

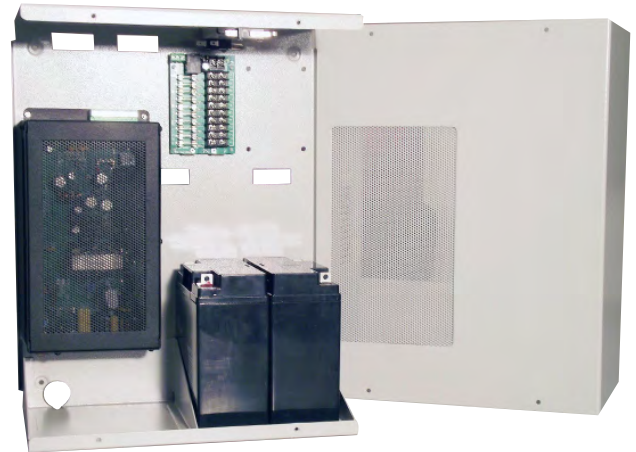
# 24Vdc 6APower Series

MODEL :

TPS24-6DC-DBT



© 2025 The contents of this manual are copyright and may not be reproduced without the written permission of Tactical Power Product Pty Ltd.

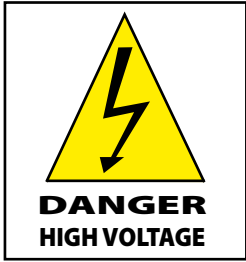


TPS24-6DC-DET-01 Shown



## Installation Manual

# CAUTION



Dangerous internal voltages exceeding 400 Volts - DO NOT REMOVE COVERS !

Equipment must be installed & serviced by suitably qualified service personnel in a restricted access area.

*Dangerous Voltages Inside !*

*Do not remove covers*

*No user serviceable parts inside*



## General

This power supply is designed for **indoor use only**.

TPS24-DC models are high performance, extremely low noise, Dual Channel Switch Mode power supplies offering 24Vdc at 6A .

When operating from mains, these models provide an output of 24Vdc ( to power connected equipment) and are configured with a separate 27.6Vdc battery charging channel. Available battery charge current is 1.4A @ 27.6Vdc (approx) for TPS24-6DC Models (total output 7.4A) In the event of mains failure, battery voltage is clamped to 24Vdc and instantaneously powers the load. When the mains voltage is restored, batteries are disconnected from the load and recharging commences automatically.

Output short-circuit and overload protection are provided . Removal of the fault / short circuit condition will return the power supply to normal operation ( Auto-Reset ).

## Connection

Single Output Models	Multiple Output Models
10-way removable terminal block provides the following: ( See over the page for a layout )  * 24Vdc Output * 27.6Vdc Output for SLA (Sealed Lead Acid) Batteries * Battery Test load mounted internally * AC OK Relay Output ( SPST ) * Battery Fault/Low Battery Relay Output ( SPST )	24Vdc Output is via individually fused outputs ( 10 or 20 )  10-way removable terminal block provides the following: ( See over the page for a layout ) * 27.6Vdc Output for SLA (Sealed Lead Acid) Batteries * Battery Test load mounted internally * AC OK Relay Output ( SPST ) * Battery Fault/Low Battery Relay Output ( SPST )

### Caution when handling batteries & pre charging:

Exercise care when terminating and connecting batteries. Mishandling or short circuit of SLA batteries can cause severe damage and fire. TPS24-6DC series models require two (2) 12V SLA batteries to be connected in series if standby power is required.

**NB Each battery must be fully charged on a 13.5VDC power supply before being connected in series for 24VDC operation otherwise unequally charged batteries may prematurely fail.**

### **Connecting the Batteries**

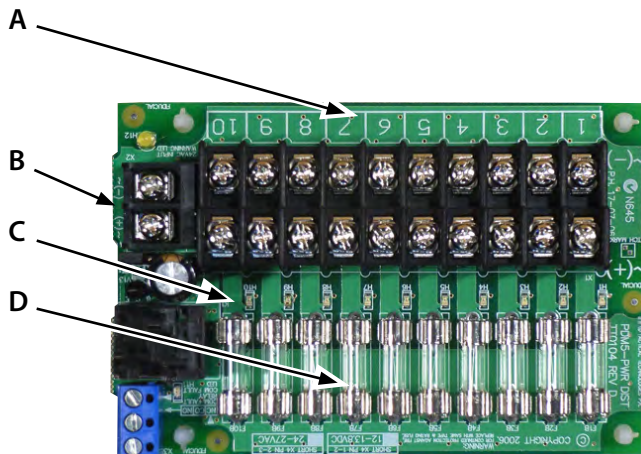
First connect positive of battery (A) to negative of battery (B) with link cable, then terminate positive of battery (B) to the + Battery input terminal of the power supply, then terminate negative of battery (A) to the - Battery input terminal of the power supply battery connection is now complete.

