Relay insert
6812U-101-500
1 Safety....................................................................................................................................................................... 3
2 Environment............................................................................................................................................................. 3
  2.1 Disposal .................................................................................................................................................. 3
3 Technical data.......................................................................................................................................................... 4
4 Function................................................................................................................................................................... 5
  4.1 Applications................................................................................................................................. 5
  4.2 Possible combinations .................................................................................................................. 5
5 Connection............................................................................................................................................................... 6
6 Mounting / Installation.............................................................................................................................................. 7
  6.1 Requirements for the electrician ................................................................. 7
  6.2 Mounting ................................................................................................................................. 8
  6.2.1 Mounting height/applications.......................................................................................... 8
7 Operation................................................................................................................................................................. 9
  7.1 Auxiliary post operation................................................................................................. 9
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!

Information regarding documentation
These operating instructions describe both the standard (Art. No. 6810-21x-101 ...) and the comfort sensors (Art. No. 6800-xxx-104(M) ...) as “flush-mounted sensors.” Please pay attention to the correct type assignment in the description.
The type designation of your device can be found on the back side of the respective device.

Information regarding activation
Activation of the power circuit when the incandescent lamp is changed is possible only by deactivating an upstream main switch or the automatic circuit breaker.

2 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.

2.1 Disposal
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)
## Technical data

<table>
<thead>
<tr>
<th></th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal voltage:</td>
<td>230 V ~ ± 10%, 50 Hz</td>
</tr>
<tr>
<td>Switching capacity:</td>
<td>700 W / VA (3 A, (\cos \phi = 0.5))</td>
</tr>
<tr>
<td>Power consumption:</td>
<td>&lt; 1 W</td>
</tr>
<tr>
<td>Overload protection, short-circuit protection:</td>
<td>By upstream automatic circuit breakers</td>
</tr>
<tr>
<td>Ambient temperature range:</td>
<td>0 – +55°C</td>
</tr>
</tbody>
</table>
4 Function

4.1 Applications
The device is a switch for any loads up to 700 W/VA.

<table>
<thead>
<tr>
<th>Load types</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>230 V incandescent lamps</td>
<td></td>
</tr>
<tr>
<td>230 V halogen lamps</td>
<td></td>
</tr>
<tr>
<td>Low-volt halogen lamps with conventional transformers or electronic transformers</td>
<td></td>
</tr>
<tr>
<td>Fluorescent lamps</td>
<td></td>
</tr>
</tbody>
</table>

4.2 Possible combinations

| 6812 U ... | X |
| 6800-xxx-104 ... | X |
| 6810-21x-101 ... | X |
| 6813-(183)-101 ... | X |
| 6813/11-24 ... | X |
| 6813/11-183 ... | X |

A combination with active auxiliary posts 6805U ... is not possible.
5  

Connection

Fig. 1: Relay insert 6812U-101 … in connection with an NC contact button

| 1 | Pushbutton/NC contact |

Fig. 2: Parallel connection of relay insert 6812U-101 …
6 Mounting / Installation

Warning

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

– Low-voltage and 230 V cables must not be installed together in a flush-mounted socket!
  In case of a short-circuit there is the danger of a 230 V load on the low-voltage line.

6.1 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;
  5. Cover or barricade adjacent live parts.
• Use suitable personal protective clothing.
• Use only suitable tools and measuring devices.
• Check the type supply network (TN system, IT system, TT system) to secure the following power supply conditions (classic connection to ground, protective earthing, necessary additional measures, etc.).
6.2  Mounting
The device may only be installed in suitable flush-mounted sockets (DIN 49073-1) or a suitable surface-mounted housing.

6.2.1  Mounting height/applications
To guarantee an optimum function of the flush-mounted sensors, observe the following table.

<table>
<thead>
<tr>
<th>Flush-mounted sensor type</th>
<th>Mounting height, application</th>
<th>Built-in position of the connecting screws</th>
</tr>
</thead>
<tbody>
<tr>
<td>6813-xxx-10 ...</td>
<td>2.0 – 8.0 m (ceiling mounting)</td>
<td>--</td>
</tr>
<tr>
<td>6813/11-xxx ...</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6810-21X-101 ...</td>
<td>0.8 – 1.2 m (stairwell)</td>
<td>Top</td>
</tr>
<tr>
<td>6800-xxx-104(M) ...</td>
<td>0.8 – 1.2 m (stairwell)</td>
<td>Bottom</td>
</tr>
<tr>
<td></td>
<td>2.0 – 2.5 m (room monitoring)</td>
<td>Bottom</td>
</tr>
</tbody>
</table>

Fig. 3: Mounting height of stairwell
6810-21X-101 ...  
6800-xxx-104(M) ...

In combination with the presence detector 6813 ..., only ceiling mounting makes sense. If possible, the presence detector 6813 ... should be installed directly above the workplace.

Fig. 4: Mounting height of room monitoring
6800-xxx-104(M) ...
7 Operation

7.1 Auxiliary post operation

In connection with flush-mounted sensors, auxiliary post operation via activation by NC contact button in the power supply is possible (press for at least one second).

Auxiliary post option via NC contact button (see Fig. 1) in connection with flush-mounted sensors 6810-21x-101 ...:

After the NC contact button is actuated, the light is switched on. This response is independent of the respective light conditions at the mounting position.

In connection with flush-mounted sensors 6800-xxx-10x(M) ... and Busch-Watchdog Presence 6813-xxx ...:

The function executed on the NC contact button switches on the devices for the time set on the flush-mounted sensor (at least one minute for time settings less than one minute). This response is independent of the respective light conditions at the mounting position.

Note

Here, only the short-time pulses forms an exception (JL).
A member of the ABB Group

Busch-Jaeger Elektro GmbH
PO box
58505 Lüdenscheid

Freisenbergstraße 2
58513 Lüdenscheid
Germany

www.BUSCH-JAEGER.com
info.bje@de.abb.com

Central sales service:
Phone: +49 (0) 180 5 669900
Fax: +49 (0) 180 5 669909

Notice
We reserve the right to at all times make technical changes as well as changes to the contents of this document without prior notice. The detailed specifications agreed to at the time of ordering apply to all orders. ABB accepts no responsibility for possible errors or incompleteness in this document.

We reserve all rights to this document and the topics and illustrations contained therein. The document and its contents, or extracts thereof, must not be reproduced, transmitted or reused by third parties without prior written consent by ABB.

Copyright© 2012 Busch-Jaeger Elektro GmbH
All rights reserved