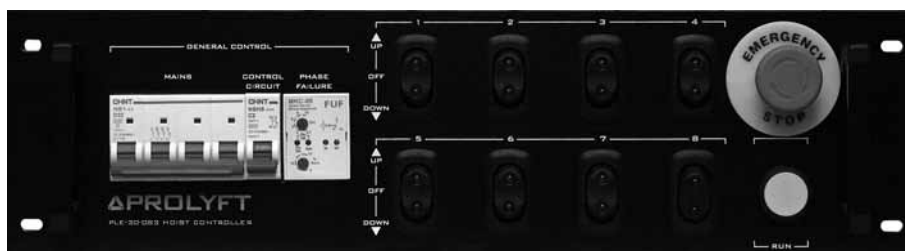


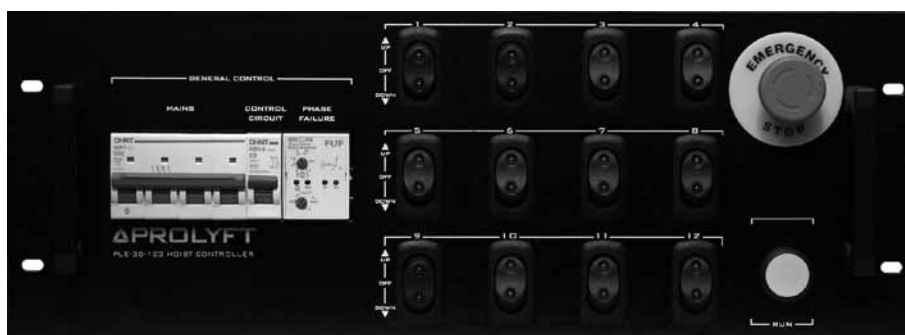
USER MANUAL PROLYFT CONTROLLERS FOR DIRECT CONTROLLED HOIST



PLE-30-044



PLE-30-083



PLE-30-123

Should you have any questions or have problems with this product, please call Prolyft at **+31 (0)594 85 15 15**

Before using the controller hoist,
fill in the information below:

Model No. _____

Purchase Date _____

Service point _____

PROLYFT

CONTENT

SYSTEM DESCRIPTION	3
LIMITATIONS OF USE	3
IDENTIFICATION	3
ELECTRICAL CONNECTIONS	3
DO'S AND DON'TS	5
PLE-30-044 4-WAY FOR DIRECT CONTROLLED HOIST	6
• PICTURE	6
• FUNCTIONAL DESCRIPTION	6
• WIRING DIAGRAM	7
PLE-30-083 8-WAY FOR DIRECT CONTROLLED HOIST	9
• PICTURE	9
• FUNCTIONAL DESCRIPTION	9
• WIRING DIAGRAM	10
PLE-30-123 12-WAY FOR DIRECT CONTROLLED HOIST	12
• PICTURE	12
• FUNCTIONAL DESCRIPTION	12
• WIRING DIAGRAM	13
PHASE FAILURE PROTECTOR	15
REMOTE CONTROL	15
GUARANTEE	16
TROUBLE SHOOTING	16
1-WAY HANDHELD DIAGRAM	17
2-WAY HANDHELD DIAGRAM	18
4-WAY BASIC DIAGRAM	19
8-WAY BASIC DIAGRAM	20
12-WAY BASIC DIAGRAM	21

SYSTEM DESCRIPTION

Prolyte has designed a range of controllers that can be used in conjunction with the Prolift chain hoist, but also with most other types of Direct controlled chain hoists, provided they will fit the electrical limits of this equipment.

To be able to control your chain hoist on low voltage control, please contact your nearest Prolift Service Point. They can supply you with adequate controllers and manuals.

All controllers have a custom-build, sturdy steel 19" rack housing. The housing is 3HE OR 4HE (12-WAY) high and has a black powder coated finish.

All selected electrical components meet the needs for industrial use and requirements stated in the EC machine directive, EN standards and IEC and FEM regulations.

All controllers can be daisy linked to create a multi channel controller. By means of cable, article code: PLA-35-001

LIMITATION OF USE

All controllers are designed work in conjunction with the Prolift chain hoist. It is also allowed to use them with other brands of Direct controlled chain hoists, if provided they fit within the electrical limits of this equipment.

Controllers may only be used in areas, which are secured against environmental influences and with operating temperatures from -20 degree Celsius till +40 degree Celsius.
IP factor 40.

VOLTAGES

MODELS PLE-30-044 / PLE 30-083 / PLE 30-123

- Operating voltage = 400V 3p+N+G at 50Hz
- Max. voltage drop is -20% and + 10%
- Maximum switching capacity 3.3 amps / 1,5kw at 400V
4.6 amps / 1,1kw at 230V

To operate controllers on 208/230v 3P + N +G at 60Hz

Please reconnect wires as per the electrical scheme on page 7, drawing 4-1.

