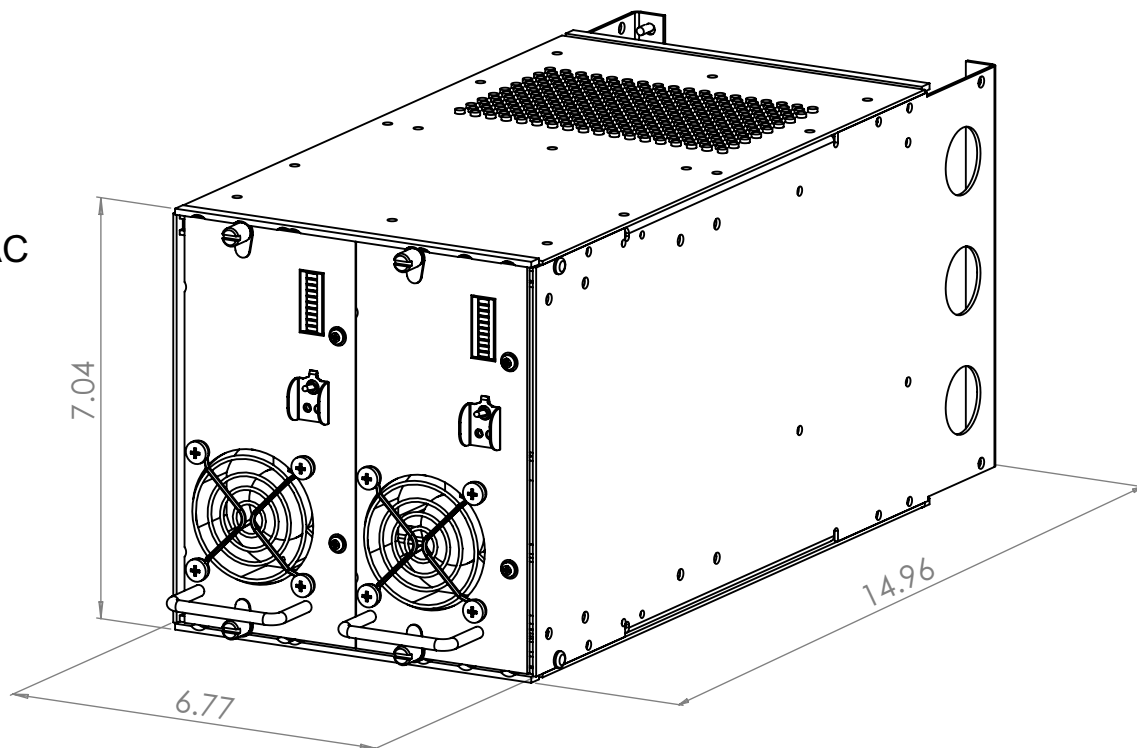
Power Output: 1KW to 2KW

Output Voltage of 100VAC, 117VAC, or 230VAC

DC Input of 12V up to 108V

Included Parts:

- 7" MX Cage (1)
- 1KW Master Module (1)
- Up to (1) 1KW Power Modules



# MX 7" Bi-Phase 2KW Master Module

## Specifications

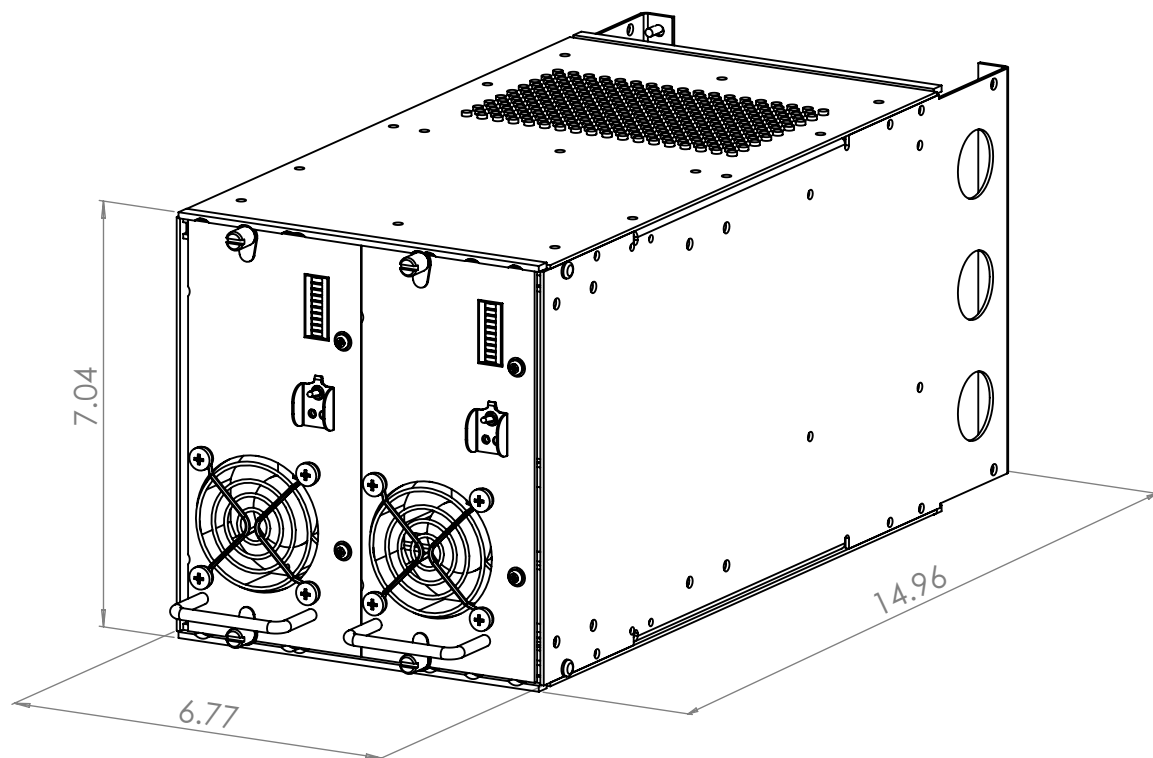
Power Output: 2KW

Output Voltage of 117VAC L-N / 240VAC L-L

DC Input of 12V up to 108V

Included Parts:

- 7" MX Cage (1)
- 1KW Master Module (2)



# MX 7" Single Phase 1KW Mechanical Transfer Switch

## Specifications

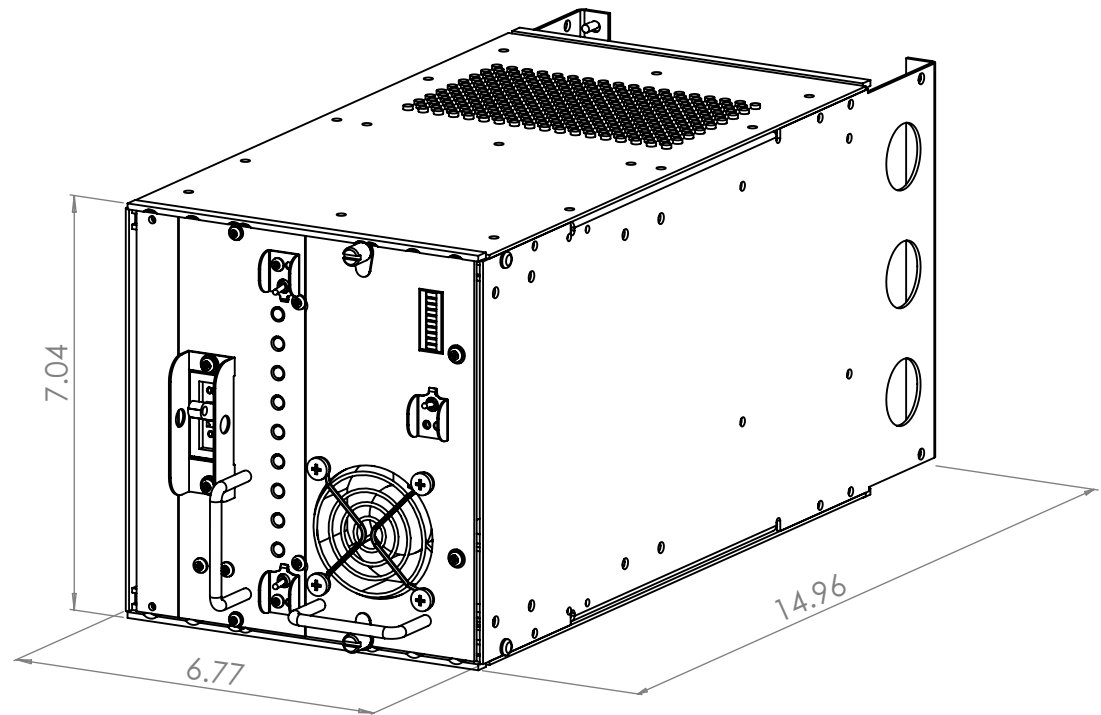
Power Output: 1KW

Output Voltage of 100VAC, 117VAC, or 230VAC

DC Input of 12V up to 108V

Included Parts:

- 7" MX Cage (1)
- Mechanical Transfer Switch (1)
- 1KW Master Module (1)



# MX 9" Inverter Series

## 1KW – 3KW

# MX 9" Single Phase 3KW Master Module

## Specifications

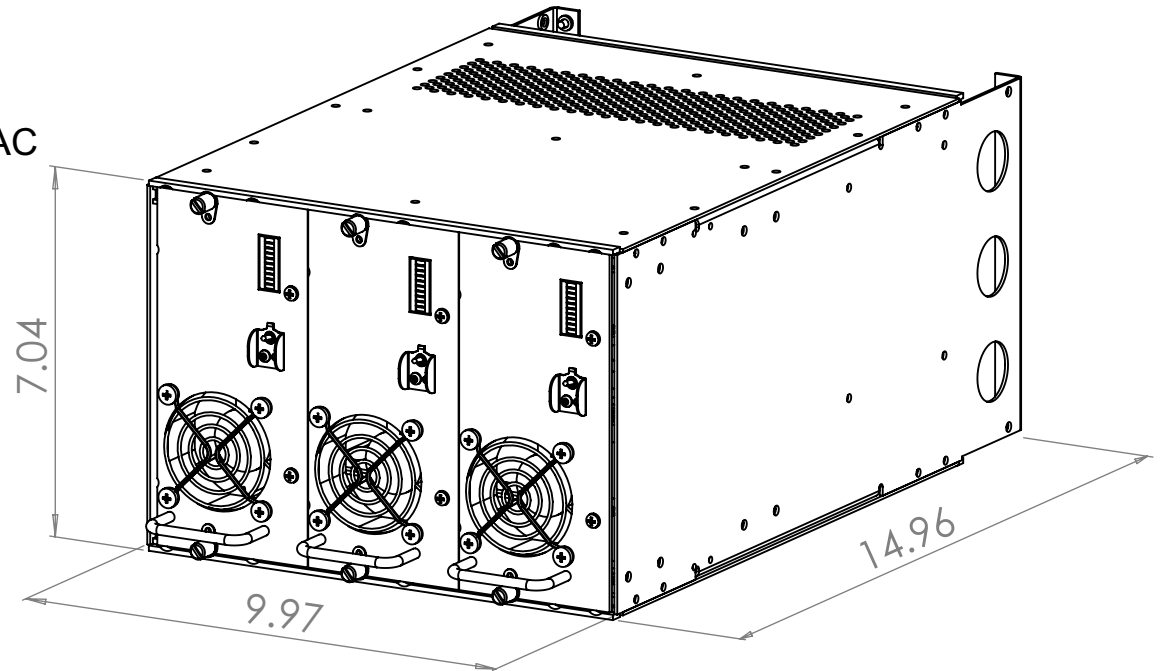
Power Output: 1KW to 3KW

Output Voltage of 100VAC, 117VAC, or 230VAC

DC Input of 12V up to 108V

Included Parts:

- 9" MX Cage (1)
- 1KW Master Module (1)
- Up to (2) 1KW Power Modules



# MX 9" Three-Phase 3KW Master Module

## Specifications

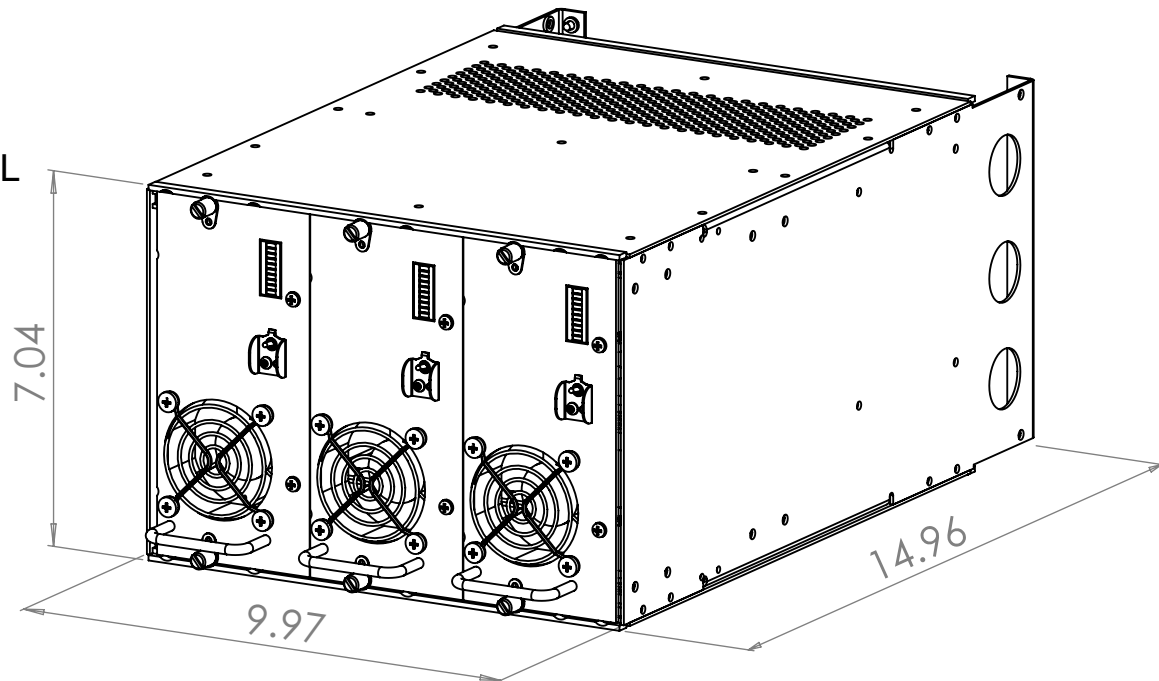
Power Output: 3KW

Output Voltage of 117VAC L-N / 208VAC L-L

DC Input of 12V up to 108V

Included Parts:

- 9" MX Cage (1)
- 1KW Master Module (3)



# MX 19" Inverter Series

1KW – 20KW N+1  
Single Phase

# MX 19" Single Phase 2KW N+1 Solid State Transfer Switch

## Specifications

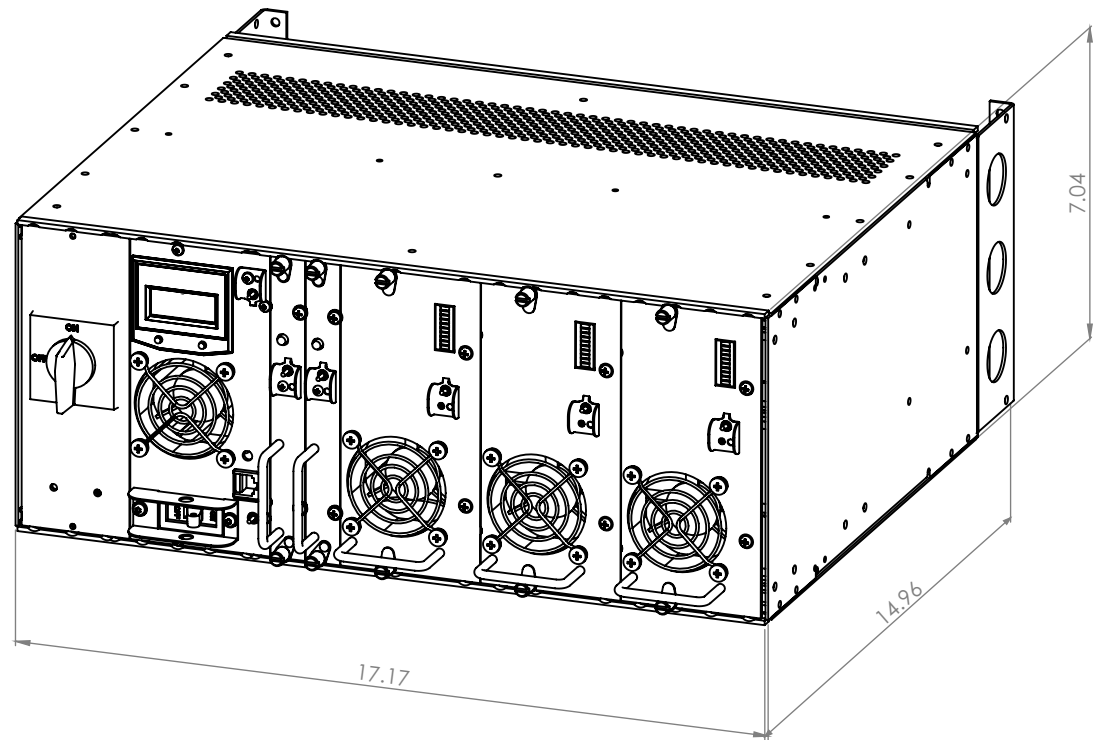
Power Output: 1KW to 3KW

Output Voltage of 100VAC or 117VAC

DC Input of 12V up to 108V

Included Parts:

- 19" MX Cage (1)
- Control Card (2)
- Solid State Transfer Switch 5KW (1)
- Up to (3) 1KW Power Modules
- M13 Maintenance Bypass Switch (1)





# MX 19" Single Phase 3KW N+1 Alarm Card

## Specifications

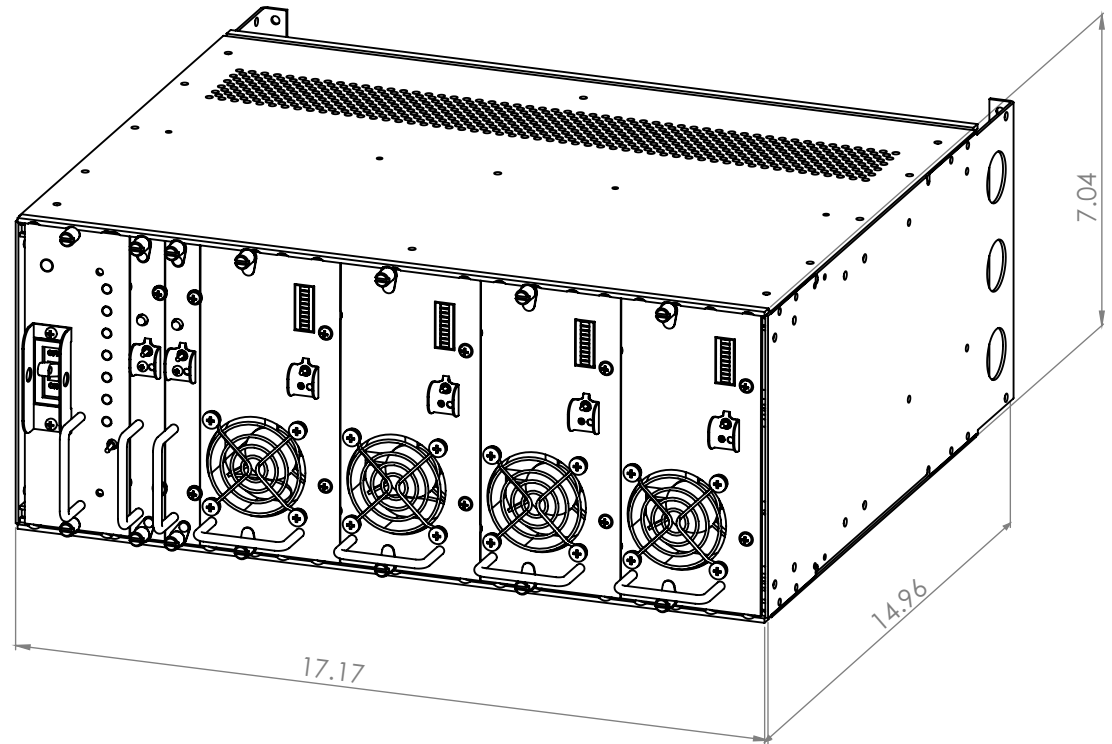
Power Output: 1KW to 4KW

Output Voltage of 100VAC, 117VAC, or 230VAC

DC Input of 12V up to 108V

Included Parts:

- 19" MX Cage (1)
- Control Card (2)
- Alarm Card (1)
- Up to (4) 1KW Power Modules



# MX 19" Single Phase 3KW N+1 System Monitor II Card

## Specifications

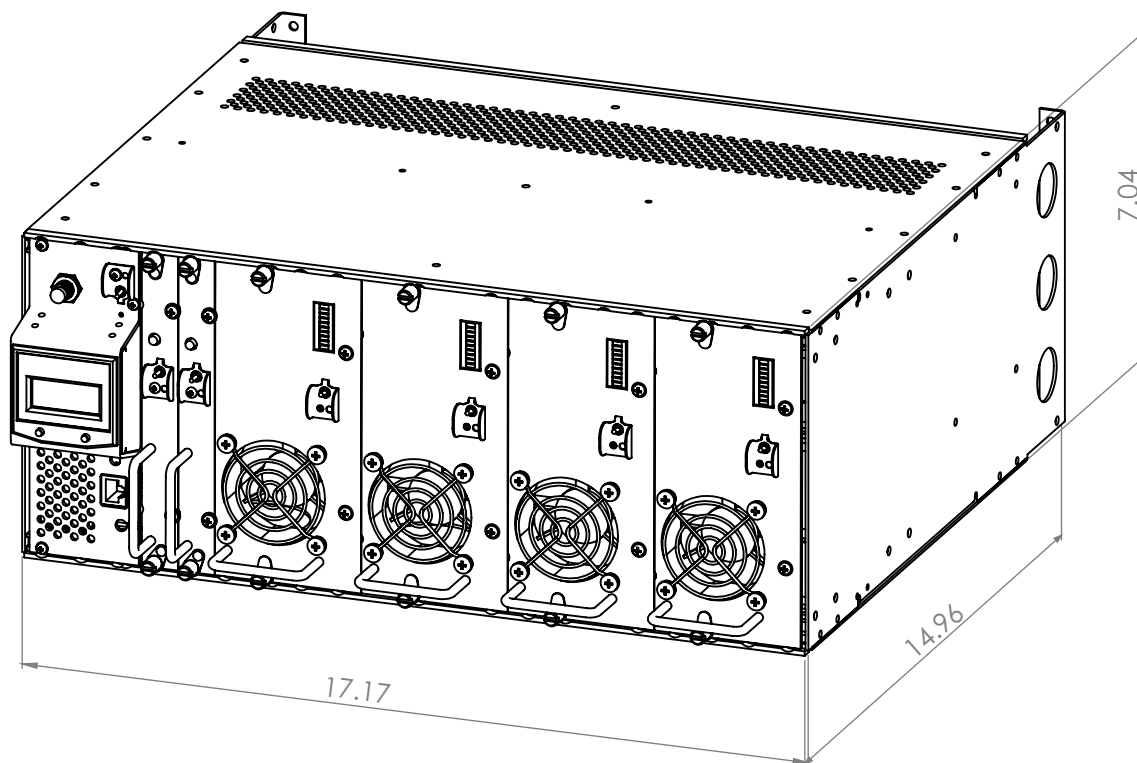
Power Output: 1KW to 4KW

Output Voltage of 100VAC or 117VAC

DC Input of 12V up to 108V

Included Parts:

- 19" MX Cage (1)
- Control Card (2)
- System Monitor II Card (1)
- Up to (4) 1KW Power Modules



# MX 19" Single Phase 3KW N+1 Mechanical Transfer Switch

## Specifications

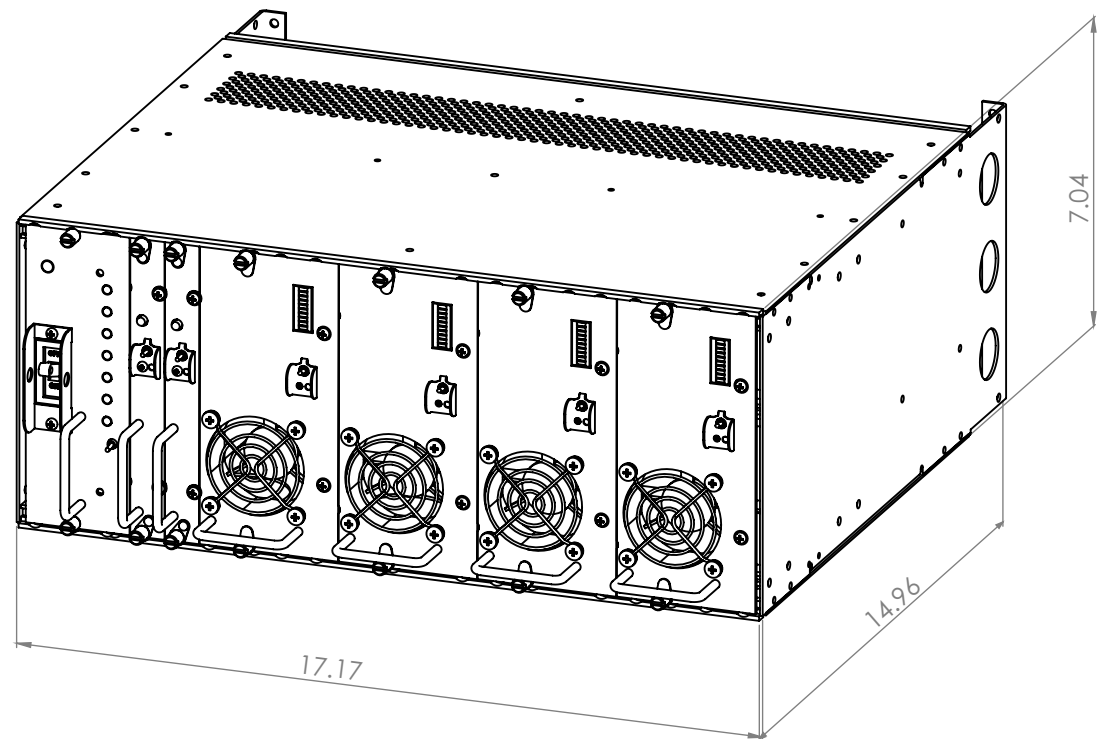
Power Output: 1KW to 4KW

Output Voltage of 100VAC, 117VAC, or 230VAC

DC Input of 12V up to 108V

Included Parts:

- 19" MX Cage (1)
- Control Card (2)
- Mechanical Transfer Switch (1)
- Up to (4) 1KW Power Modules



# MX 19" Single Phase 3KW N+1

## Solid State Transfer Switch / Alarm Card

### Specifications

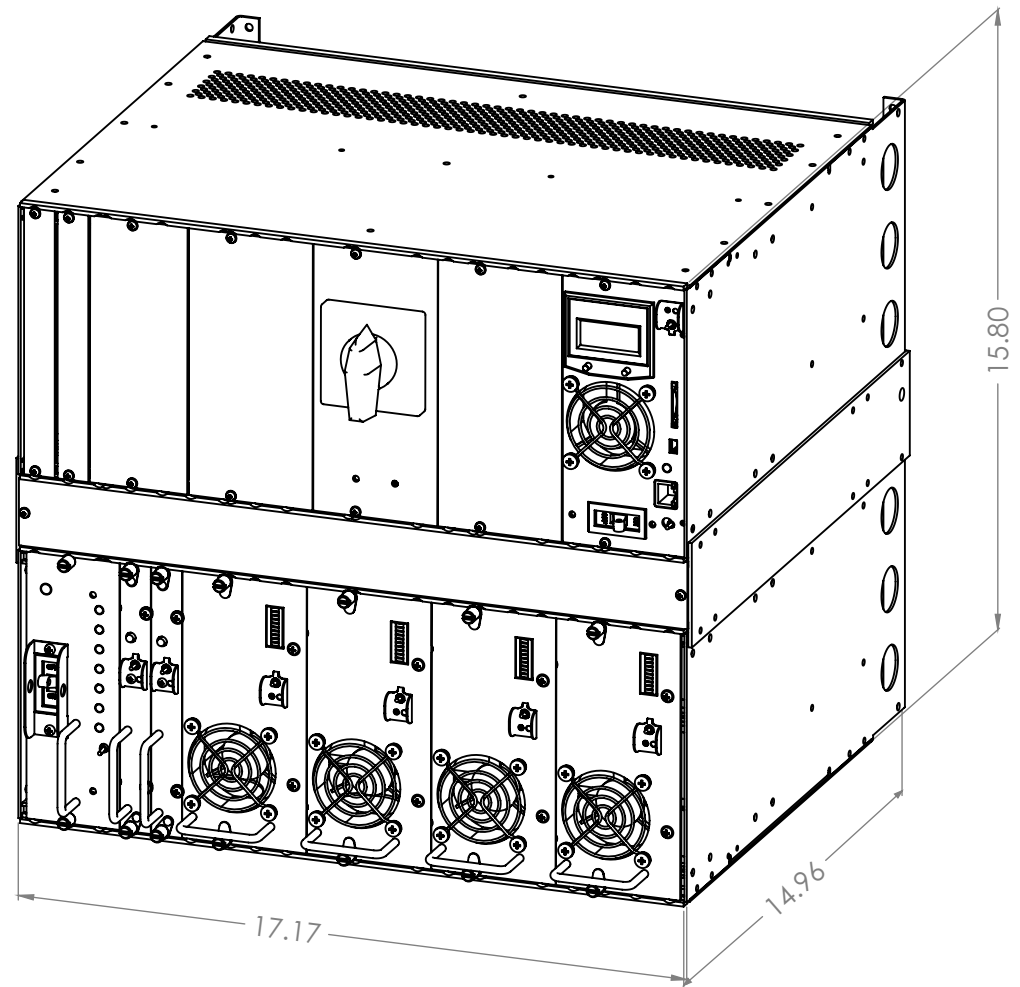
Power Output: 1KW to 4KW

Output Voltage of 100VAC or 117VAC

DC Input of 12V up to 108V

Included Parts:

- 19" MX Cage (1)
- Control Card (2)
- Alarm Card (1)
- Up to (4) 1KW Power Modules
- 19" MX Accessory Cage (1)
- Stacking Kit (1)
- Solid State Transfer Switch 5KW (1)
- M15 Maintenance Bypass Switch (1)



# MX 19" Single Phase 3KW N+1

## Solid State Transfer Switch / System Monitor II Card

### Specifications

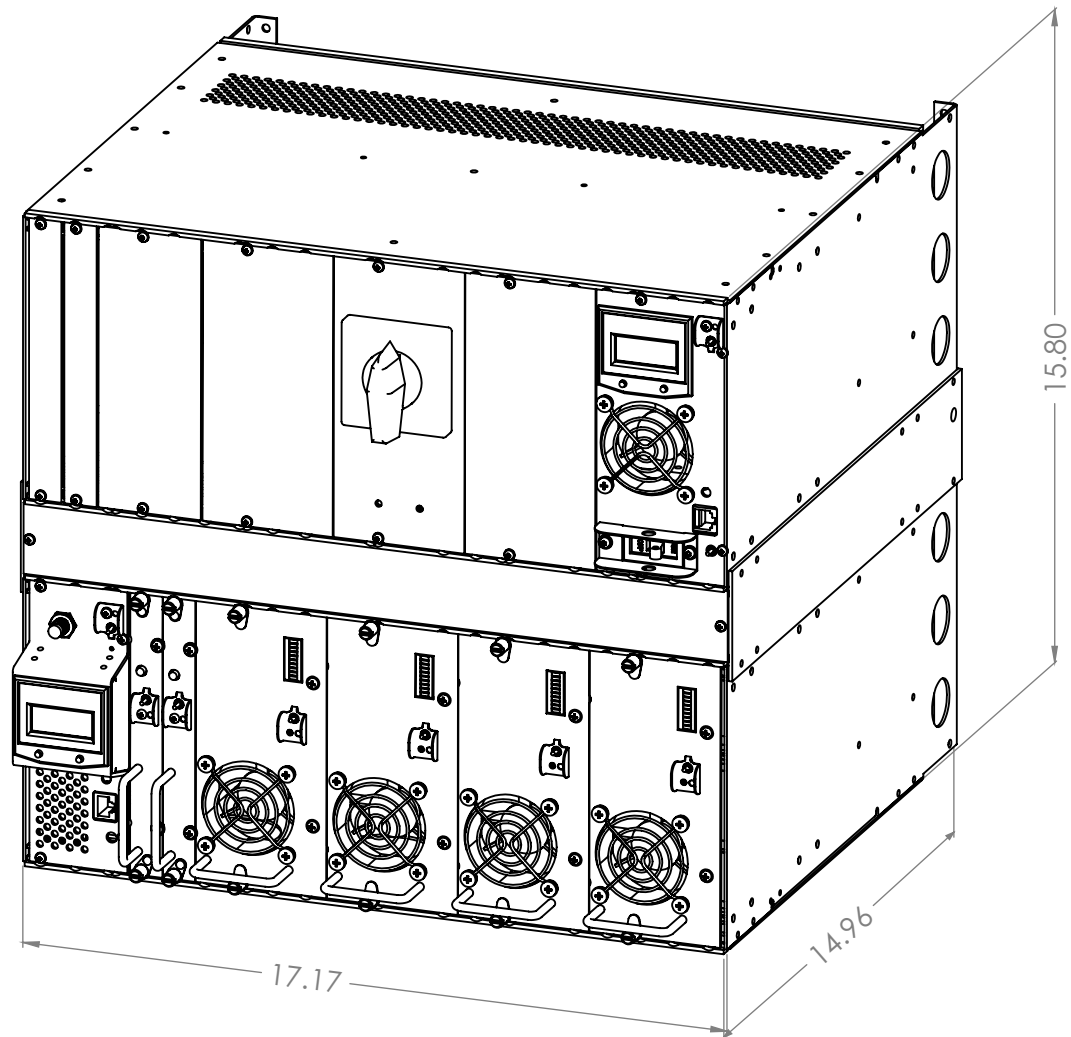
Power Output: 1KW to 4KW

Output Voltage of 100VAC or 117VAC

DC Input of 12V up to 108V

Included Parts:

- 19" MX Cage (1)
- Control Card (2)
- System Monitor II Card (1)
- Up to (4) 1KW Power Modules
- 19" MX Accessory Cage (1)
- Stacking Kit (1)
- Solid State Transfer Switch 5KW (1)
- M15 Maintenance Bypass Switch (1)



# MX 19" Single Phase 8KW N+1 Alarm Card

## Specifications

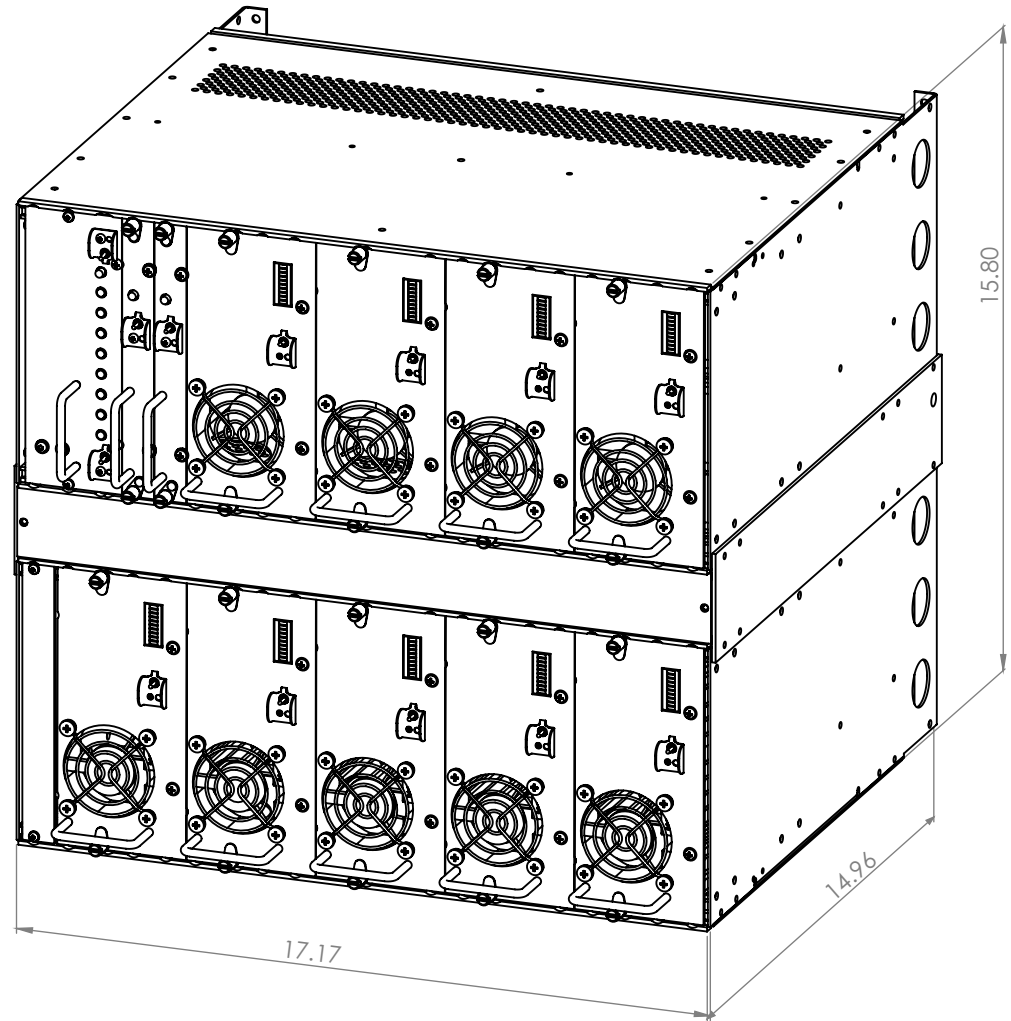
Power Output: 1KW to 9KW

Output Voltage of 100VAC or 117VAC

DC Input of 12V up to 108V

Included Parts:

- 19" MX Cage (2)
- Control Card (2)
- Alarm Card (1)
- Up to (9) 1KW Power Modules
- Stacking Kit (1)



# MX 19" Single Phase 8KW N+1 System Monitor II Card

## Specifications

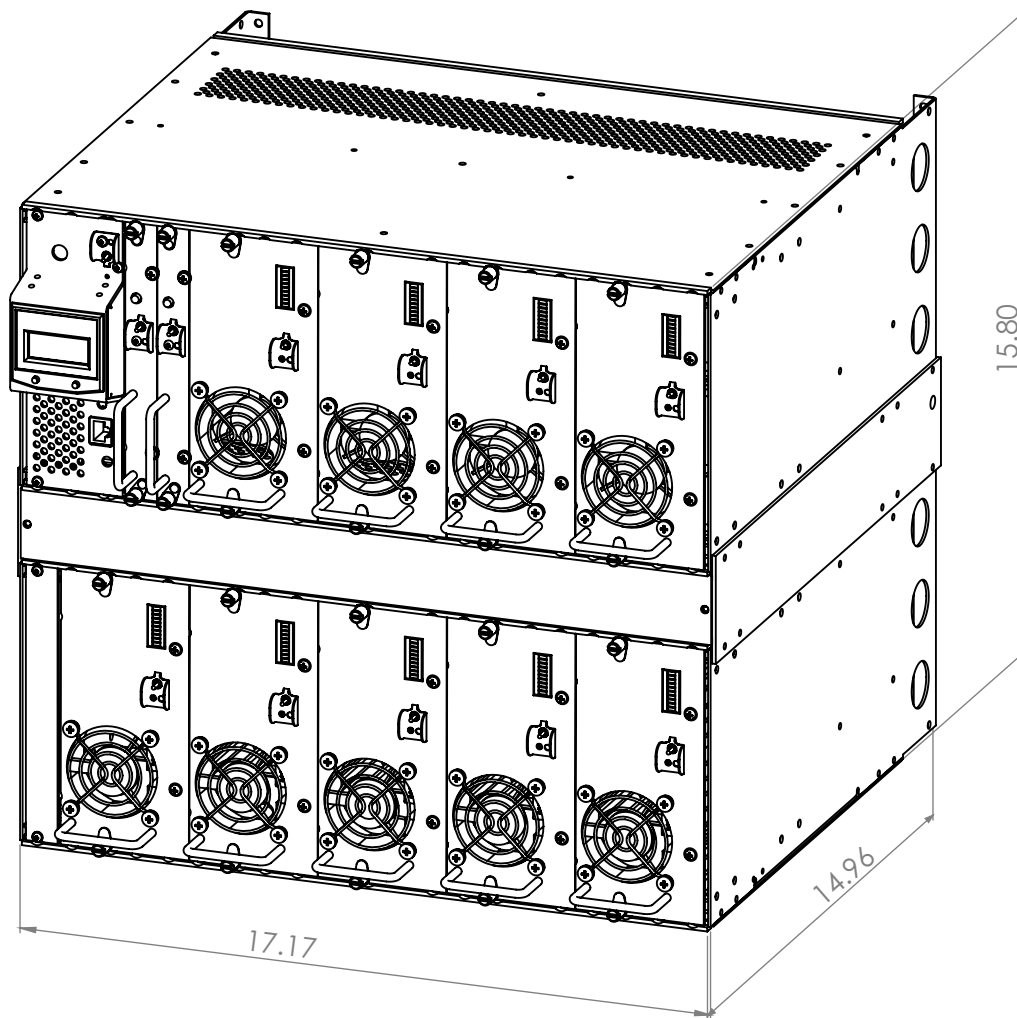
Power Output: 1KW to 9KW

Output Voltage of 100VAC or 117VAC

DC Input of 12V up to 108V

Included Parts:

- 19" MX Cage (2)
- Control Card (2)
- System Monitor II Card (1)
- Up to (9) 1KW Power Modules
- Stacking Kit (1)



