



La MARCHÉ®

ISO 9001:2000 CERTIFIED

Model A32P / A32S Uninterruptible Power Supply (UPS) for Fire Alarm and Security Systems

Model A32P / A32S Uninterruptible Power Supply



Model shown A32P-1.5K-48VBC-A6-8-24

Standard Features

- Rectifier & Inverter U.L. 1481 Listed for Fire Alarm System
- High Quality Sine Wave
- Ferroresonant Design
- Automatic Electronic Transfer Switch
- Local & Remote Alarms
- LED Indicators & Switches
- Line Regulation & Load Regulation
- Environmental:
 - Operating Temperature: 0 to 50°C (32 to 122°F)
 - Storage Temperature: -20 to 60°C (-2 to 140°F)
 - Relative Humidity: 0 to 95% non-condensing
- NEMA 1 Enclosure ANSI 61 Gray Baked Enamel Paint
- 5 Year Limited Warranty

The La Marche model A32 series is an Uninterruptible Power Supply system designed to power critical AC loads. Modular in concept, it utilizes separate rectifier and inverter components allowing for simplicity in sizing and growth for various requirements.

All sub-system components (rectifiers and inverters) utilize a 48VDC bus and are listed under the UL 1481 Fire Protective Signaling Standard, making them ideal for central station and critical alarm system applications.

The La Marche model A31 Inverter is compact and supplies a sine wave output. It provides reliability through transistor switching and a ferroresonant transformer which has inherent voltage regulation, output filtering and overload protection.

The La Marche A36D Rectifier (Charger) uses controlled ferroresonant technology, with separate adjustable voltage settings for float and equalize. It provides high efficiency, high power factor, short circuit protection, and an integral alarm package.

Available for primary or standby operation, the A32 series provides the highest form of reliable UPS protection for fire protective signaling applications.

U.L. 1481 Listed for Fire Alarm System

La Marche Manufacturing Company
106 Bradrock Drive, Des Plaines, IL 60018-1967
Tel: 847-299-1188 Toll Free Fax: 1-888-232-9562
sales@lamarchemfg.com www.lamarchemfg.com

Made in U.S. A.

A31 DC-AC Inverter

AC Output Voltage

120 Volt nominal, single phase.

Design Features

Regulation

Line : ± 3 Over DC battery range.
Load : ± 4 % from no load to full load

Output Power Factor

Rated volts-amps continuous for unity to 0.8 lagging.

Frequency: 60 Hz

Frequency Regulation

± 0.5 % of the rated value and line synchronization- Quartz Crystal Control.

Wave Shape: Sine Wave

Total Harmonic Distortion (THD)

5% at nominal DC input and full load; less than 3% any single harmonic.

Approximate Efficiency: 85% to 90%

Noise: Less than 32 DBRN

*Refer to the A31 Data Sheet for further details.

Protection

Inverter Input DC Breaker

Inverter Output AC Breaker

DC Undervoltage/Overvoltage Shutdown

Current Limit Protection

Reverse Polarity Indicator/filter precharge circuit.

A36D Rectifier / Power Supply

AC Input Voltage

120/208/240 Volt, single phase, 60 Hz.
(some models 120 Volt only)

Design Features

Steady-State

± 0.5 % from no load to full load over the specified input voltage, frequency, and ambient temperature ranges

Dynamic Response on Battery

Maximum voltage transient will not exceed ± 5 % of the initial steady-state voltage for a step change from 20% to 100% of the full rated load.

Current Walk In

Output current will gradually increase after the charger is turned on eliminating surges and overshoot.

Temperature Compensation

5 step @ 1mVpc/ $^{\circ}$ C

Protection

Current Limit, AC Breaker and DC Breaker.

Alarm Status Panel

Equalize Indicator

Float Indicator

AC "ON" Indicator
Low Current Alarm Indicator

Low DC Voltage Alarm Indicator

High DC Voltage Alarm Indicator

Summary Rectifier Fail Alarm Indicator

*Refer to the A36D Data Sheet for further details.

