

Power Supply Assembly and Installation Instructions

Contents

1. Overview
2. Specifications
3. List of Power Supply Kit Contents
4. Cable Assembly Connections
5. Installation Instructions
6. Mounting Ferrites on PW7KPSU120 and PRO42PSU120 Boards
7. AC Fail & Low Battery Operation
8. Connector and Cabling Information

Overview

The PRO42PSU120, PRO42PSU230 and PW7KPSU120, PW7KPSU230 power supply and battery charger is compatible with the PW7000 and PRO4200 systems. For ordering purpose please use the PW7KPSU120, PW7KPSU230 for the PW7000 systems and PRO42PSU120, PRO42PSU230 for the PRO4200 systems.

This power supply converts AC input voltage into a 12.5 VDC output with 4.0 amps maximum of continuous current. The power supply should connect to an input voltage of 102 VAC to 132 VAC at 50Hz/60Hz for the 120VAC versions and 195 VAC to 264 VAC at 50Hz/60Hz for the 230 VAC version. The power supply provides AC fail and low battery supervision when connected to PW7000 and PRO4200 I/O PFL (Power Fail) and auxiliary inputs.

UL Listed for 120VAC operation only.

Specifications

- 4.0 amps maximum continuous output current at 12.5 VDC with overload protection
- Filtered and electronically regulated outputs
- Built-in charger for sealed lead acid batteries with a maximum charge current of 1A
- Automatic switch over to stand-by battery, if present, upon AC power failure
- Reverse battery polarity with a non-replaceable fuse
- Low battery supervision when connected to a low battery input on the panel
- AC fail supervision when connected to PWR fail on panel
- Short circuit/overload/over-voltage protection
- -20° C to +50° C operating temperature range
- UL-60950, UL-294, and ULC S-319 listed
- CE compliant

Cautions and Warnings

- Power Supply shall be installed in accordance with the National Electric Code, as well as all applicable local regulations
- Before installation, turn off the extra circuit breaker that supplies power to the system. Do not re-apply power until installation is complete
- To reduce the risk of electric shock, do not expose the unit to rain, liquids, or excessive moisture
- There are no user-serviceable parts. Installation and servicing should only be performed by qualified personnel
- Route all power-limited (low voltage) wiring at least 1/4" (6.35 mm) away from any non-power limited wiring

Note The wires going from the battery to the power supply are non-power-limited. All the wires that go from the power supply to the other components in the enclosure (except the battery) are power-limited.

- Backup battery 12 V, 7 AH sealed lead-acid maintenance-free battery, 712BNP or equivalent
- Do not connect to a receptacle controlled by a switch

List of Power Supply Kit Contents

- Power Supply Assembly (1)
- Cable Assembly 12 VDC Power and Battery connections (1)
- Cable Assembly AC and Battery Fail connections (1)
- Cable Assembly Ground Plate to Chassis (1)
- Power Supply Mounting Plate (4 keyholes) (1)
- Machine Screw 8-32x5/16".Ground Wire to Plate (1)
- Keep Nut 8-32 Ground Wire to Plate (1)
- Machine Screw M3x0.5, 6mm Power Supply to Mounting Plate (8)
- Plastic standoffs for Mounting to the Metal Plate(4)
- Installation Instructions (1)
- IEC Power Cord (1)
- Cable Assembly AC Power Inlet and LED Power Indicator(1)

Cable Assembly Connections

The power supply consists of three pin connectors (CN1, CN2, and CN3) to which you need to connect three cable assemblies, as shown below:

Figure 1 **Power Supply Pin Connectors**

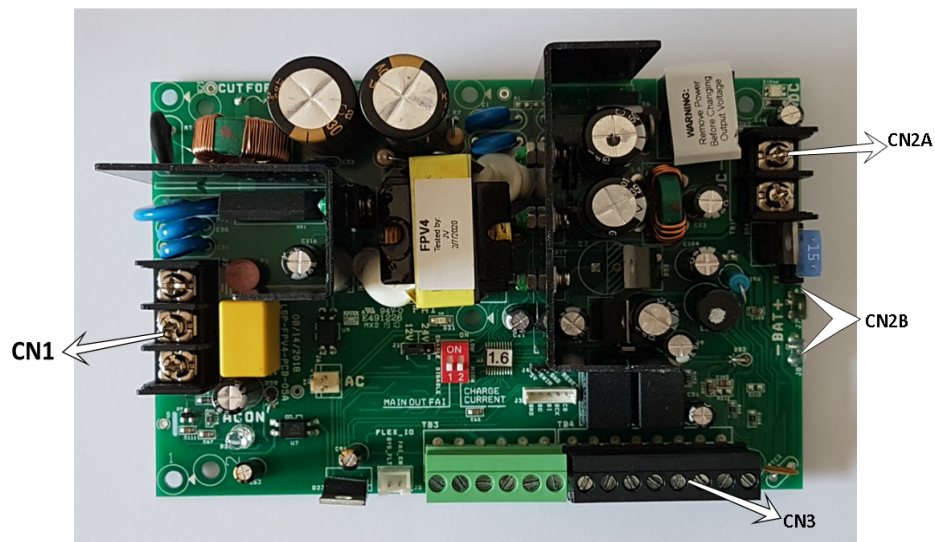
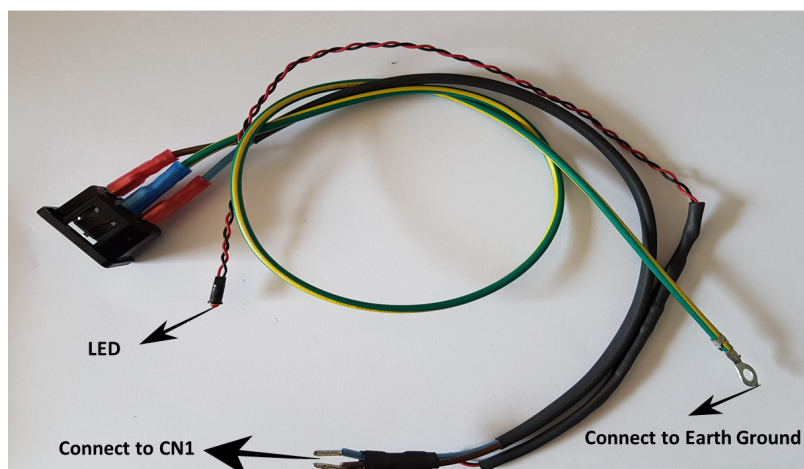
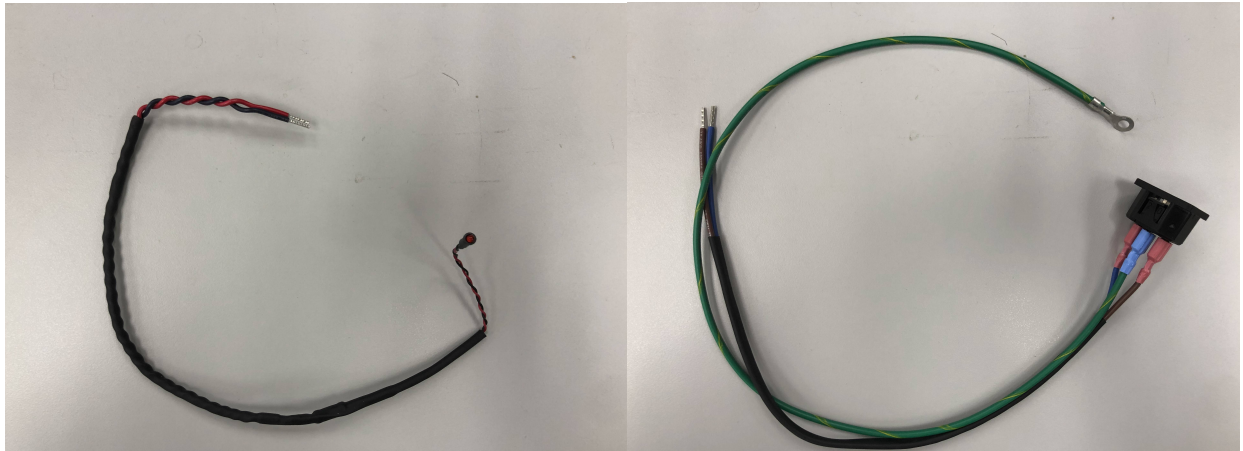


