

# Technical Specifications

MGE Galaxy 5000

40–130 kVA 480 V



**APC**<sup>™</sup>  
by Schneider Electric



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# Technical Data

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## Model List

- MGE Galaxy 5000 40 kVA
- MGE Galaxy 5000 50 kVA
- MGE Galaxy 5000 60 kVA
- MGE Galaxy 5000 80 kVA
- MGE Galaxy 5000 100 kVA
- MGE Galaxy 5000 130 kVA

## Input Power Factor

	20% Load		50% Load		75% Load		100% Load	
	Linear load	Non linear load	Linear load	Non linear load	Linear load	Non linear load	Linear load	Non linear load
80 kVA	0.94	0.93	0.99	0.99	0.99	0.99	0.99	0.99
130 kVA	0.87	0.88	0.99	0.99	0.99	0.99	0.99	0.99

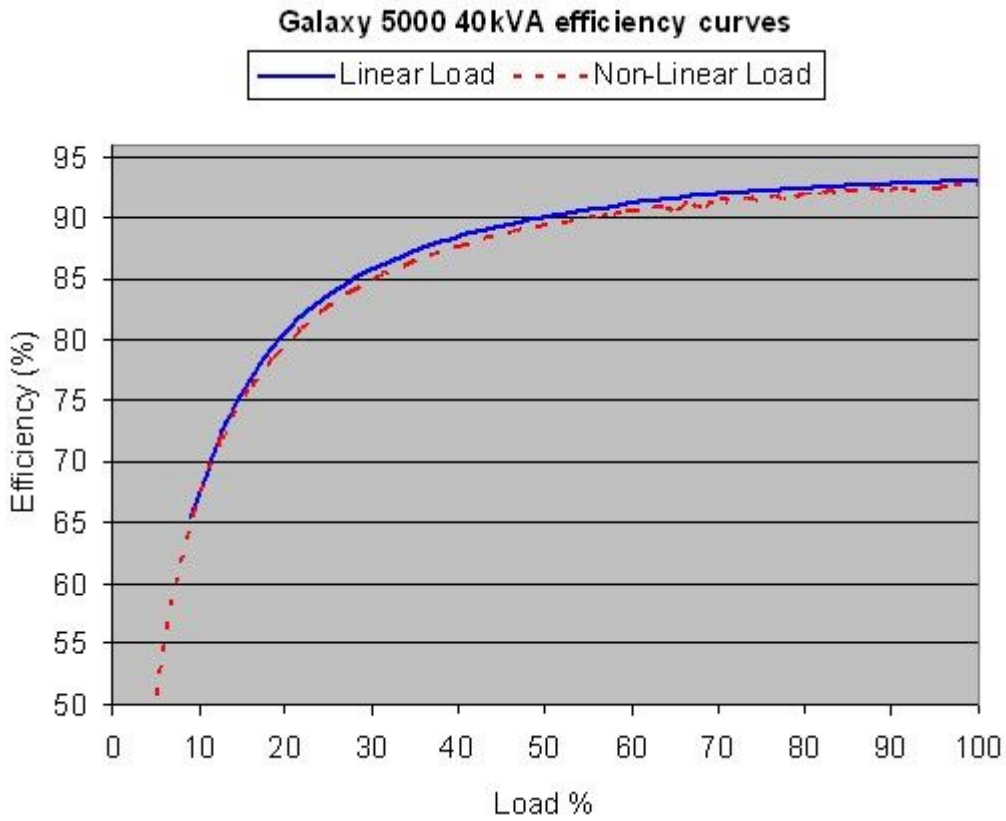
## Efficiency

The table below shows the average system efficiencies with a balanced linear load and  $\text{pf} = 0.9$ .

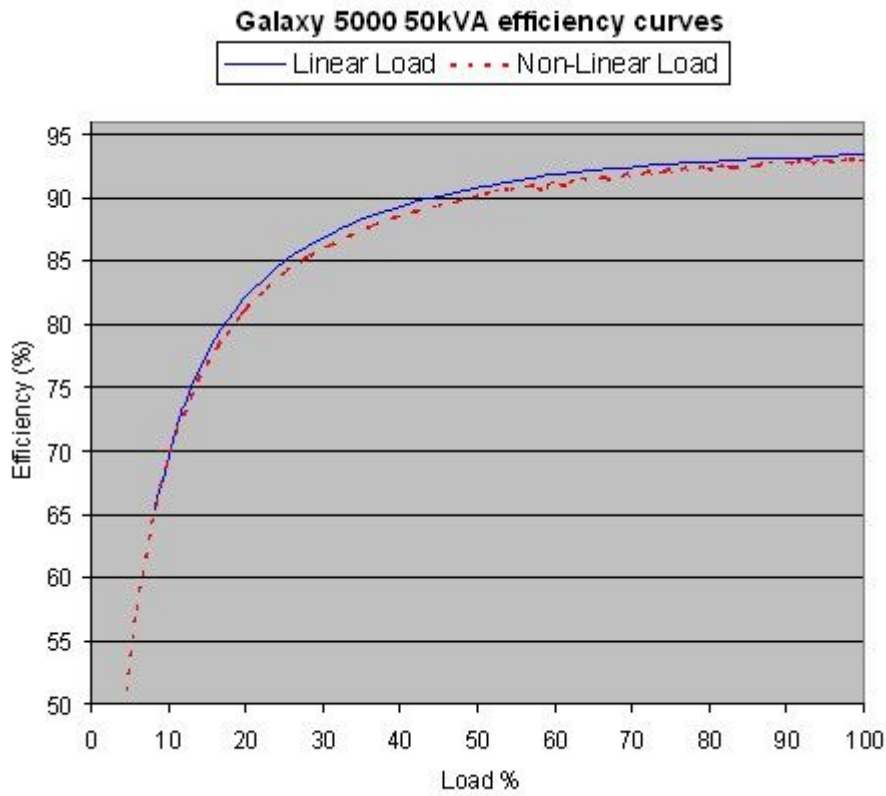
System	25% load	50% load	75% load	100% load
40 kVA	84.23	90.22	92.26	93.16
50 kVA	84.11	90.17	92.27	93.09
60 kVA	87.1	91.48	93.08	93.61
80 kVA	89.28	92.65	93.53	93.72
100 kVA	90.19	93.66	94.38	94.53
130 kVA	91.79	94.27	94.51	94.53

