

Install Dimming Specification

Main features

24/48 16amp channels or 12/24 32 Amp channels, or permutations of this.

Size 1000high 500wide 200deep (Hotpatch increases this, see below).

Twin DMX inputs fully patchable + RDM ready.

Internal memories.

Panic input.

Hotpatch dimmer outputs to install circuits.

RCB protection.

Easily installed, electronics installed separately once building is clean.

Easy commissioning.

Easy disconnect of Live and neutral for building electrical testing.

240uS rise time.

100% duty cycle.

1. Detailed specification

1.1 Physical

The sturdy mainframe is made from 1.5 mm folded, welded and powder coated steel.

The mainframe is 500mm wide 1000mm high and 200mm deep.

The mainframe with optional patch is 500mm wide 1150mm high and 200mm deep.

The mainframe weights 31 Kg.

The 16A power block 16 Kg.

The 32A power block 16 Kg.

Patch panel 6 Kg.

1.2 Channel types

The system is build around a mainframe and two power blocks. The power block variants are:

12 channel 16A 240 μ Sec rise time choke.

6 channel 32A 240 μ Sec rise time choke.

The Channel Phase allocation per power block is.

Phase 1 channels 1, 4, 7, 10.

Phase 2 channels 2, 5, 8, 11.

Phase 3 channels 3, 6, 9, 12.

All channels are rated at 100% duty cycle at 40 °C.

Cooling is achieved by 2 temperature dependant speed controlled fans which are switched off during inactive periods (all channels at 0%).

An optional air filter set is available for the air intake.

1.3 System permutations

A system consists of 1 master mainframe and optionally 1 slave mainframe. Each mainframe can hold 2 powerblocks, each powerblock containing either 12 channels of 16 Amps or 6 channels of 32 Amps per channel.

The possible configurations therefore are:

Single mainframe:

- 24 channel of 16A.
- 12 channels of 16A and 6 channels of 32A.
- 12 channels of 32A.

Master + Slave Mainframe (2 main frames linked)

- 48 channels of 16A.
- 36 channels of 16A and 6 channels of 32A.
- 24 channels of 16A and 12 channels of 32A.
- 12 channels of 16A and 18 channels of 32A.
- 24 channels of 32A.

1.4 Protection

The mainframe can be fitted with optional 30mA RCB protection for each power block.

1.5 Mains isolation

Single mainframes can be fitted with a 125A mains isolator, which can be locked in the off position. (The diversity factor is 1.)

Master mainframes can be fitted with a 160A mains isolator, which can be locked in the off position. (The diversity factor reduces to 0.62.)

1.6 Mains connection

The mains input uses 5 Wago cage clamp capable of receiving 35mm² cables without specialist crimping tools.

The system requires a 3-Phase 4 wire mains connection (TN-S or TN-C-S) 240V P-N/ 415 P-P/ 0V N-E.

The supply needs to be protected with maximum of 125A D type breaker or fused disconnect (160A D type for master slave).

The maximum Icu is 6kA..

The maximum withstand voltage is 2000V.

1.7 Load connection

Connection directly to the dimmer circuits

The mainframe load connection to the building wiring is through two multipin connectors allowing easy disconnection of both the neutral and phase connections for periodic wiring tests.

Using the integral patching option

An optional integral patch panel consists of two outlets per 16 amp dimmer channel and is complemented by a 48 circuit panel for connection to the installed circuits. Connection to this is via four multipin connectors for solid cable ensuring the panel can be closed, or direct into the Wieland connector if stranded building wiring is used. In the patch configuration periodic wiring test neutral and phase disconnection is achieved by unplugging the patch cable.

1.8 Installation

The system is specifically designed to be easily installed. The system consists of a cable entry box and the dimming box which contain the electronics etc. These two boxes fit together. The cable entry box is fitted first, and the mounting is very flexible to allow for situations where a hole cannot be drilled in an exact location. Holes for the dimming box are drilled at the same time using a template provided and a plumb line hanging point and tape measure fixing point are provided to ensure the system hangs vertically.

Once the cable entry box has been fitted all the wiring can be completed, whilst the dimmer box is kept in a 'safe' environment. Circuits can easily be tested using a test connector which mates with the cable entry box connectors.

The cable entry panel can have 24 PG13.5 knock-outs or be a flat plate which can be easily customized by the installer to suit the local installation.

When the dimming box is required, it is simply hung onto the entry box and screwed into place, and connectors mated to complete the installation. If necessary circuits can still be wired, the hanging of the dimming box does not obstruct the cable termination.

1.9 Control system

The system is fully digital, no trimming is needed.

2 DMX 512 inputs which can be individually addressed and merged on an HTP basis.

The system is RDM ready via software upgrade using a connection to a laptop computer.

Local channel control is through an intuitive encoder wheel and on-screen level matrix.

12 memories can be stored and replayed using the encoder wheel and on-screen level matrix.

Breaker and Load Status is displayed on screen, and through RDM when available.

Remote store and replay of memories

Memory 12 can be controlled by a 12V AC or DC panic input.

Intuitive user interface using a large 42 x 8 character graphics quality backlit LCD display.

Individual channels can be set to any of the available curves.

Individual channels can have a limit level set.

Individual Preheat for each channel.

Plug in Control card for easy maintenance.

Software upgradeable via a PC and download cable.