Operating Instructions
Busch-Dimmer®

Dimmer
2200 UJ-212-500
2210 U-500
1 Safety

**Warning**

**Electric voltage!**
Risk of death and fire due to electrical voltage of 230 V.

– Work on the 230V supply system may only be performed by authorised electricians!

– Disconnect the mains power supply prior to installation and/or disassembly!

2 Intended use

The device is to be used exclusively with the components that are supplied and licensed as described in chapter "Setup and function".

3 Environment

**Consider the protection of the environment!**

Used electric and electronic devices must not be disposed of with domestic waste.

– The device contains valuable raw materials which can be recycled. Therefore, dispose of the device at the appropriate collecting depot.

All packaging materials and devices bear the markings and test seals for proper disposal. Always dispose of the packaging material and electric devices and their components via the authorized collecting depots and disposal companies.

The products meet the legal requirements, in particular the laws governing electronic and electrical devices and the REACH ordinance.


(EU REACH ordinance and law for the implementation of the ordinance (EC) No.1907/2006)
4 Technical data

<table>
<thead>
<tr>
<th>General</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal voltage</td>
<td>230 V AC ± 10%, 50 Hz</td>
</tr>
<tr>
<td>Nominal power</td>
<td>60 … 400 W / VA</td>
</tr>
<tr>
<td>Short-circuit protection</td>
<td>T 1.6 H</td>
</tr>
<tr>
<td>Nominal current</td>
<td>1.74 A</td>
</tr>
<tr>
<td>Ambient temperature range</td>
<td>0 … 35 °C</td>
</tr>
<tr>
<td>Protection type</td>
<td>IP 20</td>
</tr>
</tbody>
</table>

5 Setup and function

The device is intended for the activation of the following types of loads:

- 230 V incandescent lamps
- 230 V halogen lamps

5.1 Features of function and equipment

- Complete device
- With rotary actuation and phase section
- Non-illuminable

5.2 Possible combinations

- 2200 UJ-212
- 2210 U
- 2110 C212
- X

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6 Reduction of the connection load (derating)

The dimmer heats up during operation because part of the connected load is lost and converted into heat. The specified rated power is designed for dimmer installation in a solid masonry wall. When installing the dimmer in a wall made of gas concrete, wood, or plasterboard, the maximum connection load must be reduced by 20%.

The connected load must always be reduced when several dimmers are installed one below the other or when other heat sources cause additional heating. In intensely heated-up rooms, the maximum connected load must be reduced according to the diagram.

![Diagram showing derating curve]

Fig. 1: Derating

<table>
<thead>
<tr>
<th>Unit</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>Nominal power</td>
</tr>
<tr>
<td>°C</td>
<td>Ambient temperature</td>
</tr>
</tbody>
</table>
7 Installation and electrical connection

Warning

Electric voltage!
Risk of death due to electrical voltage of 230 V during short-circuit in the low-voltage line.
– Low-voltage and 230 V lines must not be installed together in a flush-mounted socket!

7.1 Requirements for the electrician

Warning

Electric voltage!
Install the device only if you have the necessary electrical engineering knowledge and experience.
• Incorrect installation endangers your life and that of the user of the electrical system.
• Incorrect installation can cause serious damage to property, e.g. due to fire.

The minimum necessary expert knowledge and requirements for the installation are as follows:
• Apply the "five safety rules" (DIN VDE 0105, EN 50110):
  1. Disconnect from power;
  2. Secure against being re-connected;
  3. Ensure there is no voltage;
  4. Connect to earth and short-circuit;
  5. Cover or barricade adjacent live parts.
• Use suitable personal protective clothing.
• Use only suitable tools and measuring devices.
• Check the supply network type (TN system, IT system, TT system) to secure the following power supply conditions (classic connection to ground, protective earthing, necessary additional measures, etc.).

7.2 Mounting

Warning

Electric voltage!
Risk of death and fire due to electrical voltage of 230 V.
– Work on the 230V supply system may only be performed by authorised electricians!
– Disconnect the mains power supply prior to installation and/or disassembly!

The flush-mounted insert must only be installed in flush-mounted wall boxes according to DIN 49073-1, Part 1, or suitable surface-mounted housings.
7.3 Electrical connection

Note on adapting the connected load to the ambient temperature
In intensely heated rooms, the maximum connected load must be reduced according to the following derating diagram.

Fig. 2: Deactivation
Notice

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