Global Design Solutions

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Installation Instructions

6 Zone DMX-512 PSU

Supplied Items

- 1 x 19" 2U 6 Zone PSU
- 8 x 3pin Connectors
- Instruction Leaflet

Optional Accessories

Please contact your distributor for further information.

- BS-DM1 – Dimmer Control Module

Introduction

The BS-PSD6R-2 is a six zone power supply with a DMX-512 input for the BlueDome and BlueBeam range of light fittings. Each output on the BS-PSD6R-2 can be individually controlled by a DMX-512 compatible controller. All outputs are protected from overload and short circuits by a user changeable fuse located on the rear panel. When a fuse is blown, an indicator on the front panel will illuminate showing which zone has the fault. The front panel also indicates the status of each zone.

Conformity

The BlueDome and BlueBeam range of power supplies conform to the following standards:

EN 61000-6-3 Light Industrial Emissions
EN 61000-4-2 Heavy Industrial Immunity
EN 60945 Marine

CE

Further information can be obtained from technical@gds.uk.com

Installation

THIS UNIT MUST BE EARTHED. The BS-PSD6R-2 should be mounted in a dry location away from any sources of heat. The unit contains a fan to keep it cool under maximum load.

Electrical Properties

Input Voltage:	85-264V AC
Input Frequency:	47-63Hz
Max Input Current:	3.2A @ 100V Input
Nominal Output Voltage:	24V DC
Maximum Load:	55 - 60 Beams/Domes
CTRL Output Impedance:	10Ω

It is very important to keep the vents clear of obstruction to allow proper cooling and reliable operation. If stacking multiple BS-PSD6R power supplies it is recommended to use a 1U vent panel between units to allow for maximum air flow.

Operation

The BS-PSD6R-2 will accept either a standard DMX-512 control signal from a lighting controller, or the Blues System protocol.

DMX 512

To use the BS-PSD6R-2 in DMX mode, simply set the start address on the module to the DMX channel you want it to operate from. The 'DMX MODE' LED will illuminate to tell you the module is in DMX mode and ready to receive DMX data. When the module is receiving valid DMX data, the Rx LED will illuminate.

Advanced Options – DMX Loss Behaviour

The PSU has 3 options that can be set to change the behaviour of the output upon loss of DMX. These can be set and stored in the unit at any time during installation or commissioning.

To set these options simply set the encoder wheels to one of the following addresses and power the unit up.

Address	Function
901: -	This will be factory standard which is hold last value.
911: -	This will drive the channel to full on DMX loss.
921: -	This will fade the channel down to 0% upon DMX loss.
931: -	This will put the card into Minimum Level Capture mode**

The above example is for channel 1 on the PSU. To modify another channel change the unit address to the required channel. If the units encoder is set to 7, this will modify all 6 channels.

The PSU will now store the new operating mode in memory. Now simply set the address to the required DMX address and the PSU is ready for operation.

(Advanced Options)**

Advanced Options – Minimum Level Capture

The PSU has the ability to set the minimum output level. This simply stops the DMX signal from switching the outputs completely off. This can be useful for emergency fittings that are controlled by the PSU, by preventing the DMX signal from driving the output below the set level.

To set the minimum output level of the PSU, ensure the power is switched off and you have a DMX source connected to the unit.

Set the address of the PSU to 931: - This will put the card into Minimum Level Capture mode.

Set your DMX source to output 0% on DMX channel 1.

Switch the power on, whilst the PSU is in this mode it will respond to DMX channel 1 and output this level to the fittings. When you can see the desired level, simply turn the power supply off for 5 seconds and then on again. It will now capture the level on DMX channel 1 and store this as the new minimum level.

The unit should now be set to the required DMX address.

If a minimum level of 0% is required, simply set your DMX source to output 0% on channel 1 and repeat the procedure above.

