



# Hoist / Motor Controller

## Instruction Manual

Models:

**MCBC12-LV, MCBC8-LV,  
MCBC4-LV**

version 1.0 since 3 February 2020

### **ATTENTION!**

This instruction manual contains important information about the installation and the use of the equipment. Please read and follow these instructions carefully.

Always ensure that the power to the equipment is disconnected before opening the equipment or commencing any maintenance work.

# General information

## ***IMPORTANT INSTRUCTIONS!***

All safety and operating instructions should be read before the equipment is installed or operated.

## ***IMPORTANT SAFETY INFORMATION***

The following general safety precautions have to be observed during all phases of operation, service, and the repair of this equipment. Failure to comply with these precautions or with specific warnings in this manual violates safety standards of design, manufacture, and the intended use of this equipment.

### ***Do not operate in an explosive atmosphere!***

Do not operate this equipment in the presence of flammable gases or fumes. Operation of any electrical instrument in such an environment constitutes a definite safety hazard.

### ***Water, moisture, heat and humidity***

Do not operate this equipment near water, in areas with wet floors or in high humidity atmosphere where condensation forms on the equipment. It should never be placed near or over a heat register or other source of heated air and it should not be installed or operated without proper ventilation.

# Functions and Control

MCBC Motor Controller is designed to control up to 12 electrically compatible, low voltage controlled motors/hoist separately or simultaneously; controlled via cable remote controller MCBCX.MCP REMOTE.

Each device is equipped with MPA /Manual Phase Align/ module that allows changing the phases easily by rotating pins L2 and L3 on the main connector.

The unit is also equipped with AVM /Automatic voltage metering/ module. This module checks the main voltage for AC 400V +-20% and the star configuration. If there is a problem with the main voltage, user is notified, and the unit will not run any hoist.

Unit does not work when:

- one phase is missing
- there is an under-voltage on lines
- there is an over-voltage on lines

All electrical components carry their own individual CE and comply with European Directives. The components are housed in a robust steel 19" rack casing with powder coating. Unit complies with the CE according to the Certification of Conformity that is attached to this manual.

## Operation

The Motors/Hoists connected to the MCBC controller can be activated individually or simultaneously using the GO button located on the front panel, via cable remote or by linked controller. The selection of the hoists that are controlled is made by switches located on front panel.

Several MCBC controllers can be linked together to create bigger systems.

## How to start

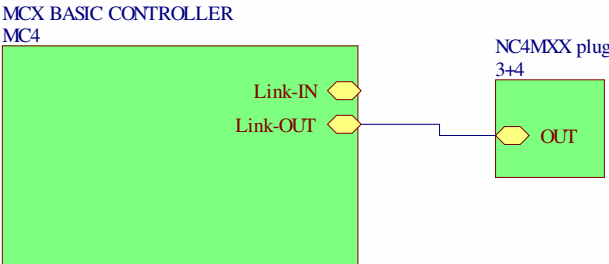
- Connect the CEE32A/5p plug to the AC400V power supply and check GFI and control MCB.
- If the main is OK, LED OK is green and either 123 or 132 align LED is ON.
- If there is 123 align, all outputs will work normally.
- If there is 132 align, the outputs will work reversely. In order to switch the align of phases to 123, rotate pins L2 and L3 on the main connector.
- If there is a problem with main voltages, red ERR/FAIL LED is ON. This is due to one missing phase. Disconnect mains and check line voltage and the presence of all phases.
- Connect the plugs of the electric hoists to the power and control sockets of the CEE16A/4p or CEE16A/5p\* or multipin connectors\* /\*on request/
- Check if all emergency STOP buttons /on device and all other linked devices in system/ are released and there is presence of security plug/breach with short circuit in between pins 3 and 4 on last unit in system.

## To Move a Single/Several Motor(s):

- Set the UP/DOWN switch for each motor to the desired direction.
- Hold the GO button until all motors are moved the desired height and release.