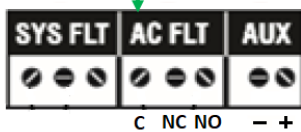
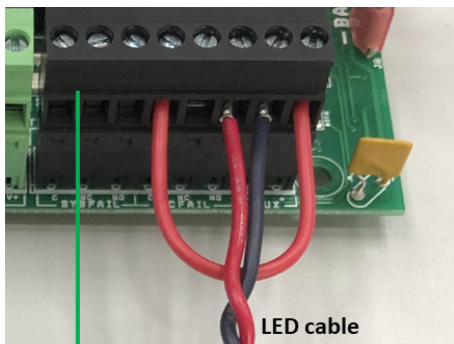
Figure 2 AC Power Inlet and LED Indicator Cable Assembly (Old Version)



New Version AC Power Inlet



Wiring Instructions

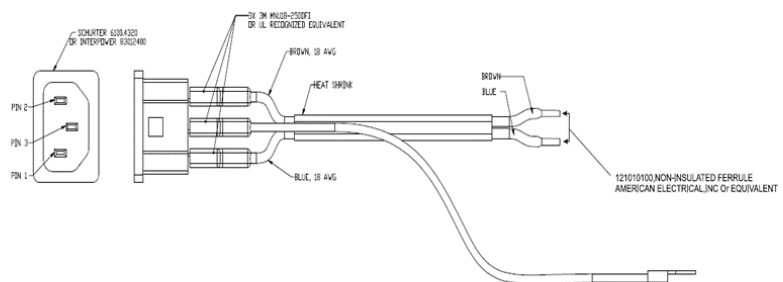


LED cable wiring instruction:

- 1) Connect black wire of LED cable to minus terminal of CN3 AUX connector;
- 2) Connect red wire of LED cable connect to NO terminal of CN3 AC FAIL connector;
- 3) An extra wire (not part of the accessories) connects the plus terminal of AUX connector to C terminal of CN3 AC FAIL.

AC power cable (w/o LED):

- 1) Brown wire of power cable connect to L terminal of CN1;
- 2) blue wire of power cable connect to N terminal of CN1.



Note The AC power inlet and the LED indicator are pre-installed into the enclosure as shown below:

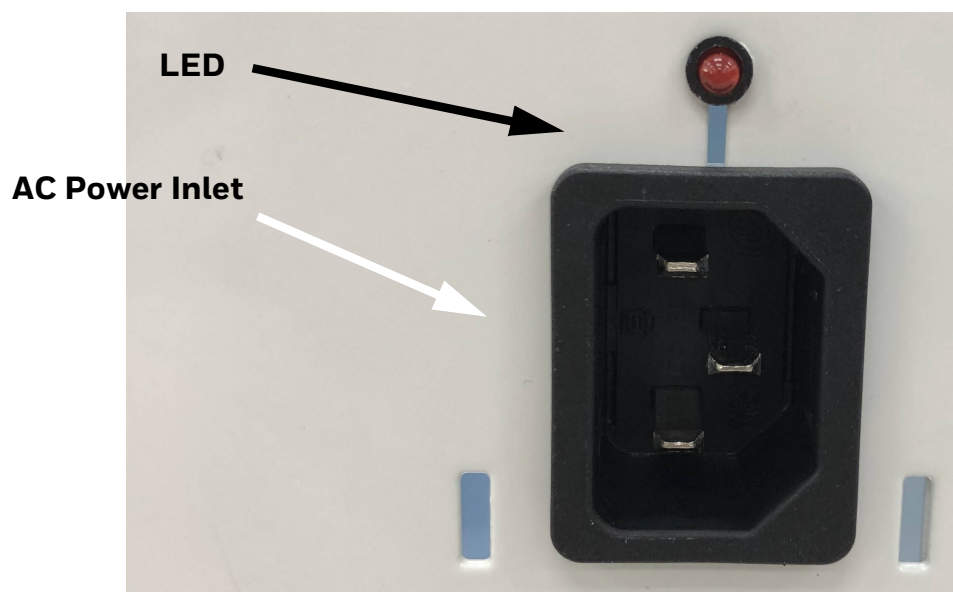


Figure 3 12VDC Power and Battery Cable Assembly

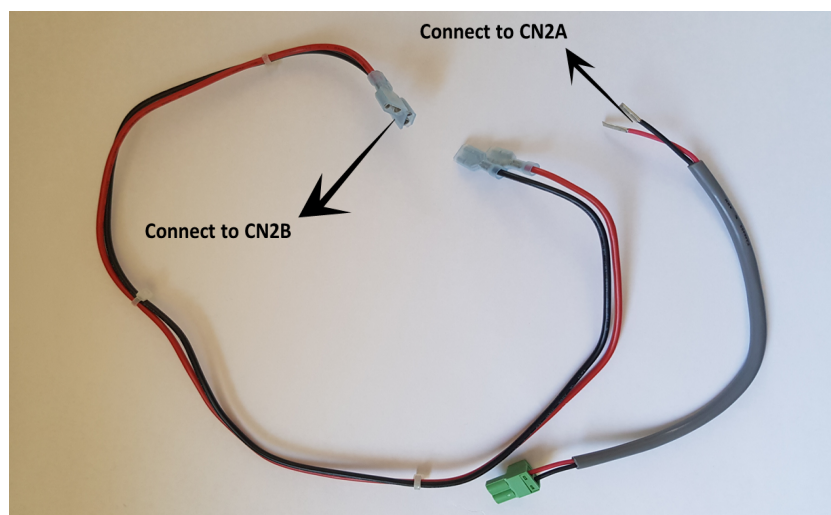
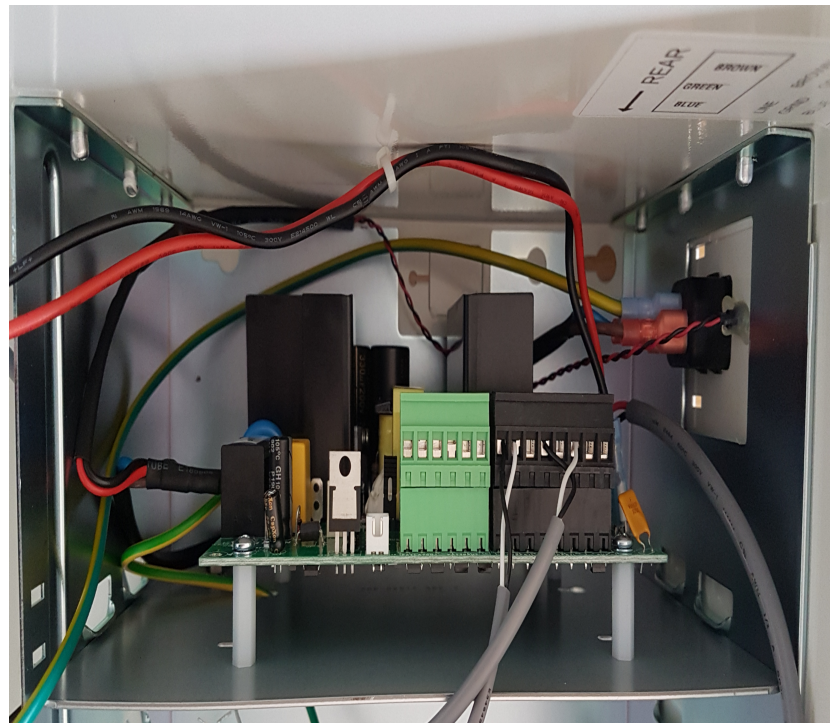


Figure 4 AC and Battery Fail Cable Assembly



When the four cable assemblies are connected to the pin connectors (C1, C2, and C3), the fully connected power supply should look similar to Figure 4.

Figure 5 Fully Connected Power Supply, Front View



Here are the three cable assemblies that connect to these pin connectors:

Note This cable is not included with the power supply. It is included with high density enclosure and it is also available separately as part number PROE1PSCBL.

Installation

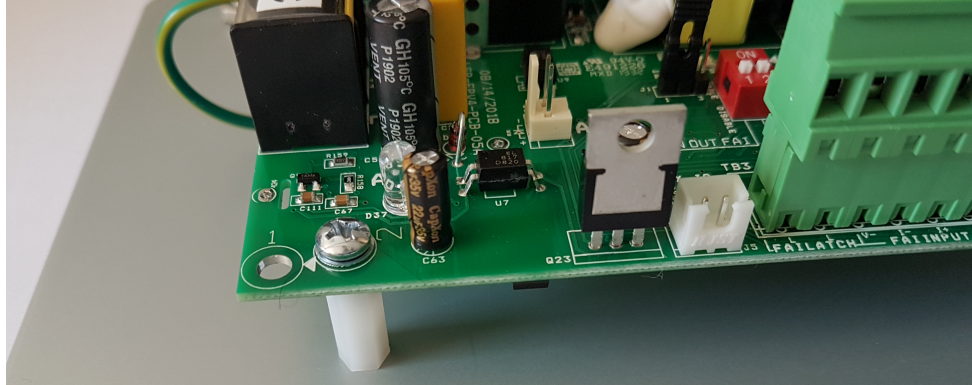
Use this power supply only with Honeywell PW7000 and PRO4200 series access control and proprietary alarm units.

