

Control Units

General Information

Reliable controllers are a precondition for efficient LED lighting. That's why LATAB has developed an extensive range of its own controllers. These not only maximize the life time of the sensitive LEDs, but automatically adapt to the connected light head.

The product features of the LATAB controllers are numerous: designs suitable for industrial use, adjustable light intensity, up to 4 channels, PC operation via Ethernet or other interfaces, as well as stand-alone solutions, either for continuous/switching mode operation or strobe mode, with adjustable pulse durations from 50 μ s to 1.5 ms.

The controllers are based on constant current generators with a "plug and play" feature that automatically adapts to the connected LED light for exact light intensity.

The major differentiating factor of LATAB controllers is the illumination technique:

Continuous/switching Mode

The adjustable parameter for continuous/switching mode controllers is light intensity either via an internal or external potentiometer. Intensity can also be modulated by the voltage from zero (0 V) to full brightness (10 V).

Continuous/switching mode controllers are equipped with the "long flash" feature: The long flash function is a kind of trigger-controlled light. Light starts with trigger pulse and lasts as long as the trigger pulse is on.

In the long flash mode double intensity is available, that means that light intensity is twice the standard intensity. In double intensity (DI) mode ON-time is limited to five seconds, followed automatically by five seconds OFF-time. Shorter ON-time double intensity pulses are not limited and can be repeated at users demand.

Rise time is about 1.5 msec and fall time about 10 to 15 msec.

Strobe Mode

The adjustable parameters for strobe controllers are light intensity and strobe pulse length. Intensity can also be modulated by the voltage from zero (0 V) to full brightness (10 V).

For PC-controlled units a trigger pulse delay is also available. Strobe controllers provide 5 times more intensity compared to continuous/switching devices.

In strobe mode the pulse length is tuneable by internal set time from 50 to 1500 μ sec. Rise and fall time is a few μ sec.

A second differentiating factor of LATAB controllers is the interface:

Ethernet Interface

These controllers communicate by Ethernet protocol. In principle this allows an unlimited number of units to be connected to the same computer. When using the test program the number is limited to 8 controllers. The trigger signal is connected to the controller by a separate connector.

RS-232 Interface

The RS-232 interface is converted (within the COM-port connector itself) to RS-485, enabling up to 16 units to be connected to the same COM-port in a so-called multi drop system. These units are delivered with a test/demo PC-software which can also be used in real applications.

Test Program

Controllers with PC-communication are delivered with a test program for testing purposes and lab applications only.

The protocol has a simple form and is therefore easily programmable by the user.

Continuous/switching Mode Controllers

The continuous/switching mode controllers are micro-processor-based and specially designed to control all types of LATAB lighting heads. Like the lighting heads, they come in a black aluminium housing.

The controller is enabled for plug and play. Just connect the LATAB lighting head and the controller automatically identifies the lighting type by an electronic sensor and gives the maximum light intensity to the lighting head. The light intensity can be adjusted by an internal/external dimmer, via 0-10 V, RS-232 or Ethernet.

The unique “long flash” feature gives the opportunity to increase the light intensity up to 200% when a trigger pulse is received. In order to avoid overheating the pulse length is limited to 5 sec, followed by a 5 sec cool down period.

The controllers are supplied with a 5 m power/trigger cable¹.



Sample picture. Specific type pictures and drawings on the following pages.

| General Specifications | |
|------------------------|---------------------------------|
| Supply voltage | 24 V DC ± 10%, max. 2.5 A |
| Power output | max. 1 A/3 A |
| Light intensity | 0 - 100% internal potentiometer |
| Trigger input | 5 - 24 V, optically isolated |
| Operation temperature | 0 - 65 °C |

| Order Information | | | | | |
|--------------------------|---|-----------|--------------------|---------------|---------------------------|
| Order number | Intensity control mode | Output | Number of channels | Figure number | Long flash option (5 sec) |
| PAD2 1135/1 | Internal potentiometer/ 0-10 V ¹ | 1 A | 1 | 1 | yes |
| PAD2 1135/3 | Internal potentiometer/ 0-10 V ¹ | 3 A | 1 | 1 | yes |
| PAD2 2135/1 | External dimmer/ 0-10 V ¹ | 1 A | 1 | 9 | yes |
| PAD2 2135/3 | External dimmer/ 0-10 V ¹ | 3 A | 1 | 9 | yes |
| PAD2 1235/1 | Internal potentiometer | 1 A/chan. | 2 | 3 | yes |
| PAD2 1435/1 ² | Internal potentiometer | 1 A/chan. | 4 | 4 | yes |
| PAD2 1136/1 | RS-232 | 1 A | 1 | 1 | |
| PAD2 1136/3 | RS-232 | 3 A | 1 | 1 | |
| PAD2 1436/1 ³ | RS-232 | 1 A | 4 | 10 | |
| PAD2 4136/1 | Ethernet | 1 A | 1 | 5 | yes |
| PAD2 4136/3 | Ethernet | 3 A | 1 | 6 | yes |
| PAD2 4236/1 | Ethernet | 1 A | 2 | 7 | yes |
| PAD2 4436/1 ² | Ethernet | 1 A | 4 | 8 | yes |

¹ Additional cable LKA2 5135 is necessary

² Trigger cable is optional

³ PAD2 1436/1 has no trigger function