











## 1 PRECAUTIONS



Read the following instructions carefully before connecting or operating the unit. Failure to comply with the instructions in this booklet may result in a malfunction or injury.

The contents of this manual are believed to be correct at the time of printing. In the interest of a policy of continuous development and improvement, the manufacturer reserves the right to change the specification of the drive or its performance, or the contents of this manual without notice.

Although protection at the outputs of the controller protects its circuits in case of an overload or overvoltage, we recommend installing an additional protection device on the controller's supply circuit.

To avoid exposing the controller to harmful gases or excessive humidity, it is preferable to install it in a corridor.

All cables must pass through watertight connectors through the bottom plate. Do NOT drill extra holes in the enclosure, as this may render the enclosure non-IP54 compliant.

Do NOT spray the controller with water.

# Relink-2c/2s

## 2 TERMS AND SYMBOLS

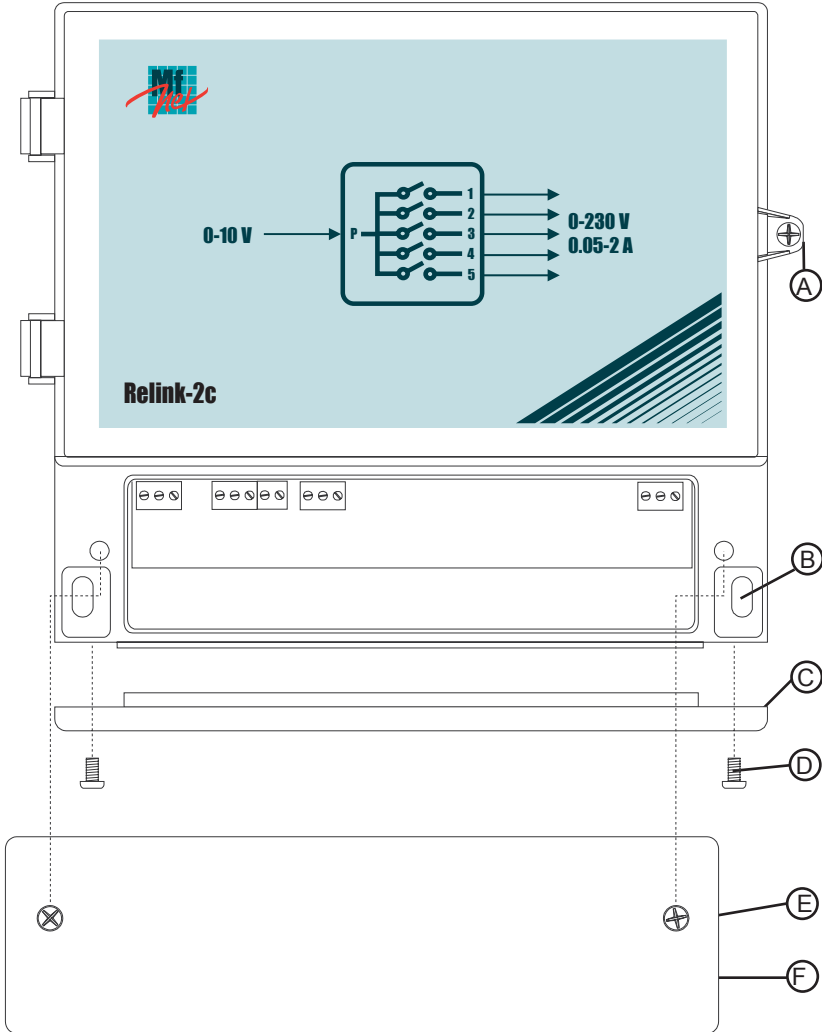


Fig. 1 – Exploded view of the Relink-2c/2s

## 2.1 IMPORTANT TERMS

- A **Top Cover Fastening screw.** (M4x8 mm)
- B **Wall Mounting Holes.** Maximum screw diameter is 5mm
- C **Punch-hole Plate.** This is the plate through which ALL cables must pass. There is a provision for up to 3 M16 and 4 M20 watertight connectors.
- D **Mounting Screws for Punch-hole Plate** (M4x8 mm).
- E **Mounting Screws for Connection Compartment Cover** (M4x8 mm).
- F **Connection Compartment Cover.**

## 2.2 Key to Symbols in the Manual



**Danger.**

There is a risk of electrical shock or hazard if the following instructions are not followed.



