



29009956R001

# PS4085 Power Supply Module

## Installation Manual

This installation sheet shall be used in conjunction with the installation manual of the DSC equipment to which the PS4085 is connected.

The PS4085 provides up to 1.5A of additional current, up to 4-hour standby time and 15 minutes alarm time from a rechargeable 12V rated battery.

### General

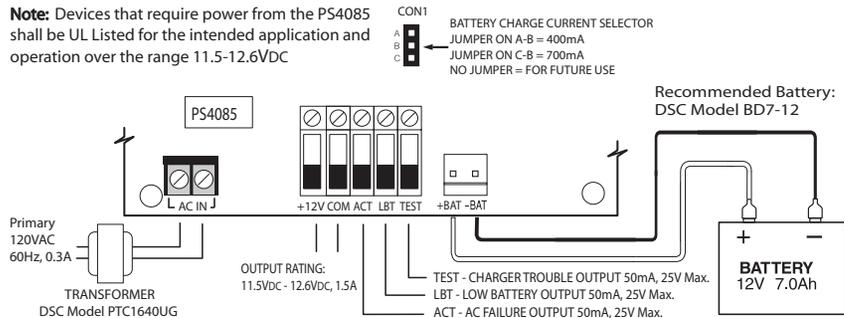
This product meets the requirements of UL603 Standard for Power Supplies used with Burglar-Alarm Systems and can be used in Mercantile Alarm installations in accordance with the following UL Standards: UL365, UL609, UL1076, UL1610.

### Specifications

- Temperature range: 0°C to +49°C (32°F to +120°F)
- Relative humidity: 93% non condensing
- Input ratings: 120Vac, 60Hz, 300mA
- Transformer required: Plug-in adapter model DSC PTC1640UG
- Transformer secondary ratings: 16.5Vac, 40VA
- Board current draw: 30mA
- Board dimensions: 145 mm x 83 mm
- Output rating: 11.5 -12.6VDC, 1.5A (max.)
- Resettable fuse (PTC) used on circuit board instead of replaceable fuses
- Output ripple voltage: 180mVpp
- No overvoltage protection devices required on the outputs
- Storage device: rechargeable, sealed, lead-acid batteries, rated 12VDC. Replace every 3-5 years
- Battery capacity: 7Ah
- Battery derating factor: minimum 10%
- Maximum standby time: 4h and 15 min alarm
- Recharging time: less than 24 hours
- Low battery trouble indication threshold: 11.2VDC
- Battery deep discharge protection (cut-off at 9.5VDC)
- Supervision for loss or degradation of primary power source (ACT), battery fail or battery low voltage (LBT) and charger circuitry failure (TEST)

Figure 1 PS4085 Wiring

**Note:** Devices that require power from the PS4085 shall be UL Listed for the intended application and operation over the range 11.5-12.6VDC



### Terminal Descriptions

**AC** - Supervised input. Connect the secondary of the transformer to these terminals. Connect the primary of the transformer to a dedicated electrical circuit (commercial fire installations) or to an unswitched AC source (other applications).

**+12V/COM** - Special applications output circuit, power limited. Connect to devices that require power. Connect the positive lead of powered devices to the +12V terminal and the negative lead to the COM terminal.

**ACT** - This open collector output activates when an AC Trouble is detected: Rated 50mA.

**LBT** - This open collector output activates when a Battery Trouble condition is detected: Rated 50mA.

**TEST** - This open collector output activates when the charging circuit is in a trouble condition: Rated 50mA. These outputs may be used to activate an indicating device, such as an LED, or a relay to activate devices requiring more current. The terminals may also be connected to a control panel zone input to generate an alarm and to have the system report trouble conditions.

To report AC failure and low battery conditions with individual reporting codes, connect the ACT and LBT to individual alarm zones. The ACT and LBT terminals may also be connected to a single alarm zone. When so connected, both trouble conditions are reported with a single reporting code.

**+BAT/-BAT** - Used to connect the standby battery, non-power limited. Use single or dual lead battery wire assembly.

### Battery Charge Current

Select the battery charge current using jumper "CON1". To avoid damage to the battery, do not select a battery charge rate greater than 0.1 times the battery AHR rating.

Jumper Setting	Charge Current	Battery Size
A-B	400mA	4Ah
B-C	700mA	7Ah, 14Ah
None	Future Use	N/A

**Note:** For UL Listed installations use only 700mA setting.

### Applying Power

After all wiring is complete, connect the battery leads to the battery, then connect the AC transformer. For information on the power requirements of specific devices, refer to the instructions supplied with the device.

**IMPORTANT! Do not connect power until all wiring is complete.**

### Mounting the Cabinet

When mounting the cabinet, select a dry location within 1m/3.3ft of the control panel.

To mount the cabinet:

1. Press 4 white circuit board stand-offs into the raised mounting holes at the back of the cabinet.
2. Hold the cabinet in position and pull all wiring through the holes in the back.
3. Using the provided mounting screws and appropriate wall anchors, mount the cabinet securely to the wall.
4. Press the PS4085 module onto the plastic stand-offs.

### Enclosures

The PS4085 can be installed in the metal enclosure described below. Tamper protection switches can be installed on all enclosures, including door opening protection and/or removal from the mounting position. Doors can be secured using screws or keylock.