Transfer Switches

1MS ELECTRONIC STATIC SWITCH

(provided on 1KVA and larger)

The La Marche Electronic Static Switch is an Automatic device that will transfer an AC load to and from the Prime Source to an Alternate Source, if the Prime Source fails in a rapid 1ms. The Static Transfer Switch is provided on the La Marche A31 DC to AC Inverters. Whether your Prime Source is established as your AC commercial line or the A31 Inverter, the Static Switch can be calibrated for either Source at the factory or at your site.

LED Indicators

- Phase lock
- Utility Available
- Inverter Available
- Load on preferred source
- Load on alternate source

15ms Electronic Static Switch

(provided on 500VA & 750VA)

An electronic load transfer switch is provided with approximately 15ms transfer time to switch the load from the inverter stage to the bypass source or from the bypass source to the inverter. Load voltage is sensed and power is transferred to the AC bypass source or the inverter. When the voltage is out of the specified value for longer than 15ms. This transfer point is adjustable by potentiometer. Retransfer is automatic after a time delay when both AC sources are available.

LED Indicators

- Bypass Available
- Inverter Available
- Load on alternate source

A32P - PRIME SYSTEMS

UPS System Model Number	KVA	AC Output		Battery Charger U.L. 1481 Listed			Inverter U.L. 1481 Listed			Approx System Weight	No. of Battery Trays	*Backup Time Range in Hrs	Approx. Battery Amp Hrs.
		Volts	Amps	Model Number	AC Input		Model Number	DC Input Amps					
					Volts	Amps		N. L.	F. L.				
"Prime" UPS System 24Hr Recharge													
A32P-500-48VBC-A6-2-24	0.5	120	4.17	A36D-15-48V-A1-24L	120	10.0	A31-500-48V-A6-24L	2.5	15.0	355	1	0.25 - 2	40
A32P-500-48VBC-A6-8-24	0.5	120	4.17	A36D-20-48V-ABD1-24L	120/208/240	13.4/7.7/6.7	A31-500-48V-A6-24L	2.5	15.0	363	1	4 - 8	72 - 125
A32P-500-48VBC-A6-24-24	0.5	120	4.17	A36D-30-48V-ABD1-24L	120/208/240	20.0/11.6/10.0	A31-500-48V-A6-24L	2.5	15.0	328	-	24	312
A32P-750-48VBC-A6-4-24	0.75	120	6.25	A36D-25-48V-ABD1-24L	120/208/240	16.8/9.7/8.4	A31-750-48V-A6-24L	3.5	22.0	375	1	0.25 - 4	40 - 105
A32P-750-48VBC-A6-8-24	0.75	120	6.25	A36D-30-48V-ABD1-24L	120/208/240	20.0/11.6/10.0	A31-750-48V-A6-24L	3.5	22.0	428	2	8	210
A32P-750-48VBC-A6-24-24	0.75	120	6.25	A36D-50-48V-ABD1-24L	120/208/240	33.6/19.4/16.8	A31-750-48V-A6-24L	3.5	22.0	380	-	24	520
A32P-1K-48VBC-A6-4-24	1	120	8.33	A36D-30-48V-ABD1-24L	120/208/240	20.0/11.6/10.0	A31-1K-48V-A6-24L	5.0	28.0	408	1	0.25 - 4	40 - 125
A32P-1K-48VBC-A6-8-24	1	120	8.33	A36D-50-48V-ABD1-24L	120/208/240	33.6/19.4/16.8	A31-1K-48V-A6-24L	5.0	28.0	500	2	8	300
A32P-1K-48VBC-A6-24-24	1	120	8.33	A36D-75-48V-ABD1-24L	120/208/240	50.4/29.1/25.2	A31-1K-48V-A6-24L	5.0	28.0	485	-	24	615
