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EEF012D

IP Roombox enhanced with integrated dimmer

Safety instructions

The installation and mounting of electrical appliances must only be performed by qualified electricians, in compliance with installation standards and in accordance with the guidelines, provisions and safety and accident prevention regulations in force in the country concerned. Failure to follow these installation instructions may damage the device, cause a fire or give rise to hazards. Risk of electric shock. Switch off the installation before performing any operation on the device or the load. Do not forget to include all of the circuit breakers which supply potentially dangerous voltages to the device or to the load. Risk of electric shock. The appliance is not suitable for providing isolation. Risk of electric shock on SELV/FELV installations. Not suitable for switching SELV/FELV voltages. Only connect one motor per output. Use only motors with mechanical or electronic limit switch sensors. Check the adjustment of the limit switches. Follow the motor manufacturer's instructions. There is a risk of damage to the unit.
Do not connect to three-phase motors. There is a risk of damage to the unit. Observe the motor manufacturer's recommendations for the minimum reverse rotation time and the maximum continuous operation time. These instructions for use form an integral part of the product and must be retained by the end user.

Installation

The IP Roombox inputs are used for interfacing dry contacts (not 230 V ∿) with relay outputs and the dimming output of the IP Roombox. For example, push buttons, switches or conventional automation.

Functions

The exact functions of these inputs depend on the configuration that you establish in the "IP Roombox configuration software".
The push button on the front panel is used for navigation in the various menus offered by the product: NETWORK SETTINGS, RESET MODUL WITH DHCP ON, RESET MODUL WITH DHCP OFF, RESTART MODULE, DIMMER SETTINGS
Depending on the configuration parameters that you define using the "IP Roombox configuration software", the device will switch electrical loads using its independent output relays.
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Typical use examples

- Switching of 230 V ∿ electrical loads via floating contacts.
- Control of 230 V ∿ motors for roller shutters and fan-coil units.

- Control of 24 V⎓ electric motors for roller shutters.
- Mounting on a DIN rail in accordance with standard EN60715 on a distribution board.

Product description

① Inputs: 12 dry contacts
② Outputs: 12 ON/OFF relay outputs
③ Push button for navigation of menus
④ LCD screen for viewing the I/O and menus
⑤ 230 V ∿ terminals
⑥ RJ45 network connector
⑦ Dimming output

fig. 1
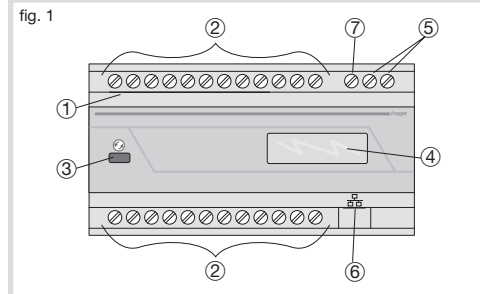
Available functions

Several functions are available for configuration of the product using the "IP Roombox configuration software":
- On/Off
- Toggle
- Timer
- Shutters 230 V ∿
- Shutters 24 V⎓
- External dimmer (available only with the EEA001A external dinner, not supplied)
- Internal dimmer
- Fan-coil unit (**warning**: regulation is not provided by the IP Roombox. Rather it must be provided by an external thermostat, the outputs of which can be interfaced with the dry contact inputs of the IP Roombox).

⚡	Electric shock in the event of contact with live parts! Electric shock can cause death! Before working on the unit, switch off the installation and cover the neighbouring conductive parts!

| ⚠	A critical temperature increase may occur if too large a load is connected to the device! The device and connecting cables may be damaged at the terminal connection! Do not exceed the maximum permissible load per device!

⚠	Risk of damage in the event of parallel installation of multiple motors on a single output! The limit switches risk being damaged! The motors, opening elements and the device may be destroyed! Connect only one motor per output!

