

# Dual Channel 5A Dimming/Switching Pack

## DUAL PRO-DIM 5



**Dual Pro-Dim 5 with DMX inputs, crossfade 2 & effects generator.**

- Suitable for resistive, inductive/wound transformer loads and for use with most dimmable transformers for low voltage or cold cathode lighting
- 5 A fuse overcurrent protection per channel
- Selectable dimming or zero voltage switching operation
- Internal joint 0-25% Preheat control
- Setting for use with electronic ballasts
- Suitable for wall mounting, pole mounting or free standing use
- Recommended minimum load 100 W
- +10 V 50 mA reference output
- Two 0-10 V analogue inputs
- Selectable 1 second fade rate for soft start operation with large incandescents
- Push button outstations available
- Optional DMX input on XLR and RJ45 with thumbwheel bcd address setting and selectable termination resistor
- Stand alone Crossfade 2 version
- Also available in a portable 'Location' version
- Output connection options :-
  - Hardwired on internal screw terminals
  - Two CEE 17 output sockets
  - Two IEC output sockets
  - Two Schuko output sockets
  - Two French output sockets
  - Two Danish output sockets
- Available as a Slave version

All versions of this digital design feature an internal 0-25% preheat control, selection of dimming or zero voltage switching operation, 1 second fade rate option for soft start operation and an option switch for improved compatibility with electronic ballasts.

The Master dual channel Pro-Dim has two on board level controls and two 0-10V analogue inputs.

The dual channel DMX version of the Pro-Dim comes with two analogue inputs and two on board level controls, but also has bcd switches to set the DMX address, XLR connectors and an RJ45 DMX input socket for ease of interfacing with AMD or Anyscene DMX products from Anytronics. The highest of the analogue input level, DMX input level or on board level controls set the dimming level on each channel.

The dedicated Crossfade 2 model has no external control inputs, but the four on board potentiometers provide control of the Speed, Master level, Crosspoint (bias) and Balance for the crossfade algorithm. With the Speed control set to zero, two of the potentiometers become on board level controls for static two channel dimming.

Speed : cycle period from 330 ms (3 Hz) to 82 sec  
Master : Joint Ch1/2 control of Master level from 0-100%  
Balance : 50% : 100% to 100% : 50% balance between Ch1 and Ch 2  
Crosspoint : full range control from mainly on alternating to off, to mainly off alternating on.

The dual channel DMX K403 version of the Pro-Dim incorporates all the features of the above products, together with an additional range of 'flicker' effects for simulating various lightsources such as candle light and firelight.

- With the DMX address set to zero, it is a dual analogue input dimmer with two on board level controls.
- With DMX address from 1-511 any DMX input is combined with the analogue controls to control the dimming levels.
- With DMX address set to 800 the unit turns into a crossfade 2.
- With DMX addresses 900 up, a range of 'flicker' lighting effects are available to simulate candle light, firelight, TV, lightning etc.

## Supply connection

The Dual Pro-Dim 5 requires earth, neutral and live connections for safe operation. Unscrew the four screws holding the lid in place and remove the lid to access input and output connections. The earth and neutral connections should be made to the earth and neutral common connection blocks at the front left side of the PCB. The live feed should be connected to the Live terminal marked IN>.

Output neutral and earth connections should also be made to the common neutral and earth terminals. The output dimmed live connections to the loads should be connected to the live terminals marked <CH1 and <CH2.

## Analogue input connections

There are two 0-10 V analogue input connections (input impedance > 40 Kohm) on the screw terminal block to the right of the circuit breaker marked < 1 and < 2 respectively. A reference 0 V and a +10 V 50 mA supply are also made available for connecting to external potentiometer controls or other control equipment such as Anytronics Pro-Dim outstations. A +22 V 100 mA supply is

also available for powering lighting desks or similar external equipment. The 0 V and input connections of different packs can be connected together to provide control of several channels.

The analogue inputs are combined with the level of the rotary control (and DMX input if present) on each channel so that the highest input level sets the output dimming level on that channel.

## DMX512 option

If fitted, this option will allow connection of DMX inputs via 3 or 5 pin XLRs or via a convenient RJ45 connector. The RJ45 connection also provides a +5 V supply to external equipment such as the Anyscene or AMD range of Anytronics DMX controls. The DMX address is set on the three bcd switches. An address of zero will disable the DMX input. Addresses between 512 and 799 are interpreted as address 512. Addresses above 799 will be ignored unless the Crossfade or lighting effects options are fitted (see above).

## DIL switch options

With DIL switch 1 OFF dimming operation is selected, with it ON then the outputs will be zero voltage switched on and off as the inputs pass through the switching thresholds.

If problems are encountered when dimming loads connected via electronic transformers, switch DIL switch 2 to ON for better compatibility with this type of load.

For a smooth output response, the normal dimming response time with DIL switch 3 OFF is approximately 100 ms. By switching DIL switch 3 ON this response time can be extended to one second in order to diminish the thermal shock applied to large incandescent loads. Such loads should ideally have a measure of preheat set as well, so that lamp filaments remain warm and in a high impedance state. A DMX termination resistor can be switched in by setting DIL switch 4 to ON.

## Technical Specification

### SUPPLY

Nominal 200-240 V ac, 50/60 Hz

### OUTPUT CURRENT

Maximum current 5 A limited by fuse protection

Minimum recommended load 100 W

Full load 10%-90% current risetime > 100  $\mu$ s

### FUSE PROTECTION

Electronics fuse (internal) 5 x 20 mm glass 100 mA Time Lag.

Channel fuses (external) 5 x 20 mm ceramic 5 A HRC Slow.

### CONTROLS/INPUTS

Rotary front panel level controls

Analogue 0-10 V dc control inputs, impedance > 40 k $\Omega$

Optional DMX input on XLR / RJ45

### OPERATIONAL OPTIONS

1. Dimming or zero voltage switching
2. Electronic ballast dimming
3. Rate limiting for soft start operation

### DIMENSIONS

190 mm x 174 mm x 75 mm

### WEIGHT

1.7 kg net 2.2 kg gross

### COMPLIANCE

Complies with relevant parts of current CE regulations

for EMC: EN50081-1 emissions, EN50082-1 immunity

LVD: EN60439 / EN60950

Specifications and designs are subject to change without any notice or obligation on the part of the manufacturer.

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