# MX 19" Single Phase 8KW N+1

## Static Transfer Switch / System Monitor II Card

### Specifications

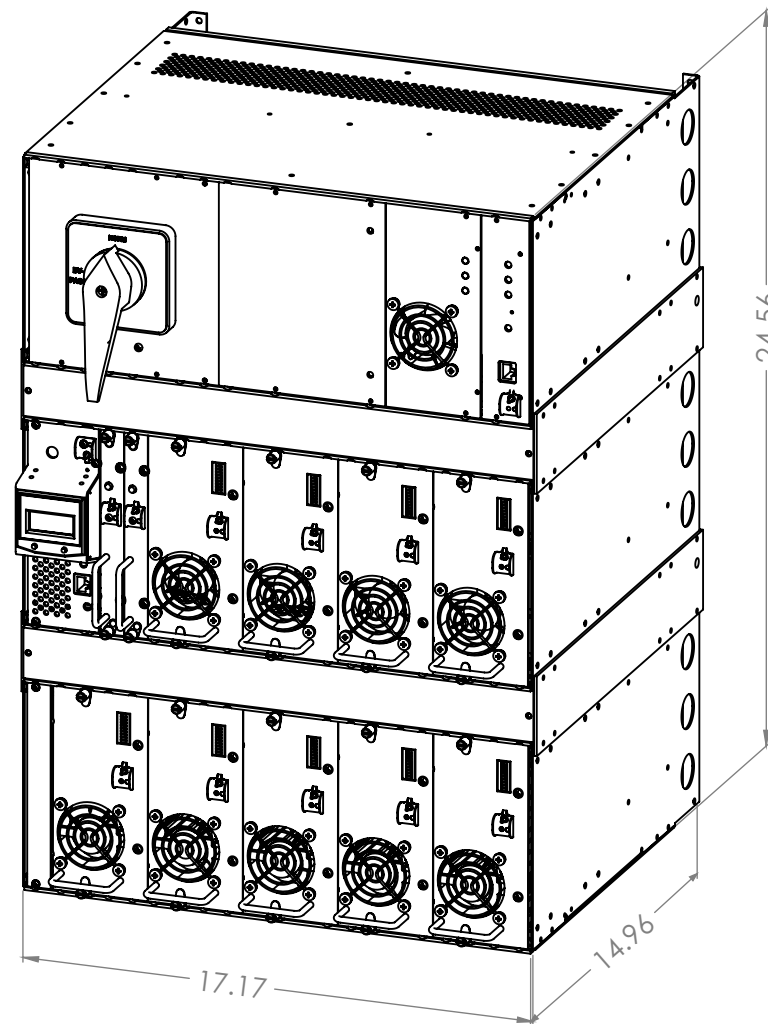
Power Output: 1KW to 9KW

Output Voltage of 100VAC or 117VAC

DC Input of 12V up to 108V

Included Parts:

- 19" MX Cage (2)
- Control Card (2)
- System Monitor II Card (1)
- Up to (9) 1KW Power Modules
- Static Transfer Switch System 10 KW (1)
- M11 Maintenance Bypass Switch (1)
- Stacking Kit (2)





# MX 19" Single Phase 13KW N+1 Alarm Card

## Specifications

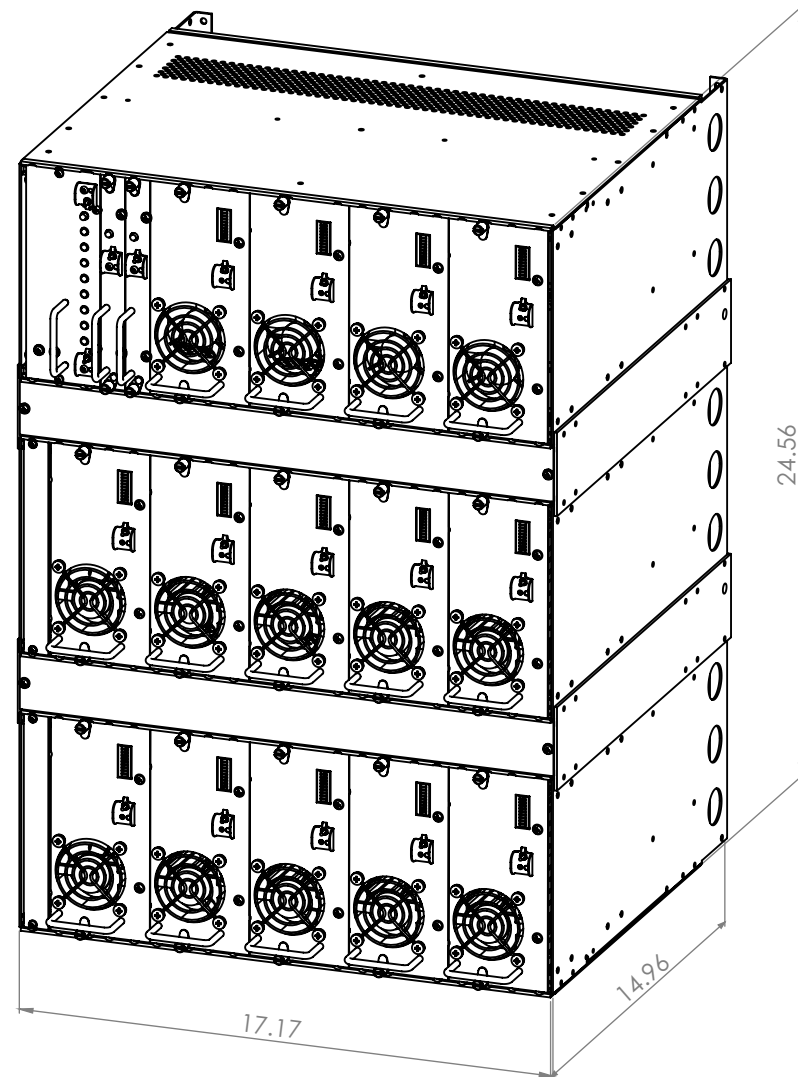
Power Output: 1KW to 14KW

Output Voltage of 100VAC or 117VAC

DC Input of 24V up to 108V

Included Parts:

- 19" MX Cage (3)
- Control Card (2)
- Alarm Card (1)
- Up to (14) 1KW Power Modules
- Stacking Kit (2)



# MX 19" Single Phase 13KW N+1 System Monitor II Card

## Specifications

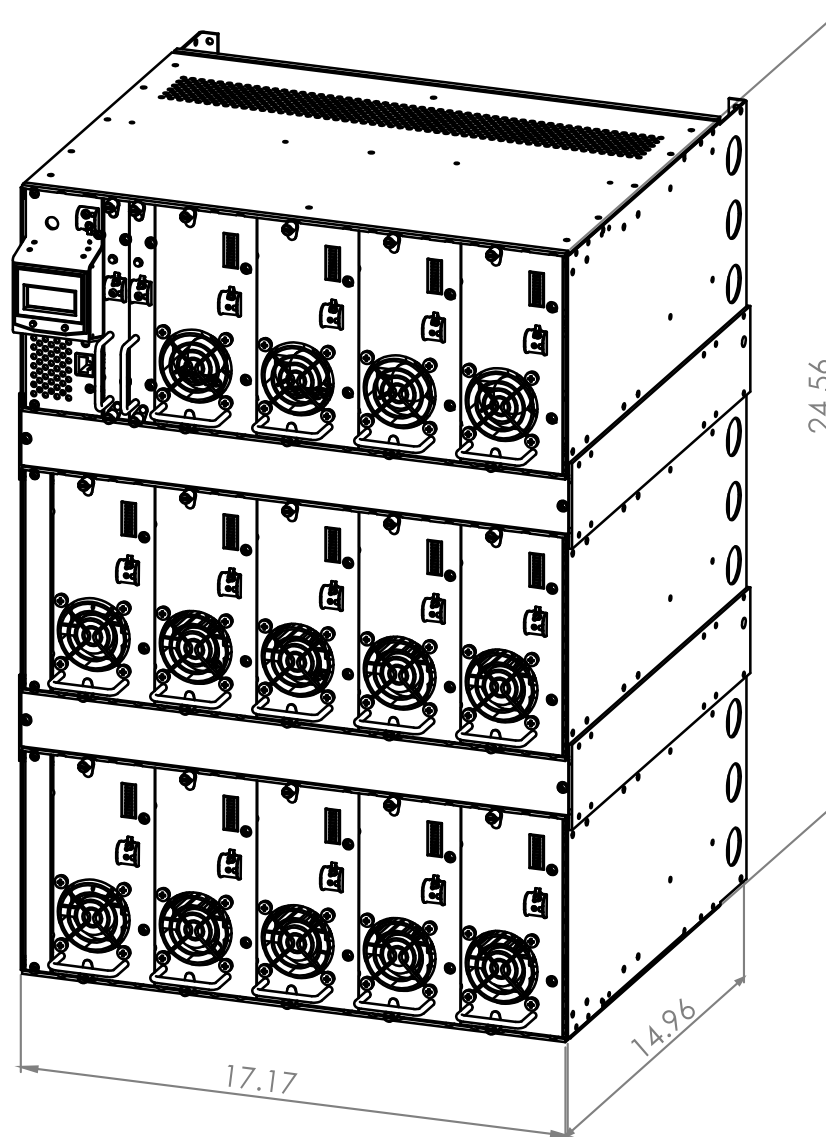
Power Output: 1KW to 14KW

Output Voltage of 100VAC or 117VAC

DC Input of 24V up to 108V

Included Parts:

- 19" MX Cage (3)
- Control Card (2)
- System Monitor II Card (1)
- Up to (14) 1KW Power Modules
- Stacking Kit (2)



# MX 19" Single Phase 13KW N+1

## Static Transfer Switch / System Monitor II Card

### Specifications

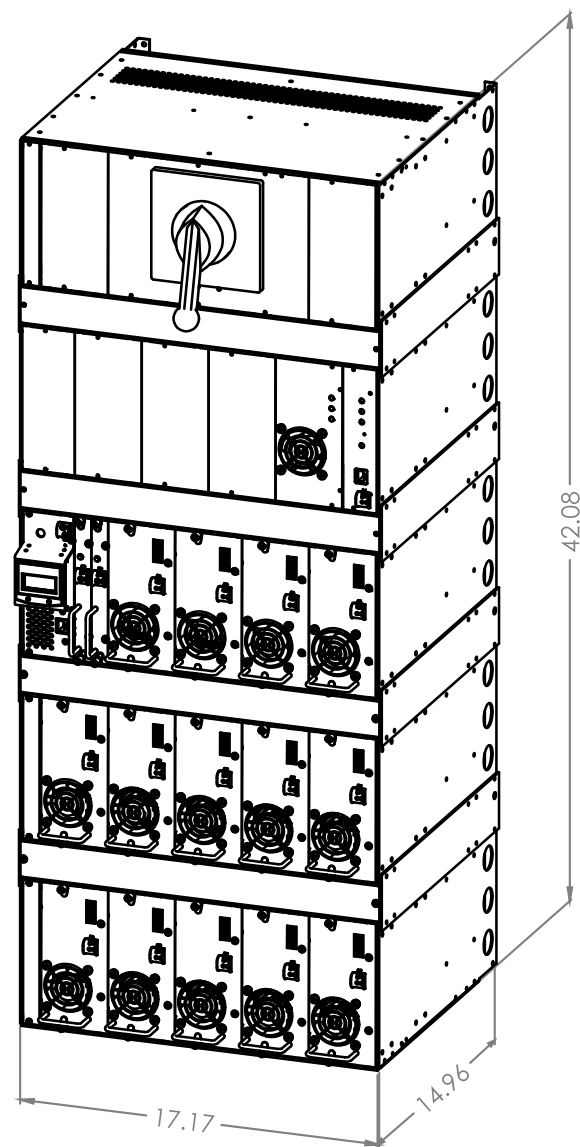
Power Output: 1KW to 14KW

Output Voltage of 100VAC or 117VAC

DC Input of 24V up to 108V

Included Parts:

- 19" MX Cage (3)
- Control Card (2)
- System Monitor II Card (1)
- Up to (14) 1KW Power Modules
- MX 19" Accessory Cage (1)
- Static Transfer Switch System 20KW (1)
- Stacking Kit (4)
- M12 Maintenance Bypass Switch (1)



# MX 19" Single Phase 18KW N+1 Alarm Card

## Specifications

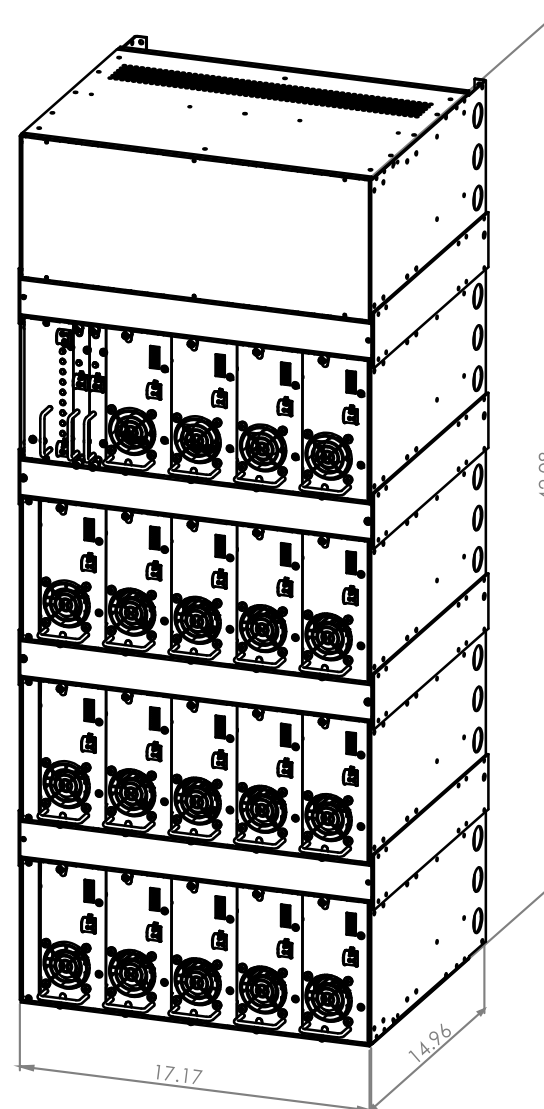
Power Output: 1KW to 19KW

Output Voltage of 100VAC or 117VAC

DC Input of 24V up to 108V

Included Parts:

- 19" MX Cage (4)
- Control Card (2)
- Alarm Card (1)
- Up to (19) 1KW Power Modules
- Stacking Kit (4)
- MX 19" Customer Interface Cage (1)
- 19" Relay Rack Recommended



# MX 19" Single Phase 18KW N+1 System Monitor II Card

## Specifications

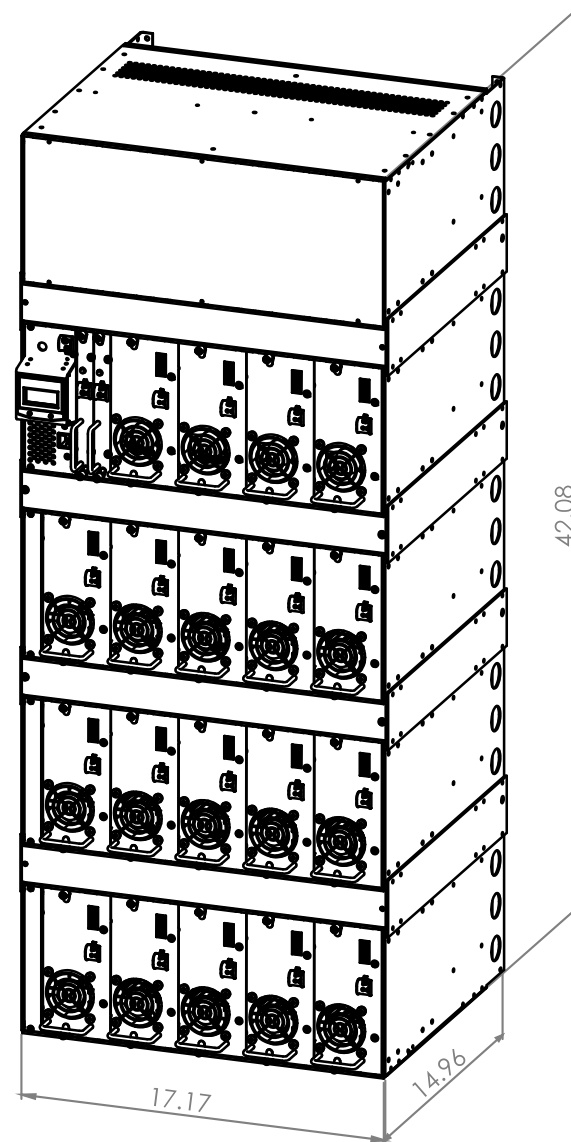
Power Output: 1KW to 19KW

Output Voltage of 100VAC or 117VAC

DC Input of 24V up to 108V

Included Parts:

- 19" MX Cage (4)
- Control Card (2)
- System Monitor II Card (1)
- Up to 19 1KW Power Modules
- Stacking Kit (4)
- MX 19" Customer Interface Cage (1)
- 19" Relay Rack Recommended



# MX 19" Single Phase 18KW N+1 Static Transfer Switch / System Monitor II Card

## Specifications

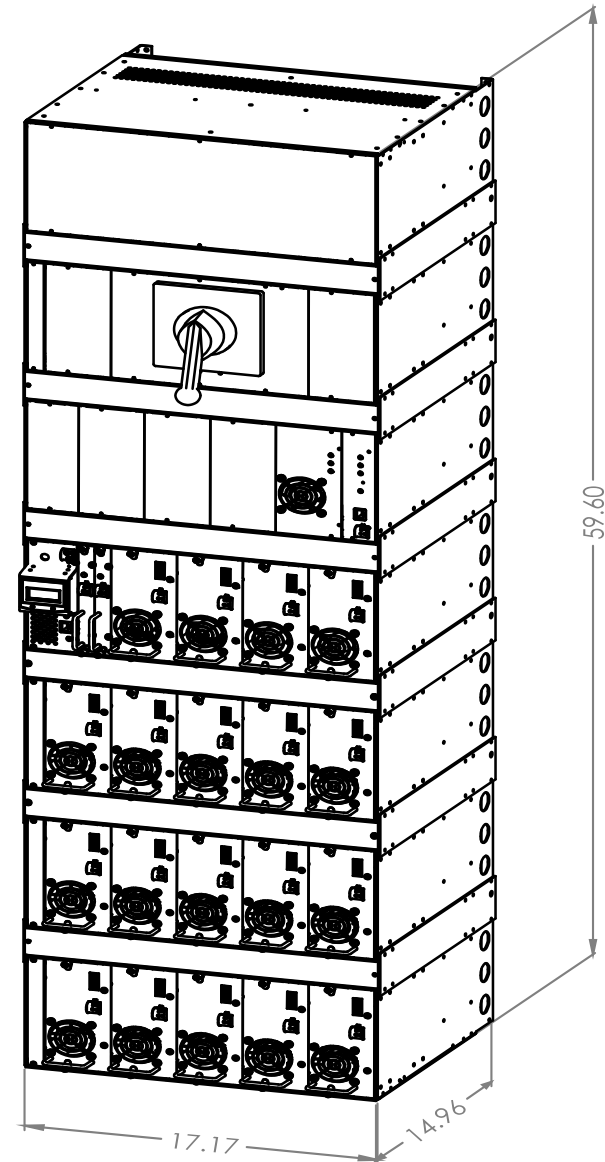
Power Output: 1KW to 14KW

Output Voltage of 100VAC or 117VAC

DC Input of 24V up to 108V

Included Parts:

- 19" MX Cage (4)
- Control Card (2)
- System Monitor II Card (1)
- Up to (19) 1KW Power Modules
- MX 19" Accessory Cage (1)
- Static Transfer Switch System 20KW (1)
- Stacking Kit (6)
- M12 Maintenance Bypass Switch (1)
- MX 19" Customer Interface Cage (1)
- 19" Relay Rack Recommended



# MX 19" Single Phase 20KW N+1 Alarm Card

## Specifications

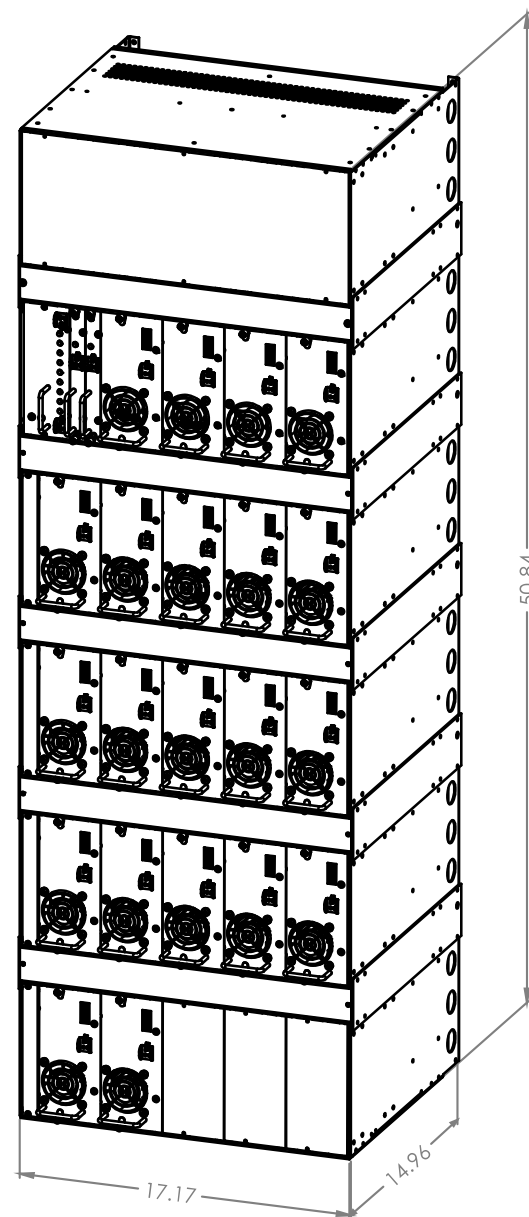
Power Output: 1KW to 19KW

Output Voltage of 100VAC or 117VAC

DC Input of 24V up to 108V

Included Parts:

- 19" MX Cage (5)
- Control Card (2)
- Alarm Card (1)
- Up to (21) 1KW Power Modules
- Stacking Kit (5)
- MX 19" Customer Interface Cage (1)
- 19" Relay Rack Recommended



# MX 19" Single Phase 20KW N+1 System Monitor II Card

## Specifications

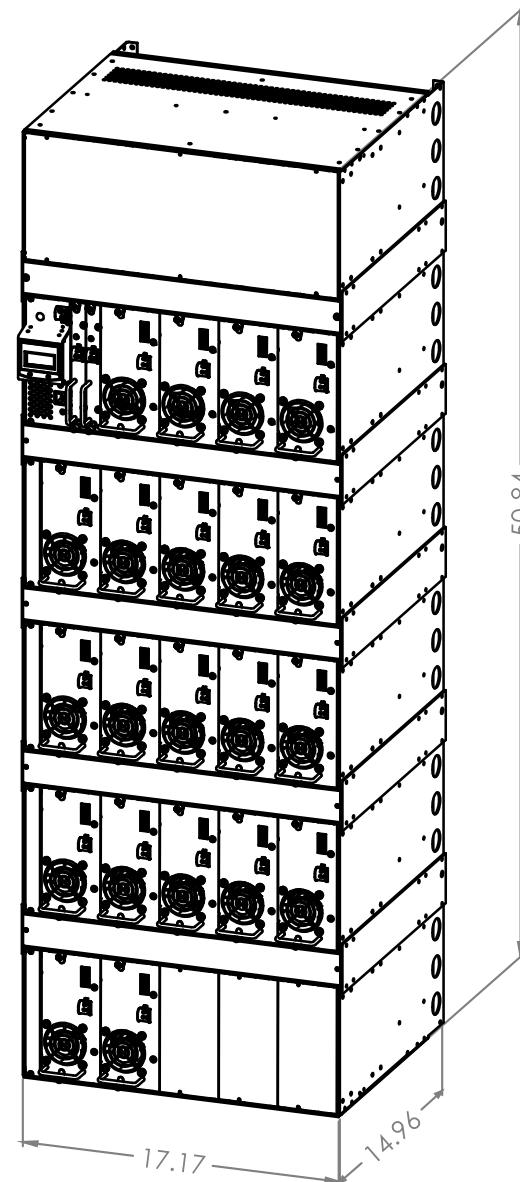
Power Output: 1KW to 19KW

Output Voltage of 100VAC or 117VAC

DC Input of 24V up to 108V

Included Parts:

- 19" MX Cage (5)
- Control Card (2)
- System Monitor II Card (1)
- Up to (21) 1KW Power Modules
- Stacking Kit (5)
- MX 19" Customer Interface Cage (1)
- 19" Relay Rack Recommended





# MX 19" Single Phase 20KW N+1 Static Transfer Switch / System Monitor II Card

## Specifications

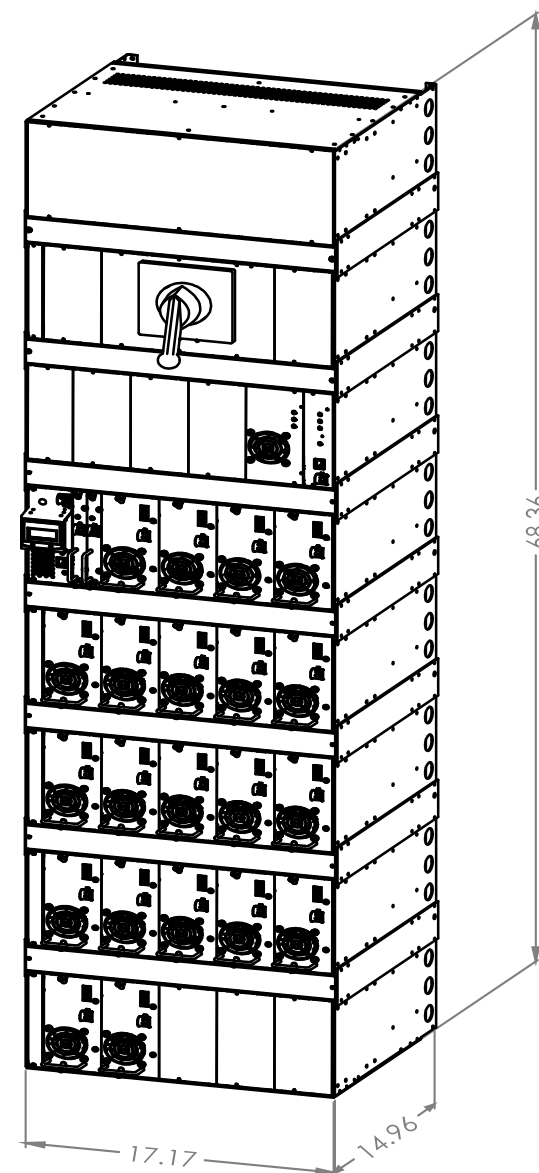
Power Output: 1KW to 14KW

Output Voltage of 100VAC or 117VAC

DC Input of 24V up to 108V

Included Parts:

- 19" MX Cage (5)
- Control Card (2)
- System Monitor II Card (1)
- Up to (21) 1KW Power Modules
- MX 19" Accessory Cage (1)
- Static Transfer Switch System 20KW (1)
- Stacking Kit (7)
- M12 Maintenance Bypass Switch (1)
- MX 19" Customer Interface Cage (1)
- 19" Relay Rack Recommended



# MX 23" Inverter Series

1KW – 20KW N+1  
Single Phase

# MX 23" Single Phase 3KW N+1

## Mechanical Transfer Switch / System Monitor II Card

### Specifications

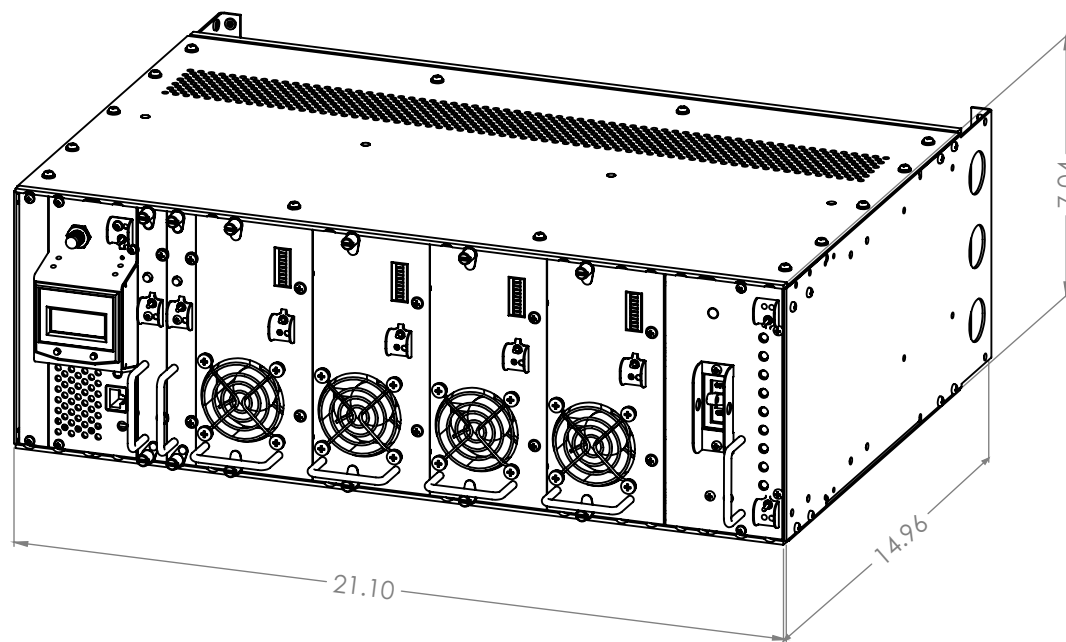
Power Output: 1KW to 4KW

Output Voltage of 100VAC or 117VAC

DC Input of 12V up to 108V

Included Parts:

- 23" MX Cage (1)
- Control Card (2)
- System Monitor II Card (1)
- Mechanical Transfer Switch (1)
- Up to (4) 1KW Power Modules



# MX 23" Single Phase 3KW N+1 Solid State Transfer Switch

## Specifications

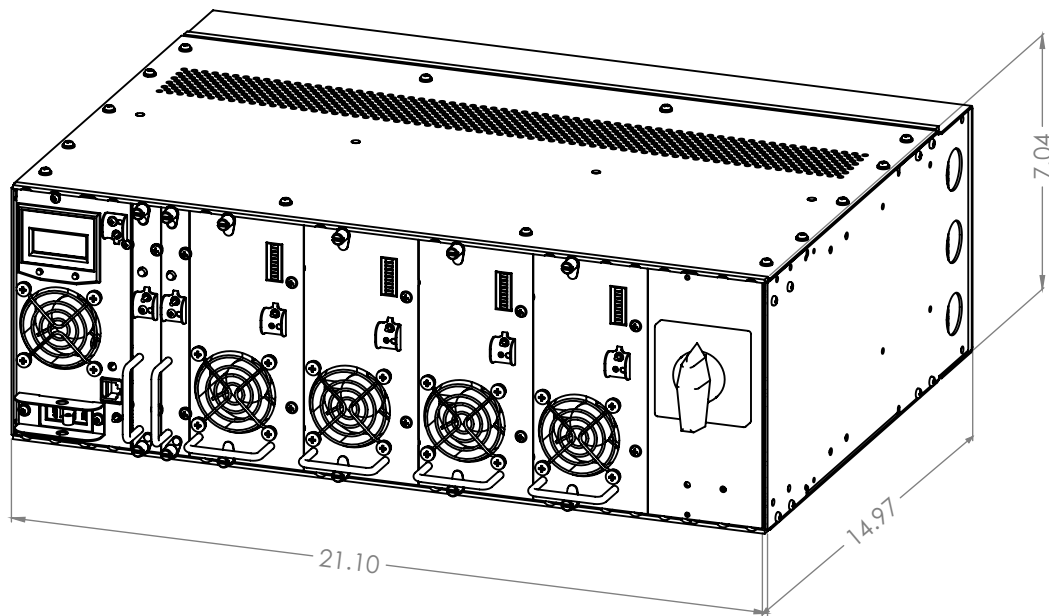
Power Output: 1KW to 4KW

Output Voltage of 100VAC or 117VAC

DC Input of 12V up to 108V

Included Parts:

- 23" MX Cage (1)
- Control Card (2)
- Solid State Transfer Switch 5KW (1)
- Up to (4) 1KW Power Modules
- M15 Maintenance Bypass Switch (1)



# MX 23" Single Phase 4KW N+1 Alarm Card

## Specifications

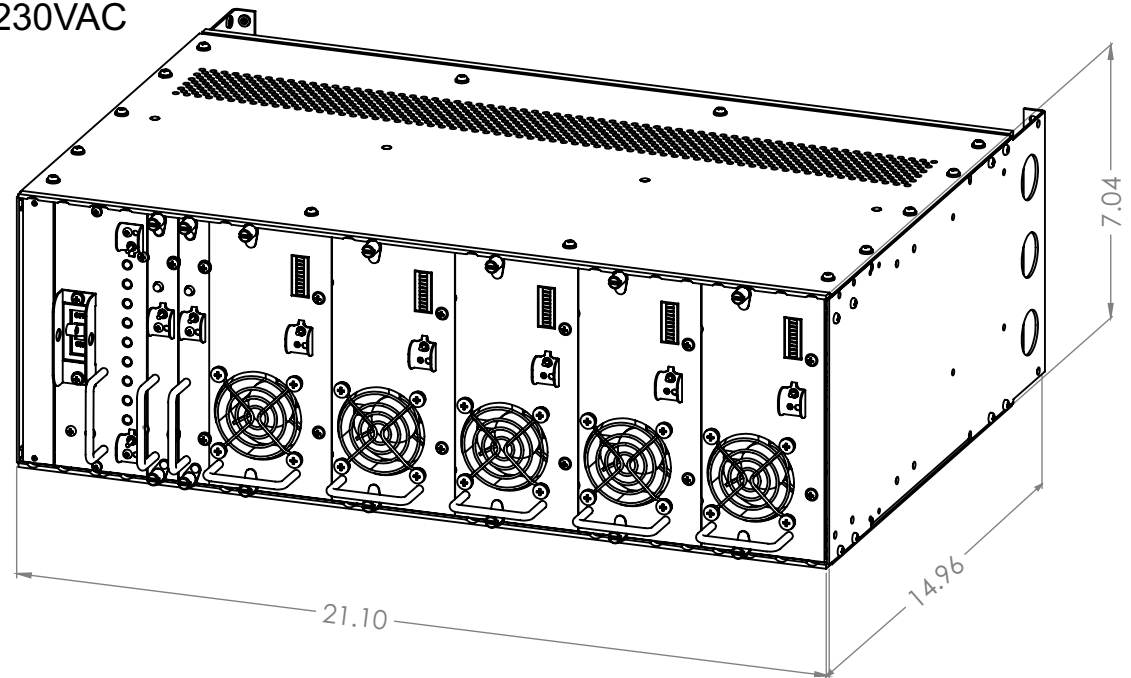
Power Output: 1KW to 5KW

Output Voltage of 100VAC, 117VAC, or 230VAC

DC Input of 12V up to 108V

Included Parts:

- 23" MX Cage (1)
- Control Card (2)
- Alarm Card (1)
- Up to (5) 1KW Power Modules



# MX 23" Single Phase 4KW N+1 System Monitor II Card

## Specifications

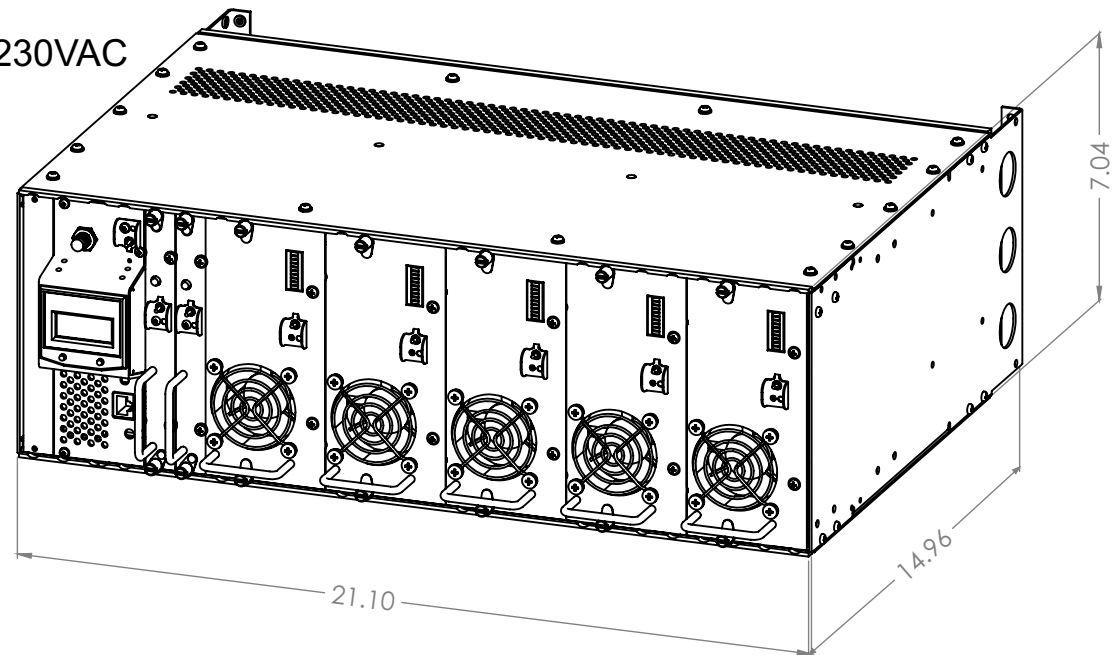
Power Output: 1KW to 5KW

Output Voltage of 100VAC, 117VAC, or 230VAC

DC Input of 12V up to 108V

Included Parts:

- 23" MX Cage (1)
- Control Card (2)
- System Monitor II Card (1)
- Up to (5) 1KW Power Modules



# MX 23" Single Phase 4KW N+1 Mechanical Transfer Switch

## Specifications

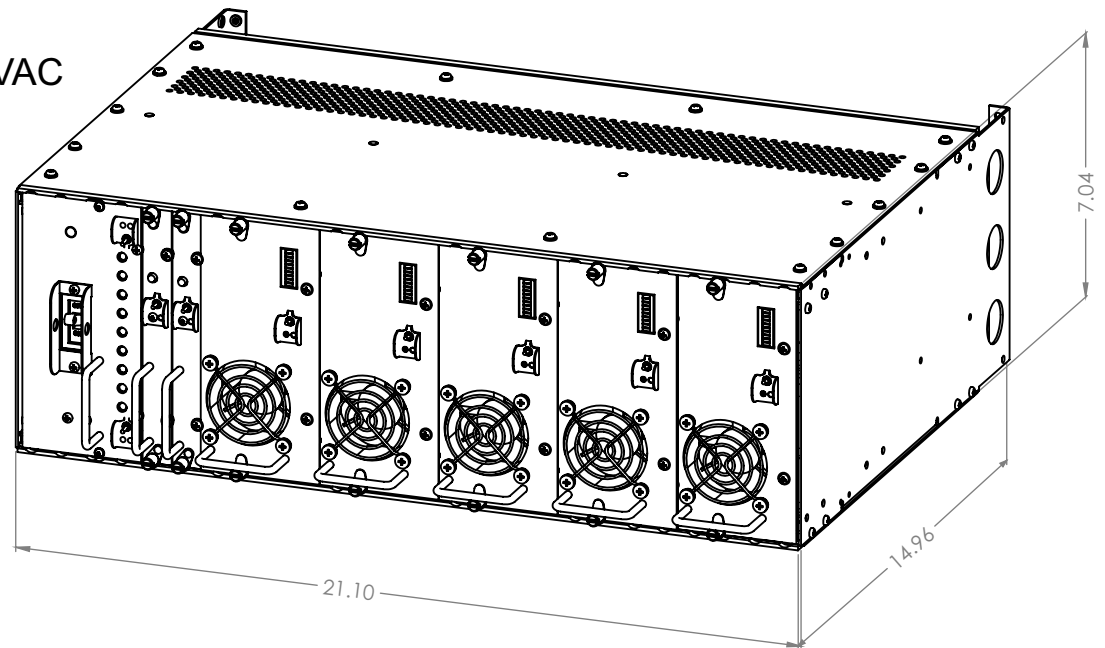
Power Output: 1KW to 5KW

Output Voltage of 100VAC, 117VAC, or 230VAC

DC Input of 12V up to 108V

Included Parts:

- 23" MX Cage (1)
- Control Card (2)
- Mechanical Transfer Switch (1)
- Up to (5) 1KW Power Modules



# MX 23" Single Phase 4KW N+1 Solid State Transfer Switch

## Specifications

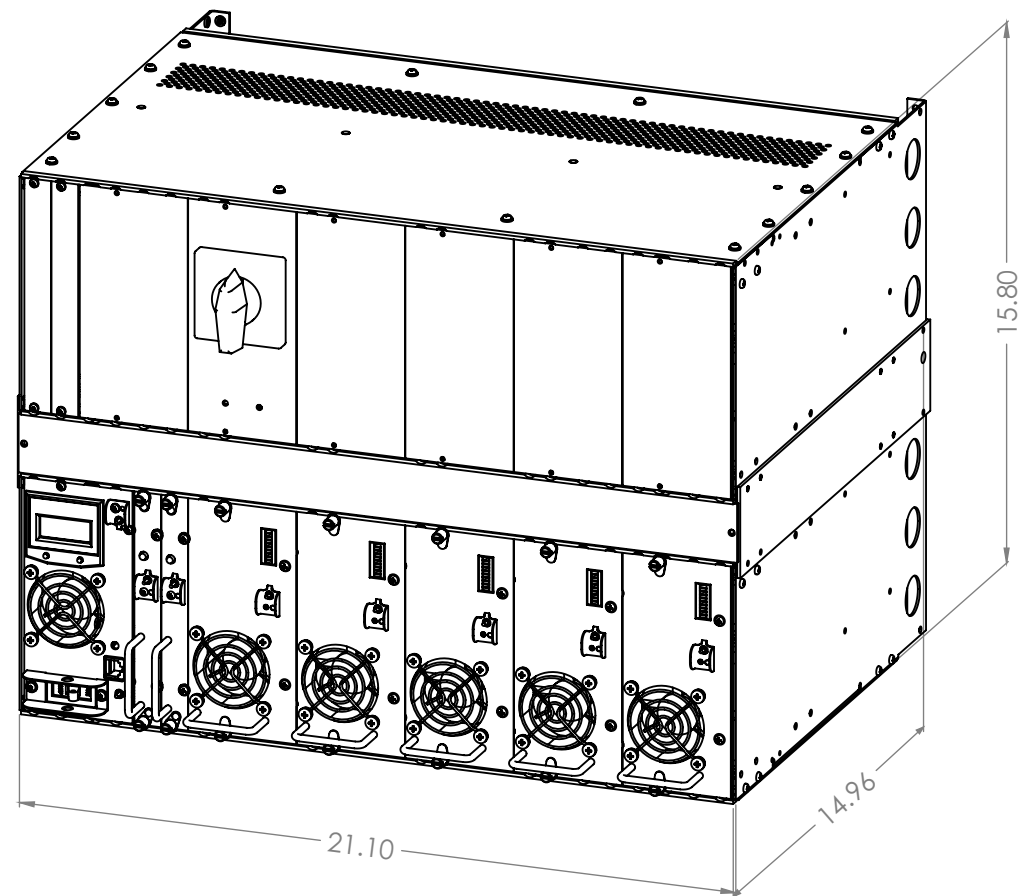
Power Output: 1KW to 5KW

Output Voltage of 100VAC, 117VAC, or 230VAC

DC input of 12V up to 108V

Included Parts:

