



## BOTEX CHC-4 Motor Controller User Manual

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**Chainhoist Controller CHC-4, CHC-8**

**Motor Controller**

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## General information

This document contains important instructions for the safe operation of the product. Read and follow the safety instructions and all other instructions. Keep the document for future reference. Make sure that it is available to all those using the product. If you sell the product to another user, be sure that they also receive this document. Our products and documentation are subject to a process of continuous development. They are therefore subject to change. Please refer to the latest version of the documentation, which is ready for download under [www.thomann.de](http://www.thomann.de).

### 1.1 Symbols and signal words

In this section you will find an overview of the meaning of symbols and signal words that are used in this document.

Signal word	Meaning
DANGER!	This combination of symbol and signal word indicates an immediate dangerous situation that will result in death or serious injury if it is not avoided.
CAUTION!	This combination of symbol and signal word indicates a possible dangerous situation that can result in minor injury if it is not avoided.
NOTICE!	This combination of symbol and signal word indicates a possible dangerous situation that can result in material and environmental damage if it is not avoided.
Warning signs	Type of danger
	Warning – high-voltage.
	Warning – danger zone.

## Safety instructions

### Intended use

This device is used to control electrically operated chain hoists. The device is designed for pro-fessional use only and is not suitable for use in households. Use the device only as described in this user manual. Any other use or use under other operating conditions is considered to be improper and may result in personal injury or property damage. No liability will be assumed for damages resulting from improper use.

This device may be used only by persons with sufficient physical, sensorial, and intellectual abilities and having

corresponding knowledge and experience. Other persons may use this device only if they are supervised or instructed by a person who is responsible for their safety.

## **Safety**



### **DANGER!**

Risk of injury and choking hazard for children!

Children can suffocate on packaging material and small parts. Children can injure themselves when handling the device. Never allow children to play with the packaging material and the device. Always store packaging material out of the reach of babies and small children. Always dispose of packaging material properly when it is not in use. Never allow children to use the device without supervision. Keep small parts away from children and make sure that the device does not shed any small parts (such as knobs) that children could play with.



### **DANGER!**

Danger to life due to electric current!

Within the device there are areas where high voltages may be present. Never remove any covers. There are no user-serviceable parts inside. Do not use the device when covers, safety equipment or optical components are missing or damaged.



### **DANGER!**

Risk of death from electrical current!

A short circuit can cause fires and loss of life. Always use a properly insulated CEE cable to connect the unit to the 400 V mains grid.

Do not modify the CEE cable or the CEE plug. If the insulation is damaged, immediately switch off the power supply and have it repaired. If in doubt, contact a qualified electrician.



### **DANGER!**

Risk of death from electrical current!

Hazardous voltage may be present at cable ends and screw terminals. The connection of screw terminals and all maintenance and repair work on the electrical installation of the device may only be performed by a qualified electrician. Always perform maintenance and repair work when the device is free from voltage. Failure to comply may result in electric shock and risk of fire and loss of life.

Always observe all electrical safety instructions applicable in the country of operation.



### **NOTICE!**

Risk of fire due to covered vents and neighbouring heat sources!

If the vents of the device are covered or the device is operated in the immediate vicinity of other heat sources, the device can over-heat and burst into flames. Never cover the device or the vents. Do not install the device in the immediate vicinity of other heat sources. Never operate the device in the immediate vicinity of naked flames.



### **NOTICE!**

Damage to the device if operated in unsuitable ambient conditions!

The device can be damaged if it is operated in unsuitable ambient conditions. Only operate the device indoors within the ambient conditions specified in the "Technical specifications" chapter of this user manual. Avoid operating it in environments with direct sunlight, heavy dirt and strong vibrations. Avoid operating it in environments with strong temperature fluctuations. If temperature fluctuations cannot be avoided (for example after transport in low outside temperatures), do not switch on the device immediately.

Never subject the device to liquids or moisture. Never move the device to another location while it is in operation. In environments with increased dirt levels (for example due to dust, smoke, nicotine or mist): Have the device cleaned by qualified specialists at regular intervals to prevent damage due to overheating and other malfunctions.

### **NOTICE!**

Damage to the device due to high voltages!

