

OPERATING INSTRUCTIONS

MPC 4ED8/8ED8 + MRC 4/8/12/16/24
MPC 16/24/32TD8

(Translation)



Control system for kinetic drives
in accordance to BGV D8 and D8 Plus / IGWV
SQ P2

Safety first – Made in Germany

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1 Safety instructions



1.1 General

- Read and follow the operating instructions and the listed operation and safety notes.
- These operating instructions must be consulted without fail whenever the control system is sold or transferred, or new staff are being trained in its use to ensure that the new operators/users are able to inform themselves in full as to its functionality and of the safety instructions.
- The devices were designed for the control of professional kinetic stage drives with 3-phase AC motors in the course of setup and dismantling. No other use is permissible. The devices may be operated only by specialists who have been instructed and trained in their use.
- The devices should be put into operation by adults only. Any handling of the devices by minors must be forbidden.
- Any electrical work required for the installation and maintenance of the devices must be performed by a qualified technician/electrician or by personnel of similar proficiency.
- After unpacking the device ensure that it is intact and complete. If this is not the case, please contact our Service department immediately.
- Ambient temperatures above 40° C and below 1° C should be avoided.
- Protect the devices from moisture, dust and vibration.
- If the devices are exposed to large temperature differences between storage and operation (e.g. in touring applications) sufficient acclimatisation time must be allowed to prevent irreparable damage being caused by condensation.
- The penetration of liquids or metal objects into the device should be avoided.
- In view of their IP21 protection class, outdoor operation is only possible if external measures are taken to protect the devices from the adverse effects of weather and in particular moisture.
- Do not open the devices. There are no components inside capable of being repaired by the user.
- Do not dismantle or modify the devices.
- Never attempt to repair the devices yourself.
- In the event of a serious malfunction, switch off and unplug the devices before contacting your nearest service centre or the manufacturer for the equipment to be examined and if necessary repaired.

1.2 Intended Use

The control system consisting of the devices MPC 4/8EDB and MRC xED8 complies with the EN 60204-32 directive and is designed for installation operations using lifting gear such as electric chain hoists and winches at low speeds (≤ 10 m/min) or similar stage drives designed with 3-phase induction motors using 400 V AC phase-changing circuitry. No other use is permissible. The devices may be operated only by specialists who have been instructed and trained in their use. Inappropriate and improper use will render the product warranty null and void.



Because the devices combine with the connected drives to form an entire system, it is absolutely essential that the connected drives comply with BGV D8 or D8 Plus / IGWW SQ P2 and are inspected and tested at appropriate intervals. If this is not the case, the operation of the entire system and therefore also of the control system can no longer be regarded as being in conformity with BGV D8 or D8 Plus. Here it is a case of the weakest link in the chain determining the maximum safety.

Equal consideration must be given to all the slings, constructional elements, suspension points and suspended loads involved in their use. In the selection and dimensioning of all the bearing elements (e.g. suspension points, girder clamps, shackles, steel wire, roundslings, trusses, decorative elements etc.) found in the force flow, the loads and hazards involved in each case must also be taken into account (see also IGWW SQ P2 and BGI 810-3).

In this context, particular attention and consideration must be paid to the following factors:

- the unladen weight of the chain hoist
- dynamic factors involved in the operation
- factors arising from errors

NB:

The operator always bears the overall responsibility for the system he is operating. He must familiarize himself with the relevant and applicable guidelines, norms and standards and observe them at all times. Before each use, he must conduct a risk assessment and analysis of the system configuration in question and determine in accordance with his findings the requisite safety standards for the individual components, for the overall system and also for the run parameters and keep a written record of his findings.



For this purpose, the following basic principles and guidelines should be observed:

- BGV D8
- IGWW SQ P2
- BGI 810-0
- BGI 810-3

The applicable guidelines, norms and standards for setting-up, dismantling and operating the system are invariably governed by the degree of hazard (risk assessment), and this must be determined by the operator/user.

Furthermore, the specific laws, regulations and structural requirements of the country and/or state in which the devices are being used must be observed at all times.

1.3 Power supply/phase sequence correction

According to VDE 0100 Part 722, in the case of temporary installations a residual current device (RCD) must be included in the supply circuit. Since the MPC 4ED8 Controller has no integrated residual current device, it must be noted that to ensure optimal personnel protection when the device is used in a temporary installation, a suitable residual current device with a tripping current of max. 30 mA must be present in the upstream supply cabinet or power distributor. The MPC 8ED8 can optionally be delivered with a factory-fitted RCD 30 mA (retrofitting is not possible).



It is essential to ensure that all three phases (400 V) are present at the device and that the rotating field has a clockwise rotation. In the event of an error, an orange LED will light up on the front panel of the housing. Operation is then prevented by an internal safety device and is therefore NOT possible. The drives cannot run. To eliminate the problem, two of the phases can be exchanged using the phase-changer housed in the plug. If the fault persists, the supply line should be examined.

To correct the rotary field, the CEE phase-changing plug is equipped with a mechanical device that allows you to swap round two of the phase terminals. Using a broad screwdriver, push down on the slot between the two phase terminals and then turn it through 180 degrees so that the two pins swap positions. As soon as the downward pressure ceases, the two pole contacts will latch into their new positions.

Now plug the CEE connector cable back in and if all the phases are present and there is no further fault, the Phase Error LED will go out after a short amount of time.

If one phase is missing, the green phase LED (R-S-T) assigned to it on the front panel of the controller will fail to illuminate. This will be due to a fault in the external power supply or a defective cable in the supply line. This fault is also monitored for, as are phase asymmetry and undervoltage errors, with the run being interrupted in each case if an error is detected.