A32P-1.5K-48VBC-A6-2-24	1.5	120	12.5	A36D-50-48V-ABD1-24L	120/208/240	33.6/19.4/16.8	A31-1.5K-48V-A6-24L	7.0	40.0	470	1	0.25 - 2	40 - 105
A32P-1.5K-48VBC-A6-8-24	1.5	120	12.5	A36D-50-48V-ABD1-24L	120/208/240	33.6/19.4/16.8	A31-1.5K-48V-A6-24L	7.0	40.0	515	2	4 - 8	208 - 310
A32P-1.5K-48VBC-A6-24-24	1.5	120	12.5	A36D-100-48V-ABD1-24L	120/208/240	67.2/38.8/33.6	A31-1.5K-48V-A6-24L	7.0	40.0	526	-	24	896
A32P-2K-48VBC-A6-0.5-24	2	120	16.67	A36D-50-48V-ABD1-24L	120/208/240	33.6/19.4/16.8	A31-2K-48V-A6-24L	10.0	54.0	525	1	0.25 - 0.5	40 - 72
A32P-2K-48VBC-A6-2-24	2	120	16.67	A36D-75-48V-ABD1-24L	120/208/240	50.4/29.1/25.2	A31-2K-48V-A6-24L	10.0	54.0	605	1	2	155
A32P-2K-48VBC-A6-4-24	2	120	16.67	A36D-75-48V-ABD1-24L	120/208/240	50.4/29.1/25.2	A31-2K-48V-A6-24L	10.0	54.0	650	2	4	250
A32P-2K-48VBC-A6-8-24	2	120	16.67	A36D-75-48V-ABD1-24L	120/208/240	50.4/29.1/25.2	A31-2K-48V-A6-24L	10.0	54.0	555	-	8	432
A32P-2K-48VBC-A6-24-24	2	120	16.67	A36D-100-48V-ABD1-24L	120/208/240	67.2/38.8/33.6	A31-2K-48V-A6-24L	10.0	54.0	581	-	24	1096
A32P-3K-48VBC-A6-0.5-24	3	120	25.0	A36D-100-48V-ABD1-24L	120/208/240	67.2/38.8/33.6	A31-3K-48V-A6-24L	13.0	81.0	726	1	0.25 - 0.5	40 - 72
A32P-3K-48VBC-A6-2-24	3	120	25.0	A36D-100-48V-ABD1-24L	120/208/240	67.2/38.8/33.6	A31-3K-48V-A6-24L	13.0	81.0	771	2	2	208
A32P-3K-48VBC-A6-8-24	3	120	25.0	A36D-100-48V-ABD1-24L	120/208/240	67.2/38.8/33.6	A31-3K-48V-A6-24L	13.0	81.0	676	-	4 - 8	432 - 696
A32P-3K-48VBC-A6-24-24	3	120	25.0	A36D-100-48V-ABD1-24L ^(X2)	120/208/240	67.2/38.8/33.6	A31-3K-48V-A6-24L	13.0	81.0	967	-	24	1800
A32P-4K-48VBC-A6-0.5-24	4	120	33.3	A36D-100-48V-ABD1-24L	120/208/240	67.2/38.8/33.6	A31-4K-48V-A6-24L	15.0	106.0	766	1	0.25 - 0.5	72 - 90
A32P-4K-48VBC-A6-2-24	4	120	33.3	A36D-100-48V-ABD1-24L	120/208/240	67.2/38.8/33.6	A31-4K-48V-A6-24L	15.0	106.0	811	2	2	310
A32P-4K-48VBC-A6-8-24	4	120	33.3	A36D-75-48V-ABD1-24L ^(X2)	120/208/240	50.4/29.1/25.2	A31-4K-48V-A6-24L	15.0	106.0	950	-	4 - 8	520 - 896
A32P-4K-48VBC-A6-24-24	4	120	33.3	A36D-100-48V-ABD1-24L ^(X2)	120/208/240	67.2/38.8/33.6	A31-4K-48V-A6-24L	15.0	106.0	1007	-	24	2400
A32P-5K-48VBC-A6-0.5-24	5	120	41.67	A36D-75-48V-ABD1-24L ^(X2)	120/208/240	50.4/29.1/25.2	A31-5K-48V-A6-24L	16.0	132.0	1025	1	0.25 - 0.5	72 - 125
A32P-5K-48VBC-A6-4-24	5	120	41.67	A36D-75-48V-ABD1-24L ^(X2)	120/208/240	50.4/29.1/25.2	A31-5K-48V-A6-24L	16.0	132.0	980	-	2 - 4	432 - 608
A32P-5K-48VBC-A6-8-24	5	120	41.67	A36D-100-48V-ABD1-24L ^(X2)	120/208/240	67.2/38.8/33.6	A31-5K-48V-A6-24L	16.0	132.0	1037	-	8	1096

Note: Backup time - range indicates the range of backup times that the systems can be used for. Example: A32P-500-48VBC-A6-8-24 can be used for applications of 4 Hrs - 8 Hrs.

