

503INT INTERNATIONAL POWER SUPPLY

Installation Guide

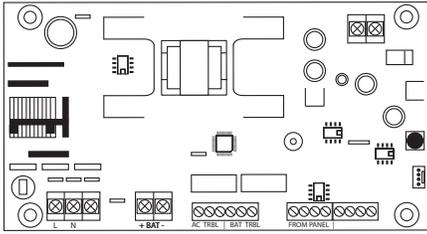


Figure 1: 503INT International Power Supply

DESCRIPTION

The 503INT International Power Supply is a regulated, power limited, switching power supply rated for a maximum output of 15 VDC at 2.7 Amps. The 503INT is a supervised power supply.

The 503INT includes battery leads and is offered pre-mounted in an enclosure with wall and enclosure door tamper or as a separate PCB.

The 503INT also provides connections for 230 VAC input, standby battery input, DC output, AC and battery trouble relays, data bus input/output, tamper input, and keypad programming connection.

Compatibility

All DMP International control panels.

What is Included?

- 503INT International Power Supply
- High Voltage Shield
- Hardware Pack



1 MOUNT THE ENCLOSURE

Mount the metal enclosure on a solid, flat, vertical, and secure surface such as dry wall or masonry using four #8 1/2" panhead screws. This is to protect the unit from damage due to tampering or the elements. See Figure 4 for the mounting orientation.

2 MOUNT THE 503INT PCB

Mount the 503INT PCB in the metal enclosure using the provided hardware. See Figure 2 for mounting hole locations.

1. Place the PCB inside the metal enclosure.
2. Install the three standoffs in the standoff holes.
3. Install the two screws in the mounting holes.

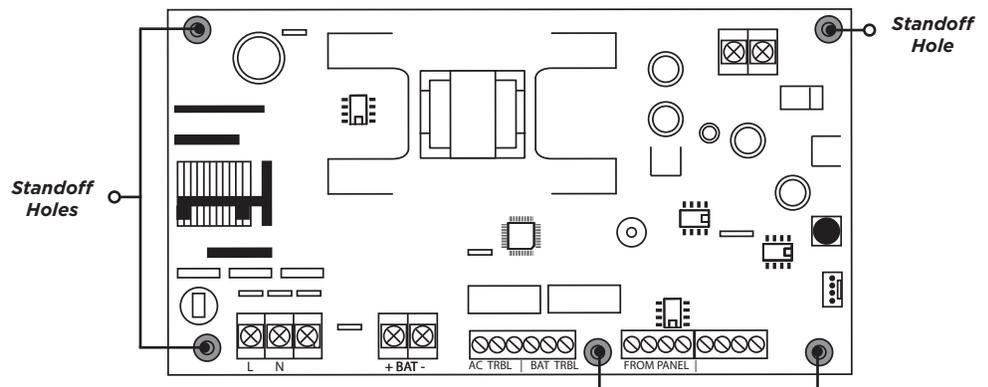


Figure 2: Mounting Hole Locations

3 WIRE AC CONNECTIONS

AC power connection should only be installed by a qualified electrician. Before turning on the 503INT's AC power, make sure all electrical covers are in place.

⚡ Caution: Do not apply power to the 503INT until all wiring connections are made and free of direct shorts or open circuits.

1. Connect the AC power input to an unswitched 230 VAC 50 Hz power source with at least 1.5 Amps of available current.
2. Connect the AC power wires to the terminal block. See Figure 3.

- Connect the brown wire to the L terminal
- Connect the blue wire to the N terminal
- Connect the green and yellow wire to the (ground) stud using a ring terminal.

