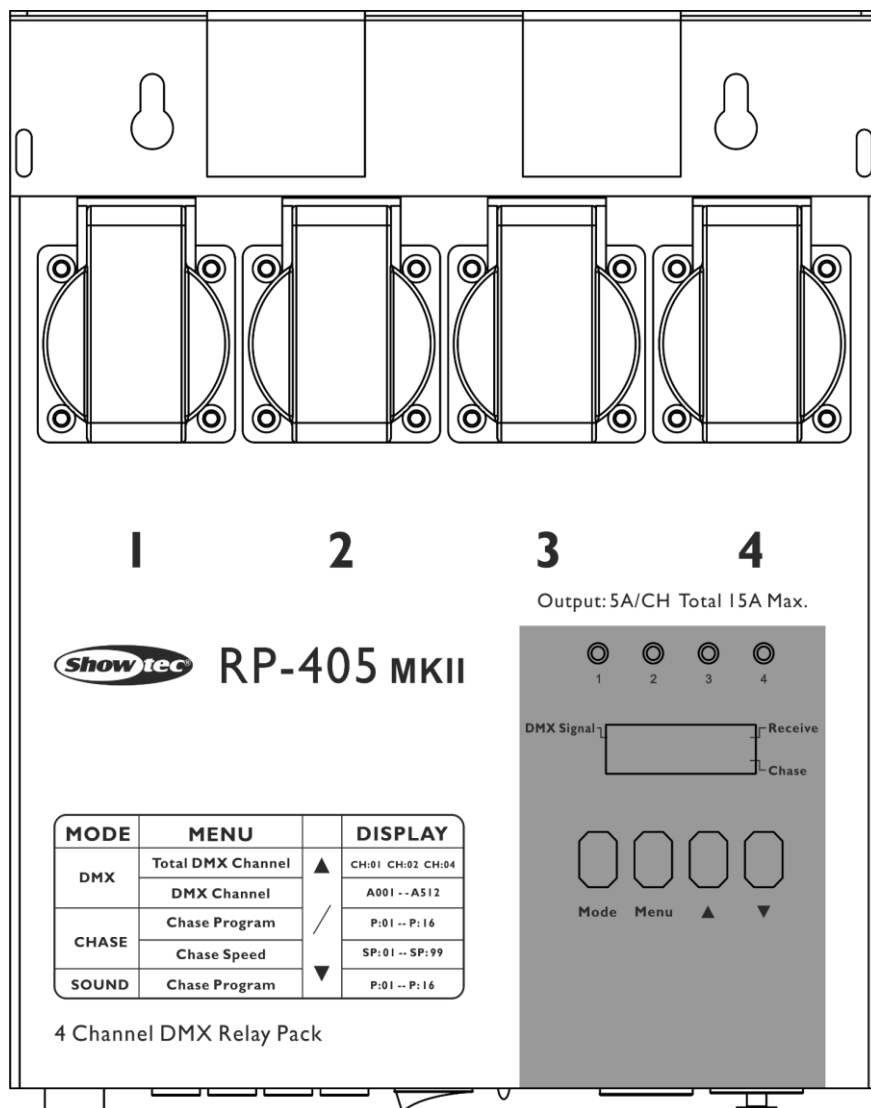




MANUAL



ENGLISH

RP-405 MKII Relay Pack V3

Ordercode: 50753

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Warning



**For your own safety, please read this user manual carefully
before your initial start-up!**

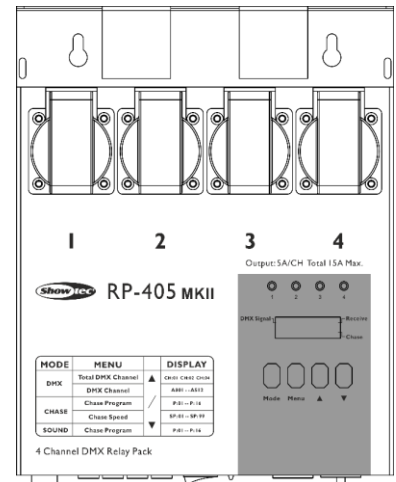


Unpacking Instructions

Immediately upon receiving this product, carefully unpack the carton and check the contents to ensure that all parts are present, and have been received in good condition. Notify the dealer immediately and retain packing material for inspection if any parts appear damaged from shipping or the carton itself shows signs of mishandling. Save the carton and all packing materials. In the event that a fixture must be returned to the factory, it is important that the fixture be returned in the original factory box and packing.