For this reason, the electrical connection systems connected to the controllers should be fully tested with a load tester (e.g. Duspol) by an authorised/specialist technician before the cable is connected and the device brought into service.

All supply voltage errors are indicated visually by means of the orange Error LED.

Note in particular:

The power supply cable should never be removed during operation. Always halt the drives in motion first, using the Power switch on the device, and isolate the connected hoists altogether from the power supply.



1.4 E-STOP button (Emergency STOP) button

The E-STOP button on the remote control (MRC 4/8/12/16/24/32ED8) shuts down all the connected drives immediately under all operating conditions. This also applies to drives connected to the MPC controller via the M-LINK system (see 'M-LINK system' on page 15)

To unlock the E-STOP button again, take hold of the button and turn it gently to the right.

1.5 Improper Use

If non-conforming connector cables or connection leads not authorized by the manufacturer are used to connect to the hoists and accessories, the safety functions may in some cases be impeded.

Operation under such conditions, inappropriate use and non-observance of the listed operating and safety instructions are all prohibited!

In any such case, the product warranty will be null and void.

2 Introduction

Congratulations!

We congratulate you on the purchase of the MPC 4/8ED8 controller combined with the MRC 4/8/16/24/32ED8 remote control for the control of 3-phase rotary current drives with direct control in accordance with BGV D8 and D8 Plus / IGWV SQ P2.

These MOVEKET devices will impress you with their quality, functionality and safety!

Please read these Operating Instructions through carefully prior to first use.

Allow some time for this, in order to prevent malfunctions and supposed risks!

2.1 Function and use

The devices allow you specifically to operate 3-phase AC drives independently of one another in both directions. The MPC controller in connection with the MRC remote control satisfies the technical requirements for the control of lifting gear (for an explanation, see 'Safety instructions'). In the event of a fault, the motor protection circuit breakers perform a 3-phase shutdown and are subject to compulsory group use, which means that in the event of the failure or malfunction of one drive, the others drives are locked.

A control system invariably consists of at least one MPC controller (the power unit) and one MRC remote control (the remote control unit). The MPC controller contains the power and safety components for the phase changing controller of the 400 V AC drives. The MRC remote controls govern the MPC functions and allow remote operation.

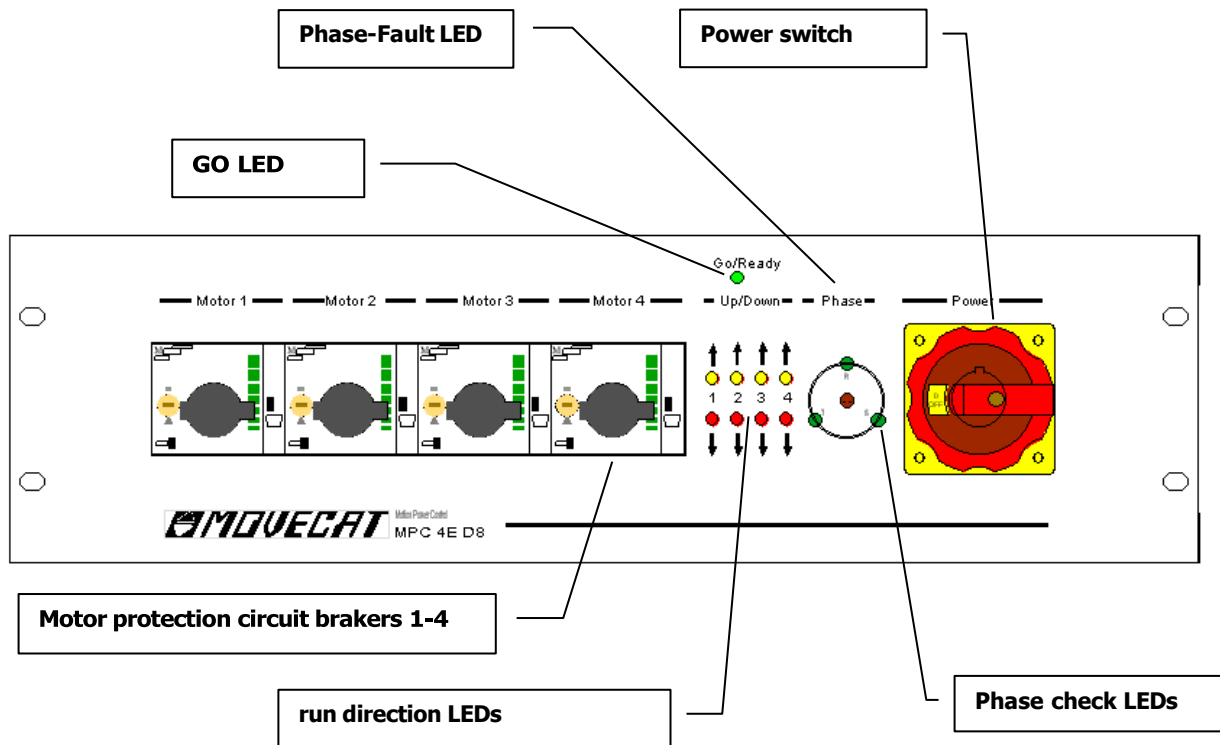
The devices are used in trade fair, event, studio, production and entertainment venues as well as in tour applications to control 3-phase AC motors. The devices were primarily designed to control the lifting and lowering of suspended loads during setting-up and dismantling operations with the help of lifting gear (e.g. electric chain hoists or winches). Such loads include, for example, trusses as well as lighting, video and sound reinforcement equipment.