- 23" MX Cage (1)
- Control Card (2)
- Solid State Transfer Switch 5kW (1)
- Up to (5) 1KW Power Modules
- 23" MX Accessory Cage (1)
- Stacking Kit (1)
- M15 Maintenance Bypass Switch (1)





# MX 23" Single Phase 10KW N+1 Alarm Card

## Specifications

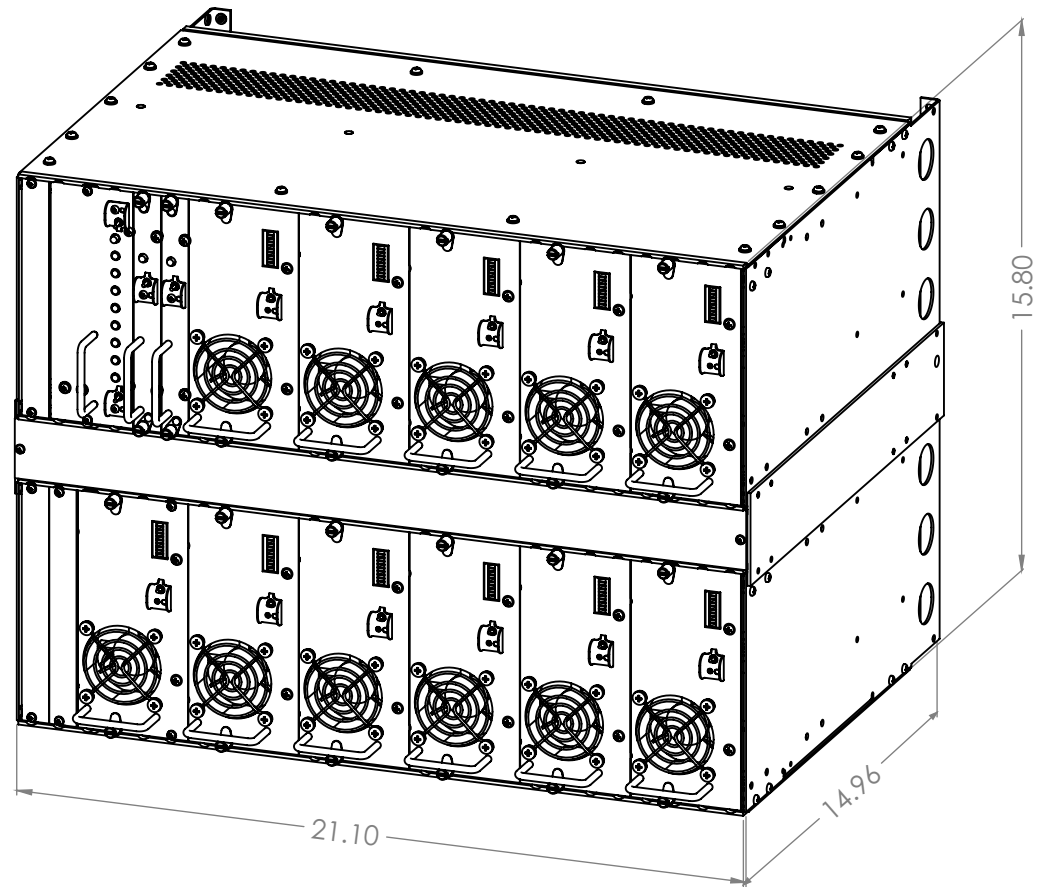
Power Output: 1KW to 11KW

Output voltage of 100VAC or 117VAC

DC input of 24V up to 108V

Included Parts:

- 23" MX Cage (2)
- Control Card (2)
- Alarm Card (1)
- Up to (11) 1KW Power Modules
- Stacking Kit (1)



# MX 23" Single Phase 10KW N+1 System Monitor II Card

## Specifications

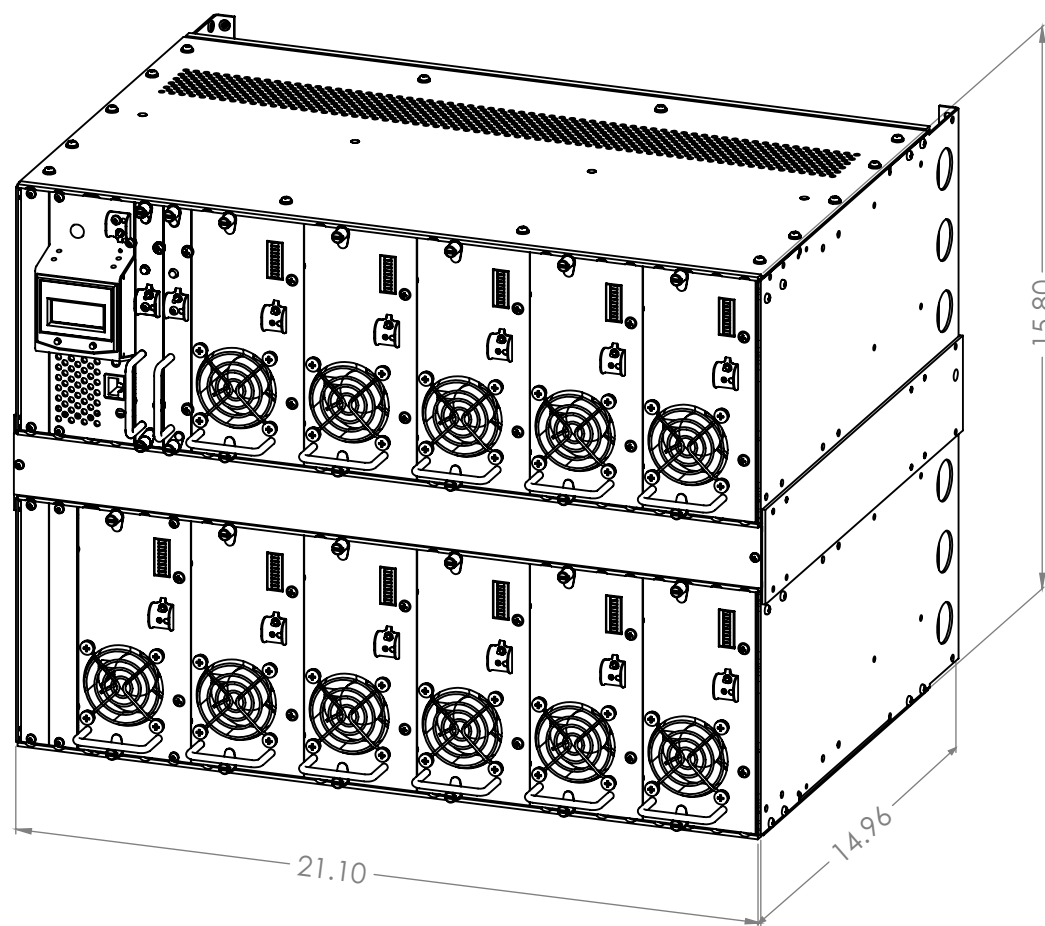
Power Output: 1KW to 11KW

Output voltage of 100VAC or 117VAC

DC input of 24V up to 108V

Included Parts:

- 23" MX Cage (2)
- Control Card (2)
- System Monitor II (1)
- Up to (11) 1KW Power Modules
- Stacking Kit (1)



# MX 23" Single Phase 10KW N+1 Static Transfer Switch

## Specifications

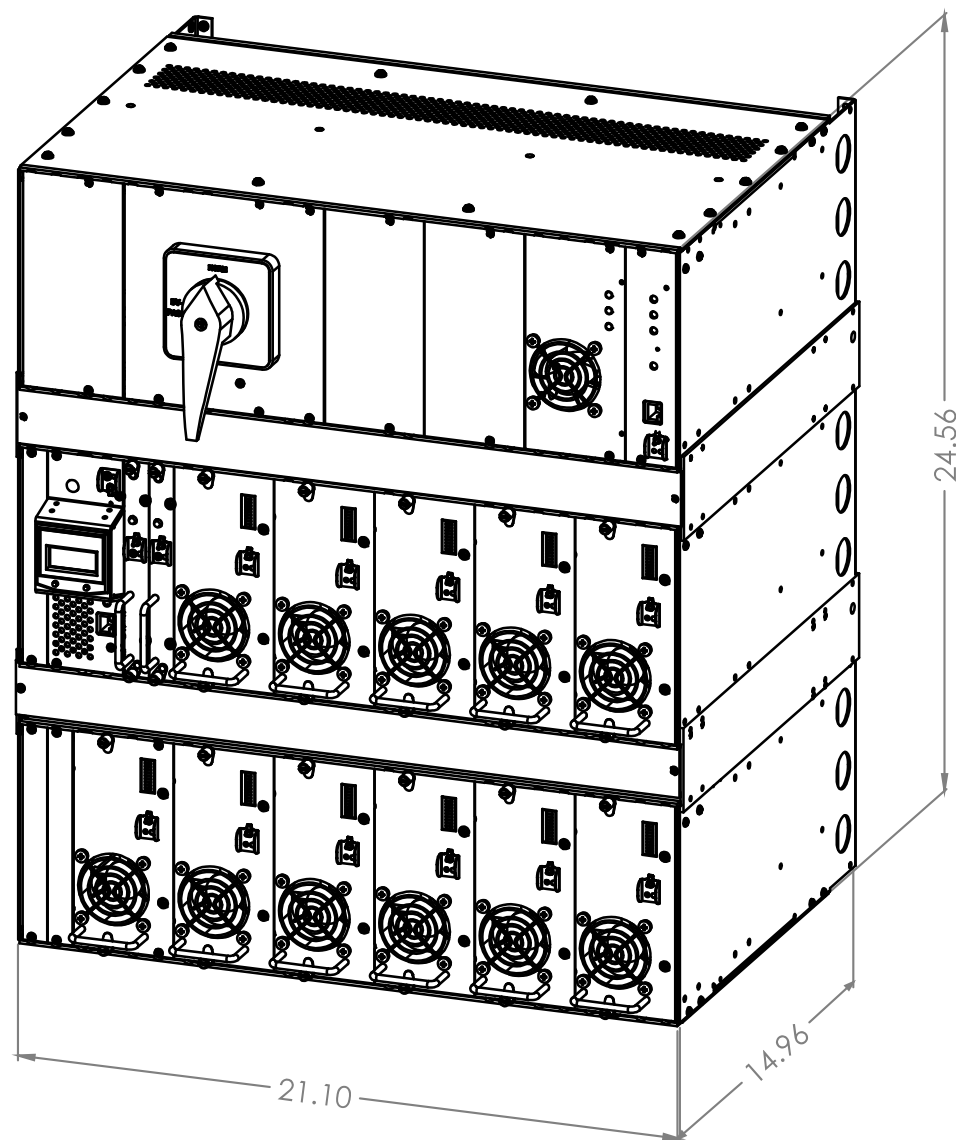
Power Output: 1KW to 11KW

Output voltage of 100VAC or 117VAC

DC input of 24V up to 108V

Included Parts:

- 23" MX Cage (2)
- Control Card (2)
- System Monitor II Card (1)
- Up to (11) 1KW Power Modules
- Static Transfer Switch System 10KW (1)
- Stacking Kit (2)
- M11 Maintenance Bypass Switch (1)



# MX 23" Single Phase 16KW N+1 Alarm Card

## Specifications

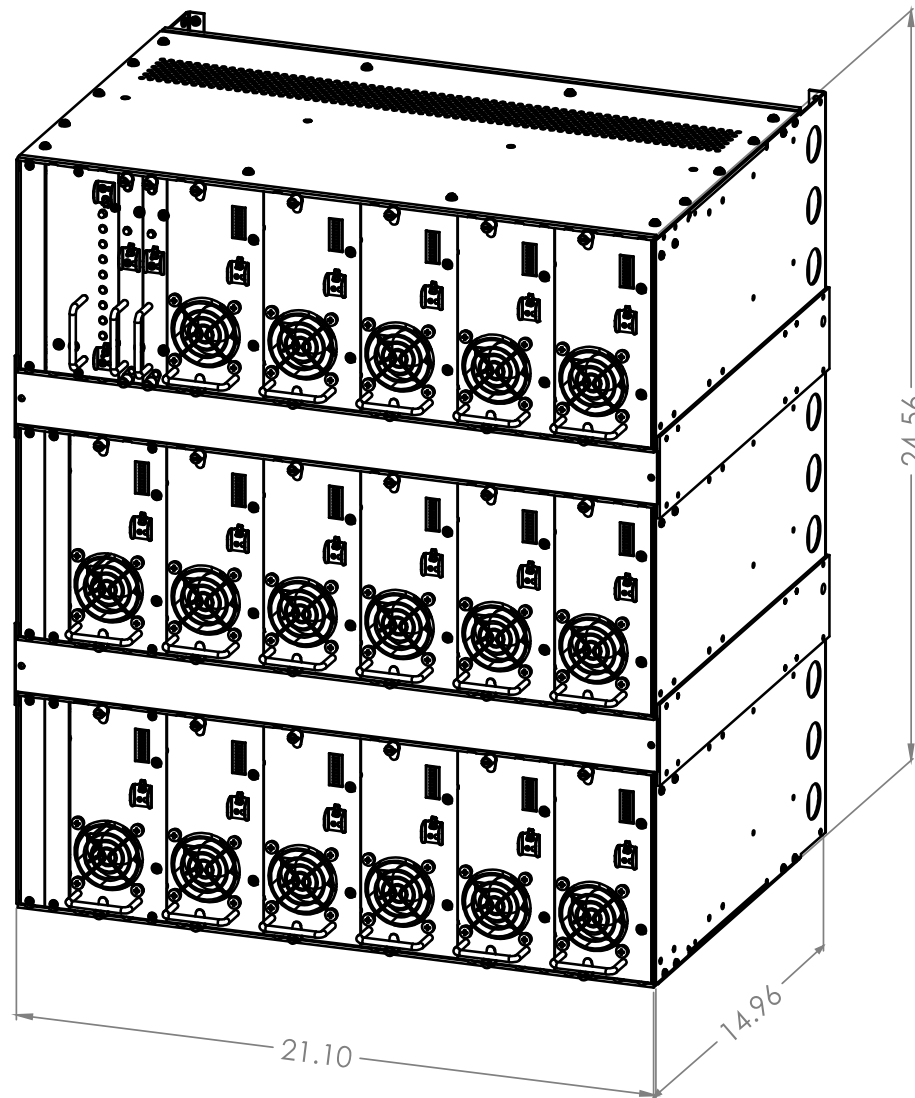
Power Output: 1KW to 17KW

Output voltage of 100VAC or 117VAC

DC input of 24V up to 108V

Included Parts:

- 23" MX Cage (3)
- Control Card (2)
- Alarm Card (1)
- Up to (17) 1KW Power Modules
- Stacking Kit (2)



# MX 23" Single Phase 16KW N+1 System Monitor II Card

## Specifications

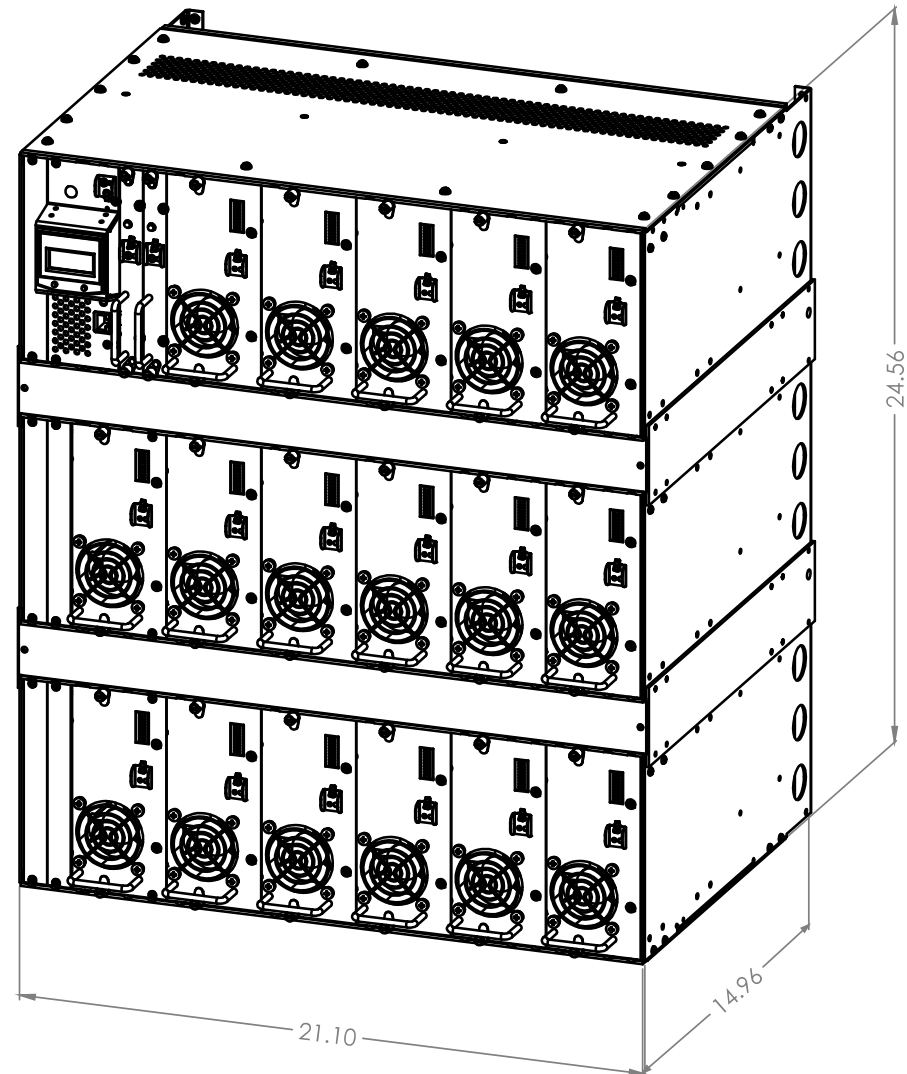
Power Output: 1KW to 17KW

Output voltage of 100VAC or 117VAC

DC input of 24V up to 108V

Included Parts:

- 23" MX Cage (3)
- Control Card (2)
- System Monitor II (1)
- Up to (17) 1KW Power Modules
- Stacking Kit (2)



# MX 23" Single Phase 16KW N+1 Static Transfer Switch

## Specifications

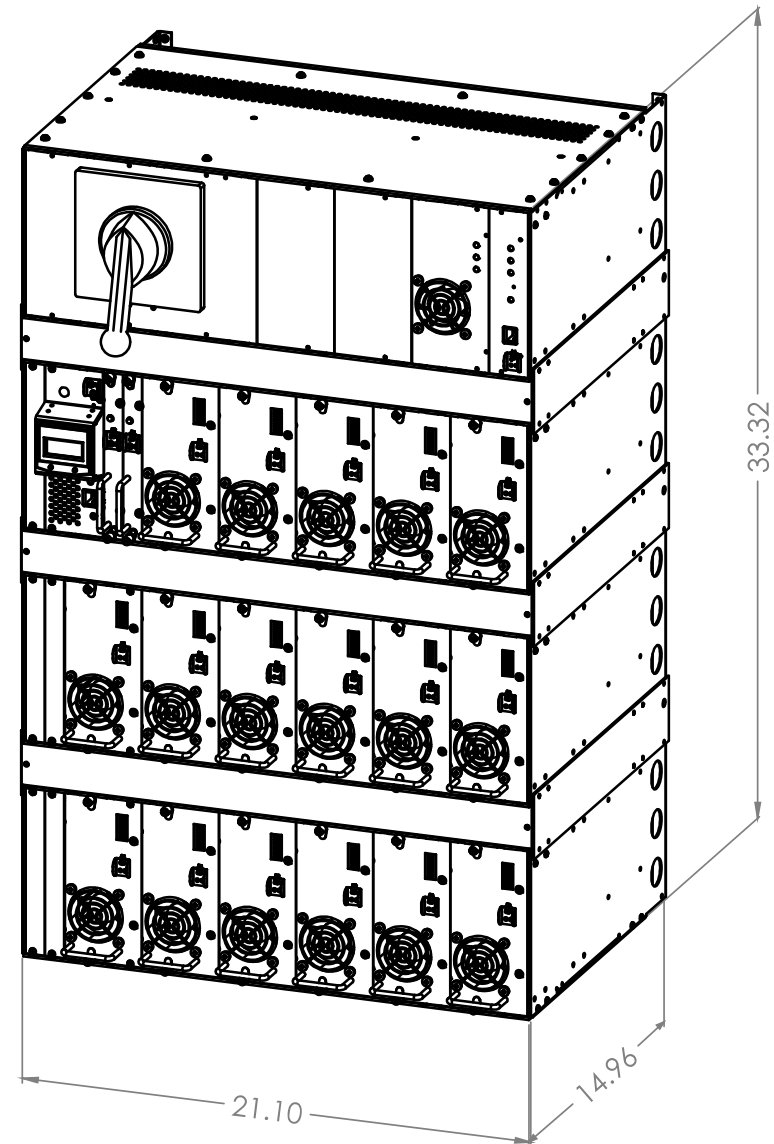
Power Output: 1KW to 17KW

Output voltage of 100VAC or 117VAC

DC input of 24V up to 108V

Included Parts:

- 23" MX Cage (3)
- Control Card (2)
- System Monitor II Card (1)
- Up to (17) 1KW Power Modules
- Static Transfer Switch System 20KW (1)
- Stacking Kit (3)
- M12 Maintenance Bypass Switch (1)



# MX 23" Single Phase 20KW N+1 Alarm Card

## Specifications

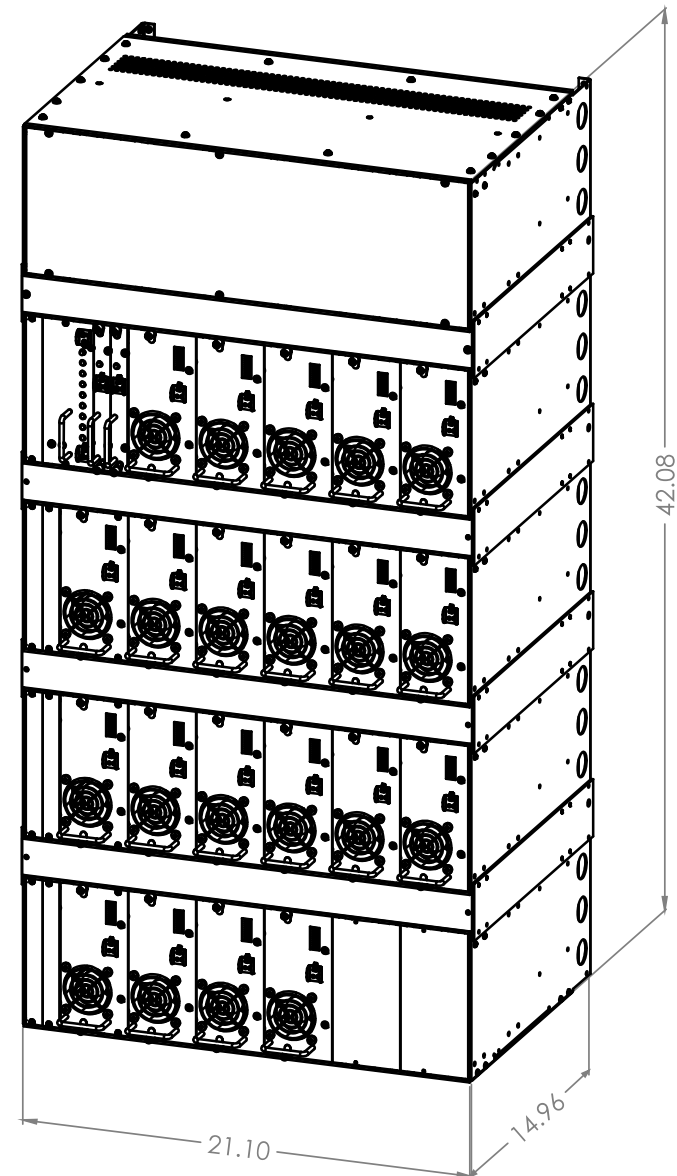
Power Output: 1KW to 21KW

Output voltage of 100VAC or 117VAC

DC input of 24V up to 108V

Included Parts:

- 23" MX Cage (4)
- Control Card (2)
- Alarm Card (1)
- Up to (21) 1KW Power Modules
- Stacking Kit (4)
- MX 23" Customer Interface Cage (1)
- 23" Relay Rack Recommended



# MX 23" Single Phase 20KW N+1 System Monitor II Card

## Specifications

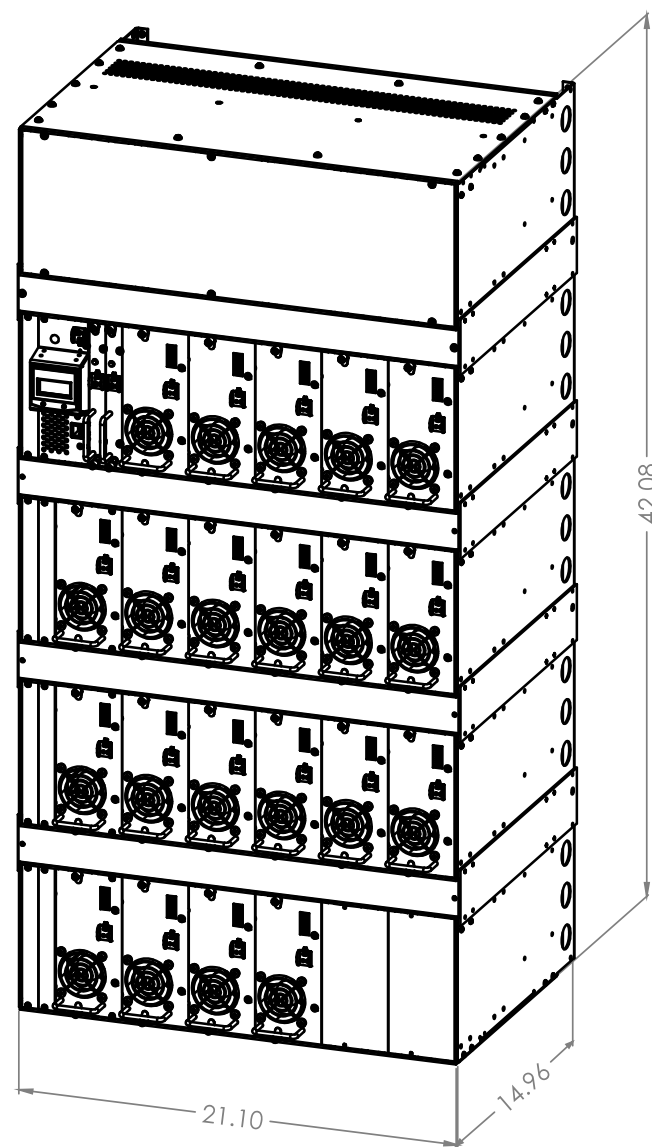
Power Output: 1KW to 23KW

Output voltage of 100VAC or 117VAC

DC input of 24V up to 108V

Included Parts:

- 23" MX Cage (4)
- Control Card (2)
- System Monitor II (1)
- Up to (21) 1KW Power Modules
- Stacking Kit (4)
- MX 23" Customer Interface Cage (1)
- 23" Relay Rack Recommended





# MX 23" Single Phase 20KW N+1 Static Transfer Switch

## Specifications

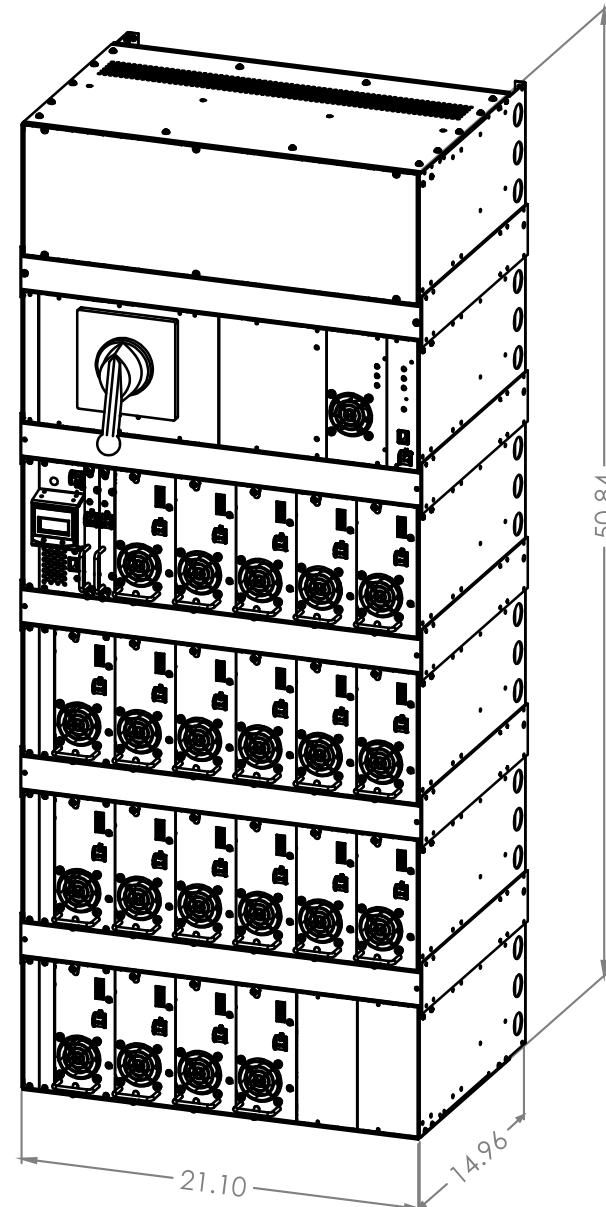
Power Output: 1KW to 21KW

Output voltage of 100VAC or 117VAC

DC input of 24V up to 108V

Included Parts:

- 23" MX Cage (4)
- Control Card (2)
- System Monitor II (1)
- Up to (21) 1KW Power Modules
- Stacking Kit (5)
- M12 Maintenance Bypass Switch
- Static Transfer Switch System 20KW (1)
- MX 23" Customer Interface Cage (1)
- 23" Relay Rack Recommended



# MX 19" Inverter Series

2KW – 40KW N+1  
Bi-Phase

# MX 19" Bi-Phase 6KW N+1 Alarm Card

## Specifications

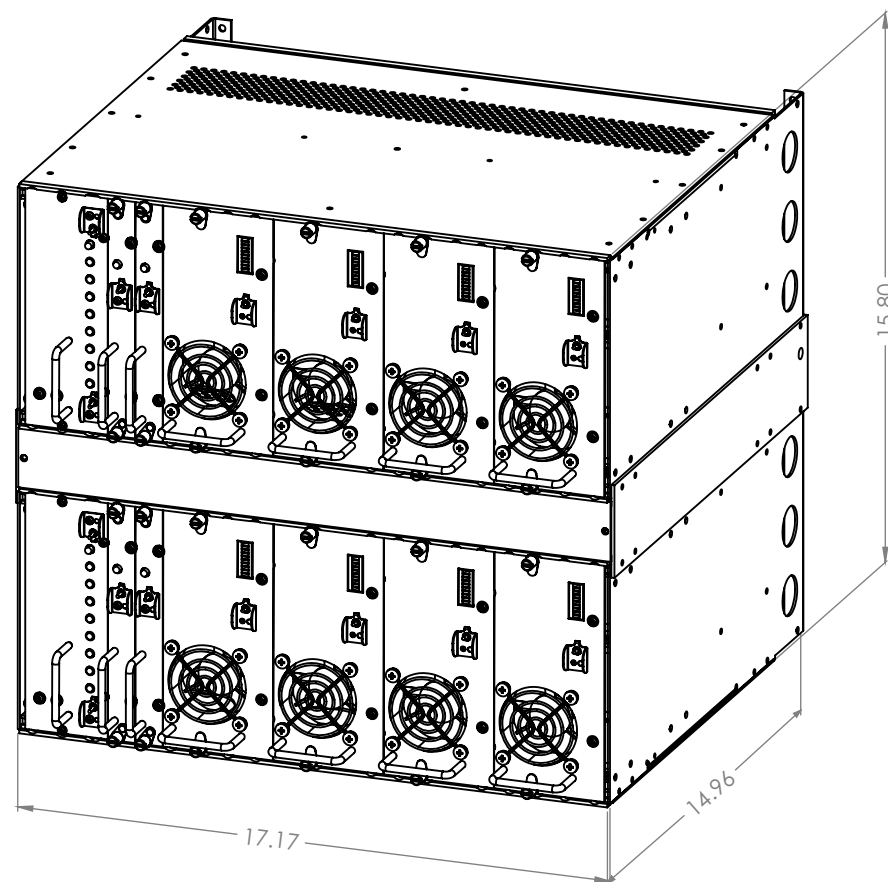
Power Output: 2KW to 8KW

Output Voltage of 117VAC L-N / 240VAC L-L

DC Input of 12V up to 108V

Included Parts:

- 19" MX Cage (2)
- Control Card (4)
- Alarm Card (2)
- Up to (4) 1KW Power Modules per Phase
- Stacking Kit (1)



# MX 19" Bi-Phase 6KW N+1 System Monitor II Card

## Specifications

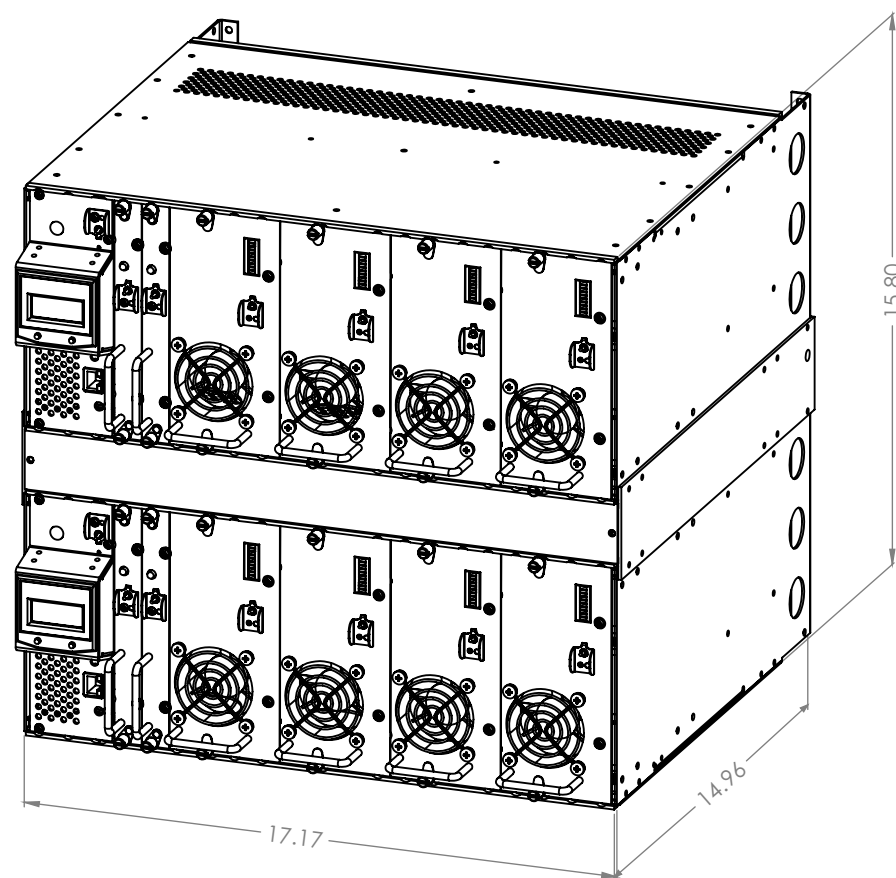
Power Output: 2KW to 8KW

Output Voltage of 117VAC L-N / 240VAC L-L

DC Input of 12V up to 108V

Included Parts:

- 19" MX Cage (2)
- Control Card (4)
- System Monitor II Card (2)
- Up to (4) 1KW Power Modules per Phase
- Stacking Kit (1)



# MX 19" Bi-Phase 6KW N+1 Mechanical Transfer Switch

## Specifications

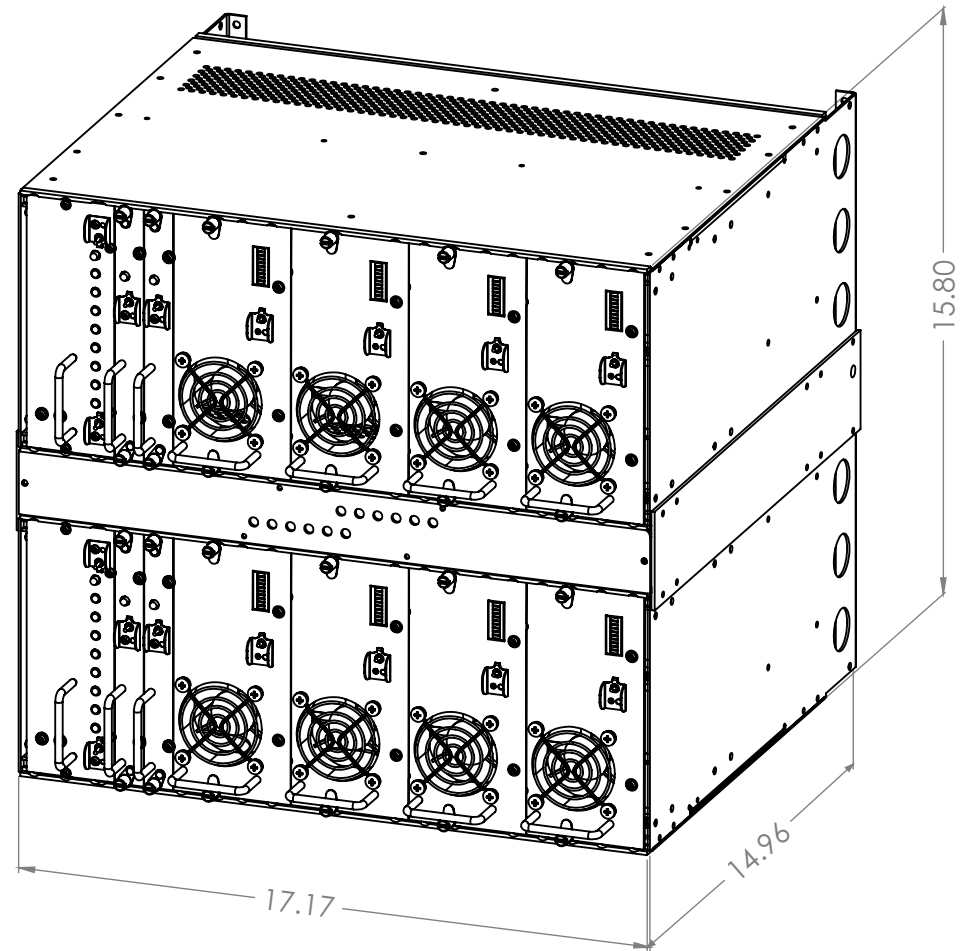
Power Output: 2KW to 8KW

Output Voltage of 117VAC L-N / 240VAC L-L

DC Input of 12V up to 108V

Included Parts:

- 19" MX Cage (2)
- Control Card (4)
- Mechanical Transfer Switch (2)
- Up to (4) 1KW Power Modules per Phase
- Line to Line Detector (1)
- Stacking Kit (1)



# MX 19" Bi-Phase 6KW N+1 Static Transfer Switch

## Specifications

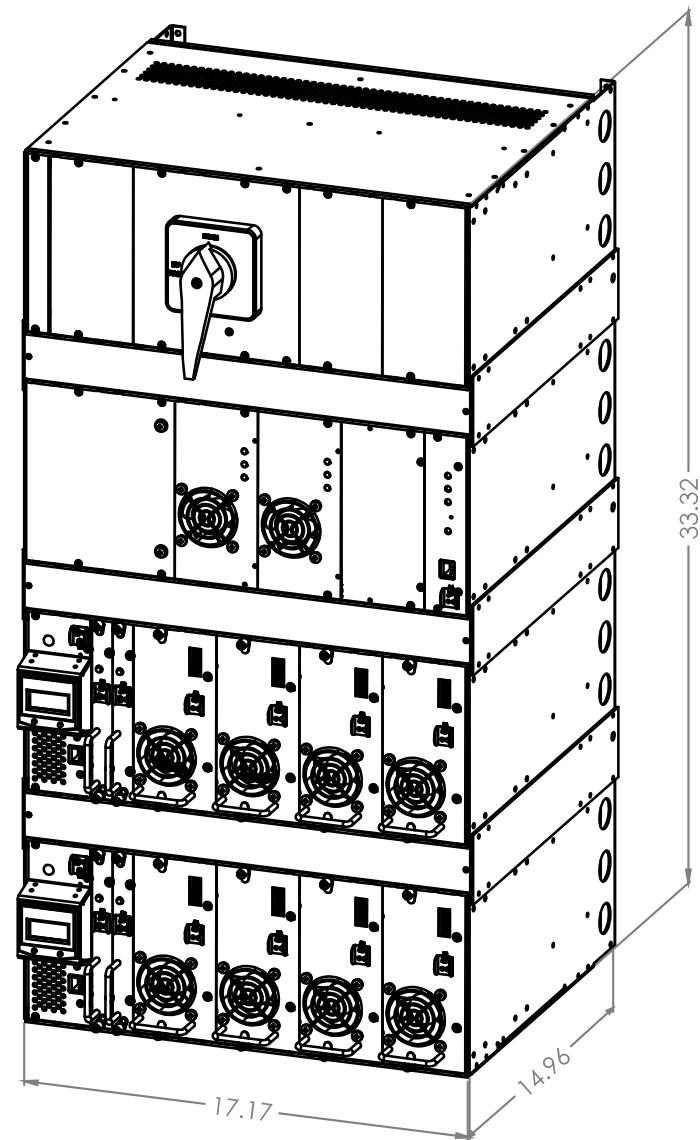
Power Output: 2KW to 8KW

Output Voltage of 117VAC L-N / 240VAC L-L

DC Input of 12V up to 108V

Included Parts:

- 19" MX Cage (2)
- Control Card (4)
- System Monitor II Card (2)
- Up to (4) 1KW Power Modules per Phase
- 19" MX Accessory Cage (1)
- M25 Maintenance Bypass Switch (1)
- Static Transfer Switch System 10KW (1)
- Stacking Kit (3)



# MX 19" Bi-Phase 16KW N+1 Alarm Card

## Specifications

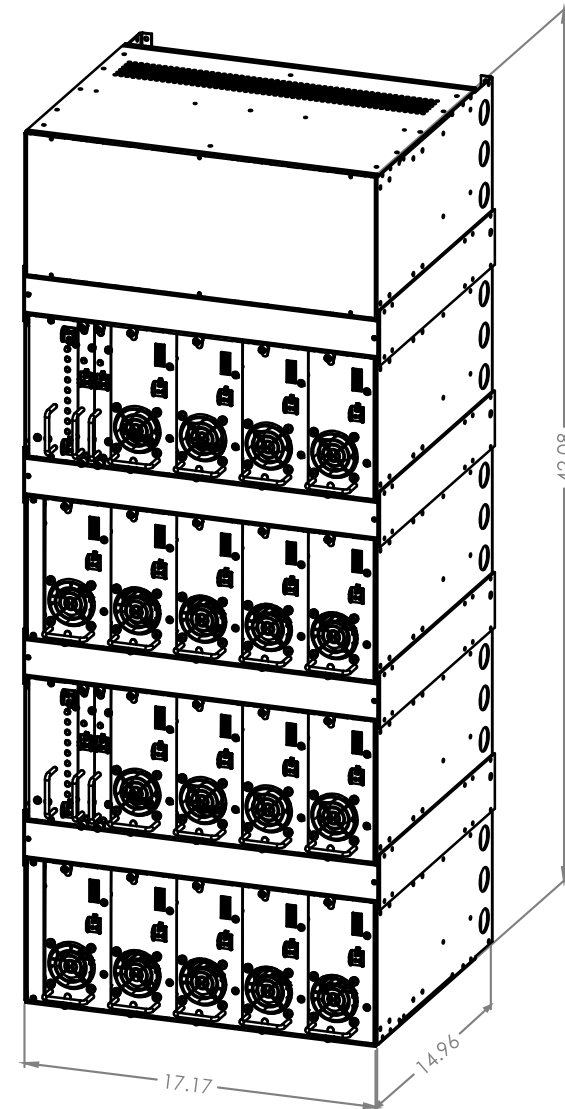
Power Output: 2KW to 18KW

Output Voltage of 117VAC L-N / 240VAC L-L

DC Input of 24V up to 108V

Included Parts:

- 19" MX Cage (4)
- Control Card (4)
- Alarm Card (2)
- Up to (9) 1KW Power Modules per Phase
- MX 19" Customer Interface Cage (1)
- Stacking Kit (4)
- MX 19" Relay Rack Recommended



# MX 19" Bi-Phase 16KW N+1 System Monitor II Card

## Specifications

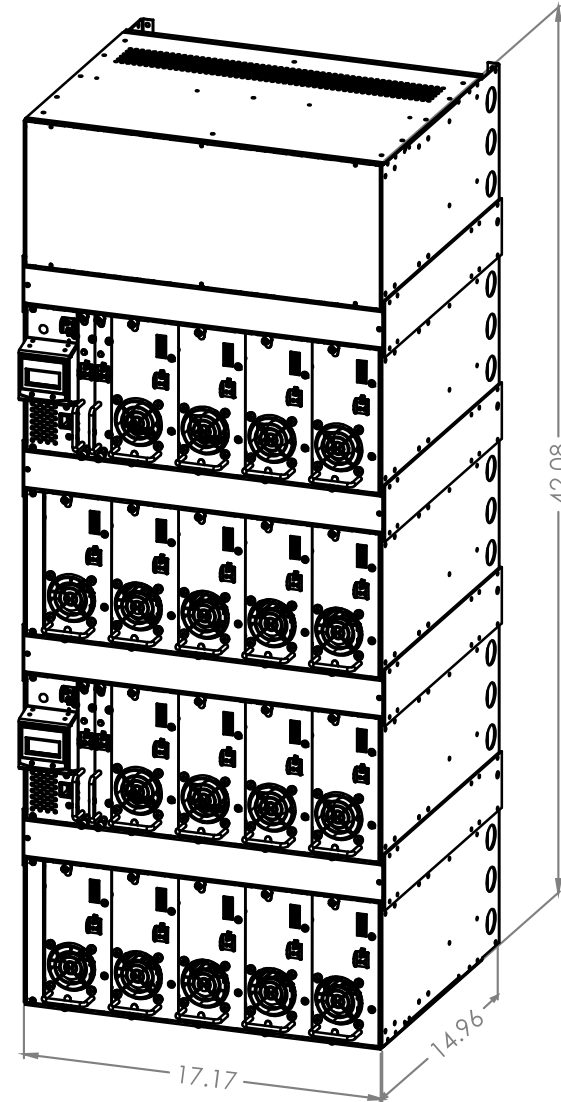
Power Output: 2KW to 18KW

Output Voltage of 117VAC L-N / 240VAC L-L

DC Input of 24V up to 108V

Included Parts:

- 19" MX Cage (4)
- Control Card (4)
- System Monitor II Card (2)
- Up to (9) 1KW Power Modules per Phase
- MX 19" Customer Interface Cage (1)
- Stacking Kit (4)
- MX 19" Relay Rack Recommended





# MX 19" Bi-Phase 16KW N+1 Static Transfer Switch

## Specifications

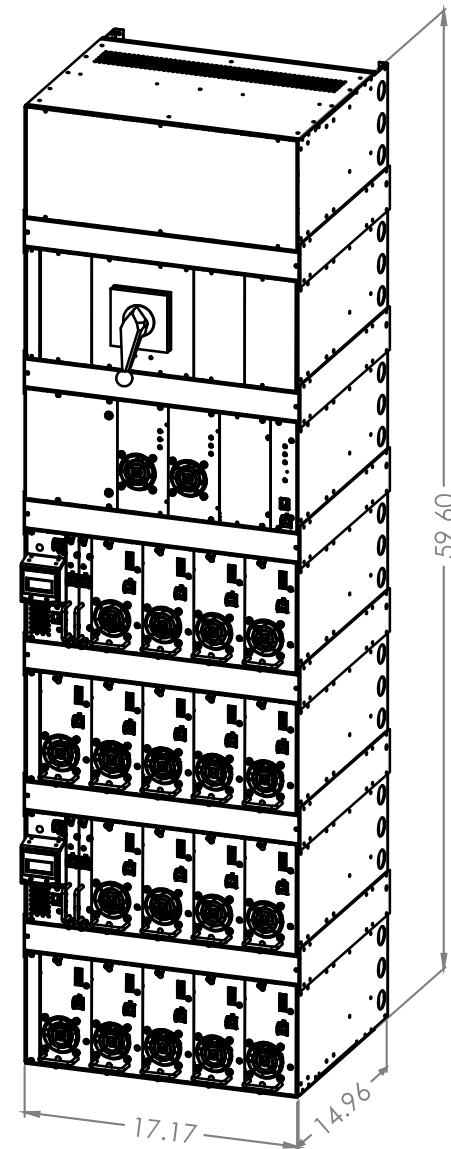
Power Output: 2KW to 18KW

Output Voltage of 117VAC L-N / 240VAC L-L

DC Input of 24V up to 108V

Included Parts:

- 19" MX Cage (4)
- Control Card (4)
- System Monitor II Card (2)
- Up to (9) 1KW Power Modules per Phase
- MX 19" Accessory Cage (1)
- M21 Maintenance Bypass Switch (1)
- Static Transfer Switch System 10KW (1)
- Stacking Kit (6)
- MX 19" Relay Rack Recommended



# MX 19" Bi-Phase 26KW N+1 Alarm Card

## Specifications

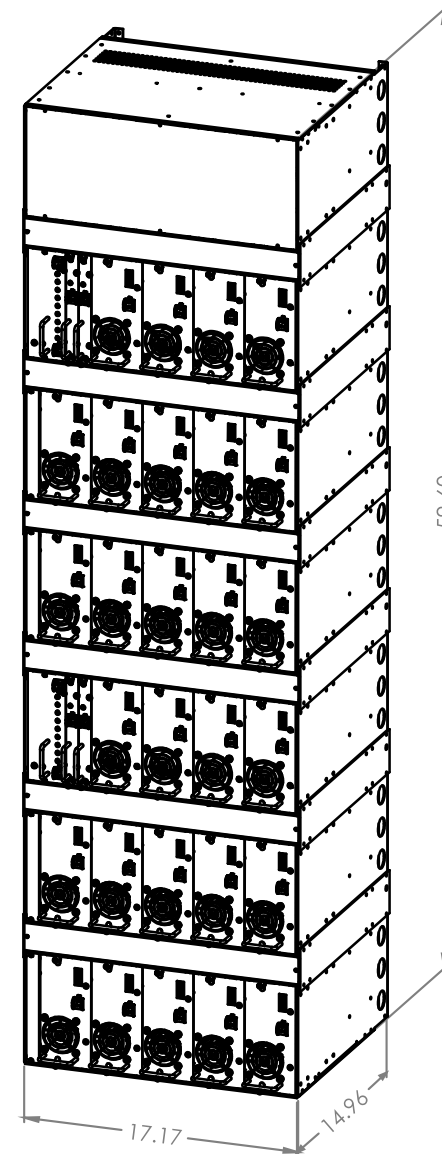
Power Output: 2KW to 28KW

Output Voltage of 117VAC L-N / 240VAC L-L

DC Input of 24V up to 108V

Included Parts:

- 19" MX Cage (6)
- Control Card (4)
- Alarm Card (2)
- Up to (14) 1KW Power Modules per Phase
- Stacking Kit (6)
- MX 19" Customer Interface Cage (1)
- MX 19" Relay Rack Recommended



# MX 19" Bi-Phase 26KW N+1 System Monitor II Card

## Specifications

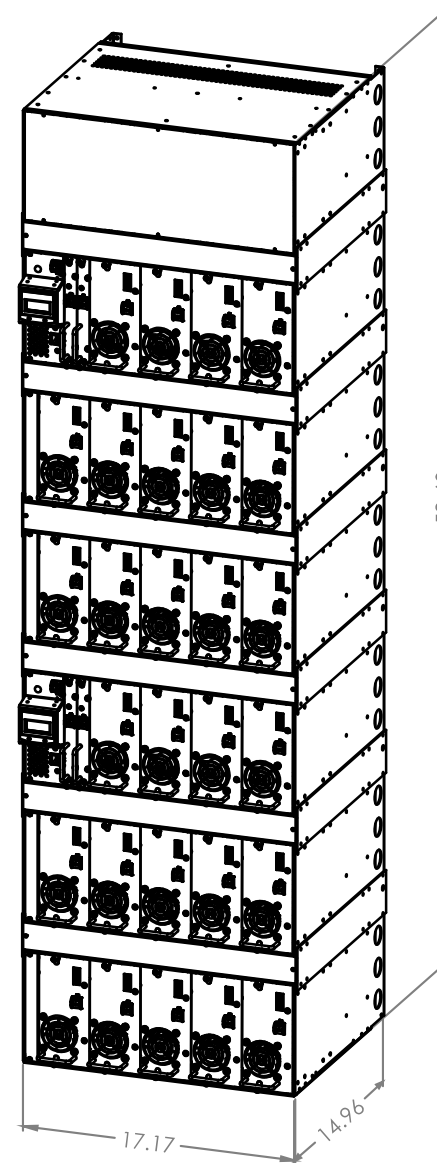
Power Output: 2KW to 28KW

Output Voltage of 117VAC L-N / 240VAC L-L

DC Input of 24V up to 108V

Included Parts:

- 19" MX Cage (6)
- Control Card (4)
- System Monitor II Card (2)
- Up to (14) 1KW Power Modules per Phase
- Stacking Kit (6)
- MX 19" Customer Interface Cage (1)
- MX 19" Relay Rack Recommended



# MX 19" Bi-Phase 26KW N+1 Static Transfer Switch

## Specifications

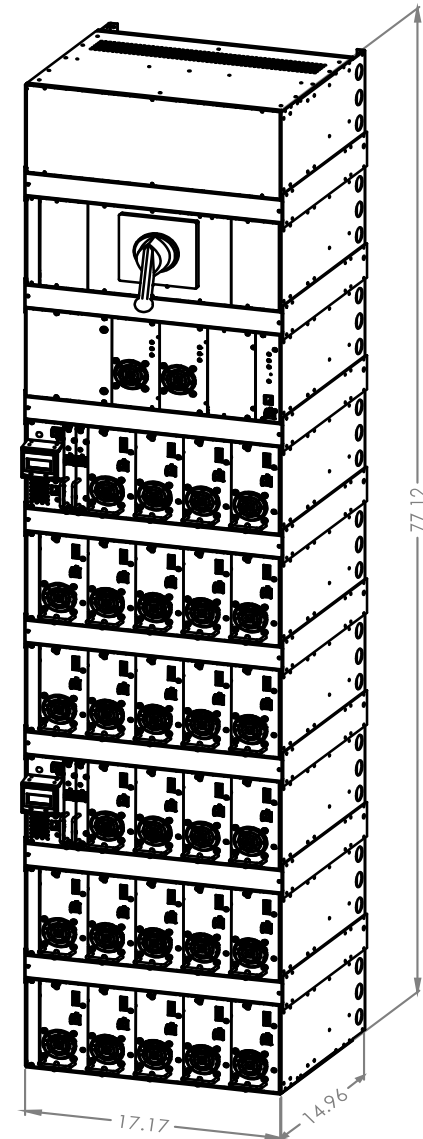
Power Output: 2KW to 28KW

Output Voltage of 117VAC L-N / 240VAC L-L

DC Input of 24V up to 108V

Included Parts:

- 19" MX Cage (6)
- Control Card (4)
- System Monitor II Card (2)
- Up to (14) 1KW Power Modules per Phase
- MX 19" Accessory Cage (1)
- M22 Maintenance Bypass Switch (1)
- Static Transfer Switch System 20 KW (1)
- Stacking Kit (8)
- MX 19" Relay Rack Recommended



# MX 19" Bi-Phase 36KW N+1 Alarm Card

## Specifications

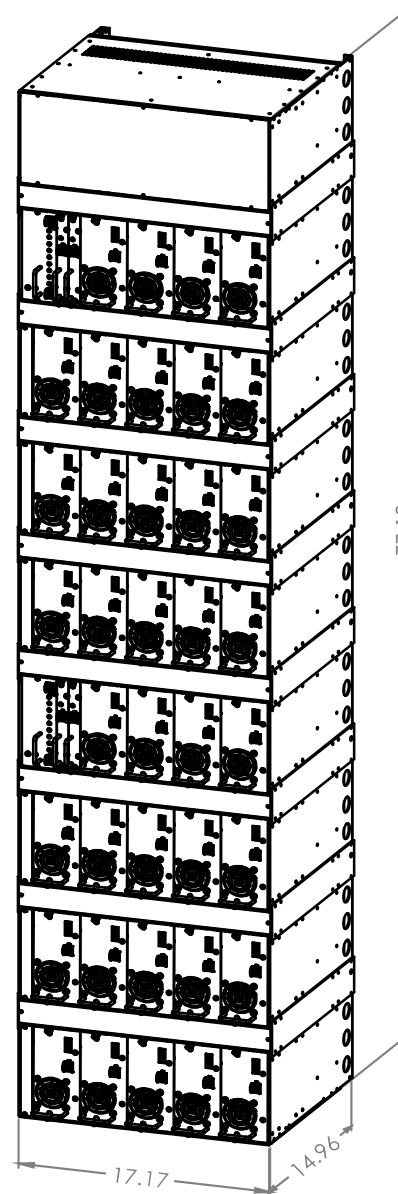
Power Output: 2KW to 38KW

Output Voltage of 117VAC L-N / 240VAC L-L

DC Input of 24V up to 108V

Included Parts:

- 19" MX Cage (8)
- Control Card (4)
- Alarm Card (2)
- Up to (19) 1KW Power Modules per Phase
- Stacking Kit (8)
- MX 19" Customer Interface Cage (1)
- MX 19" Relay Rack Recommended



# MX 19" Bi-Phase 36KW N+1 System Monitor II Card

## Specifications

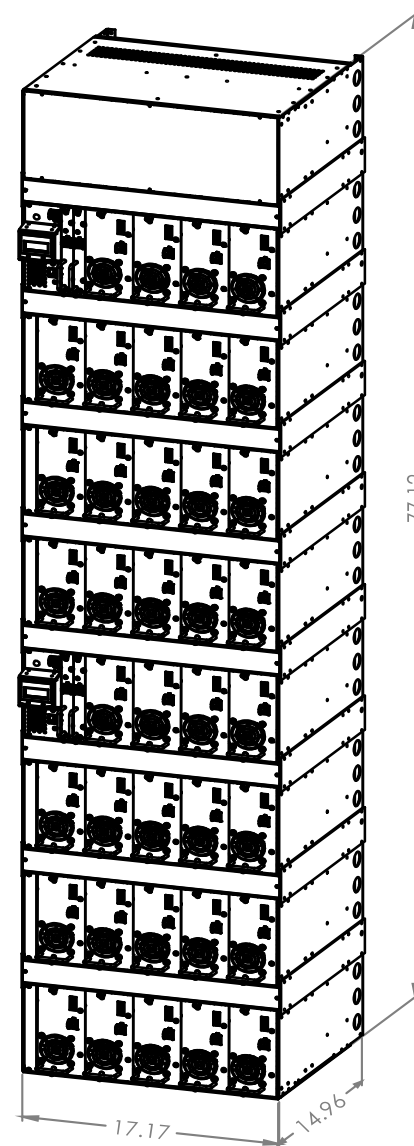
Power Output: 2KW to 38KW

Output Voltage of 117VAC L-N / 240VAC L-L

DC Input of 24V up to 108V

Included Parts:

- 19" MX Cage (8)
- Control Card (4)
- System Monitor II Card (2)
- Up to (19) 1KW Power Modules per Phase
- Stacking Kit (8)
- MX 19" Customer Interface Cage (1)
- MX 19" Relay Rack Recommended



# MX 19" Bi-Phase 36KW N+1 Static Transfer Switch

## Specifications

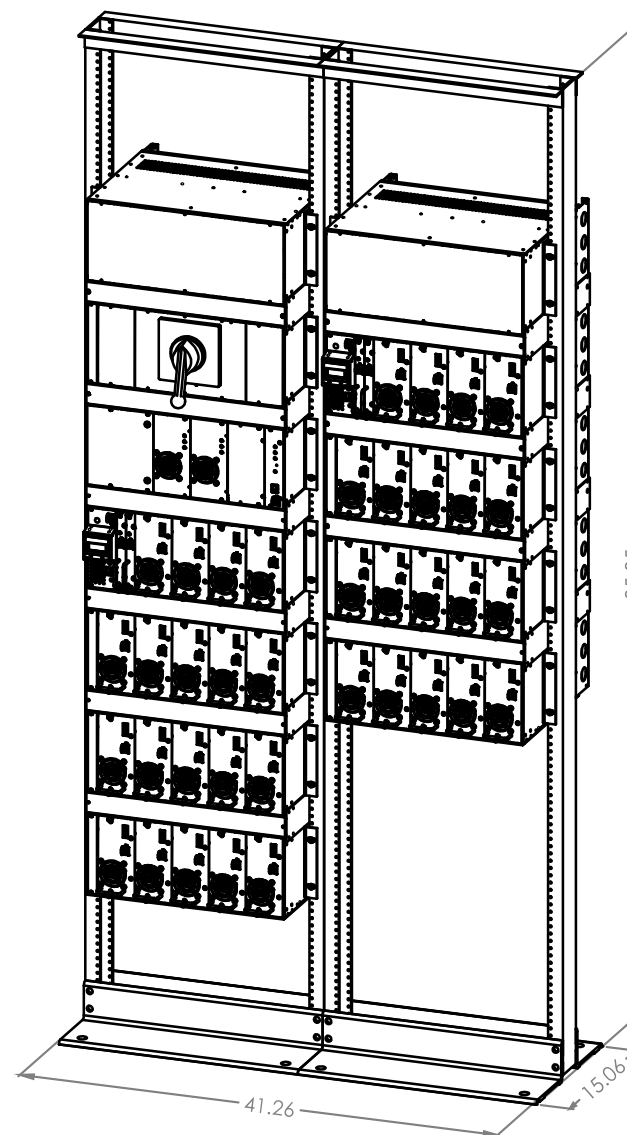
Power Output: 2KW to 38KW

Output Voltage of 117VAC L-N / 240VAC L-L

DC Input of 24V up to 108V

Included Parts:

- 19" MX Cage (8)
- Control Card (4)
- System Monitor II Card (2)
- Up to (19) 1KW Power Modules per Phase
- MX 19" AC Customer Interface Cage (1)
- MX 19" DC Customer Interface Cage (1)
- MX 19" Accessory Cage (1)
- M22 Maintenance Bypass Switch (1)
- Static Transfer Switch System 20 KW (1)
- Stacking Kit (10)
- MX 19" Relay Rack (2)



# MX 19" Bi-Phase 40KW N+1 Alarm Card

## Specifications

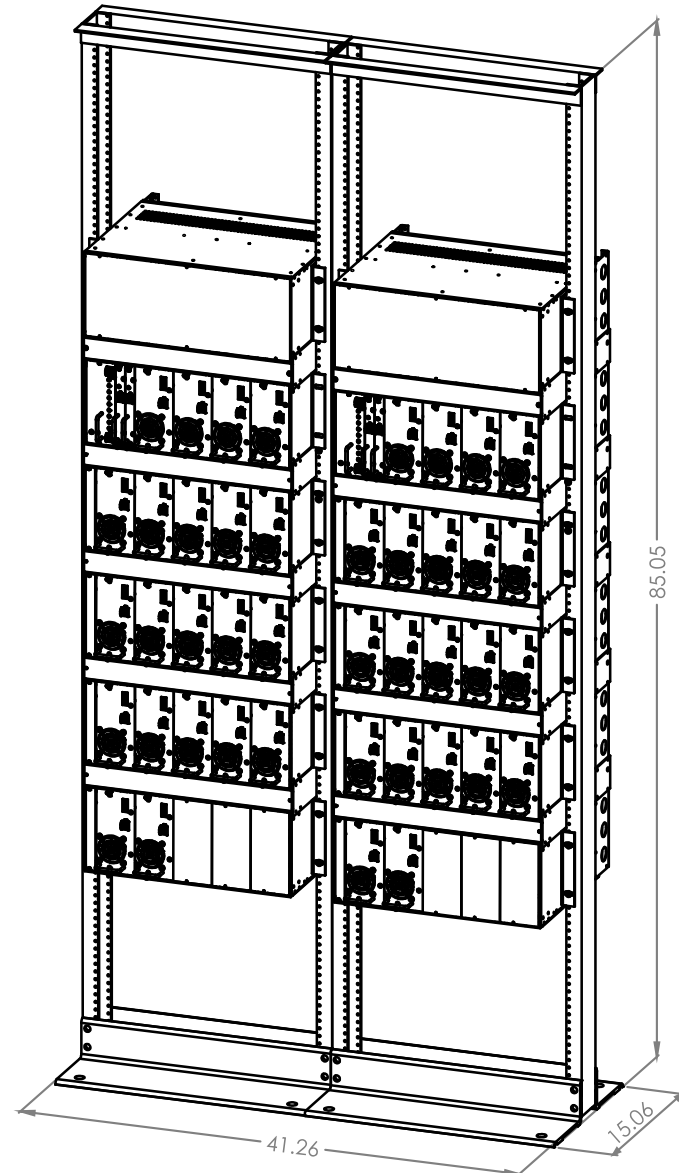
Power Output: 2KW to 42KW

Output Voltage of 117VAC L-N / 240VAC L-L

DC Input of 24V up to 108V

Included Parts:

- 19" MX Cage (10)
- Control Card (4)
- Alarm Card (2)
- Up to (21) 1KW Power Modules per Phase
- MX 19" AC Customer Interface Cage (1)
- MX 19" DC Customer Interface Cage (1)
- Stacking Kit (10)
- MX 19" Relay Rack (2)





# MX 19" Bi-Phase 40KW N+1 System Monitor II Card

## Specifications

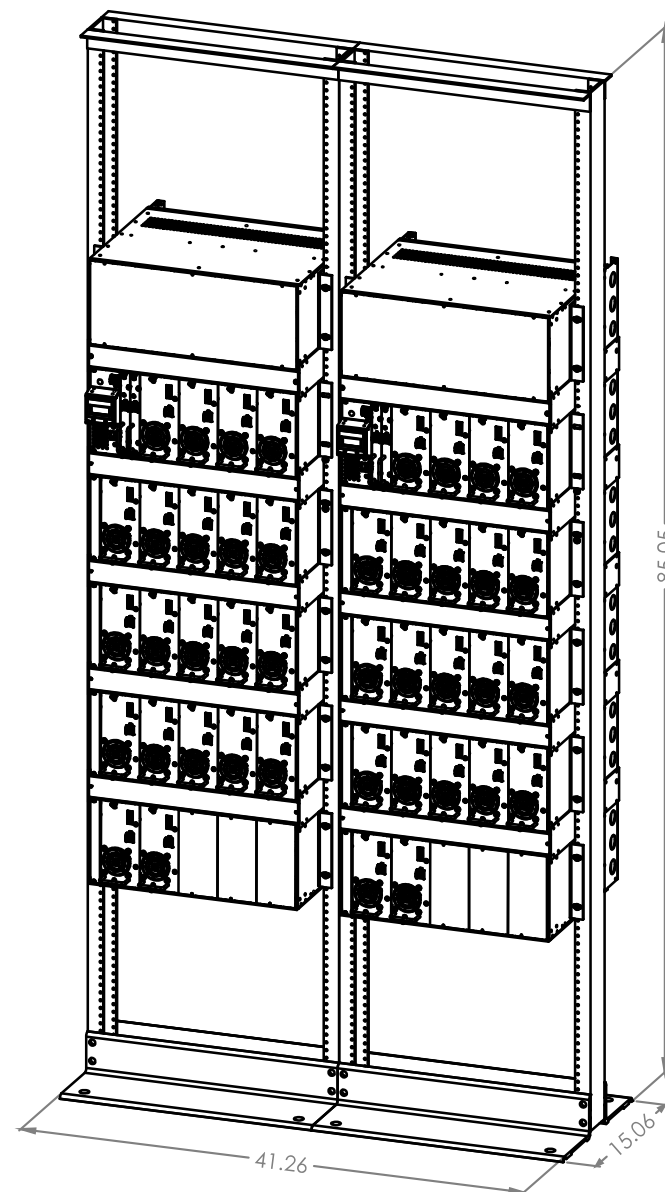
Power Output: 2KW to 42KW

Output Voltage of 117VAC L-N / 240VAC L-L

DC Input of 24V up to 108V

Included Parts:

- 19" MX Cage (10)
- Control Card (4)
- System Monitor II Card (2)
- Up to (21) 1KW Power Modules per Phase
- MX 19" AC Customer Interface Cage (1)
- MX 19" DC Customer Interface Cage (1)
- Stacking Kit (10)
- MX 19" Relay Rack (2)



# MX 19" Bi-Phase 40KW N+1 Static Transfer Switch

## Specifications

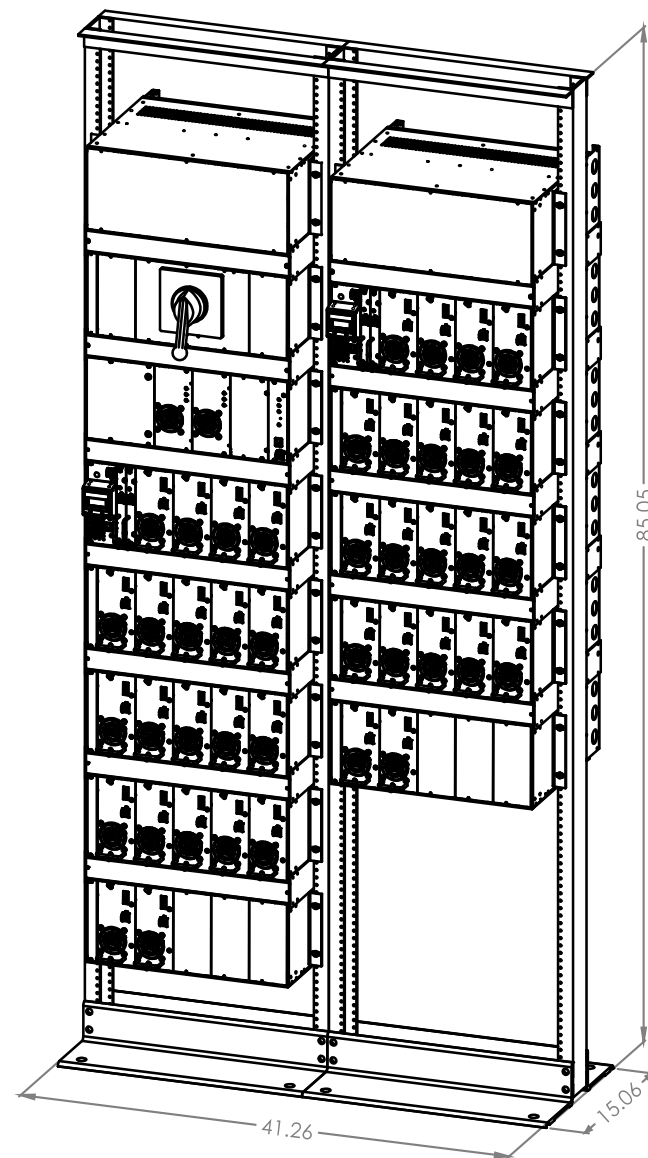
Power Output: 2KW to 42KW

Output Voltage of 117VAC L-N / 240VAC L-L

DC Input of 24V up to 108V

Included Parts:

- 19" MX Cage (10)
- Control Card (4)
- Alarm Card (2)
- Up to (21) 1KW Power Modules per Phase
- MX 19" AC Customer Interface Cage (1)
- MX 19" DC Customer Interface Cage (1)
- MX 19" Accessory Cage (1)
- M22 Maintenance Bypass Switch (1)
- Static Transfer Switch System 20 KW (1)
- Stacking Kit (12)
- MX 19" Relay Rack (2)



# MX 23" Inverter Series

2KW – 40KW N+1  
Bi-Phase

# MX 23" Bi-Phase 8KW N+1 Alarm Card

## Specifications

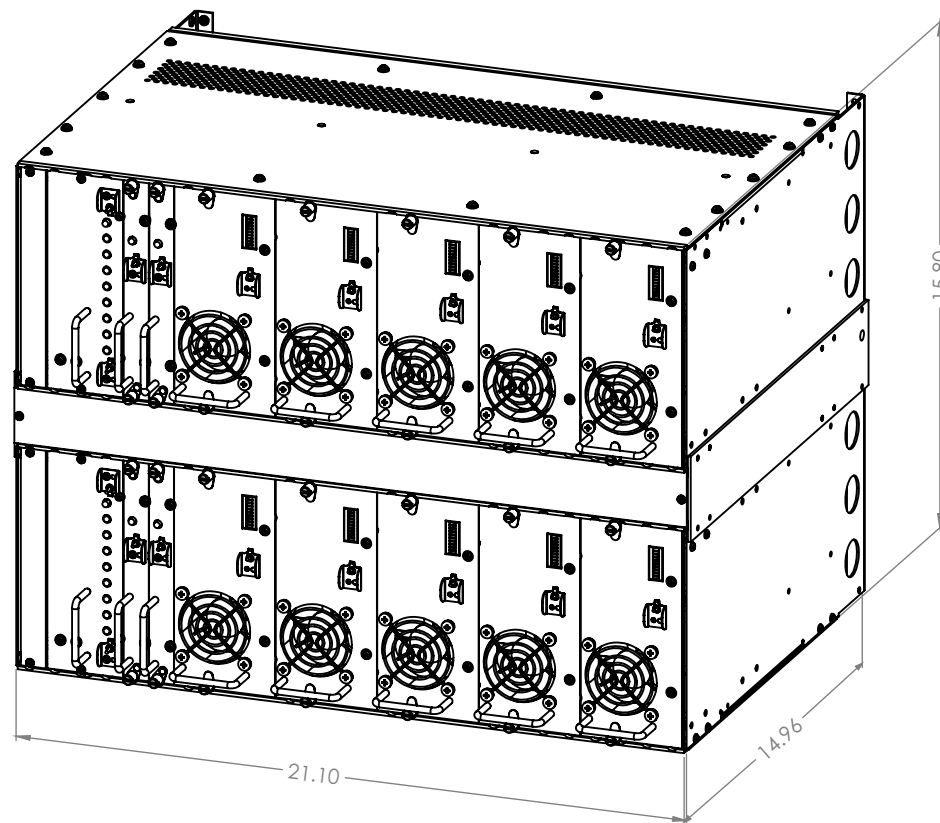
Power Output: 2KW to 10KW

Output Voltage of 117VAC L-N / 240VAC L-L

DC Input of 12V up to 108V

Included Parts:

- 23" MX Cage (2)
- Control Card (4)
- Alarm Card (2)
- Up to (5) 1KW Power Modules per Phase
- Stacking Kit (1)



# MX 23" Bi-Phase 8KW N+1 System Monitor II Card

## Specifications

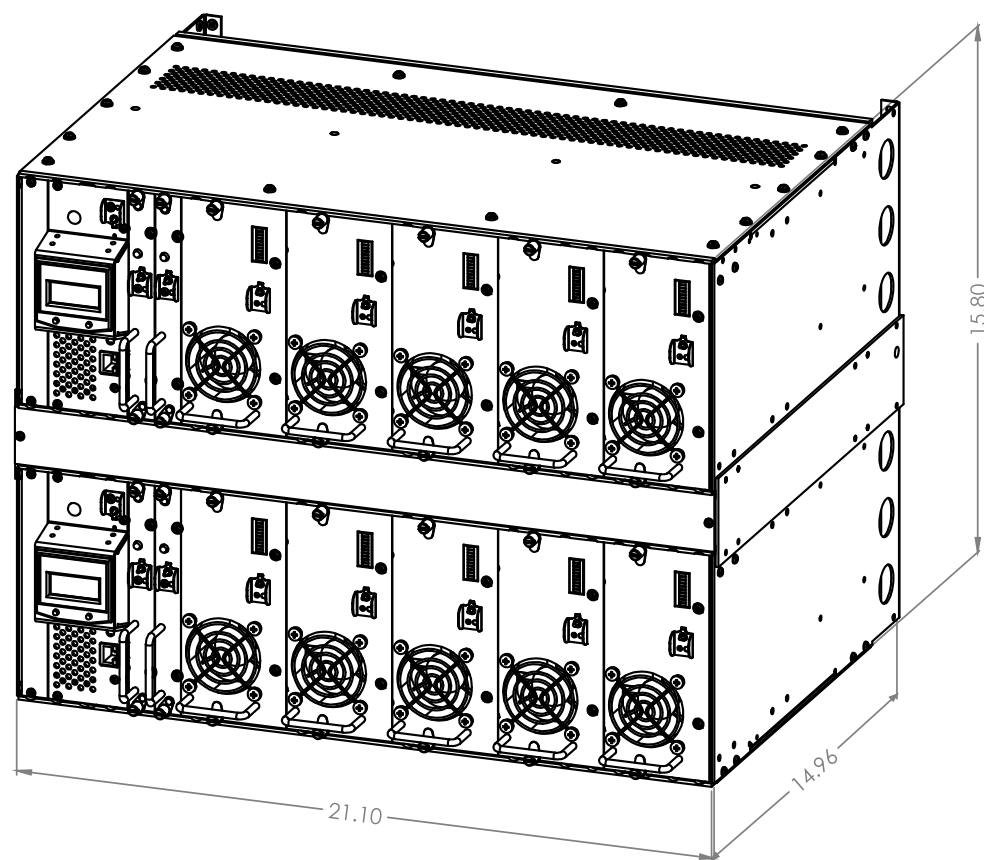
Power Output: 2KW to 10KW

Output Voltage of 117VAC L-N / 240VAC L-L

DC Input of 12V up to 108V

Included Parts:

- 23" MX Cage (2)
- Control Card (4)
- System Monitor II Card (2)
- Up to (5) 1KW Power Modules per Phase
- Stacking Kit (1)



# MX 23" Bi-Phase 8KW N+1 Mechanical Transfer Switch

## Specifications

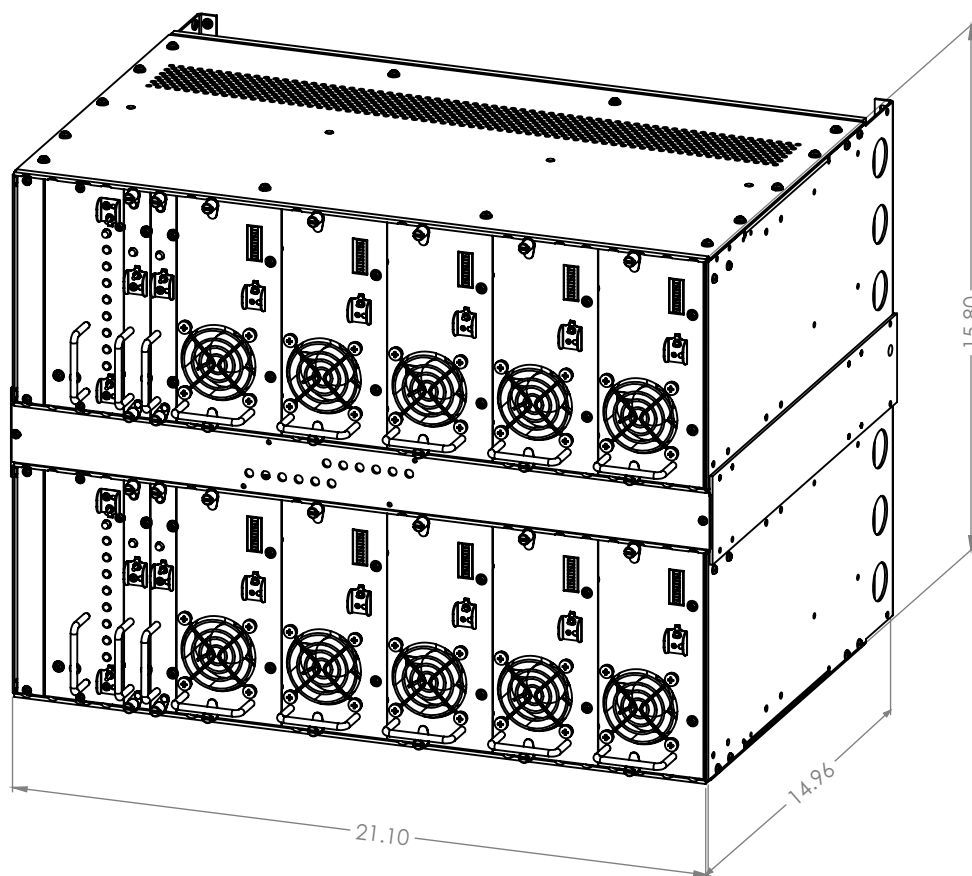
Power Output: 2KW to 10KW

Output Voltage of 117VAC L-N / 240VAC L-L

DC Input of 12V up to 108V

Included Parts:

- 23" MX Cage (2)
- Control Card (4)
- Mechanical Transfer Switch (2)
- Up to (5) 1KW Power Modules per Phase
- Line – Line Detector (1)
- Stacking Kit (1)