(X2) = Two chargers per system.

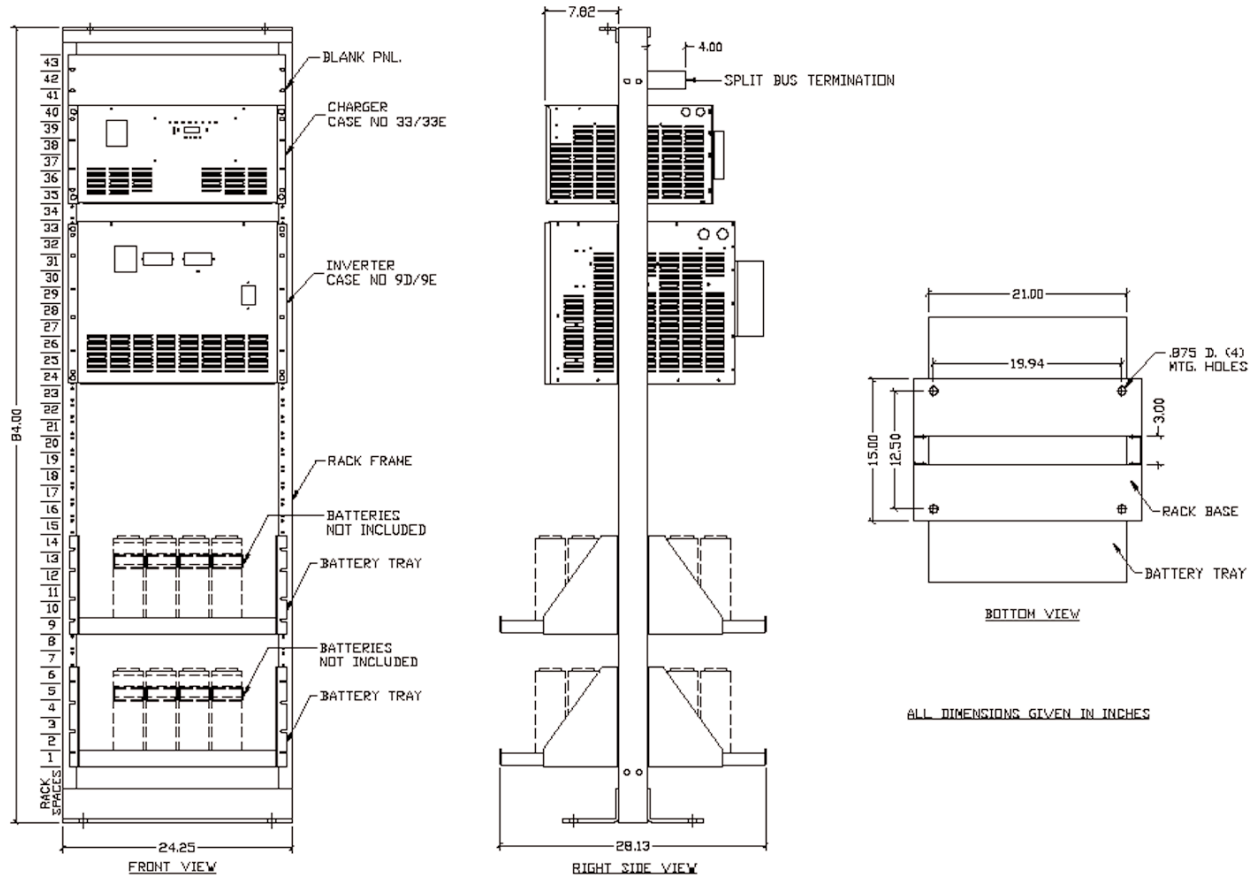
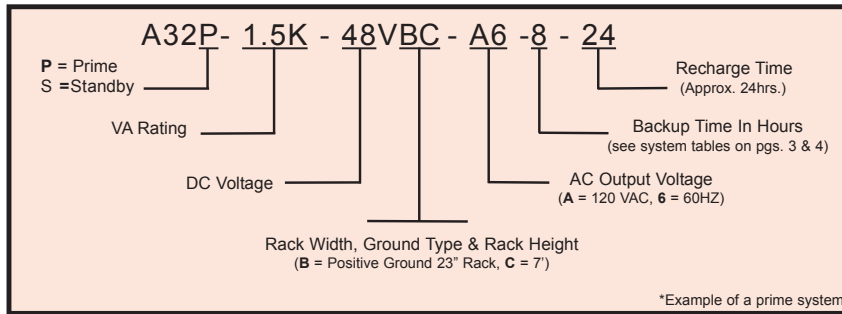
A32S - STANDBY SYSTEMS

