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EN

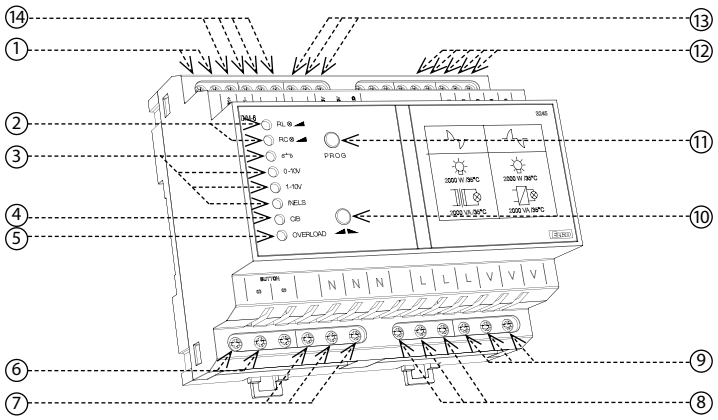
DIM-6

Controlled dimmer

Characteristics

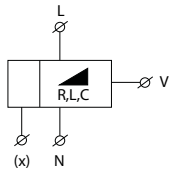
- Designated for dimming of lights RLC, also available for aplliances switching
- DIM-6 can be controlled by: button (parallel button connection), external potentiometer, analog signal 0-10 V (1-10 V), iNELS system bus.
- Actuator manages output 230V AC, controlled by 1 semi-conductor. Maximum output power is 2000 VA
- Power range can be increased, up to 10000 VA, by additional moduls DIM6-3M-P
- Electronic overcurrent protection, overvoltage and short-circuit protection.
- Protection against overun of temperature inside device - switch off output + signalize overheat by flashing red LED.
- 6-MODUL version, mounting on DIN rail

Description



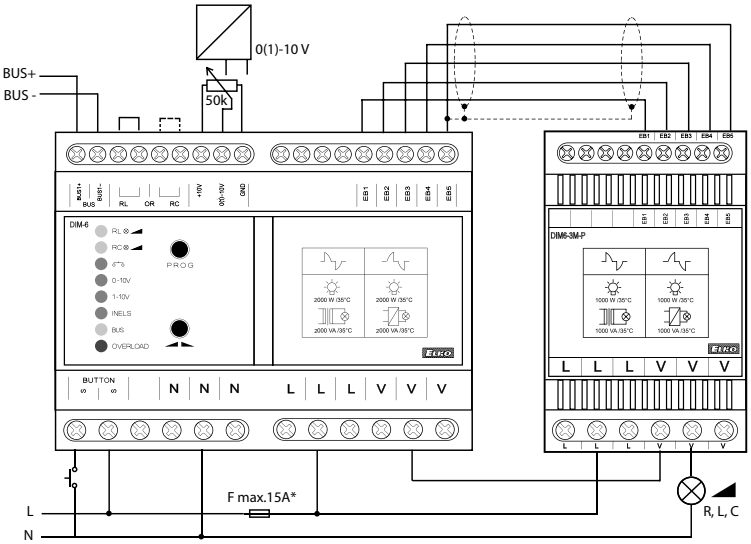
1. Terminals for BUS bus connection
2. Load type indication
   RL ⊗ ◢ - yellow-indicates configuration of load RL
   RC ⊗ ◢ - yellow-indicates configuration of load RC
3. Control type indication
   ⊶ - green-button control mode selected
   0-10V - green - 0-10 V signal control mode selected
   1-10V - green - 1-10 V signal control mode selected
   INELS - green - BUS conductor bar - iNELS control mode selected
4. Indicates BUS conductor bar data transfer communication - yellow
5. Overload indication - red - indicates overload, flashing LED signalizes overrun inside the device, shinnig LED signalizes current overload
6. Terminals for connecting control button
7. Terminals of neutral wire
8. Phase connection term
9. Output terminals
10. Button for output control
11. Button control type selection
12. Terminals for additional modul conductor bar
13. Terminals for control by signal 0(1)-10V, or by potentiometer
14. Terminal for regulation load of wire jumper

Symbol



(x) - according to control type setting

Connection



* Potential L on device terminal needs to be protected by a protection element corresponding to load connected to the device.

Product loadability

a	b	c	d	e	f	
HAL 230 V			230V AC			
R	L	C	x	x	xx	xxx
●	●	●	-	-	●	●

a) lamp,halogen light
b) low-voltage el. bulbs 12/24V wound transformers
c) low-voltage el. bulbs 12/24V electronic transformers
d) LED bulbs
e) saving fluorescent lamps
f) switching management
x - dimmable
xx - incline edge
xxx - descending edge