Your shipment includes:

- Showtec RP-405 MKII Relay Pack with a Schuko power cable (1,3 m)
- User manual



CAUTION!
Keep this device away from rain and moisture!
Unplug mains lead before opening the housing!



Safety Instructions

Every person involved with the installation, operation and maintenance of this device has to:

- be qualified
- follow the instructions of this manual



CAUTION! Be careful with your operations.
With a dangerous voltage you can suffer
a dangerous electric shock when touching the wires!



Before your initial start-up, please make sure that there is no damage caused by transportation. Should there be any, consult your dealer and do not use the device.

To maintain perfect condition and to ensure a safe operation, it is absolutely necessary for the user to follow the safety instructions and warning notes written in this manual.

Please consider that damages caused by manual modifications to the device are not subject to warranty.

This device contains no user-serviceable parts. Refer servicing to qualified technicians only.

IMPORTANT:

The manufacturer will not accept liability for any resulting damages caused by the non-observance of this manual or any unauthorized modification to the device.

- Never let the power cord come into contact with other cables! Handle the power cord and all connections with the mains with particular caution!
- Never modify, bend, mechanically strain, put pressure on, pull or heat up the power cord.
- Never strain the cable insert or the female part in the device. There must always be sufficient cable going to the device. Otherwise, the cable will be damaged, which can cause serious damage.
- Never remove warning or informative labels from the device.
- Never use anything to cover the ground contact.
- Never leave any cables lying around.
- Never use the device during thunderstorms, unplug the device immediately.
- Never leave various parts of the packaging (plastic bags, polystyrene foam, nails, etc.) within children's reach, as they are potential sources of danger.
- Do not insert objects into air vents.
- Do not open the device and do not modify the device.
- Do not connect this device to a dimmer pack.
- Do not switch the device on and off in short intervals, as this will reduce the device's life.
- Do not touch the device's housing bare-handed during its operation (housing becomes very hot). Allow the device to cool for at least 5 minutes before handling.
- Do not shake the device. Avoid brute force when installing or operating the device.
- Only use the device indoors, avoid contact with water or other liquids.
- Only operate the device after having checked if the housing is firmly closed and all screws are tightly fastened.
- Only operate the device after having familiarized with its functions.
- Avoid flames and do not put close to flammable liquids or gases.
- Always keep the case closed while operating.
- Always allow a free air space of at least 50 cm around the device for ventilation.
- Always disconnect power from the mains, when device is not used or before cleaning! Only handle the power cord holding it by the plug. Never pull out the plug by tugging the power cord.
- Make sure that the device is not exposed to extreme heat, moisture or dust.
- Make sure that the available voltage is not higher than stated on the rear panel.
- Make sure that the power cord is never crimped or damaged. Check the device and the power cord from time to time.
- Make sure that the core diameter of extension cords and power cords is sufficient for the required power consumption of the device.
- Make sure you don't use the wrong kind of cables or defective cables.
- If the external cable is damaged, it has to be replaced by a qualified technician.
- If device was dropped or struck, disconnect mains power supply immediately. Have a qualified engineer inspect for safety before operating.
- If the device has been exposed to drastic temperature fluctuation (e.g. after transportation), do not switch it on immediately. The arising condensation water might damage your device. Leave the device switched off until it has reached room temperature.
- If your device fails to work properly, discontinue the use immediately. Pack the device securely (preferably in the original packing material), and return it to your Showtec dealer for service.
- For adult use only. The device must be installed beyond the reach of children. Never leave the device running unattended.
- Never attempt to bypass the thermostatic switch or fuses.
- For replacement use fuses of same type and rating only.
- The user is responsible for correct positioning and operating of the device. The manufacturer will not accept liability for damages caused by the misuse or incorrect installation of this device.
- This device falls under protection class I. Therefore it is essential to connect the yellow/green conductor to earth.
- Repairs, servicing and electric connection must be carried out by a qualified technician.
- WARRANTY: Till one year after date of purchase.