NB! Inside the controllers these wires are marked.

IDENTIFICATION

Prolift controllers can be identified by the model number on the front side. These numbers refer to the information in the user manual and the CE declaration of conformity.

CODE	DESCRIPTION	DIMENSION	WEIGHT
PLE-30-044	4-way controller basic 19" version	Width 483mm Height 134mm Depth 440mm	15,5 Kg
PLE-30-083	8-way controller basic 19" version	Width 483mm Height 134mm Depth 440mm	17,5 Kg
PLE-30-123	12-way controller basic 19" version with thermal motor protectors	Width 483mm Height 178mm Depth 440mm	20,5 Kg

ELECTRICAL CONNECTIONS

Prolift can supply a full range of cabling to make your system work. Cabling should comply with the applicable standards. Decent plugs should be used. All cabling should be tested on functionality and resistance in Ohms. Failures in cabling and plugs could cause malfunction of the hoist and controllers.

CONNECTION DATA OF C-FORM PLUGS AND MULTI PLUGS

WARNING:

Wiring tables should be respected at any time to avoid damage to the hoist and controllers

MAINS POWER CABLE			
Wire	Colour / EU	Colour / US	Pin
L1 / U1	Brown	Brown	1
L2 / V1	Black	Black	2
L3 / W1	Grey/Black	Black	3
PE / ground	Yellow/Green	Yellow/Green	GND
Zero	Blue	Blue	N

MOTOR CABLE			
Wire	Colour / EU	Colour / US	Pin
L1 / U1	Brown	white	1
L2 / V1	Blue	Blue	2
L3 / W1	Grey/Black	Red	3
PE / ground	Yellow/Green	Green	GND

PICKLE FOR LOW VOLTAGE CONTROL			
Wire	Colour / EU	Function	Pin
L1	Brown	110Vac	1
L2	Grey	Up	2
L3	Black	Down	3
PE / ground	Yellow/Green		GND

BRAKE INS / BRAKE OUTS		
Wire	Colour / EU	Pin
MOTOR 1		
L1	Brown	1
L2	Black	2
L3	Black	3
GND	Yellow/Green	4
MOTOR 2		
L1	Brown	5
L2	Black	6
L3	Black	7
GND	Yellow/Green	8
MOTOR 3		
L1	Brown	9
L2	Black	10
L3	Black	11
GND	Yellow/Green	12
MOTOR 4		
L1	Brown	13
L2	Black	14
L3	Black	15
GND	Yellow/Green	16+pe

MULTI CABLES		
Wire	Colour / EU	Pin
L1	1	1
L2	2	2
L3	3	3
GND	4	4
L1	5	5
L2	6	6
L3	7	7
GND	8	8
L1	9	9
L2	10	10
L3	11	11
GND	12	12
L1	13	13
L2	14	14
L3	15	15
GND	16	16+pe

MAX. CABLE LENGTH in Meters				
LIFTING CAPACITY PROLYFT HOIST	1,5mm2 cords		2,5mm2 cords	
	400V/50hz	230v/60hz	400V/50hz	230v/60hz
250KG	230	75	255	80
500 KG	100	40	110	45
1000KG	65	25	75	25
2000KG	65	25	75	25

The table above gives an indication of the maximum length of cables between controller and hoist. Lengths are calculated in accordance to EN 60204 and for the worst case situation. If power cords with 1,5q/mm wires are connected to 2,5q/mm wired cords the one with the smallest cross section determines the maximum length.

The charts have been calculated with a maximum voltage drop of 5%.

DO'S AND DON'TS

Do's

- Use the controller within the technical scope of the FEM class of the Prolift hoist. Longer operating time could severely damage controller and hoist.
- Mount the controller in a protective casing
- Handle the controller only by the grips of the case
- Store the controller in its normal operating position away from aggressive atmospheres (dust, humidity...).
- Make sure that the controller is always clean and protected from corrosion.
- Only a competent person may install and operate the controller
- Make sure that connecting cables are in good condition and connectors are fitted properly.
- Make sure that connecting cables are always symmetrical fitted.
- If the hoist direction is different from the Up /down indicators on the controller, check intermediary cabling and change phases by means of phase reverse facility in the CEE plug at the main power cord
- Use only original parts in case of repair or replacements.
- During operation of the control, always remain alert. In case of emergency, press the emergency stop button, this will inactivate all functions of the control.
- Before operation, check if the load is correctly fastened and attached to the hook. Do make sure the hook latches, if used, are closed and not supporting any part of the load.
- Make sure you have an unobstructed view on the full travel path of the load.
- Make sure that the load is in the correct position before moving it.
- Make sure that each hoist is in an exact vertical position to the load and that the load chain is unobstructed, before operating the controller.
- If used out doors, use sufficient protection against bad weather conditions.
- Use the material under normal working conditions (ambient temperature, atmosphere....)
- Moving a single load or truss system requires experienced and competent operators.
- All the necessary precautions should be taken to ensure a correct distribution of the load and to avoid overloading of a single hoist when multiple hoists are used on one grid. The hoists should be checked individually before they will be moved.
- Notify the responsible and competent person after a dangerous operation or if the hoist seems not to function properly.
- Clear the area from obstacles and people and switch working lights on before operating the controls.
- No people are being allowed under the load.