# MX 23" Bi-Phase 8KW N+1 Static Transfer Switch

## Specifications

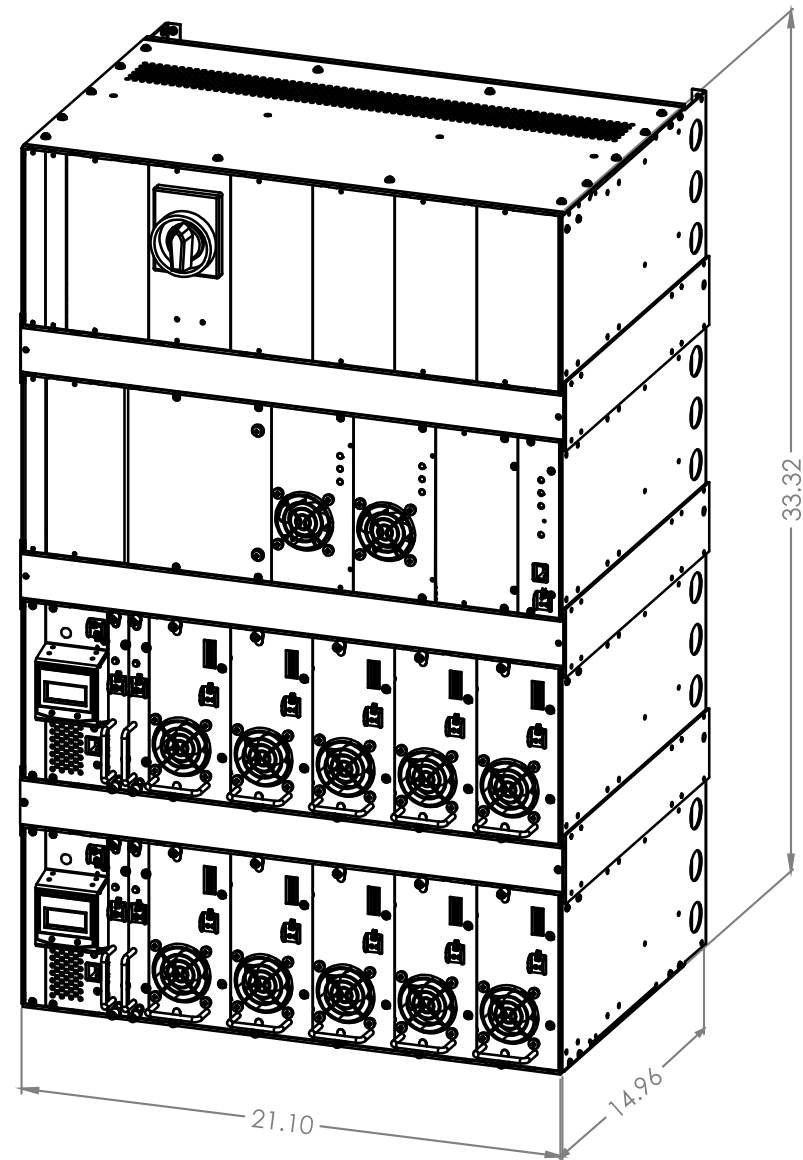
Power Output: 2KW to 10KW

Output voltage of 117VAC L-N / 240VAC L-L

DC input of 12V up to 108V

Included Parts:

- 23" MX Cage (2)
- Control Card (4)
- System Monitor II Cards (2)
- Up to (5) 1KW Power Modules per Phase
- MX 23" Accessory Cage (1)
- M25 Maintenance Bypass Switch (1)
- Static Transfer Switch System 10KW (1)
- Stacking Kit (3)



# MX 23" Bi-Phase 20KW N+1 Alarm Card

## Specifications

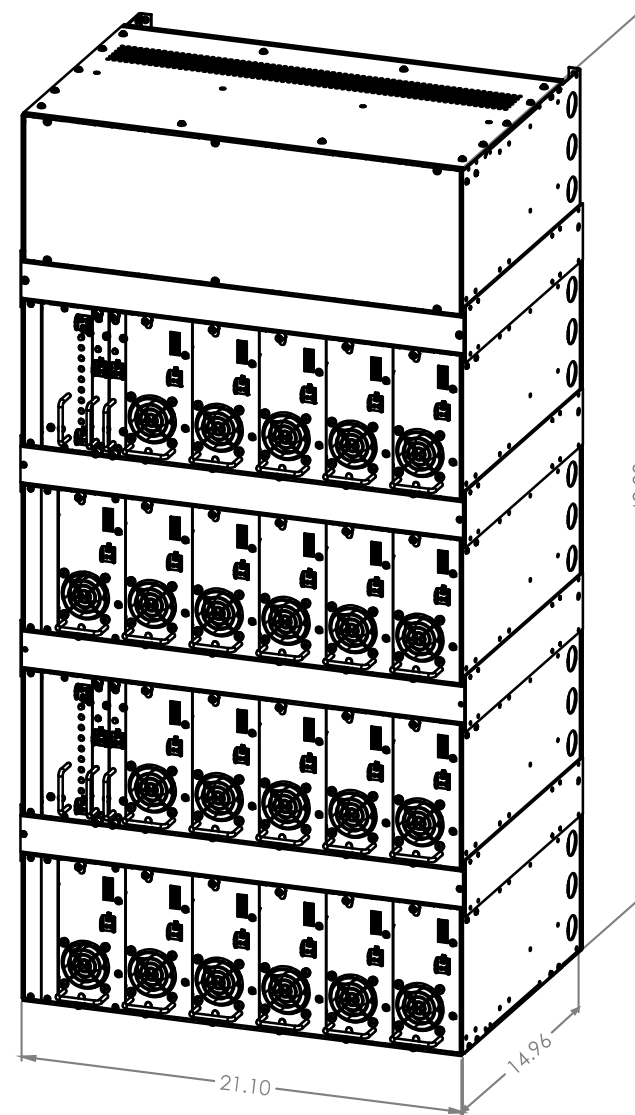
Power Output: 2KW to 22KW

Output voltage of 117VAC L-N / 240VAC L-L

DC input of 24V up to 108V

Included Parts:

- 23" MX Cage (4)
- Control Card (4)
- Alarm Card (2)
- Up to (11) 1KW Power Modules per Phase
- MX 23" Customer Interface Cage (1)
- Stacking Kit (4)
- MX 23" Relay Rack Recommended





# MX 23" Bi-Phase 20KW N+1 System Monitor II Card

## Specifications

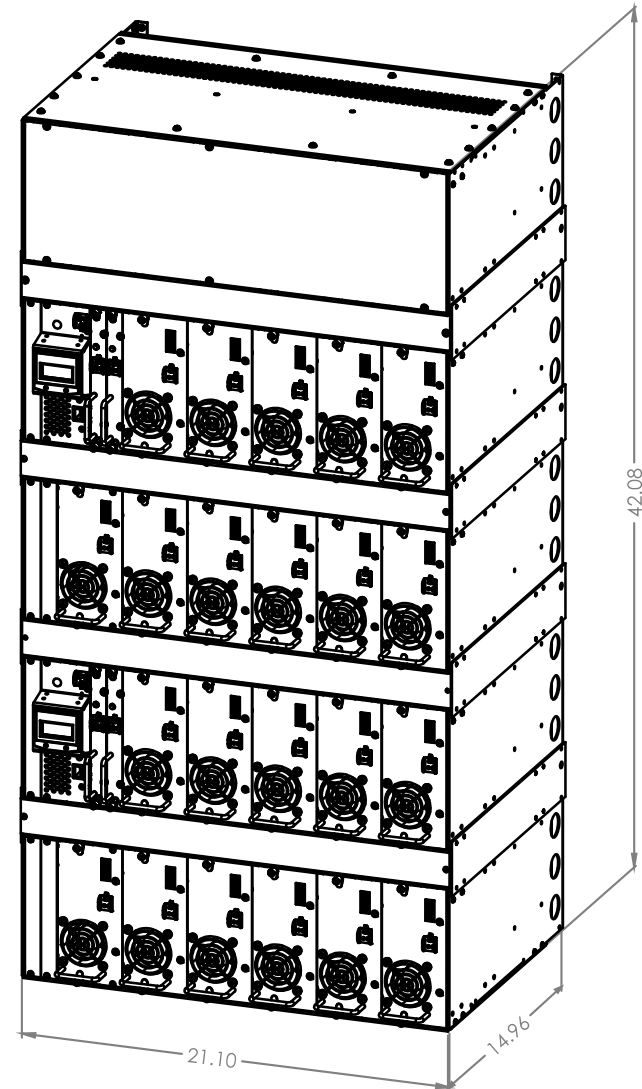
Power Output: 2KW to 22KW

Output voltage of 117VAC L-N / 240VAC L-L

DC input of 24V up to 108V

Included Parts:

- 23" MX Cage (4)
- Control Card (4)
- System Monitor II Card (2)
- Up to (11) 1KW Power Modules per Phase
- MX 23" Customer Interface Cage (1)
- Stacking Kit (4)
- MX 23" Relay Rack Recommended



# MX 23" Bi-Phase 20KW N+1 Static Transfer Switch

## Specifications

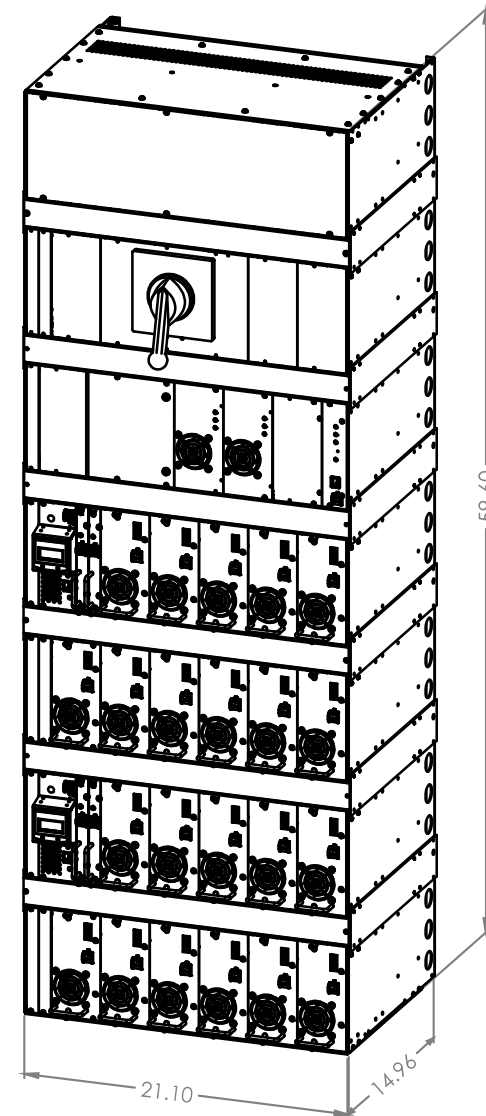
Power Output: 2KW to 22KW

Output voltage of 117VAC L-N / 240VAC L-L

DC input of 24V up to 108V

Included Parts:

- 23" MX Cage (4)
- Control Card (4)
- System Monitor II Card (2)
- Up to (11) 1KW Power Modules per Phase
- MX 23" Accessory Cage (1)
- M21 Maintenance Bypass Switch (1)
- Static Transfer Switch System 10KW (1)
- Stacking Kit (6)
- MX 23" Relay Rack Recommended



# MX 23" Bi-Phase 32KW N+1 Alarm Card

## Specifications

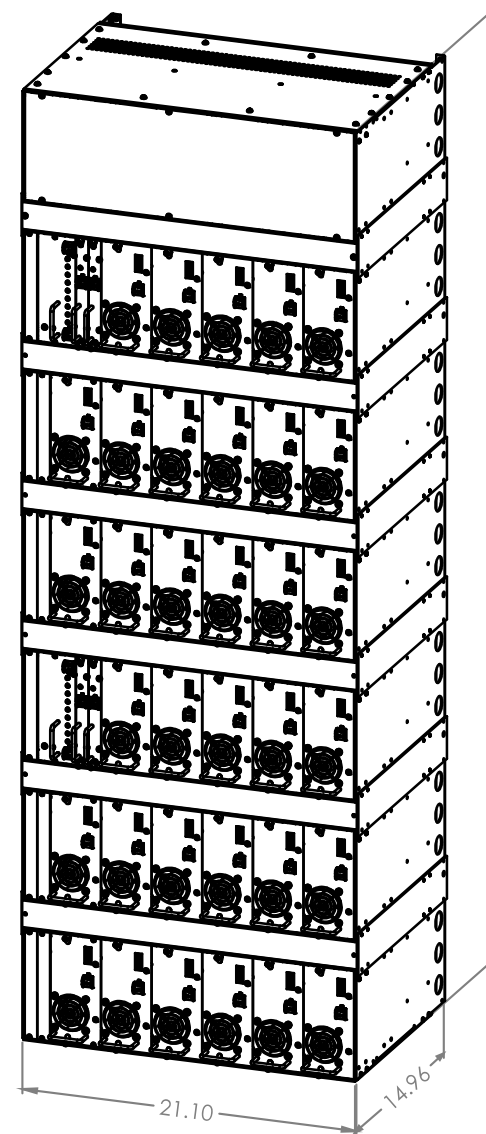
Power Output: 2KW to 34KW

Output voltage of 117VAC L-N / 240VAC L-L

DC input of 24V up to 108V

Included Parts:

- 23" MX Cage (6)
- Control Card (4)
- Alarm Card (2)
- Up to (17) 1KW Power Modules per Phase
- MX 23" Customer Interface Cage (1)
- Stacking Kit (6)
- MX 23" Relay Rack Recommended



# MX 23" Bi-Phase 32KW N+1 System Monitor II Card

## Specifications

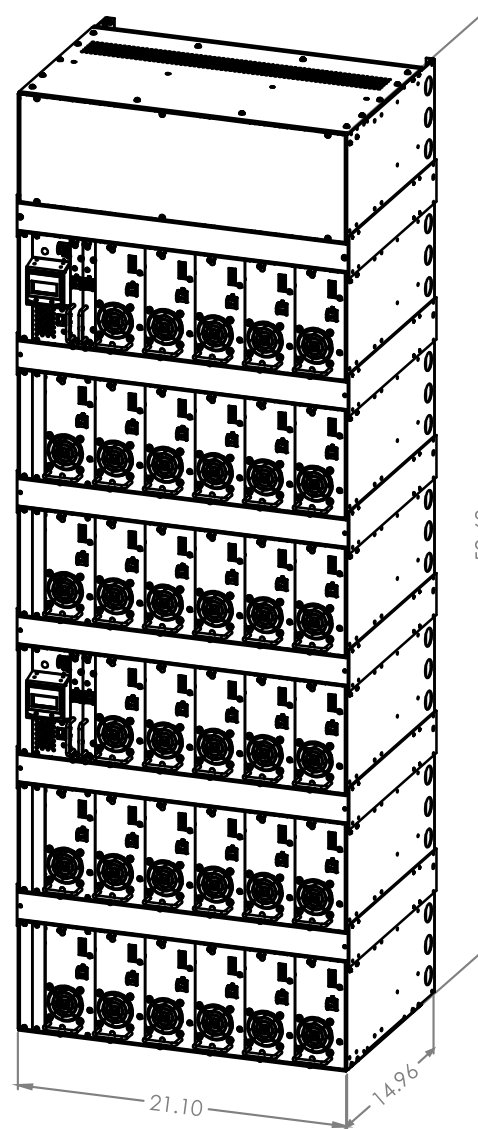
Power Output: 2KW to 34KW

Output Voltage of 117VAC L-N / 240VAC L-L

DC Input of 24V up to 108V

Included Parts:

- 23" MX Cage (6)
- Control Card (4)
- System Monitor II Card (2)
- Up to (17) 1KW Power Modules per Phase
- MX 23" Customer Interface Cage (1)
- Stacking Kit (6)
- MX 23" Relay Rack Recommended



# MX 23" Bi-Phase 32KW N+1 Static Transfer Switch

## Specifications

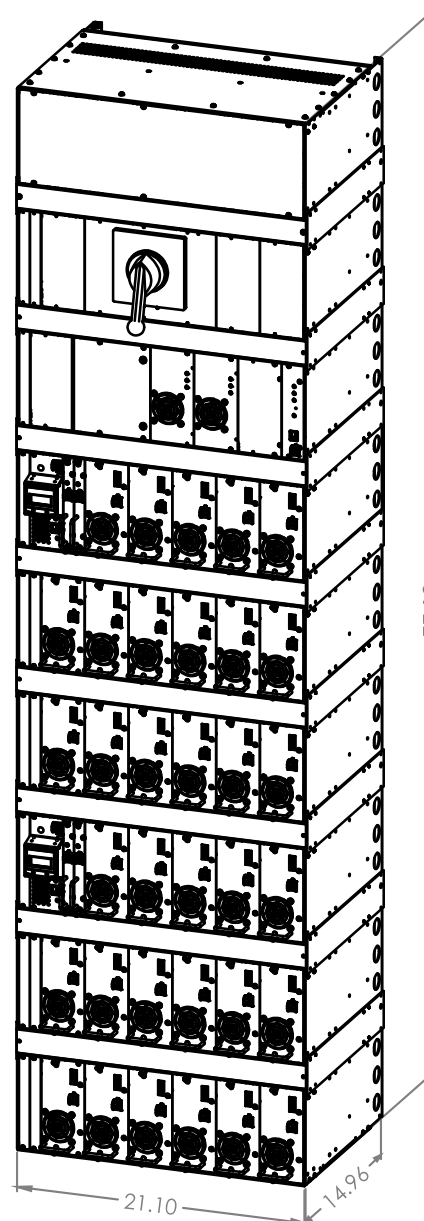
Power Output: 2KW to 34KW

Output Voltage of 117VAC L-N / 240VAC L-L

DC Input of 24V up to 108V

Included Parts:

- 23" MX Cage (6)
- Control Card (4)
- System Monitor II Card (2)
- Up to (17) 1KW Power Modules per Phase
- MX 23" Accessory Cage (1)
- M22 Maintenance Bypass Switch (1)
- MX Customer Interface Cage (1)
- Static Transfer Switch System 20KW (1)
- Stacking Kit (8)
- MX 23" Relay Rack Recommended



# MX 23" Bi-Phase 40KW N+1 Alarm Card

## Specifications

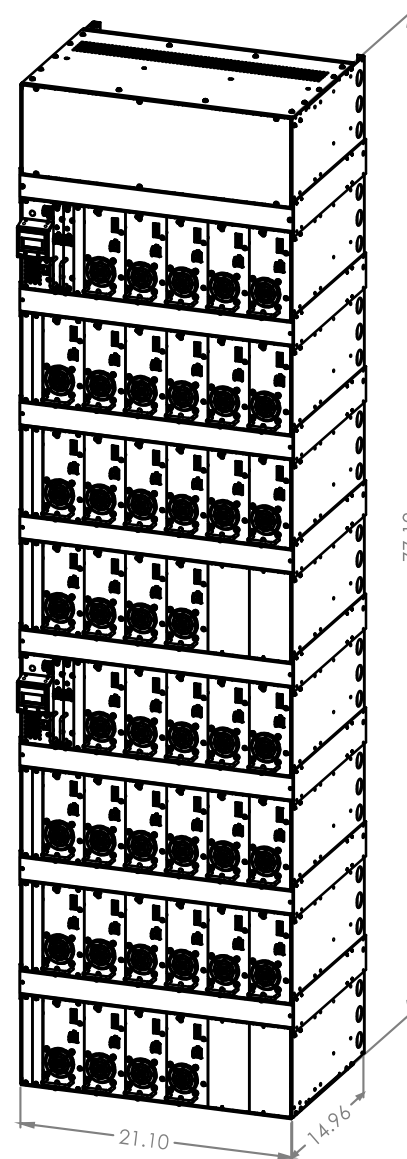
Power Output: 2KW to 42KW

Output voltage of 117VAC L-N / 240VAC L-L

DC input of 24V up to 108V

Included Parts:

- 23" MX Cage (8)
- Control Card (4)
- Alarm Card (2)
- Up to (21) 1KW Power Modules per Phase
- MX 23" Customer Interface Cage (1)
- Stacking Kit (8)
- MX 23" Relay Rack Recommended



# MX 23" Bi-Phase 40KW N+1 System Monitor II Card

## Specifications

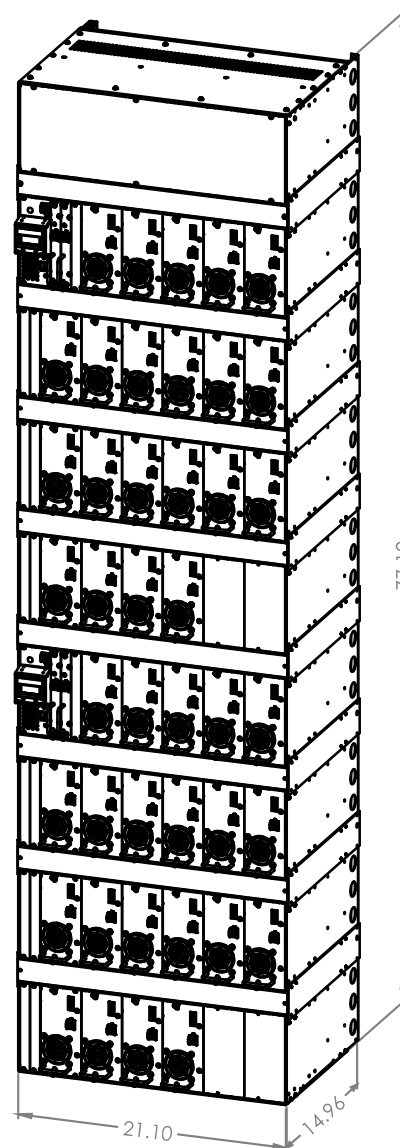
Power Output: 2KW to 42KW

Output voltage of 117VAC L-N / 240VAC L-L

DC input of 24V up to 108V

Included Parts:

- 23" MX Cage (8)
- Control Card (4)
- System Monitor II Card (2)
- Up to (21) 1KW Power Modules per Phase
- MX 23" Customer Interface Cage (1)
- Stacking Kit (8)
- MX 23" Relay Rack Recommended



# MX 23" Bi-Phase 40KW N+1 Static Transfer Switch

## Specifications

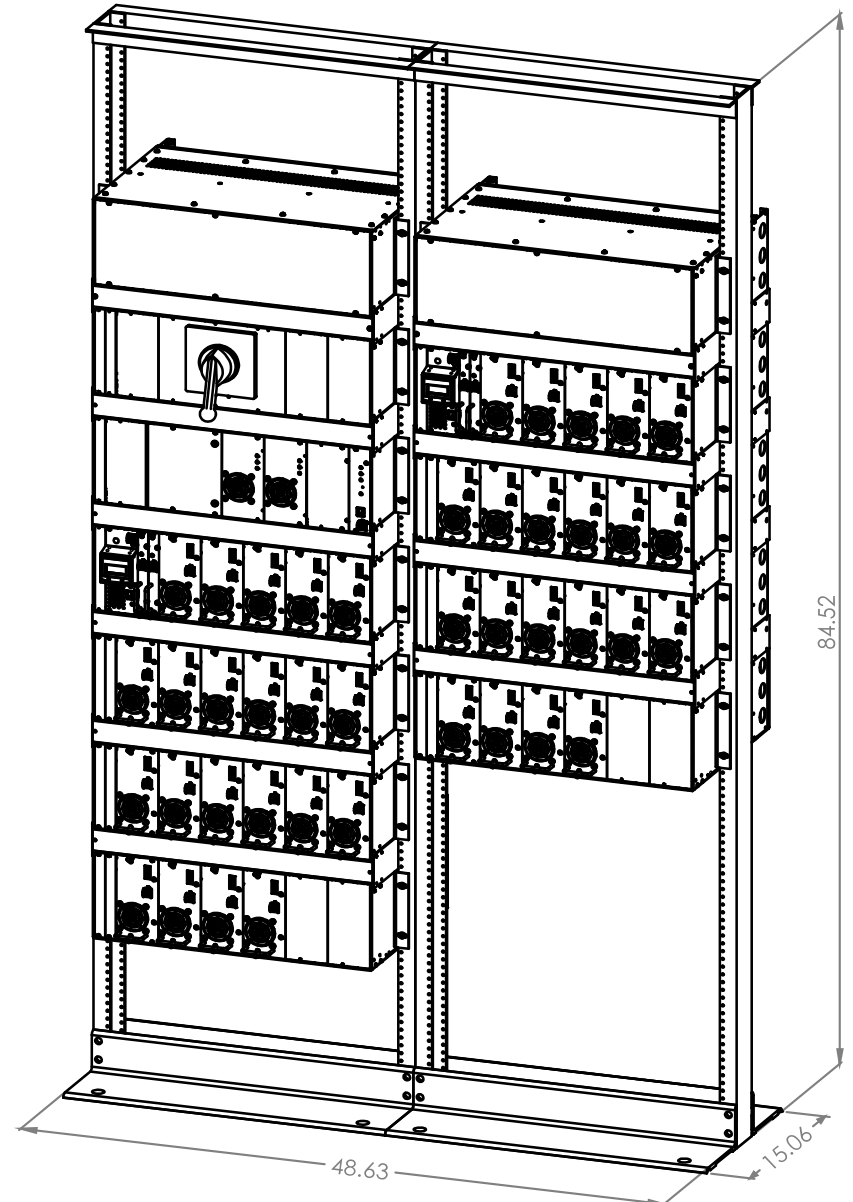
Power Output: 2KW to 42KW

Output Voltage of 117VAC L-N / 240VAC L-L

DC Input of 24V up to 108V

Included Parts:

- 23" MX Cage (8)
- Control Card (4)
- System Monitor II Card (2)
- Up to (21) 1KW Power Modules per Phase
- MX 23" Accessory Cage (1)
- M22 Maintenance Bypass Switch (1)
- MX 23" AC Customer Interface Cage (1)
- MX 23" DC Customer Interface Cage (1)
- Static Transfer Switch System 20KW (1)
- Stacking Kit (10)
- MX 23" Relay Rack (2)





# MX 19" Inverter Series

3KW – 54KW N+1  
Three-Phase

# MX 19" Three-Phase 9KW N+1 Alarm Card

## Specifications

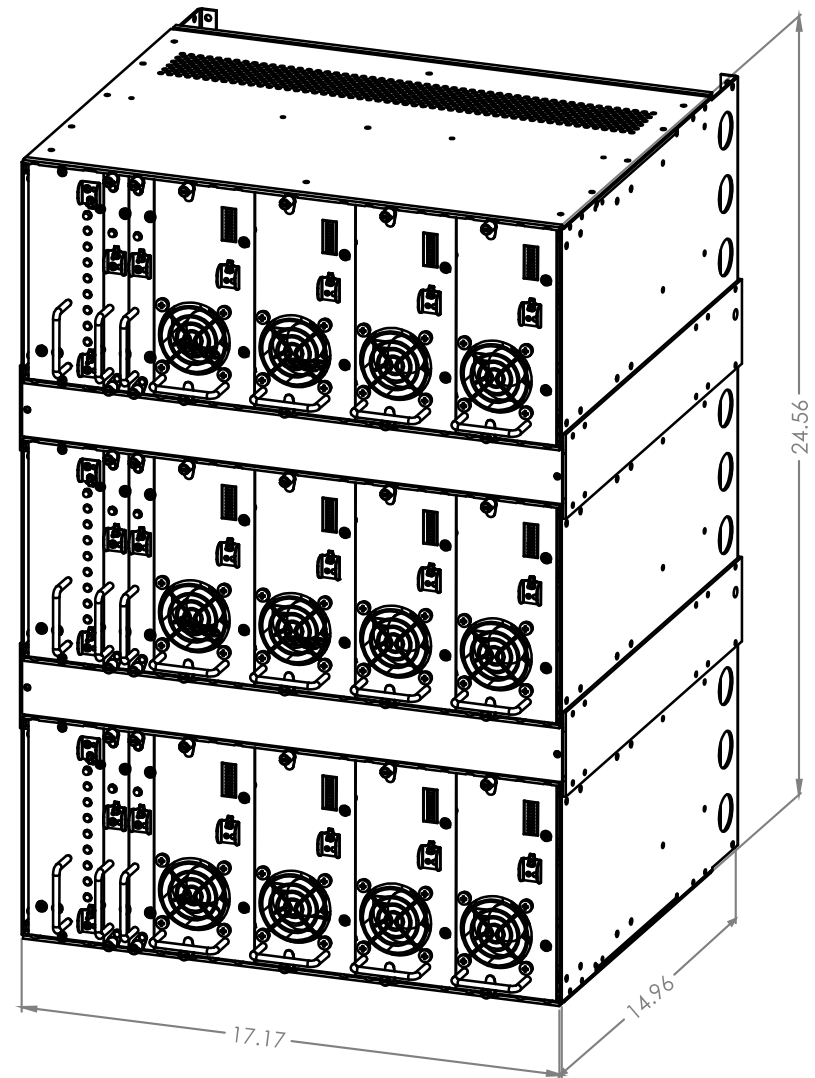
Power Output: 3KW to 12KW

Output Voltage of 117VAC L-N / 208VAC L-L

DC Input of 12V up to 108V

Included Parts:

- 19" MX Cage (3)
- Control Card (6)
- Alarm Card (3)
- Up to (4) 1KW Power Modules per Phase
- Stacking Kit (2)



# MX 19" Three-Phase 9KW N+1 System Monitor II Card

## Specifications

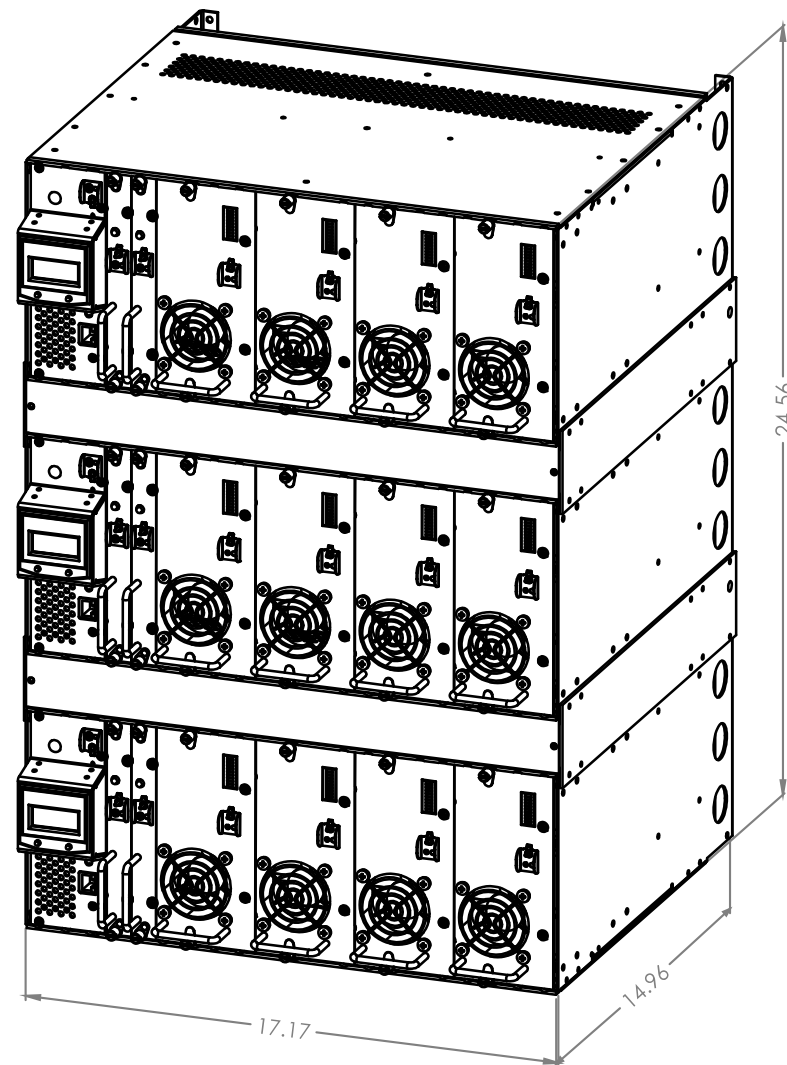
Power Output: 3KW to 12KW

Output Voltage of 117VAC L-N / 208VAC L-L

DC Input of 12V up to 108V

Included Parts:

- 19" MX Cage (3)
- Control Card (6)
- System Monitor II Card (3)
- Up to (4) 1KW Power Modules per Phase
- Stacking Kit (2)



# MX 19" Three-Phase 9KW N+1 Mechanical Transfer Switch

## Specifications

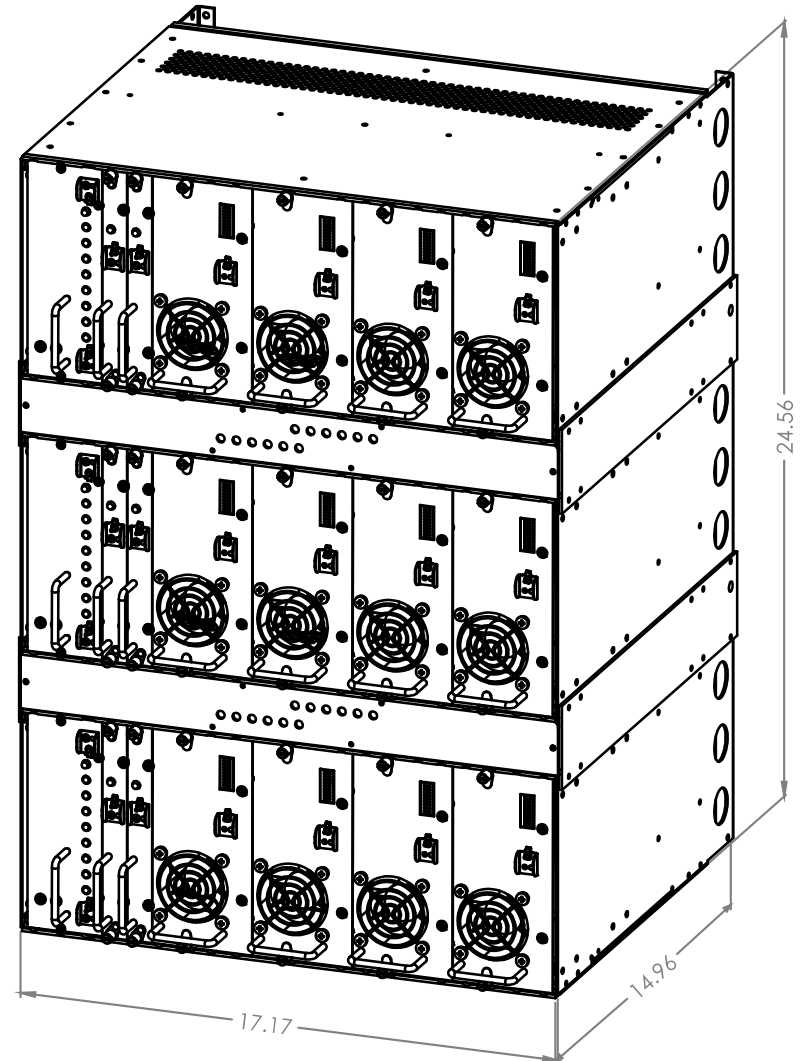
Power Output: 3KW to 12KW

Output Voltage of 117VAC L-N / 208VAC L-L

DC Input of 12V up to 108V

Included Parts:

- 19" MX cage (3)
- Control Card (6)
- Mechanical Transfer Switch (3)
- Up to (4) 1KW Power Modules per Phase
- Line to Line Detector (2)
- Stacking Kit (2)



# MX 19" Three-Phase 9KW N+1 Static Transfer Switch

## Specifications

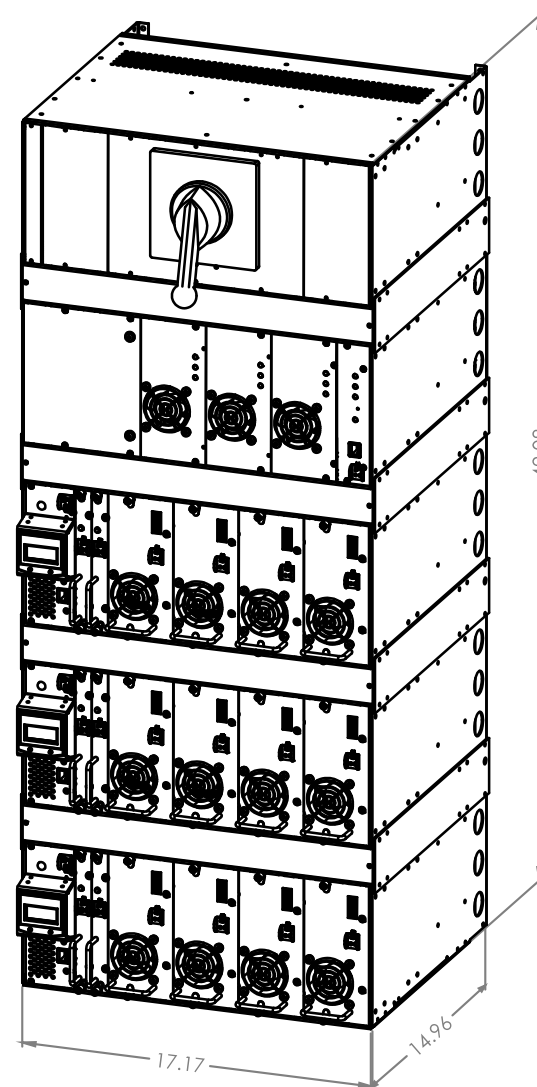
Power Output: 3KW to 12KW

Output Voltage of 117VAC L-N / 208VAC L-L

DC Input of 12V up to 108V

Included Parts:

- 19" MX Cage (3)
- Control Card (6)
- System Monitor II Card (3)
- Up to (4) 1KW Power Modules per Phase
- MX 19" Accessory Cage (1)
- M35 Maintenance Bypass Switch (1)
- Static Transfer Switch System 10KW (1)
- Stacking Kit (4)



# MX 19" Three-Phase 24KW N+1 Alarm Card

## Specifications

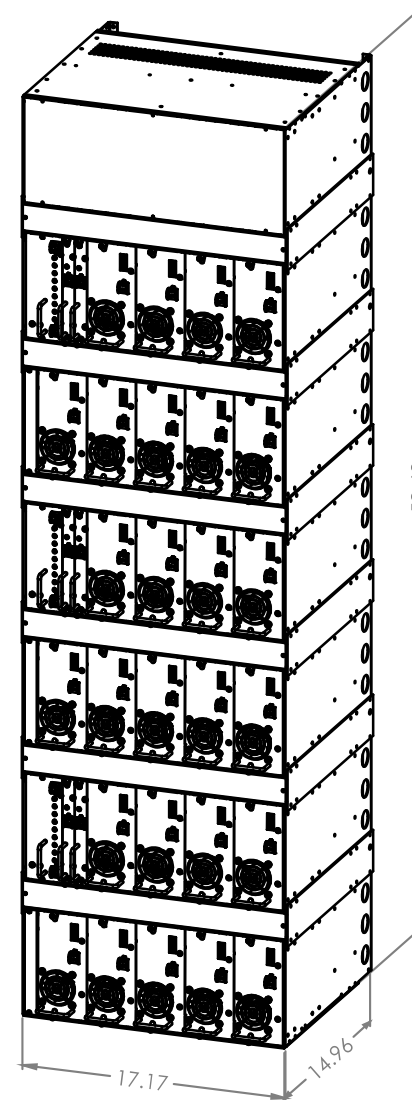
Power Output: 3KW to 27KW

Output Voltage of 117VAC L-N / 208VAC L-L

DC Input of 24V up to 108V

Included Parts:

- 19" MX Cage (6)
- Control Card (6)
- Alarm Card (3)
- Up to (9) 1KW Power Modules per Phase
- MX 19" Customer Interface Cage (1)
- Stacking Kit (6)
- MX 19" Relay Rack Recommended



# MX 19" Three-Phase 24KW N+1 System Monitor II Card

## Specifications

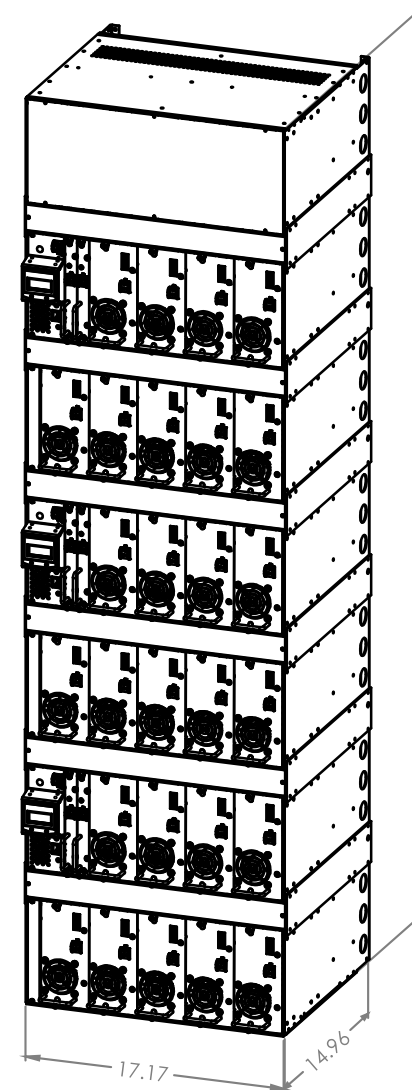
Power Output: 3KW to 27KW

Output Voltage of 117VAC L-N / 208VAC L-L

DC Input of 24V up to 108V

Included Parts:

- 19" MX Cage (6)
- Control Card (6)
- System Monitor II Card (3)
- Up to (9) 1KW Power Modules per Phase
- MX 19" Customer Interface Cage (1)
- Stacking Kit (6)
- MX 19" Relay Rack Recommended



# MX 19" Three-Phase 24KW N+1 Static Transfer Switch

## Specifications

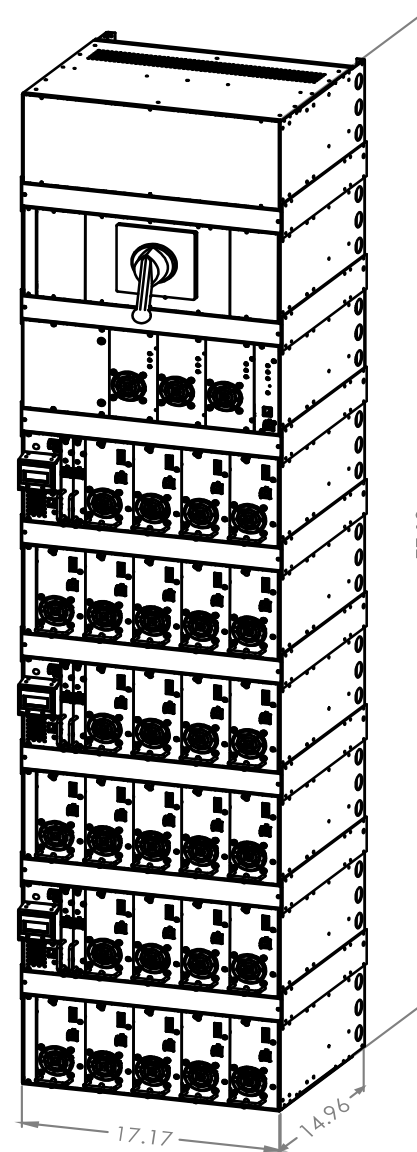
Power Output: 3KW to 27KW

Output Voltage of 117VAC L-N / 208VAC L-L

DC Input of 24V up to 108V

Included Parts:

- 19" MX Cage (6)
- Control Card (6)
- System Monitor II Card (3)
- Up to (9) 1KW Power Modules per Phase
- MX 19" Accessory Cage (1)
- MX 19" Customer Interface Cage (1)
- M31 Maintenance Bypass Switch (1)
- Static Transfer Switch System 10KW (1)
- Stacking Kit (8)
- MX 19" Relay Rack Recommended





# MX 19" Three-Phase 39KW N+1 Alarm Card

## Specifications

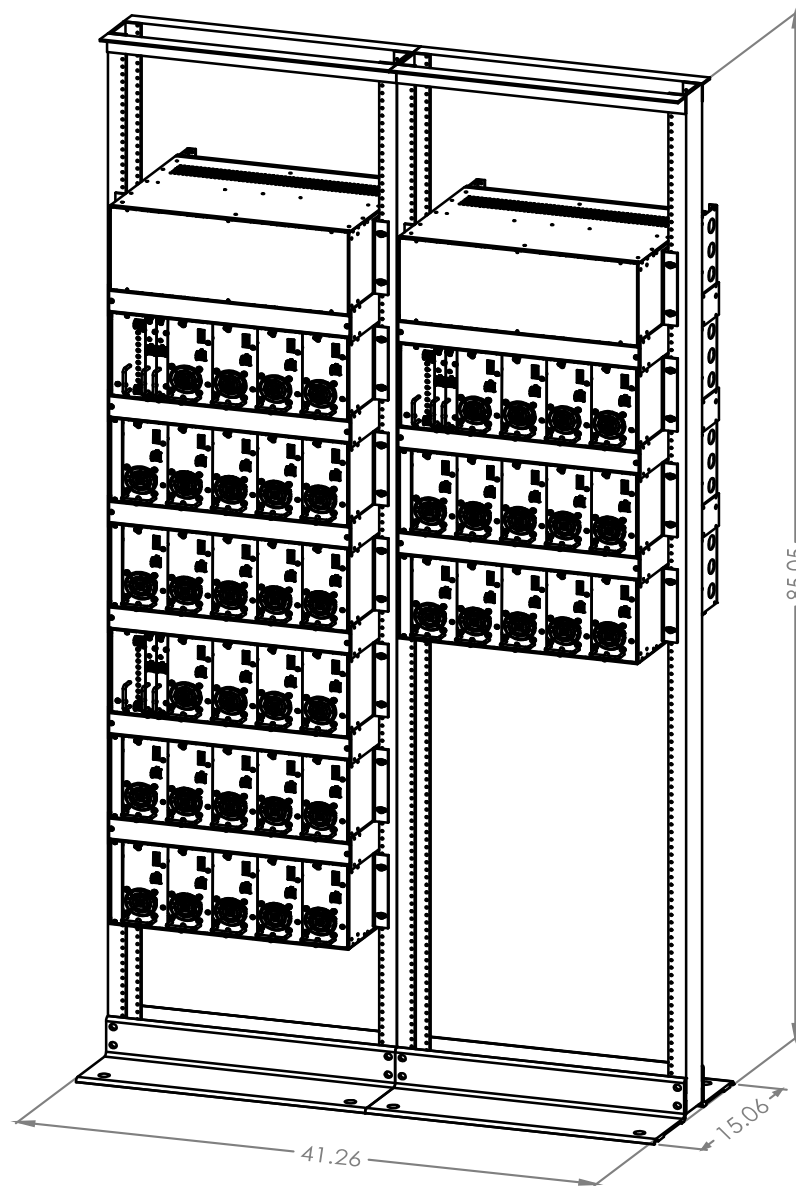
Power Output: 3KW to 42KW

Output Voltage of 117VAC L-N / 208VAC L-L

DC Input of 24V up to 108V

Included Parts:

- 19" MX Cage (9)
- Control Card (6)
- Alarm Card (3)
- Up to (14) 1KW Power Modules per Phase
- MX 19" AC Customer Interface Cage (1)
- MX 19" DC Customer Interface Cage (1)
- Stacking Kit (9)
- MX 19" Relay Rack (2)



# MX 19" Three-Phase 39KW N+1 System Monitor II Card

## Specifications

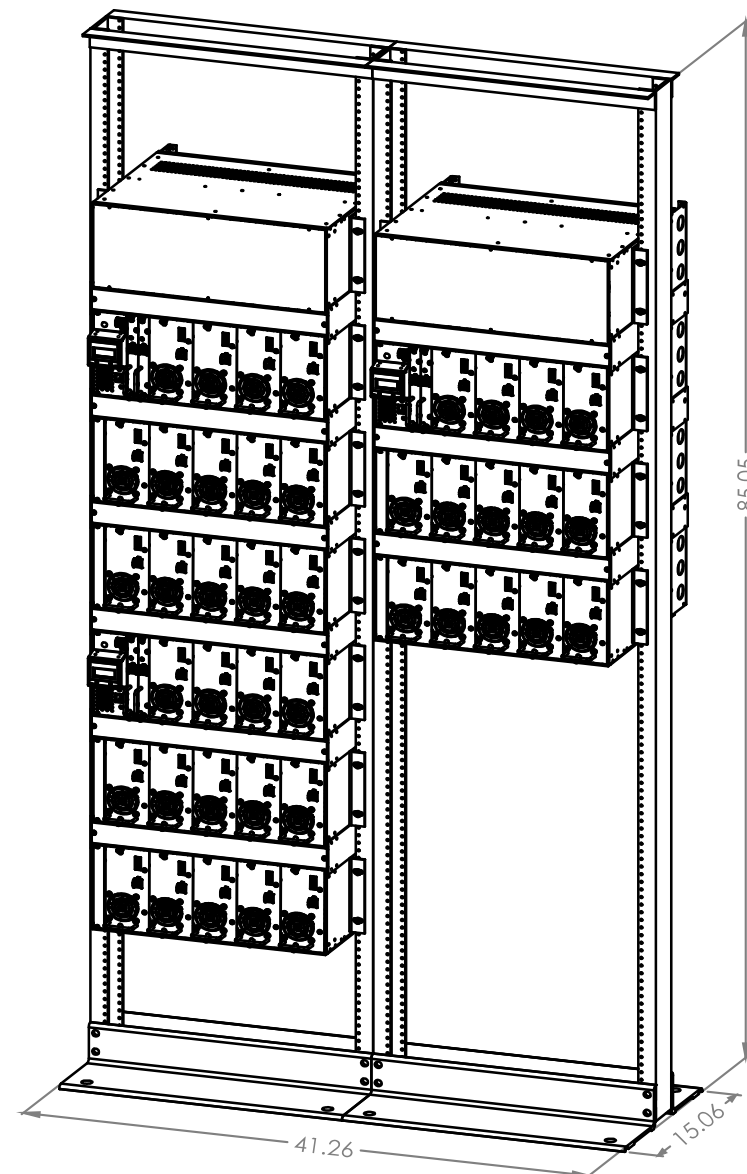
Power Output: 3KW to 42KW

Output Voltage of 117VAC L-N / 208VAC L-L

DC Input of 24V up to 108V

Included Parts:

- 19" MX Cage (9)
- Control Card (6)
- System Monitor II Card (3)
- Up to (14) 1KW Power Modules per Phase
- MX 19" AC Customer Interface Cage (1)
- MX 19" DC Customer Interface Cage (1)
- Stacking Kit (9)
- MX 19" Relay Rack (2)



# MX 19" Three-Phase 39KW N+1 Static Transfer Switch

## Specifications

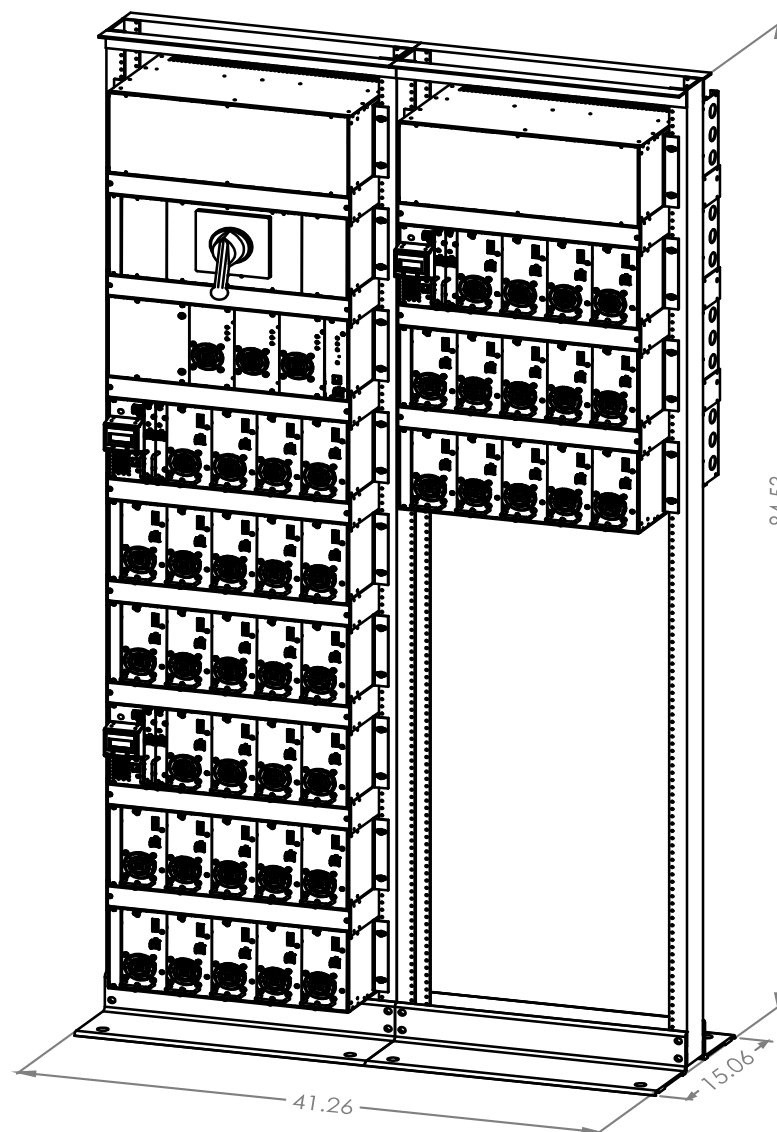
Power Output: 3KW to 42KW

Output Voltage of 117VAC L-N / 208VAC L-L

DC Input of 24V up to 108V

Included Parts:

- 19" MX Cage (9)
- Control Card (6)
- System Monitor II Card (3)
- Up to (14) 1KW Power Modules per Phase
- MX 19" Accessory Cage (1)
- MX 19" AC Customer Interface Cage (1)
- MX 19" DC Customer Interface Cage (1)
- M32 Maintenance Bypass Switch (1)
- Static Transfer Switch System 20KW (1)
- Stacking Kit (11)
- MX 19" Relay Rack (2)



# MX 19" Three-Phase 54KW N+1 Alarm Card

## Specifications

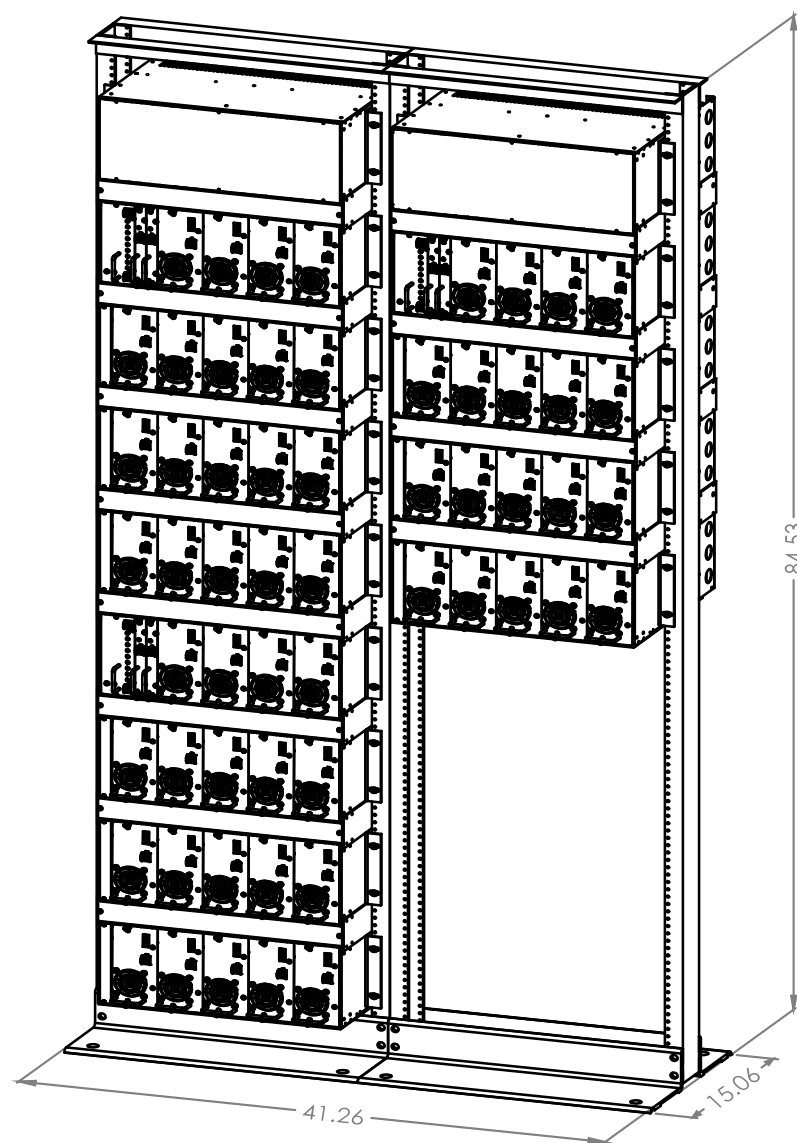
Power Output: 3KW to 57KW

Output Voltage of 117VAC L-N / 208VAC L-L

DC Input of 24V up to 108V

Included Parts:

- 19" MX Cage (12)
- Control Card (6)
- Alarm Card (3)
- Up to (19) 1KW Power Modules per Phase
- MX 19" AC Customer Interface Cage (1)
- MX 19" DC Customer Interface Cage (1)
- Stacking Kit (12)
- MX 19" Relay Rack (2)



# MX 19" Three-Phase 54KW N+1 System Monitor II Card

## Specifications

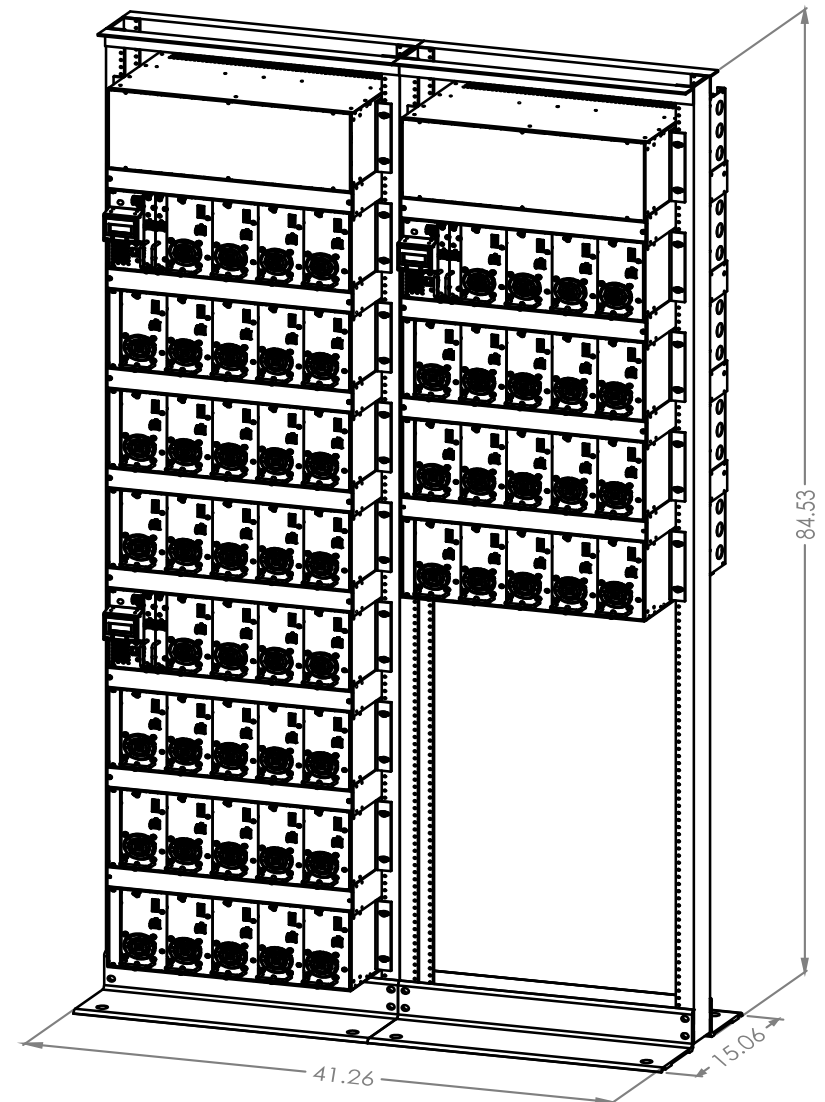
Power Output: 3KW to 57KW

Output Voltage of 117VAC L-N / 208VAC L-L

DC Input of 24V up to 108V

Included Parts:

- 19" MX Cage (12)
- Control Card (6)
- System Monitor II Card (3)
- Up to (19) 1KW Power Modules per Phase
- MX 19" AC Customer Interface Cage (1)
- MX 19" DC Customer Interface Cage (1)
- Stacking Kit (12)
- MX 19" Relay Rack (2)



# MX 23" Inverter Series

3KW – 63KW N+1  
Three-Phase

# MX 23" Three-Phase 12KW N+1 Alarm Card

## Specifications

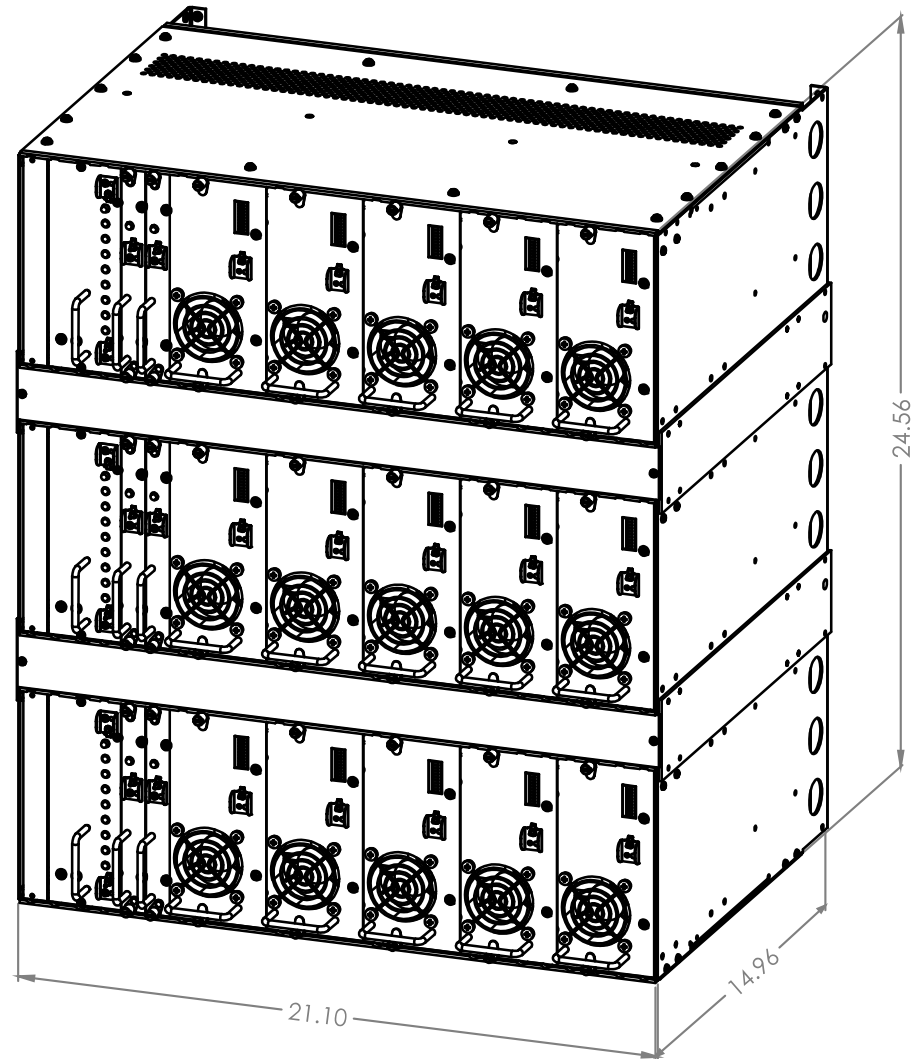
Power Output: 3KW to 15KW

Output Voltage of 117VAC L-N / 208VAC L-L

DC Input of 12V up to 108V

Included Parts:

- 23" MX Cage (3)
- Control Card (6)
- Alarm Card (3)
- Up to (5) 1KW Power Modules per Phase
- Stacking Kit (2)



# MX 23" Three-Phase 12KW N+1 System Monitor II Card

## Specifications

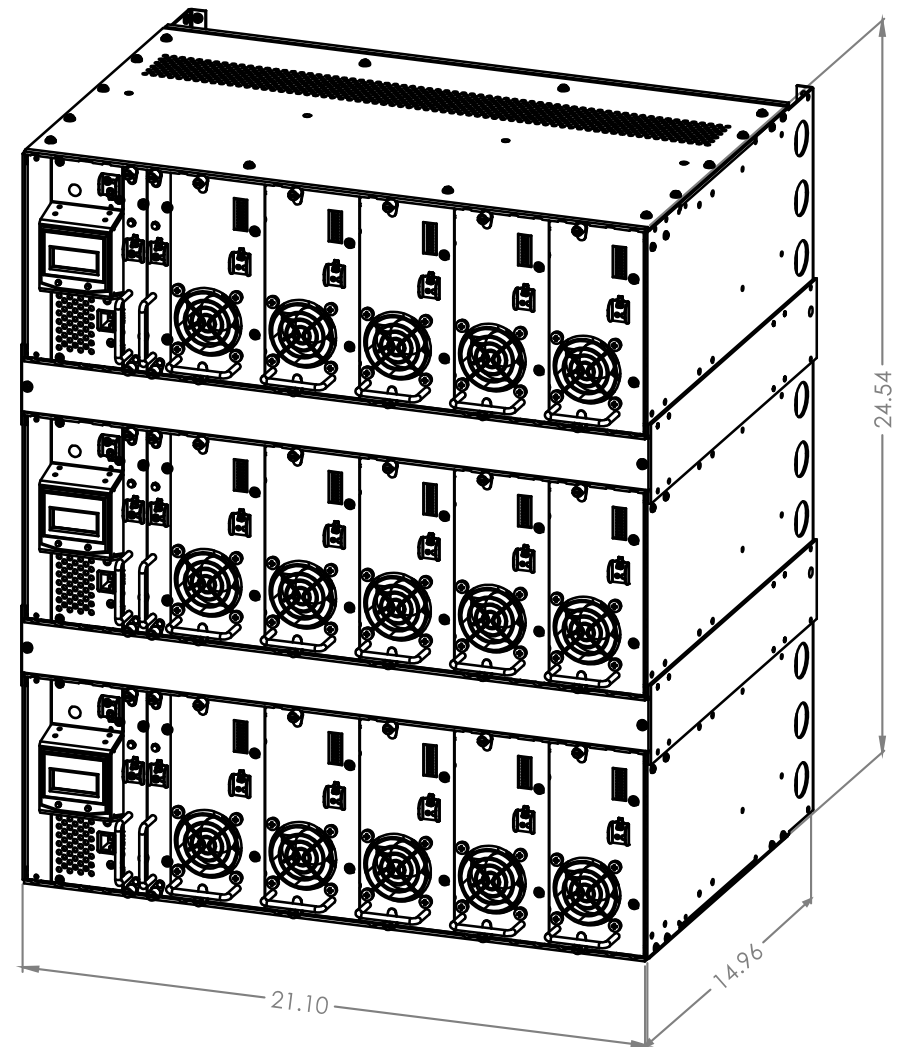
Power Output: 3KW to 15KW

Output Voltage of 117VAC L-N / 208VAC L-L

DC Input of 12V up to 108V

Included Parts:

- 23" MX Cage (3)
- Control Card (6)
- System Monitor II Card (3)
- Up to (5) 1KW Power Modules per Phase
- Stacking Kit (2)





# MX 23" Three-Phase 12KW N+1 Mechanical Transfer Switch

## Specifications

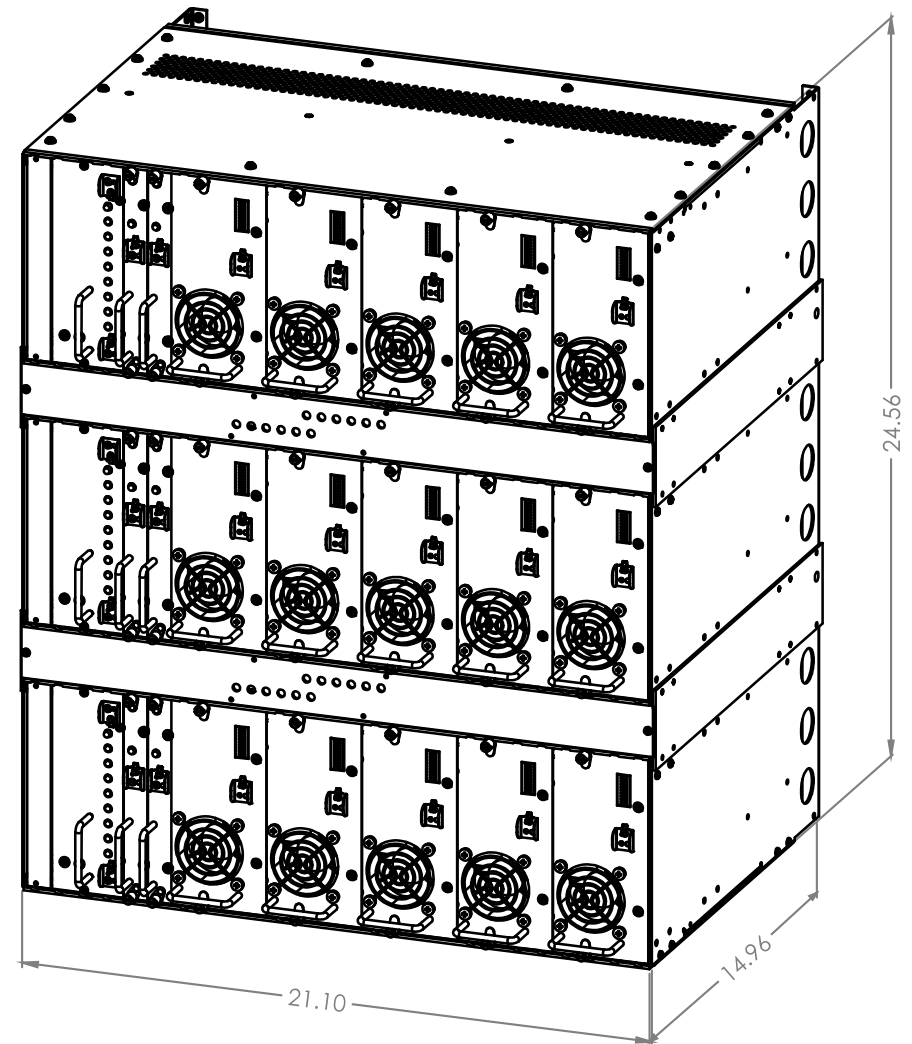
Power Output: 3KW to 15KW

Output Voltage of 117VAC L-N / 208VAC L-L

DC Input of 12V up to 108V

Included Parts:

- 23" MX Cage (3)
- Control Card (6)
- Mechanical Transfer Switch (3)
- Up to (5) 1KW Power Modules per Phase
- Line to Line Detector (2)
- Stacking Kit (2)



# MX 23" Three-Phase 12KW N+1 Static Transfer Switch

## Specifications

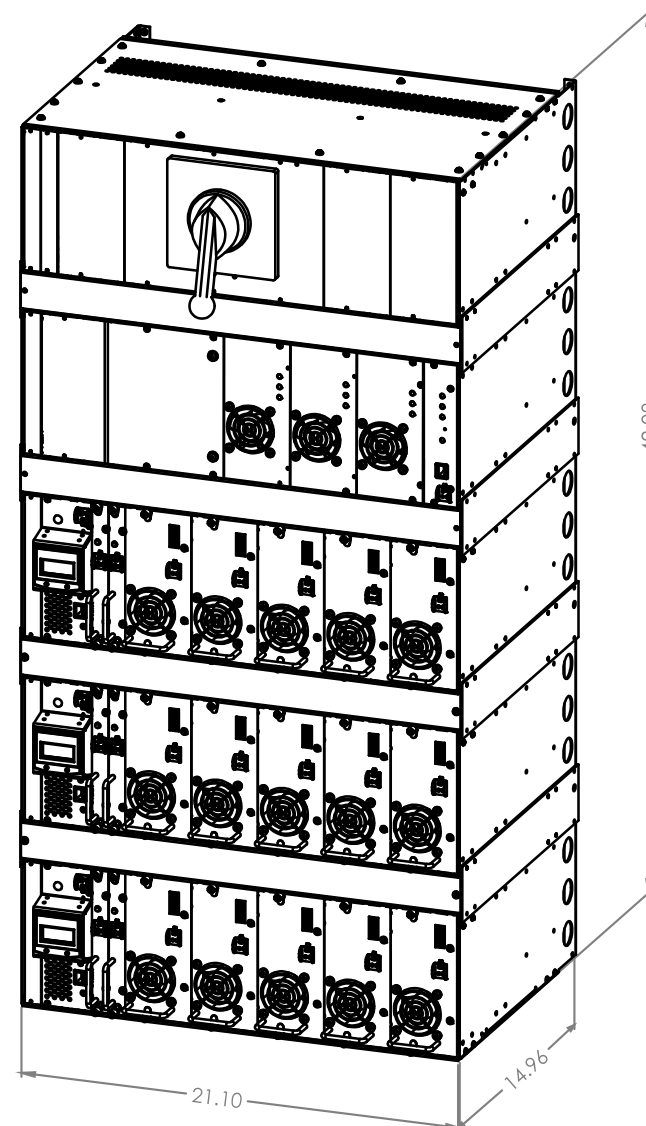
Power Output: 3KW to 15KW

Output Voltage of 117VAC L-N / 208VAC L-L

DC Input of 12V up to 108V

Included Parts:

- 23" MX Cage (3)
- Control Card (6)
- System Monitor II Card (3)
- Up to (5) 1KW Power Modules per Phase
- MX 23" Accessory Cage (1)
- M35 Maintenance Bypass Switch (1)
- Static Transfer Switch System 10KW (1)
- Stacking Kit (4)
- MX 23" Relay Rack Recommended



# MX 23" Three-Phase 30KW N+1 Alarm Card

## Specifications

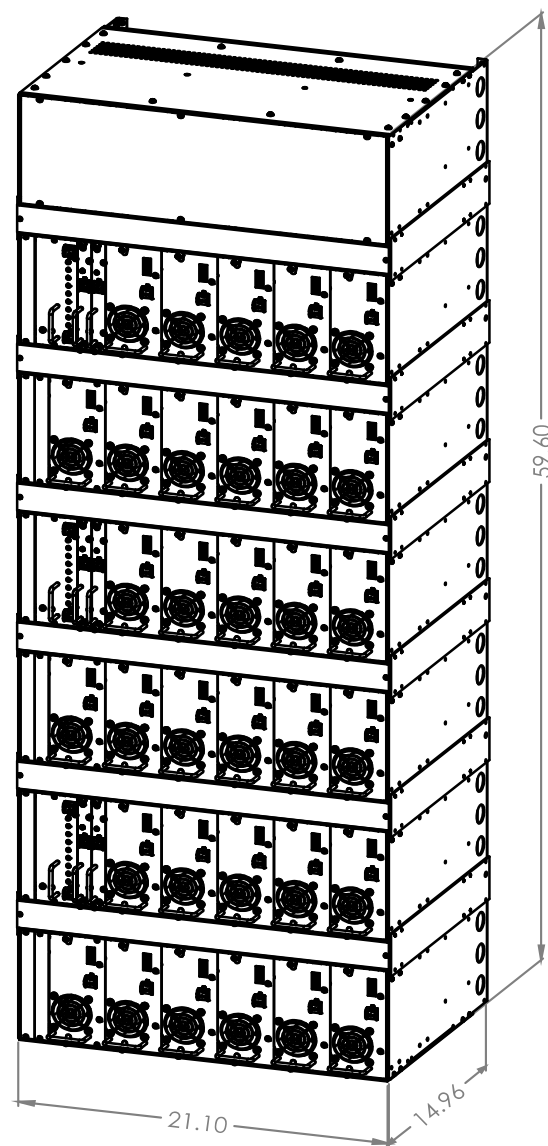
Power Output: 3KW to 33KW

Output Voltage of 117VAC L-N / 208VAC L-L

DC Input of 24V up to 108V

Included Parts:

- 23" MX Cage (6)
- Control Card (6)
- Alarm Card (3)
- Up to (11) 1KW Power Modules per Phase
- MX 23" Customer Interface Cage (1)
- Stacking Kit (6)
- MX 23" Relay Rack Recommended



# MX 23" Three-Phase 30KW N+1 System Monitor II Card

## Specifications

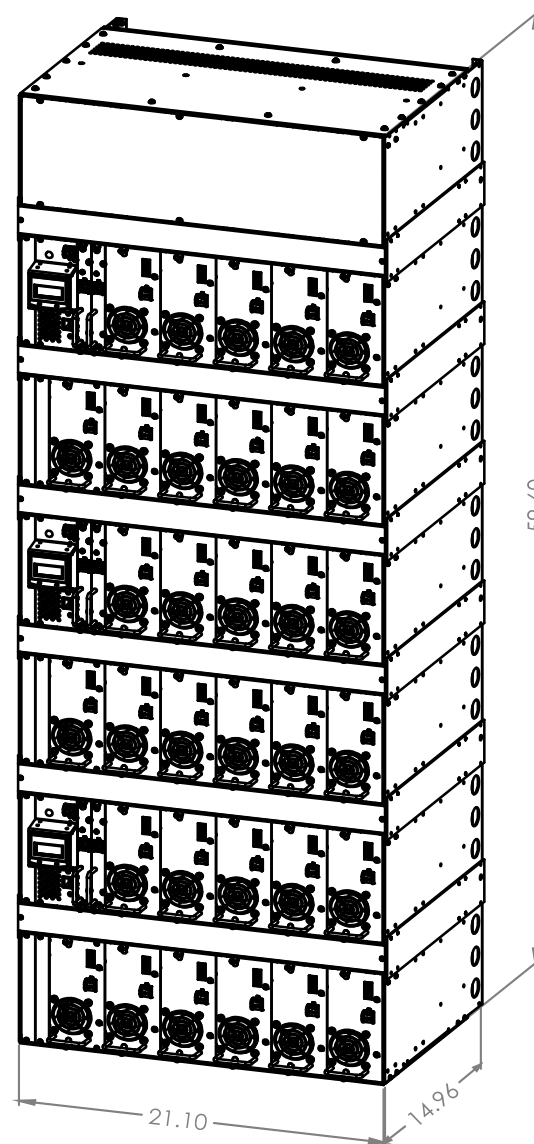
Power Output: 3KW to 33KW

Output Voltage of 117VAC L-N / 208VAC L-L

DC Input of 24V up to 108V

Included Parts:

- 23" MX Cage (6)
- Control Card (6)
- System Monitor II Card (3)
- Up to (11) 1KW Power Modules per Phase
- MX 23" Customer Interface Cage (1)
- Stacking Kit (6)
- MX 23" Relay Rack Recommended



# MX 23" Three-Phase 30KW N+1 Static Transfer Switch

## Specifications

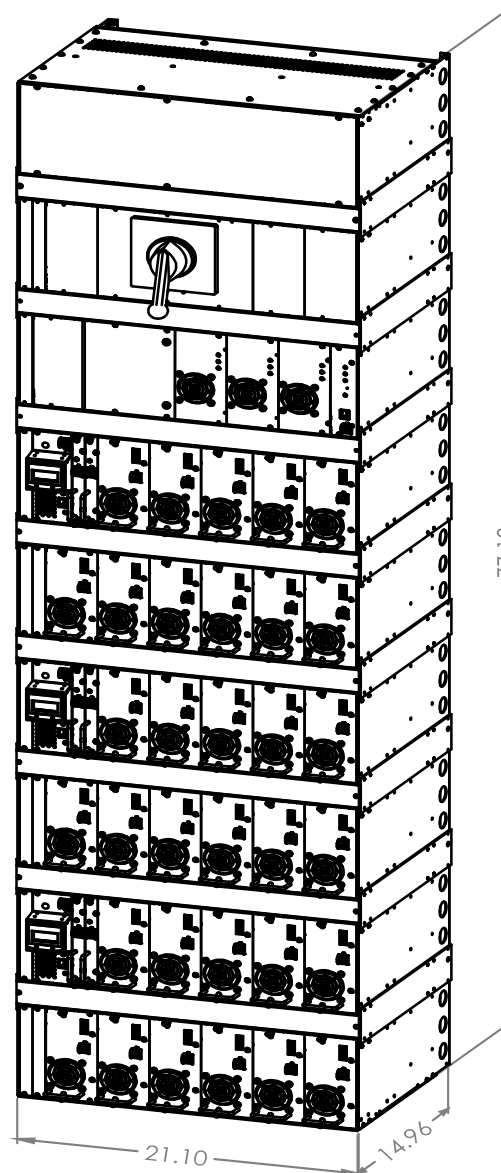
Power Output: 3KW to 33KW

Output Voltage of 117VAC L-N / 208VAC L-L

DC Input of 24V up to 108V

Included Parts:

- 23" MX Cage (6)
- Control Card (6)
- System Monitor II Card (3)
- Up to (11) 1KW Power Modules per Phase
- MX 23" Accessory Cage (1)
- M31 Maintenance Bypass Switch (1)
- Static Transfer Switch System 10KW (1)
- Customer Interface Cage (1)
- Stacking Kit (8)
- MX 23" Relay Rack Recommended



# MX 23" Three-Phase 48KW N+1 Alarm Card

## Specifications

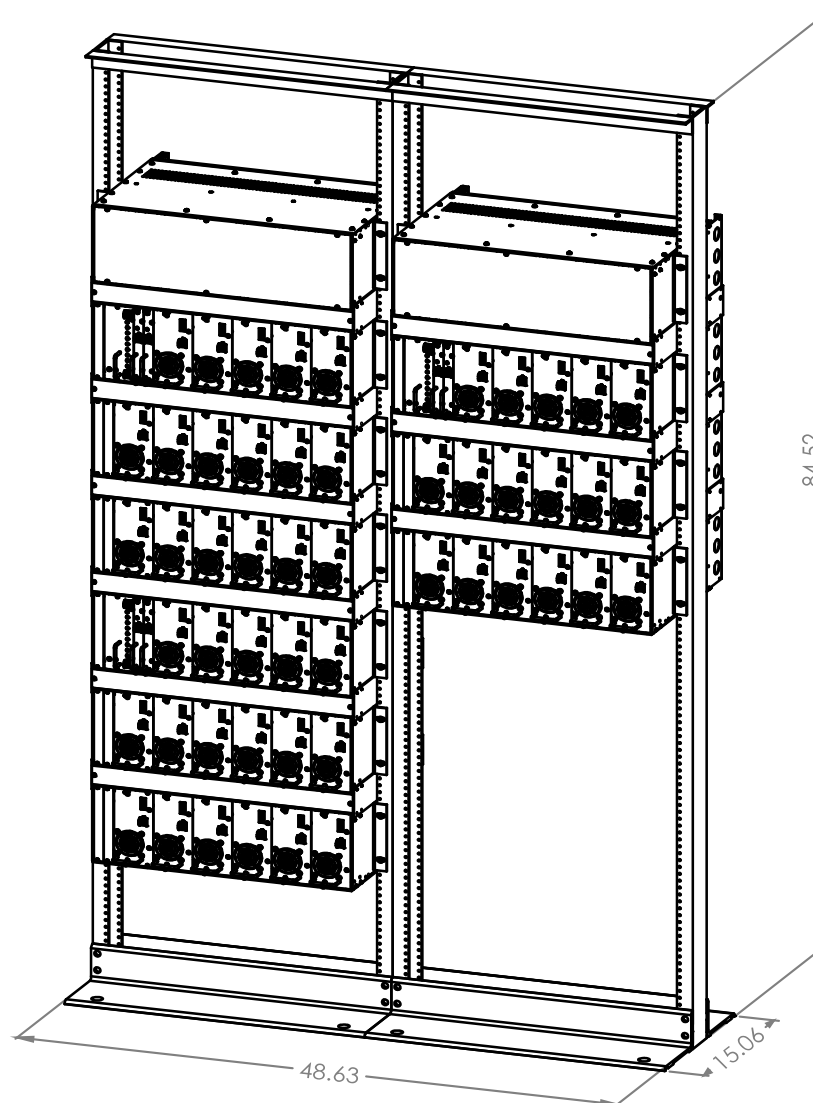
Power Output: 3KW to 51KW

Output Voltage of 117VAC L-N / 208VAC L-L

DC Input of 24V up to 108V

Included Parts:

- 23" MX Cage (9)
- Control Card (6)
- Alarm Card (3)
- Up to (17) 1KW Power Modules per Phase
- MX 23" AC Customer Interface Cage (1)
- MX 23" DC Customer Interface Cage (1)
- Stacking Kit (9)
- MX 23" Relay Rack (2)