This power supply has been evaluated by UL for access control applications only and to be used with the following enclosures:

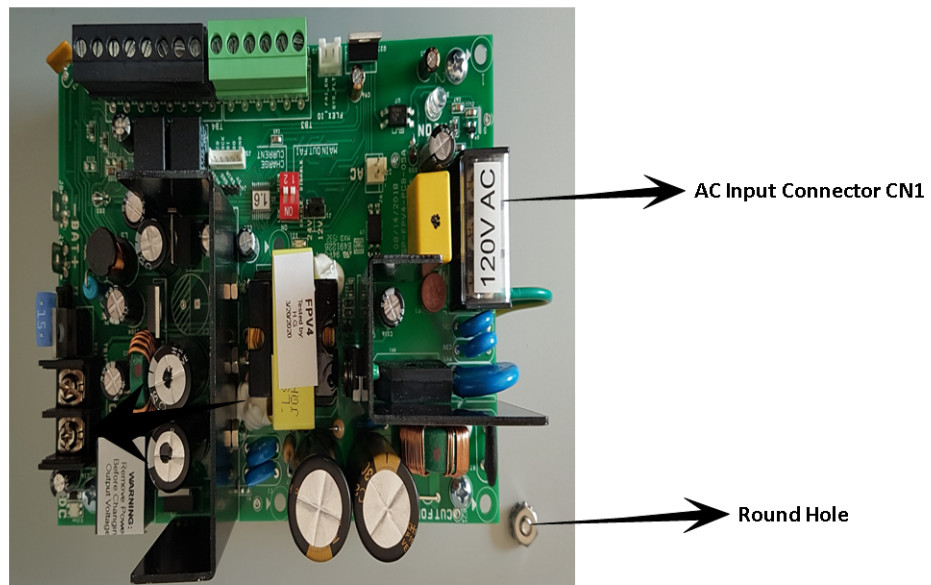
- PRO22ENC1
 - PRO22ENC2
 - PW5K2ENC1
 - PW5K2ENC2
1. Secure enclosure in the required location, using appropriately sized fasteners.
 2. Unpack the power supply and metal plate. Do not discard the packing materials until installation and checkout are successfully completed.
 3. Remove metal plate from packaging.



4. Install the 4 Power Supply with the 4 plastic Stand offs SVPWS.

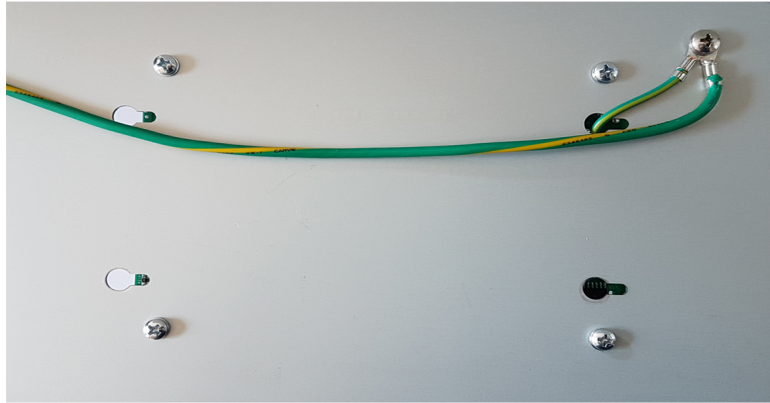


Position the power supply over the 4 keyholes on the metal plate. Ensure that the round hole (refer to the following image) is in the lower left corner and the power supply is positioned with the AC input terminals (CN1) facing downward.



5. Slide the power supply down in the keyholes until they bottom out. Mount the Power Supply with the four plastic standoffs with the screws.