**Caution!**

Carefully read the following text for it contains important information which, if ignored, may cause the controller to operate improperly.



**Pay attention.**

The following text contains very useful information.



# Relink-2c/2s

## 3 INSTALATION

### 3.1 Unpacking the controller

The following items should be in the box when you receive the controller:

- 1 Relink-2c/2s relay output module
- 1 Instruction manual

Inspect the controller carefully. If it is damaged or any items are missing, contact your distributor.



Do NOT install or use a damaged controller. Contact your distributor to obtain another unit.



Take a few moments to write the complete serial number found on the side of the controller on page 4 of this manual. This will be useful for future reference..

### 3.2 Installing the Controller on the Wall

The controller should be mounted on a wall indoors, preferably in a corridor or where the humidity and dirt levels are not too high. Do not mount the controller above a heater and prevent covering the heatsink. It should be mounted in such a way that the display is at eye level and the punch hole plate (Fig. 1, Item C) is facing the ground. There should be no objects or wall at least 26 cm from the left side of the controller to allow enough room for the cover to open (see Fig. 2).

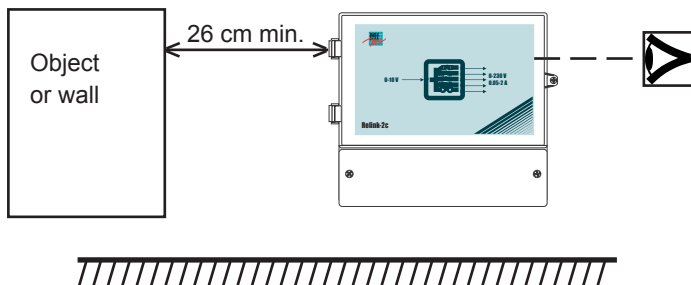


Fig. 2 – Installation of the controller

# Relink-2c/2s

Open the controller's cover by removing the top cover screw (see Fig.1, Item A). Remove the connection compartments cover (Fig. 1, Item F) by removing the 2 retaining screws. There are 4 mounting holes: 2 in the upper corners of the box and 2 near the bottom (Fig. 1, Item B). These holes accept screws with a maximum diameter of 5mm. The following diagram gives the mounting hole pattern:

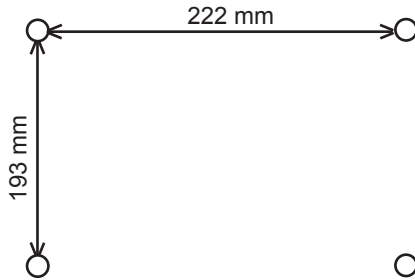


Fig. 3 Mounting Hole Pattern



Never mount the controller near water or rain pipes, as failure of these pipes may cause strong water jets to reach the controller.

## 3.3 Connecting the Controller

To connect the controller, refer to the wiring diagram on section 8 of this manual, which comes with the controller. Make sure the power supply is suitable for the controller (see technical specifications at the end of this manual)..



**WARNING.** All wiring must be done by an authorized electrician according to all applicable codes, laws and regulations. Make sure power is off before doing any wiring or opening the controller to avoid electrical shocks and equipment damage.



Pass all wiring through the punch hole plate (Fig. 1, Item C), located at the bottom of the enclosure. Do not drill holes on the side or the top of the enclosure as this may allow water to enter the enclosure.

# Relink-2c/2s

## 3.4 Connecting the input cable

The module must be connected to the main controller according to the wiring diagram in section 8. Since the input is insulated from the mains supply, the cable may be a shielded 2-core low voltage cable and may be extended up to 300 meters (if the wire diameter is at least .64 mm)..



- When extending an input wire, solder all connections.
- Never run low voltage cables parallel to high voltage wires to prevent interference.
- Input cables must cross power cables at a 90°

## 3.5 Setting the DIP Switches

The Relink-2c/2s has 1 DIP-switch, which determine whether the input is 0-10V or 10-0V. These switches are located on the circuit board inside the enclosure..



By preference switch OFF the power to the controller before changing the DIP switches. **Use an insulated screwdriver and never touch any parts in the unit!!!!**

Close the controller immediately after changing the settings!



Pay attention when setting DIP switches. Since they are very close to each other, it is easy to switch 2 switches at the same time.