# MX 23" Three-Phase 48KW N+1 System Monitor II Card

## Specifications

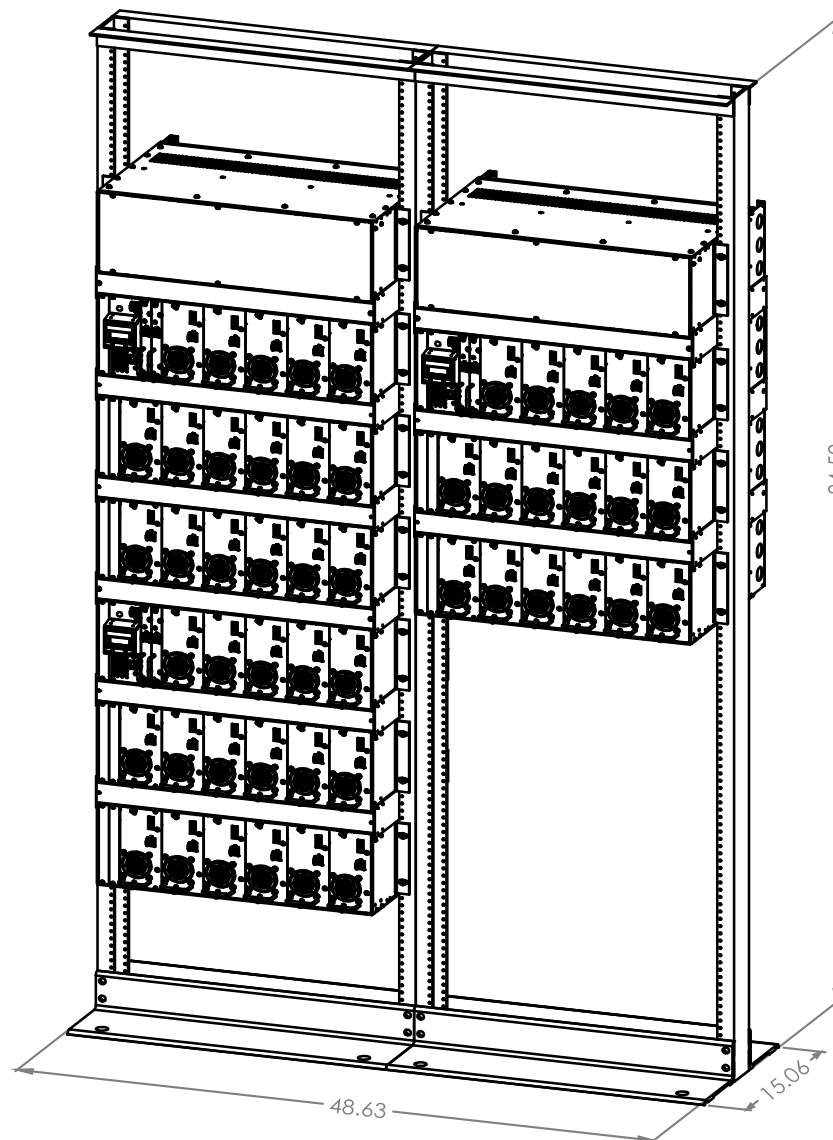
Power Output: 3KW to 51KW

Output Voltage of 117VAC L-N / 208VAC L-L

DC Input of 24V up to 108V

Included Parts:

- 23" MX Cage (9)
- Control Card (6)
- System Monitor II Card (3)
- Up to (17) 1KW Power Modules per Phase
- MX 23" AC Customer Interface Cage (1)
- MX 23" DC Customer Interface Cage (1)
- Stacking Kit (9)
- MX 23" Relay Rack (2)



# MX 23" Three-Phase 48KW N+1 Static Transfer Switch

## Specifications

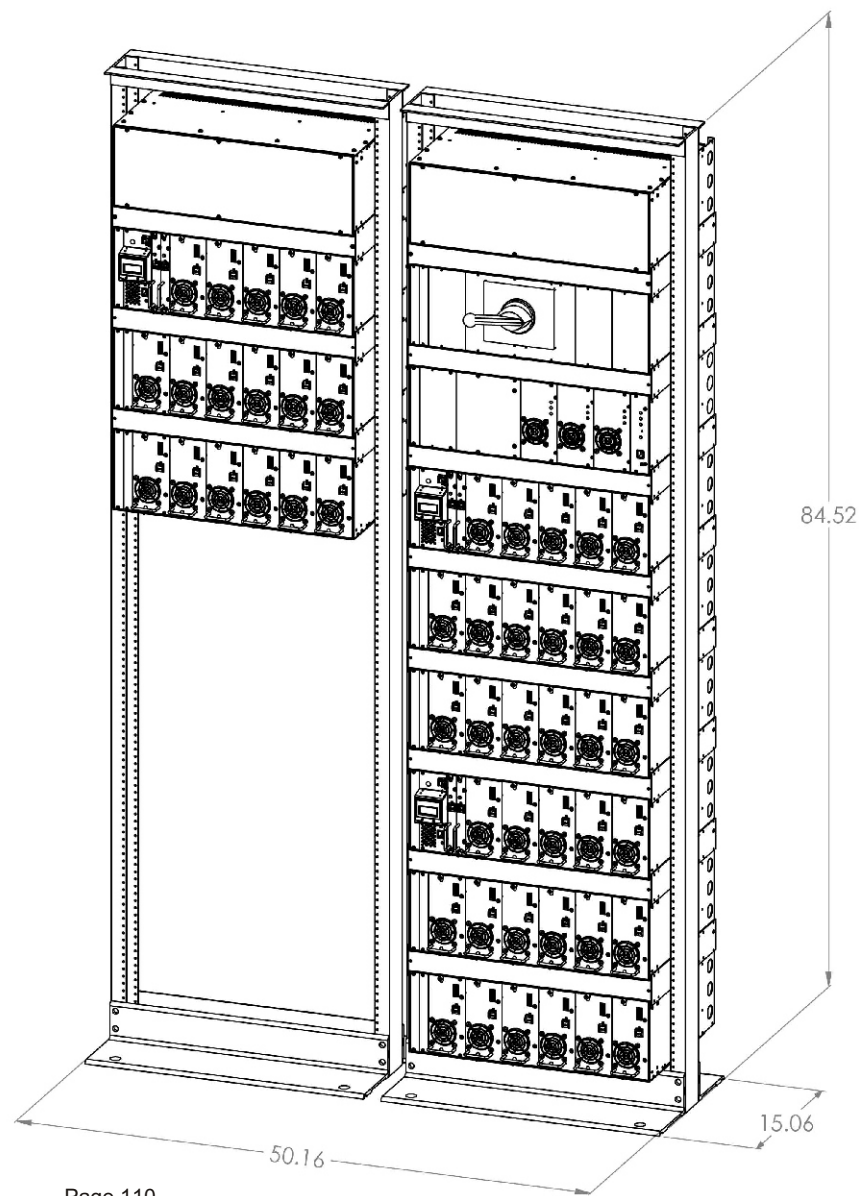
Power Output: 3KW to 51KW

Output Voltage of 117VAC L-N / 208VAC L-L

DC Input of 24V up to 108V

Included Parts:

- 23" MX Cage (9)
- Control Card (6)
- System Monitor II Card (3)
- Up to (17) 1KW Power Modules per Phase
- MX 23" Accessory Cage (1)
- M32 Maintenance Bypass Switch (1)
- Static Transfer Switch System 20KW (1)
- MX 23" AC Customer Interface Cage (1)
- MX 23" DC Customer Interface Cage (1)
- Stacking Kit (11)
- MX 23" Relay Rack (2)





# MX 23" Three-Phase 60KW N+1 Alarm Card

## Specifications

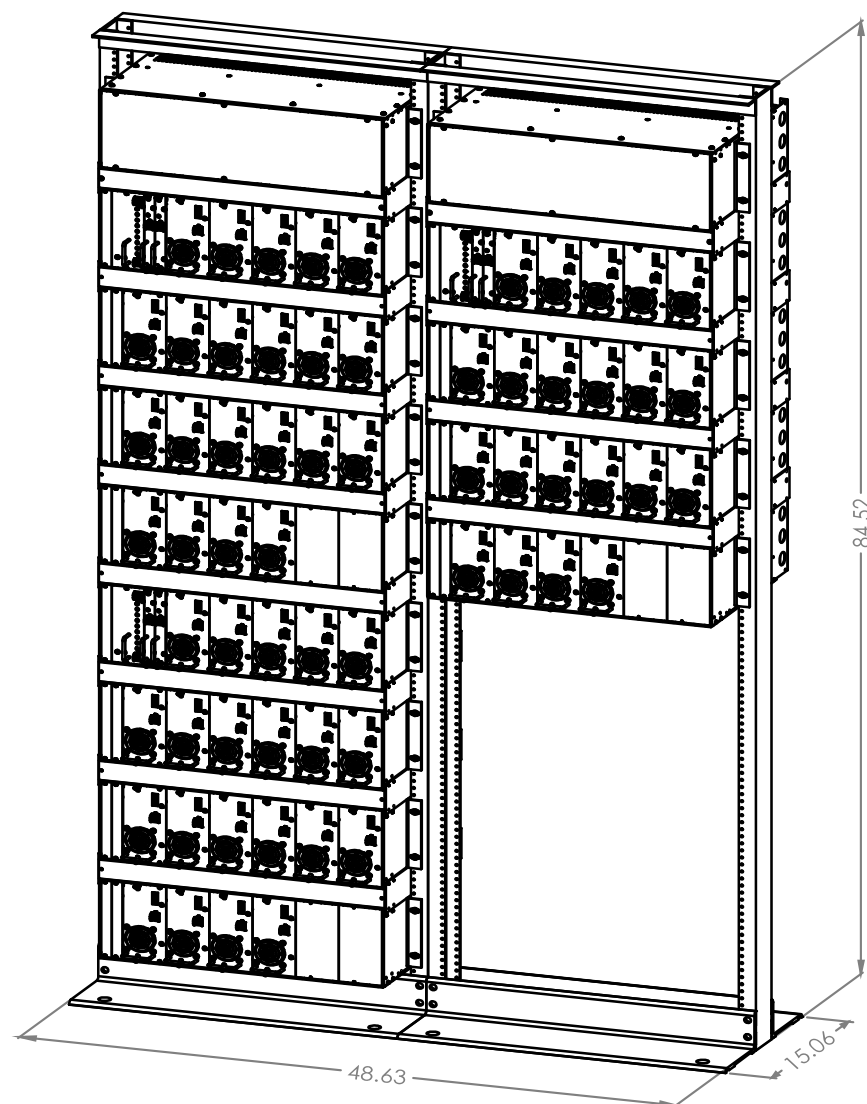
Power Output: 3KW to 63KW

Output Voltage of 117VAC L-N / 208VAC L-L

DC Input of 24V up to 108V

Included Parts:

- 23" MX Cage (12)
- Control Card (6)
- Alarm Card (3)
- Up to (21) 1KW Power Modules per Phase
- MX 23" AC Customer Interface Cage (1)
- MX 23" DC Customer Interface Cage (1)
- Stacking Kit (12)
- MX 23" Relay Rack (2)



# MX 23" Three-Phase 60KW N+1 System Monitor II Card

## Specifications

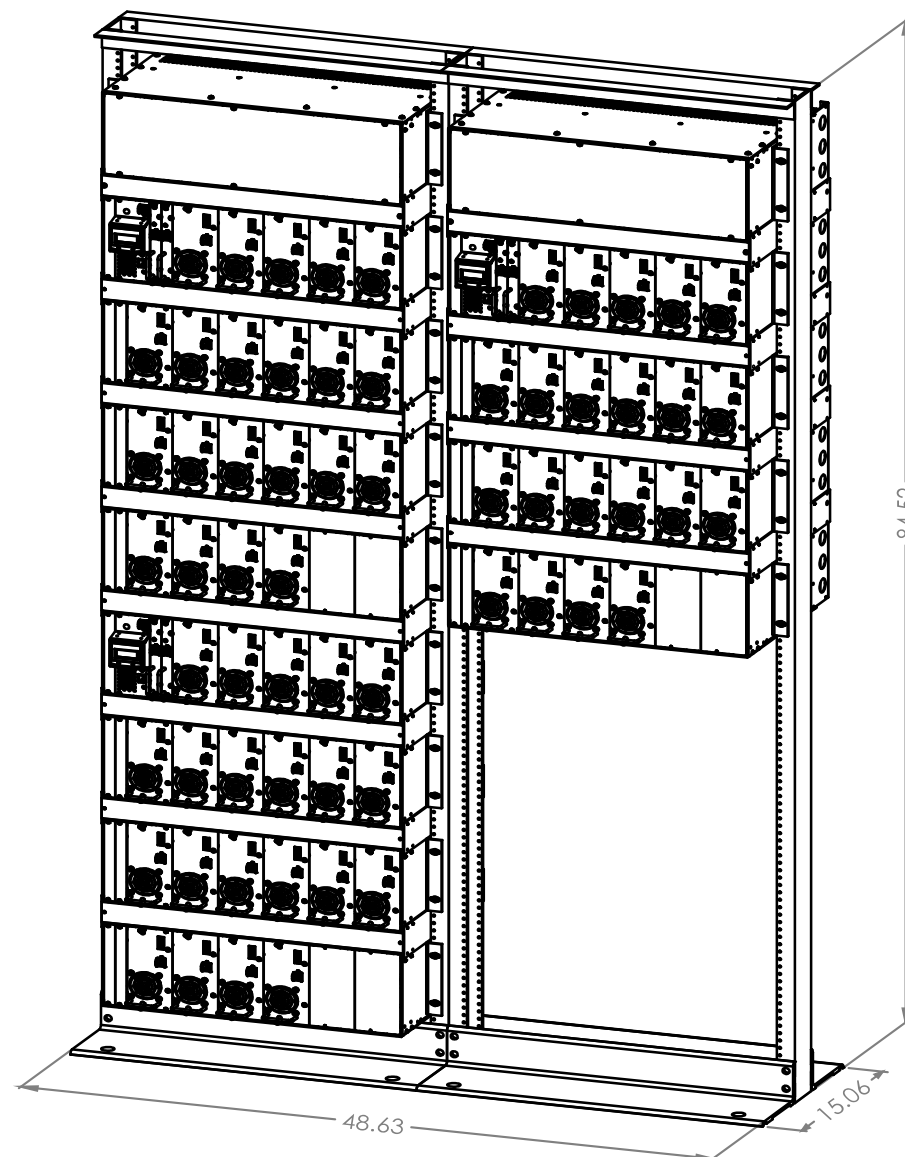
Power Output: 3KW to 60KW

Output Voltage of 117VAC L-N / 208VAC L-L

DC Input of 24V up to 108V

Included Parts:

- 23" MX Cage (12)
- Control Card (6)
- System Monitor II Card (3)
- Up to (21) 1KW Power Modules per Phase
- MX 23" AC Customer Interface Cage (1)
- MX 23" DC Customer Interface Cage (1)
- Stacking Kit (12)
- MX 23" Relay Rack (2)



# MX 23" Three-Phase 60KW N+1 Static Transfer Switch

## Specifications

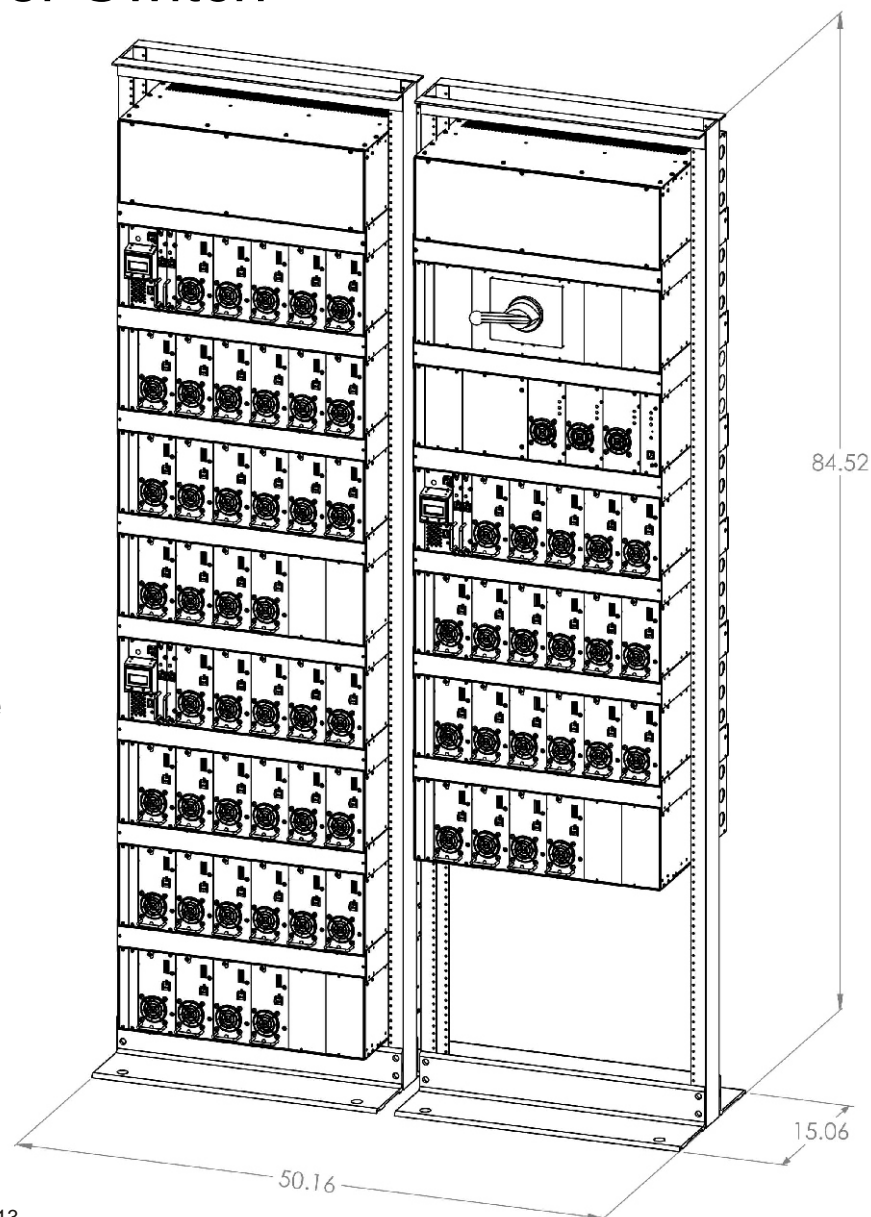
Power Output: 3KW to 60KW

Output Voltage of 117VAC L-N / 208VAC L-L

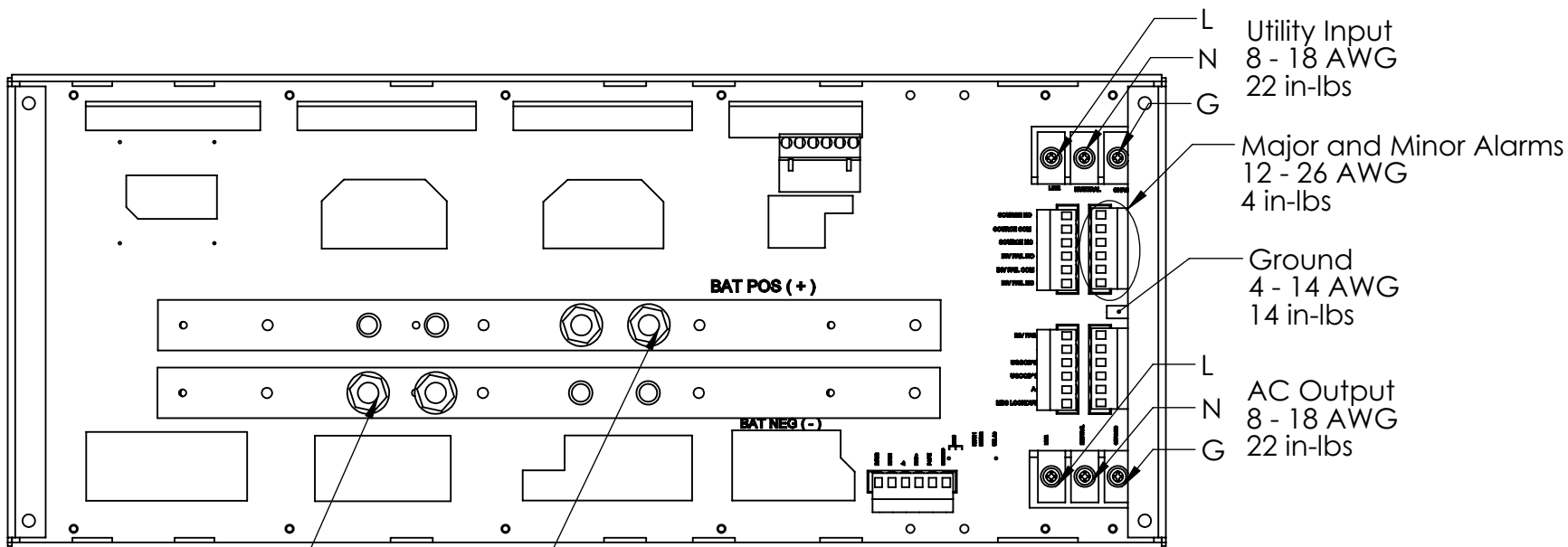
DC Input of 24V up to 108V

Included Parts:

- 23" MX Cage (12)
- Control Card (6)
- System Monitor II Card (3)
- Up to (21) 1KW Power Modules per Phase
- MX 23" Accessory Cage (1)
- M32 Maintenance Bypass Switch (1)
- Static Transfer Switch System 20KW (1)
- MX 23" AC Customer Interface Cage (1)
- MX 23" DC Customer Interface Cage (1)
- Stacking Kit (14)
- MX 23" Relay Rack (2)



# MX Customer Connection Wiring Diagrams



DC Negative  
5/16" Threaded Studs  
1" spacing  
85 in-lbs

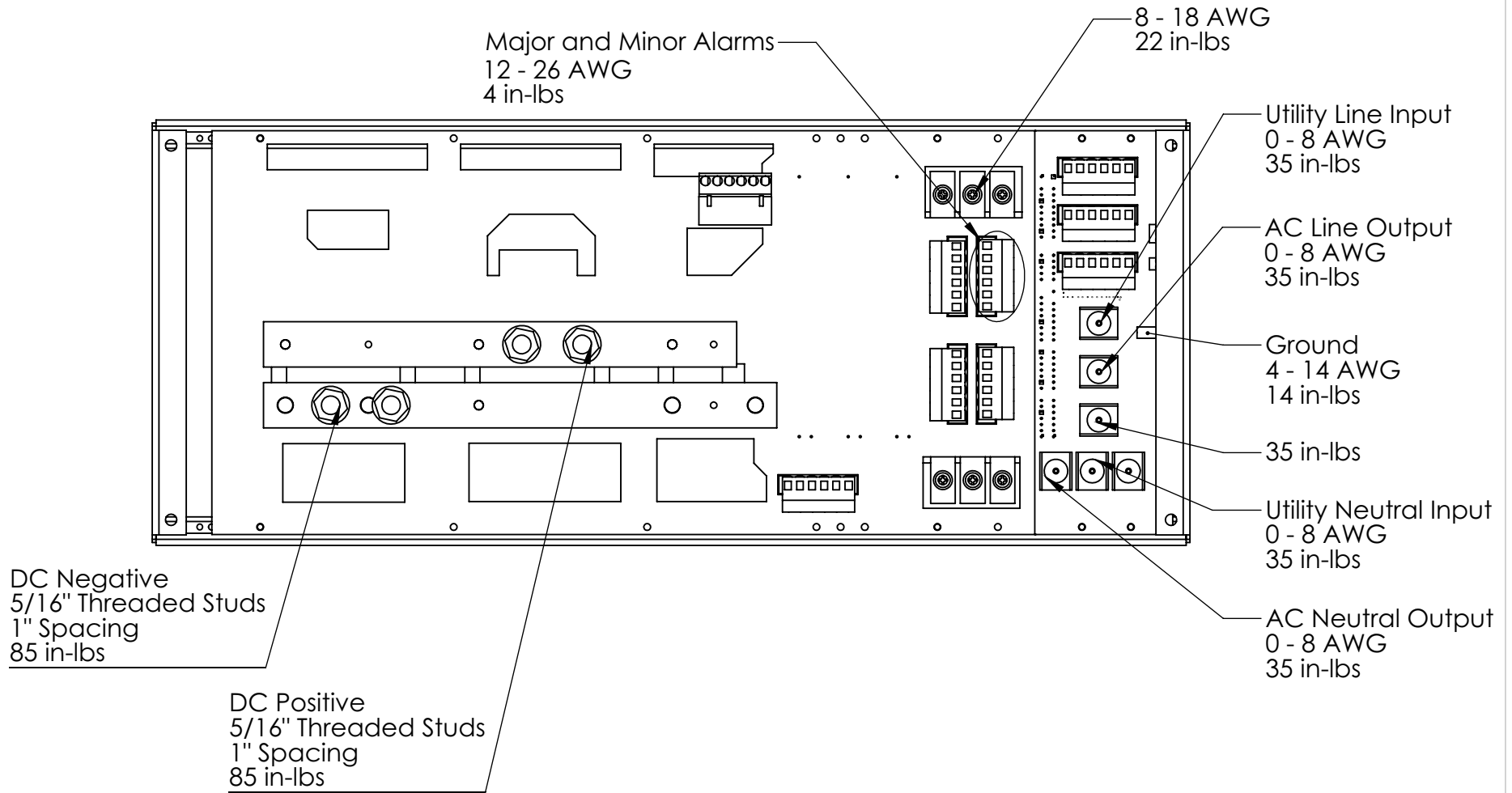
DC Positive  
5/16" Threaded Studs  
1" spacing  
85 in-lbs

\*Utility connections not applicable for standalone inverter applications.

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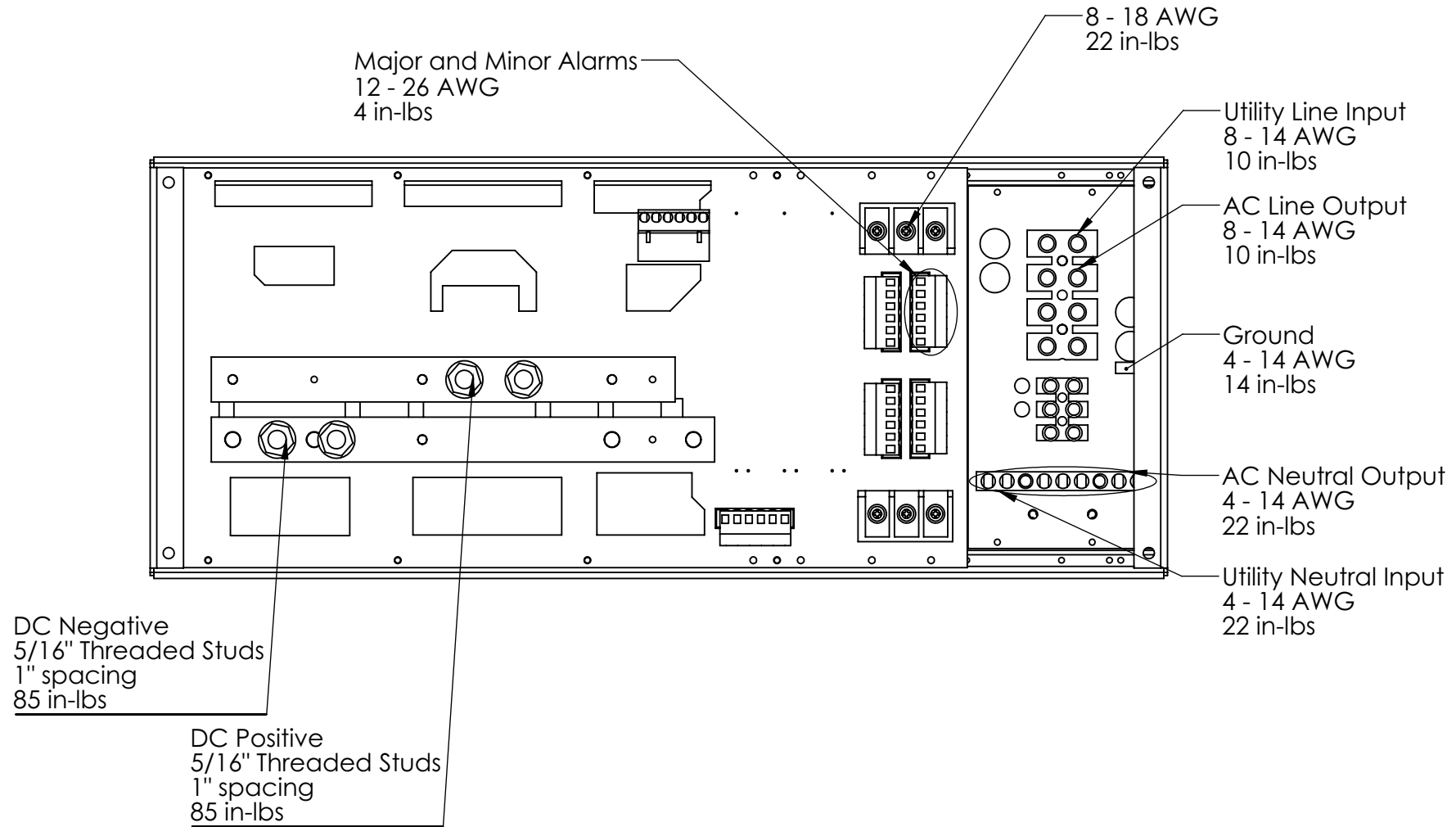
SIZE	DWG. NO.	REV
A	Single Phase, 1 cage	
SCALE: 1:3	WEIGHT:	SHEET 1 OF 1



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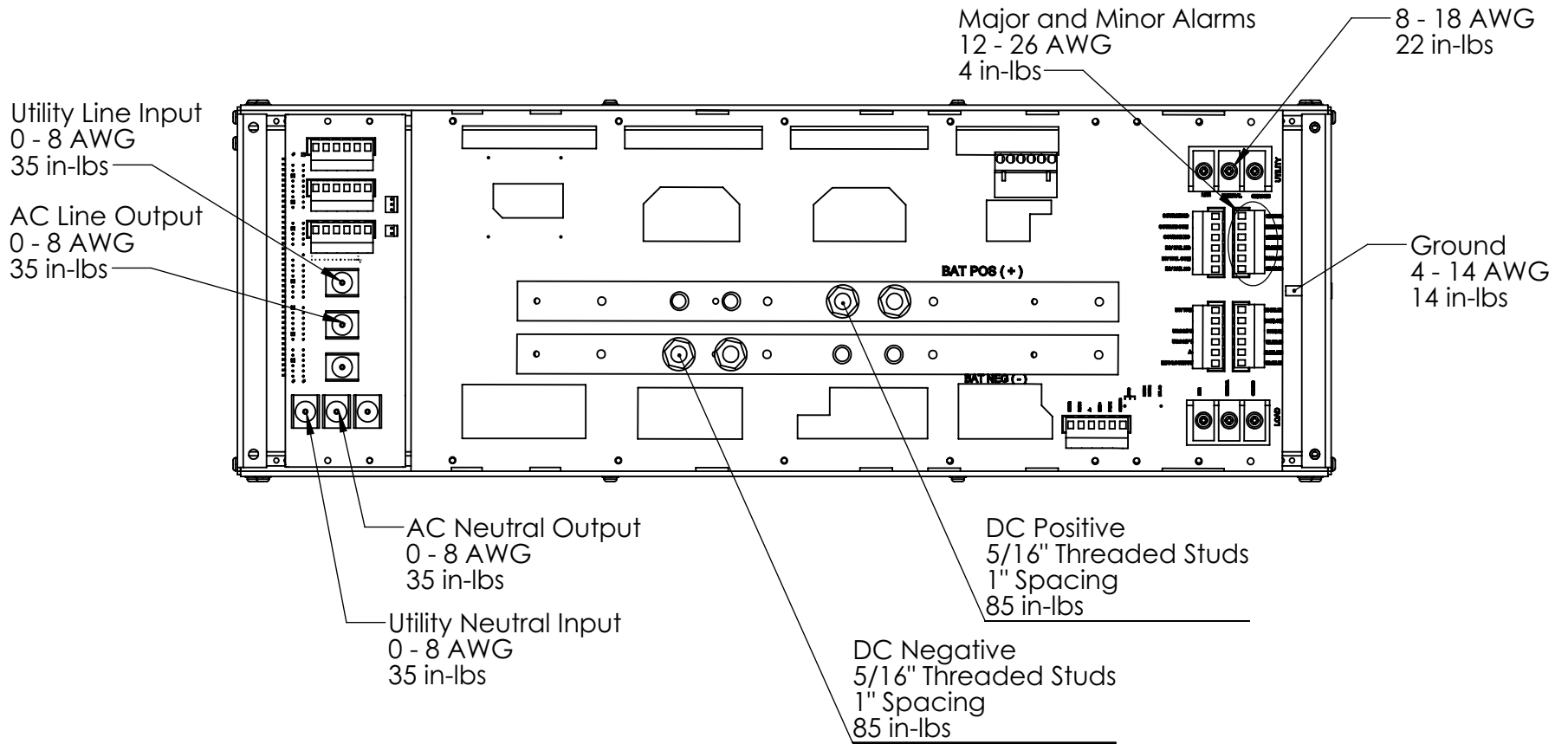
7317 Jack Newell Blvd N  
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SIZE <b>A</b>	DWG. NO. Single phase 19" SysMon II, XFR	REV
SCALE: 1:2.5 WEIGHT:		SHEET 1 OF 1



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SIZE A	DWG. NO. Single Phase, 19" SSXFR, MBS	REV
SCALE: 1:2.5 WEIGHT:		SHEET 1 OF 1

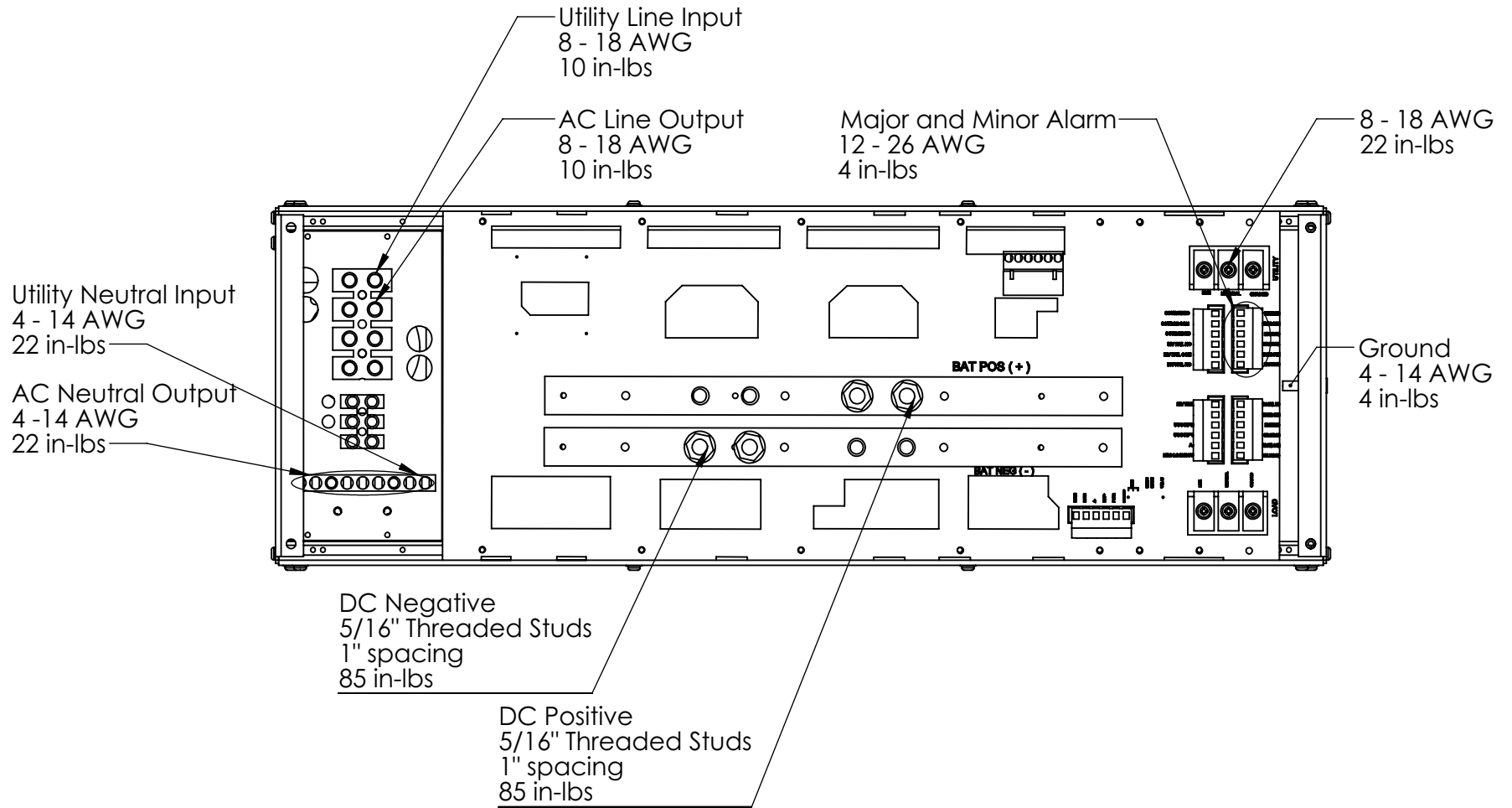


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SIZE <b>A</b>	DWG. NO. Single phase 23" SysMon II, XFR	REV
SCALE: 1:3 WEIGHT:		SHEET 1 OF 1

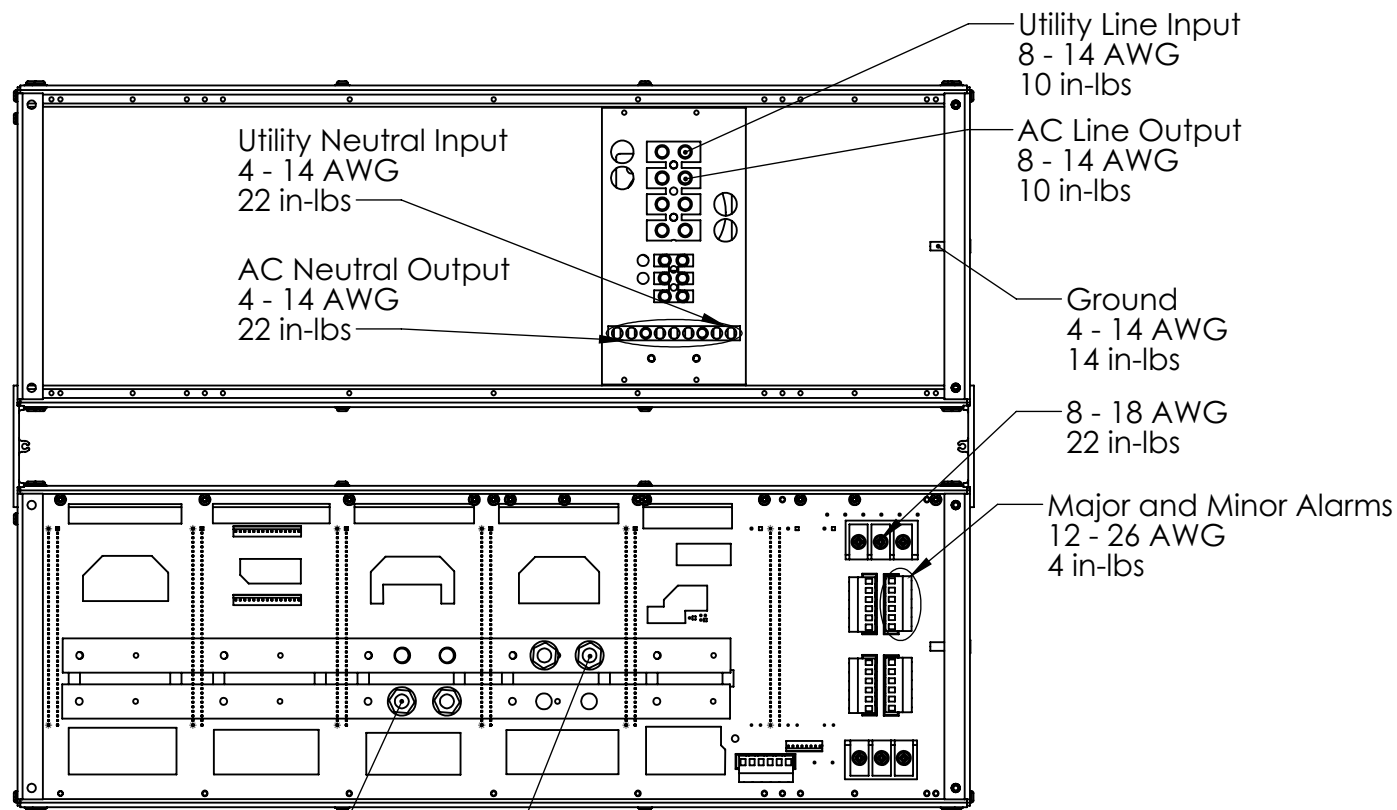




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SIZE <b>A</b>	DWG. NO. Single Phase, 23", SSXFR, MBS	REV
SCALE: 1:3	WEIGHT:	SHEET 1 OF 1

