A32P / A32S

Uninterruptible Power Supply (UPS)
for Fire Alarm and Security Systems



Model shown A32P-1.5K-48VBC-A6-8-24
(Please note: batteries are not included)

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.

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
- Operating Temperature: 0 to 50°C (32 to122°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

Specifications subject to change without notice

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P25-DSA32-1
ECN 23838
10/26

A31 DC-AC Inverter

- **AC Output Voltage**
  120 Volt nominal, single phase.
- **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%
- **Alarm**
  Inverter Failure Form “C” Contact
- **Noise**
  Less than 32 DBRN
- **Protection**
  Inverter Input DC Breaker
  Inverter Output AC Breaker
  DC Undervoltage/Overvoltage Shutdown
  Current Limit Protection
  Reverse Polarity Indicator
  Indicator/filter precharge circuit.

A36D Rectifier / Power Supply

- **AC Input Voltage**
  120/208/240 Volt, single phase, 60 Hz. (some models 120 Volt only)
- **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/C
- **Protection**
  Current Limit, AC Breaker and DC Breaker.
- **Alarm Status Panel LCD Display**
  AC "ON"
  Float and Equalize
  Summary Alarm
  Low DC Current
  Overload Current Limit
  End of Discharge
  Low & High DC Voltage
  High Voltage Shutdown
  Open DC Protection

*Refer to the A36D Data Sheet for further details.

Transfer Switch

1MS Electronic Static Switch

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

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	Calculated Amp Hrs. Required
		Volts	Amps	Model Number	AC Input		Model Number	DC Input Amps					
					Volts	Amps		N.L.	F.L.				
A32P-1K-48VBC-A6-4-24-02202	1	120	8.33	A36D-30-48V-ABD1-24L	120/208/240	20.0/11.6/10.0	A31-1K-48V-A6-24L	5	28	408	1	0.25 - 4	7 - 112
A32P-1K-48VBC-A6-8-24-02202	1	120	8.33	A36D-50-48V-ABD1-24L	120/208/240	33.6/19.4/16.8	A31-1K-48V-A6-24L	5	28	500	2	8	224
A32P-1K-48VBC-A6-24-24-02202	1	120	8.33	A36D-75-48V-ABD1-24L	120/208/240	50.4/29.1/25.2	A31-1K-48V-A6-24L	5	28	485	-	24	672
A32P-1.5K-48VBC-A6-2-24-02202	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	40	470	1	0.25 - 2	10 - 80
A32P-1.5K-48VBC-A6-8-24-02202	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	40	515	2	4 - 8	160 - 320
A32P-1.5K-48VBC-A6-24-24-02202	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	40	526	-	24	960
A32P-2K-48VBC-A6-0.5-24-02202	2	120	16.67	A36D-50-48V-ABD1-24L	120/208/240	33.6/19.4/16.8	A31-2K-48V-A6-24L	10	54	525	1	0.25 - 0.5	13.5 - 27
A32P-2K-48VBC-A6-2-24-02202	2	120	16.67	A36D-75-48V-ABD1-24L	120/208/240	50.4/29.1/25.2	A31-2K-48V-A6-24L	10	54	605	1	2	108
A32P-2K-48VBC-A6-4-24-02202	2	120	16.67	A36D-75-48V-ABD1-24L	120/208/240	50.4/29.1/25.2	A31-2K-48V-A6-24L	10	54	650	2	4	216
A32P-2K-48VBC-A6-8-24-02202	2	120	16.67	A36D-75-48V-ABD1-24L	120/208/240	50.4/29.1/25.2	A31-2K-48V-A6-24L	10	54	555	-	8	432
A32P-2K-48VBC-A6-24-24-02202	2	120	16.67	A36D-100-48V-ABD1-24L	120/208/240	67.2/38.8/33.6	A31-2K-48V-A6-24L	10	54	581	-	24	1296
A32P-3K-48VBC-A6-0.5-24-02202	3	120	25	A36D-100-48V-ABD1-24L	120/208/240	67.2/38.8/33.6	A31-3K-48V-A6-24L	13	81	726	1	0.25 - 0.5	20.25 - 40.5
A32P-3K-48VBC-A6-2-24-02202	3	120	25	A36D-100-48V-ABD1-24L	120/208/240	67.2/38.8/33.6	A31-3K-48V-A6-24L	13	81	771	2	2	162
A32P-3K-48VBC-A6-8-24-02202	3	120	25	A36D-100-48V-ABD1-24L	120/208/240	67.2/38.8/33.6	A31-3K-48V-A6-24L	13	81	676	-	4 - 8	324 - 648
A32P-3K-48VBC-A6-24-24-02202	3	120	25	A36D-100-48V-ABD1-24L(X2)	120/208/240	67.2/38.8/33.6	A31-3K-48V-A6-24L	13	81	967	-	24	1944
A32P-4K-48VBC-A6-0.5-24-02202	4	120	33.3	A36D-100-48V-ABD1-24L	120/208/240	67.2/38.8/33.6	A31-4K-48V-A6-24L	15	106	766	1	0.25 - 0.5	26.5 - 53
A32P-4K-48VBC-A6-2-24-02202	4	120	33.3	A36D-100-48V-ABD1-24L	120/208/240	67.2/38.8/33.6	A31-4K-48V-A6-24L	15	106	811	2	2	212
A32P-4K-48VBC-A6-8-24-02202	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	106	950	-	4 - 8	424 - 848
A32P-4K-48VBC-A6-24-24-02202	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	106	1007	-	24	2544
A32P-5K-48VBC-A6-0.5-24-02202	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	132	1025	1	0.25 - 0.5	33 - 66
A32P-5K-48VBC-A6-4-24-02202	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	132	980	-	2 - 4	264 - 528
A32P-5K-48VBC-A6-8-24-02202	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	132	1037	-	8	1056

