Installation Manual

Premier PSU200/PSU200XP

Issue 1

CE

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Introduction

The *Premier PSU200* is a standalone intelligent 2 Amp power supply unit designed to meet the requirements of Grade 3 under EN50131-6 and PD6662. The *Premier PSU200XP* is a *PSU200* combined with a *Premier 8XP* zone expander to create a fully monitored power supply unit via the control panel network. Both units are supplied in a metal housing which can accommodate either two 7Ah batteries or a single 17Ah battery.

The *Premier PSU200XP* is designed for use with the following *Premier* control panels:

- *Premier 24* - V7.5
- *Premier 48* - V7.5
- *Premier 88* - V7.5
- *Premier 168* - V7.5
- *Premier 640* - V8.0

PSU200 and *PSU200XP* Layout

① *PSU200* power supply PCB.

② *Premier 8XP* zone expander PCB (only fitted on *PSU200XP*).

③ Standby battery space; 2 x 7Ah or 1 x 17Ah.

④ Front cover “Alert” indicator.

⑤ Front cover “Power” indicator.

⑥ Mains cable entry and anchor point

⑦ Keyhole mounting and back tamper fixing point.

⑧ Fused terminal block connector for mains supply and spare fuse clip.

⑨ Tamper switch assembly.

⑩ Mains transformer.

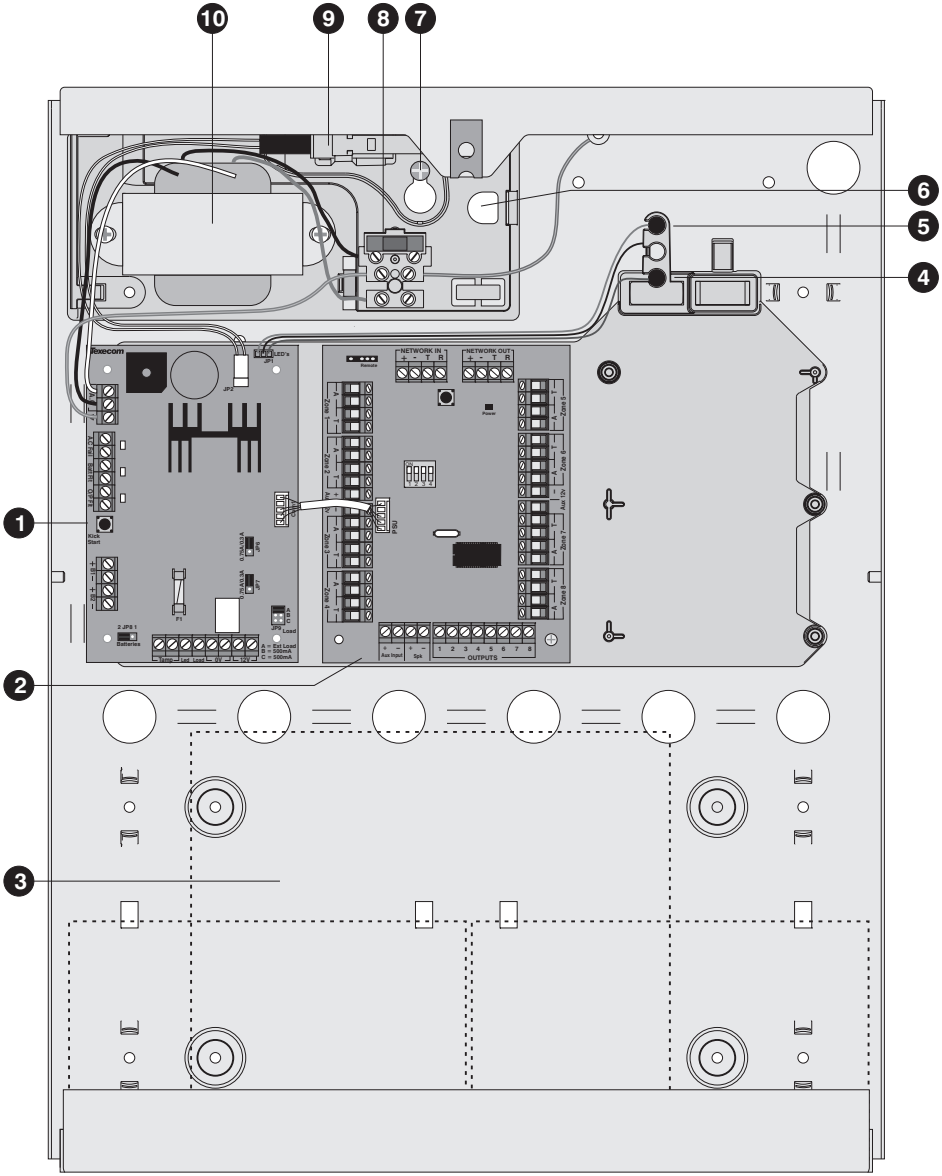


Figure 1. *PSU200* & *PSU200XP* Layout

PCB Layout and Terminals

The figure below shows the PCB layout of the *PSU200* and *PSU200XP*:

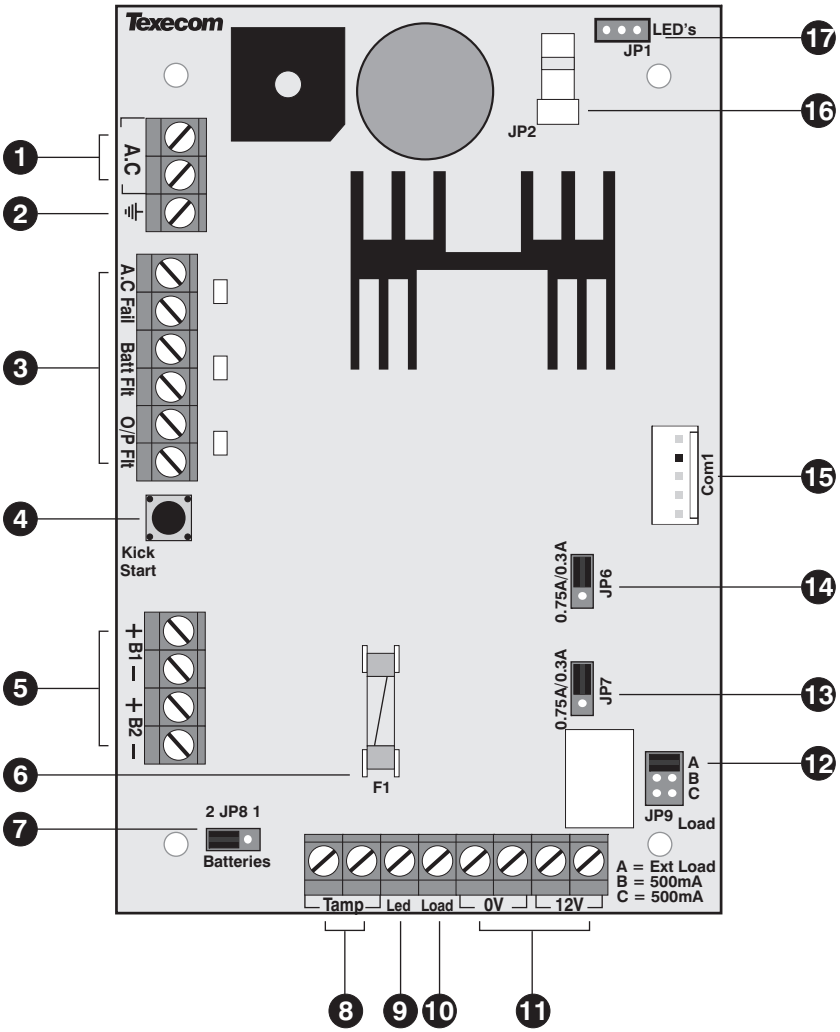


Figure 2. PCB Layout

① 18Vac from mains transformer.

② Earth connection.

③ Normally closed fault outputs and status led's.

④ Battery kick start switch.

⑤ Battery 1 and 2 connections.

⑥ 12V output protection fuse (1.6A).

⑦ Number of batteries connected.

⑧ Normally closed tamper output.

⑨ Alert Led disable input.

⑩ External load for battery load test.

⑪ 12V supply output.

⑫ Battery load test options.

⑬ Battery 2 charge current selector (0.75A or 0.30A).

⑭ Battery 1 charge current selector (0.75A or 0.30A).

⑮ Communication port (for connection to *Premier 8XP* zone expander).

⑯ Connector to case tamper switch.

⑰ Connector to front cover status indicators.

