DP4-X

4 Channel dimmer pack

Manual iss1.2 08-01-2013

goldingaudio.com

DP4-X
4 Channel Dimmer

Maximum Load Per Channel:
1500W @ 230VAC (Resistive) / 1000W @ 230VAC (Inductive)
75W @ 12VAC (Resistive) / 50W @ 12VAC (Inductive)
Dimming Capability: 12VAC to 240VAC
Control Supply: 230VAC
Control Signals: 0-10V or Contact Closure

DMX in/out

CE

Features

12V AC to 240V AC dimming capability
4 Channel dimming at up to 6.5A per channel
0-10V analogue inputs
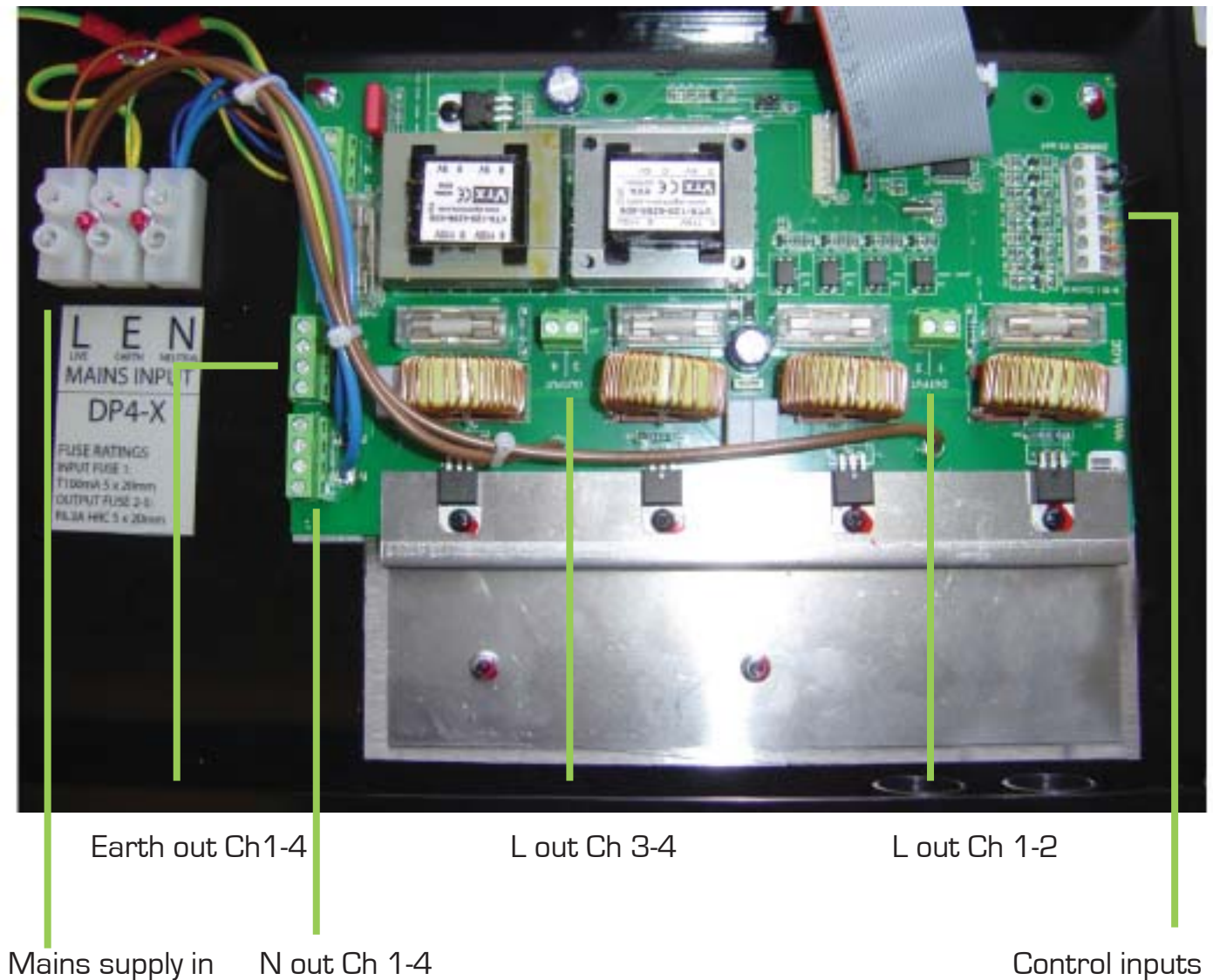Internal ramp generators for contact closure operation
Wall mounted or rack mounted

Table of Contents	Page

1 Introduction

The DP4-X is a compact cost effective 4 channel dimmer pack that can be configured in three different formats.

