

# INSTALLATION INSTRUCTIONS

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# EUROLIGHT LD6230

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## IMPORTANT SAFETY INSTRUCTIONS



**CAUTION:** The unit's installation and initial operation must be done under the supervision of a qualified professional. To reduce the risk of electric shock, do not remove the top cover (or the rear section). No user serviceable parts inside; refer servicing to qualified personnel.

**WARNING:** To reduce the risk of fire or electric shock, do not expose this appliance to rain and moisture.




This symbol, wherever it appears, alerts you to the presence of uninsulated dangerous voltage inside the enclosure—voltage that may be sufficient to constitute a risk of shock.



This symbol, wherever it appears, alerts you to important operating and maintenance instructions in the accompanying literature. Please read the manual.

## DETAILED SAFETY INSTRUCTIONS:

- 1) Read these instructions.
  - 2) Keep these instructions.
  - 3) Heed all warnings.
  - 4) Follow all instructions.
  - 5) Do not use this device near water.
  - 6) Clean only with a dry cloth.
  - 7) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
  - 8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
  - 9) Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
  - 10) Protect the power cord from being walked on or pinched particularly at plugs, extension cords, and the point at which they exit the unit.
  - 11) Only use attachments/accessories specified by the manufacturer.
  - 12) Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the device. When a cart is used, use caution when moving the cart/device combination to avoid injury from stumbling over it.
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- A circular prohibition symbol (a circle with a diagonal line through it) over a black and white illustration of a person pushing a cart. The cart has a large rectangular object (the device) on it, which is tilted and appears to be falling or unstable.
- 13) Unplug this device during lightning storms or when not used for long periods of time.
  - 14) Refer all servicing to qualified service personnel. Servicing is required when the unit has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the device, the unit has been exposed to rain or moisture, does not operate normally, or has been dropped.

# INSTALLATION INSTRUCTIONS EUROLIGHT LD6230

The BEHRINGER EUROLIGHT LD6230 Dimmer Pack was developed to meet the highest demands of light engineering. Its wide-ranging functions make it an all-purpose workhorse for various commercial applications (TV studios, theatre or live events).

The EUROLIGHT LD6230 has all the important features needed to control your lighting equipment, yet its controls are clearly arranged and simple to use. You can select between digital DMX or analog control. You get trouble-free operation with the extensive LEDs used for signal error detection.

## IMPORTANT INFORMATION

✎ Installation as well as initial operation **must** be performed by qualified personnel. Always assure that your LD6230 is completely disconnected from the mains before removing the casing cover.

✎ The LD6230 was designed for indoor use only.

✎ Please keep in mind that sudden temperature changes (e.g. bringing your equipment from colder environments into warmer environments) may cause condensation on electronic components, leading to possible equipment damage and physical harm to the operator.

✎ Please adhere to all applicable national safety standards during installation.

✎ Please read the installation instructions and the enclosed user's manual in their entirety to familiarize yourself with the LD6230 and all of its functions. Please follow all instructions and store both the installation instructions and the manual in a safe place for future reference.

✎ Please assure that your EUROLIGHT is sufficiently cooled and that it is not placed near heat sources that could cause overheating.

✎ If you want to run your EUROLIGHT on mains voltage other than factory-specified voltage, contact the nearest BEHRINGER service center.

✎ To effectively limit harmonic currents and avoid voltage fluctuations that could affect other electrical appliances, connect this equipment to an AC outlet that complies with all applicable technical standards. In all other cases, contact your local power supply provider for advice prior to usage.

## MAINS/ILLUMINANT CONNECTORS

To facilitate additional flexibility, your dimmer pack has a connector terminal strip. Cable bushings for connecting to the mains and your illuminants are located in the back. Flexibility is further enhanced with the option to retrofit a CEE connector and a 16-pin HARTING® connector.

Both fixed and mobile installations require compliance with IEC 61010-1:2001 (EN 6110-1:2001). In particular, a 3-phase separator (pursuant IEC60947-1 and IEC60947-3) needs to be included in the installation. This separator needs to be labeled according to IEC 60417-50008 and IEC 0417-5007.

To assure compliance with Directive 89/336/EEC, only use specified upstream line filters with your EUROLIGHT. Using it without line filters specified by BEHRINGER may lead to electromagnetic interference. More detailed information on this subject can be found at [www.behringer.com](http://www.behringer.com).

## SAFETY AND INITIAL OPERATION

As soon as you connect your LD6230 to the mains, internal controls are activated. The six automated fuses (circuit breakers) can all handle 10 A and serve as overload protection for the connected equipment.

✎ Please keep in mind that activating circuit breakers 1, 2, 3, 4, 5 or 6 also means that the respective channels can conduct voltage.

Electronic controls are additionally protected with triple high-sensitivity fuses located on the main board.

✎ Defective fuses must be replaced with fuses with identical rating!

The LD6230 is a Class I device in which a low-Ohm protective ground wire is an integral part of its safety design.

During the installation, make sure that a low-Ohm protective conductor (< 0,1 Ohm) exists between all bare metal parts and the grounding on the main connector.

Output channels						
Phase	CH 1*	CH 2	CH 3*	CH 4	CH 5*	CH 6
L1	X	X				
L2			X	X		
L3					X	X

\* Activation of control electronics and respective output channel

## CONNECTOR TERMINAL STRIP

The connector terminal strip of your LD6230 is laid out for cables with diameters between 0.326 mm<sup>2</sup> (AWG 22) and 4 mm<sup>2</sup> (AWG 12). When using flexible access lines, cable end contacts corresponding to manufacturer specifications have to be used. To assure good contact, skin the cable endings between 9 - 13 mm.

During the installation, all applicable national standards need to be adhered to.