# Efficiency Curves

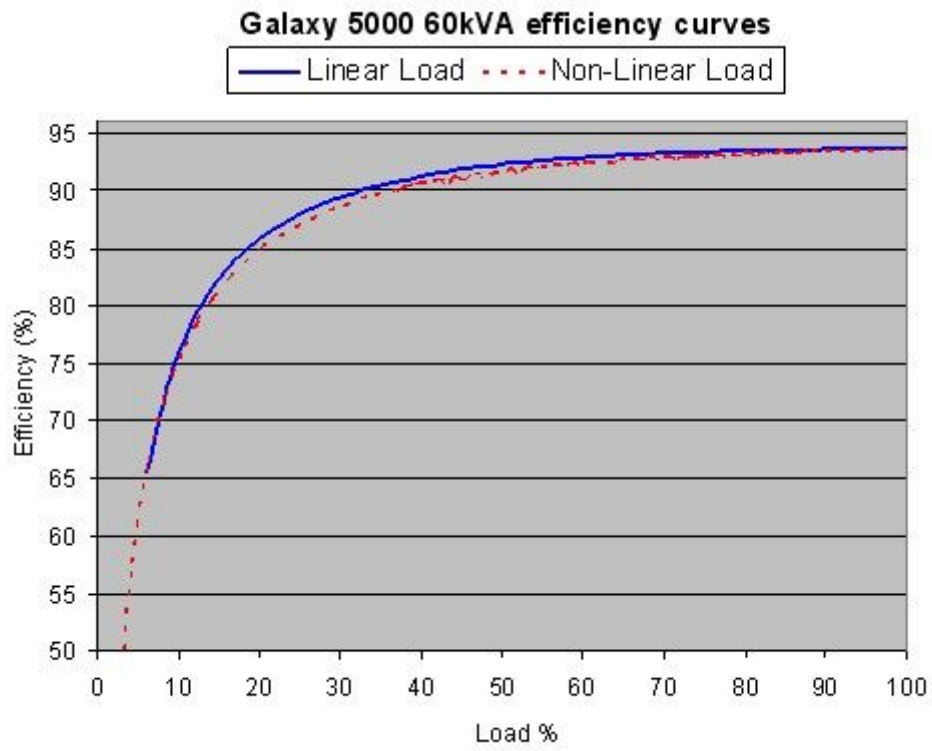
40 kVA 480 V



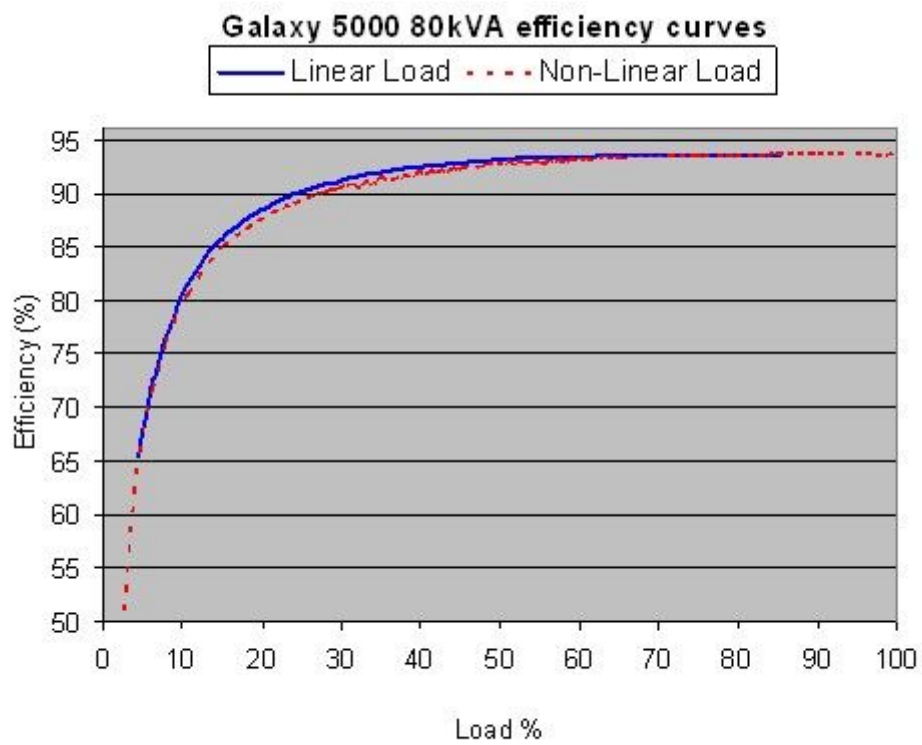
50 kVA 480 V



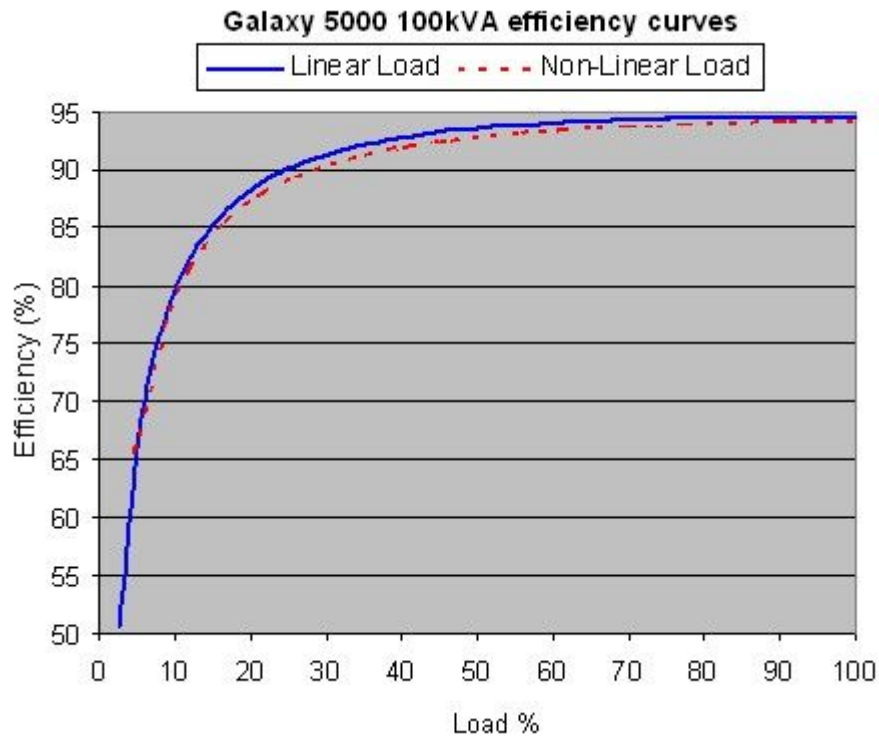
**60 kVA 480 V**



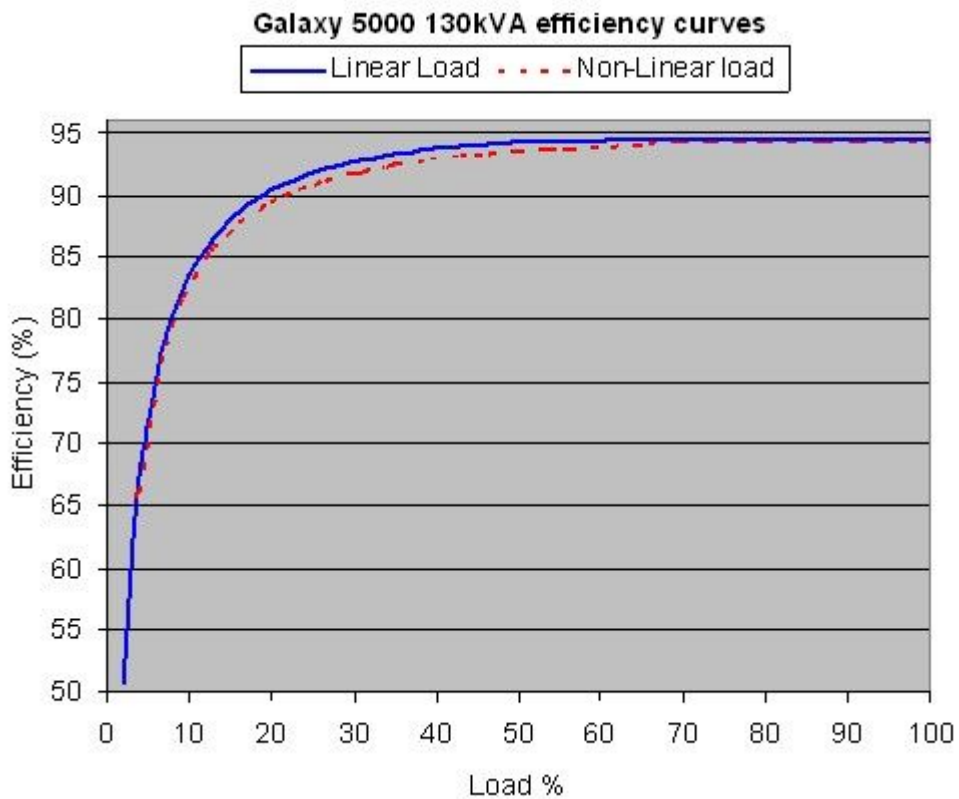
**80 kVA 480 V**



**100 kVA 480 V**



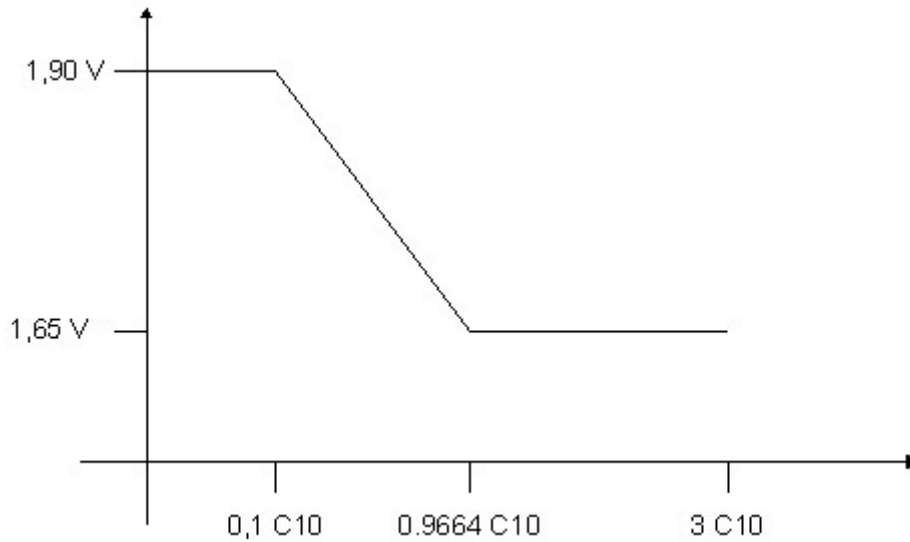
**130 kVA 480 V**





# Batteries

## End of Discharge Voltage



## Battery Material Safety Data Sheet



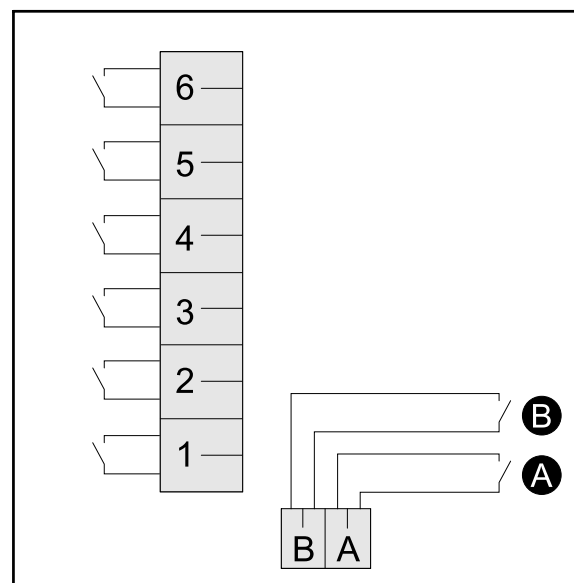
**Note:** For Material Safety Data Sheet (MSDS), go to ["http://nam-en.apc.com/app/answers/detail/a\\_id/564/kw/msds"](http://nam-en.apc.com/app/answers/detail/a_id/564/kw/msds).

# Communication and Management

## Relay Communication Card

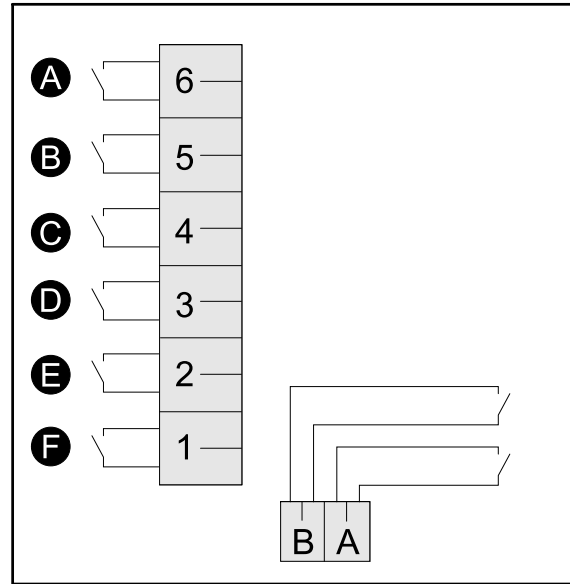
### Input Contacts

- A. UPS OFF
- B. UPS ON



## Output Contacts

- A. General alarm