The MPC 4ED8 is designed for drives using 400 V AC rotary current direct control. Here the respective manufacturer's instructions must be observed.

It is to be noted that in the operation of each motor the individual total power consumption is assured and the motor protection circuit breaker should be adjusted accordingly. (see 'Technical data: Tripping value').

3 The MPC controller

3.1 Front view



3.1.1 The Power switch

Activation of the Power switch allows current to flow to the MPC controller. Switching off disconnects all poles and isolates the power supply completely from the device and the connected drives. This prevents damage when the device is switched off but still plugged in.

The switch can be locked in the Off position using a padlock (not included in the delivery).

Make sure that the devices are completely switched off and disconnected when not in immediate use.

3.1.2 The Phase Fault LED

The device is equipped with a module that monitors the phase-direction and -symmetry as well as for undervoltage. If the orange LED does not go out within a short time of the device being switched on, a phase error is present. In the case of a phase inversion and resulting rotating field error, this can be eliminated by inverting the phase at the phase-changing plug (see 'Power supply' or 'Errors').

If, however, one of the three green Phase Fault LEDs fails to illuminate, there is a fault with the external power supply (please always check the external power supply before plugging in the MPC to ensure that the pin assignments and voltage potentials are correct).

3.1.3 The phase error LEDs

The three green phase error LEDs confirm the presence of the three phases: L1 to L3

If a phase is missing, the LED assigned to it will not light up. (see 'Power supply')

3.1.4 The GO LED (run activation)

The GO LED indicates, when the GO enabling button on the hand unit is activated, that one or more drives, the run directions of which have been successfully preselected, are now in motion. The GO LED indicates the function of the central driving contactor.

3.1.5 The Up/Down LEDs

The selected run direction (Up / Down) of one or several drives is indicated at the MRC by the preselected run direction LEDs, which are colour-coded (yellow for Up / red for Down).

3.1.6 The motor protection circuit breakers

The motor protection circuit breakers protect the drives, connector cables and internal components from overload and damage by monitoring the power consumption of the drive. The motor protection circuit breakers simulate the windings of the motors. If, as a result of overload, too much current is flowing or if the drive is operated continuously for longer than the allowed time with the result that it overheats, the drive protection shuts down the overloaded drive. The winding simulation integrated in the motor protection circuit breaker prevents the hoist being restarted immediately until the motor winding has been allowed to cool down, thereby preventing the motor winding burning out and the consequent failure of the drive.. The motor protection circuit breakers also trip in the event of a short-circuit, cross-circuit or short-to-ground.

Note especially:

Simply unplugging the affected drive and then plugging it into another controller output will lead inevitably to the overloading and even the failure of the drive in question or else to the MPC controller suffering damage!

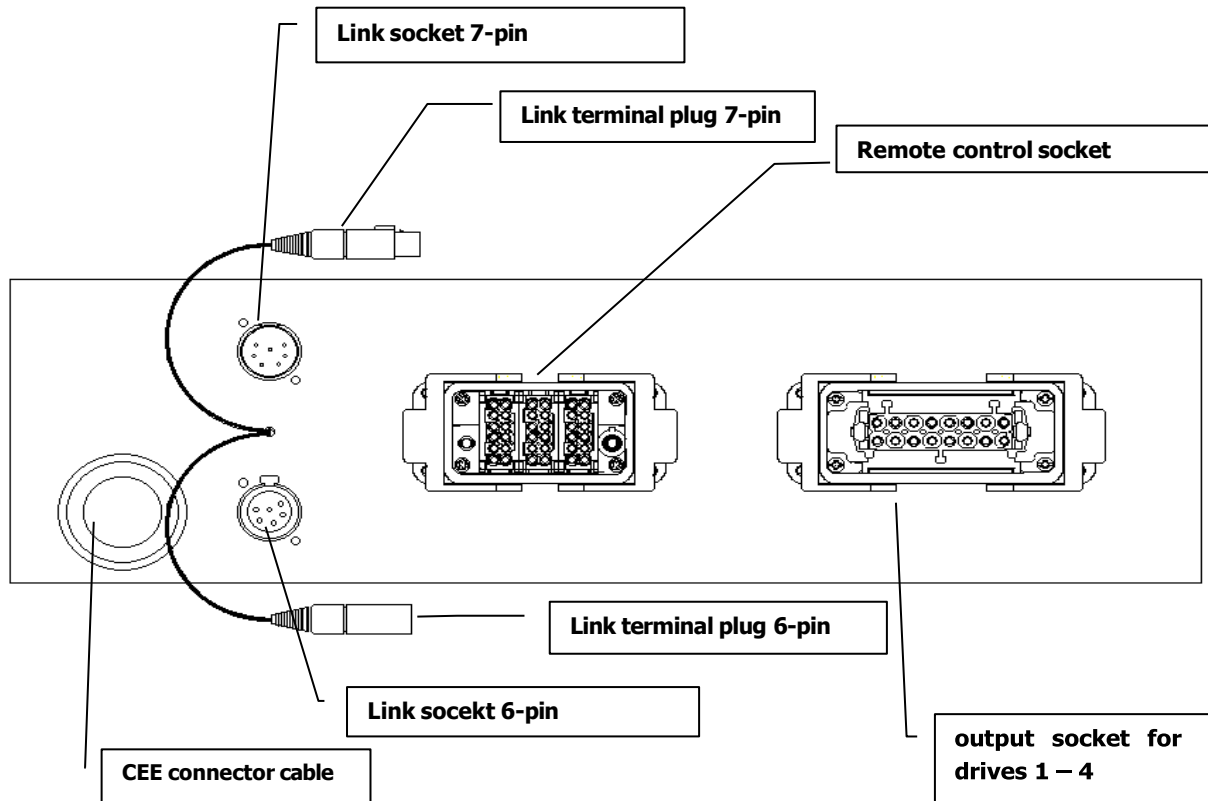


The motor protection circuit breakers are subject to the principle of compulsory group use. This means that if one motor protection circuit breaker trips, all the connected drives will be shut down until the fault has been eliminated. The same applies when multiple MPCs are combined in an M-Link network.

