

Anytronics Location Pro-Dim 125

Portable Single Channel 125A (24kW) Dimmer

Operational guide

- 1.0 Introduction
- 2.0 Installation
- 3.0 Operation
 - 3.1 DMX Input
- 4.0 Front Panel Controls
 - 4.1 DMX Address switches
 - 4.2 LED Indicator brightness
 - 4.3 Fan Control Mode
 - 4.4 Response time
 - 4.5 Saving Settings
 - 4.6 Restoring Factory Defaults
 - 4.7 Power up/down options
 - 4.8 Over Temperature detection

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1.0 Introduction

Anytronics' Location Pro-Dim 125 is a portable single channel dimmer rated at 125A (24kW) for use on 220/240V rms 50Hz supplies. Two different versions provide supply and load connections via either BAC or PowerLock connectors conveniently placed on the back panel to leave the front operational area clear of cabling. Loads are connected back to Neutral through the pack and through a double pole 125A C type circuit breaker to provide over current circuit protection on both Neutral and Live.

Either the front panel rotary control, or a DMX input can be used to control the level of the dimming output.

Key Features of Location Pro-Dim 125

- * 125A (24kW) phase controlled dimming
- * single phase 220/240V working for neutral connected loads
- * C 125 double pole circuit breaker protection
- * 'power connected' indicator neon
- * 'load connected' indicator
- * DMX512 input protected to DMX512A
- * XLR and RJ45 DMX connectors
- * DMX data LED
- * selectable DMX line terminator resistor with LED indicator
- * rotary front panel level control with mimic LED
- * full on, or proportional cooling fan control
- * all LED indicators can be dimmed for operation in dark conditions
- * panel illumination feature assists operation in dark conditions
- * panel setting can be saved for repeated use, or restored to factory presets
- * cold start protection to prolong filament life, can be overridden if required

2.0 Installation

The dimmer is designed for horizontal operation and dimmers can be stacked in operation if required. Adequate ventilation must be provided on both sides of the dimmer to allow an ample cooling airflow.

The dimmer is designed for use on 50Hz single phase supplies with a neutral connected incandescent load. **The minimum acceptable resistive/incandescent dimming load for correct operation is 200W.** The power supply and power supply connections should be adequate for the rating of the dimmer, or at very least the grand total of the connected load ratings.

3.0 Operation

With supply and load connections in place, power can be supplied to the unit, and the double pole breaker closed to connect the load. The rotary level control can be used either to set the dimming level, or as a manual test input to check on dimmer operation. If no load is detected at the output, then the load detected LED will be extinguished, and the output dimming level will be zero regardless of the state of the control inputs.

3.1 DMX Input

As a matter of good practice, all control cabling should be routed well away from both supply and output power cables.

The XLR in and through connectors and two adjacent RJ45 connectors for the DMX inputs are available on the front panel. Note that one RJ45 connector provides +5V power for powering external equipment such as desks, Anyscene memory units or similar Anytronics products. An optional DMX terminator resistor can be switched in if this unit is the last in the DMX control line, and the connection of this terminator resistor is indicated on a front panel LED.

Any valid DMX input at the set DMX address will override the front panel manual control setting, and will light the yellow DMX data LED. If DMX data at the set start address is then removed, the dimming level will remain indefinitely at the last input DMX level, and the yellow data LED will flash slowly to show that DMX input data is no longer present. If the front panel manual level control is then moved whilst there is no valid DMX data at the set start address, this manual control will take over control of the dimming level and the yellow data LED will be extinguished. Reconnection of valid DMX data at the set start address will automatically pass control of the output dimming level back to DMX.

4. Front Panel Controls

4.1 DMX Address switches

The three DMX address switches can be used to set valid DMX addresses in the range 1-512. If DMX input data is present at the set address, the DMX LED will light. A DMX setting of 000 will disable the DMX and extinguish the data LED.

4.2 LED Indicator brightness

All the panel LED indicators and the panel illumination level can be dimmed so that the front panel is less obtrusive in a darkened environment. This setting is controlled by pressing the panel LED switch. Alternate presses raise or lower the LED brightnesses. The direction of dimming change also alters automatically when the LED brightness reaches maximum or minimum.

When the desired level of illumination has been found, this level can be saved as a default (see section 4.5).

4.3 Fan control mode

There are two operational modes for the cooling fan. These are :-

- a. fan always full on, LED indicates 'Full'
- b. quiet mode : fan normally off, but comes on progressively when the internal temperature rises above a set threshold temperature, LED indicates 'Auto'. The fan will keep running until the unit cools down below the threshold temperature.

This second setting allows the use of the dimmer without fan noise for limited periods, but this period is entirely dependent on the load connected, dimming level, ambient temperature and ventilation. Load levels below 7k5W will probably not bring the fan on at normal ambient temperatures.

To change mode, press the Fan button. Changes are effective immediately. The default setting is for the fan to be full on, but this can be changed and then saved as the normal setting if required (see section 4.5).

4.4 Response time

A sophisticated software model in the dimmer constantly estimates the temperature of the filament in the load lamp. Based on this temperature estimate, the response time of the dimmer is adjusted during large changes in dimming levels in order to reduce both the thermal shock to the load lamp and the peak currents drawn from the supply. Generally this slower response time of the dimmer will only be noticeable when the dimming level is raised sharply after a long period at low level.

When necessary, the peak currents on switch on, and the response time can be improved by keeping the lamp warm. This can be done by using a suitable preheat level on the control signal.

It is also possible to override the automatic response time feature by pressing the top button on the panel to select 'fast' rather than 'auto' operation, and again this setting can be saved as the power up default (see next section)

4.5 Saving settings

If the unit is powered down whilst the 'memory' switch is held down, then the current response time, fan mode and LED brightness settings will be saved as power on defaults. When the unit is powered up again, these settings will be automatically reinstated.

4.6 Restoring Factory default settings

If the unit is powered up whilst the 'memory' switch is held down, then the factory default settings for response time, fan mode and LED brightness will be reinstated. This feature is useful for example on return from hire.

4.7 Power up / power down options summary

At **switch on** : Hold down panel 'memory' switch to reinstate factory settings.

At **switch off** : Hold down panel memory' switch to save current settings.

4.8 Over temperature detection

In normal operation the fan control system should maintain a safe internal dimmer temperature. If the ventilation ports are blocked, or the fan fails, it would be possible for the unit to begin to overheat. Under these conditions the load detect LED will begin to flash, and the dimmer will shut down the dimmer output level in stages to reduce the power dissipation to a safe level.