Note: Backup time - range indicates the range of backup times that the systems can be used for. Example: A32P-1K-48VBC-A6-8-24 can be used for applications of 4 Hrs - 8 Hrs.
(X2) = Two chargers per system.

A32S - STANDBY SYSTEMS

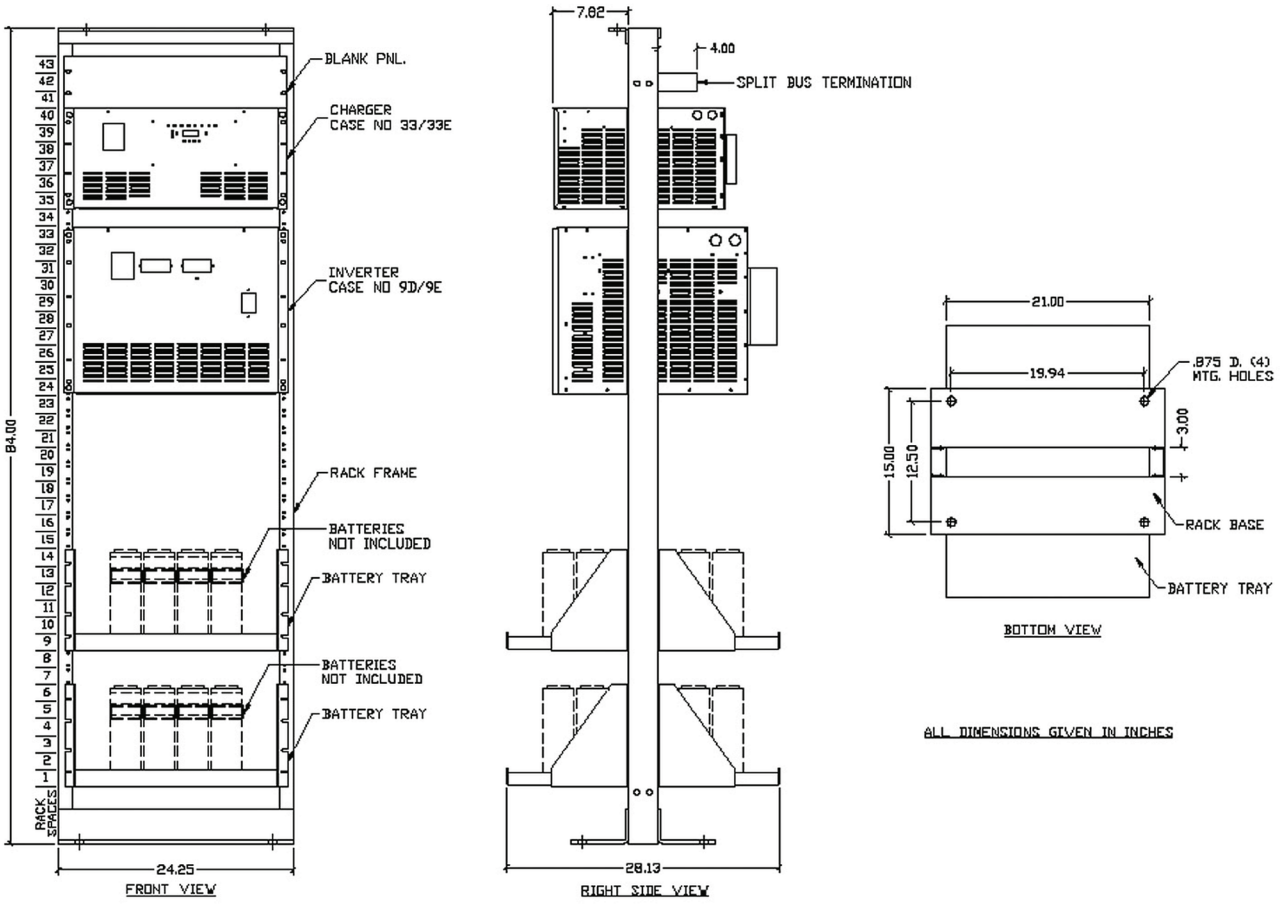
UPS System Model Number	KVA	AC Output		Battery Charger U.L. 1481 Listed			Inverter U.L. 1481 Listed			Approx. System Weight	No. of Battery Trays	*Backup Time Range in Hrs	Calculated Amp Hrs. Required
		Volts	Amps	Model Number	AC Input		Model Number	DC Input Amps					
					Volts	Amps		N.L.	F.L.				
A32S-1K-48VBC-A6-4-24-02202	1	120	8.33	A36D-10-48V-A1-24L	120	6.7	A31-1K-48V-A6-24L	5	28	339	1	0.25 - 4	7 - 112
A32S-1K-48VBC-A6-8-24-02202	1	120	8.33	A36D-15-48V-A1-24L	120	10	A31-1K-48V-A6-24L	5	28	430	2	8	224
A32S-1K-48VBC-A6-24-24-02202	1	120	8.33	A36D-50-48V-ABD1-24L	120/208/240	33.6/19.4/16.8	A31-1K-48V-A6-24L	5	28	405	-	24	672
A32S-1.5K-48VBC-A6-2-24-02202	1.5	120	12.5	A36D-10-48V-A1-24L	120	6.7	A31-1.5K-48V-A6-24L	7	40	354	1	0.25 - 2	10 - 80
A32S-1.5K-48VBC-A6-4-24-02202	1.5	120	12.5	A36D-15-48V-A1-24L	120	10.0	A31-1.5K-48V-A6-24L	7	40	445	2	4	160
A32S-1.5K-48VBC-A6-8-24-02202	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	40	460	2	8	320
A32S-1.5K-48VBC-A6-24-24-02202	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	40	420	-	24	960
A32S-2K-48VBC-A6-0.5-24-02202	2	120	16.67	A36D-10-48V-A1-24L	120	6.7	A31-2K-48V-A6-24L	10	54	409	1	0.25 - 0.5	13.5 - 27
A32S-2K-48VBC-A6-2-24-02202	2	120	16.67	A36D-15-48V-A1-24L	120	10.0	A31-2K-48V-A6-24L	10	54	455	1	2	108
A32S-2K-48VBC-A6-4-24-02202	2	120	16.67	A36D-20-48V-ABD1-24L	120/208/240	13.4/7.7/6.7	A31-2K-48V-A6-24L	10	54	508	2	4	216
A32S-2K-48VBC-A6-8-24-02202	2	120	16.67	A36D-30-48V-ABD1-24L	120/208/240	20.0/11.6/10.0	A31-2K-48V-A6-24L	10	54	428	-	8	432
A32S-2K-48VBC-A6-24-24-02202	2	120	16.67	A36D-75-48V-ABD1-24L	120/208/240	50.4/29.1/25.2	A31-2K-48V-A6-24L	10	54	555	-	24	1296