The device can be damaged if it is operated with the incorrect voltage or if high voltage peaks occur. In the worst case, excess voltages can also cause a risk of injury and fires. Make sure that the voltage specification on the device matches the local power grid before plugging in the device. Only operate the device from professionally installed mains sockets that are protected by a residual current circuit breaker (FI). As a precaution, disconnect the device from the power grid when storms are approaching or if the device will not be used for a longer period.

## Features

- Motor controller for directly controlled electric chain hoists
- Independent control for up to
  - 4 motors (item no. 422822)
  - 8 motors (item no. 422852)
- Input
  - Cable with CEE plug
- Outputs
  - item no. 422822: 4 × 4-pin CEE chassis sockets with hinged lid, 1 × 16-pin multi-pin industrial connector for use with a breakout box
  - item no. 422852: 4 × 4-pin CEE chassis sockets with hinged lid, 2 × 16-pin multi-pin industrial connectors for use with a breakout box
- Line circuit breaker for each phase
- Line circuit breaker for rotary switch and emergency stop switch

## Installation

### 4.1 Mechanical installation

Unpack and check carefully there is no transportation damage before using the unit. Keep the equipment packaging. To fully protect the product against vibration, dust and moisture during transportation or storage use the original packaging or your own packaging material suitable for transport or storage, respectively.

Make sure that the installation complies with the standards and rules that apply in your country. The device must be mounted so that the emergency stop switch is freely accessible at all times.

### Rack mounting

The device is designed for mounting in 19" racks, it occupies four rack units (RU).

### 4.2 Electrical installation



#### **DANGER!**

Risk of death from electrical current!

Hazardous voltage may be present at cable ends and screw terminals.

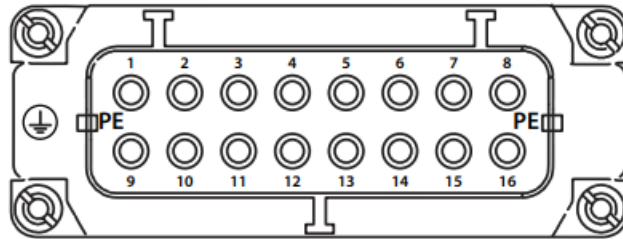
The connection of screw terminals and all maintenance and repair work on the electrical installation of the device may only be performed by a qualified electrician. Always perform maintenance and repair work when the device is free from voltage. Failure to comply may result in electric shock and risk of fire and loss of life.

Always observe all electrical safety instructions applicable in the country of operation.

The power consumption of the electric chain hoists to be connected must be below the maximum load capacity of the device outputs.

Create all connections while the device is off. Use only high-quality power supply cables with an earthed CEE plug. Only one electric chain hoist may be connected to each output. Lay the cables so that they do not run over sharp edges, are not squashed and are not subjected to tension.

### Pin assignment



The table and figure show the assignment of the 16-pin multi-pin industrial connector.

The connections for the protective earth conductor ([PE]) of the connector must be connected to the protective earth conductors of the connected motors.

Motor 1/5		Motor 2/6		Motor 3/7		Motor 4/8	
Pin	Assignment	Pin	Assignment	Pin	Assignment	Pin	Assignment
1	L1	5	L1	9	L1	13	L1
2	L2	6	L2	10	L2	14	L2
3	L3	7	L3	11	L3	15	L3
4	free	8	free	12	free	16	free

## Starting up



### CAUTION!

Risk of injury due to movable loads in the range of electric chain hoists.

If people are in the work area, the loads moved by the electric chain hoists can cause injuries.

Ensure that there are no persons in the work area of electric chain hoists as long as loads are being moved.

For persons staying in work areas under suspended loads, observe the regulations in force in your country.



### NOTICE!

Damage to the device due to change of direction during operation!

Changing the direction of movement during operation may damage the device.

Only change the position of the rotary switches if the green indicator light does not light up.



### NOTICE!

Damage to the device and connected electric chain hoists due to impulse operation!

Repeated, momentary presses of the [RUN] button can damage the device and the connected electric chain hoists.

Always press [RUN] for at several seconds, never several times in a row.

## Starting up the device

### 1. Ensure the following:

There is nobody in the work area of the electric chain hoists.

The work area is free of obstacles.

You have a clear view of the entire work area and can completely monitor the movement process.

The device must not be used unless all conditions are fulfilled.

### 2. Turn all rotary switches to the [0] position.

If the emergency stop button is pressed and locked: Make sure that the reason for pressing the switch is no

longer present and turn it clockwise to the operating position.