1.1 Guide to the DP4-X

Picture 1 – DP4-X internal connections

Earth out Ch1-4   L out Ch 3-4   L out Ch 1-2

Mains supply in   N out Ch 1-4   Control inputs

2 Setup

All settings are entered using the five way keypad next to the LED display.
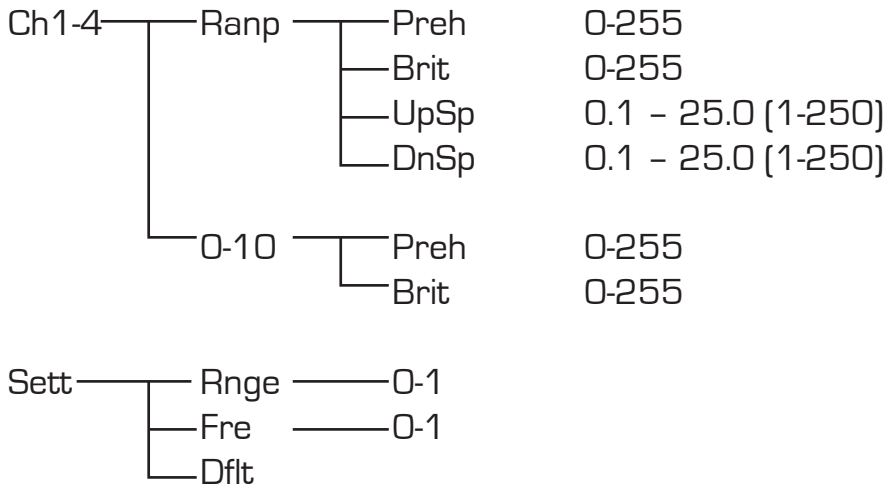
If the display is showing "*run*", press 'mode' to access the menus.
If the display is showing "*locd*" then all front panel controls are disabled. To enable, press and hold 'up' & 'down' simultaneously until "*save*" is shown on the display. It is now possible to press 'mode' to access the menus.

2.1 Menu settings

Display	Function
Ch1 - Ch4	Select the channel to setup
Ranp	Select RAMP generator mode. This allows a simple contact closure to control the fade up and fade down speed. The up and down speeds are independent.
0-10	Select 0-10v control voltage input where the output follows the control voltage input. 0v being off and 10v being maximum. The preheat and maximum brightness can be preset.
Preh	Use this function to set a preheat on the lamp.
Brit	Use this function to set the maximum brightness of the lamp.
UpSP	This setting adjusts the time it takes the output to fade from the minimum level up to the maximum level in either 100ms increments or 1 second increments when the channel input is taken to ground.
dnSP	This setting adjusts the time it takes the output to fade from the maximum level down to the minimum level in either 100ms increments or 1 second increments when the channel input is left open circuit.
Sett	Change the mains frequency, fade range or reset to factory defaults
Rnge	Use this parameter to set the fade speed range for ALL channels. It can be 0.1 seconds to 25.0 seconds range if set to '0' or It can be 1 second to 250 seconds range if set to '1'
Fre	Use this parameter to set the mains frequency. '0' for 50Hz or '1' for 60Hz.
Dflt	Press 'Ent' when this is shown on display to reset all values to factory settings.

2.2 Menu hierarchy

```
Ch1-4 ──┬── Ranp ──┬── Preh      0-255
        │          ├── Brit      0-255
        │          ├── UpSp      0.1 – 25.0 (1-250)
        │          └── DnSp      0.1 – 25.0 (1-250)
        │
        └── 0-10 ──┬── Preh      0-255
                   └── Brit      0-255


Sett ──┬── Rnge ──── 0-1
       ├── Fre  ──── 0-1
       └── Dflt
```

2.3 Factory default settings

Frequency set to 50Hz.
Speed range set to 0.1 to 25.0 seconds.
Channels 1 to 4 all in ramp mode.
All ramp up and down speeds are set to 5 seconds.
All preheats are set to minimum (000).
All brightness levels are set to maximum (255).

2.4 Front panel button lock

Press and hold the 'lock' button for 5 seconds until "Save" shows on display.
To unlock, press and hold "up" & "down" together for 5 seconds until "save" is shown on display.