UPS System Model Number	KVA	AC Output		Battery Charger U.L. 1481 Listed			Inverter U.L. 1481 Listed			Approx System Weight	No. of Battery Trays	* Backup Time Range in Hours	Approx. Battery Amp Hrs.
		Volts	Amps	Model Number	AC Input		Model Number	DC Input Amps					
					Volts	Amps		N. L.	F. L.				
"Standby" UPS System 24Hr Recharge													
A32S-500-48VBC-A6-8-24	0.5	120	4.17	A36D-10-48V-A1-24L	120	6.7	A31-500-48V-A6-24L	2.5	15.0	309	1	0.25 - 8	40 - 125
A32S-500-48VBC-A6-24-24	0.5	120	4.17	A36D-20-48V-ABD1-24L	120/208/240	13.4/7.7/6.7	A31-500-48V-A6-24L	2.5	15.0	313	-	24	312
A32S-750-48VBC-A6-4-24	0.75	120	6.25	A36D-10-48V-A1-24L	120	6.7	A31-750-48V-A6-24L	3.5	22.0	314	1	0.25 - 4	40 - 104
A32S-750-48VBC-A6-8-24	0.75	120	6.25	A36D-15-48V-A1-24L	120	10	A31-750-48V-A6-24L	3.5	22.0	405	2	8	210
A32S-750-48VBC-A6-24-24	0.75	120	6.25	A36D-30-48V-ABD1-24L	120/208/240	20.0/11.6/10.0	A31-750-48V-A6-24L	3.5	22.0	333	-	24	520
A32S-1K-48VBC-A6-4-24	1	120	8.33	A36D-10-48V-A1-24L	120	6.7	A31-1K-48V-A6-24L	5.0	28.0	339	1	0.25 - 4	40 - 125
A32S-1K-48VBC-A6-8-24	1	120	8.33	A36D-15-48V-A1-24L	120	10	A31-1K-48V-A6-24L	5.0	28.0	430	2	8	250
A32S-1K-48VBC-A6-24-24	1	120	8.33	A36D-50-48V-ABD1-24L	120/208/240	33.6/19.4/16.8	A31-1K-48V-A6-24L	5.0	28.0	405	-	24	608
A32S-1.5K-48VBC-A6-2-24	1.5	120	12.5	A36D-10-48V-A1-24L	120	6.7	A31-1.5K-48V-A6-24L	7.0	40.0	354	1	0.25 - 2	40 - 104
A32S-1.5K-48VBC-A6-4-24	1.5	120	12.5	A36D-15-48V-A1-24L	120	10.0	A31-1.5K-48V-A6-24L	7.0	40.0	445	2	4	208
A32S-1.5K-48VBC-A6-8-24	1.5	120	12.5	A36D-25-48V-ABD1-24L	120/208/240	16.8/9.7/8.4	A31-1.5K-48V-A6-24L	7.0	40.0	460	2	8	310
A32S-1.5K-48VBC-A6-24-24	1.5	120	12.5	A36D-50-48V-ABD1-24L	120/208/240	33.6/19.4/16.8	A31-1.5K-48V-A6-24L	7.0	40.0	420	-	24	896
A32S-2K-48VBC-A6-0.5-24	2	120	16.67	A36D-10-48V-A1-24L	120	6.7	A31-2K-48V-A6-24L	10.0	54.0	409	1	0.25 - 0.5	40 - 72
A32S-2K-48VBC-A6-2-24	2	120	16.67	A36D-15-48V-A1-24L	120	10.0	A31-2K-48V-A6-24L	10.0	54.0	455	1	2	155
A32S-2K-48VBC-A6-4-24	2	120	16.67	A36D-20-48V-ABD1-24L	120/208/240	13.4/7.7/6.7	A31-2K-48V-A6-24L	10.0	54.0	508	2	4	250