Installation of the device

Observe the operating temperature range, in order to ensure adequate cooling.
- Mount the unit on a DIN rail in accordance with standard EN60715.
- When wiring the product, make sure that you correctly separate/isolate the input and output cables from each other, as well as from the other LV cables of the installation.

Example connection of the device Inputs
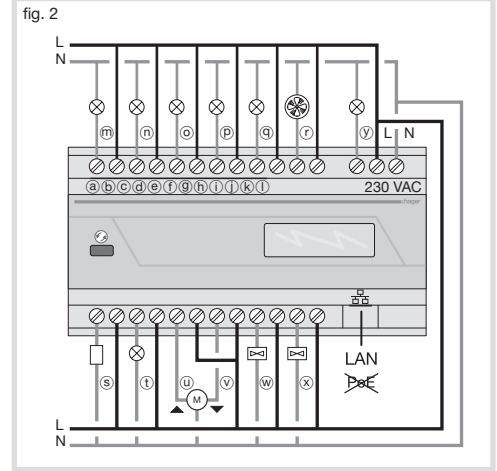
fig. 2

- ⓐ Card Holder
- ⓑ Button ring
- ⓒ Hall light
- ⓓ Do not disturb
- ⓔ Clean my room
- ⓕ Bathroom light
- ⓖ Emergency button
- ⓗ Bath water sensor
- ⓘ UP Button Shutter
- ⓙ DOWN Button Shutter
- ⓚ Master OFF
- ⓛ Free

Outputs
- ⓜ Entrance Light
- ⓝ Bathroom Light
- ⓞ Hall light
- ⓟ Do not disturb
- ⓠ Clean my room
- ⓡ Bath Airing
- ⓢ Doorbell
- ⓣ Alarm lamp
- ⓤ Shutter UP
- ⓥ Shutter DOWN
- ⓦ Heating
- ⓧ Cooling
- ⓨ Dimmer output

Connecting roller shutter motors

230 V ∿ Roller Shutters

For 230 V ∿ roller shutter motors, two adjacent outputs C1/C2, C3/C4, C5/C6, C7/C8, C9/C10 and/or C11/C12 can be used to form a shutter output.
- The first output of the pair C1, C3, C5, C7, C9 or C11 is assigned to the OPENING movement (Up)
- The second output of the pair C2, C4, C6, C8, C10 or C12 is assigned to the CLOSING movement (Down).

Connect the 230 V ∿ motor to the outputs in accordance with fig. 3 below. Use the same phase to do this.

24 V⎓ Roller Shutters

For the roller shutter motors, four neighbouring 24 V⎓ outputs C1/C2/C3/C4, C5/C6/C7/C8 and/or C9/C10/C11/C12 can be used to form a shutter output.
- The first and second outputs of the group of 4 outputs C1/C2, C5/C6 or C9/C10 must be connected to the **+** terminal of the 24 V⎓ power supply.
- The third and fourth outputs of the group of 4 outputs C3/C4, C7/C8 or C11/C12 must be connected to the **-** terminal of the 24 V⎓ power supply.

Connect the 24 V⎓ motor to the outputs in accordance with fig. 3 below.

- Ⓐ Button UP
- Ⓑ Button DOWN
- Ⓒ Button UP-DOWN
- Ⓓ Shutter UP 230 V ∿
- Ⓔ Shutter DOWN 230 V ∿
- Ⓕ Shutter UP 24 V⎓
- Ⓖ Shutter DOWN 24 V⎓

fig. 3
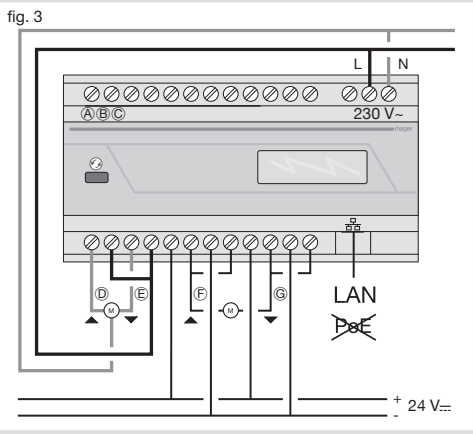
Dimming

The integrated dimmer allows you to adjust the brightness of an incandescent lamp, LV halogen lamp (230 V), very low voltage halogen lamp (12 V or 24 V ULV) with an electronic or ferromagnetic transformer, dimmable compact fluorescent lamp with integrated power supply, dimmable 230 V LED lamp with integrated power supply, or a dimmable very low voltage LED lamp (12 V or 24 V ULV) with electronic transformer.

