



GE Model PS/C-6 Power Supply/Charger Installation Instructions

460633001A • November 2005

Copyright © 2005, GE Security Inc.

Product Overview

The GE Model PS/C-6 Power Supply/Charger is designed for use with the GE Micro/5 microcontroller.

The Model PS/C-6 Power Supply/Charger features:

- 13.8 VDC, 6 Amp supply
- Auto-sensing 100/240 VAC input
- Filtered and independent regulated outputs
- No load and overload short circuit protection
- Built in charger for sealed lead acid batteries
- Automatic switch-over to standby battery when AC fails
- Low battery sensing and alarm output
- AC fail alarm output
- Deep discharge alarm output
- Rugged NEMA 1 style sheet metal enclosure with integral locking cover knockouts provided for easy wiring
- DIN rail mount
- LED indicator

Inspect the package and contents for visible damage. If any components are damaged or missing, do not use the unit; contact the supplier immediately. If you need to return the unit, you must ship it in the original box.

Technical Specifications

Enclosure specifications	
Physical dimensions	12 in high x 10 in wide x 6 in deep 305mm high x 254mm wide x 153mm deep
Operating environment	+35F to +122F (+2C to +50C)
Humidity range	5% to 95% non-condensing
Thermal air cooling	At least 6 inches (15.2cm) of clearance is required on all four sides of the enclosure
Power	
	Input: 100/240 VAC 1.8/0.6 Amp Output: 13.8 VDC 6.0 Amp
Battery	12 VDC 7 Amp hour lead acid type included
Cabling	Leads for connection to battery included
Regulatory information	FCC Class A CE UL 294 - pending UL 1076 - pending

Getting started roadmap

The following is a basic outline for installing and setting up your PS/C-6 power supply:



CAUTION: Do not apply power to any component until the installation is complete. Damage to components may occur if power is incorrectly applied.

1. Determine the power input and output cable clamps needed and obtain them prior to starting the installation. During the installation, remember to:
 - label all connections/cables for ease of maintenance.
 - leave enough slack in the wiring so the cables can be dressed. This minimizes interference during maintenance and or replacement of the power supply.
2. Unpack the power supply.
3. Mount the enclosure. See [Mounting](#) on page 1.
4. Connect AC power to the power supply. See [Connecting the PS/C-6 power supply](#) on page 2.

5. Mount and install the power supply. See [Installing the battery](#) on page 2.
6. Wire the DC power to the microcontroller. See [Wiring DC power to the microcontroller](#) on page 2.

Mounting

Be sure to read the mounting and handling guidelines below before beginning to mount the power supply.

Mounting and handling guidelines

Comply with the following guidelines:

- Locate the Model PS/C-6 Power Supply/Charger in areas secure from any disruption or tampering.
- Clean and clear all mounting areas of corrosive gases and airborne metallic particles. Avoid installing near photocopiers due to contamination from toner particles.
- Protect the power supply from hazardous (high) voltages.
- Mount the power supply on a vertical surface with at least six inches (15.2 centimeters) clearance on all four sides to support thermal air cooling.
- Locate the power supply in a place that provides dedicated AC earth ground. The Model PS/C-6 Power Supply/Charger must be earth grounded.
- Keep interior and exterior housing of all power supply enclosures and other components free of wire remnants.
- Avoid temperatures outside the range specified for the power supply operating environment.
- To avoid mechanical damage, do not drop the power supply.
- Do not subject power supply to electrostatic discharge.

Mounting instructions

The enclosure must be mounted directly to the wall. Mount the power supply enclosure using the following steps and referring to [Figure 1](#) on page 3.

1. Remove the packing material from the enclosure.
2. Measure and drill four mounting holes, if required.
3. Bolt the enclosure securely to the wall using four #10 thread lag bolts or equivalent with screw heads and washers.
4. Install cable conduit to the power supply enclosure knockout holes.

The enclosure has knockout holes on the sides, bottom, and back; cable is pulled through these holes. To open the holes, strike the knockouts from outside of the enclosure.
5. Fit and tighten one 3/4 inch (1.91 cm) strain relief clamp in each knockout hole to be used.
6. Find the nearest earth ground (such as, electrical box or ground bus). Run wire from the power supply enclosure ground terminal to earth ground point. Use wire size in accordance with local and national electrical codes.