It should be pointed out that the tripping current that is set should depend upon the use to which the drive in question is being put (see 'Technical data: tripping value').

To ensure the fail-safe functioning of the motor protection circuit breakers, their functionality should be tested regularly – ideally each time the system is used – by means of the Test button.

3.2 Rear view



3.2.1 The Link sockets

In single operation, the Link terminal plugs attached to the housing should be plugged into the Link sockets. The 6-pole male plug should be inserted in the lower socket and the 7-pole female plug in the upper one. The object of doing this is to complete safety chain without which no run is possible.

By connecting Link cables to the Link sockets, you can link up multiple controllers. This makes it possible to use up to 32 drives simultaneously in a linked group (see "Prior to operation: Linking").

3.2.2 The Link terminal plugs

The Link terminal plugs are attached to the housing and must be plugged into their respective Link sockets during operation. (see also 'Prior to use')

The Link plugs consist of one 6-pole and one 7-pole XLR plug with special internal wiring.

Unless the Link plugs are inserted or the group is fully linked up, operation of the system is impossible. The Ready lamp in the GO button will not light up in such cases.

3.2.3 MRC multi-pin socket

The MRC remote control multi-pin socket is connected to the Harting modular plug of the MRC 4/8/12ED8 or of a cable splitter.

A special feature of the MRC 4/8/12ED8 remote controls is that they can always be connected directly to an MPC controller. In connection with an MPC 4ED8 controller, the operation of Channels 1-4 is always possible – even without a splitter adapter. When an MPC 8ED8 controller is used, it is possible to operate Channels 1-4 from an MRC 4ED8 remote control and Channels 1-8 from an MRC 8/12 remote control.

Partial operation with unoccupied splitter adapter sockets (e.g. one MRC 16ED8 remote control with only one MPC 8ED8 in conjunction with a cable splitter) is not possible as the safety chain in that case will not be completely closed.

3.2.4 Motor output multi-pin socket

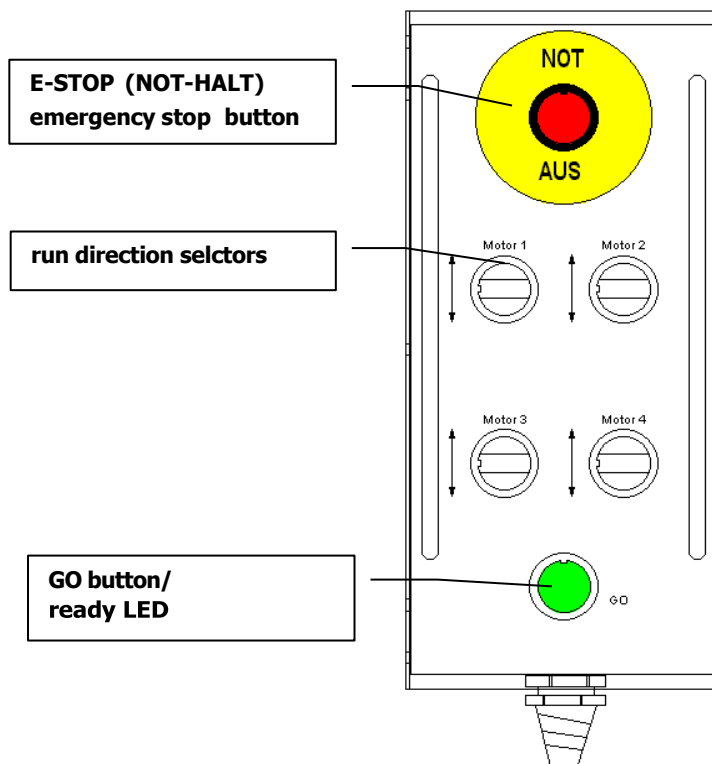
The motor output multi-pin socket connects to the Harting HAN 16E 16-pin plug of the load cable splitter (LKS). This splitter contains four CEE 16 A 4-pin cable couplers for the supply of Drives 1 to 4.

An ASK 16 connection cable can also be used here as an extension, which simplifies the cabling of the necessary drives, as only one main cable for every four drives needs to be laid until the immediate vicinity of the drives is reached and only then need the individual splitting occur.

3.2.5 The connector cable

The connector cable is fitted with a CEE 16/32 A 5-pole phase changing plug or a 63 A 5-pole plug. Before connecting to the power supply, the delivery point should be checked to ensure the pole assignments and voltage potentials are correct.

3.3 The MRC 4ED8 remote control (function identical MRC 8/12/16/24/32ED8)



The **remote control** allows you to control the MPC controller from a distance. With it, the run direction of the relevant drives is selected and runs initiated by activating the GO button.