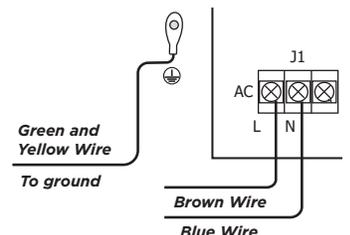


Figure 3: AC Terminals and Wires

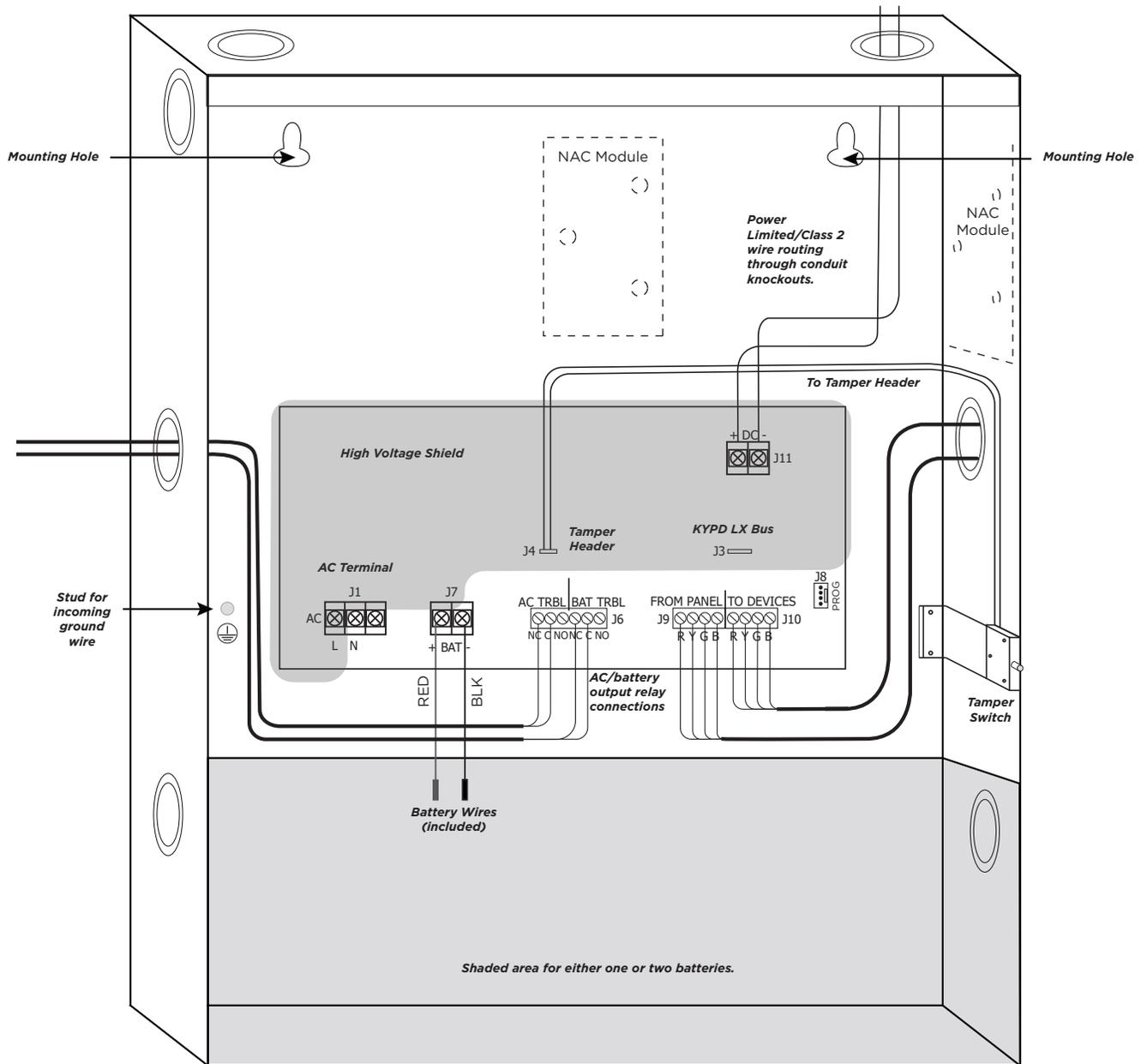


Figure 4: 503INT Wiring Diagram

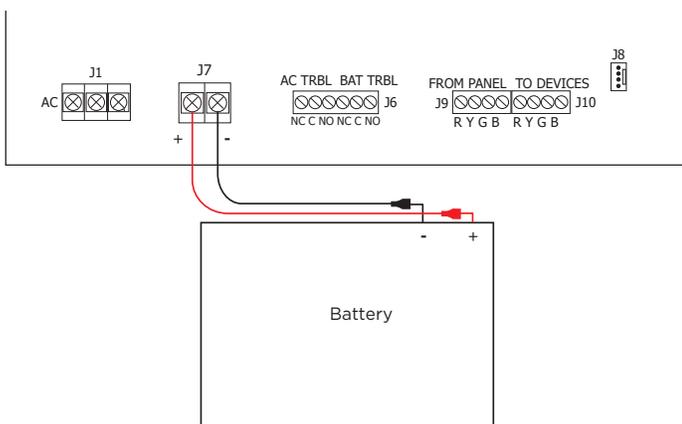


Figure 5: Single Battery Connection

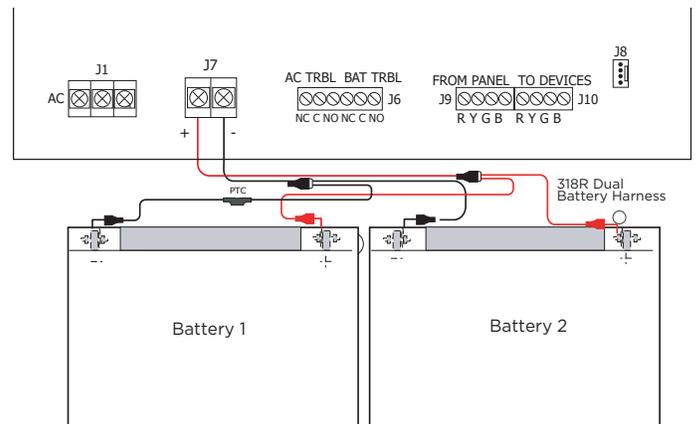


Figure 6: Dual Battery Connection

4 WIRE BATTERY CONNECTIONS

Connect batteries to the 503INT to ensure there will be back-up power if AC power fails. If using two or more batteries, use a 318 or 318R (ring terminal) dual battery harness. See Figures 5 and 6.

1. Observing polarity, connect the black battery lead to the negative battery terminal.
2. Connect the red battery lead to the positive battery terminal.



Note: The battery input has built-in protection against defective batteries. Only use sealed lead-acid batteries and replace them every 3-5 years.



Caution: Explosion may occur if batteries are replaced with incorrect battery type.

5 WIRE TROUBLE RELAY CONNECTIONS

The AC and battery trouble relay connections are form C contacts rated at 30 VDC. Form C contacts are single pole, double throw (SPDT) relays that provide one common (C), one normally open (NO), and one normally closed (NC) connection. When AC or battery trouble occurs, the relay contacts switch from normally closed to normally open.