Operating Determinations

- This device is not designed for permanent operation. Consistent operation breaks will ensure that the device will serve you for a long time without defects.
- The maximum ambient temperature $t_a = 40\text{ °C}$ must never be exceeded.
- The relative humidity must not exceed 50 % with an ambient temperature of 40 °C .
- If this device is operated in any other way, than the one described in this manual, the product may suffer damages and the warranty becomes void.
- Any other operation may lead to dangers like short-circuit, burns, electric shock, crash, etc.

You endanger your own safety and the safety of others!

Rigging

Please follow the European and national guidelines concerning rigging, trussing and all other safety issues.

Do not attempt the installation yourself !

Always let the installation be carried out by an authorized dealer !

Procedure:

- If the device is lowered from the ceiling or high joists, professional trussing systems have to be used.
- Use a clamp to mount the device, with the mounting bracket, to the trussing system.
- The device must never be fixed swinging freely in the room.
- The installation must always be secured with a safety attachment, e.g. an appropriate safety net or safety cable.
- When rigging, derigging or servicing the device, always make sure, that the area below the installation place is blocked and staying in the area is forbidden.

Improper installation can cause serious injuries to people and/or damage of property !

Connection with the mains

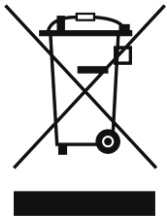
Connect the device to the mains with the power-plug.

Always check if the right color cable is connected to the right place.

International	EU Cable	UK Cable	US Cable	Pin
L	BROWN	RED	YELLOW/COPPER	PHASE
N	BLUE	BLACK	SILVER	NEUTRAL
	YELLOW/GREEN	GREEN	GREEN	PROTECTIVE GROUND

Make sure that the device is always properly connected to the earth!

Improper installation can cause serious injuries and/or damage of property!



Return Procedure

Returned merchandise must be sent prepaid and in the original packing, call tags will not be issued. Package must be clearly labeled with a Return Authorization Number (RMA number). Products returned without an RMA number will be refused. Highlite will not accept the returned goods or any responsibility. Call Highlite 0031-455667723 or mail aftersales@highlite.com and request an RMA prior to shipping the fixture. Be prepared to provide the model number, serial number and a brief description of the cause for the return. Be sure to properly pack fixture, any shipping damage resulting from inadequate packaging is the customer's responsibility. Highlite reserves the right to use its own discretion to repair or replace product(s). As a suggestion, proper UPS packing or double-boxing is always a safe method to use.

Note: If you are given an RMA number, please include the following information on a piece of paper inside the box:

- 01) Your name
- 02) Your address
- 03) Your phone number
- 04) A brief description of the symptoms

Claims

The client has the obligation to check the delivered goods immediately upon delivery for any shortcomings and/or visible defects, or perform this check after our announcement that the goods are at their disposal. Damage incurred in shipping is the responsibility of the shipper; therefore the damage must be reported to the carrier upon receipt of merchandise.

It is the customer's responsibility to notify and submit claims with the shipper in the event that a fixture is damaged due to shipping. Transportation damage has to be reported to us within one day after receipt of the delivery.

Any return shipment has to be made post-paid at all times. Return shipments must be accompanied with a letter defining the reason for return shipment. Non-prepaid return shipments will be refused, unless otherwise agreed in writing.

Complaints against us must be made known in writing or by fax within 10 working days after receipt of the invoice. After this period complaints will not be handled anymore.

Complaints will only then be considered if the client has so far complied with all parts of the agreement, regardless of the agreement of which the obligation is resulting.

Description of the device

Features

The RP-405 MKII Relay Pack is a compact switch pack with built-in relays, designed for switching your LED light effects. The device is suitable for low-power LEDs,

- Controllable by DMX or sound, according to the built in patterns.
- Pattern speed adjustable between 20 seconds - 2 minutes per step
- Patchable per channel
- 4-channel switchpack with built-in relays
- Input voltage: 240 V AC, 50/60 Hz
- Power consumption: 3450 W
- Connections: 4 x Schuko OUT
3-pin DMX (IN/OUT)
- DMX channels: 1, 2 and 4 channels
- Channel output: 5 A/CH; total 15 A
- Chases: 16
- IP rating: IP20
- Housing: Metal
- Color: Gray
- Main fuse: 15 A/250 V
- Fuse channels: 4 x 6,3 A/250 V
- Dimensions: 210 x 73 x 260 mm (LxWxH)
- Weight: 2,8 kg