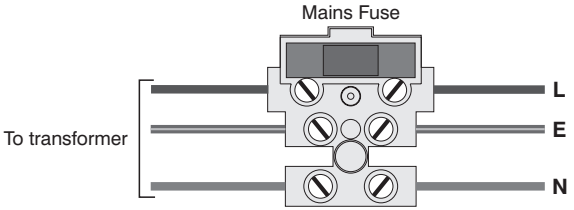
Mains Supply Connection

The mains supply is connected to a 3 way fused terminal block, which is fitted with a 500mA protection fuse. The supply cabling should also incorporate an accessible double pole disconnect device so that the supply can be isolated.

NOTE All electrical connections should be carried out by a qualified electrician.

After connecting the mains supply, fit the mains protection cover to the fused terminal block, this can be found in the spares bag.

Secure the mains cable to the anchor point using a cable tie.



Supply Output

Two sets of terminals are provided to allow connection to auxiliary 12V devices. The output is protected by a 1.6A fuse.

Tamper Protection

The power supply is both front and back tamper protected by the use of a tamper switch which is connected to the PCB via a jumper plug JP2. When installing a *PSU200* the two tamper connections terminals should be connected to the tamper or 24hour zone of the alarm control panel. The tamper connections are not required for the *PSU200XP* as the tamper status is detected through the communication port.

Front Cover Indicators

Two indicators are provided to the front cover via a harness lead that plugs onto JP1. They indicate the following:

Power: On indicates power is present (mains or battery), off indicates no power either from mains or battery.

Alert: On indicates a fault (fuse fail, no output or mains power off), off indicates no fault.

The “Alert” indication can be disabled by applying 0V to the “LED” terminal (see item ⑨ of Figure 2)

Fault Outputs and Indicators

Individual outputs and indicators are provided for the following faults:

A.C Fail: A normally closed set of contacts which open when the mains supply to the unit fails. The associated red status led also lights when this fault is present.

Battery Fault: A normally closed set of contacts which open when a battery fault is detected. The associated red status led also lights when this fault is present.

Output Fault: A normally closed set of contacts which open when the output fuse (F1) fails or output voltage falls below 11.0V. The associated red status led also lights when this fault is present.

When installing a *PSU200* the fault outputs terminals should be connected to individual zones or auxiliary inputs of the alarm control panel. The fault outputs are not required for the *PSU200XP* as the fault status is detected through the communication port.

Standby Battery

One or two 12V 7Ah batteries or one 12V 17Ah battery can be fitted inside the power supply case to provide continued operation in the event of a mains supply failure. The table below show various battery arrangements and recharge times against rated output (maximum continuous current) for the required standby period:

Battery Arrangement	Recharge Time	Rated Output (Amps)			
		8 Hrs	12 Hrs	15 Hrs	24 Hrs
1 x 7Ah	< 24Hrs	0.875 A	0.580 A	0.465 A	0.290 A
2 x 7Ah	< 24Hrs	1.4 A	1.15 A	0.930 A	0.580 A
1 x 17Ah	< 24Hrs	1.25 A	1.25 A	1.1 A	0.700 A
	< 72Hrs	1.6 A	1.4 A	1.1 A	0.700 A

The table below shows the setting for the battery charge jumpers JP6 and JP7 for the various battery arrangements and recharge times:

Battery Arrangement	Recharge Time	Battery Charge Selector	
		Battery 1 (JP6)	Battery 2 (JP7)
1 x 7Ah	< 24Hrs	0.3 A	-
2 x 7Ah	< 24Hrs	0.3 A	0.3 A
1 x 17Ah	< 24Hrs	0.75 A	-
	< 72Hrs	0.3 A	-

The table below shows the battery standby and recharge times for both EN50131-6 and PD6662:

EN50131-6	Grade 1	Grade 2	Grade 3
Minimum Standby Period	8 Hrs	15 Hrs	24 Hrs
Maximum Recharge Time	72 Hrs	72 Hrs	24 Hrs
PD6662	**Grade 1**	**Grade 2**	**Grade 3**
Standby Period	12 Hrs	12 Hrs	24 Hrs *
Maximum Recharge Time	72 Hrs	72 Hrs	24 Hrs

***** This time may be halved if mains failure is signalled to an ARC.

Deep Discharge Protection

The power supply has a deep discharge protection circuit that prevents the standby battery from being fully discharged when the mains supply has failed. The standby batteries will be electronically disconnected when the terminal voltage reaches 10.0V. When powering up the power supply without a mains supply (battery only), the 'Kick-Start' switch must be pressed in order to bring the battery into circuit.