3.3.1 E-STOP button (emergency stop)

Activation of the E-STOP button switches off the main contactor instantaneously. The LED of the GO button goes out. This means that none of the drives can be moved any longer as the release is blocked. If you activate the E-STOP button in the course of operation, the drives will stop at once. The E-STOP button is self-latching and boasts a function display: when depressed, the button lights up in RED. To enable the main contactor once again, take hold of the E-STOP button and turn it gently to the right; this will unlatch it, enabling will take place and the GO/READY indicator will once again light up in GREEN. It will then be possible once again to initiate a further run function by activating the GO button.

3.3.2 The run direction selectors

With direction selectors 1 to 4 (in the case of the MRC 4ED8), you determine in advance the direction of Drives 1 to 4 (or 1 to 8 in the case of the MRC 4ED8, when combined with two MPC 4 ED8 units and an ASA MRC 4/8 splitting adapter) (see 'Prior to use').

When a run direction has been selected, a LED glows on the front panel of the MPC controller indicating the current status of the direction selectors (see 'MPC controller' and 'Prior to use').

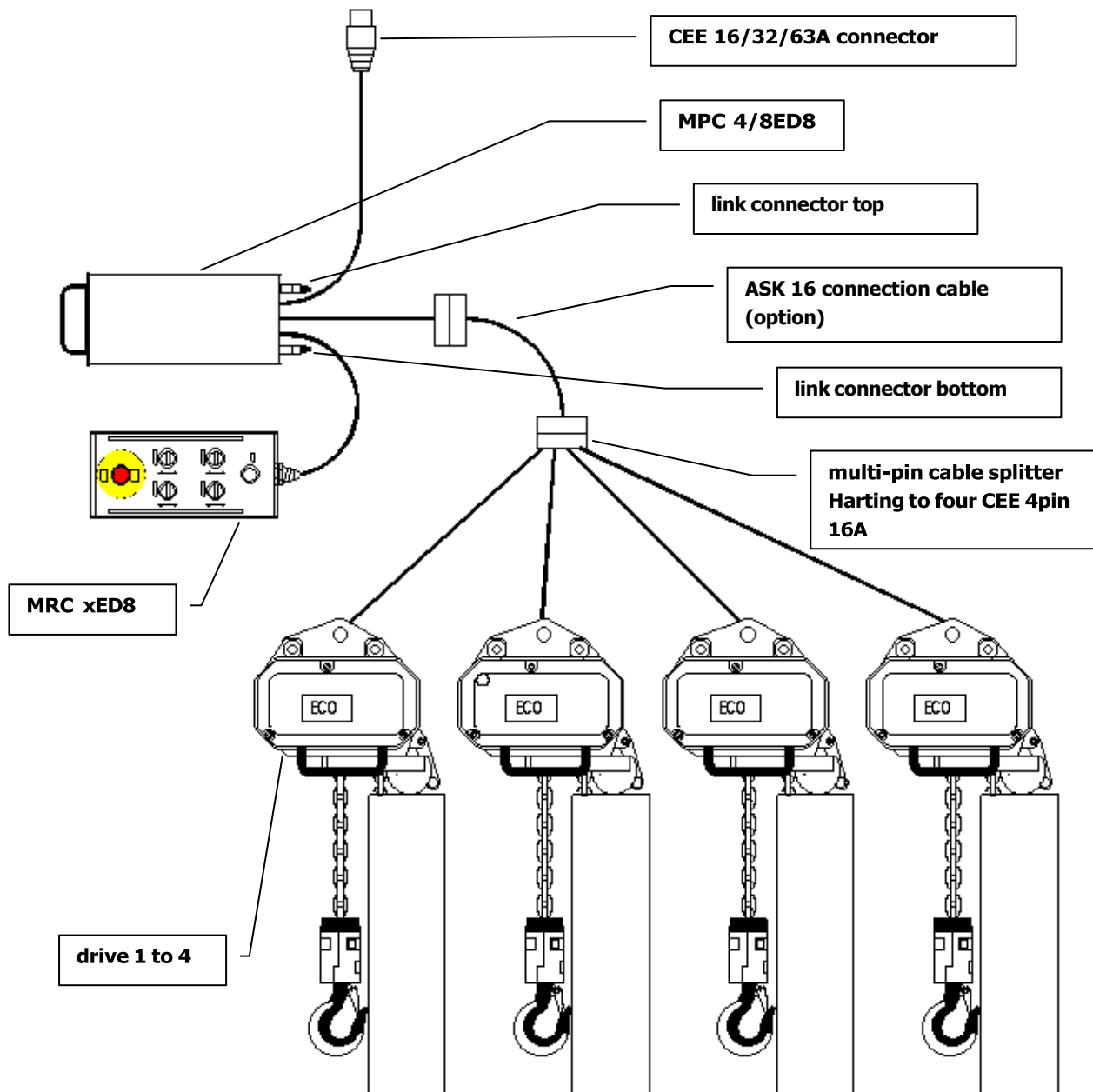
3.3.3 GO button

Pressing the GO button executes the run command predetermined by the direction selectors. The button illuminates when the system is operational and there is no fault (see 'Prior to use').

4 Prior to use

The paramount rule is that operation should only take place within view of the loads to be moved.