3 Operating Modes

3.1 Setting the dimmer for Ramp operation

1. Select the channel that you wish to setup by using the 'up' and 'down' buttons, the display will show "Ch-n" where 'n' is the channel number then press 'Ent'.

2. Now select the RAMP function by using the 'up' or 'down' buttons until the display shows 'rAnP' then press 'Ent' to access the function.

3. Now select the PREHEAT function by using the 'up' or 'down' buttons until the display shows 'Preh' then press 'Ent' to access the function. The display will show a 3 digit number.

4. If you have the lamp connected, you can now use the 'up' and 'down' buttons to set the minimum brightness level. When you have finished setting the preheat, press 'Ent' to return to the previous submenu.

5. Use the 'up' button to select the BRIGHTNESS function. The display should show 'brit'. If you have the lamp connected, you can now use the 'up' and 'down' buttons to set the maximum brightness level. When you have finished setting the brightness, press 'Ent' to return to the previous submenu.

6. Use the 'up' button to select the UP SPEED function. The display should show 'UPSP'.

7. Use the 'up' and 'down' buttons to set the speed of the fade up which can be from 0.1 seconds to 25.0 seconds if the dimmer is set to its default range. You can test the fade speed by pressing the 'Lock' button which will mimic a contact closure on the selected channel. When you have finished setting the up speed, press 'Ent' to return to the previous submenu.

8. Use the 'up' button to select the DOWN SPEED function. The display should show 'dnSP'.

9. Set the down speed the same way as you set the up speed. When you have finished setting the down speed, press 'Ent' to return to the previous submenu.

10. Now press 'Mode' three times until "Save" appears on the display which confirms the new settings have been saved to 'flash'. If no settings have been changed "Save" will not be displayed.

To INVERT the ramp function so that a contact closure to ground causes a lamp to fade down instead of up, use the 'preheat' setting to set the maximum level and use the 'brightness' setting to set the minimum level.

3.2 Setting the dimmer for 0-10V operation

1. Select the channel that you wish to setup by using the 'up' and 'down' buttons, the display will show "Ch-n" where 'n' is the channel number then press 'Ent'.

2. Now select the 0-10V function by using the 'up' or 'down' buttons until the display shows '0-10' then press 'Ent' to access the function.

3. Now select the PREHEAT function by using the 'up' or 'down' buttons until the display shows 'Preh' then press 'Ent' to access the function. The display will show a 3 digit number.

4. If you have the lamp connected, you can now use the 'up' and 'down' buttons to set the minimum brightness level. When you have finished setting the preheat, press 'Ent' to return to the previous submenu.

5. Use the 'up' button to select the BRIGHTNESS function. The display should show 'brit'. If you have the lamp connected, you can now use the 'up' and 'down' buttons to set the maximum brightness level.

6. Now press 'Mode' three times until "Save" appears on the display which confirms the new settings have been saved to 'flash'. If no settings have been changed "Save" will not be displayed.

0-10v control mode

If set to 0-10v, the input control voltage will increase the output from the preheat level up to the maximum level set by the brightness setting. Therefore if the maximum brightness is set to '127' (50%) then any voltage above 5v on the 0-10v input will have no effect.

4. Specifications

Mains input	230V AC
Dimming capability	12VAC to 240VAC
Phase control	Leading edge switching (Not suitable for certain ballasts or some LED's)
Output	Maximum 6.5Amps. 1500 Watts @ 230v (resistive) 1000 Watts @ 230v (inductive) 75 Watts @ 12vac (resistive) 50 Watts @ 12vac (inductive)
Output resolution	1024 levels
Control signals	
0-10v or Ramp contact closure	Active low, a resistor to 5V is automatically switched in when ramp selected.
Enable	This line must be tied to ground to enable the outputs.
DMX (optional)	Future use.
Controls	
Up	Increments the selected item or value
Down	Decrements the selected item or value
Mode	Press to access setup mode or step back a menu level.
Enter	Enter into a submenu item or save a value.
Lock / test	Disables the above buttons. Press and hold for 5 seconds until "Save" shows on display. To unlock, press and hold "up" & "down" together for 5 seconds until "save" is shown on display. Also used to test an output when in setup mode.
Indicators	
4 x digit LED display	Shows "run" or "locd" normally or current setup menu or value if in setup mode.
Output LED's	Indicates if an output is active.
Dimensions	360mm (W) x 220mm (D) x 51mm (H)
Weight (net)	2.3Kg