3. Connect the electric chain hoists to the unit, either via the CEE sockets or via the multipin industrial connectors.
4. Make sure the supply voltage is correct and the three phases are connected in the correct order.
5. Connect the device to the power supply.

The indicator lights [L1], [L2], [L3] for the three phases of the power supply light up.

The device must not be used unless all three indicator lights light up.

6. Check the correct connection and function of the electric chain hoists:

To do this, set the rotary switches for all connected electric chain hoists to the [UP] or [DOWN] position, and the other rotary switches to the [OFF] position.

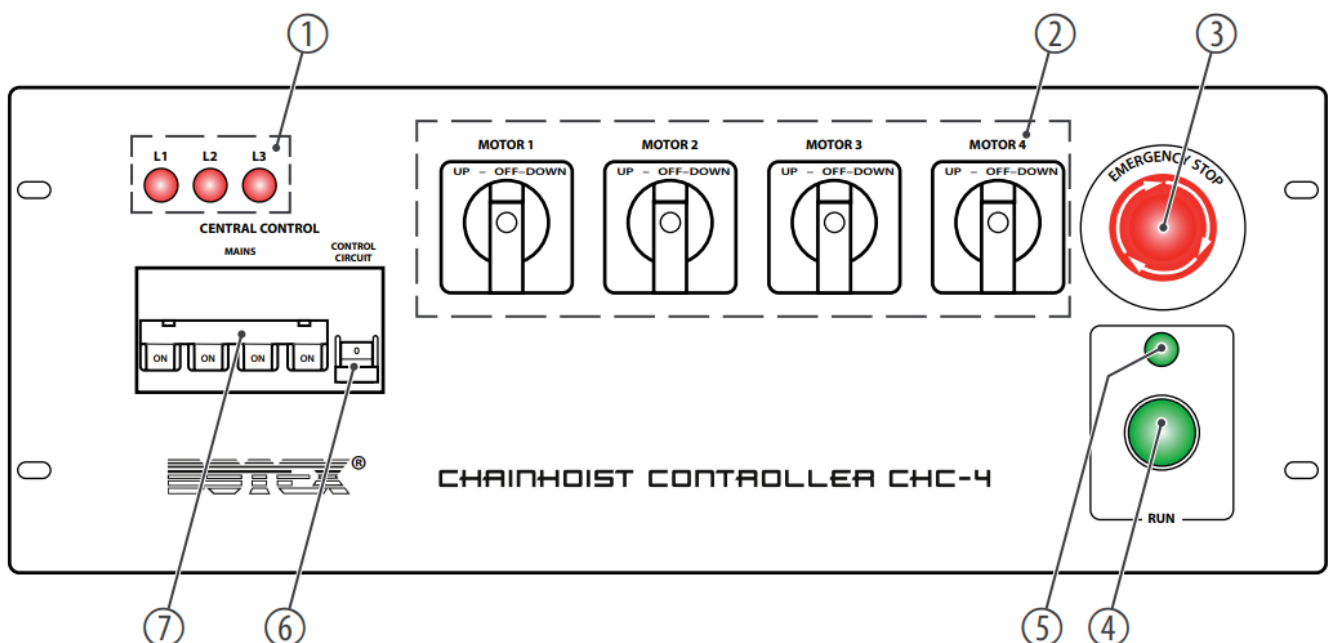
7. Press [RUN] until the electric chain hoists are in the required positions.

The green indicator light is lit as long as the electric chain hoists are moving.

If an electric chain hoist does not move or moves in the wrong direction, it is not connected correctly.