4.1 System structure



4.2 Connection and operation

When connecting up the MPC 4ED8 controller and the MRC 4ED8 remote control there are several points to note. Proceed as follows:

- Insert the remote-control plug into the remote control multi-pin socket and close the clamp lock.
- Plug the load cable splitter into the motor output multi-pin socket and close the clamp lock.
- Connect the drive to the cable couplers of the load cable splitter. Note the numbering of each coupler that will lead to the desired drive
- Set the tripping current of the motor protection circuit breaker (see 'Technical data')
- Check the external power supply to ensure that the assignments and voltage potentials are correct
- Only then should you connect the cable to a CEE 16A 5-pole socket
- Turn the Power switch to the right to the 'ON' position
- Now the three green LEDs and the orange phase error LED should illuminate. The orange LED should go out after a short time. If this is not the case, a phase error is present (see on this subject 'Power supply' or 'Errors').
- Check that all the motor protection circuit breakers are switched on
- Test the E-STOP button The GO/READY LED of the enabling button should not be illuminated when the E-STOP button is pressed
- Now select a drive using the run direction selector assigned to it (selectors 1 to 4 correspond to Drives 1 to 4) The choice is displayed immediately on the front panel of the MPC
- Make sure that all the cables are hanging freely and there are no obstacles in the run area
- Make sure that there is no one underneath the suspended load
- Now press the GO button. The attached loads will move in the preselected direction.
- Check the safety function of the E-STOP (Emergency STOP) button. Press the E-STOP button while the drives are running – the runs of all the drives in motion will come to an immediate halt – the GO/READY light in the enabling button will be extinguished. It should no longer be possible to activate any runs.
- Unlatch the depressed E-STOP button again; the GO/READY indicator C7528 should light up once again in green and the runs of the selected hoists will resume as soon as the GO button is activated.
- When the desired end position has been reached, release the GO button and the selected drives will stop immediately
- After a successful run, a sensible measure is to press the E-STOP button or in the ideal case even turn the Power switch to Off to ensure the system comes to a definitive halt! When not in use, the MPC controller should always be isolated from the mains by means of the Power switch.
- **It is essential to have the running hoists in your field of vision at all times**



4.3 Lifting

To move the attached loads upwards, set the run direction selector switch of the desired drive in the direction indicated by the arrow pointing upwards. If the drives fail to move but remain in their current positions, set the direction selector switch to its middle position. Pressing the GO button will trigger the preselected movement.

4.4 Lowering

To move the attached loads upwards, set the run direction selection switch of the desired drive in the direction indicated by the arrow pointing downwards. If the drives fail to move but remain in their current positions, set the direction selector switch to its middle position. Pressing the GO button will trigger the preselected movement.

4.5 Lifting and lowering in parallel (asynchronous runs)

To move the attached loads simultaneously in different directions, set the direction selector switches of the drives in question to the desired run positions. The GO button will activate the preselected runs of the individual drives.

4.6 M-Link system

By connecting multiple MPC controllers (max. 8 units in one network), it is possible to control up to 64 drives simultaneously. The MPC controllers are linked to one another using Link cable (use MOVEKET Original Link Cable) via the Link sockets. The drives are selected using the remote controls of the MPC controllers in question; runs can be executed using the Go button of any of the MRC remote controls. Activating any GO button in the linked group activates runs by all the preselected hoists within the linked group.

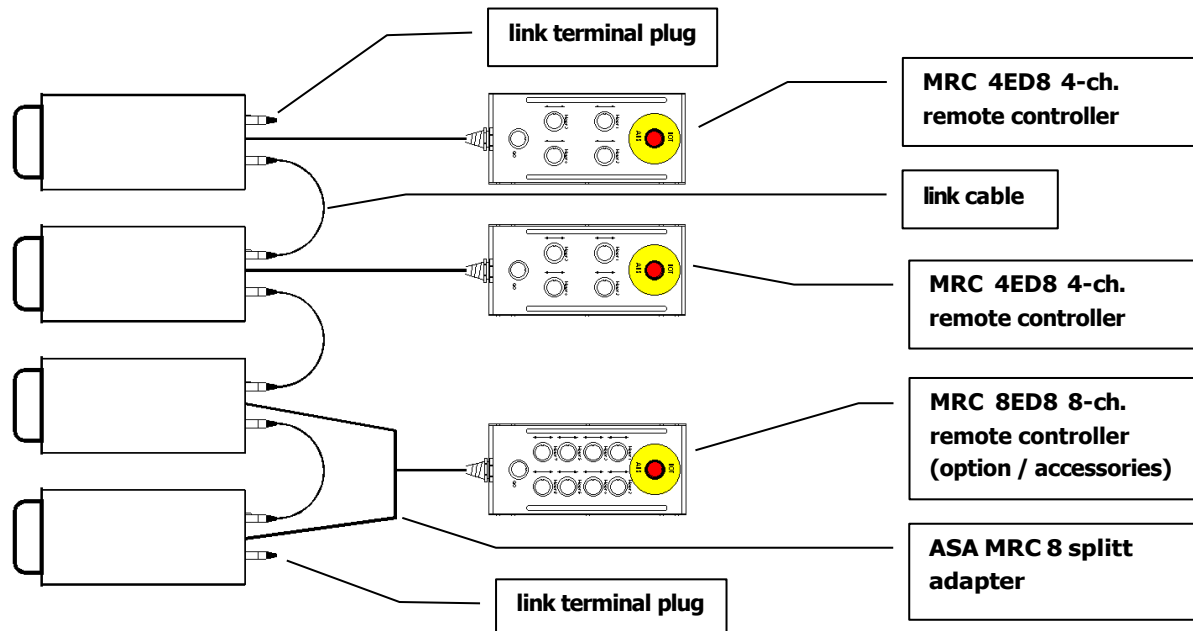
If an error occurs in the Link system e.g. as a result of the tripping of any of the motor protection circuit breakers or the pressing of any E-STOP button, all the run-active hoists in the entire linked system will stop (forced group shutdown).