- B. Battery fault
- C. Load on UPS
- D. Load on automatic bypass
- E. Load on battery power
- F. Low battery warning



## EPO Options

An optional Emergency Power Off or Remote Emergency Power Off can be connected to the UPS system.

Pressing the general shutdown button causes UPS shutdown and opening of the battery circuit breaker (with opening of the bypass static switch depending on customisation settings). The Remote Emergency Power Off (REPO) notion is applicable to installations where pressing the button also causes the upstream Normal AC source and AC bypass source circuit breakers to open. In parallel systems, there must be a single general shutdown button with a separate contact for each UPS unit.

## Compliance

The MGE Galaxy 5000 conforms with the following regulatory approvals:

- cUL Listed
- EN/IEC 62040-1
- EN/IEC 62040-2
- EN/IEC 62040-3
- FCC Part 15 Class A
- ISO 9001
- UL 1778

# Facility Planning

## AC Input

	40 kVA	50 kVA	60 kVA	80 kVA	100 kVA	130 kVA
Nominal input voltage (V)	480	480	480	480	480	480
Input frequency (Hz)	60	60	60	60	60	60
Nominal input current (A) <sup>1</sup>	48	59	71	94	117	151
Max input current (A) <sup>2</sup>	59	70	88	111	150	182
Input current limit (A) <sup>3</sup>	71	84	97	111	164	182
Input phase rotation	A, B, C clockwise					
Input power factor	> 0.98					
THDI	5%	5%	3%	3%	3%	3%
Maximum Short Circuit Withstand (kA)	20				30	
<sup>1</sup> Input current based on rated load and batteries fully charged. <sup>2</sup> Input current based on fully battery recharge, nominal voltage and rated load. <sup>3</sup> Nominal voltage -10% voltage with partial recharge.						