Don'ts

- Never connect a Prolift controller to a power source other than specified on the unit.
- Never modify the controller unless the manufacturer has authorised the modification.
- Never modify the values and adjustments of the safety components outside the limits provided in the manual, or without the approval of the manufacturer
- Never try to repair or intervene on the controller without the authorisation of the manufacturer or a qualified electrician.
- No unqualified personnel should operate the controller
- Never connect more hoists than the available number of outlets (channels) or number of selector switches available.
- Do not use additional splitters to connect more than one hoist per channel.
- Avoid shocks or accidental collision with other objects.
- Never open the controller as long as the system is under power.
- Never block, or lock the RUN button in order to continue a movement without manual interference.
- Do not operate the controller if your physical condition does not allow it.
- Never use the controller if it is in bad condition.
- Never use suspected spare parts or parts whose origin is not known.
- Do not subject the controller to brutal shocks.
- Never distract the operator's attention while he is operating the system.
- Do not use the controller for a purpose or in an area for which it is not intended.
- Do not expose the controller to an aggressive atmosphere (temperature, acidity...)
- Do not use the safety components as operation components (emergency button, main fuse switch. etc...)
- Do not use the controls needlessly (avoid inching – stop-start operation of the buttons). This can cause overheating and even damage to the hoist.
- Do not change the operating direction whilst the RUN button is pressed (hoist under power).
- If the hoist direction doesn't match with the indications on the controller, don't change phases inside the controller but check the interconnecting cables or the individual hoist, after having disconnected all power cables.
- Never use hoists who are running in the opposite direction of the selected direction.
- Do not connect the controller to an unknown power supply; check if the power source matches the specifications of the controller and the hoists. (under voltage or over voltage \pm 5%, absence of phase etc....)

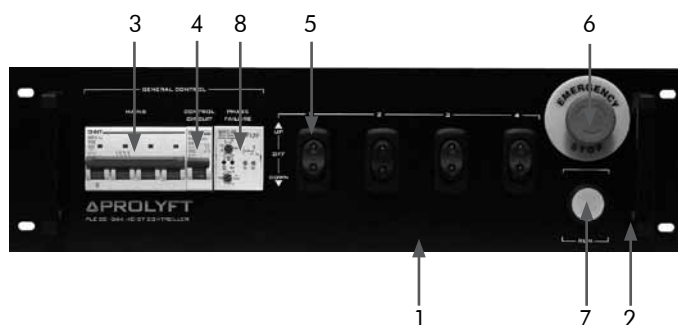


WARNING

THIS SYMBOL POINTS OUT IMPORTANT SAFETY INSTRUCTIONS WHICH IF NOT FOLLOWED COULD ENDANGER THE PERSONAL SAFETY AND/OR PROPERTY OF YOURSELF AND OTHERS. READ AND FOLLOW ALL INSTRUCTIONS IN THIS MANUAL AND ANY PROVIDED WITH THE EQUIPMENT BEFORE ATTEMPTING TO OPERATE YOUR PROLYFT HOIST.

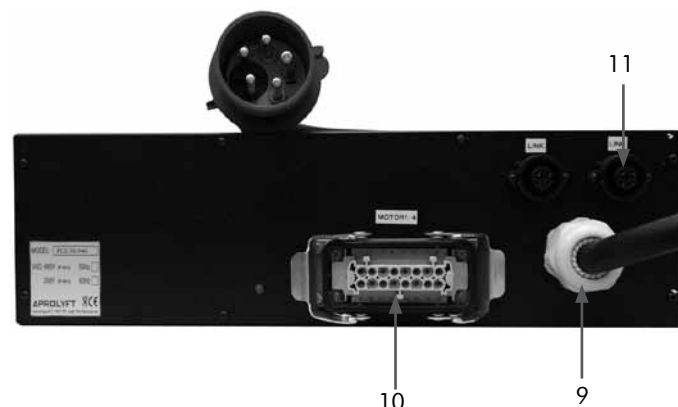
PLE-30-044

4-WAY FOR DIRECT CONTROLLED HOIST



FRONT SIDE

1. 19" 3U rack housing
2. Front plate release bolts
3. Mains switch 3 phase short circuit breaker
4. Short circuit protection for power and control
5. Up-0-Down switch for pre-selecting the individual hoist direction
6. Emergency button
7. Run button
8. Phase failure protection