A32S-3K-48VBC-A6-0.5-24-02202	3	120	25	A36D-15-48V-A1-24L	120	10.0	A31-3K-48V-A6-24L	13	81	550	1	0.25 - 0.5	20.25 - 40.5
A32S-3K-48VBC-A6-2-24-02202	3	120	25	A36D-20-48V-ABD1-24L	120/208/240	13.4/7.7/6.7	A31-3K-48V-A6-24L	13	81	603	2	2	162
A32S-3K-48VBC-A6-4-24-02202	3	120	25	A36D-30-48V-ABD1-24L	120/208/240	20.0/11.6/10.0	A31-3K-48V-A6-24L	13	81	523	-	4	324
A32S-3K-48VBC-A6-8-24-02202	3	120	25	A36D-50-48V-ABD1-24L	120/208/240	33.6/19.4/16.8	A31-3K-48V-A6-24L	13	81	570	-	8	648
A32S-3K-48VBC-A6-24-24-02202	3	120	25	A36D-100-48V-ABD1-24L	120/208/240	67.2/38.8/36.6	A31-3K-48V-A6-24L	13	81	676	-	24	1944
A32S-4K-48VBC-A6-0.5-24-02202	4	120	33.3	A36D-20-48V-ABD1-24L	120/208/240	13.4/7.7/6.7	A31-4K-48V-A6-24L	15	106	598	1	0.25 - 0.5	26.5 - 53
A32S-4K-48VBC-A6-2-24-02202	4	120	33.3	A36D-25-48V-ABD1-24L	120/208/240	16.8/9.7/8.4	A31-4K-48V-A6-24L	15	106	650	2	2	212
A32S-4K-48VBC-A6-4-24-02202	4	120	33.3	A36D-30-48V-ABD1-24L	120/208/240	20.0/11.6/10.0	A31-4K-48V-A6-24L	15	106	563	-	4	424
A32S-4K-48VBC-A6-8-24-02202	4	120	33.3	A36D-50-48V-ABD1-24L	120/208/240	33.6/19.4/16.8	A31-4K-48V-A6-24L	15	106	610	-	8	848
A32S-4K-48VBC-A6-24-24-02202	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	106	950	-	24	2544
A32S-5K-48VBC-A6-0.5-24-02202	5	120	41.67	A36D-20-48V-ABD1-24L	120/208/240	13.4/7.7/6.7	A31-5K-48V-A6-24L	16	132	628	1	0.25 - 0.5	33 - 66
A32S-5K-48VBC-A6-2-24-02202	5	120	41.67	A36D-30-48V-ABD1-24L	120/208/240	20.0/11.6/10.0	A31-5K-48V-A6-24L	16	132	593	-	2	264
A32SK-5K-48VBC-A6-4-24-02202	5	120	41.67	A36D-50-48V-ABD1-24L	120/208/240	33.6/19.4/16.8	A31-5K-48V-A6-24L	16	132	640	-	4	528
A32S-5K-48VBC-A6-8-24-02202	5	120	41.67	A36D-75-48V-ABD1-24L	120/208/240	50.4/29.1/25.2	A31-5K-48V-A6-24L	16	132	720	-	8	1056
A32S-5K-48VBC-A6-24-24-02202	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	132	980	-	24	3168