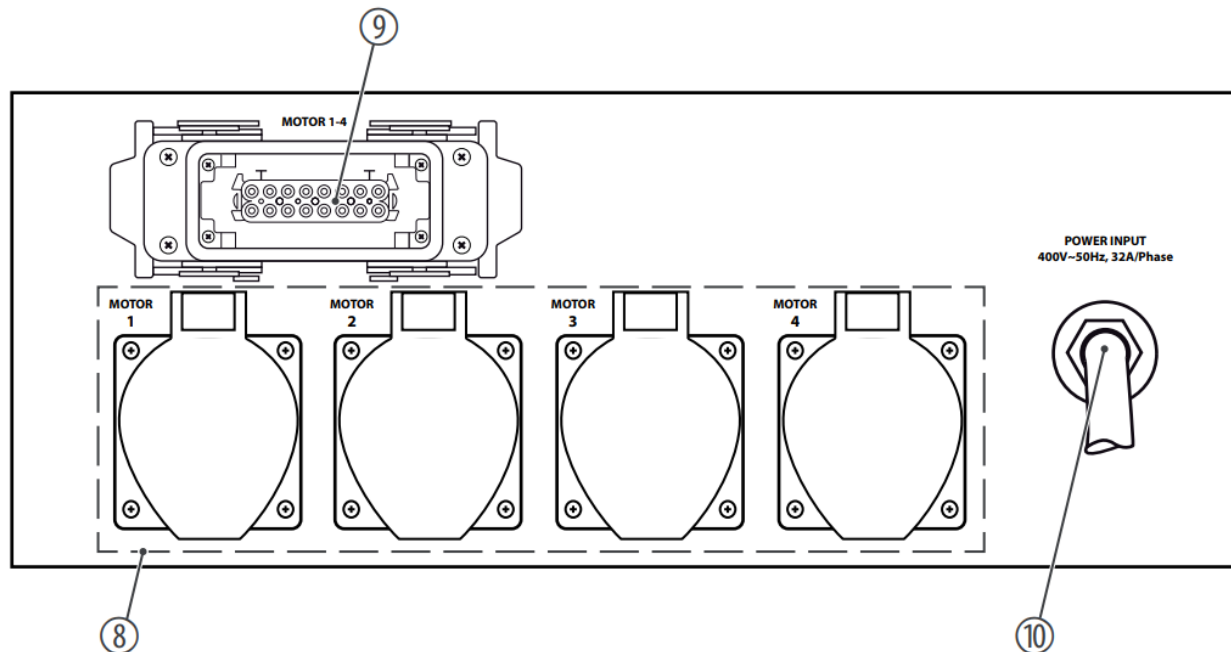
## Connections and controls

Front of CHC-4  
(item no. 422822)



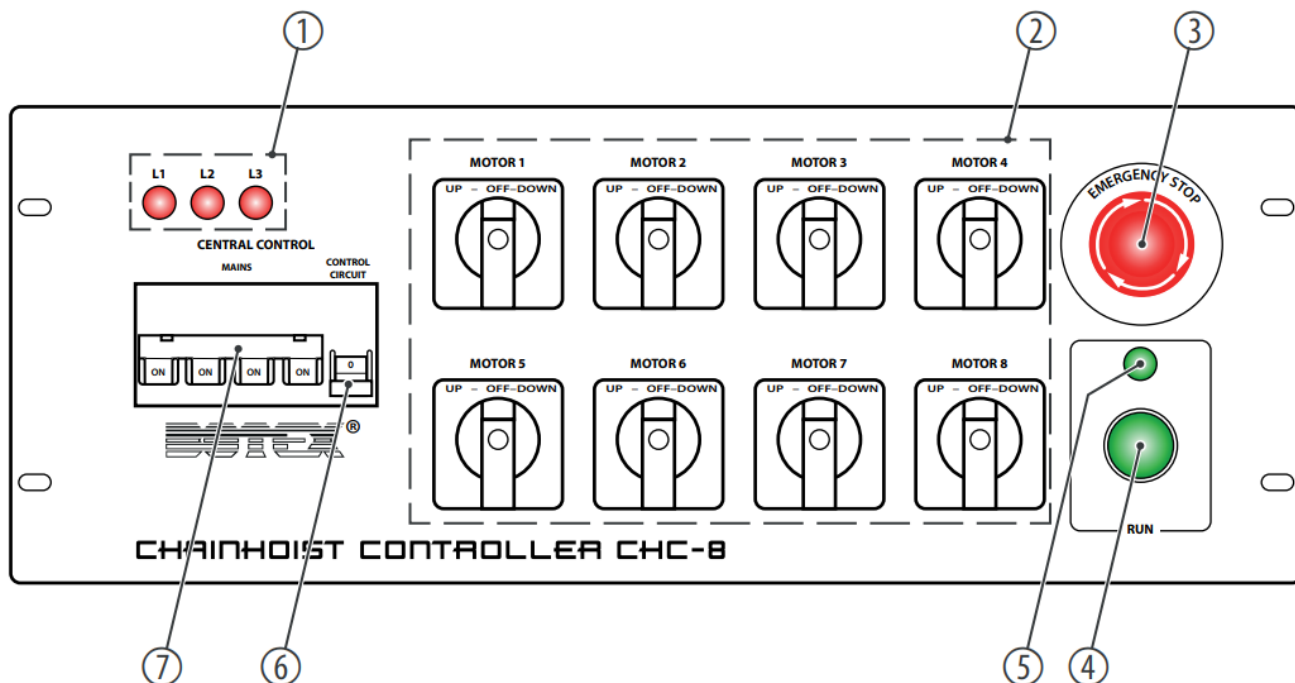
1. [L1], [L2], [L3] | Indicator lights for the three phases of the power supply. The device must not be used unless all three indicator lights light up.
2. [MOTOR 1]...[MOTOR 4] | Rotary switches for preselecting the direction of movement for the connected electric chain hoists 1...4.
3. [EMERGENCY STOP] | Emergency stop switch
4. [RUN] | Button for controlling the electric chain hoists whose direction of movement was set using the [MOTOR 1]...[MOTOR 4] switches. The selected electric chain hoists run while the button is pressed.
5. Indicator light. Indicates that the selected electric chain hoists are running.
6. [CONTROL CIRCUIT] | Circuit breaker for rotary switch and emergency stop switch
7. [MAINS] | Circuit breaker for each phase of the power supply