### **Dynamic Battery Test**

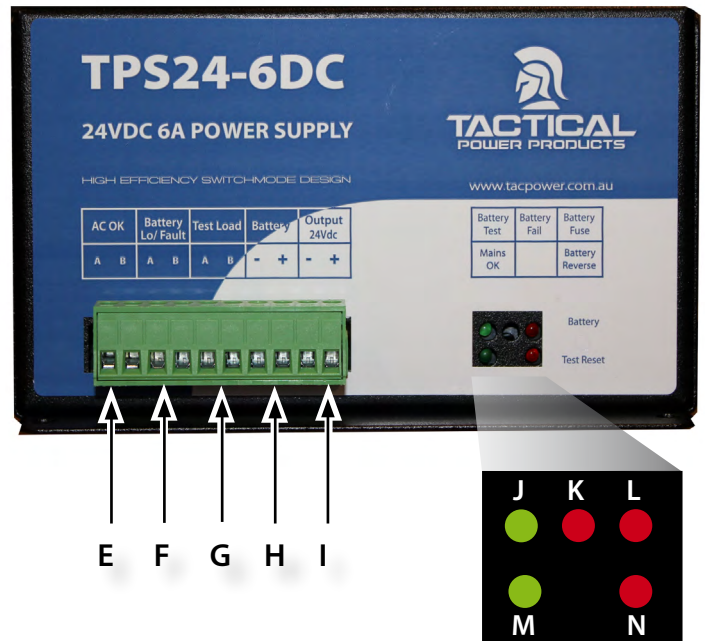
On initial power up the Red battery fail LED (K) will illuminate, press the test/reset button located to the right of the LED cluster to initiate the battery test. The green LED (J) will illuminate for 15 seconds during the test period., during the test if the battery voltage is below 21 volts then the test will terminate, the battery fail Red LED (K) will illuminate and the low battery relay will latch. The unit will stay in this mode until the reset button is pressed, resetting the fault indicators and reinitiating the 15 second test timer. If the battery fault still remains the error will continue. Replace the with fully charged batteries. If the battery passes the 15 second start up test then (J) green test LED will be extinguished and charger will be reconnected . The test timer will enter a perpetual test cycle every 55 minutes testing the battery voltage for a 5 minute period. Battery test can be conducted manually at anytime by depressing the test button.

# LAYOUT

Multi-Output Models



TPS24-6DC Module Face



<b>A</b>	Output Terminals ( Multi Output models only )	<b>B</b>	PDM Input ( Multi Output models only ) - "I" below
<b>C</b>	Individual Circuit Status LEDs ( Multi Output Models )	<b>D</b>	Individual Circuit Fuses ( Multi Output models only )
<b>E</b>	AC Mains OK Output ( COM / NC )	<b>F</b>	Battery Low / Fault Output ( COM / NC )
<b>G</b>	Load Mounted Internally no external connection	<b>H</b>	- Battery + (Connect Sealed Lead Acid Batteries)
<b>I</b>	- Output 24Vdc + ( Connect to load or PDM )	<b>J</b>	Dynamic Battery Test (Green ON = Active)
<b>K</b>	Battery Test Fail LED ( Red ON = Fail )	<b>L</b>	Battery Fuse Fail LED ( Red ON = Fail )
<b>M</b>	AC Mains OK LED ( Green ON = OK )	<b>N</b>	Reverse Battery LED ( Red ON = Fail )
<b>O</b>	240V IEC Mains Socket	<b>P</b>	Compliance / Date of Manufacture Label



# 24Vdc

# 6A DBT



## Specifications :

( In the interests of product improvement, Tactical reserves the right to change specifications without notice)

Full Model Number	TPS24-6DC-DBT			TPS24-6DC-DET-01						
Output Voltage	24Vdc									
Output Current	6A									
Output Channels	Heavy Duty Barrier terminals			10						
Output per Channel	M205 glass fuse			600mA						
Input Voltage	240 V ac ( 215V - 255V ) 50Hz									
Input Current	1.6A at full load									
Input In-Rush	<20A ( 25 °C cold start up )									
Battery Charger	27.6Vdc / 1.4A					Dynamic battery test microprocessor controlled				
Low Battery Indicator	1 x SPST Relay & Red LED									
AC OK Indicator	1 x SPST Relay & Green LED									
Weight			< 5Kg							
Dimensions (mm)			340W x 436H x 220D							
Efficiency	80% Typical									
Overload Protection	Constant current limiting, short circuit shutdown, auto recovery									
Load Regulation	< 1% from open to full load									
Line Regulation	< 0.2%									
Output Ripple	<50 mVp-p @ full load									
Working Temperature	0 - 45 ° C									
Batteries	2 x 12V Sealed Lead Acid (SLA) 17AH each									
Safety Standards	AS NZS 62368.1:2022 Certificate of Compliance EESS-214126-0									
EMC Standards	AS / NZS CISPR 32:2015 Class B (Conducted & Radiated)									



[www.tacpower.com.au](http://www.tacpower.com.au)

Securing Your Power Needs®  
Now and into the Future...



Tel: +1300-822-769 | U23/9-12 Lambridge Pl. Penrith NSW 2750 | [sales@tacpower.com.au](mailto:sales@tacpower.com.au)