Battery Monitoring

Each battery is monitored independently, therefore, the number of batteries connected to the *PSU200*/*PSU200XP* must be set using JP8. If JP8 is set to "1 Battery" then battery 2 is not monitored. The following conditions are monitored:

Presence: Each battery is tested every 30 seconds and when the case tamper is closed. If either battery is disconnected during this test a battery fault is generated.

Load: The *PSU200* tests the standby batteries every 24 hours by allowing the batteries to power the PSU and connected devices for a period of 10 seconds. During the load test the voltage and current drawn from each battery is measured and if either battery cannot supply the full load, a battery fault is generated (see Battery Load). The *PSU200XP* performs the same test, but the frequency and duration of the test is controlled by the control panel.

Low Voltage: When the mains supply fails and the unit is powered from the standby batteries, the voltage is continuously measured and if the battery voltage drops below 11.0V a battery fault is generated.

Battery Load

In order to ascertain the status of the battery during the load test the PSU must be put under a sufficient load. If the devices connected to the output of the PSU already draw 1A or more, then this is a sufficient load during the battery load test. If the devices connected to the output of the PSU draw less than 0.5A, then an additional load is required for the battery load test. This can be easily achieved using JP9:

JP9 Setting	Total Battery Load
A	External Load + PSU Load
B	500mA + PSU Load
A and B	External Load + 500mA + PSU Load
C	Do not use

If an external load is used it must be connected between the "Load" and "12V" terminals (see items ⑩ and ⑪ of Figure 2).

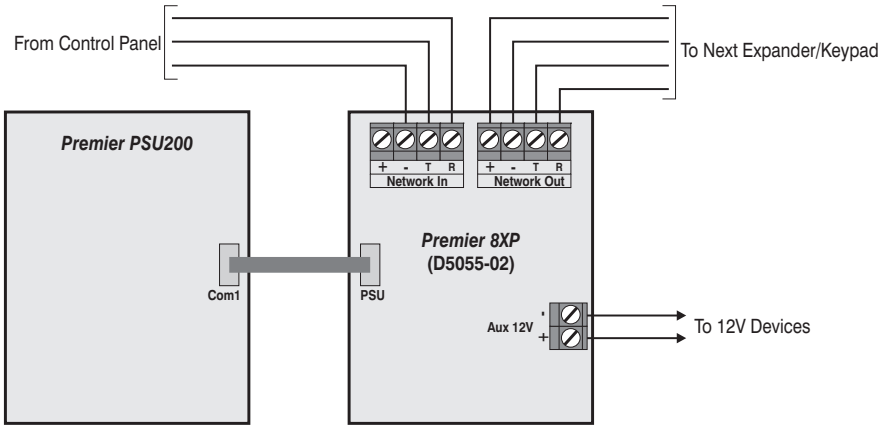
Installation

1) Remove the screw from the front cover and carefully slide it upwards to disengage the cover from the bottom clip.
2) Gently pull the cover towards you noting that earth is connected to a spade terminal on the front cover.
3) Unplug the earth lead from the spade connection on the inside of the front cover. The front cover can now be fully removed and placed to one side.
4) Position the base in the required location and mark at least four of the available mounting holes. If the back tamper is required the keyhole must also be marked.
5) Remove the base and drill and plug the holes.
6) Pass all necessary cables through the cable entries and fix the base to the wall using not less than 30mm x No 10 screws.
7) Connect the mains cable to the fused mains terminal block.
8) Connect the terminals on the PCB as required, see Wiring Diagrams.
9) Fit the appropriate standby battery or batteries and connect the battery leads to the battery terminals.
10) Apply mains power and check the operation of the power supply.
11) Refit the front cover, remembering to connect the earth lead to the front cover.
12) Replace the front cover screw.