### Back of CHC-4 (item no. 422822)



8. [MOTOR 1], [MOTOR 2], [MOTOR 3], [MOTOR 4] | CEE chassis sockets for connecting electric chain hoists 1...4
9. 16-pin multi-pin industrial connector for connecting electric chain hoists 1...4
10. Power cable with CEE plug

### Front of CHC-8 (item no. 422852)

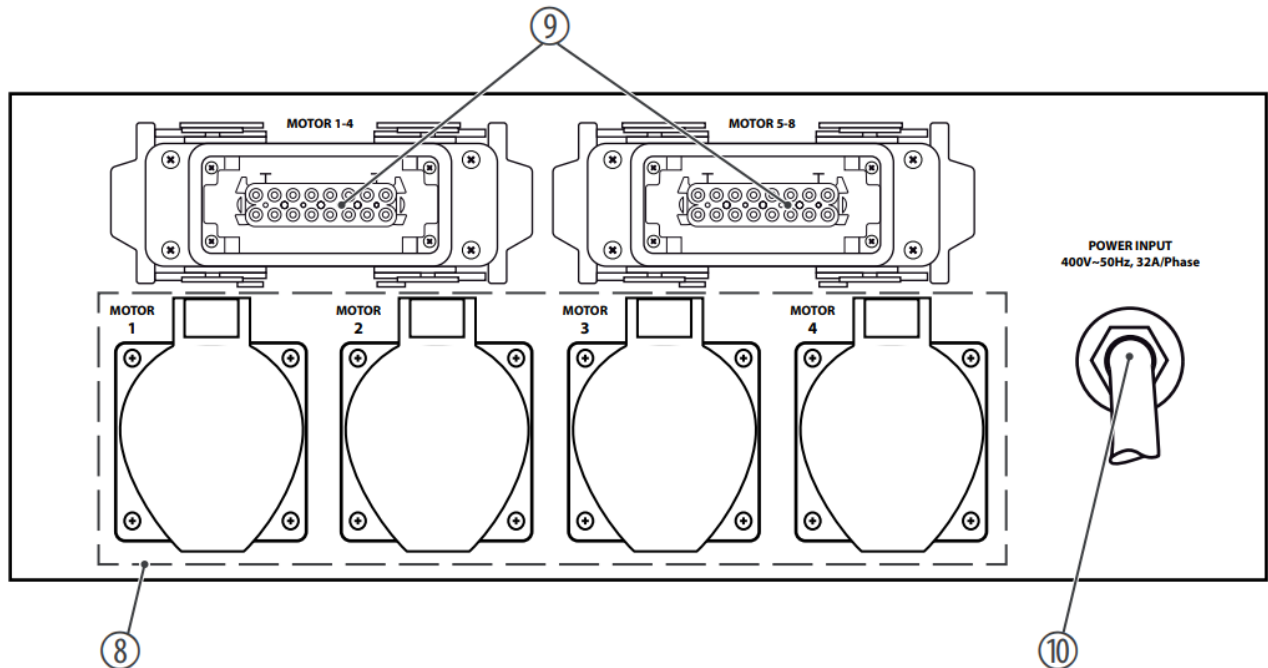


1. [L1], [L2], [L3] | Indicator lights for the three phases of the power supply. The device must not be used unless all three indicator lights light up.
2. [MOTOR 1]...[MOTOR 8] | Rotary switches for preselecting the direction of movement for the connected electric chain hoists 1...8.
3. [EMERGENCY STOP] | Emergency stop switch