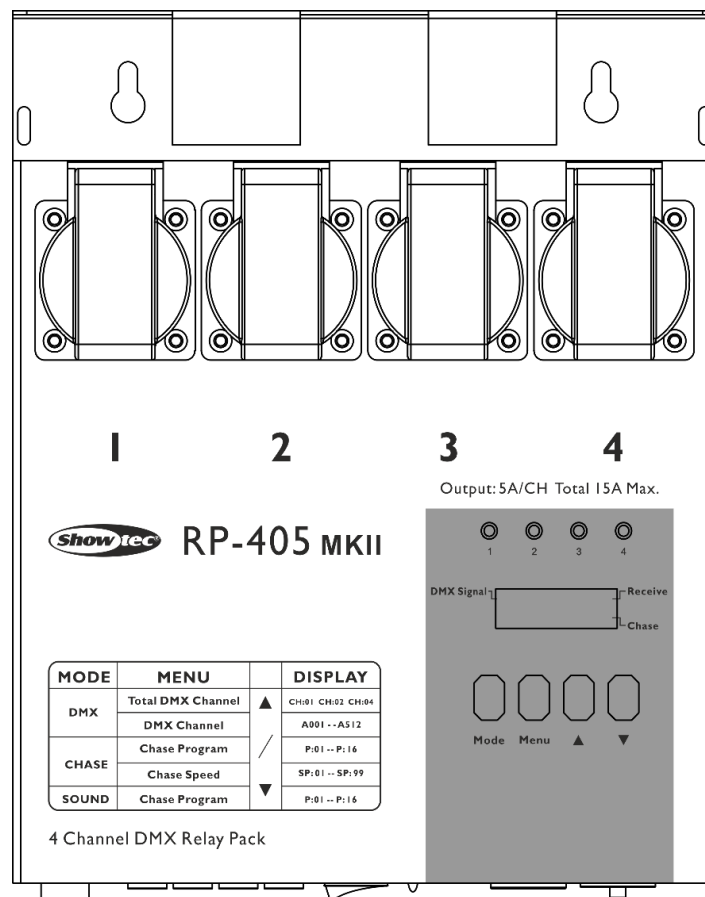


Fig. 01

Frontside

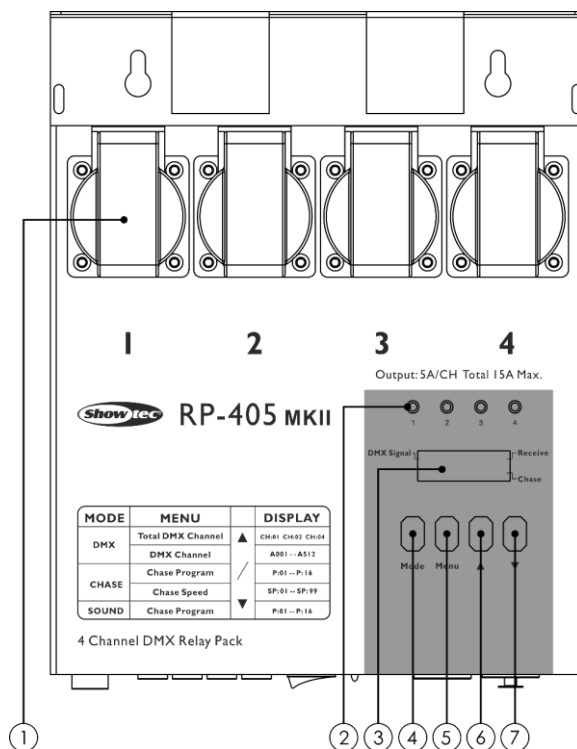


Fig. 02

- 01) 4 x Schuko output
- 02) LED channel indicators
- 03) LED display
- 04) MODE button
- 05) MENU button
- 06) UP button
- 07) DOWN button