1. Connect the **AC TRBL** supervisory relay output terminals marked **NC** and **C** to the control panel. See Figure 7.
2. Connect the **BATT TRBL** supervisory relay output terminals marked **NC** and **C** to the panel.

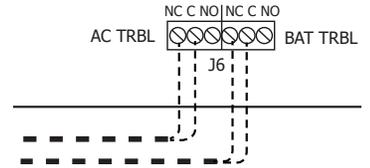


Figure 7: AC and Battery Trouble Relay Connections

6 WIRE DC OUTPUT CONNECTIONS

Connect the device that requires power to the power output terminal marked **+ DC -** and observe polarity. See Figure 8.

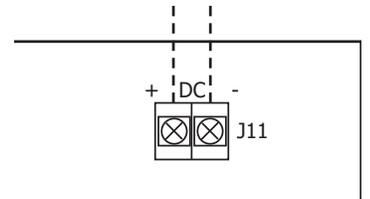


Figure 8: DC Output Connections

7 WIRE DATA BUS CONNECTIONS

The 503INT communicates with the panel using the **FROM PANEL** terminals. Status changes such as battery or tamper trouble are sent to the panel using the DC output connection. The **TO DEVICES** terminals provide power from the 503INT and pass data to other devices.

1. Connect the control panel's keypad or LX bus to the **FROM PANEL** terminals on the 503INT. See Figure 9.
2. To send data out to keypads or zone expanders, connect to the **TO DEVICES** terminals on the 503INT.
3. Set the **KYPD LX Bus** expansion jumper above the terminals to the appropriate bus type.

