

505-12 Power Supply

Description

The DMP 505-12 Series Power Supplies are regulated, power limited, switching power supplies. The 505 Series are rated for 12VDC @ 5 Amps maximum. Each power supply includes a transformer, battery leads and is mounted in an enclosure. Each power supply provides connections for AC input, DC output, and a standby battery. Also included are a low AC input LED indicator, a low standby battery LED indicator, AC trouble and battery trouble relays, and on-board transient protection for the AC input and the DC output. The 505-12LX includes two Model 867 Style W Notification Modules.

Mounting the Enclosure

Mount the power supply metal enclosure in a secure, dry location to protect the unit from damage due to tampering or the elements. It is not necessary to remove the PC board or transformer when installing the enclosure.

<p>Enclosure 505-12/505-12LX Material 20-gauge, cold-rolled steel Colors Gray (G) or Red (R) Dimensions 15.75" H x 12.5" W x 4.75" D</p> <p>Enclosure 505-12A Material 18-gauge with 16-gauge door Colors Gray (G) Dimensions 17.5" W x 13.5" H x 3.75" D</p>	<p>Enclosure 505-12L Material 18-gauge, cold-rolled steel Colors Gray (G) or Red (R) Dimensions 17.5" W x 13.5" H x 3.5" D</p>
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Mounting Optional NAC Modules

The power supply enclosure can accommodate the addition of two NAC modules for powering various listed notification appliances. Use either the DMP Model 865 conventional Class A NAC module, the Model 866 conventional Class B NAC module, or the Model 867 LX-Bus NAC module. Install any of the modules inside the enclosure using the three hole mounting configuration. Plastic standoffs are provided with each module that attach to the enclosure. See Figures 1 and 2.

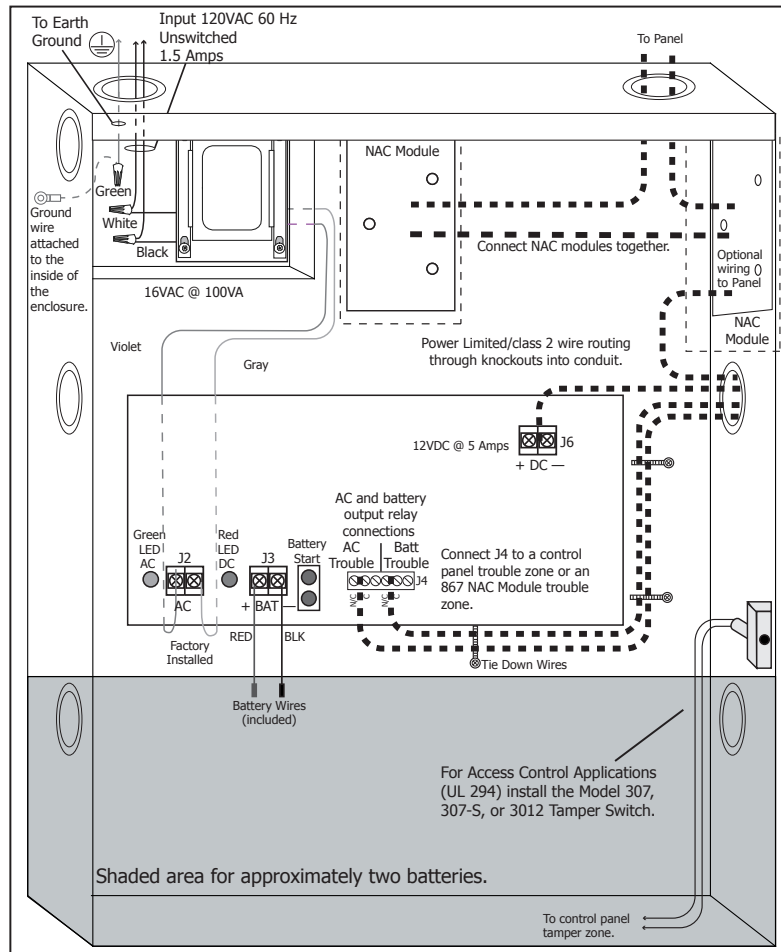


Figure 1: 505-12, 505-12LX Wiring Diagram



Battery Connection (J3)

Connect the black battery lead to the battery negative terminal. Connect the red battery lead to the positive battery terminal. Only use sealed lead-acid batteries and replace every 3 to 5 years.

Note: Observe polarity when connecting the battery. Only use sealed lead-acid batteries and replace every 3 to 5 years.