## AC Bypass

	40 kVA	50 kVA	60 kVA	80 kVA	100 kVA	130 kVA
Input frequency (Hz)	60	60	60	60	60	60
Nominal input current (A)	48	59	71	94	117	151

## AC Output

	40 kVA	50 kVA	60 kVA	80 kVA	100 kVA	130 kVA
Nominal input voltage (V)	480	480	480	480	480	480
Overload Capacity	125% for 10 minutes 150% for 1 minute 220% for 1 second					
Nominal output current (A)	48	59	71	94	117	151
Output frequency (Hz)	60					
THDU	≤ 0.5% phase to phase for linear loads ≤ 2 % phase to phase for non-linear loads					

# Batteries

	40 kVA	50 kVA	60 kVA	80 kVA	100 kVA	130 kVA
Nominal voltage (VDC)	432					
End voltage (VDC)	356					
Max. floating voltage (VDC)	490					
I <sub>Nom</sub> discharge <sup>1</sup> (A)	90	113	135	180	225	293
I <sub>Max</sub> discharge <sup>2</sup> (A)	109	137	164	219	273	355

<sup>1</sup> Nominal battery discharge current based on rated load and nominal battery voltage.  
<sup>2</sup> Maximum battery discharge current based on rated load at the end of the discharge.

## Recommended Over Current Protection

	40 kVA					50 kVA				
	208:208	480:208	480:480	600:208	600:600	208:208	480:208	480:480	600:208	600:600
Input (A)	175	80	80	60	60	225	90	90	70	70
Output (A)	150	150	60	150	50	175	175	80	175	60

	60 kVA					80 kVA				
	208:208	480:208	480:480	600:208	600:600	208:208	480:208	480:480	600:208	600:600
Input (A)	300	110	110	90	90	350	150	150	125	125
Output (A)	225	225	90	225	80	300	300	125	200	100

	100 kVA					130 kVA				
	208:208	480:208	480:480	600:208	600:600	208:208	480:208	480:480	600:208	600:600
Input (A)	450	200	200	150	150	600	250	250	200	200
Output (A)	350	350	150	350	125	450	450	200	200	175

## Physical

### Weights and Dimensions

Cabinet	Weight kg (lbs)	Height mm (in)	Width mm (in)	Depth mm (in)
40 kVA	400 (880)	1900 (74.80)	712 (28.03)	848 (33.39)
50 kVA	400 (880)	1900 (74.80)	712 (28.03)	848 (33.39)
60 kVA	400 (880)	1900 (74.80)	712 (28.03)	848 (33.39)
80 kVA	540 (1188)	1900 (74.80)	712 (28.03)	848 (33.39)
100 kVA	540 (1188)	1900 (74.80)	712 (28.03)	848 (33.39)
130 kVA	540 (1188)	1900 (74.80)	712 (28.03)	848 (33.39)

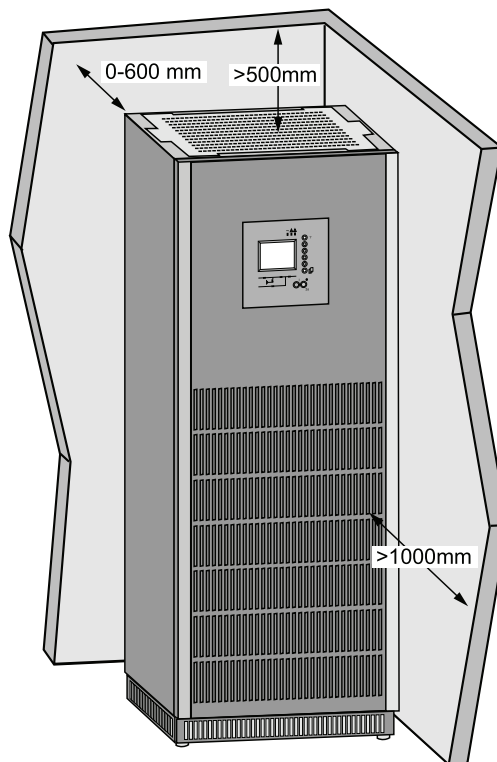
## Shipping Weights and Dimensions

	Weight kg (lbs)	Height mm (in)	Width mm (in)	Depth mm (in)
40 kVA	420 (924)	2030 (79.92)	980 (38.58)	960 (37.80)
50 kVA	420 (924)	2032 (80.00)	978 (38.50)	960 (37.80)
60 kVA	420 (924)	2030 (79.92)	980 (38.58)	960 (37.80)
80 kVA	540 (1188)	2030 (79.92)	980 (38.58)	960 (37.80)
100 kVA	540 (1188)	2030 (79.92)	980 (38.58)	960 (37.80)
130 kVA	540 (1188)	2057 (81)	813 (32)	950 (37.40)

## Clearance



**Note:** Clearance dimensions are published for airflow and service access only. Consult with the local safety codes and standards for additional requirements in your local area.



## Environmental

Operating Temperature	0 - 40 °C (32-104°F)
Storage Temperature	-20 - 45 °C (-4-113°F)
Operating Relative Humidity	0 - 95%, non-condensing
Storage Relative Humidity	0 - 95%, non-condensing
Operating Elevation	0-1000 m (0-3000 ft): 100% load At 1500 m (4500 ft): 85% load At 2000 m (6000 ft): 79% load At 2300 m (7500 ft): 75% load At 3000 m (10000 ft): 69% load At 4000 m (13000 ft): 59% load
Storage Elevation	0-12000 meters (0-40000 ft )
Audible noise at 100% load – 1 meter from surface of unit 40 kVA 480 V 50 kVA 480 V 60 kVA 480 V 80 kVA 480 V 100 kVA 480 V 130 kVA 480 V	63 dBA 63 dBA 63 dBA 63 dBA 65 dBA 65 dBA
Protection Class	IP20
Colour	Charcoal