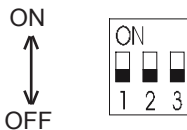


Fig. 4 DIP Switch ON and OFF Position

# Relink-2c/2s

Schakelaar nr.	OFF (uit)	ON (aan)
1	Control 10-0V	Control 0-10V
2	Not used	Not used
3	Not used	Not used

Table 1 DIP switch functions



When the controller is shipped, all DIP switches are set to the ON position.

## 4 USING THE CONTROLLER

### 4.1 Description of the Relink-2c

The Relink-1c is an electronic device which controls 5 relays in cascading fashion according to a low voltage 0-10V input.

The Relink-2c has one input:

- 1 input for a 0-10V or 10-0V control signal

And the following outputs:

- 5 230V 2A relay contacts for connecting 5 ON/OFF stages



If the Relink-2c is driving heaters, we recommend using it in 10-0V mode (if the main controller supports it).

The 5 relay contacts are arranged in such a way that terminal P is connected in sequence to terminals 1, then 1 and 2, then 1 to 3, and so on. When power to the controller is OFF, terminals P and 2 are connected together to ensure minimum ventilation.

### 4.2 How to use the Relink-2c

Simply connect the Relink-2c to a 0-10V or 10-0V source and connect the outputs to a step-transformer and the load you wish to control (contactor coils). The contacts of the Relink-2c are designed specifically for controlling contactor coils (max. 2A). For safety reasons, Points P and 2 are connected together when power fails to ensure minimum ventilation or heating.

# Relink-2c/2s

## 4.3 Description of the Relink-2s

The Relink-2s is an electronic device which controls 5 relays in sequence according to a low voltage 0-10V input.

The Relink-2s has one input:

- 1 input for a 0-10V or a 10-0V control signal

and the following outputs:

- 5 230 V 10A relay contacts for connection to a 5-step transformer

The 5 relay contacts are arranged in such a way that terminal P is connected in sequence to terminals 1, then 2,3, and so on. When power to the control is OFF, terminals P and 2 are connected together to ensure minimum ventilation..

## 4.4 How to use the Relink-2s

Simply connect the Relink-2s to a 0-10V or 10-0V source and connect the outputs to a step-transformer and the load you wish to control (lights or single phase fans). For safety reasons, Points P and 2 are connected together when power fails to insure minimum ventilation.

## 4.5 When to use the 10-0V-mode?

If the main controller gives a 10-0V instead of a 0-10V signal, set DIP switch #1 to the OFF position (see section 3.5). This mode of operation is useful for safety reasons: if the main controller loses power and its 0-10V outputs fall to 0 V, then output 5 of the Relink-2s will be closed (meaning that the load will be fully on).



If the Relink-2c/2s is driving fans used for minimum ventilation, we recommend using it in 10-0V mode (if the main controller supports it).

## 5 OPERATION OF THE RELINK-2c

### 5.1 Operation of the 0-10V

The following diagrams show how the outputs respond to the input voltage..