# Controller normal operation:

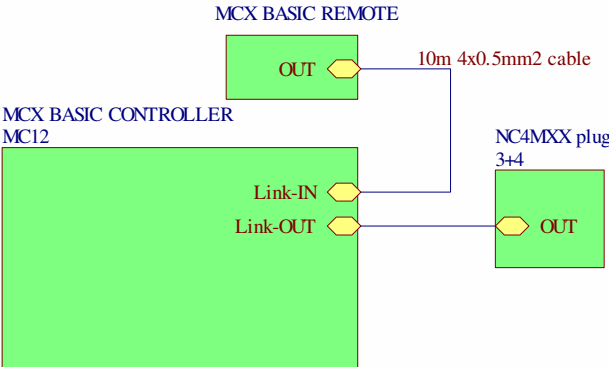
In this mode, the controller is operated by GO and E-STOP buttons located on the front panel.



During operation, the NC4MXX plug must be connected to the last controller in chain

# Controller with remote operation:

In this mode, the controller is operated by GO and E-STOP buttons located either on the front panel or on the MCBCX.MCP REMOTE.

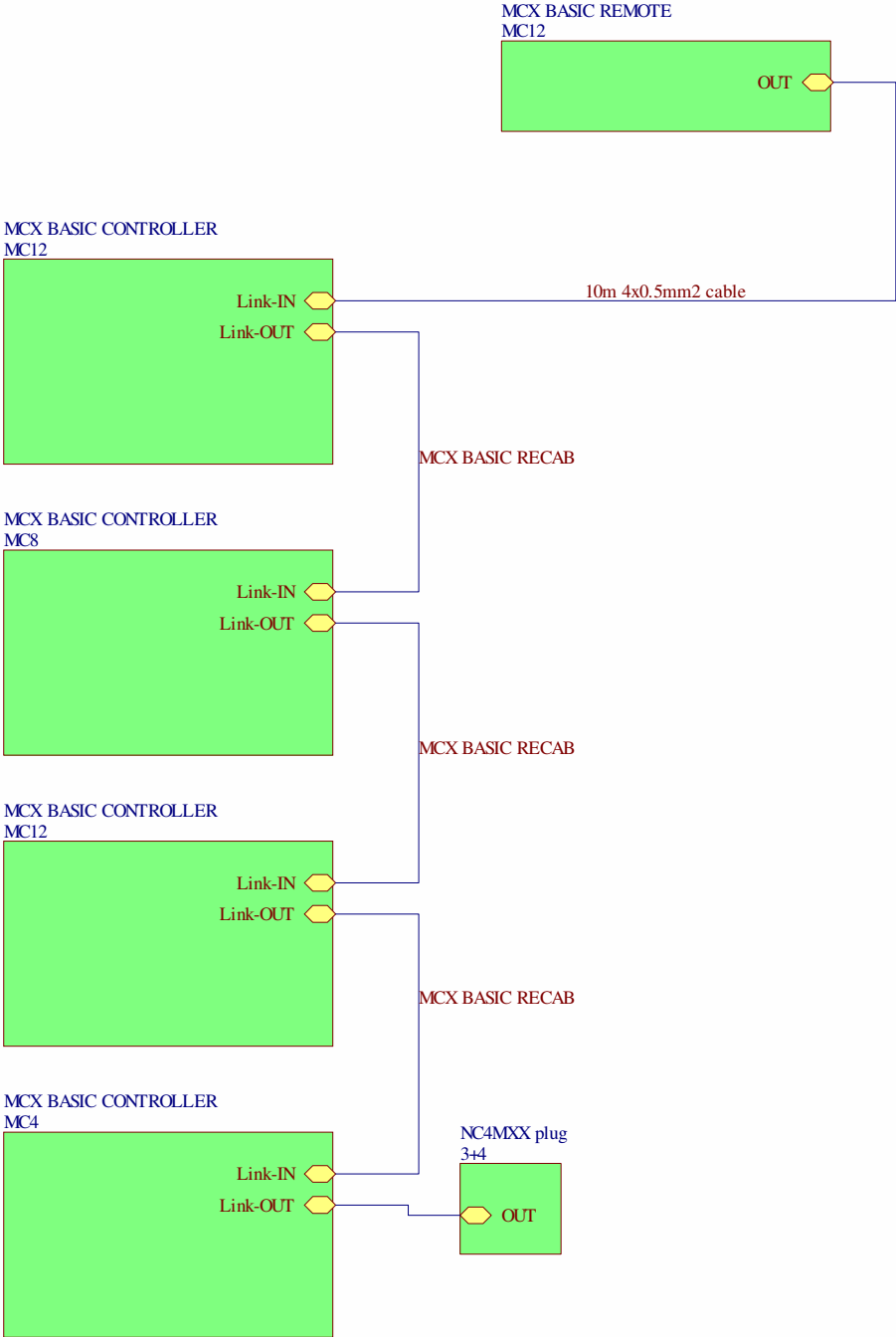


During operation, the NC4MXX plug must be connected to the last controller in chain

# Controller link operation:

In this mode, all linked controllers are operated by any GO and E-STOP button located either on the front panel or on the MCBCX.MCP REMOTE.

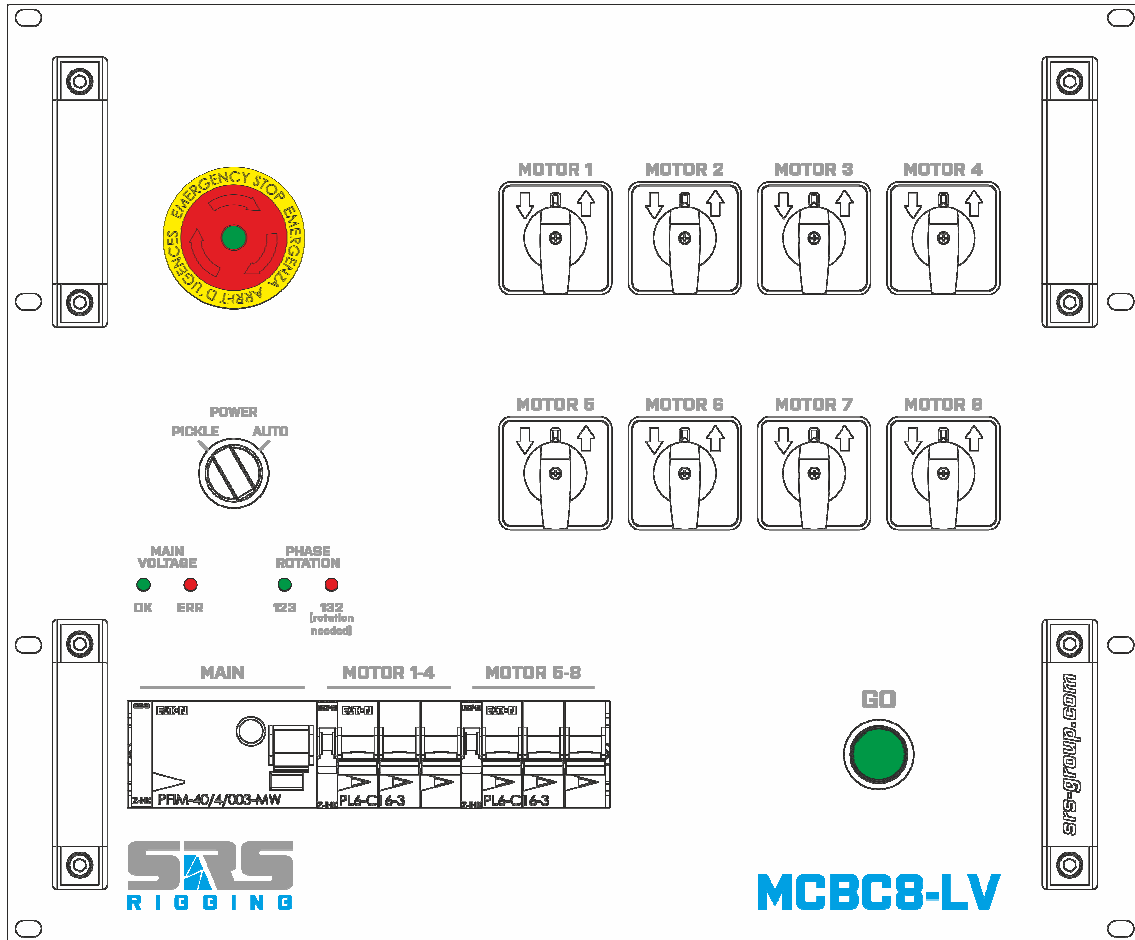
**Do not forget to plug the NC4MXX plug to the last controller in chain.**