## Heat Dissipation

	40 kVA	50 kVA	60 kVA	80 kVA	100 kVA	130 kVA
Typical losses (kW)	2.63	3.23	3.75	4.92	5.24	6.81
Heat dissipation (BTU/hr)	8974	11021	12796	16788	17880	23237

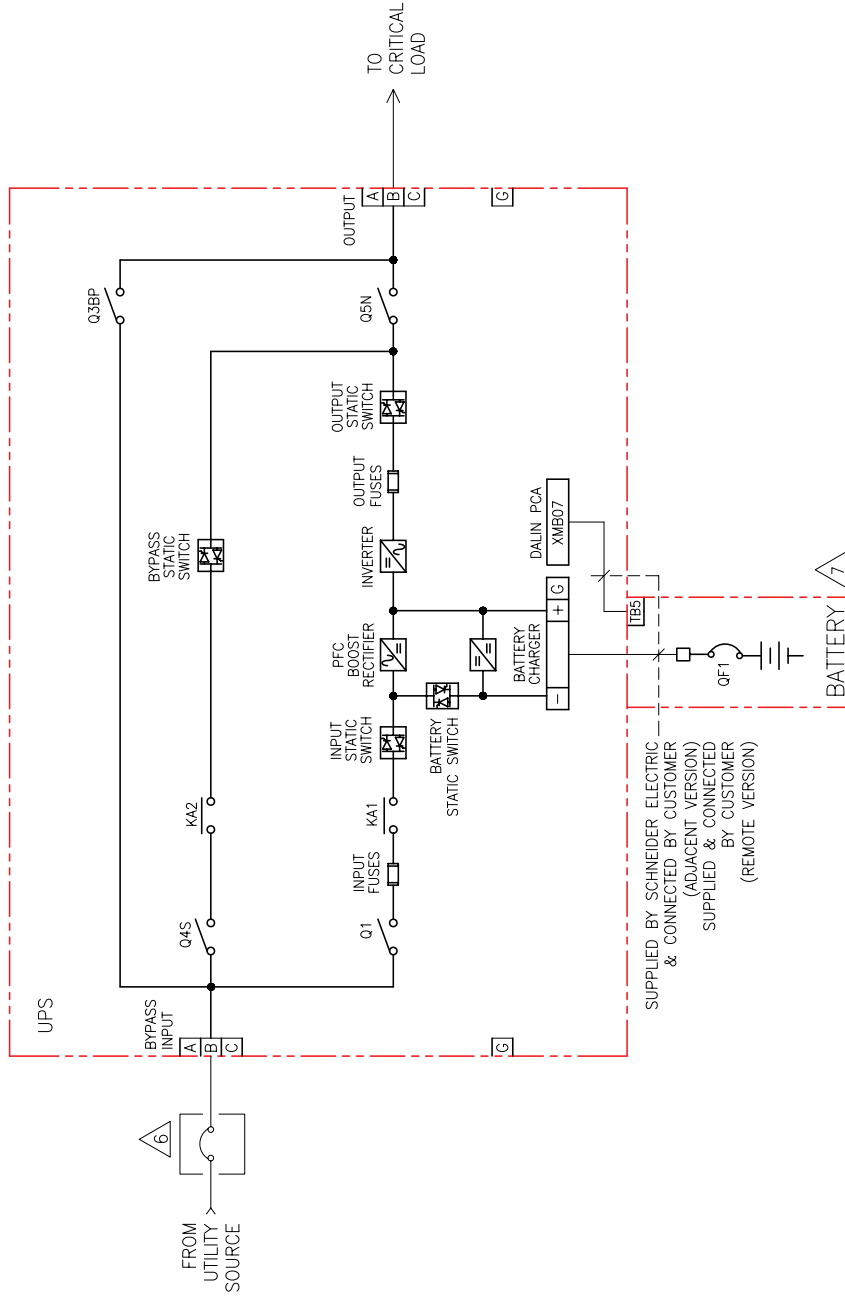
# Drawings

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**Note:** A comprehensive set of drawings is available on the engineering website at [www.engineer.apc.com](http://www.engineer.apc.com).

# MGE Galaxy 5000 480 V Single Mains



SUPPLIED BY SCHNEIDER ELECTRIC  
& CONNECTED BY CUSTOMER  
(ADJACENT VERSION)  
SUPPLIED & CONNECTED  
BY CUSTOMER  
(REMOTE VERSION)

**NOTES: UNLESS OTHERWISE SPECIFIED.**

1. INSTALLATION SHALL COMPLY WITH ALL APPLICABLE NATIONAL AND LOCAL CODES.
2. PLEASE REFER TO PRODUCT MANUALS FOR ADDITIONAL DETAILS.
3. ALL EXTERNAL WIRING BY CUSTOMER.
4. CUSTOMER IS RESPONSIBLE FOR CONNECTING ALL SCHNEIDER ELECTRIC SUPPLIED CABLES.
5. POWER AND CONTROL CABLES SHALL BE IN SEPARATE CONDUITS.
6. UPSTREAM PROTECTIVE DEVICE REQUIRED. PROVIDED BY CUSTOMER.
7. ONE CABLET SHOWN. FOR UP TO FOUR (4) BATTERY ENCLOSURE CONNECTIONS.  
REFER TO DRAWINGS 90-174701-00 OR 90-174701-01.
8. REFER TO DRAWING NO. 90-174700-00-ED FOR AND ELECTRICAL DATA, VARIOUS INPUT SOURCE REQUIREMENT AND HIGH RESISTANCE GROUNDING APPLICATION DETAILS.