Internal and/or external wiring for this module shall be routed, supported, clamped or secured in a manner that reduces the likelihood of the following:

- excessive strain on wire and on terminal connections.
- loosening of terminal connections.
- damage of conductor insulation.

# DSC

From Tyco Security Products

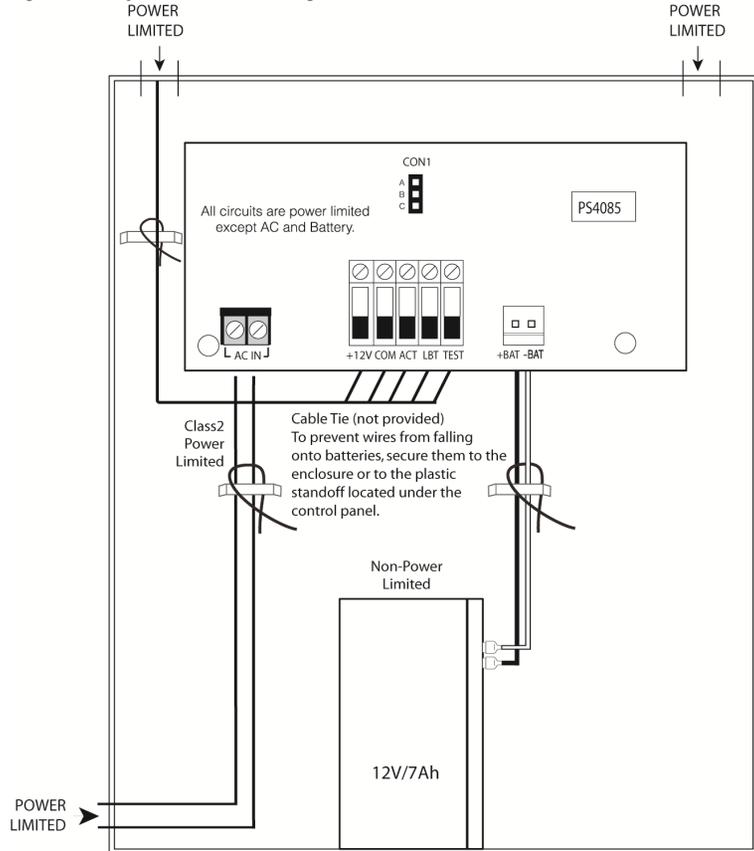
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## Metal Enclosure

- Model PC5003C (removable door) made of 22Ga steel, painted, dimensions: 248mm(L) x 298mm(W) x 76mm(H), weight: 1500g.

Figure 2 Battery and AC Wire Routing



INSTALL BATTERY AND AC WIRING AS SHOWN ABOVE

**IMPORTANT:** All circuits are classified for UL installations as Power Limited/Class II Power Limited except for the battery leads and primary AC wiring which are not power limited. Do not route any wiring over circuit boards. Maintain at least 1" (25.4mm) separation. A minimum 1/4" (6.4mm) separation must be maintained at all points between Power Limited wiring and all other Non-Power Limited wiring. Route wires as indicated in the diagram.

## LIMITED WARRANTY

Digital Security Controls warrants that for a period of twelve months from the date of purchase, the product shall be free of defects in materials and workmanship under normal use and that in fulfillment of any breach of such warranty, Digital Security Controls shall, at its option, repair or replace the defective equipment upon return of the equipment to its factory. This warranty applies only to defects in parts and workmanship and not to damage incurred in shipping or handling, or damage due to causes

beyond the control of Digital Security Controls such as lightning, excessive voltage, mechanical shock, water damage, or damage arising out of abuse, alteration or improper application of the equipment. The foregoing warranty shall apply only to the original buyer, and is and shall be in lieu of any and all other warranties, whether expressed or implied and of all other obligations or liabilities on the part of Digital Security Controls. This warranty contains the entire warranty. Digital Security Controls neither assumes responsibility for, nor authorizes any other person purporting to act on its behalf to modify or to change this warranty, nor to assume for it any other warranty or liability concerning this product. In no event shall Digital Security Controls be liable for any direct or indirect or consequential damages, loss of anticipated profits, loss of time or any other losses incurred by the buyer in connection with the purchase, installation or operation or failure of this product. Warning: Digital Security Controls recommends that the entire system be completely tested on a regular basis. However, despite frequent testing, and due to, but not limited to, criminal tampering or electrical disruption, it is possible for this product to fail to perform as expected.

## FCC COMPLIANCE STATEMENT

**CAUTION:** Changes or modifications not expressly approved by Digital Security Controls could void your authority to use this equipment. This equipment generates and uses radio frequency energy and if not installed and used properly, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for Class B device in accordance with the specifications in Subpart "B" of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in any residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to television or radio reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Re-orient the receiving antenna
- Relocate the alarm control with respect to the receiver
- Move the alarm control away from the receiver
- Connect the alarm control into a different outlet so that alarm control and receiver are on different circuits. If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the FCC useful: "How to Identify and Resolve Radio/Television Interference Problems". This booklet is available from the U.S. Government Printing Office, Washington D.C. 20402, Stock # 004-000-00345-4.