CAUTION: The Model PS/C-6 Power Supply/Charger must be earth grounded.

Setup

Connecting the PS/C-6 power supply

- Note:**
1. A readily accessible disconnect device shall be incorporated in the building installation wiring.
 2. This equipment has been designed for connection to an IT power distribution system.
- Note:**
1. Ein leicht zugängliches Ausschaltgerät muss in die Installationsverkabelung des Gebäudes integriert werden.
 2. Dieses Gerät wurde für den Anschluss an ein IT-Stromverteilungssystem entworfen.



CAUTION: Installation should be in accordance with local and national electrical codes.

ACHTUNG: Installation sollte in Übereinstimmung mit den lokalen und nationalen Electrical Codes erfolgen.

To apply AC power to the power supply:

1. Follow all state, local, and national electrical codes.
2. Using the knockouts provided in the side and back of the enclosure, connect AC power and earth ground to the terminals provided inside the enclosure. See [Figure 2](#) on page 4.

Power supply earth grounding (AC grounding) is a critical element for proper operation.

To test AC power ground:

1. Using an ohmmeter, measure the resistance between the power supply ground stud and a known good earth ground (metal water pipe or building structural steel frame).
2. A resistance value greater than 50 ohms indicates poor AC ground.

Installing the battery

The battery included with the PS/C-6 Power Supply/Charger is 12 VDC with a 7 amp-hour current rating. It will need to be wired to the power supply



CAUTION: Make sure AC input power is disconnected prior to installing the battery.

To install the battery:

1. Unpack the battery from the shipping box.
2. Place the battery inside the enclosure below the power supply as shown in [Figure 2](#) on page 4.
3. Remove the protective cover from the positive terminal of the battery.
4. Connect the battery leads from the power supply Black to negative terminal and Red to positive terminal of the battery. [Figure 3](#) on page 5 shows the wiring between the battery and the power supply.



CAUTION: Replace battery with lead acid sealed 7AH only.

ACHTUNG: Batterien nur durch Bleisäure-versiegelte 7AH-Batterien ersetzen.

Wiring power supply failure outputs

To wire the AC power fail outputs:

Low battery (pin 2): indicates that the battery output voltage level is below 11.6V. Line is low as long as Vbattery is higher than 11.6V and goes high when Vbattery goes below 11.6V.

If this option is used:

- Wire a 1K ohm pull-up resistor to +13.8 VDC (Resistor R1).
- Connect power supply pin 2 to an input on a 20DI board.

Refer to [Figure 3](#) on page 5.

Deep battery discharge (pin 4): indicates that the battery output voltage level is below 10.5V. Line is low as long as Vbattery is higher than 10.5V and goes high when Vbattery goes below 10.5V.

If this option is used:

- Wire a 1K ohm pull-up resistor to +13.8 VDC (Resistor R2).
- Connect power supply pin 4 to an input on a 20DI board.

Refer to [Figure 3](#) on page 5.

Power fail (pin 10): indicates that the AC input has been lost. Line is low during normal operation and goes high when AC input is lost.

If this option is used:

- Wire a 1K ohm pull-up resistor to +13.8 VDC (Resistor R3).
- Connect power supply pin 10 to pin 8 (AC FAIL) on the Micro/5 Power/Communications board.

Refer to [Figure 3](#) on page 5.