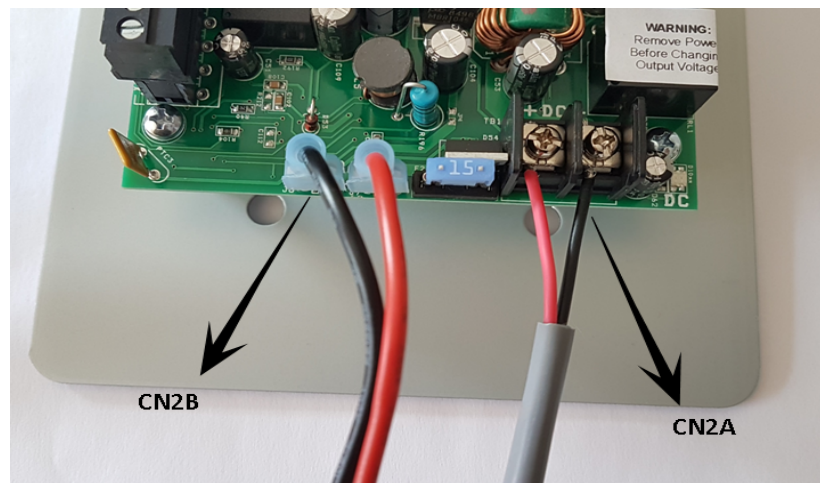
6. Using the provided #8x32 screw and locknut, secure the provided ground wire (GREEN with YELLOW stripe) to the back of the metal plate as shown below:



WARNING Do not connect power at this time!

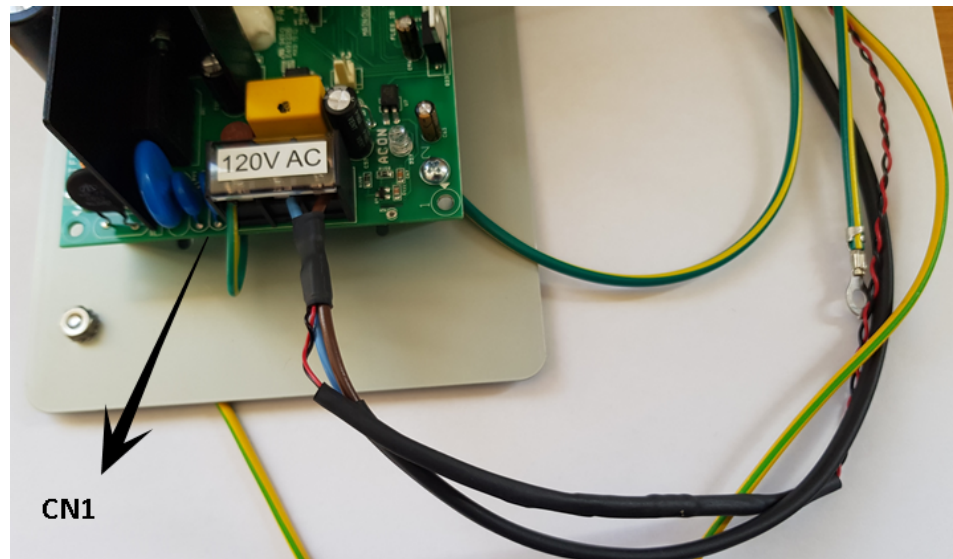
7. Push and insert the cable connector to the pin connector CN2 and then connect the 12 VDC output and battery cable to the power supply.

Figure 6 12 VDC Power and Battery Cable Assembly Connecting to the CN2 Pin Connector



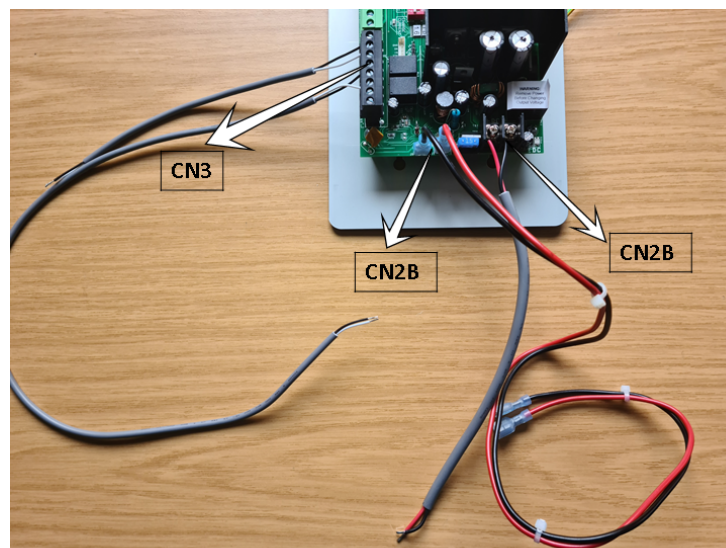
8. Screw the pin connector CN3 and then connect the AC battery fail cable to the power supply:

Figure 7 AC Power Inlet and LED Indicator Cable Assembly Connecting to the CN1 Pin Connector

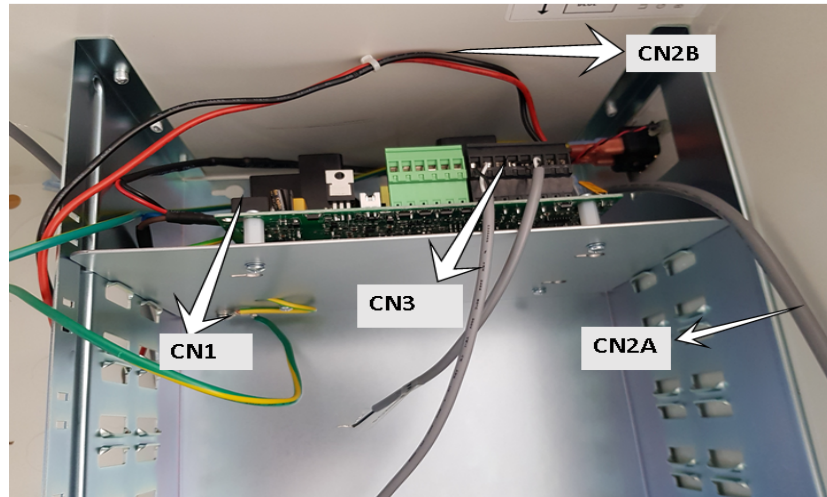


Note The cable harness consisting of the IEC receptacle, AC power indicator light, and the enclosure ground have been factory installed and continuity tested in order to comply with UL-294. Removal of the factory installed green wire or loosening the nut that secures the enclosure ground will void UL compliance.

This is how the pin connectors CN2 and CN3 should look like after attaching both the cables:



9. Slide the power supply and metal plate assembly into the metal enclosure. Note the orientation of the ground wire towards the lower portion of the enclosure:



10. Secure the ground wires (GREEN with YELLOW stripe) from the mounting plate to the middle grounding lug inside the mounting enclosure, as shown below.



11. Connect the 12 VDC power output from the power supply to the controller input, noting proper polarity.
12. Connect the low battery wires to the appropriate panel input.
13. Connect the AC power fail wires to the appropriate panel input.
14. Connect the supplied power cable into the power inlet on the outside of the enclosure.
15. Check all the power supply wiring to ensure it is installed properly.
16. Plug the AC power supply cord into the appropriate AC source and power on the system.
17. Check to ensure that the system is powered up correctly.
18. Ensure that the red LED near the AC power inlet is glowing.
19. Connect the battery leads to an appropriately-sized battery for the application.
20. Route all power-limited wiring at least 0.25" (6.35 mm) away from any non-power-limited wiring.

Note The wires going from the battery to the power supply are non-power-limited. All the wires that go from the power supply to the other components in the enclosure (except the battery) are power-limited.

21. Secure and lock the cabinet door to prevent access by unauthorized persons.

Mounting Ferrites on PW7KPSU120 and PRO42PSU120 Boards

To meet FCC approval, 2 ferrites must be added to the power supply when the IC is operating in Native Mode (on board readers active).

To install the two required ferrites:

1. Mount square ferrite at the mains entry connector point of the Power Supply Unit. Run the mains power cable through the ferrite.
2. Add the round ferrite to the mains and the LED cables as shown in the picture.



AC Fail And Low Battery Operation

AC Fail Output

During normal operation, the AC Fail output will not be active, as the AC power is present and the relay contact is open. If AC power fails or is disconnected, the AC fail output will change the state to close. This will trigger the AC Fail alarm if wired into the panel properly at the power fail input (PFL).

When the power supply senses a loss of AC power, it will generate the AC Fail alarm and simultaneously switch over to the battery power without power interruption to the system.

Low Battery Output

The power supply low battery alarm output is not active during normal operation, which means that the relay contact is open. The low battery alarm output is typically triggered (closed) at 10.25 VDC (measured at the battery). The exact transition point may vary due to component tolerances and/or power supply loading.