# Relink-2c/2s

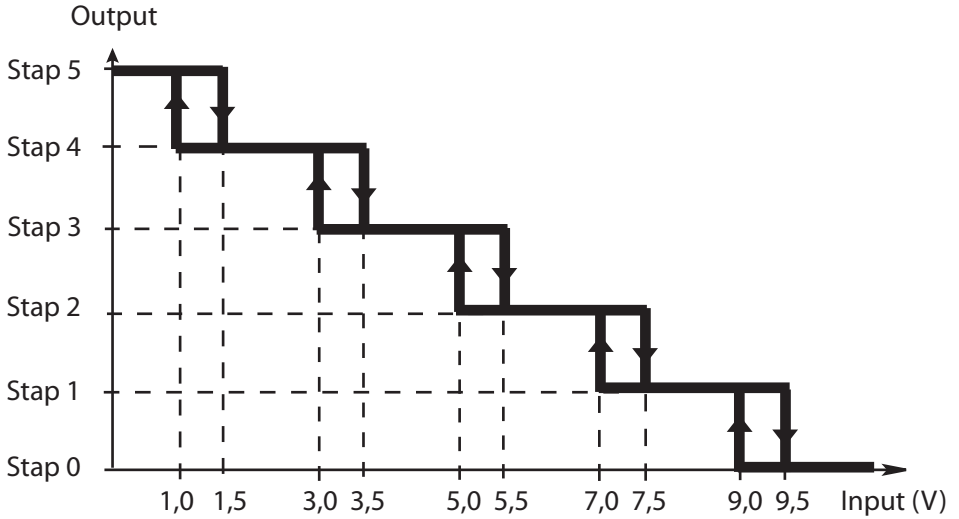


Fig. 5 Operation of the Relink-2c/2s in 0-10V mode

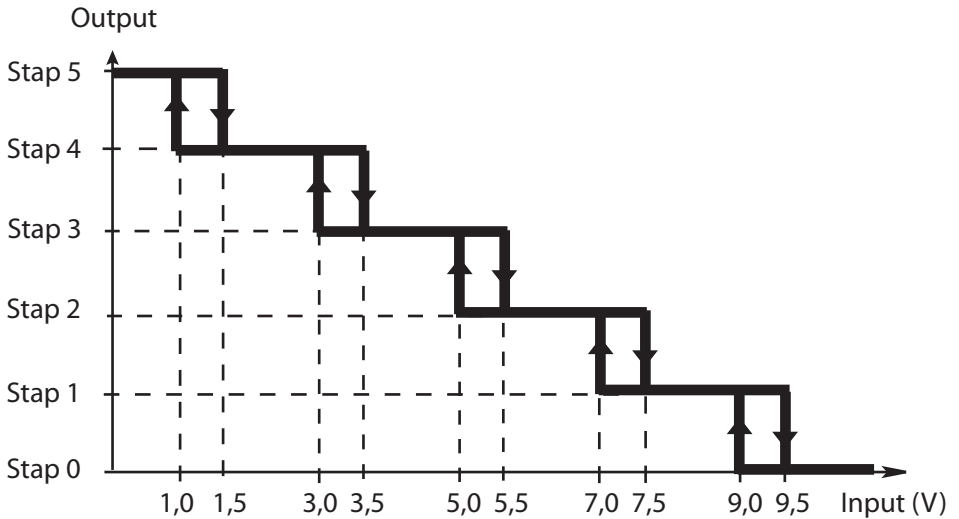
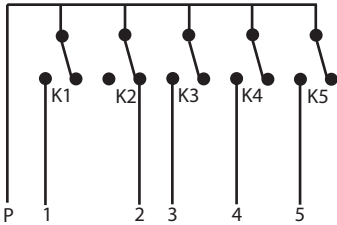


Fig. 6 Operation of the Relink-1c in 10-0V mode

# Relink-2c/2s



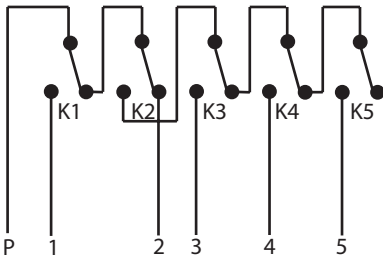
Step	Points connected together
0	no connection
1	P and 1
2	P, 1 and 2
3	P, 1, 2 and 3
4	P, 1, 2, 3 and 4
5	P, 1, 2, 3, 4 and 5

All relays are shown in their de-energized position

**Fig. 7 Internal connection diagram Relink-2c**



There is a 5 second built-in delay before the Relink-1c switches a relay on. This prevents overloading the supply circuit at startup.



Step	Points connected together
0	no connection
1	P and 1
2	P and 2
3	P and 3
4	P and 4
5	P and 5

**Fig. 8 Internal connection diagram Relink-2s**



There is a 1 second built-in delay before the Relink-2s switches a relay on. This prevents overloading the supply circuit at startup.

## 5.2 Control by a Potentiometer

A potentiometer can be connected on the Relink-2c/2s for manual control. The preferred value is 10 KOhm. (See connection diagram page 17,18)

# Relink-2c/2s

## 6 TROUBLESHOOTING

Problem	Probable cause(s)	Solution
The output is always at 0 V	<ul style="list-style-type: none"> <li>- There is a problem with the 0-10V input wiring</li> <li>- The controller has no power</li> </ul>	<ul style="list-style-type: none"> <li>- Check wiring. Make sure there is more than 0V on the input and the polarity is correct.</li> <li>- Check breaker, supply voltage and wiring</li> </ul>
The output is always step 2	<ul style="list-style-type: none"> <li>- The controller has no power</li> </ul>	<ul style="list-style-type: none"> <li>- Check breaker, supply voltage and wiring</li> </ul>
The output increases when it should decrease and vice versa	<ul style="list-style-type: none"> <li>- DIP switch 1 is in the incorrect position</li> </ul>	<ul style="list-style-type: none"> <li>- Change the position of DIP-switch 1.</li> </ul>