Wiring DC power to the microcontroller

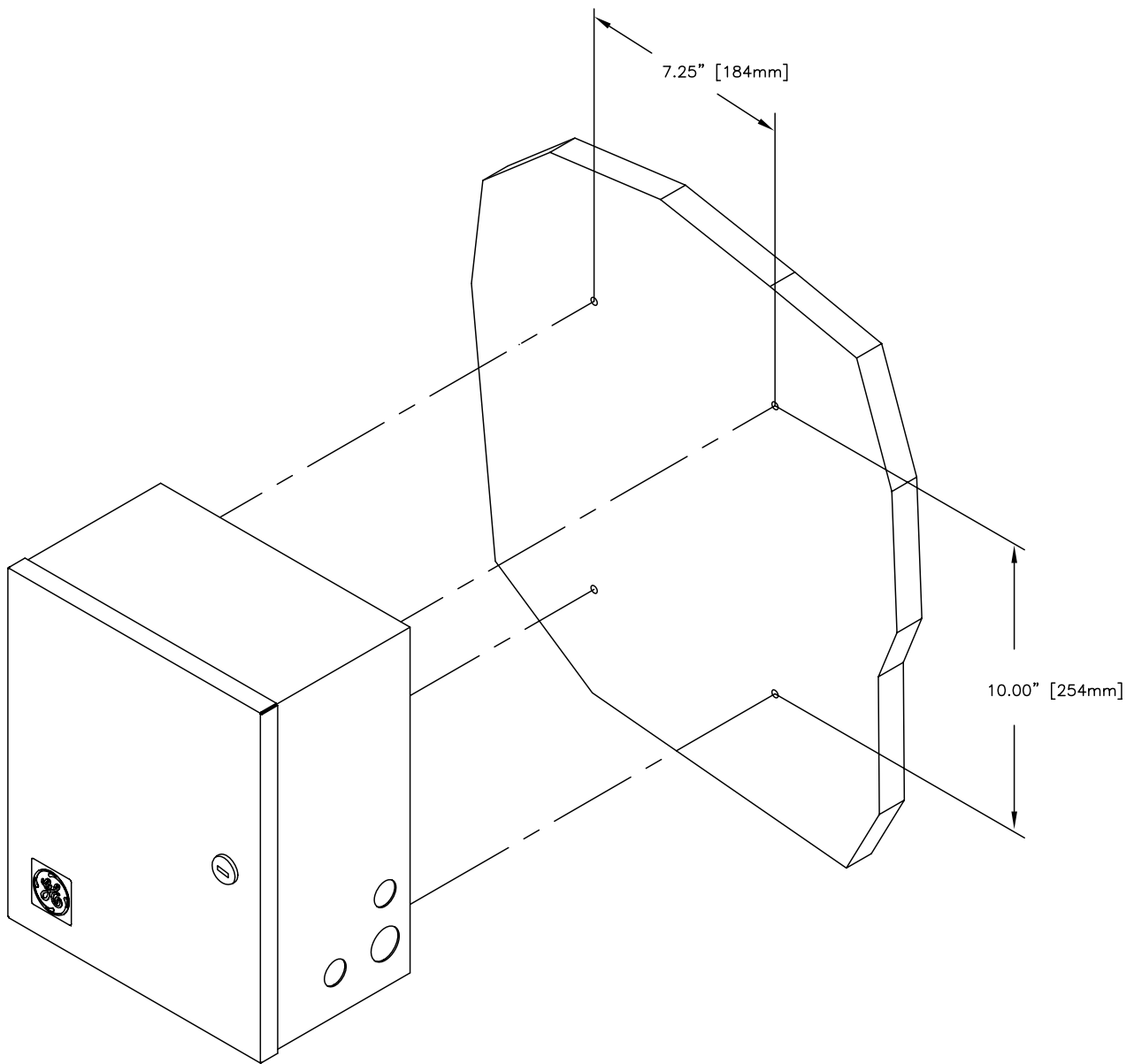


- CAUTION:**
1. If the polarity is reversed, the fuse will blow to prevent damage.
 2. If the fuse blows, replace with a fuse of the same type and rating:
For board revisions A - E, replace with a 1.5 amp 220V fuse.
For board revisions F and later, replace with a 5.0 amp 220V fuse.

To wire DC power to the microcontroller:

1. Connect the DC wires to the power supply terminals 6 and 8 as shown in [Figure 3](#) on page 5.
2. Using the proper size electrical conduit, run DC wires through the knockout provided on the side of the power supply enclosure to the Micro/5 enclosure.
3. Connect DC wires to the Micro/5 Power/Communications board connector J6, pin 3 (+12 VDC) and pin 4 (Ground 12 VDC Return). See [Figure 3](#) on page 5.