BACKSIDE

9. Power cable of 150cm with 32A-5p CEE plug with phase reverse plug
10. Output HARTING 16p connector
11. Link option to daisy link multiple controllers for operating larger quantity of hoist with Hirschmann CA3LS connector

FUNCTIONAL DESCRIPTION:

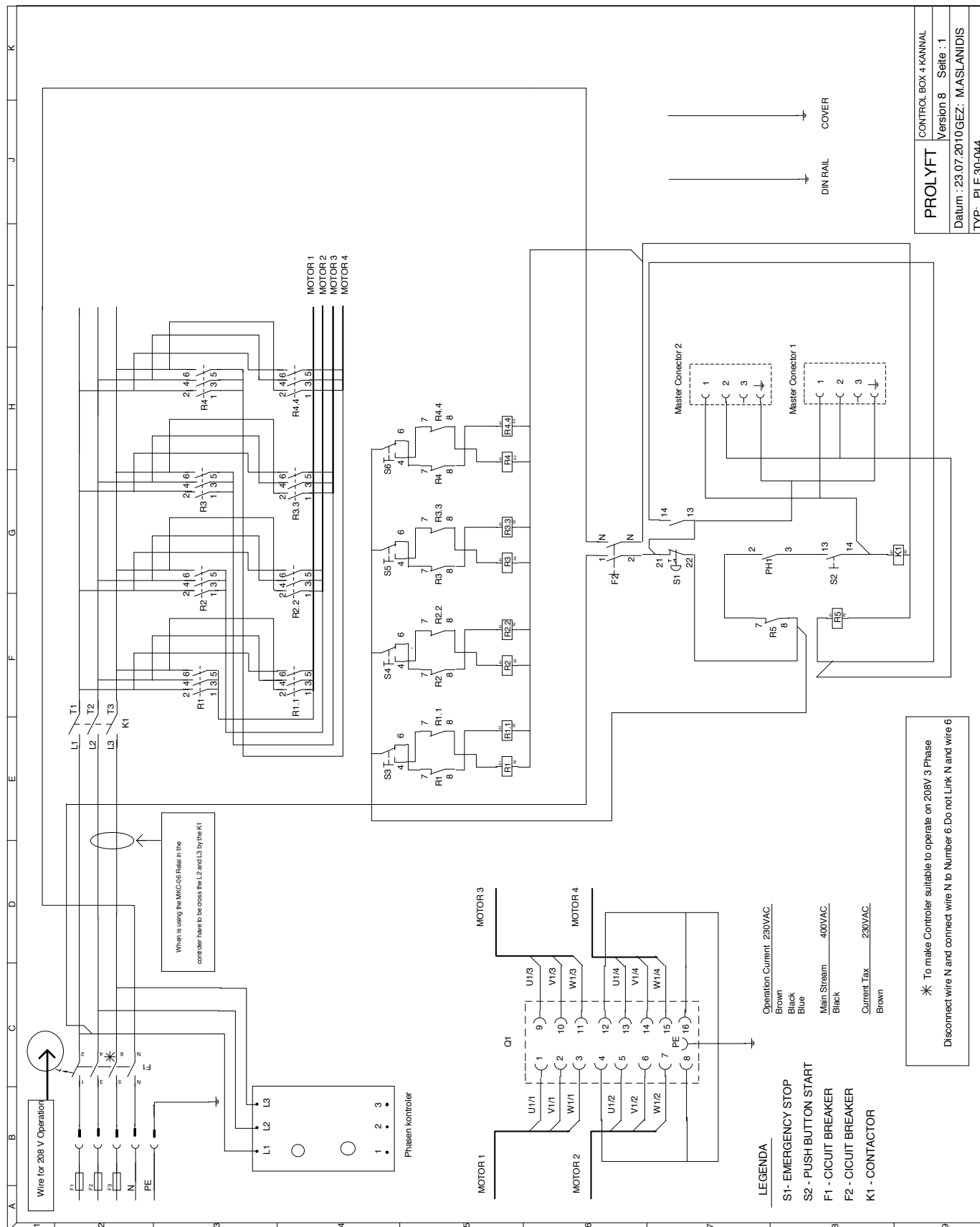
1. Measure the main power supply to be sure the operating voltage is correct and all the phases are present
2. Release the emergency button by turning it anti-clockwise
3. Connect the controller to the power supply and switch it on using the main switch
4. Connect power cords to each of the hoists to be operated. 4 single cords can be connected to one multi cord.
5. Connect the power cords to the controller by using a break-out (HARTING 16p > 4 x 16A 4p) or connect the multi cord to the controller.
6. Link the controllers if you want to operate more than 4-channels using one "run-button".
7. Check if the pre-selection switches for all hoist are in the "0" position
8. Select a hoist and switch it in the up or down direction. Press the run button for 2 seconds to make sure the hoist has power and if the running direction of the hoist matches the selected direction on the controller. Up is green LED, down is red LED.
9. If the direction of the hoist is not correct, change phases using the phase change plug on the power cable.
10. If individual hoist run in the wrong direction, check intermediate cabling or check the hoist.
11. Make sure that the load to be lifted is in the correct position
12. Clear the area from obstacles
13. No people are allowed under or on the load. Make sure all people have left the operating area before you start to move any load.
14. Make sure you have an unobstructed view on the full travel path of the load.
15. Pre-Select all hoist needed in the up or down direction
16. Press the run button to activate all hoists and hold it till the load has reached the desired height. It may be necessary to level the rig at certain stages.
17. Never press the run button staccato. This can severely damage controller and hoist.
18. If the desired height is reached release the run button, and switch of the mains power switch.
19. In case more hoist need to be operated than the controller allows, you can daisy link two or more controllers by means of the link cable. The emergency breaker only works for the controller from which the breaker is pushed!