Technical parameters

DIM-6	
Supply terminals:	L, N
Supply voltage:	AC 230 V / 50 Hz
Input:	10 VA
Tolerance of supply voltage:	-15 %; +10 %
Max. output power:	max. 2 000 VA
Dissipated power:	2.5 % from load
Module extendable:	to 10 000 VA
Galvanic separation of bus and power output:	yes
Isulating voltage between outputs and inner circuits:	3.75 kV, SELV according to EN 60950
Control - button type	
Control voltage:	AC 12 - 240 V
Control terminals:	S - S, galvanically separated
Power of control input:	AC 0.53 VA (AC 230 V), AC 0.025 - 0.2 VA (AC 12-240 V)
Length of control impulse:	min. 25 ms / max. unlimited
Recovery time:	max. 150 ms
Connection of glow lamps:	no
Control 0(1)-10V	
Control terminals:	0(1) - 10 V, GND
Control voltage:	0 - 10 V or 1 - 10 V
Min. current of control input:	1 mA
BUS control	
Control terminals:	BUS+, BUS-
bus voltage:	27 V DC
Current of control input:	5 mA
Indication of data transmission:	yellow LED
Output	
Contactless:	4x MOSFET
Rated current:	10 A
Resistive load:	2 000 VA*
Inductive load:	2 000 VA*
Capacitive load:	2 000 VA*
Indication of output state:	yellow LED, according to load type
Other data	
Operating temperature:	-20.. +35 °C
Storing temperature:	-30.. +70 °C
Operating position:	vertical
Mounting:	DIN rail EN 60715
Protection degree:	IP40 from front panel
Purpose of control device:	operative control device
Construction of control device:	individual control device
Char. of automatic operation:	1.B.E
Heat and fire resistance cat.:	FR-0
Anti-stroke category (immunity):	class 2
Rated impulse voltage:	2.5 kV
Overvoltage category:	III.
Pollution level:	2
Profile of connecting wires (mm^2):	
- output part:	max.1x2.5, max. 2x1.5 / with sleeve max. 1x1.5 (AWG 12)
- control part:	max.1x2.5, max. 2x1.5 / with sleeve max. 1x2.5 (AWG 12)
Dimensions:	90 x 105 x 65 mm (3.5˝ x 4.1˝ x 2.6˝)
Weight:	410 g (14.5 oz.)
Applying standards:	EN 60669-2-1, EN 61010, EN 55014

* Warning: it is not allowed to connect inductive and capacitive loads in the same time.

Function

This device is designated for switching and dimming of lightning, light bulbs and halogen lamps with wound or electronical transformator up to 2 000 VA in the range of luminance intensity 0-100%. Capaticy of attachable load could be increase with additional modul up to 10 000 VA. Switching and dimming of attached output load is controlled with several modes - types of control, which are chosen with button PROG. Modes are to be switched in circle after you press PROG button and analogically indicated on the front panel with one of four green LED diods.

Modes of control dimmer DIM-6:

- button ◢◣ on the front panel - in mode ⚷ is possible to control dimmer output and regulate luminance setting 0-100% (short button press turn on/off the light, longer press > 0.5s - allows slight luminance setting).
- external button on terminals S, S - this control input of device is galvanicaly separated from inside device circuits, operation switching voltage by external button can be in the range AC/DC 12-240V, polarity voltage doesn´t metter. Output controlling is identical as control by button ◢◣ on the fornt panel (short button press turn on/off the light, longer press > 0.5s - allows slight luminance setting).
- control signal 0-10 V or 1-10V - into this input is possible connect the external converter with output 0-10V or 1-10V, where 0 V (or 1 V) on the terminal 0(1)-10 V is equal to 0% luminance intensity and 10 V is equal to 100% luminance intencity. This voltage must be related to terminal GND.
- external potenciometr 50k - during the service of an internal supplier (terminal + 10 V), is possible to use an external potenciometr, by connecting it with terminal 0(1)-10 V and GND, see the picture of connection options. With this potenciometer is possible to control an output of dimmer in the range of luminance intencity 0-100%.
- iNELS, with the help of conductor bar BUS - dimmer is possible to use as a component of conductor bar in system iNELS. Operating of dimmer is controlled by central conductor bar system iNELS.

It's not possible to combine individual types of dimmer controllers.

Attention - before setting the mode of dimmer control, is necessary to set up the type of connecting load, with the wire jumper on terminals RC or RL. If the type of connecting load is not set up, LED diods RC and RL are flashing in turns and switching, dimming of load on output is not possible. If the type of load is set up incorrectly than is connected on output, that cause a risk of demage or destruction of operating output of device!!!

The dimmer has multiple current terminals, for easier installation of this device. It's not possible to use these terminals as a conductor bar for distribution of current in installation.

Dimmer is equipped with heat and overcurrent protection - signalized by red LED diod on the front panel. Flashing LED diod signalize heat overload (overheating) inside the device.

Dimmer is also equiped with electronic overcurrent protection, which will be activated in the case of device overload or short circuit of output with N conductor - output will be switched off.

Supply of device (potencial L) must be protected with circuit breaker component, which has to be accordant with load connected to device by fast fuse.

Warning

Device is constructed for connection in 1-phase main AC and must be installed according to norms valid in the state of application. Connection according to the details in this direction. Installation, connection, setting and servicing should be installed by qualified electrician staff only, who has learnt these instruction and functions of the device. This device contains protection against overvoltage peaks and disturbancies in supply. For correct function of the protection of this device there must be suitable protections of higher degree (A, B, C) installed in front of them. According to standards elimination of disturbancies must be ensured. Before installation the main switch must be in position "OFF" and the device should be de-energized. Don´t install the device to sources of excessive electro-magnetic interference. By correct installation ensure ideal air circulation so in case of permanent operation and higher ambient temperature the maximal operating temperature of the device is not exceeded. For installation and setting use screw-driver cca 2 mm. The device is fully-electronic - installation should be carried out according to this fact. Non-problematic function depends also on the way of transportation, storing and handling. In case of any signs of destruction, deformation, non-function or missing part, don´t install and claim at your seller. After the product exceeds lifetime, it should be removed and placed in protected dump. Important advice and warning: Dimmer is designated for managing brightness of el. bulbs, in case of low-voltage halogen lights with separating ferromagnetic transformer or electronic transformer.
Warning: by signals HDO and similar signals that are distributed in the main, can create disturbances of dimmer. Disturbance is active only for the period of signal transmission.