A32S-2K-48VBC-A6-8-24	2	120	16.67	A36D-30-48V-ABD1-24L	120/208/240	20.0/11.6/10.0	A31-2K-48V-A6-24L	10.0	54.0	428	-	8	432
A32S-2K-48VBC-A6-24-24	2	120	16.67	A36D-75-48V-ABD1-24L	120/208/240	50.4/29.1/25.2	A31-2K-48V-A6-24L	10.0	54.0	555	-	24	1096
A32S-3K-48VBC-A6-0.5-24	3	120	25.0	A36D-15-48V-A1-24L	120	10.0	A31-3K-48V-A6-24L	13.0	81.0	550	1	0.25 - 0.5	40 - 72
A32S-3K-48VBC-A6-2-24	3	120	25.0	A36D-20-48V-ABD1-24L	120/208/240	13.4/7.7/6.7	A31-3K-48V-A6-24L	13.0	81.0	603	2	2	208
A32S-3K-48VBC-A6-4-24	3	120	25.0	A36D-30-48V-ABD1-24L	120/208/240	20.0/11.6/10.0	A31-3K-48V-A6-24L	13.0	81.0	523	-	4	432
A32S-3K-48VBC-A6-8-24	3	120	25.0	A36D-50-48V-ABD1-24L	120/208/240	33.6/19.4/16.8	A31-3K-48V-A6-24L	13.0	81.0	570	-	8	696
A32S-3K-48VBC-A6-24-24	3	120	25.0	A36D-100-48V-ABD1-24L	120/208/240	67.2/38.8/36.6	A31-3K-48V-A6-24L	13.0	81.0	676	-	24	1800
A32S-4K-48VBC-A6-0.5-24	4	120	33.3	A36D-20-48V-ABD1-24L	120/208/240	13.4/7.7/6.7	A31-4K-48V-A6-24L	15.0	106.0	598	1	0.25 - 0.5	72 - 90
A32S-4K-48VBC-A6-2-24	4	120	33.3	A36D-25-48V-ABD1-24L	120/208/240	16.8/9.7/8.4	A31-4K-48V-A6-24L	15.0	106.0	650	2	2	310
A32S-4K-48VBC-A6-4-24	4	120	33.3	A36D-30-48V-ABD1-24L	120/208/240	20.0/11.6/10.0	A31-4K-48V-A6-24L	15.0	106.0	563	-	4	520
A32S-4K-48VBC-A6-8-24	4	120	33.3	A36D-50-48V-ABD1-24L	120/208/240	33.6/19.4/16.8	A31-4K-48V-A6-24L	15.0	106.0	610	-	8	896
A32S-4K-48VBC-A6-24-24	4	120	33.3	A36D-75-48V-ABD1-24L ^(X2)	120/208/240	50.4/29.1/25.2	A31-4K-48V-A6-24L	15.0	106.0	950	-	24	2400
A32S-5K-48VBC-A6-0.5-24	5	120	41.67	A36D-20-48V-ABD1-24L	120/208/240	13.4/7.7/6.7	A31-5K-48V-A6-24L	16.0	132.0	628	1	0.25 - 0.5	72 - 125
A32S-5K-48VBC-A6-2-24	5	120	41.67	A36D-30-48V-ABD1-24L	120/208/240	20.0/11.6/10.0	A31-5K-48V-A6-24L	16.0	132.0	593	-	2	432
A32S-5K-48VBC-A6-4-24	5	120	41.67	A36D-50-48V-ABD1-24L	120/208/240	33.6/19.4/16.8	A31-5K-48V-A6-24L	16.0	132.0	640	-	4	608
A32S-5K-48VBC-A6-8-24	5	120	41.67	A36D-75-48V-ABD1-24L	120/208/240	50.4/29.1/25.2	A31-5K-48V-A6-24L	16.0	132.0	720	-	8	1096
A32S-5K-48VBC-A6-24-24	5	120	41.67	A36D-75-48V-ABD1-24L ^(X2)	120/208/240	50.4/29.1/25.2	A31-5K-48V-A6-24L	16.0	132.0	980	-	24	3000