This integrated dimmer is a universal dimmer with automatic load detection, having a memorisation function in order to more effectively control 230 V compact fluorescent and LED lamps.

The integrated dimmer also has a "priority" mode which allows you to select the dimming mode of your choice.

Adjustment of the lighting level is achieved using the standard push buttons connected to the IP Roombox IP inputs.
- By short presses:
  • switching the lighting on or off.
- By long presses (greater than 400 ms):
  • adjusting the brightness up to the minimum or maximum level. The dimming direction is inverted each time a new press is maintained.

Load memorisation

Load memorisation allows you to detect the characteristics of the load in order to control it more effectively:
- Press the button for 10 seconds. While pressing the button, the load may blink.
- Give a short push on the button in order to start the memorisation. This operation takes approximately 30 seconds and causes the lighting level to change.
- After this memorisation, the load switches on at the maximum level and flashes once to indicate that memorisation is complete.

If no action is performed for a period of 10 seconds after the long press, the product returns to the preceding dimming mode.
The minimum illumination level can be modified depending on the load connected.

Factory reset (automatic mode)

If a conventional load is installed again, it is possible to return to "factory" dimming mode: after pressing for 10 seconds, give 2 further short key presses. The product will confirm the factory reset by blinking the load twice. This mode is the most suitable for conventional loads.

⚠️ A load must be connected in order to proceed with the load memorisation or a factory reset.

Priority dimming mode

It is possible to prioritise the dimming mode from the LCD screen or the "IP Roombox configuration software".

Via the LCD screen:
- Give a long press on the Navigation button of the product to enter the menus.
- Scroll the menus using short presses until "VIEW DIMMER SETTINGS" is displayed.
- Give a long press to enter the "VIEW DIMMER SETTINGS" menu.

- Give short presses until "CURRENT MODE: FACTORY" is displayed (Factory being the default mode activated).
- Give a long press to enter the "CURRENT MODE: FACTORY" menu.
- Give short presses until the desired mode (CFL, LED, INDUCTIVE CAPACITIVE, FACTORY, LEARNING) is displayed.
- Give a long press to prioritise the selected mode.

If the confirmed mode is incompatible with the load connected, the dimmer automatically returns to "FACTORY" mode.

Protection against overheating or against overload

In the event of overheating or overload, the available power is automatically reduced.
To remedy this phenomenon:
- adjust or reduce the load connected to the dimmer and output.
- Reduce the temperature of the product and casing by inserting heat dissipation spacers (e.g. LZ060) on both sides of the IP Roombox and ensuring good ventilation.

In the event of a short-circuit or very large overload, the load is no longer controlled.
To remedy this problem:
- check whether the output is short-circuited.
- Decrease the power of the load connected to the dimmer output of the product.

Switching on/Configuration

- Switch on the product.
- Connect an RJ45 cable to the product and your computer.
- Download the "IP Roombox configuration software" to a computer.
- The computer used for the configuration must have a fixed IP address if the product as a fixed IP address (default configuration). It is possible to modify this setting directly on the product in the following manner:
  • access the Menus interface with a long key press.
  • Scroll the menus using short presses until "RESET MODUL WITH DHCP ON" is displayed to switch to dynamic IP.
  • Once you are positioned on "RESET MODUL WITH DHCP ON" give a long key press to restart the product with a dynamic IP address.
  • Wait for the product to re-initialise (it is possible to switch back at any time to fixed IP address mode by following the same procedure with "RESET MODUL WITH DHCP OFF").