During operation, the NC4MXX plug must be connected to the last controller in chain

# MCBC-LV models

## 1.1 MCBC8-LV-CEE Front panel



### 1.2 EMERGENCY STOP:

The Emergency STOP is a RED button located in the middle of yellow circle.

The Emergency STOP button turns the MCBC-LV controller to an inactive state and stays in it. To release it, rotate the emergency stop clockwise.

**When several more controllers are linked together, the press of any E-STOP button will shut down all connected controllers.**

### 1.3 GO:

When active, the green pushbutton turns the selected channels of Hoist Control system ON. Once the GO button is released, the energizing of the hoists is turned off.

### 1.4 POWER:

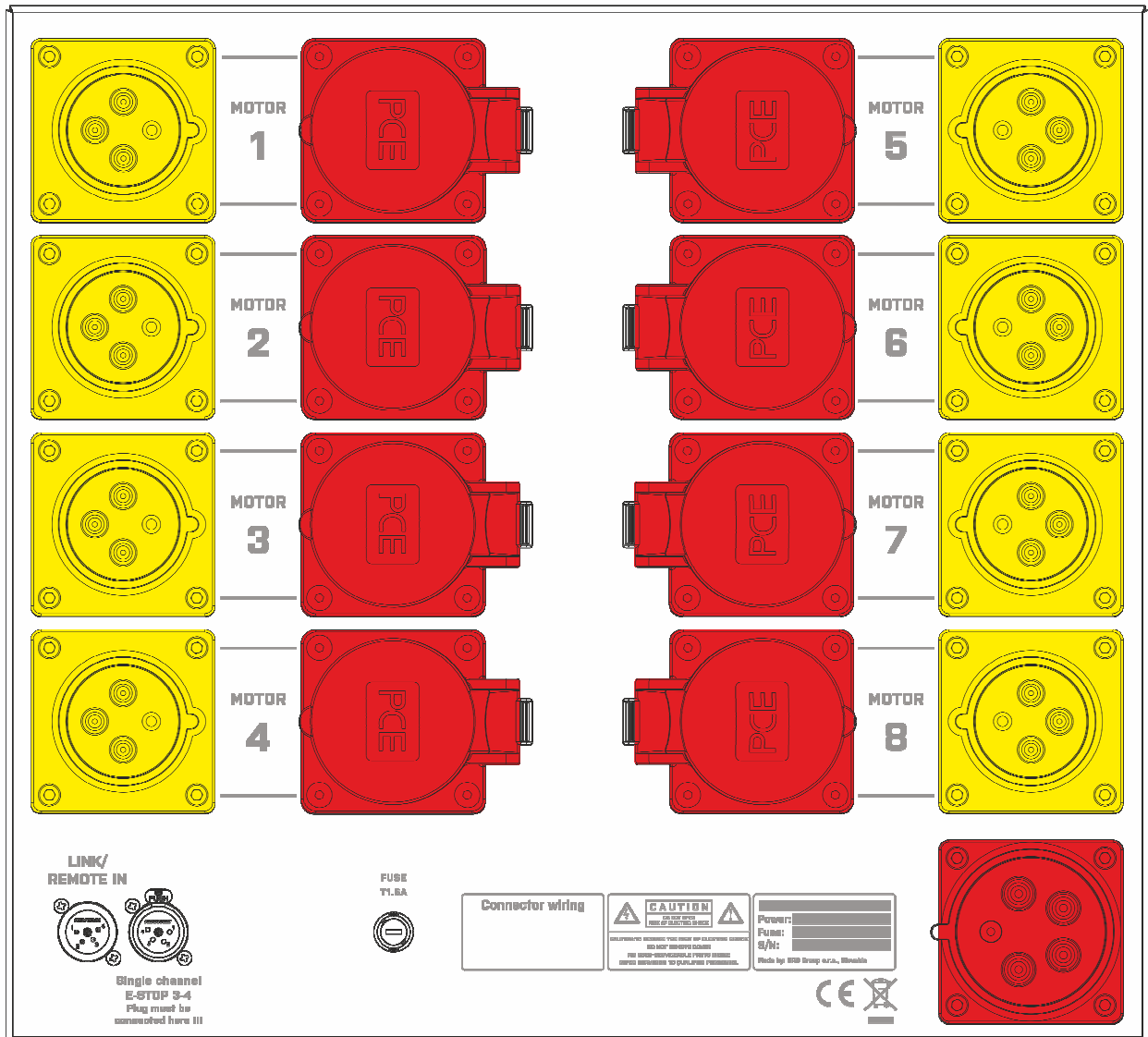
Power rotating switch features three positions:

Middle position = the controller power is turned off.

Left side = PICKLE mode only; the RED power output connectors are permanently switched on.

Right side = AUTO mode; the power CEE16/4 and directional control CEE16/4 are activated only when GO button is engaged.

## 1.5 MCBC8-LV-CEE Rear panel



## 1.6 Power input connector

Power input connector CEE32/5p is a panel mount type with reversible L2/L3 contacts for easy alignment of mis-wired phases input.

## 1.7 Link/Remote in

Connection port for MCBCX.MCP REMOTE. Lines 3 and 4 are normally closed – NC, by default for normal operation. Due to this, it is necessary to fit the safety breach /MXX connector/ to the link OUT connector with the short circuit between pins 3 and 4 for normal operation. When there is no other unit linked, the safety plug must be inside of the output connector. Without this, the controller will not work.

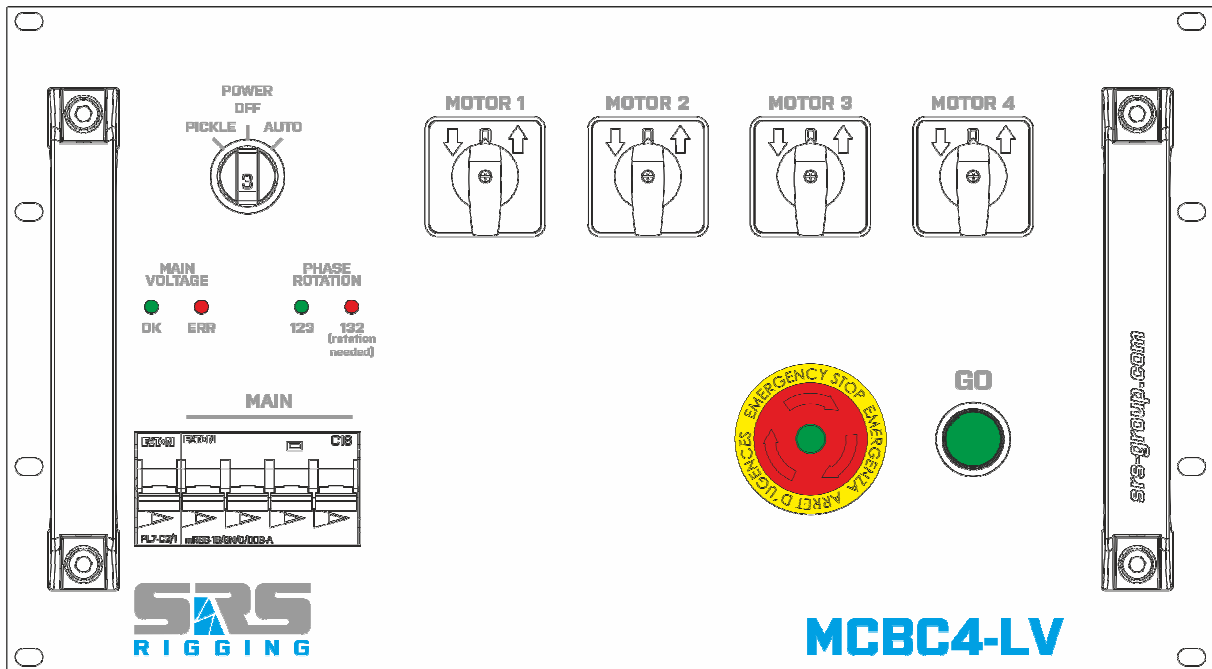
**This breach must be connected to the last controller in system if the controllers are linked.**