Underside

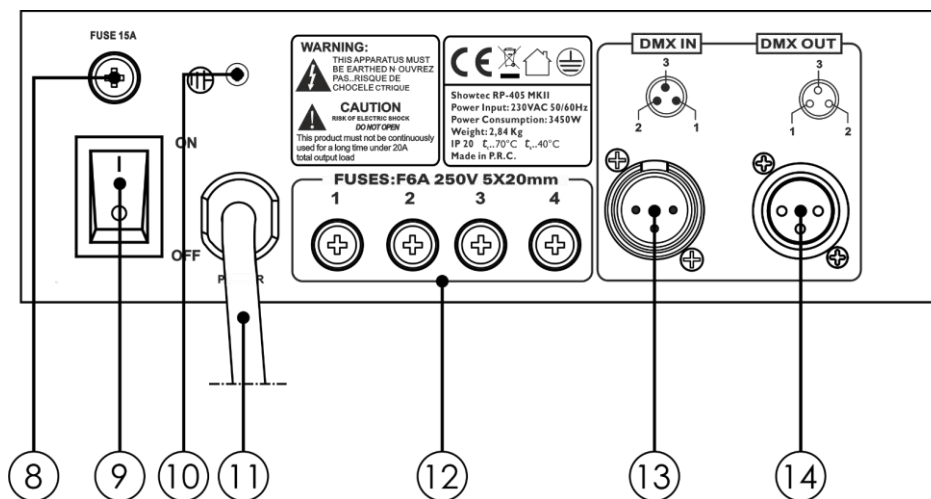


Fig. 03

- 08) Main fuse 15A
- 09) Power switch ON/OFF
- 10) Ground/Earth connection
- 11) Schuko power cable (1,3 m)
- 12) 4 x fuse 6,3A/250V
- 13) 3-pin DMX signal connector IN
- 14) 3-pin DMX signal connector OUT

Installation

Remove all packing materials from the RP-405 MKII. Check if all foam and plastic padding is removed. Connect all cables.

Do not supply power before the whole system is set up and connected properly.

Always disconnect from electric mains power supply before cleaning or servicing.

Damages caused by non-observance are not subject to warranty.

Set Up and Operation

Follow the directions below, as they pertain to your preferred operation mode.

Before plugging the device in, always make sure that the power supply matches the product specification voltage. Do not attempt to operate a 110 V specification product on 230 V power, or vice versa.

Connect the device to the main power supply.

Connect your light fixtures to any of the 4 **Schuko outputs (01)**.

Main Menu Options

The device has 3 control modes:

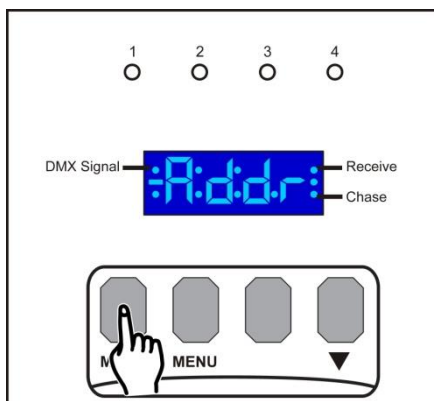
- Receive mode
- Chase mode
- Sound-controlled mode

Use the **MODE** button to select control modes.

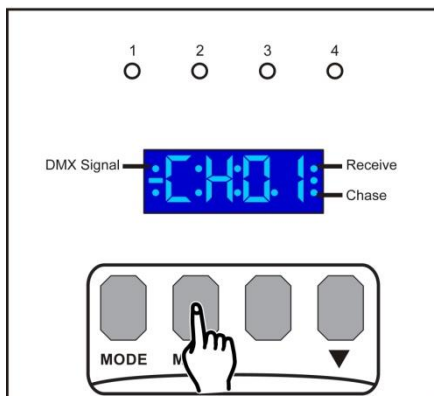
1. Receive Mode

In Receive mode you can select a DMX channel mode and set the DMX channel values.

01) Press the **MODE** button until the display shows:



02) Press the **MENU** button to enter the submenu.

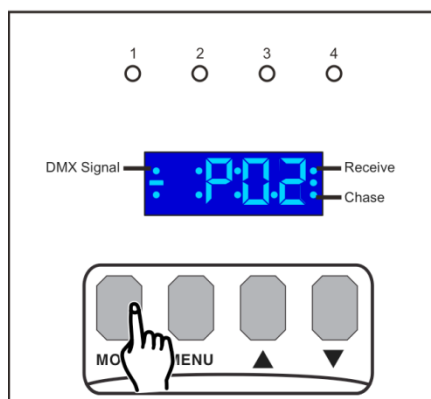


- 03) Press the **UP/DOWN** buttons to select one of the 3 DMX channel modes:
- CH: 01 1 channel controls all 4 outputs
 - CH: 02 2 channels control 4 outputs: one channel controls outputs 1 and 2 and another channel controls outputs 3 and 4
 - CH: 04 4 channels control 4 separate outputs
- 04) Repeatedly press the **MENU** button to select DMX channels (number of channels depends on the selected DMX channel mode).
- 05) Press the **UP/DOWN** buttons to adjust the value of the selected DMX channel. The adjustment range is 001–512.