Linking is performed by connecting the 7-pole socket of the first MPC controller to the 6-pole socket of the second MPC controller using the MOVEKET Link cable. The free sockets that result should be occupied by the Link terminal plugs of the first and last controllers in the chain, for this purpose the open Link system sockets should be closed off with the Link terminal plugs. Only in this way can the safety chain be closed and the entire system enabled – the GO/READY indicators of all the linked MRC controllers will then turn GREEN!

For technical safety reasons, no more than 8 MPC controllers can be connected together at one time.

The Link cable is available in various lengths.

The following graphic illustrates the structure:



4.7 Forbidden operations

The following operations are not permitted:

- Tipping (between consecutive run activations, a pause of at least 3 seconds is required)
- Turning individual drives on and off using their direction selectors in the course of a run
- Changing the run direction of drives with their direction selectors in the course of a run
- System operation of multiple MPC controllers without an active link system
- Removing or inserting plugs of any description in the course of a run
- Driving whilst unable to see the loads and the entire run path of all drives
- Moving loads over people's heads
- Scenic runs
- The transportation of people
- Use with lifting gear at speeds in excess of 10 m/min
- Operating outside the working conditions
- Use other than that intended and improper handling



5 Errors

As a fundamental rule, errors that require the controller or the remote control to be opened must not and cannot, be eliminated by anyone other than authorized, skilled personnel.

If this rule is infringed, we cannot guarantee the safety of the device.

Therefore, in the case of more serious malfunctions or errors contact your nearest service centre!

CAUTION: THE DEVICE IS UNDER 400 V AC!



5.1 Errors or system failures in the course of operation

MPC controllers dispose over an internal safety chain in which relevant errors within an interdependent group (group supervision) are monitored and evaluated. This means that any error invariably leads to the shutting down of all the drives. Before the system can be operated again it is invariably necessary therefore to eliminate the operating error. The same is true in Link mode with additional MPC controllers.

5.2 Operating errors

- Power supply undervoltage
- Rotary field errors (in the event of a phase error, the procedure to be followed is described under 'Power supply')
- Phase asymmetry
- Missing operating phase (L1, L2, L3) in the power supply
- Power switch in the OFF position
- Open safety chain e.g. link terminal plug not inserted or cable splitter not fully occupied.
- Tripping of any motor protection circuit breaker (In the event of a motor protection circuit breaker error, the procedure to be followed is described under 'motor protection circuit breakers')
- E-STOP (emergency stop) button depressed and latched

6 Inspection and maintenance

6.1 Inspections

The devices and accessories must be subjected to an annual UVV inspection by a specialist in the course of which the correct functioning of the safety systems and functions is tested in conjunction with the drives/hoists being used, The functioning, in particular, of the E-STOP button as well as the motor protection circuit breakers and RCDs (MPC 8ED8) in both single and group modes (M-LINK) should be tested.

When used as mobile devices, annual inspections in accordance with BGV A3 (VDE 0701/0702) must be conducted and documented. Here, regulations and requirements specific to the country of use must be respected.

To ensure the fail-safe functioning of the RCD and the motor protection circuit breakers, their functionality should be tested regularly – ideally each time the system is used – by means of the Test button.

6.2 Maintenance instructions

The MPC controller and MRC remote control generally require no maintenance.

The housing should be cleaned by wiping it with a damp cloth using commercially available, mild, degreasing cleaning agents. Please do not use substances containing solvents.

7 Technical data

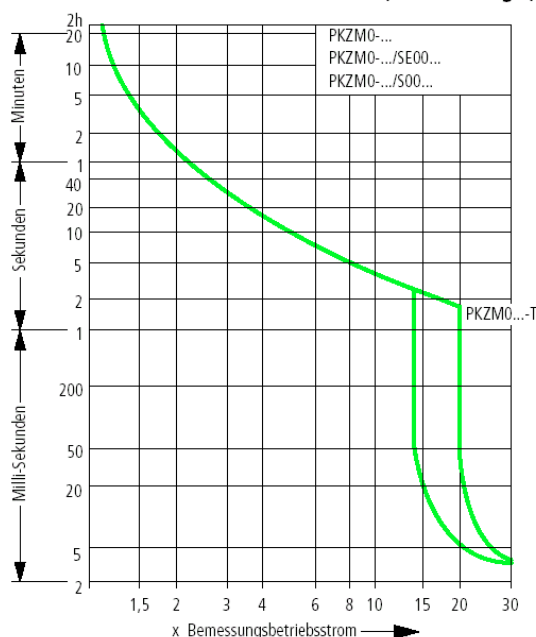
7.1 Technical data

Supply voltage :	400 V
Frequency:	50 Hz
Operation power consumption:	depending on the motor 0,27 kW to 2,2 kW
Protection class:	IP 21
Connection:	16 A / 3-phase CEE 5p phase-changing plug (MPC 4 ED8-3) 32 A / 3-phase CEE 5p phase-changing plug (MPC 4 ED8-4/5) 32 A / 3-phase CEE 5p phase-changing plug (MPC 4 8ED8-3) 63 A / 3-phase CEE 5p plug (MPC 4 8ED8-4/5)
Weight:	10 kg (MPC 4ED8) 20 kg (MPC 8ED8)
Dimensions:	Width: 19 inches or 44.5 cm Height: 3 U or 13 cm (MPC 4ED8) 6 U or 26 cm (MPC 8ED8) Depth: c. 50 cm (in plugged state)
Temperature range /operation:	0° to + 40° C
Temperature range/ transportation:	- 20° to + 60° C

7.2 Setting the motor protection circuit breakers

The tripping value is set using the yellow setting screw on the motor protection circuit breaker in question.