4. [RUN] | Switch for controlling the electric chain hoists whose direction of movement was set using the [MOTOR 1]...
- [MOTOR 8] switches. The selected electric chain hoists run while the button is pressed.
5. Indicator light. Indicates that the selected electric chain hoists are running.
6. [CONTROL CIRCUIT] | Circuit breaker for rotary switch and emergency stop switch
7. [MAINS] | Circuit breaker for each phase of the power supply

**Back of CHC-8 (item no. 422852)**



8. [MOTOR 1], [MOTOR 2], [MOTOR 3], [MOTOR 4] | CEE chassis sockets for connecting electric chain hoists 1...4
9. 16-pin multi-pin industrial connector for connecting electric chain hoists 1...4 or 5...8
10. Power cable with CEE plug

## Operating



### CAUTION!

Risk of injury due to movable loads in the range of electric chain hoists.

If people are in the work area, the loads moved by the electric chain hoists can cause injuries.

Ensure that there are no persons in the work area of electric chain hoists as long as loads are being moved.

For persons staying in work areas under suspended loads, observe the regulations in force in your country.

### !NOTICE!

Damage to the device due to change of direction during operation!

Changing the direction of movement during operation may damage the device.

Only change the position of the rotary switches if the green indicator light does not light up.

### !NOTICE!

Damage to the device and connected electric chain hoists due to impulse operation!

Repeated, momentary presses of the [RUN] button can damage the device and the connected electric chain hoists.

Always press [RUN] for at several seconds, never several times in a row.

## Operating the device



1. Ensure the following:

There is nobody in the work area of the electric chain hoists.

The work area is free of obstacles.

You have a clear view of the entire work area and can completely monitor the movement process.

The indicator lights [L1], [L2], [L3] for the three phases of the power supply light up.

The device must not be used unless all conditions are fulfilled.

2. If the emergency stop button is pressed and locked: Make sure that the reason for pressing the switch is no longer present and turn it clockwise to the operating position.

Set the rotary switches for those electric chain hoists to be moved to the 'UP' or 'DOWN' position, and the other rotary switches to the 'OFF' position.

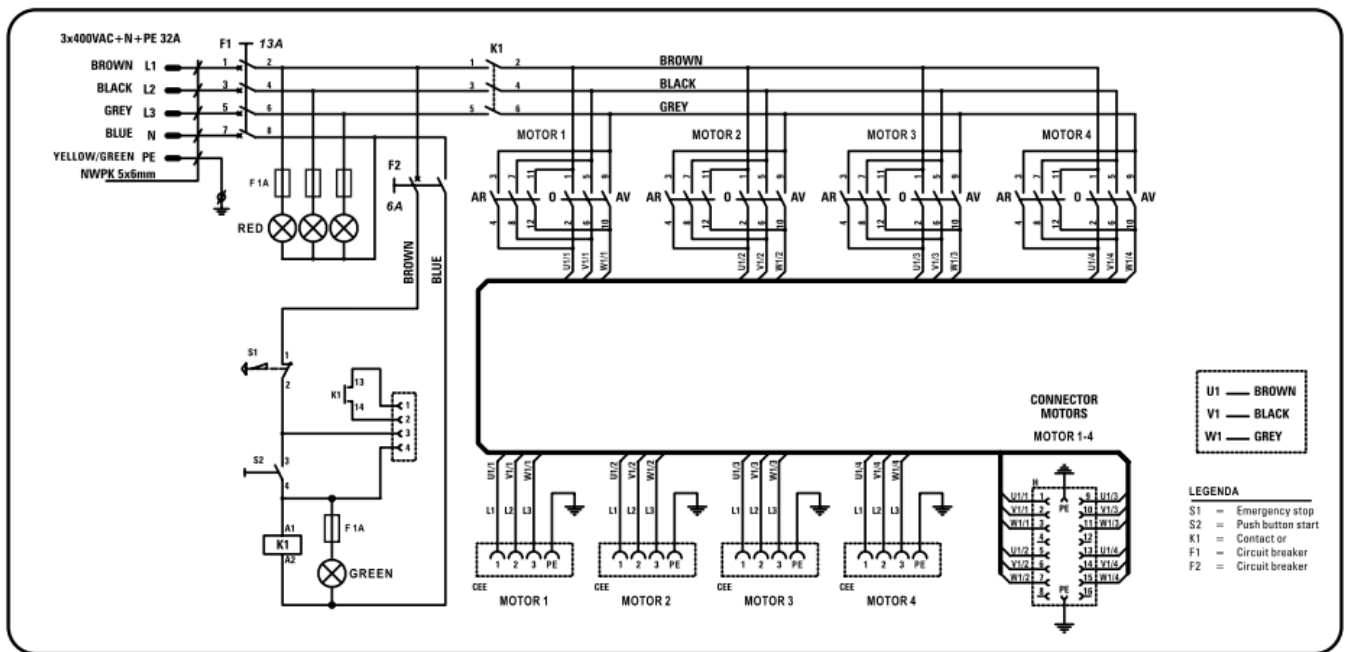
3. Press [RUN] until the parts moved by the electric chain hoists are in the required positions.