Note! NEVER change the running direction of a hoist when the run button is pushed



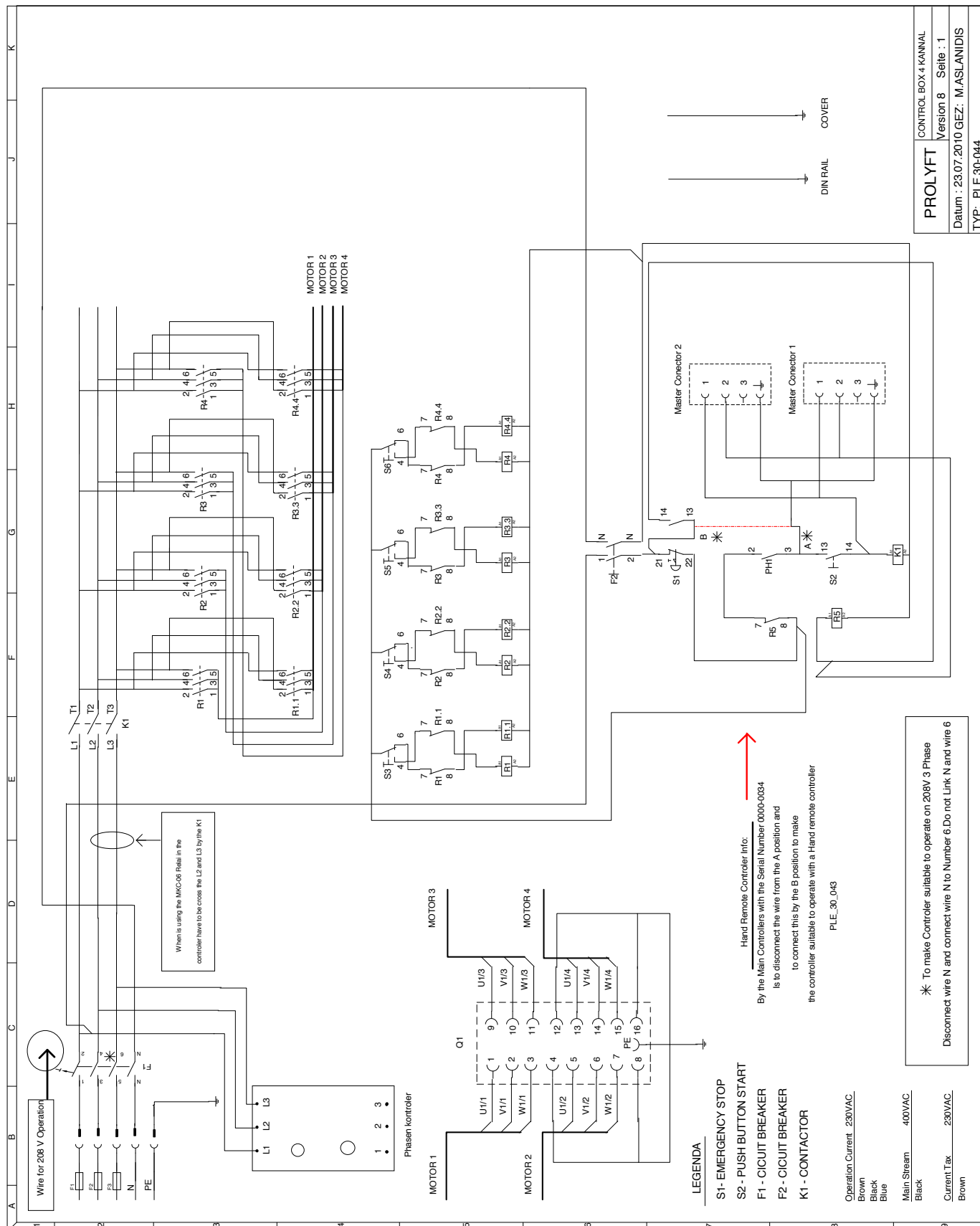
WARNING

- **Use only cable and connectors, which are in good condition**
- **Never connect more than one hoist per channel**
- **Not respecting this manual can cause severe injury or even death**



CONTROL BOX 4 KANAL
Version 8
Datum : 23.07.2010 GEZ: M.ASLANDIS
TYP: PLE 30-044

Electrical plan for all controllers manufactured before july 2010 whith serial number 0000 til 0034 which need to be operated with remote handset PLE-30-043U



CONTROL BOX 4 KANAL

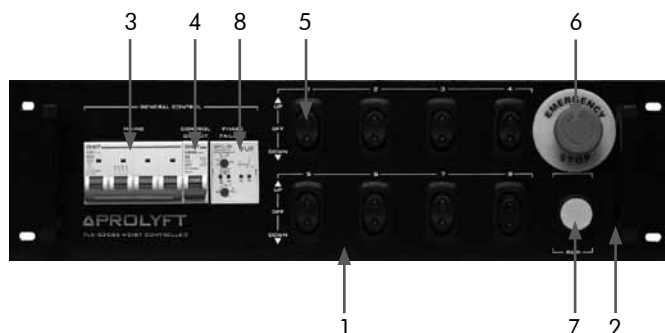
Version 8

Seite : 1

Datum : 23.07.2010 GEZ: M.ASLANDIS