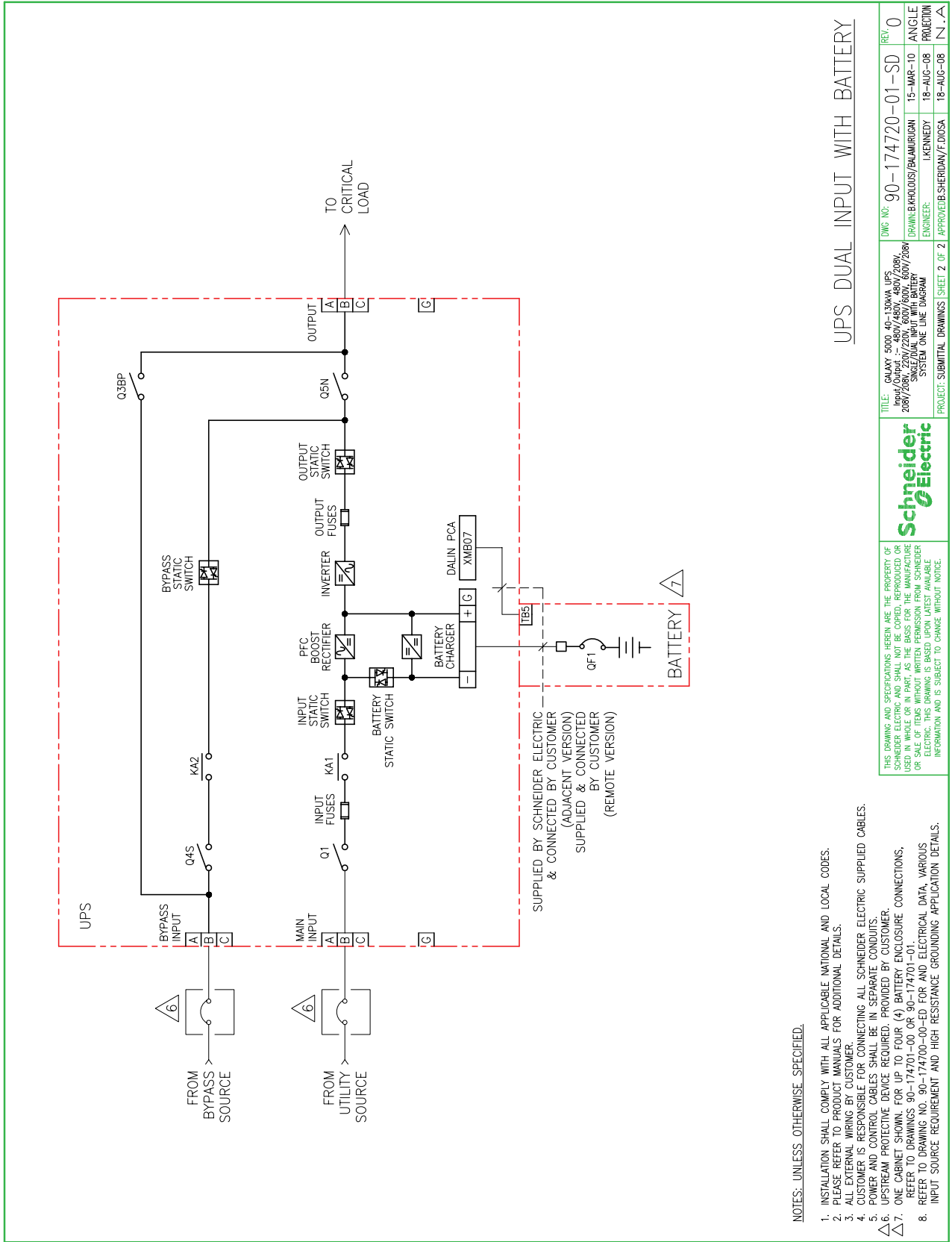
**UPS SINGLE INPUT WITH BATTERY**

	TITLE: GALAXY 5000 40-150kVA UPS UPS/208V/220V/220V/600V/600V/600V/208V SINGLE/DUAL INPUT WITH BATTERY SYSTEM ONE LINE DIAGRAM	DWG NO: 90-174720-00-S0 REV: 0
	DRAWN BY: KHLOUSI/SALMURQAN ENGINEER: I. KENNEDY PROJECT: SUBMITTAL DRAWINGS SHEET 1 OF 2 APPROVED BY: SHERIDAN/F. DIOSA	15-MAR-10 18-AUG-08 18-AUG-08 ANGLE PRODUCTION N.A.

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# MGE Galaxy 5000 480 V Dual Mains



NOTES: UNLESS OTHERWISE SPECIFIED.

1. INSTALLATION SHALL COMPLY WITH ALL APPLICABLE NATIONAL AND LOCAL CODES.
2. PLEASE REFER TO PRODUCT MANUALS FOR ADDITIONAL DETAILS.
3. ALL EXTERNAL WIRING BY CUSTOMER.
4. CUSTOMER IS RESPONSIBLE FOR CONNECTING ALL SCHNEIDER ELECTRIC SUPPLIED CABLES.
5. POWER AND CONTROL CABLES SHALL BE IN SEPARATE CONDUITS.
6. UPSTREAM PROTECTIVE DEVICE REQUIRED, PROVIDED BY CUSTOMER.
7. ONE CABINET SHOWN. FOR UP TO FOUR (4) BATTERY ENCLOSURE CONNECTIONS, REFER TO DRAWINGS 90-174701-00 OR 90-174701-01.
8. REFER TO DRAWING NO. 90-174700-00-ED FOR AND ELECTRICAL DATA, VARIOUS INPUT SOURCE REQUIREMENT AND HIGH RESISTANCE GROUNDING APPLICATION DETAILS.