Note: Backup time - range indicates the range of backup times that the systems can be used for. Example: A32S-1K-48VBC-A6-8-24-02202 can be used for applications ranging from 15 min - 8 Hrs.
(X2) = Two chargers per system.

Model Number Nomenclature

A32 P - 1.5K - 48VBC - A6 - 8 - 24 - 02202

- P = Prime or S = Standby
- VA Rating
- DC Voltage
- Rack Width, Ground Type and Rack Height (B = Positive Ground 23" Rack, C = 7;)
- AC Output Voltage (A = 120VAC, 6 = 60HZ)
- Back up Time in Hours (see pgs 3 & 4)
- Recharge Time (Approx. 24Hrs.)
- A36D with option 550 LCD display option



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

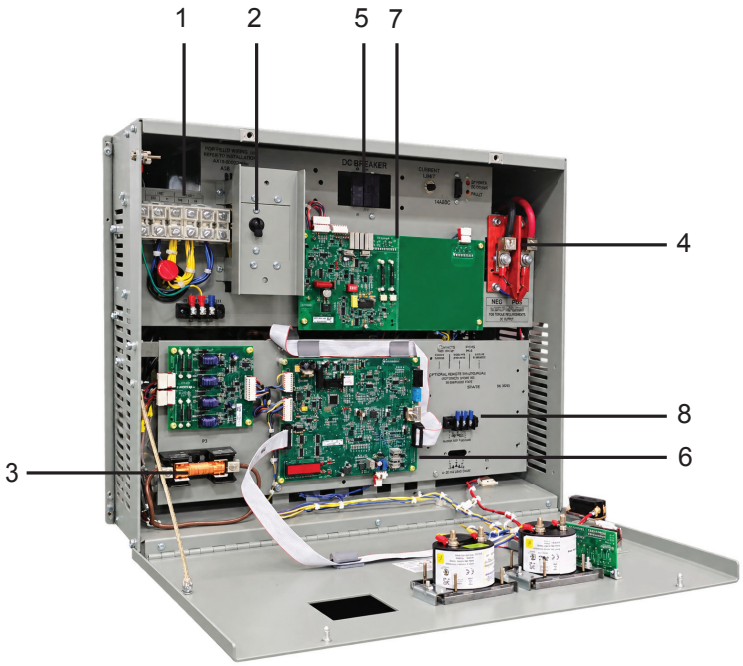
Notes

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

A31 Inverter

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
8 Inverter Failure “C” Contact



A36D Battery Charger

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