The green indicator light is lit as long as the electric chain hoists are moving.

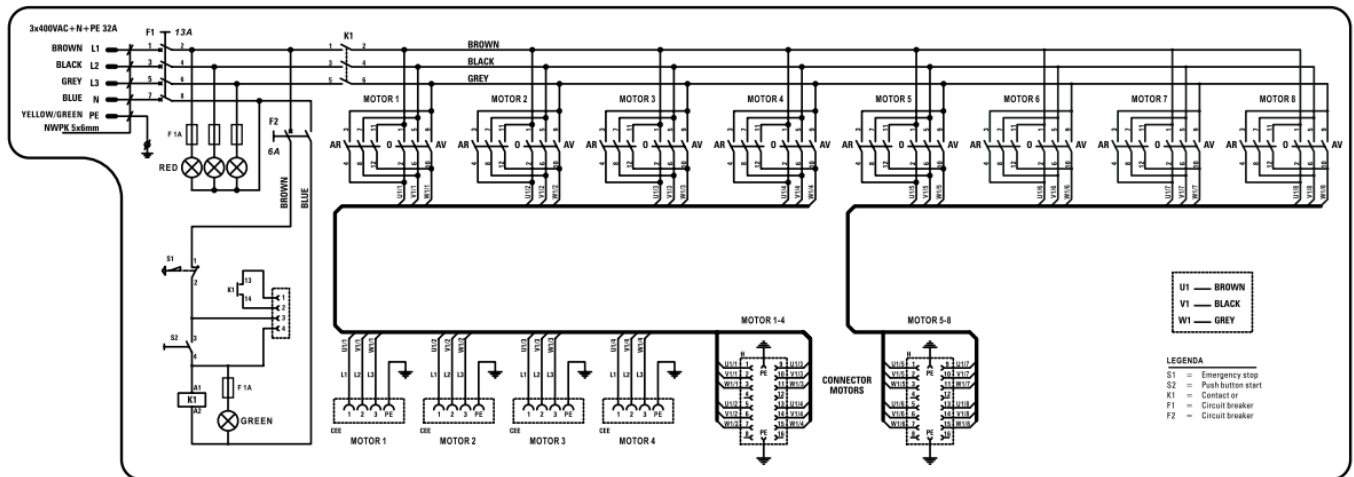
## Technical specifications

	CHC-4 (item no. 422822)	CHC-8 (item no. 422852)
Line circuit breaker / phases	3 × 13 A (type D)	3 × 13 A (type D)
Line circuit breaker / rotary switch and emergency stop	6 A (type C)	6 A (type C)
Input connections	Power cable with CEE plug	Power cable with CEE plug
Output connections	4 × 4-pin CEE chassis sockets with hinged lid 1 × 16-pin multi-pin industrial connector for use with a breakout box	4 × 4-pin CEE chassis sockets with hinged lid 2 × 16-pin multi-pin industrial connectors for use with a breakout box
Max. load per motor switch	1.9 kW	1.9 kW
Max. total load	9 kW	9 kW
Supply voltage	400 V 50 Hz	
International Protection Rating	IP20	
Installation properties	19 inch, 4 RU	
Dimensions (W × H × D)	483 mm × 278 mm (4 HE) × 178 mm	
Weight	8.75 kg	10.3 kg
Ambient conditions	Temperature range Relative humidity	0 °C...40 °C 20%...80% (non-condensing)