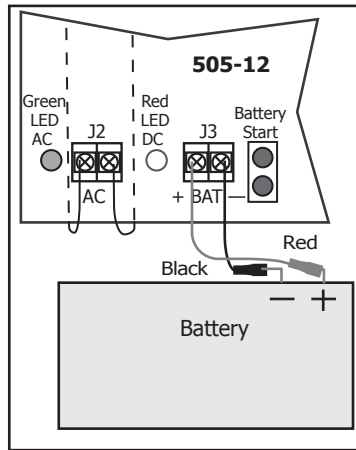


Figure 3: Battery Harness Connection

AC and Battery Trouble Relay Connections (J4)

Connect AC TRBL and BATT TRBL supervisory relay outputs marked NC (normally closed) and C (common) to a control panel or an 867 NAC zone. Relays are form C with the contacts rated at 30VDC. When an AC trouble or Battery trouble occurs, the relay contacts switch from the NC (normally closed) to the NO (normally open) position. When connected to a panel, an alarm sounds. When connected to an 867 NAC the LEDs turn off as listed in the table below.

Condition	Voltage	LED	Status	Condition
AC Trouble	Approximately 102VAC	AC LED (GRN)	ON	AC Good
Battery Trouble	Below 11.8VDC	AC LED (GRN)	OFF	AC Bad
Battery Restoral	Above 12.4VDC	DC LED (RED)	ON	AC Good, Battery Good
Battery Cutoff	Below 10.2VDC	DC LED (RED)	OFF	AC Good, Battery Bad

DC Output (J6)

Connect devices that require power to output terminals marked – DC +.

Note: Measure and verify output voltage before connecting devices to ensure proper equipment operation.

Standby Battery Power Calculations

The following calculation defines the total number of Amp-hours required. From this calculation, assemble the appropriate number of batteries to slightly exceed the calculated total Amp-hour requirement.

1. Add all standby current values including the power supply operating current.
2. Multiply the total standby current by the number of standby hours needed.
3. Add all alarm current values and multiply by 0.25.
4. Add the total alarm mA-hour with the total standby mA-hour and then multiply this number by 0.001.

	Power Supply Operating Current	200	mA
	Other Standby Current	+	_____ mA
1.	Total Standby Current	=	_____ mA
	Number of Standby Hours Required	x	_____ hr
2.	Total Standby mA-Hours Required	=	_____ mA-hr
3.	Total alarm current x .25	=	_____ mA
	(0.25 = 15 minute alarm)		
	Total Standby Required	+	_____ mA-hr
	Total	=	_____ mA-hr
		x	0.001
4.	Total Required Amp-hours	=	_____

NAC Module Connections

Refer to the panel Installation Guide for information on connecting the various NAC modules to the power supplies.

FCC Information

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user is required to correct the interference at their own expense.

Compliance Listing Specifications

For UL 1481 Power Supplies for Fire Protective Signaling, apply the following maximum battery standby Ampere Hours to reach 24 hours battery backup.

Battery Standby	Maximum 38.5Ah
Output Voltage	12VDC
Output Current	1.25A Standby, 5A Alarm
A maximum of 38.5Ah is approximately equal to six 7.0Ah Batteries and a maximum of 49.2Ah is approximately equal to seven 7.0Ah Batteries.	

For UL 603 Power Supplies for Burglary Alarm System applications and UL 294 Power Supplies for Access Control System applications, the 505 Series Power Supply has a voltage range of 10.76 to 12.36.


For UL 294 Access Control Applications install the Model 307, 307-S, or 3012 Tamper Switch.

NAC Modules Compatibility

The Model 505-12 Series is compatible with the Wheelock MT-12/24 Multi-tone horn at 12VDC.

Power Limited

All circuits on the Model 505-12 Series comply with the requirements for inherent power limitation and are Class 2 except the red battery wire.

<h3>Specifications</h3> <p>Voltage/Current Input 505 Series 120VAC @ 1.5 Amps max.</p> <p>Voltage/Current Output 505 Series 12VDC @ 5 Amps max.</p> <p>Internal Current Draw 200mA</p> <p>Secondary (Battery) Power Charge Current 1.5 Amps max.</p> <p>Only use sealed lead-acid rechargeable batteries.</p> <p>Enclosure 505-12/505-12LX Material 20-gauge, cold-rolled steel Colors Gray (G) or Red (R) Dimensions 15.75" H x 12.5" W x 4.75" D</p> <p>Enclosure 505-12L Material 18-gauge, cold-rolled steel Colors Gray (G) or Red (R) Dimensions 17.5" W x 13.5" H x 3.5" D</p> <p>Enclosure 505-12A Material 18-gauge with 16-gauge door Colors Gray (G) Dimensions 17.5" W x 13.5" H x 3.75" D</p>	<h3>Certifications</h3> <p>California State Fire Marshal (CSFM) FCC Part 15 National Fire Protection Association (NFPA) New York City (FDNY COA #6167) ANSI/UL 1481 Power Supplies for Fire Protective Signaling ANSI/UL 603 Power Supplies for Burglary Alarm Systems ANSI/UL 294 Power Supplies for Access Control System Units</p> <h3>Compatibility</h3> <p>All DMP Control Panels</p>	
	<p>800-641-4282</p> <p>www.dmp.com</p> <p>Designed, Engineered and Assembled in U.S.A.</p>	<p>INTRUSION • FIRE • ACCESS • NETWORKS</p> <p>2500 North Partnership Boulevard</p> <p>Springfield, Missouri 65803-8877</p>