The computer/session used for the configuration must be an Administrator.
- Double click on the ".exe" file of the "IP Roombox configuration software".
- Connect to the product using the IP address of the product or the Hostname (ex.: EEF012D_15): the default IP address is available on the label on the back of the product. It is also possible to display the product IP address/Hostname using the navigation button on the front of the product:
  • access the Menus interface with a long key press.
  • Scroll through the menus using short presses until "VIEW NETWORK SETTINGS" is displayed.
  • Once you are positioned over "VIEW NETWORK SETTINGS", give a long key press to access the information on this menu.
  • Scroll the information using short presses until "IP ADDRESS" or "HOSTNAME" is displayed. Its also possible to use the "Search" function (🔍) in the "IP Roombox configuration" software to find the various IP addresses connected to the network.
- Once connected to the product, configure it using the functions available in the "IP Roombox configuration software".

Commissioning the device

Switch on the outputs.

What to do if...

The outputs and the LCD screen no longer respond.
- Using the product IP address/Hostname: try to connect to the product using and RJ45 cable and the "IP Roombox configuration software" then attempt to download the configuration again.
- If you do not know the product IP address/Hostname: switch off and on the power supply to the product, so that it re-initialises.

The outputs no longer respond but the LCD screen is functional.
- Give a long key press to enter the menus.
- Use short key presses to scroll through the menus until "RESTART MODULE" is displayed.
- Give a long press to restart the product and wait for it to re-initialise.

It is not possible to connect to the product.
- Check the connection between the product and your computer.

Technical characteristics

Inputs dry contacts, do not connect a voltage	
Maximum connection distance	100 m.
Supply voltage	230 V ∼ /+10%/-15%
	240 V ∼ +/-6%
Frequency	50/60 Hz
Output relays (x12)	breaking capacity
	µ10 A AC1 230 V ∼
Upstream protection	circuit breaker 10 A
Loads 230 V ∼	
Incandescent lamps	2300 W max.
Halogen lamps	2300 W max.
Ferromagnetic transformers	1500 VA max.
Electronic transformers	1500 W
Fluorescent lamps	
- non-compensated	1000 W
- for electronic ballast (mono/duo)	1000 W max.
- with conventional ballast, parallel installation	1500 W
Compact fluorescent/LED lamps, 20 lamps max. of 20 W max. each	
Shutter motors	6 A max.
Fan-coil unit motors	4 A max.
Loads 24 V ⎓	
- 24 V ⎓ shutter motors	6 A max.
Dimming output	
- Incandescent and halogen lamps, 230 V	300 W
- Halogen Lamps ULV 300 VA via ferromagnetic transformer. The transformer must not be used at less than 75% of its rated load.	
- ULV halogen lamps, ULV LED lamps, dimmable 300 VA via electronic transformer. The efficiency of the transformer must be considered in order to calculate the maximum number of lamps.	
- Compact fluorescent lamps, dimmable, with integrated ballast 230 V	60 W
- LED lamps, dimmable, 230 V	60 W
- Non-dimmable compact fluorescent lamps and non-dimmable LEDs are not compatible with this product.	
Minimum switching current	100 mA
Maximum operating altitude	2000 m.
Pollution level	2
Surge voltage	4 kV
Protection rating (box)	IP20
Protection rating of box under faceplate	IP30
Protection rating against mechanical shocks	IK02
Overvoltage category	III
Operating temperature	-10°C...+45°C
Storage/transport temperature	-20°C...+70°C
Screw terminal connection capacity of the inputs	0,25 mm²... 1,5 mm²
Screw terminal connection capacity of the outputs	0,75 mm²... 4 mm² (or 2 x 2,5 mm²)
Maximum dissipation	7,5 W
Standby power consumption	1,3 W
Dimensions of 10 modules	171 x 90 x 64 mm