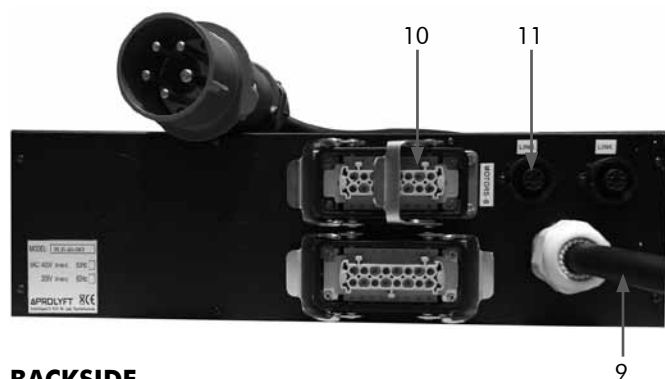
TYP: PLE 30-044

PLE-30-083 8-WAY FOR DIRECT CONTROLLED HOIST



FRONT SIDE

1. 19" 3U rack housing
2. Front plate release bolts
3. Mains switch 3 phase short circuit breaker
4. Short circuit protection for power and control
5. Up-0-Down switch for pre-selecting the individual hoist direction
6. Emergency button
7. Run button
8. Phase failure protection



BACKSIDE

9. Power cable of 100cm with 32A-5p CEE plug with phase reverse plug
10. 2 x Output HARTING 16p connector
11. Link option to daisy link multiple controllers for operating larger quantity of hoist with Hirschmann CA3LS connector

FUNCTIONAL DESCRIPTION:

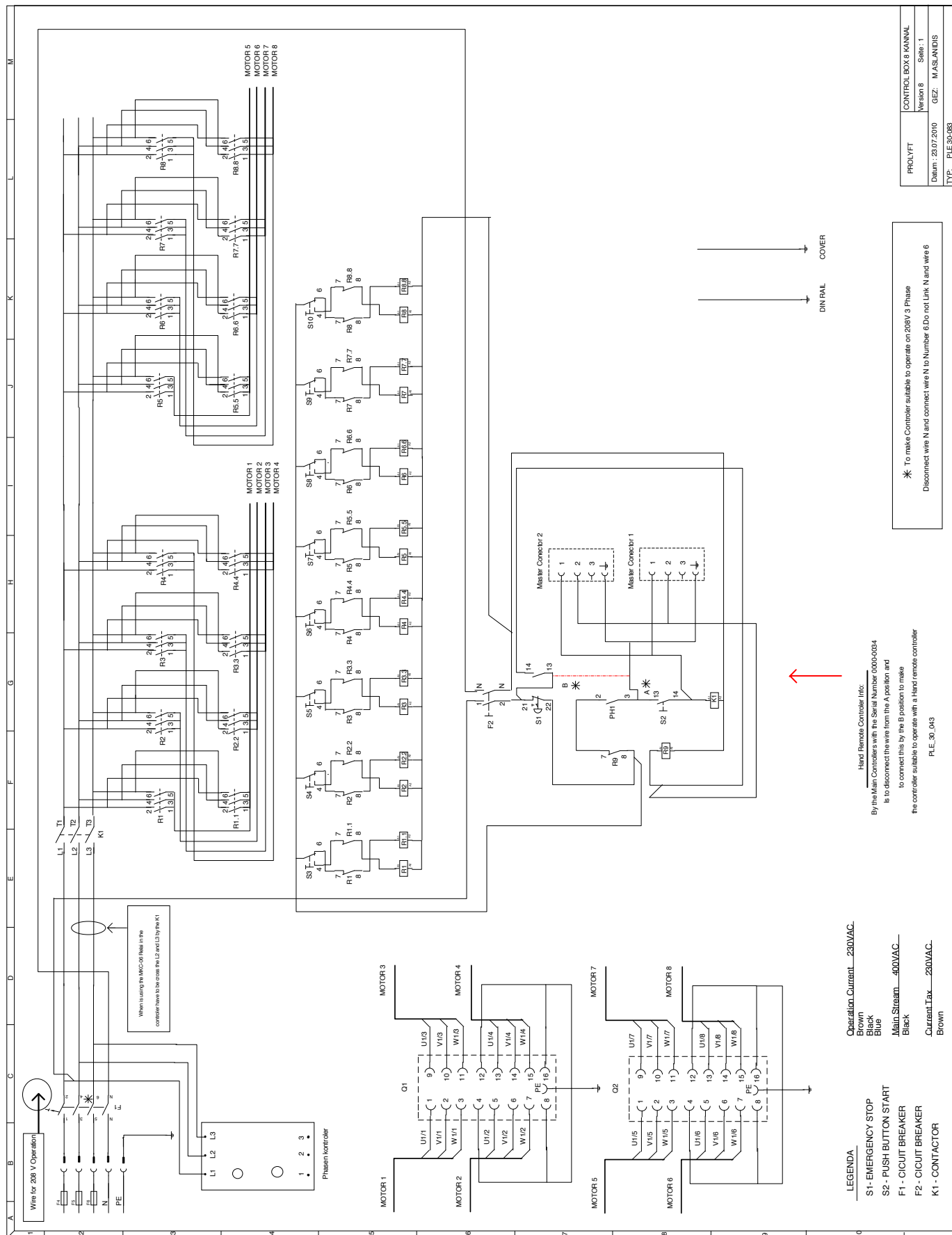
1. Measure the main power supply to be sure the operating voltage is correct and all the phases are present
2. Release the emergency button by turning it anti-clockwise
3. Connect the controller to the power supply and switch it on using the main switch
4. Connect power cords to each of the hoists to be operated. 4 single cords can be connected to one multi cord.
5. Connect the power cords to the controller by using a break-out (HARTING 16p > 4 x 16A 4p) or connect the multi cord to the controller.
6. Link the controllers if you want to operate more than 4-channels using one "run-button".
7. Check if the pre-selection switches for all hoist are in the "0" position
8. Select a hoist and switch it in the up or down direction. Press the run button for 2 seconds to make sure the hoist has power and if the running direction of the hoist matches the selected direction on the controller. Up is green LED, down is red LED
9. If the direction of the hoist is not correct, change phases using the phase change plug on the power cable.
10. If individual hoist run in the wrong direction, check intermediate cabling or check the hoist.
11. Make sure that the load to be lifted is in the correct position
12. Clear the area from obstacles
13. No people are allowed under the load. Make sure all people have left the operating area before you start to move any load.
14. Make sure you have an unobstructed view on the full travel path of the load.
15. Pre-Select all hoist needed in the up or down direction
16. Press the run button to activate all hoists and hold it till the load has reached the desired height. It may be necessary to level the rig at certain stages.
17. Never press the run button staccato. This can severely damage controller and hoist.
18. If the desired height is reached release the run button, and switch of the mains power switch.
19. In case more hoist need to be operated than the controller allows, you can daisy link two or more controllers by means of the link cable. The emergency breaker only works for the controller from which the breaker is pushed!

