

TS 210

Operating principle

In association with a Tebis TS system, the dimmer TS 210 allows dimming of 230 V incandescent lamps, 230 V halogen lamps, VLV halogen lamps (12 V or 24 V) fitted with electronic or conventional transformers.

In "Auto" mode the switching, dimming and lighting scenes are controlled by Tebis TS input modules.

In "Manu" operation the load can only be switched on or off by using the local push button.

Configuring type of load

The product is supplied without any default load selection. When using the product for the first time, the two load type state indicators will flash.

In order to configure the load type, complete the following actions.

1. Put selection switch into position "Manu", output is switched off.
2. Press on the button "load select".
The state indicators for load type are switched off.
3. Choose the load type by pressing repeatedly on the "load select".
4. Confirm the load type of your choice by pressing the button "load select" for 5 seconds.
5. The state indicator associated to the type of load selected is now switched on.

Overheating and overload protection

In case of overheating, the available release power is automatically reduced. In this case the indicator for overheating/overloading will be switched on. To solve this problem.:

- adapt or reduce the connected load on the output of the dimmer,
- decrease the temperature of the device and of the enclosure by using dissipation inserts (eg : LZ 060) and ensure improved ventilation of the enclosure.

If the temperature is too high, the TS 210 dimmer will disconnect.

In case of short circuit or severe overload, the state indicator for overheating/overload will flash. In this case, the load is not controlled. To solve this problem :

- verify if the output of the dimmer is in short circuit,
- reduce the power of the load to which the device is connected.

Warranty



A warranty period of 24 months is offered on hager products, from date of manufacture, relating to any material of manufacturing defect. If any product is found to be defective it must be returned via the installer and supplier (wholesaler). The warranty is withdrawn if :
- after inspection by hager quality control dept the device is found to have been installed in a manner which is contrary to IEE wiring regulations and accepted practice within the industry at the time of installation.
- the procedure for the return of goods has not been followed
Explanation of defect must be included when returning goods.

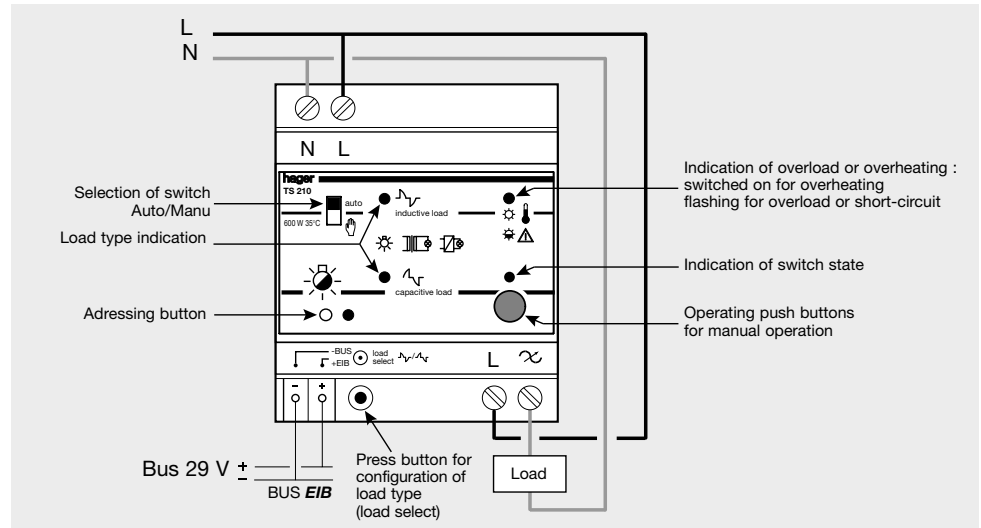
User instruction (GB)

Dimmer 600 W

Safety Recommendations:

- Installation should only be carried out by a suitably qualified electrician.
- Before using the device, it has to be configured by specifying the load to be controlled.
- This device will only function as part of the Tebis TS system.
- Observe the installation regulations of the protection measures SELV.

Product presentation



"load select"	dimming phase / load type	state indicators for load type	associated loads
1 st press down 	leading edge / inductive load	● flashing ● switched off	- incandescent / halogen 230 V * - VLV halogen (12 V or 24 V) via conventional transformer adapted for dimming.
2 nd press down 	lagging edge / capacitive load	● switched off ● flashing	- incandescent / halogen 230 V * - VLV halogen (12 V or 24 V) via electronic transformer
3 rd press down	dimming phase previously configured.		

* **Note 1** : manufacturers of lamps or VLV transformers (electronic or conventional) specify in their technical documentation which dimming mode should be used. For inductive loading it is necessary to use the leading edge mode. However, the electronic transformers are usually controlled with lagging edge mode.

Recommendations before putting into operation

1. Observe operation temperature. Mount device in lower part of the enclosure.
It is recommended to separate the TS 210 dimmers from high power electromechanical devices (contactors, MCB's) by using heat dissipation inserts (eg: LZ 060).
2. Connect the device to the mains power supply 230 V and to the bus 29 V.
Warning : the supply voltage of the module and of the load must be joined downstream from the same differential protection (RCB).
3. Connect the load on the output of the TS 210 dimmer. Do not exceed the maximum power of the TS 210 dimmer.
4. Configure the TS 210 for the type of load.
5. Observe the recommendations of the Tebis TS user instructions.

Technical Specifications

Electrical specifications

- supply voltage : bus 29V
- consumption without load : 0,5 VA
- power dissipation : 6 W

Operation data :

- power circuit :
- 230V incandescent lamps and halogen lamps: 20 W to 600 W (35 °C) or 500 W (45 °C)
- VLV halogen lamps with dimmable conventional transformer: 20 VA to 600 VA (35 °C) or 500 VA (45 °C).
- VLV halogen lamps with dimmable electronic transformer : 25 VA to 600 VA (35 °C) or 500 VA (45 °C).

The efficiency of the transformer has to be taken into account to calculate the max. number of controlled lamps.

- Dimming principles :
- lagging edge
- leading edge

Environment

- operating temperature : 0 °C to +45 °C
- storage temperature : -20 °C to +70 °C

Connection

- capacity: flexible: 1 mm² to 6 mm²
rigid : 1,5 mm² to 10 mm²

Dimensions modular unit : 4 modules.