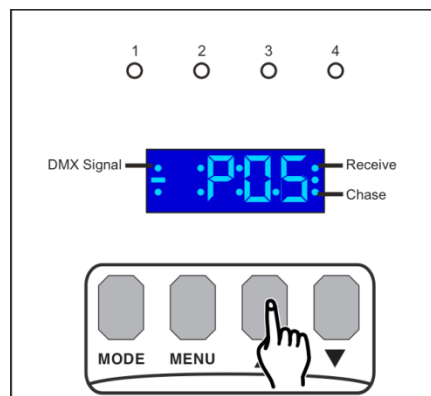
2. Chase Mode

In Chase mode you can run the built-in chases and adjust their speed settings.

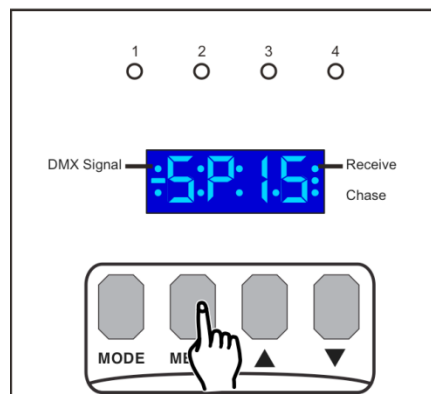
- 01) Press the **MODE** button until the display shows:



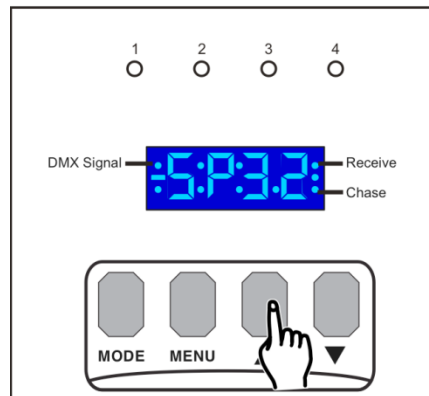
- 02) Press the **UP/DOWN** buttons to select one of the 16 built-in chases.



- 03) Press the **MENU** button to enter chase speed settings. The display shows:



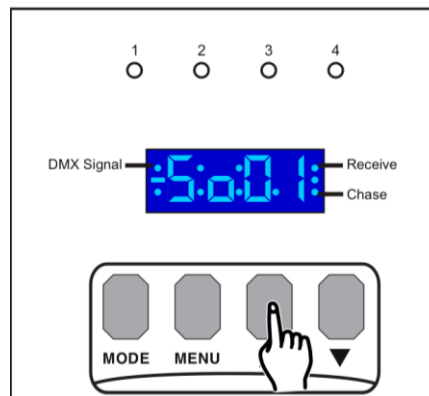
- 04) Press the **UP/DOWN** buttons to adjust the chase speed. The adjustment range is 01–99, from slow to fast.



3. Sound-controlled Mode

In Sound-controlled mode you can run the sound-controlled chases. The device will react to the background music.

- 01) Press the **MODE** button until the display shows:



- 02) Press the **UP/DOWN** buttons to select one of the 16 built-in sound-controlled chases.

Maintenance

The Showtec RP-405 MKII requires almost no maintenance. However, you should keep the device clean. Disconnect the mains power supply, and then wipe the cover with a damp cloth. Do not immerse in liquid. Do not use alcohol or solvents.

Keep connections clean. Disconnect electric power, and then wipe the DMX connections with a damp cloth. Make sure connections are thoroughly dry before linking equipment or supplying electric power.

Replacing the Fuse

Power surges, short-circuit or inappropriate electrical power supply may cause a fuse to burn out. If the fuse burns out, the product will not function whatsoever. If this happens, follow the directions below:

- 01) Unplug the device from electric power source.
- 02) Insert a flat-head screwdriver into a slot in the fuse cover. Turn the screwdriver to the left, at the same time gently push a bit (Turn and Push). The fuse will come out.
- 03) Remove the used fuse. If brown or unclear, it is burned out.
- 04) Insert the replacement fuse into the holder where the old fuse was. Reinsert the fuse cover. Be sure to use a fuse of the same type and specification. See the product specification label for details.