Note: Backup time - range indicates the range of backup times that the systems can be used for. Example: A32S-500-48VBC-A6-8-24 can be used for applications ranging from 15 min - 8 Hrs.

(X2) = Two chargers per system.

Model Number Nomenclature



Standard System Components

- 1) 7 foot x 23 inch Open Relay Rack
- 2) Controlled Ferroresonant Charger
(Positive Ground) UL 1481 approved.
- 3) Transistorized Ferroresonant
Inverter - UL 1481 approved.
- 4) Split Bus Termination.

Environmental

Operating Temperature
0 to 50°C

Storage Temperature
-20 to 60°C

Relative Humidity
0 to 95% (Non-condensing)

Cooling
Convection

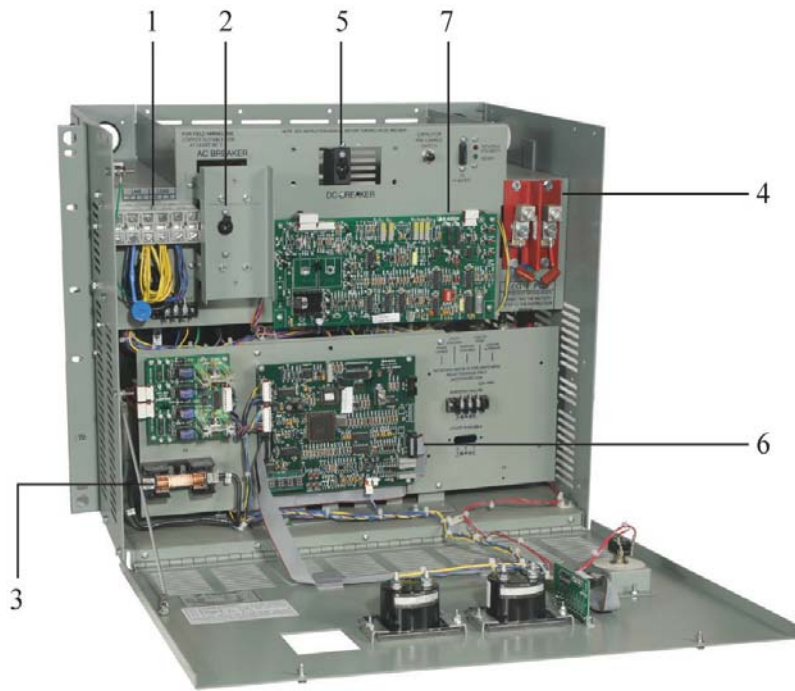
Notes

- A) System sized for 24 hour battery
recharge.
- B) Static transfer switch reduces KVA
output by 100VA
- C) Batteries are not included in the
above systems. For battery
requirements consult the factory.

Product Close-up

A3 I

1. AC Output Terminal
2. AC Output Breaker
3. AC Alt. Source Fuse
4. DC Input Terminal
5. DC Input Breaker
6. Static Switch
7. Control Board



A36D

1. AC Breaker
2. AC Input Terminal Block
3. DC Output Terminal Block
4. DC Breaker
5. Alarm Terminal Strip
6. Remote Equalize, Sensing & Load Sharing Strip
7. AC Tap Jumper Terminal Strip