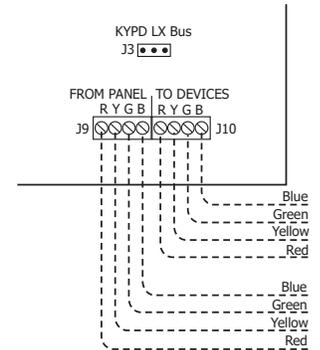


Figure 9: Data Bus Connections and KYPD LX Bus Expansion Jumper

8 CONNECT THE GROUND STRAP

1. Using the included lock washer and nyloc nut, connect one end of the ground strap to the enclosure. See Figure 10 for location.
2. Connect the other end of the ground strap to the cabinet door.

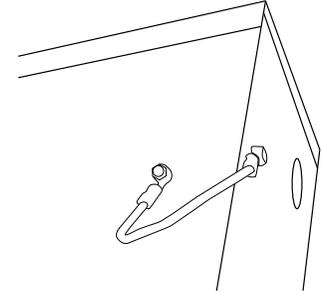


Figure 10: Ground Strap

9 CONNECT THE TAMPER SWITCH

The tamper switch in the 503INT enclosure helps to protect the power supply from damage by generating an alert when the enclosure is tampered with. The tamper switch creates a normally closed circuit that opens when faulted.

1. Locate the **TAMPER** header. See Figure 11.
2. Connect a tamper harness to the tamper header.
3. Connect the tamper harness flying leads in series with the enclosure's tamper switch.
4. Using the included screws, attach the tamper switch to the tamper bracket.
5. Place the tamper bracket through the slot in the back of the enclosure and attach it to the wall.

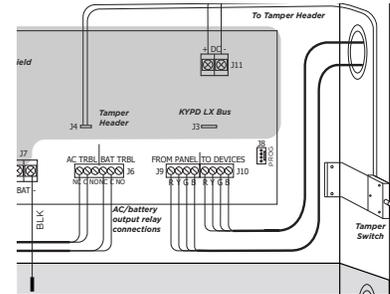


Figure 11: Tamper Switch Connection

10 ATTACH THE HIGH VOLTAGE SHIELD

Attach the High Voltage Shield to the PCB to prevent electrical shock. See Figure 4 for shield placement.

1. Remove the protective covering from the High Voltage Shield.
2. Install the shield onto the standoffs.
3. Secure the shield with the included screws.

11 POWER THE 503INT

Make sure all wiring is terminated before powering the 503INT. Measure and verify the output voltage before connecting a device to the power output terminal. This ensures that the equipment operates correctly.

12 PROGRAM THE POWER SUPPLY

After mounting the enclosure and connecting the wiring for the 503INT, use a DMP keypad to program the power supply.

1. Connect a DMP keypad to the **PROG** header.
 - ⚡ **Caution:** The connector is keyed with the red wire to the bottom and the black wire towards the top. Make sure that the harness is connected correctly to the keypad and the **PROG** connection on the power supply.
2. After the keypad is connected, the software version and date code display. Press **CMD**.
3. The **BUS TYPE:** screen displays. Press the left select key or area to choose **KEYPAD**, or press the right select key or area to choose **LX**. Press **CMD**.
4. When the **DEVICE NUMBER:** screen displays, enter a device number between 01 and 16 for the Keypad Bus or 01 and 99 for the LX Bus. Press **CMD**.
5. When the **REMOVE KEYPAD** screen displays, it is safe to remove the keypad.

13 PROGRAM THE PANEL

The 503INT uses the first four zones of the device address to report status changes to the panel.

1. Enter **6653** (PROG) and press **CMD** for XR150INT/XR550INT Series panels or enter **665** and press **CMD** for XT30INT/XT50INT Series panels to access the **PROGRAMMER** menu. If programming an LX device, go to step 5.
2. Press **CMD** until **DEVICE SETUP** displays.
3. Program the appropriate **DEVICE NO:**.
4. Select **EXP** (expander) as the **DEVICE TYPE**.
5. Navigate to **ZONE INFORMATION** and press any select key or area.
6. Enter the **ZONE NO:** and select **A1** as the **ZONE TYPE**.
7. Press **CMD** until **NEXT ZONE?** displays and select **NO**.
8. Press **CMD** until **DISARMED SHORT** displays and then press **CMD** again to display **MSG:**.
9. Press any select key or area and select **T** (trouble) as the message type.
10. Press **CMD** until **ARMED SHORT** displays and then press **CMD** again to display **MSG:**.
11. Press any select key or area and select **T** (trouble) as the message type.
12. Press **CMD** until **STOP** displays. Press any select key or area to save programming.