Wiring Diagrams

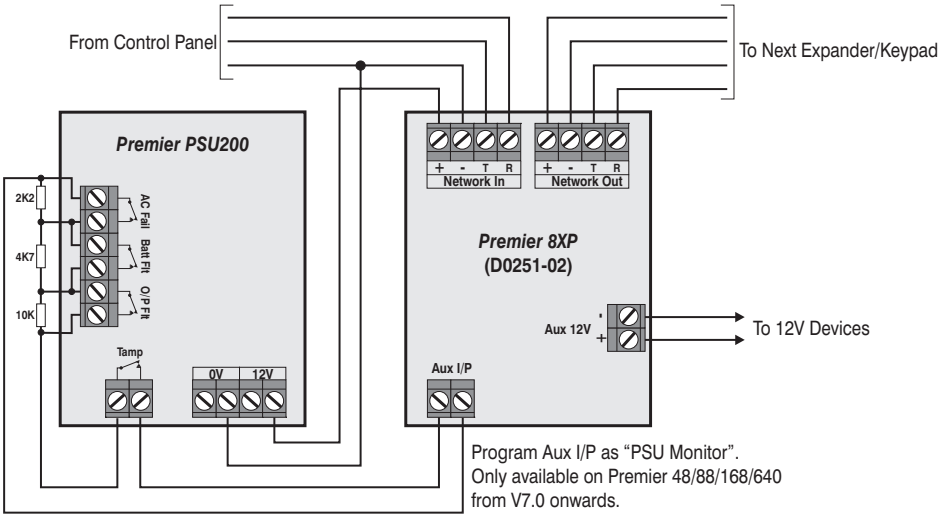
Premier PSU200XP Connected to *Premier* Control Panel

For a list of supported control panels, see page 1.



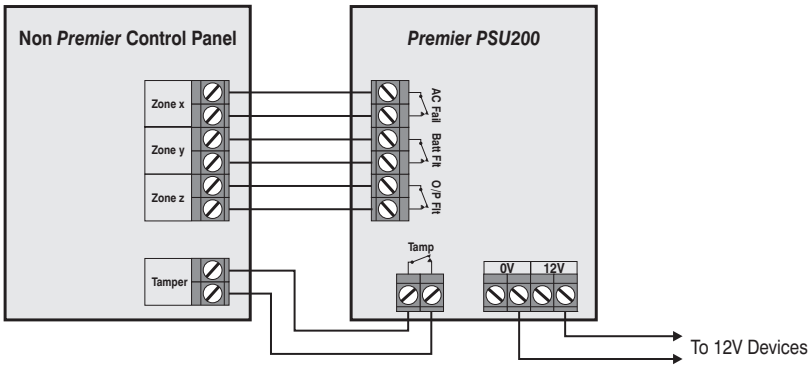
Premier PSU200 Connected to a *Premier 8XP*

The older version of the *Premier 8XP* expander (PCB No D0251-02) does not have the PSU connection port. It is however still possible to monitor the *PSU200* using the Auxiliary input programmed as “PSU Monitor”.



Premier PSU200 Connected to a non *Premier* Control Panel

The *Premier PSU200* can be fully monitored by other makes of control panels, by using the fault and tamper terminals. The zones on the control panel will need to be programmed for PSU monitoring functionality. Please consult the manufacturer’s instructions in order to ascertain whether the control panel supports these zone types.



Specifications

Electrical

Mains supply:	230V a.c. (+10%/-15%) @ 50Hz
Output voltage:	13.7V
Output ripple:	<100mV
Output current (max):	2.0A
Rated output:	See page 7.
Current consumption:	25mA
Fuses:	Mains = 500mA; F1 = 1.6A

Battery

Battery capacity:	1 x 7Ah; 2 x 7Ah; 1 x 17Ah
Battery charge current:	0.3A or 0.75A (selectable)
Low voltage fault:	10.5V at supply output
Deep discharge cut-off:	9.5V at supply output

Environmental

Operating temperature:	-10°C to +55°C
Maximum humidity:	95% non-condensing

Physical

Dimensions:	310mm x 410mm x 100mm
Packed weight:	5.5kg (approx.)

Standards

Safety:	Conforms to European Union (EU) Low Voltage Directive (LVD) 73/23/EEC (amended by 93/68/EEC).
EMC:	Conforms to European Union (EU) Electro-Magnetic Compatibility (EMC) Directive 89/336/EEC (amended by 92/31/EEC and 93/68/EEC)
Security:	Conforms to EN50131-1, PD6662 and EN50131-6 Type A Grade 3, Environmental class II requirements.

The CE mark indicates that this product complies with the European requirements for safety, health, environment and customer protection.

Warranty

All Texecom products are designed for reliable, trouble-free operation. Quality is carefully monitored by extensive computerised testing. As a result the *Premier PSU200* and *PSU200XP* is covered by a two-year warranty against defects in material or workmanship. As the *Premier PSU200* and *PSU200XP* are not a complete alarm system but only a part thereof, Texecom cannot accept responsibility or liability for any damages whatsoever based on a claim that the *Premier PSU200* or *PSU200XP* failed to function correctly. Due to our policy of continuous improvement Texecom reserve the right to change specification without prior notice.

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