### Circuit diagram for CHC-4 (item no. 422822)



Circuit diagram for CHC-8 (item no. 422852)



EU Declaration Of Conformity

Declaration number	DOCIP 447446
Name and address of manufacturer / EU-AR	Thomann GmbH Hans-Thomann-Str. 1 96138 Burgebrach Germany
HIS DECLARATION OF CONFORMITY IS ISSUED UNDER THE SOLE RESPONSIBILITY OF:	
Name and address of manufacturer	Thomann GmbH Hans-Thomann-Str. 1 96138 Burgebrach Germany
Product identification	422822 Botex Chainhoist Controller CHC-4 422852 Botex Chainhoist Controller CHC-8
THE PRODUCTS MENTIONED IN THIS DECLARATION ARE IN CONFORMITY WITH:	
EU Community Legislation	Machinery Directive 2006/42/EC Restriction of Hazardous Substances (RoHS) Directive 2011/65/EU Low Voltage Directive (LVD) 2014/35/EU Electromagnetic Compatibility (EMC) Directive Machinery Regulation (EU) 2023/1230
Harmonised standards	Safety of machinery EN 60204-1:2018 EN ISO 12100:2010
	Safety of electrical equipment EN IEC 61439-1:2021 + AC:2022-01 + EN 61439-1:2011 EN IEC 61439-2:2021 + EN 61439-2:2011 Exposure of humans to electromagnetic fields (EMF) EN 12198-1:2000+A1:2008

## Troubleshooting

In the following we list a few common problems that may occur during operation. We give you some suggestions for easy troubleshooting:

Symptom	Remedy
The electric chain hoists do not respond when [RUN] is pressed.	<ol style="list-style-type: none"> <li>1. Check the wiring to the electric chain hoists.</li> <li>2. Check whether the assigned rotary switch is in the [UP] or [DOWN] position.</li> <li>3. Check whether the circuit breaker is in the [ON] position.</li> <li>4. If the emergency stop button is pressed and locked: Make sure that the reason for pressing the switch is no longer present and turn it clockwise to the operating position.</li> </ol>
The device does not respond at all.	<ol style="list-style-type: none"> <li>1. Check the mains connection and main fuse.</li> <li>2. Check whether the indicator lights [L1], [L2], [L3] for the three phases of the power supply light up. If this is not the case, the wiring must be corrected.</li> <li>3. If the emergency stop button is pressed and locked: Make sure that the reason for pressing the switch is no longer present and turn it clockwise to the operating position.</li> <li>4. The device may be running outside the permitted temperature range.</li> </ol>

If the procedures recommended above do not succeed, please contact our Service Center. You can find the contact information at [www.thomann.de](http://www.thomann.de).

## Protecting the environment

### Disposal of the packing material



Environmentally friendly materials have been chosen for the packaging. These materials can be sent for normal recycling. Ensure that plastic bags, packaging, etc. are disposed of in the proper manner. Do not dispose of these materials with your normal household waste, but make sure that they are collected for recycling. Please follow the instructions and markings on the packaging. Observe the disposal note regarding documentation in France.

### Disposal of your old device



This product is subject to the European Waste Electrical and Electronic Equipment Directive (WEEE) as amended.

Do not dispose of your old device with your normal household waste; instead, deliver it for controlled disposal by an approved waste disposal firm or through your local waste facility.

When disposing of the device, comply with the rules and regulations that apply in your country. If in doubt, consult your local waste management facility. Proper disposal protects the environment as well as the health of your fellow human beings.

Also note that waste avoidance is a valuable contribution to environmental protection.

Repairing a device or passing it on to another user is an ecologically valuable alternative to disposal.

You can return your old device to Thomann GmbH at no charge. Check the current conditions on [www.thomann.de](http://www.thomann.de).

If your old device contains personal data, delete those data before disposing of it.