Note: A Sensor Reset is required to clear trouble messages from the keypad status list.

ADDITIONAL INFORMATION

The table below represents the different states of zones 1-4 and describes what the shorted state of a zone indicates.

ZONE NUMBER	SHORT TYPE	DESCRIPTION
1	AC Power Fault	No power (AC = 0V)
2	Output Trouble	The 503INT tamper was tripped or battery charger faults were detected
3	Battery Trouble	Battery voltage is 11.9 V or less
4	Temperature Fault	Temperature has exceeded 125 °C

Table 1: Zone States

Replace the Fuse

1. Pull the fuse off of the 503INT PCB.
2. Line up the two pegs on the new fuse and insert the fuse into the two holes on the 503INT PCB. See Figure 12.

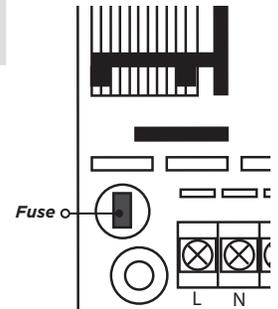


Figure 12: Fuse Location

EN 50131-6 Compliance

The 503INT International Power Supply is a Type A power supply and has the following specifications in compliance with EN 50131-6 certification.

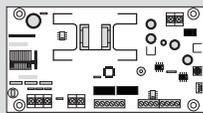
Ratings

Grade:	3
Input:	230 VAC, 50 Hz, 1.5 Amps
Output Grade 2:	15 VDC, 2 Amps (Total combined +DC- and TO DEVICES)
Output Grade 3:	15 VDC, 1.9 Amps (Total combined +DC- and TO DEVICES)
Ripple Voltage:	Maximum Ripple Voltage is less than 5% of OUTPUT Voltage
Operating Temp.:	0-49 °C
Relative Humidity:	80%
Weight:	1.7 kg

Other Specifications

- The 503INT uses 12 V SLA batteries.
- The 503INT is capable of charging a maximum of 60 Ah of batteries to 80% in 24 hours.
- Low battery is indicated at 11.9 V.
- Deep discharge protection disconnects the battery at 9.5 V.
- Over voltage protection disconnects the output at 16.8 V.
- The AC power connection must be connected to a readily accessible disconnect circuit breaker rated for a minimum of 5 Amps.
- Use solid core copper wire for all connections, 14 AWG or larger for AC supply connection (diameter 1.63 mm, area 2.08 mm²).
- Operator access areas are not provided.

503INT INTERNATIONAL POWER SUPPLY



Specifications

Voltage Input	230 VAC at 1.5 Amps Unswitched
Voltage Output	15 VDC at 2.7 Amps Max.
Secondary (Battery) Power	2 Amps Max.
Enclosure:	
Material	18-gauge, cold rolled steel
Color	Gray
Dimensions	44.5 cm W x 34.3 cm H x 8.9 cm D

Output Levels

Nominal DC Voltage:	13.8-14.3 VDC
Low Battery:	11.9 VDC
Battery Restore:	12.6 VDC
Battery Cut Off:	9.5 VDC
Max. Battery Charging Current:	2 Amps

Certifications

EN 50131-6	Power Supplies
EN 50130-4	EMC Product Family Standard: Immunity Requirements for Components of Fire, Intruder and Social Alarm Systems
EN 61000-3-2	Limits - Limits for Harmonic Current Emissions (Equip. Input Current up to and Including 16 A per Phase) Includes A1 & A2 July 1, 2009
EN 61000-3-3	Limitation of Voltage Fluctuations & Flicker in Low-Voltage Supply Systems for Equip. with Rated Current Less Than or Equal to 16 Amps per Phase & Not Subject to Conditional Connection
EN 61000-6-4	Generic Standards - Emission Standard for Industrial Environments
IEC 60950-1	Information Technology Equipment



Designed, engineered, and manufactured in Springfield, MO using U.S. and global components.
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