

# System 6 / Outlook Power Supply

## Applications Guide

### **Introduction**

The System 6 / Outlook Power Supply is a multi-purpose dual power supply unit, which may be fitted either inside a System 6 cabinet, or in a stand alone enclosure.

The power supply unit is intended to supply Outlook control stations, multiple Microcontrol stations, or other control or peripheral devices.

### **Power Input**

The power supply unit will accept a mains voltage input from 100V AC up to 240V AC, 50Hz or 60Hz without the need for adjustment.

The mains power input is connected to the screw terminals on the top of the unit.

Note: The power supply must be grounded for safety in use.

### **Output Voltage Configuration**

The unit may be configured for three different sets of output voltages, to suit different applications. A jumper header permits selection between the different modes. The jumper header is a 4-pin block on 0.1" centers, and is positioned on the printed circuit board, together with output terminations, on the end of the power supply. Each header pin post is labelled, A thru D. A two position jumper is provided to enable configuration by placing it over the appropriate two header pins. The following table provides information about the different modes, and lists the functions of the output connection terminals.

Jumper Position	Output Pins	Function
<b>B to D</b> <i>Mode 1</i>	1,2	+12V DC
	3,4	+10.6V DC
	5,6	Ground
	7,8	Ground
	9,10	-12V DC
	11,12	Data+
	13,14	Data-
<b>A to C</b> <i>Mode 2</i>	1,2	+12V DC, Supply A
	3,4	+10.6V DC (Supply A)
	5,6	Ground (same as pin 9,10)
	7,8	+12V DC, Supply B
	9,10	Ground (same as pin 5,6)
	11,12	Data+
	13,14	Data-
<b>C to D</b> <i>Mode 3</i>	1,2	Isolated + 12V DC, Supply A
	3,4	+10.6V DC (Supply A)
	5,6	Isolated Ground, Supply A
	7,8	Isolated + 12V DC, Supply B
	9,10	Isolated Ground, Supply B
	11,12	Data+
	13,14	Data-
<b>A to B</b>		<b>DO NOT USE - damage to the Power Supply Unit will result</b>

All modes produce the 10.6V DC output required for powering Microcontrol stations.

### **Mode 1**

Mode 1 provides a +/-12V DC supply, such as is required for powering Outlook control stations.

This mode may also be used to give 24V DC supply by connecting only the -12V and +12V terminals to the application system.

### Mode 2

Mode 2 provides a dual +12V DC supply. This allows use of the unit where only +12V DC is required, but at higher overall current levels (up to 6.0A total).

*The two +12V DC outputs must not be tied together and must remain separate throughout the application system, unless "wire-OR'd" using external diodes.*

### Mode 3

Mode 3 provides a dual, isolated 12V DC supply. In this configuration the two internal supply devices may be used independently. This would be suited to applications which require a high degree of isolation; for example, between input circuits (supplied by supply A) and output circuits (supplied by supply B) of a control system interface device.

### Output Currents

The following table shows the current limitations of the different power supply outputs.

Mode	Output Voltage Used	Total Current
1	+12V DC and +10.6V DC	3.3A
	+12V DC only	3.0A
	+10.6V DC only	3.0A
	-12V DC	3.0A
	+24V DC	3.0A
2	Supply A: +12V DC and +10.6V DC	3.3A
	+12V DC, Supply A, only	3.0A
	+10.6V DC, Supply A, only	3.0A
	+12V DC, Supply B	3.0A
3	Supply A: +12V DC and +10.6V DC	3.3A
	+12V DC, Supply A, only	3.0A
	+10.6V DC, Supply A, only	3.0A
	+12V DC, Supply B	3.0A

The +10.6V DC output has a maximum output current capability of 3.0A. However, this supply is derived from the output of Supply A. If the +12V DC output of this same supply is also being used, the overall output current is limited to a total of 3.3A between the two terminations.

Each output is independently fused to prevent a short circuit or low impedance condition on one output from affecting circuits on the other output. Should the overall current exceed 3.3A, the power supply will be protected from burn-out by internal current-limiting circuitry.

### Data Line Connections

Data+ and Data- terminals are provided on the terminal block to facilitate interconnection and daisy-chaining of transmission signals. Signals terminated at these block positions (11 thru 14) are also routed to a 4-pin connector on the output termination board. This permits connection to an external 6-pin XLR, a System 6 control PCB, or other multi-drop node device. The following table shows the connections.

Pin	Terminal block	Function
1	5 & 6, 7 & 8 (mode 1), 9 & 10 (mode 2)	Ground
2	1 & 2	+12V DC, Supply A only
3	11 & 12	Data+
4	13 & 14	Data-

The power supply unit does not provide for line terminations. Proper transmission line terminations should be provided externally.