**Neutrik NC4FXX**

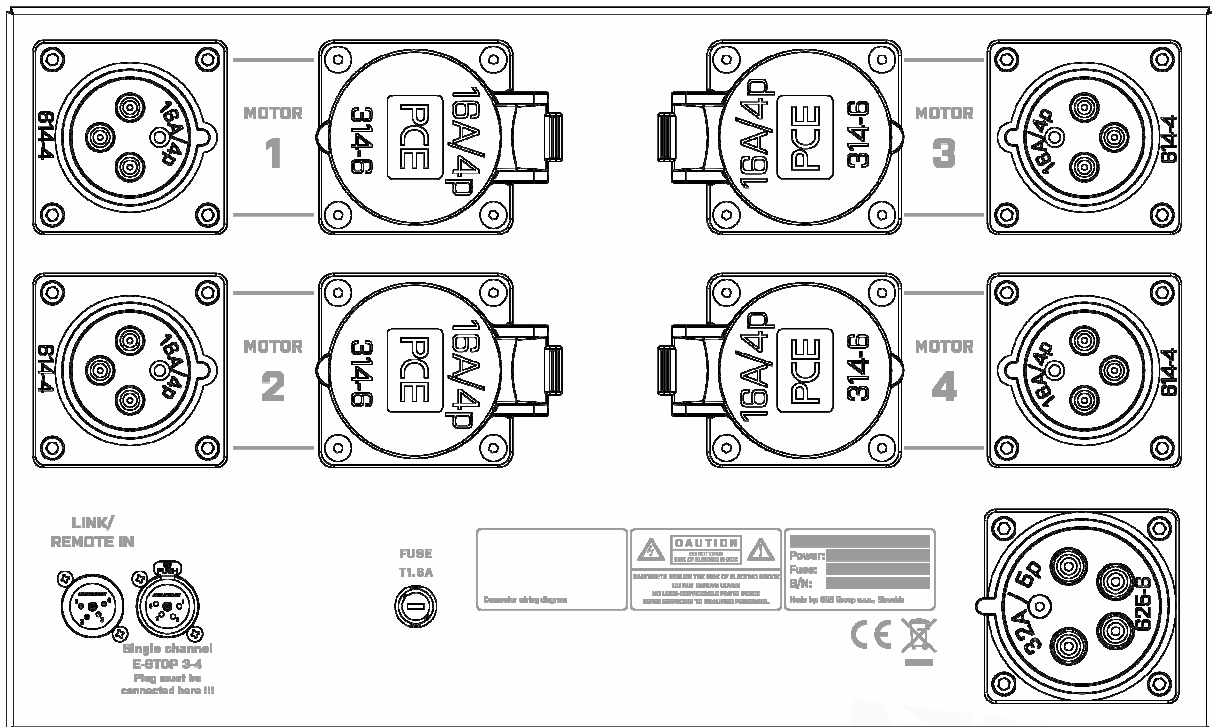
Pin 1. Remote GO IN  
 Pin 2. Remote GO OUT  
 Pin 3. Safety IN  
 Pin 4. Safety OUT



## 1.8 MCBC4-LV-CEE Front panel



## 1.9 MCBC4-LV-CEE Rear panel





## 1.10 MCBCX.MCP REMOTE

Remote controller allows controlling of GO and E-STOP buttons for single controller or all linked controllers. Standard length of cable is 10m. The length can be altered according to customer's needs.