Here attention must be paid to the setting values and maximum power consumption of the drives in use in each case (manufacturer's instructions).



Tripping characteristic of the motor protection circuit breakers

In principle, the setting range of commercially available motor protection circuit breakers is limited. It is essential to assure that the setting range accords with the rated current of the drives.

Currently a variety of MPC-E types are available:

MPC 4ED8-1 (setting range 1.0 to 1.6 A)

MPC 4ED8-2 (setting range 1.6 to 2.5 A)

MPC 4ED8-3 (setting range 2.5 to 4.0 A) standard device

MPC 4ED8-4 (setting range 4.0 to 6.3 A) HP standard device (high-power implementation)

MPC 4ED8-5 (setting range 6.3 to 10.0 A)

MPC 8ED8-1 (setting range 1.0 to 1.6 A)

MPC 8ED8-2 (setting range 1.6 to 2.5 A)

MPC 8ED8-3 (setting range 2.5 to 4.0 A) standard device

MPC 8ED8-4 (setting range 4.0 to 6.3 A) HP standard device (high-power implementation)

NB:

Three-phase drives often exhibit a high starting current when first switched on that can lead to the power supply pre-fuse tripping; for this reason, it is necessary to pay attention to the fuses used and the characteristic of the power circuit-breakers or safety elements.



7.3 Setting of the drives

To discover the rated current that should be set for the drive, consult the specification plate, the test book or the operating instructions.

Ideal protection is assured when the tripping current of the circuit breaker is identical to the rated current; values 25% higher than the rated current afford no reliable protection, whilst values lower than the rated current result in a shortening of the operation/duty cycle.

NB:

If the rated current of the drive is greater than the setting range of the motor protection circuit breaker, the operating/duty cycle will be reduced and this may also lead to the motor protection circuit breaker tripping immediately. This is not a malfunction!



7.4 Load output assignments (motor output multi-pin socket)

Number	Motor-assignments
1	1 - L1
2	1 - L2
3	1 - L3
4	2 - L1
5	2 - L2
6	2 - L3
7	nc
8	Nc
9	3 - L1
10	3 - L2
11	3 - L3
12	4 - L1
13	4 - L2
14	4 - L3
15	nc
16	nc
PE	PE (M 1- 4)

7.5 Control output assignments (remote control multi-pin socket)

C		B		A	
7	1	7	1	7	1
8	2	8	2	8	2
9	3	9	3	9	3
10	4	10	4	10	4
11	5	11	5	11	5
12	6	12	6	12	6

Use A

1	E-STOP	7	UB + 24 V
2	E-STOP	8	Motor 1 up
3	GO	9	Motor 1 down
4	Ready 24 V	10	Motor 2 up
5	Ready GND	11	Motor 2 down
6	nc	12	Motor 3 up

Use B

1	Motor 3 down	7	nc
2	Motor 4 up	8	nc
3	Motor 4 down	9	nc
4	nc	10	nc
5	nc	11	nc
6	nc	12	nc

Use C complete nc

* nc stands for „not connected“

8 Accessories

- Remote cable splitter
- Motor load cable splitter
- Load cable extensions of various lengths
- Motor cable extensions of various lengths
- Remote control cable extensions of various lengths
- Link cables of various lengths
- Transport cases

9 CE Declaration of Conformity

MOVEKET GmbH
Rudolf- Diesel-Straße 23
D-71154 Nufringen

This is to confirm that the devices listed below in their design and construction as well as the versions thereof that we have put into circulation correspond with the applicable regulations, standards, EC directives and norms listed below.

Designation:

MPC 4ED8, MPC 4ED8-HP, MPC 8ED8, MPC 8ED8-HP, MRC 4/8/12/16ED8, MPC 16/24/32TD8

Applicable EC directives:

2006/24/EG	Machinery Directive
2006/95/EG	Low Voltage Directive
2004/108/EG	EMC Directive
DIN EN ISO 13849-1	Safety of machinery – safety-related parts of control systems – Part 1: General principles for design

Applicable harmonized standards:

DIN EN 60204-32	Safety of machinery – Electrical equipment of machines - Part 32: Requirements for hoisting machines
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National regulations:

BGV D8	Winches, lifting and pulling devices
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Nationale standards:

igvw SQ P2	Chain hoists (supply and use of electric chain hoists in event engineering)
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Alterations not approved by us deprive this declaration of its validity.

Nufringen, 10.01.2013



Andrew Abele

CEO / Geschäftsführer

10 Warranty

For devices and components manufactured by us, we offer a warranty of 24 months starting with the delivery or installation date: during such time we will repair defects of which we are informed in writing and that are substantiated or else provide suitable replacements.

No claims under the warranty shall exist in respect of damage caused by improper handling, the use of excessive force, induction or undervoltage, alterations or repairs conducted by the operator or user, or any external influences whatsoever.

For claims under the warranty, the device is to be returned unopened in the original packaging to the address given below, accompanied by a description of the apparent defect. A copy of the purchase invoice must be enclosed!

Wear attributable to normal operation is not covered by the warranty.

11 Service and support

Your responsible MOVEKET service support center, dealer or distributor as well as the manufacturer

MOVEKET GmbH
Rudolf-Diesel-Straße 23
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