Figure 1. Power supply - wall mounting



530633001A

Figure 2. Wiring AC power through the terminal block

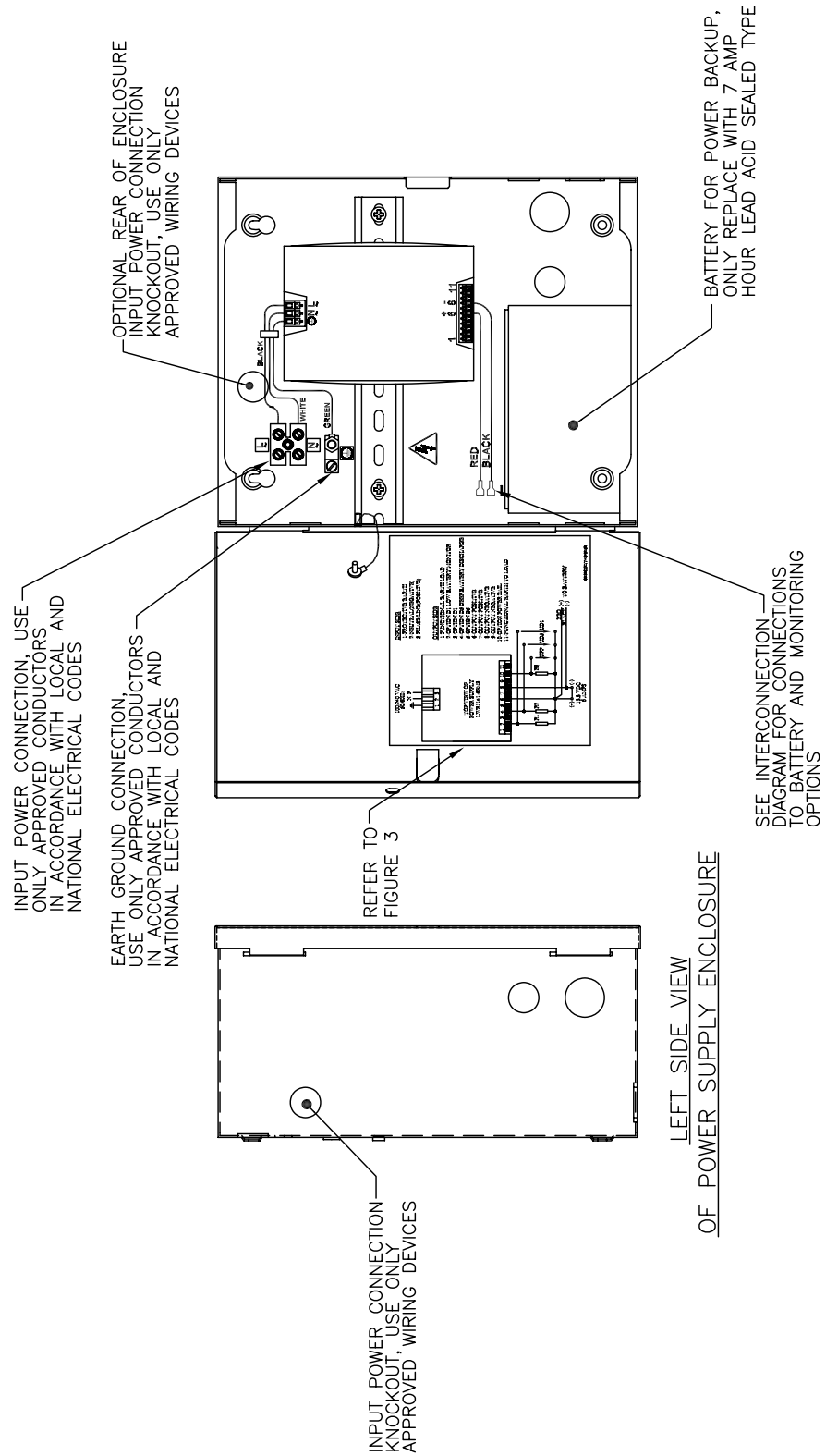
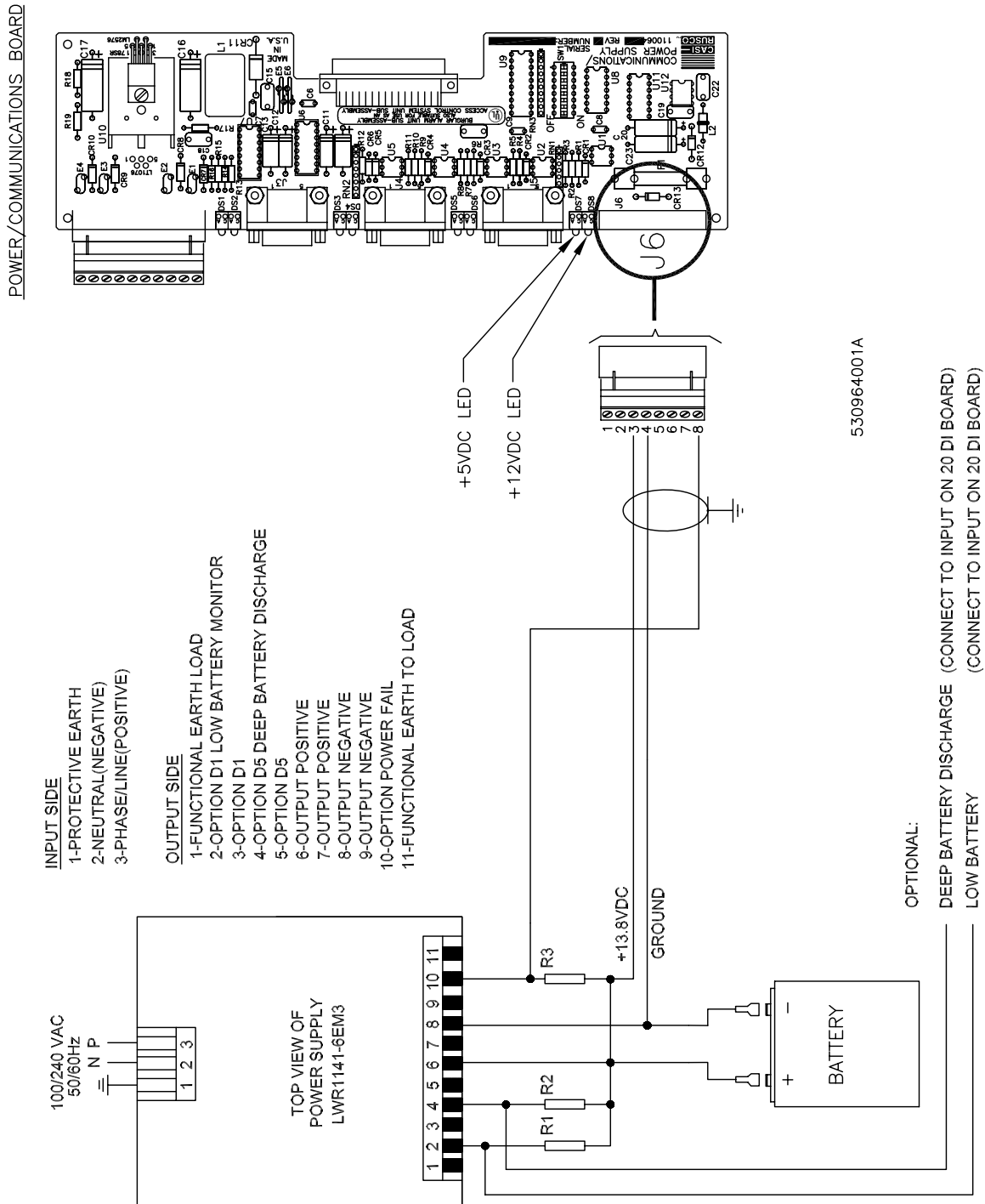


Figure 3. Wiring power supply to the battery and Micro/5 Power/Communication board



- **Low battery (pin 2):** indicates that the battery output voltage level is below 11.6V. Line is low as long as V_{battery} is higher than 11.6V and goes high when V_{battery} goes below 11.6V. If this option is used, wire a 1K ohm pull-up resistor to +13.8 VDC (Resistor R1).
- **Deep battery discharge (pin 4):** indicates that the battery output voltage level is below 10.5V. Line is low as long as V_{battery} is higher than 10.5V and goes high when V_{battery} goes below 10.5V. If this option is used, wire a 1K ohm pull-up resistor to +13.8 VDC (Resistor R2).
- **Power fail (pin 10):** indicates that the AC input has been lost. Line is low during normal operation and goes high when AC input is lost. If this option is used, wire a 1K ohm pull-up resistor to +13.8 VDC (Resistor R3).

GE
Security

U.S.
T 888 GE SECURITY (1 888 437 3287)
F 561 998 6224

Asia
T 852 2907 8108
F 852 2142 5063

Australia
T 61 3 9259 4700
F 61 3 9259 4799

Europe
T 32 2 725 11 20
F 32 2 721 86-13

Latin America
T 305 593 4301
F 305 267 4300

www.gesecurity.com