## UPS DUAL INPUT WITH BATTERY

	TITLE: GALAXY 5000 40-130kVA UPS Input/Output: 480V/480V, 480V/208V, 208V/208V SYSTEM: SINGLE/PHASE WITH BATTERY SYSTEM ONE LINE DIAGRAM	DWG NO: 90-174720-01-SD	REV: 0
	DRAWN: B.KHLOUS/BALAMURUGAN ENGINEER: L.KENEDY	15-MAR-10	ANGLE PROJECTION
	PROJECT: SUBMITTAL DRAWINGS SHEET 2 OF 2 APPROVED: B.SHERIDAN/F.DIOSA	18-AUG-08	N.A

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# Options

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## Hardware Options

### Battery Cabinets

MGE Galaxy 5000 Empty Battery Cabinet

MGE Galaxy 5000 Battery Cabinet 480 V

### Auxiliary Cabinets

MGE Galaxy 5000 Empty Auxiliary Cabinet

MGE Galaxy 5000 40 kVA Auxiliary Cabinet

MGE Galaxy 5000 50 kVA Auxiliary Cabinet

MGE Galaxy 5000 60 kVA Auxiliary Cabinet

MGE Galaxy 5000 80 kVA Auxiliary Cabinet

MGE Galaxy 5000 100 kVA Auxiliary Cabinet

MGE Galaxy 5000 130 kVA Auxiliary Cabinet

### External Bypass

MGE Galaxy 5000 External Bypass

### Management Cards

MGE JBus/Modbus Card

MGE Alarm Relay Card

MGE SNMP/Web Card

MGE PowerServices TelPac Card

MGE U-Talk/Basic Acquisition Card

MGE Environment Sensor for Network Management Cable

### Transformers

Isolation Transformer assembled in a 710 mm cubicle 40–130 kVA

Isolation Transformer assembled in a 710 mm cubicle. It protects liquid sprays <15 degrees from vertical (IP32)

# Configuration Options

- Parallel system bypass cabinets
- 65kAIC rating
- IP 32 rated cabinets
- External maintenance bypass
- Wall mounted or stand alone
- Remote alarm status panel (RASP)
- Remote summary alarm panel (RSAP)
- 42 pole distribution in a matching cabinet
- Seismic anchors
- Top cable entry cabinet
- Communications cards
- Advanced power management software

# APC by Schneider Electric Limited Factory Warranty

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## Three Phase Power Products or Cooling Solutions One-Year Factory Warranty

The limited warranty provided by APC by Schneider Electric (APC®) in this Statement of Limited Factory Warranty applies only to products you purchase for your commercial or industrial use in the ordinary course of your business.

### Terms of Warranty

American Power Conversion warrants that the product shall be free from defects in materials and workmanship for a period of one year from the date of product start-up when start-up is performed by APC authorized service personnel and occurs within six months of The APC shipment date. This warranty covers repairing or replacing any defective parts including on-site labor and travel. In the event that the product fails to meet the foregoing warranty criteria, the warranty covers repairing or replacing defective parts at the sole discretion of APC for a period of one year from the shipment date. For APC cooling solutions, this warranty does not cover circuit breaker resetting, loss of refrigerant, consumables, or preventive maintenance items. Repair or replacement of a defective product or part thereof does not extend the original warranty period. Any parts furnished under this warranty may be new or factory-remanufactured.

### Non-transferable Warranty

This warranty is extended to the first person, firm, association or corporation (herein referred to by “You” or “Your”) for whom the APC product specified herein has been purchased. This warranty is not transferable or assignable without the prior written permission of APC.

### Assignment of Warranties

APC will assign you any warranties which are made by manufacturers and suppliers of components of the APC product and which are assignable. Any such warranties are assigned “AS IS” and APC makes no representation as to the effectiveness or extent of such warranties, assumes no responsibility for any matters which may be warranted by such manufacturers or suppliers and extends no coverage under this Warranty to such components.

### Drawings, Descriptions

APC warrants for the warranty period and on the terms of the warranty set forth herein that the APC product will substantially conform to the descriptions contained in the APC Official Published Specifications or any of the drawings certified and agreed to by contract with APC if applicable thereto (“Specifications”). It is understood that the Specifications are not warranties of performance and not warranties of fitness for a particular purpose.

### Exclusions

APC shall not be liable under the warranty if its testing and examination disclose that the alleged defect in the product does not exist or was caused by end user or any third person misuse, negligence, improper

installation or testing. Further APC shall not be liable under the warranty for unauthorized attempts to repair or modify wrong or inadequate electrical voltage or connection, inappropriate on-site operation conditions, corrosive atmosphere, repair, installation, start-up by non-APC designated personnel, a change in location or operating use, exposure to the elements, Acts of God, fire, theft, or installation contrary to APC recommendations or specifications or in any event if the APC serial number has been altered, defaced, or removed, or any other cause beyond the range of the intended use.

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## **Warranty Claims**

Customers with warranty claims issues may access the APC worldwide customer support network through the APC web site: “”. Select your country from the country selection pull-down menu. Open the Support tab at the top of the web page to obtain contact information for customer support in your region.

## **Worldwide Customer Support**

Customer support is available at no charge via e-mail or telephone. Contact information is available at [www.apc.com/support/contact](http://www.apc.com/support/contact)

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