The battery cutoff voltage is the minimum battery voltage that will result in the power supply providing an output. This voltage is typically 75 VDC below the low battery alarm. If the low battery alarm is generated at 10.25 VDC (typical), the battery cutoff will occur at 9.5 VDC (typical).

Connector and Cabling Information

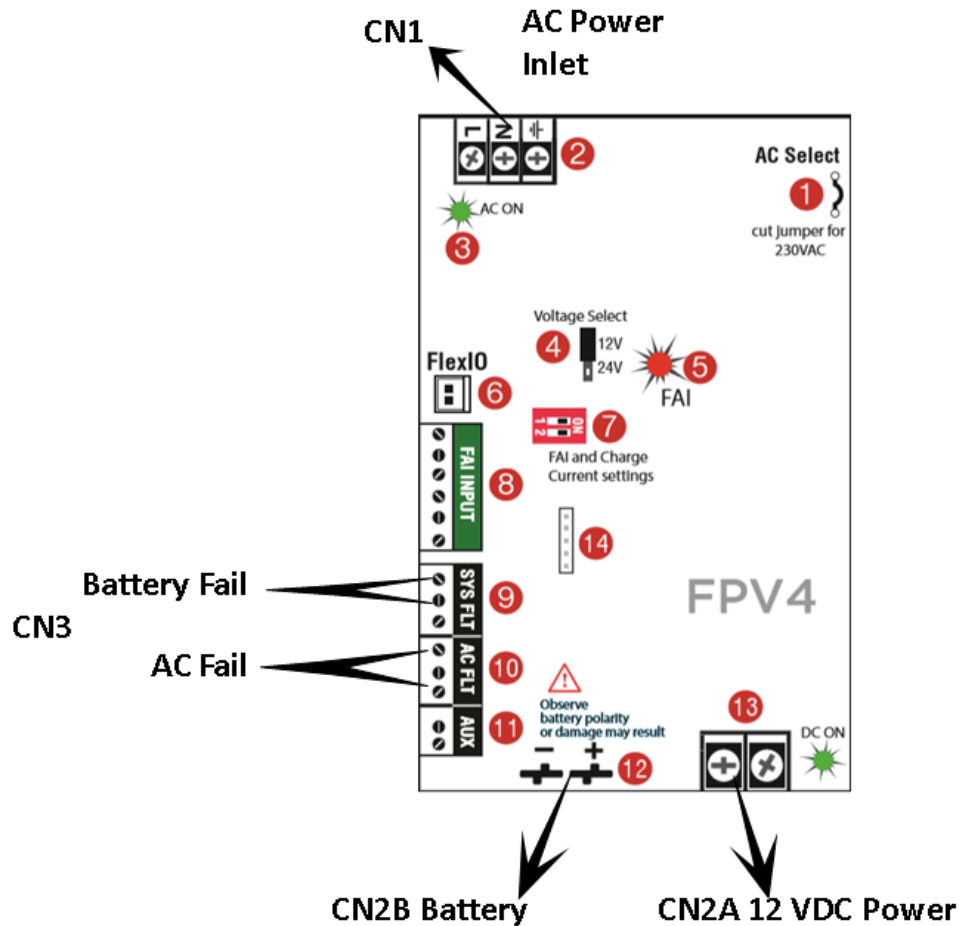


Table 1 Cable Assembly AC Power Inlet and LED Power Indicator Connections, CN1

Pin Number	Pin Assignment	Wire Color
1	AC Neutral	Blue
2	No Connect	N/A
3	AC Line/Live	Brown

Honeywell Access Systems

135 W. Forest Hill Avenue Oak Creek, WI 53154

United States-800-323-4576

www.honeywellaccess.com

+1 800 323 4576 (North America only)

<https://mywebtech.honeywell.com>

Document 800-26330_04 2021

@ 2020 Honeywell International Inc. All rights reserved. No part of this publication may be reproduced by any means without written permission from Honeywell. The information in this publication is believed to be accurate in all respects. However, Honeywell cannot assume responsibility for any consequences resulting from the use thereof. The information contained herein is subject to change without notice. Revisions or new editions to this publication may be issued to incorporate such changes. For patent information, see www.honeywell.com/patents.

Honeywell

—
**THE
FUTURE
IS
WHAT
WE
MAKE IT**