Troubleshooting

No Light

If the device does not operate properly, refer servicing to a technician.

Suspect two potential problem areas as: the power supply, the fuse.

- 01) Power supply. Check that the device is plugged into an appropriate power supply.
- 02) The fuse. Replace the fuse. See page 10 for replacing the fuse.
- 03) If all appears to be O.K., plug the device in again.
- 04) If you are unable to determine the cause of the problem, do not open the RP-405 MKII Relay Pack, as this may damage the device and the warranty will become void.
- 05) Return the device to your Showtec dealer.

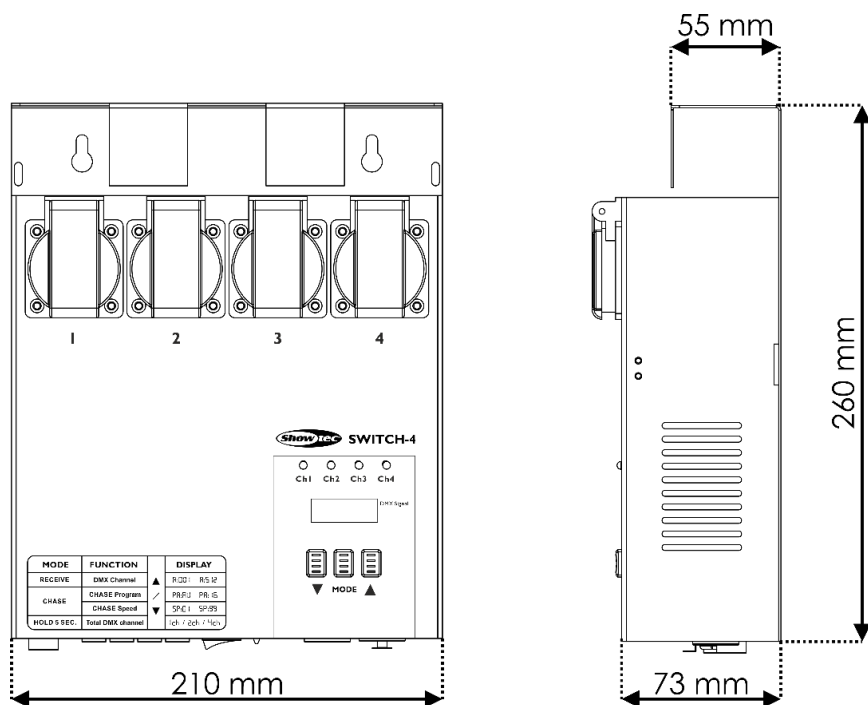
No Response to DMX

Suspect the DMX cable or connectors, a distributor malfunction, a controller malfunction, a light effect DMX card malfunction.

- 01) Check the DMX setting. Make sure that DMX addresses are correct.
- 02) Check the DMX cable: Unplug the device; change the DMX cable; then reconnect to electrical power. Try your DMX control again.
- 03) Determine whether the distributor, controller or light effect is at fault. If the distributor or controller does not operate properly, take the distributor or controller in for repair. Otherwise, take the DMX cable and the light effect to a qualified technician.

Product Specifications

Model:	Showtec RP-405 MKII Relay Pack
Input Voltage:	240 V AC, 50/60 Hz
Fuse:	4 x 6,3 A/250 V
Main fuse:	15 A/250 V
Power consumption:	3450 W
Dimensions:	210 x 73 x 260 mm (LxWxH)
Weight:	2,8 kg
Operating and Programming:	
Signal pin OUT:	Pin 1 (earth), pin 2 (-), pin 3 (+)
DMX Mode:	1, 2, 4 channels
Signal input:	3-pin XLR IN
Signal output:	3-pin XLR OUT
Electro-mechanical effects:	
Channel output:	5 A/CH; total 15 A
Chases:	16
Housing:	Metal
Color:	Gray
IP rating:	IP20
DMX control:	via standard DMX-controller
Onboard:	LED display for easy setup
Connections:	4 x Schuko OUT
Maximum ambient temperature t_a :	40 °C
Minimum ambient temperature:	0 °C
Minimum distance:	
Minimum distance from flammable surfaces:	0,5 m



Design and product specifications are subject to change without prior notice.



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