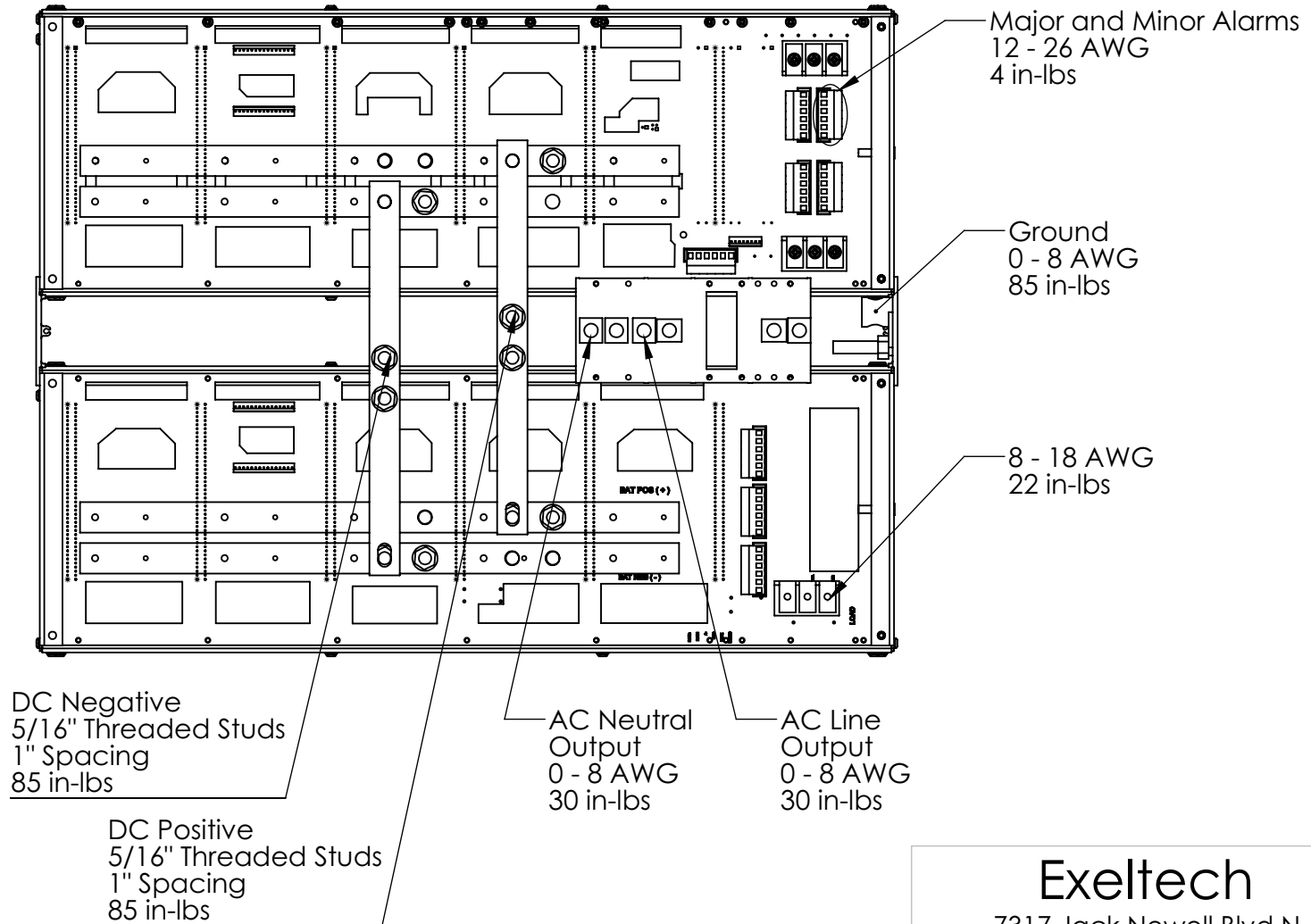


DC Negative  
5/16" Threaded Studs  
1" Spacing  
85 in-lbs

DC Positive  
5/16" Threaded Studs  
1" Spacing  
85 in-lbs

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SIZE <b>A</b>	DWG. NO. Single phase, single cage STS and MBS	REV
SCALE: 1:4 WEIGHT:		SHEET 1 OF 1



Major and Minor Alarms  
12 - 26 AWG  
4 in-lbs

Ground  
0 - 8 AWG  
85 in-lbs

8 - 18 AWG  
22 in-lbs

DC Negative  
5/16" Threaded Studs  
1" Spacing  
85 in-lbs

DC Positive  
5/16" Threaded Studs  
1" Spacing  
85 in-lbs

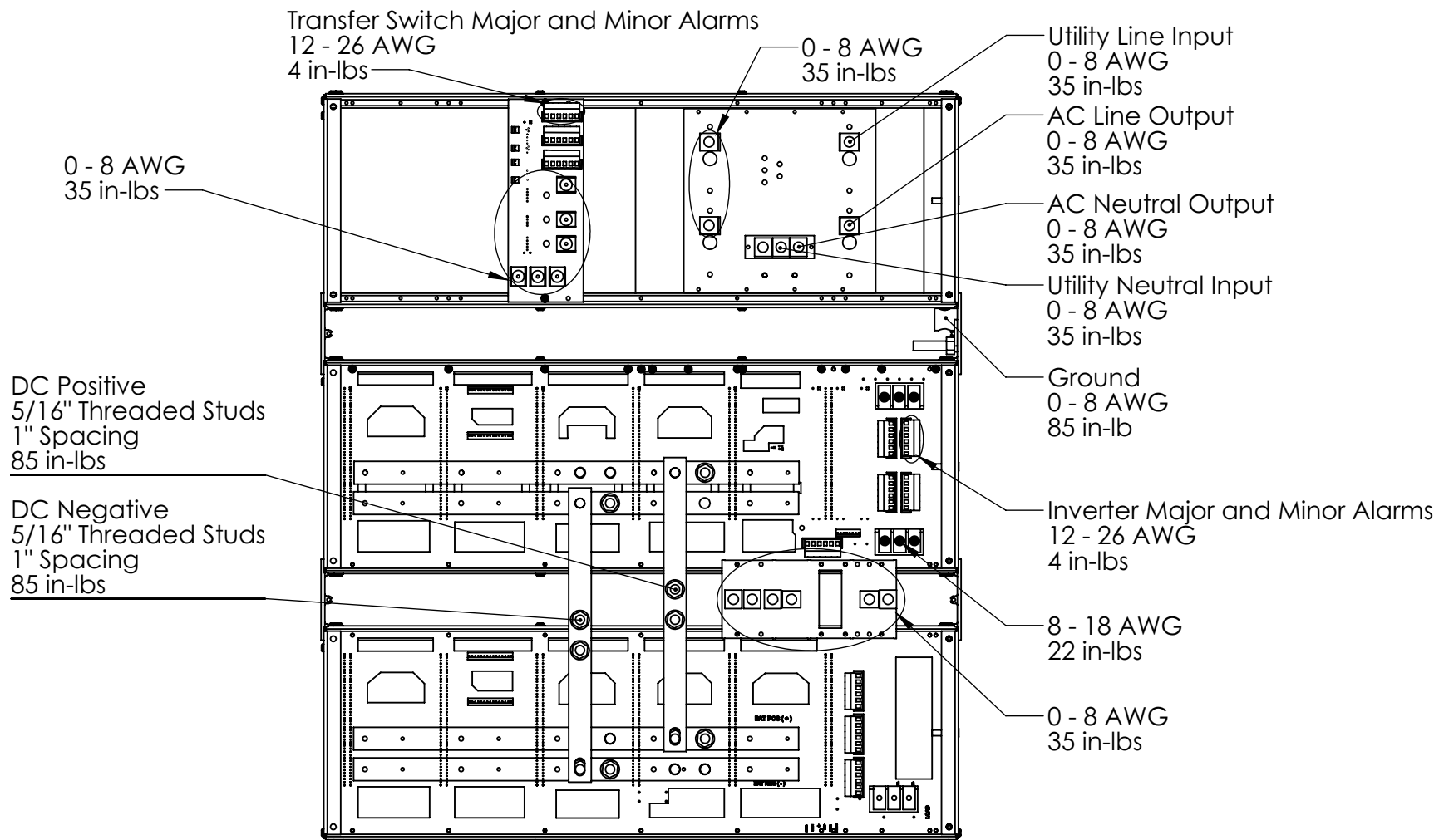
AC Neutral  
Output  
0 - 8 AWG  
30 in-lbs

AC Line  
Output  
0 - 8 AWG  
30 in-lbs

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SIZE <b>A</b>	DWG. NO. Single phase, 2 cage, stand alone	REV
SCALE: 1:4 WEIGHT:		SHEET 1 OF 1



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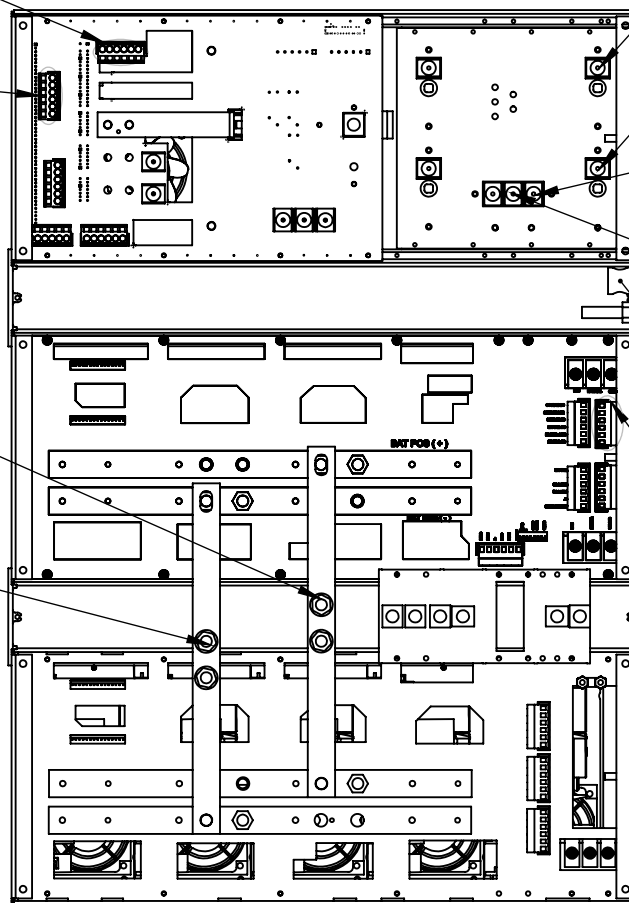
SIZE <b>A</b>	DWG. NO. Single phase, 2 cage SSXFR	REV
SCALE: 1:5	WEIGHT:	SHEET 1 OF 1

Static Transfer Switch Output Alarms  
12 - 26 AWG

Major and Minor Alarms  
Static Transfer Switch  
12 - 26 AWG

DC Positive  
5/16" Threaded Stud  
1" Spacing

DC Positive  
5/16" Threaded Stud  
1" Spacing



Utility Line Input  
0 - 8AWG

AC Line Output  
0 - 8AWG

AC Neutral Output  
0 - 8 AWG

Utility Neutral Input  
0 - 8 AWG

Ground  
0 - 8 AWG

Major and Minor Alarms  
Inverter  
12 - 26 AWG

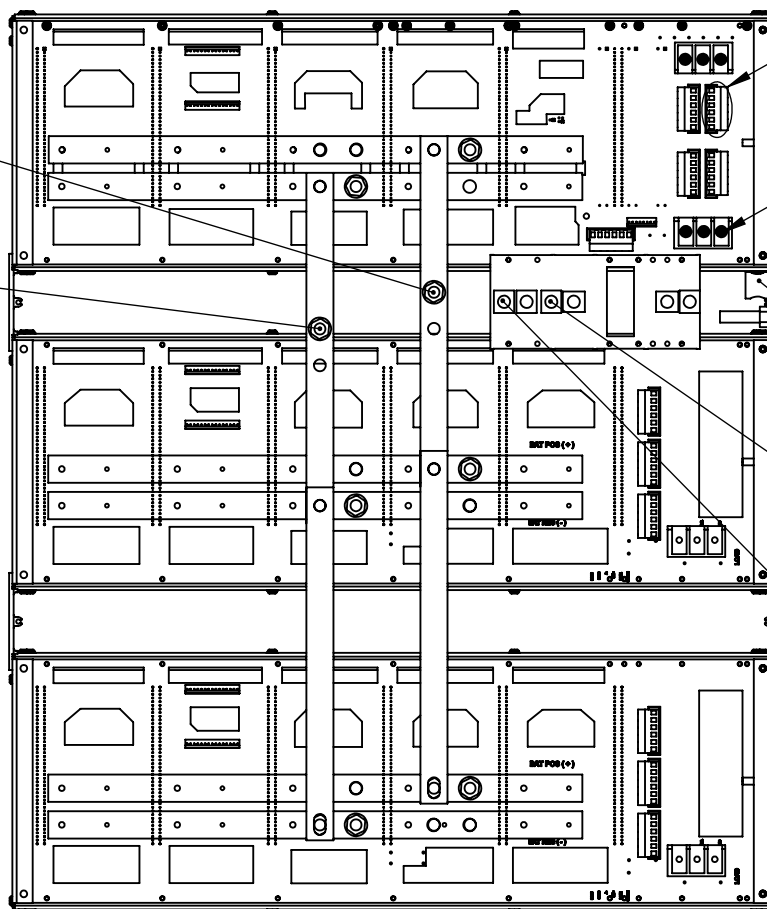
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FT. WORTH, TX 76118-7100

SIZE	DWG. NO.
A	Static Transfer Switch 1 Phase
SCALE	CAD FILE:
	SHEET 1 OF 1

DC Positive  
5/16" Threaded Studs  
1" Spacing  
85 in-lbs

DC Negative  
5/16" Threaded Studs  
1" Spacing  
85 in-lbs



Major and Minor Alarms  
12 - 26 AWG  
4 in-lbs

8 - 18 AWG  
22 in-lbs

Ground  
0 - 8 AWG  
85 in-lbs

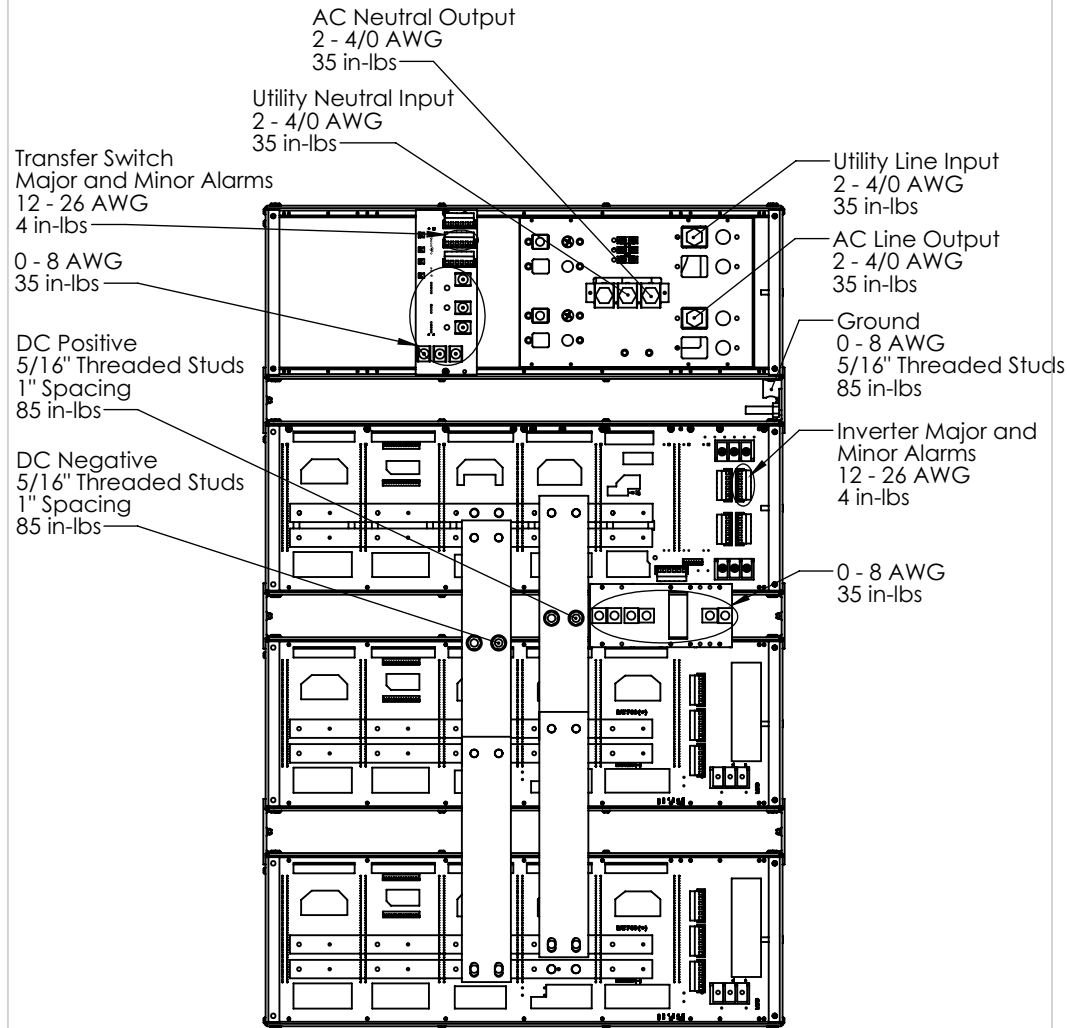
AC Line Output  
0 - 8 AWG  
30 in-lbs

AC Neutral Output  
0 - 8 AWG  
30 in-lbs

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SIZE <b>A</b>	DWG. NO. Single phase 3 cage Stand Alone	REV
SCALE: 1:5	WEIGHT:	SHEET 1 OF 1

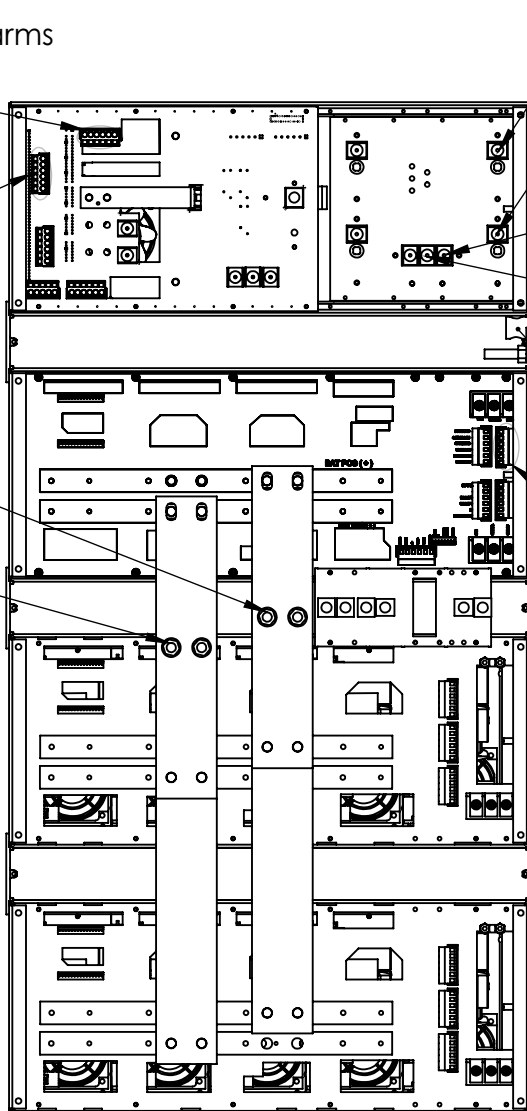


Static Transfer Switch Output Alarms  
12 - 26 AWG

Major and Minor Alarms  
Static Transfer Switch  
12 - 26 AWG

DC Positive  
5/16" Threaded Stud  
1" Spacing

DC Negative  
5/16" Threaded Stud  
1" Spacing



Utility Line Input  
0 - 8 AWG

Neutral Line Output  
0 - 8 AWG

AC Neutral Line Input  
0 - 8 AWG

Utility Line Output  
0 - 8 AWG

Ground  
0 - 8 AWG

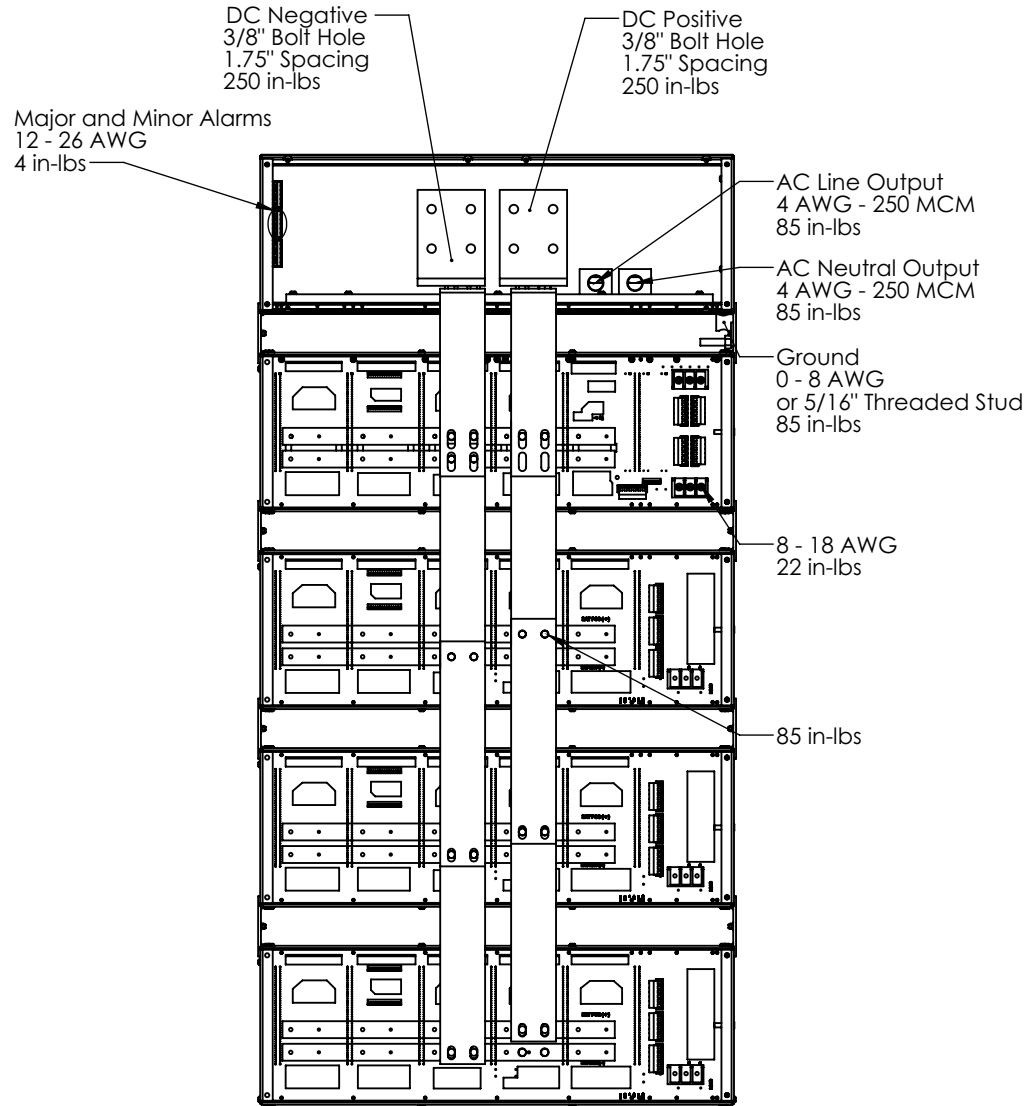
Major and Minor Alarms  
Inverter  
12 - 26 AWG

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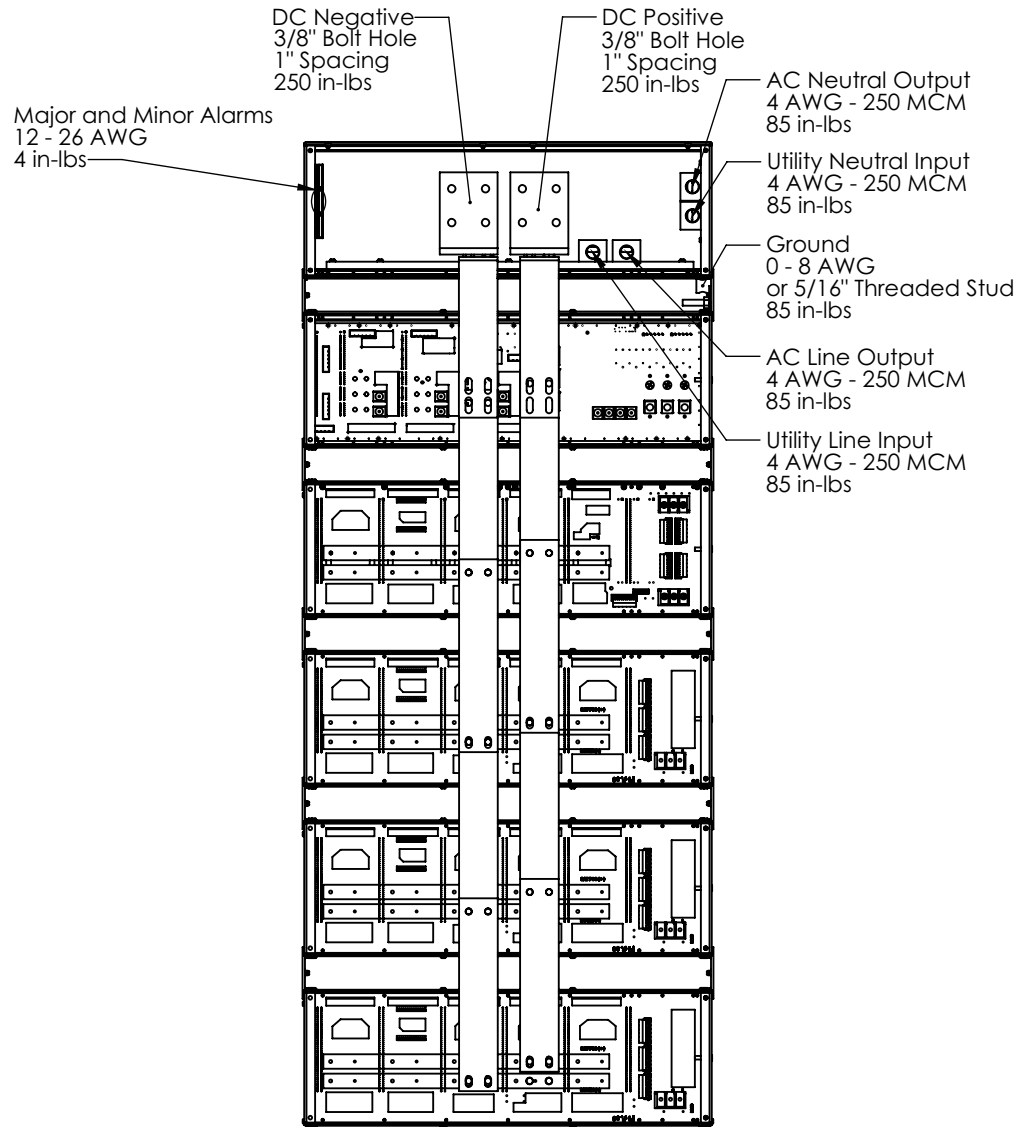
SIZE A	Static Transfer Switch 1 Phase 3 Cage
SCALE	CAD FILE: SHEET 1 OF 1





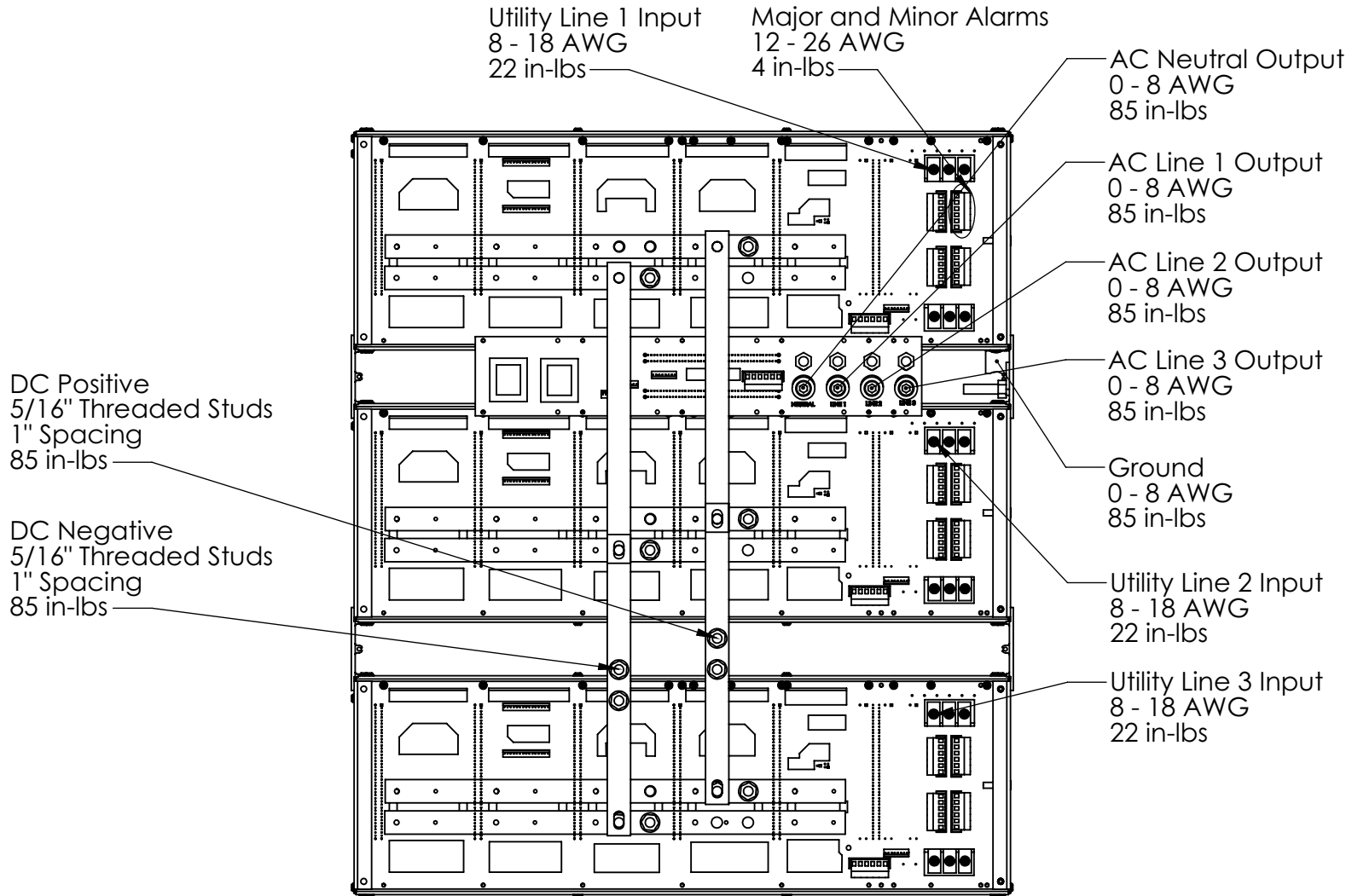
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SIZE	DWG. NO.	REV.
A	Single Phase, 4 cage, stand alone	
SCALE: 1:6	WEIGHT:	SHEET 1 OF 1



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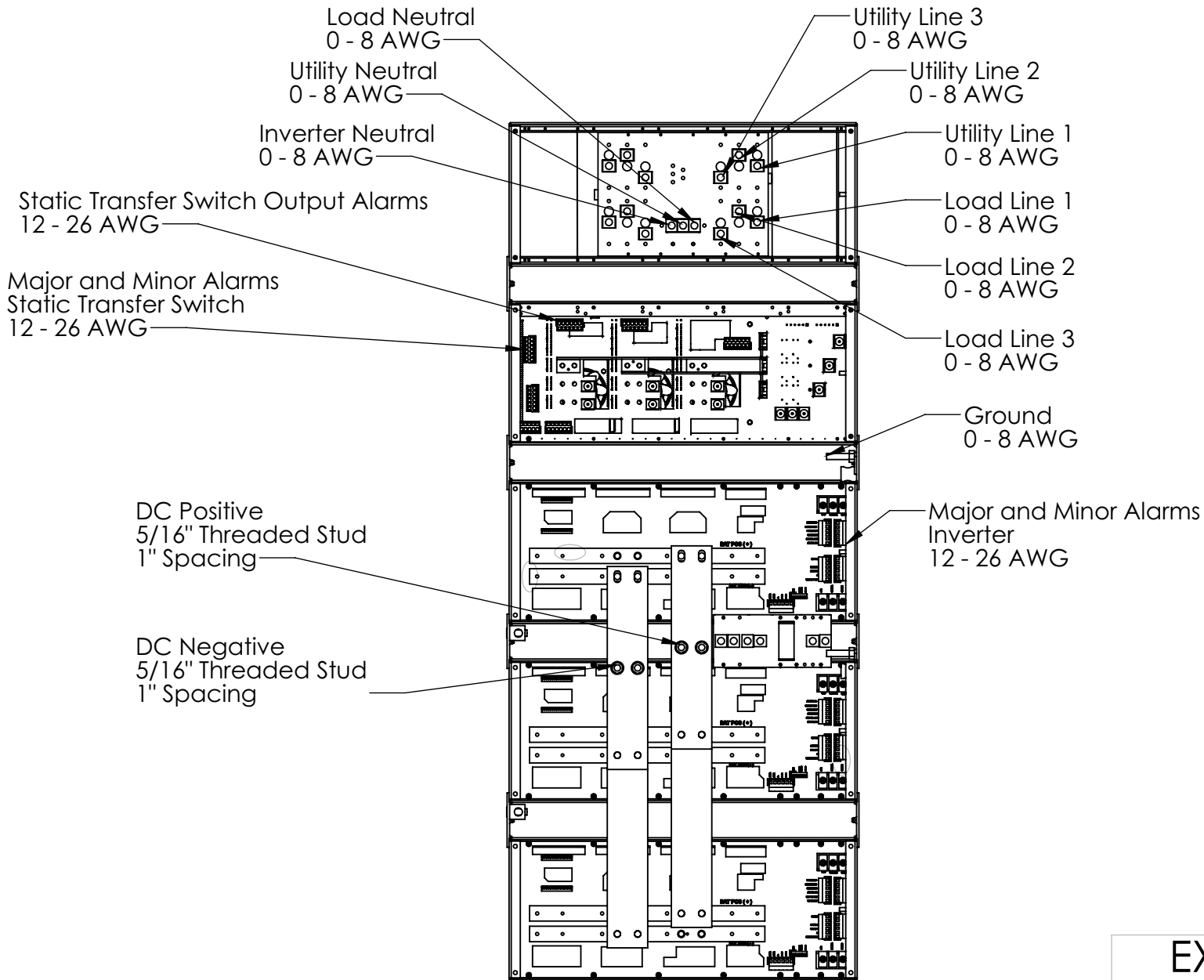
SIZE	DWG. NO.	REV.
A	Single phase 4 cage STS	
SCALE:1:12	WEIGHT:	SHEET 1 OF 1

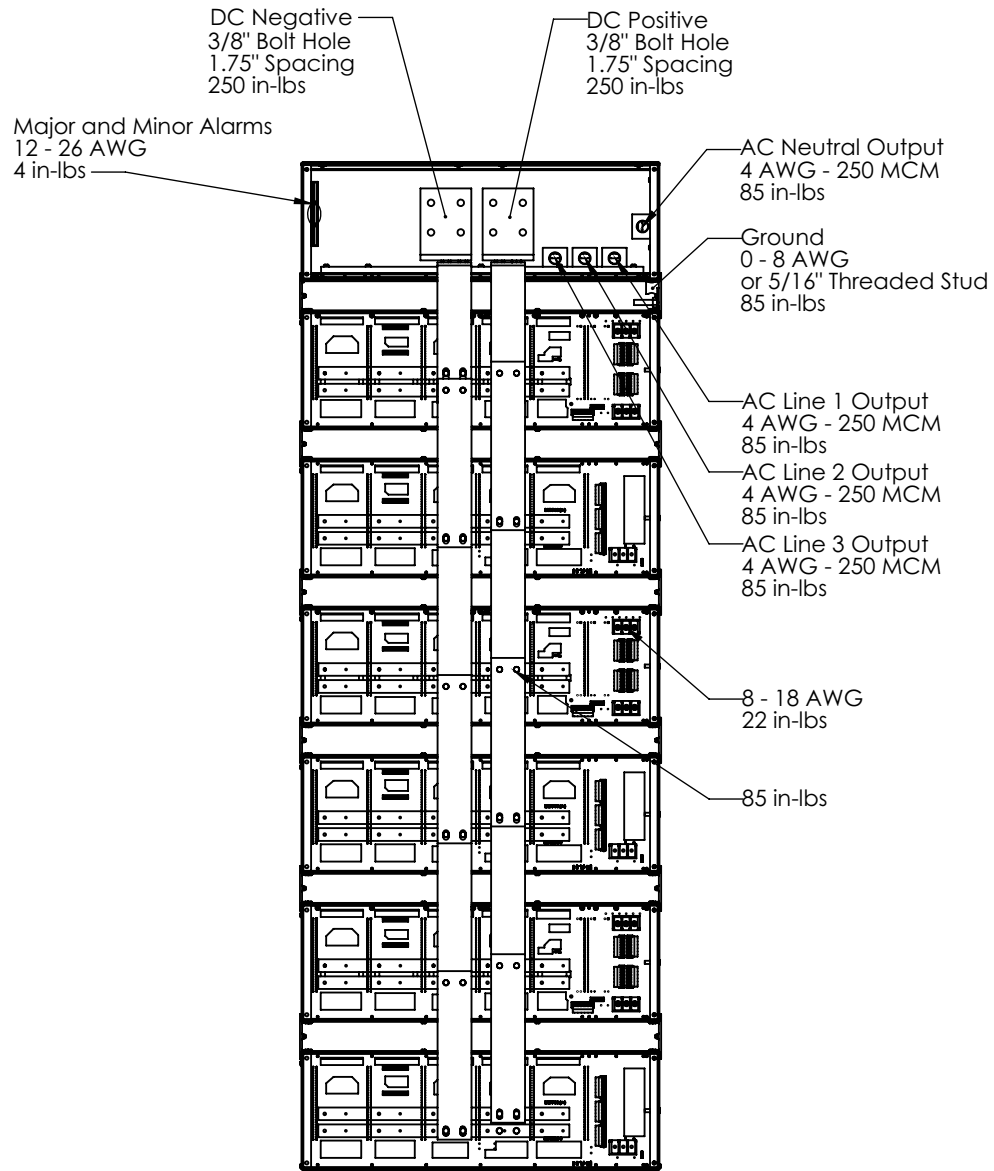


\*Utility connectins not applicable for stand alone inverter applications.  
 \*\*Phase 3 connections not applicable for bi-phase inverters.

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SIZE	DWG. NO.	REV
<b>A</b>	Multi phase, 1 cage per phase	
SCALE: 1:5	WEIGHT:	SHEET 1 OF 1



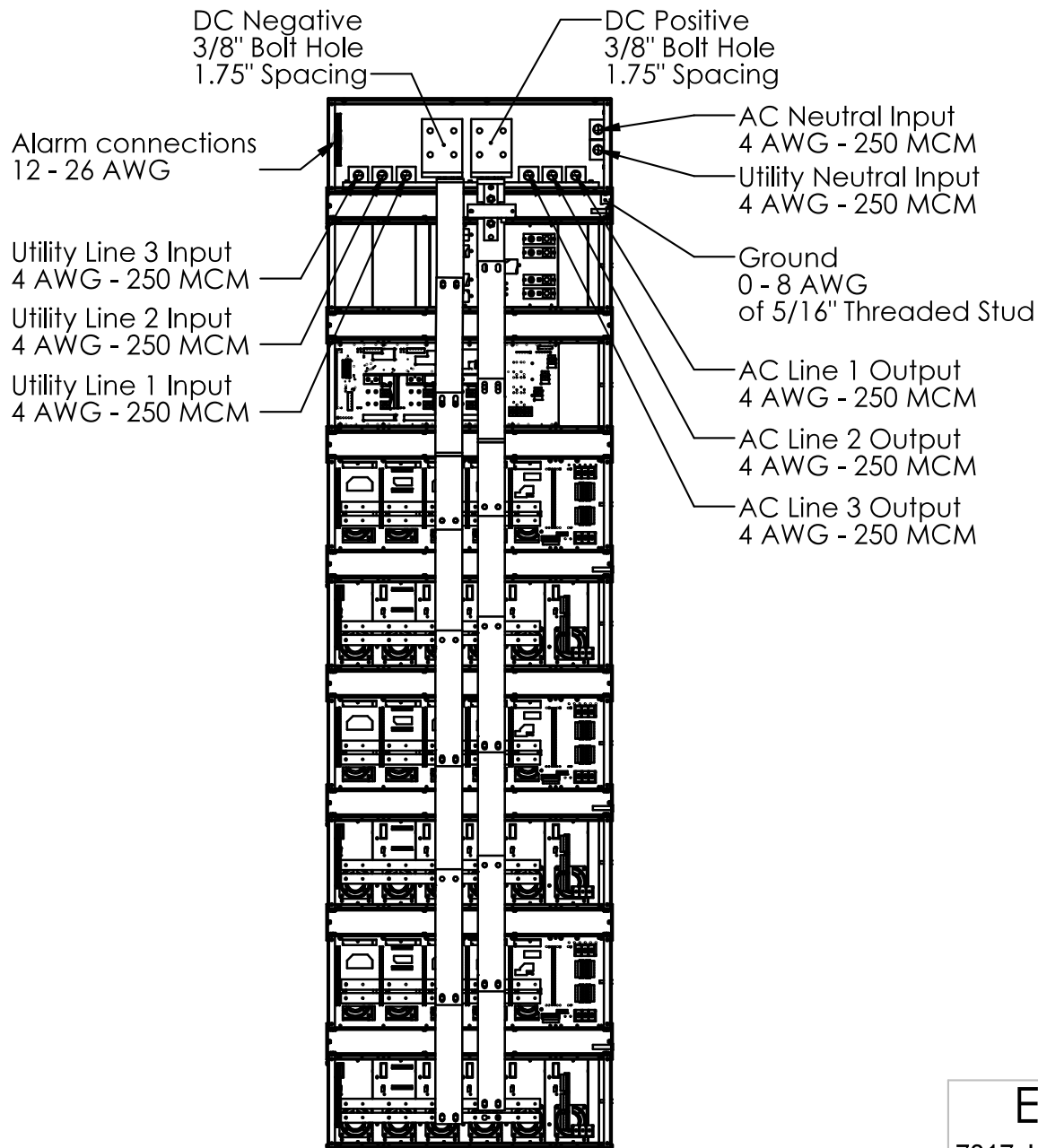


\*\*Phase 3 connections not applicable for bi-phase inverters

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DWG. NO.	Multi Phase, 2 cages per phase, Stand alone
SIZE	A
SCALE:1:24	WEIGHT:
SHEET 1 OF 1	



\*Three phase connections not applicable for bi-phase systems  
 \*\*Remote mounted Exeltech maintenance bypass switch recommended

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7317 JACK NEWELL BLVD N FT. WORTH, TX 76118-7100			
SIZE A	Static Transfer Switch 3 Phase 2 cages per phase		
SCALE	CAD FILE:	SHEET	OF 1