## 7 TECHNICAL SPECIFICATIONS

Type	Relink-2c/2s
Mains supply/frequency	230V±10%, 50/60Hz
Output 1-5 (relay contacts)_	10A, 250V cosφ =1/ 6A, 250V cosφ =0,4
IN-inputvoltage range	0-10V
IN- Input impedance	10K
Minimum potentiometervalue	1K
Maximum potentiometervalue	50K
Input accuracy	±1 %
Enclosure	IP54, plastic enclosure
Weight	2,0 kg (unpacked)
Dimensions (L x B x H)	267 x 225 x 104 mm
Operating Temperature	0 to 40°C
Storage temperature	-15 tot 50°C
Ambient relative humidity	max. 95%





# Relink-2c/2s

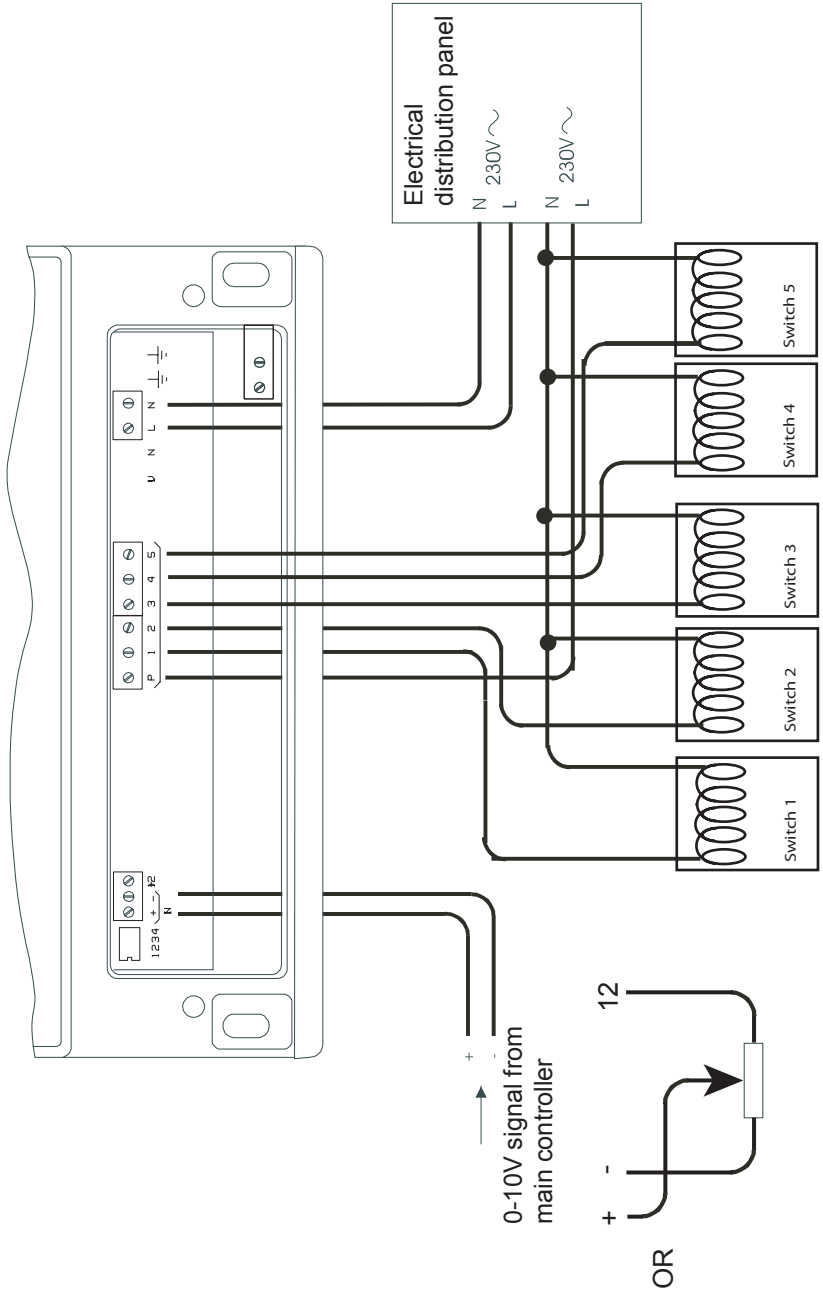


Fig. 7 Bedradingsschema voor Relink-2c  
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