Blues System Protocol (RS-485)

The Blues System Protocol may be used to control the power supply. In this mode you can daisy chain up to 10 modules and control them with one RS-485 port. The system can be controlled from an RS-232 device if a 485 to 232 converter is used.

To enable command mode set the hundreds encoder to 6. The CMD LED should now illuminate to show the module is in CMD mode and ready to receive commands. When the module has received a valid command the Rx LED will blink.

Baud Rate

The baud rate is configured by setting the Tens encoder to one of the following values: -

0 = 9,600
1 = 19,200
2 = 38,400

Unit Address

The unit address is set with the Units encoder. You can have more than one unit set to the same address if required.

Protocol

All commands are encapsulated within curved brackets (). The command will be executed when the closing bracket gets received. A command is composed of a number of parameters, each of which comprises of an identifier, and a value. These don't need to be specified in any particular order.

'U' – This defines the unit number or address of the unit the command is destined for. Valid parameters for U are '0-9' and 'A', which specifies that all units should respond to the command. Examples are: 'U4' 'UA'
Commands without this parameter will be assumed to be 'UA'

'C' – This defines a channel within the unit. Acceptable values for this parameter are '1-6' and 'A', which refers to all channels within the unit.
Commands without this parameter will be assumed to be 'CA'

'L' – This defines the level at which the channels in the command should be set to. Acceptable values for the channel are '0-255'. Leading zeros are acceptable, but no more than 3 characters should be sent.
Commands without this parameter will be ignored.

Fade time – The fade time can be specified either in tenths of a second, seconds or minutes.

'T' – Tenths of a second.
'S' – Seconds.
'M' – Minutes.

Only one must be specified per command, with a maximum of 3 digits following the character. If no time parameter is specified with the command, then the fade will snap.

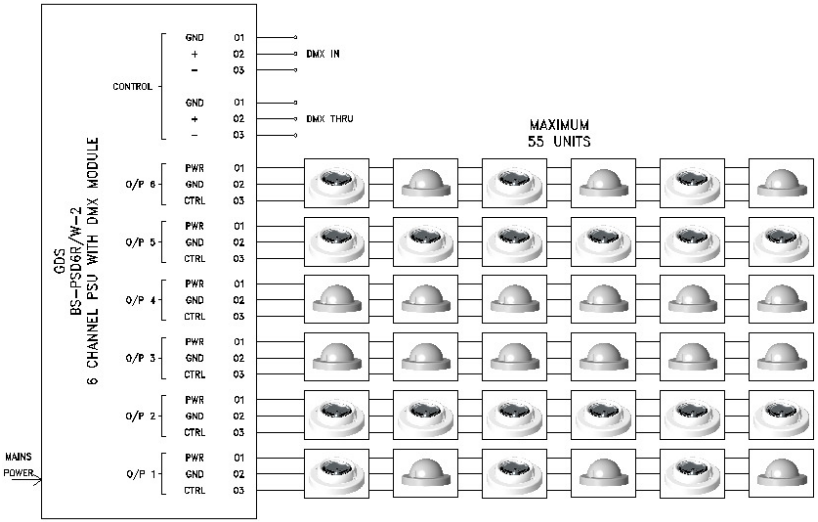
Command Examples

(U1C4L255S1) – This will fade channel 4 on unit 1 to 255 over 1 second
(L56) – This will snap all channels on all units to level 56
(U3L0M60) – This will fade all the channels on unit 3 to 0 over 1 hour

Notes

A channel will fade from its current value to the specified value over the duration specified. If the channel is already fading, the current fade will be stopped and the new fade started from whatever value the last fade was stopped at.

Connection Example



The schematic above shows the use of a BS-PSD6R-2. A total of 55 units can be connected to the power supply. The unit ships with 1.6 Amp output fuses. This allows up to 12 Domes or Beams on each output.

DO NOT EXCEED THE TOTAL LOAD OF 55 UNITS ON ONE POWER SUPPLY.