### **STOP:**

This switch protects the base unit from undesired operation and turns the MCBC-LV controller to inactive state. Stop button is of red color. Once the STOP button has been pressed, it is locked in an inactive position and must be rotated clockwise to be released.

### **GO:**

When active, the pushbutton turns the selected channels of Hoist Control system ON. Once the GO button is released, the energizing of the hoists is turned off.

## 2. Description of connectors

### Female CEE16/4p Red

Pin	Function	note
L1	Live X	
L2	Live Y	
L3	Live Z	
PE	Earth	

### Female CEE16/5p Red \*optional

Pin	Function	note
L1	Live X	
L2	Live Y	
L3	Live Z	
N	Not connected	
PE	Earth	

### 944023 Male CEE16/4p Yellow, CM/Stagemaker/Prolyte

Pin	Function	note
L1	CMN	
L2	UP	
L3	DOWN	
PE	Earth	

### 944029 Male CEE16/4p Yellow, LITEC/OUTBOARD/LTM

Pin	Function	note
L1	UP	
L2	DOWN	
L3	COMMON	
PE	Earth	

### 3. Technical data

- Mains input 400VAC +20% 50/60Hz
- MCBC12-LV mains Plug: CEE32A 5p
- Motor/Hoist sockets: CEE16/4p Yellow/Red or any kind of multipin

#### 3.1 Protection and Safety:

- Mains input AC400V  $\pm 20\%$  50/60Hz
- Mains Plug: CEE32A/5p
- Protection: 1xRCD30mA per unit + MCB C16A per 4 hoist
- Outputs:
  - 4/8/12x CEE16A/4p RED female for power
  - 2/8/12x CEE16A/4p YELLOW male for control

#### 3.2 Size/weight

- 1.5mm Steel housing with gray powder coating
- 3mm Steel front panel
- MCBC8-LV: 9U box, 19"/482,6 x 263 x 400 mm , 24kg

### 4. Warranty

MCBC-LV hoist controller is covered by a 2-year manufacturer's warranty. For extended warranty conditions, please contact the manufacturer at [sales@srs-group.com](mailto:sales@srs-group.com).

The warranty covers the original factory installed components of the controller and their correct functioning.

The warranty voids if any part or replacement component is installed or modified without authorization from the manufacturer and/or the internal circuit is tampered or modified and/or the controller is operated outside of normal using conditions – electrical power supply is not conform or there is connection error or mechanical damage of controller, including overload and improper use.

The manufacturer always helps with the repair of each unit.

# DECLARATION OF CONFORMITY



According to the specification of Machinery Directive 2006/42/CE, Annex II A:

Name of producer: SRS Group s.r.o.  
Address of producer: Rybníčná 38/B  
821 07 Bratislava  
Slovakia

*Declares that the product*

Name of product: **MCBC8-LV-CEE**  
Type: **970002**  
Year of construction: **2017**

*Corresponds with the following harmonized standards:*

**Safety:** EN 60065  
EN 60950  
EN 60204-1  
EN 13850  
EN 12100-2  
**EMC:** EN55103-1, resp. EN55103-2

*And is in compliance with following requirements:*

**Machinery directive:** 2006/42/CE  
**Low Voltage directive:** 2014/35/CE  
**Electromagnetic compatibility directive:** 2014/30/CE

Bratislava, 20 November 2017

  
SRS Group s.r.o.  
Rybníčná 38/B  
821 07 Bratislava  
Slovak Republic  
SR2022726629  
IČO: 44520433  
DIČ: 2022726629  
SRS Group s.r.o.

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**SRS Group s.r.o.**  
Rybníčná 38/B | 821 07 Bratislava | Slovakia  
Phone: +421 2 32 661 800  
Email: sales@srs-group.com | www.srs-group.com