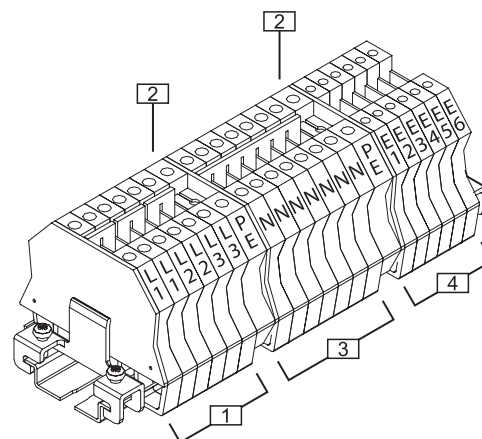


Illustration: LD6230 connector terminal strip

When your LD6230 leaves the assembly plant, all incoming and outgoing conductor connectors [3] are bridged. The incoming phases L1/L1, L2/L2 and L3/L3 [1] are always connected to one another in pairs and switched to the overload protection of the channels 1 to 6. They protect output connectors E1 to E6 [4]. Each of the channels can handle currents of maximum 10 Amperes. The green-yellow conductors [2] (PE) may only be used as protective conductors.

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The lowest cable gauge between L1 and L3, incoming neutral conductor (N) and protective earth (PE) is 4 mm<sup>2</sup> (AWG 12). For outgoing channels E1 to E6, use cables with gauges corresponding to the loads used (2.5 mm<sup>2</sup> (AWG 14) or 1.5 mm<sup>2</sup> (AWG 16)).

Output assessment [A]	Nominal cross section [mm <sup>2</sup> ] (EU)	AWG (USA)
6 - 10	1.5	16
13 - 16	2.5	14
18 - 25	4	12

During the installation, please adhere to all manufacturer instructions. **Regardless from mains supply voltage**, the maximum output current of the EUROLIGHT LD6230 is 10 A per dimmer circle.

Please make sure that each dimmer load is connected to a separate channel. **Never** connect more than one output to just one common neutral conductor.

**ATTENTION:** Due to electrocution danger, **do not** use your dimmer pack if there are bare cables visible.

## CONNECTION OPTIONS FOR FLEXIBLE USAGE

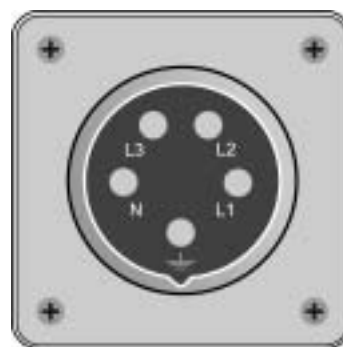
### OUTPUT CONNECTOR (HARTING®)

In the back of your LD6230 there is a cable bushing for connecting your illuminants. Open the flap on the top of the LD6230 to get to the terminal clamps used for this purpose. Here you have the option to retrofit a 16-pin HARTING® connector. To do that, you first have to remove the back-bearing cover sheet and connect the HARTING® connector to the terminal clamps.

PIN assignment/HARTING® connector					
PIN 1	Phase channel 1	E1	PIN 9	Neutral channel 1	N
PIN 2	Phase channel 2	E2	PIN 10	Neutral channel 2	N
PIN 3	Phase channel 3	E3	PIN 11	Neutral channel 3	N
PIN 4	Phase channel 4	E4	PIN 12	Neutral channel 4	N
PIN 5	Phase channel 5	E5	PIN 13	Neutral channel 5	N
PIN 6	Phase channel 6	E6	PIN 14	Neutral channel 6	N
PIN 7	free	-	PIN 15	free	-
PIN 8	free	-	PIN 16	free	-
Ground wires need to be fastened to their respective PE connectors					

### CEE POWER SUPPLY CONNECTOR

Also located in the back is a cable bushing for the mains supply. Here, you can retrofit a 5-pin CEE 32 A mains connector by removing the back-bearing cover sheet and connect the CEE high-voltage connector to the connecting terminal. The following illustration shows how the connections are allocated:



CEE connector pin allocation

Removable mains connector cables with mains interconnections (pursuant IEC60320) must match the minimal load-carrying capacity of the connector **or** must comply with the IEC60799 standard. The interconnection and the cable must comply with prevalent nominal values (maximal voltage and current).

During the installation, please adhere to the instructions provided by the connector manufacturer.

## SPECIFICATIONS

### Channels

Number	6
Load per channel	0.2 A min./10 A max.
Maximal load per channel	10 A using a 3-phase connector
Frequency	50/60 Hz

### Inputs

Power supply	3-phase connector, internal terminal block/PG cable screw joint, CEE connector (optional installation by qualified personnel)
Analog	0 to +10 V via 8 pin DIN
Digital	DMX512 via XLR 5 pin

### Outputs

Digital	DMX512 via XLR 5 pin
Load	Internal terminal block/PG cable screw joint, HARTING® (optional installation by qualified personnel)

### System fuses

Load securing per channel	10 A cable protection switch (type C)
Control section fuse	2 x T 100 mA H/250 V 1 x T 160 mA H/250 V for voltage range 220 - 230 V (EU) 2 x T 160 mA H/250 V 1 x T 315 mA H/250 V for voltage range 120 V (UL)

### Power supply

Voltage	USA/Canada 120 V~, 60 Hz Europe/U.K./Australia 240 V~, 50 Hz
Maximum power consumption	3 x 20 A

### Dimensions/Weight

Dimensions (H x W x D)	approx. 3 1/3" (84.3 mm) x 19" (482.6 mm) x 15 9/10" (403.8 mm)
Weight	approx. 20.3 lbs. (9.2 kg)

BEHRINGER continuously strives to assure the highest quality standards possible. Required modifications may be implemented without prior notice. Technical data and the appearance of the unit may deviate from the above values and/or illustrations.

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