Note! NEVER change the running direction of a hoist when the run button is pushed

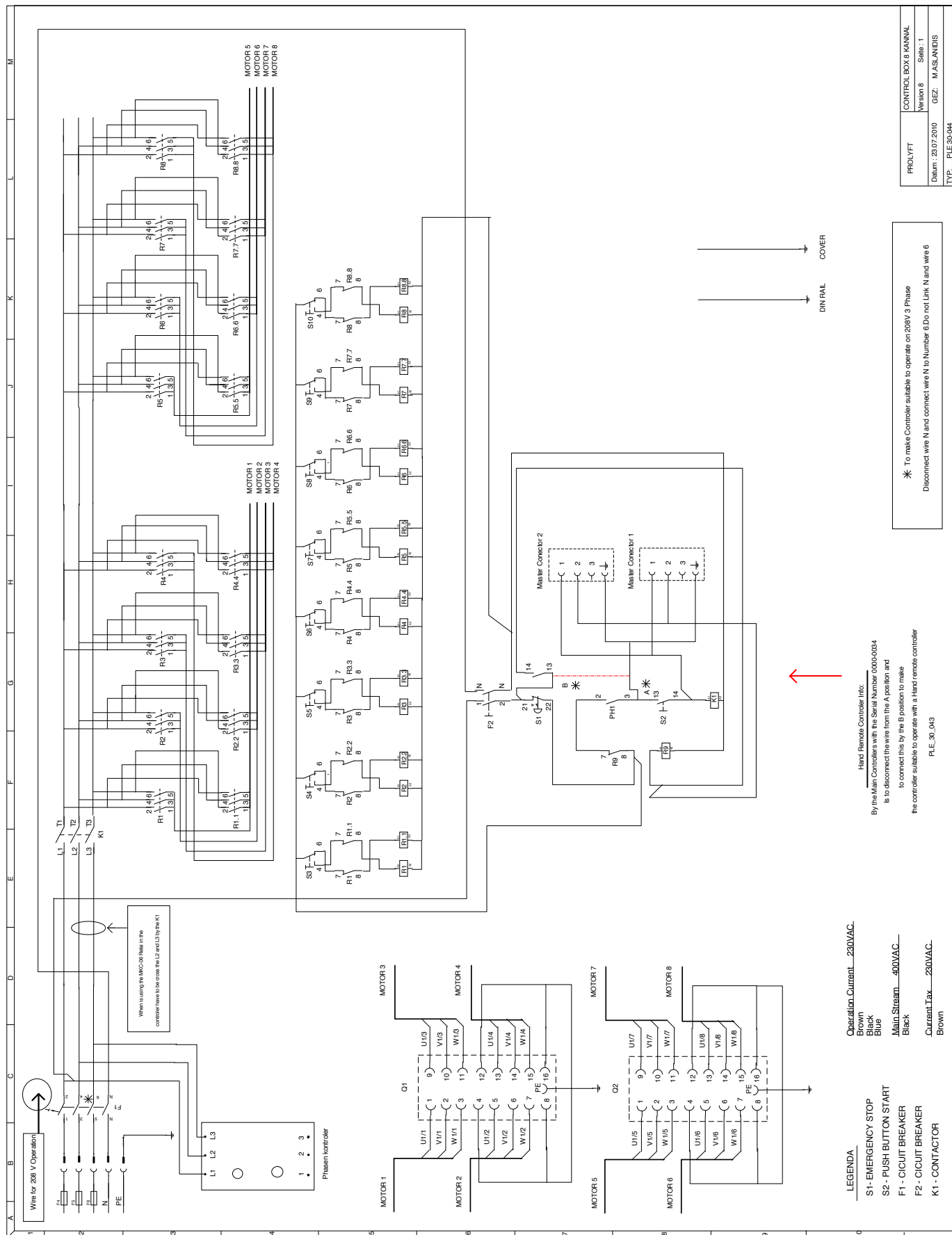


WARNING

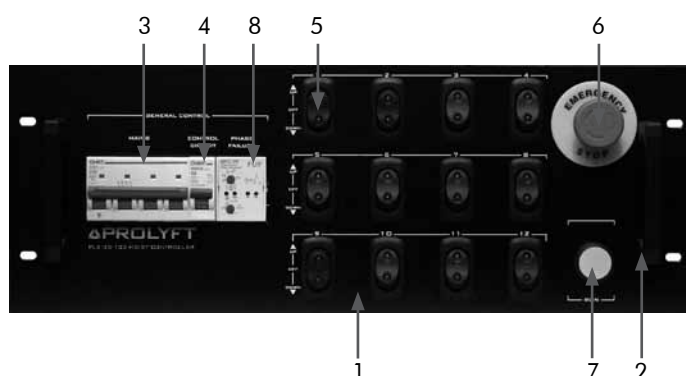
- **Use only cable and connectors, which are in good condition**
- **Never connect more than one hoist per channel**
- **Not respecting this manual can cause severe injury or even death**



Electrical plan for all controllers manufactured before July 2010 with serial number 0000 till 0034 which need to be operated with remote handset PLE-30-043U

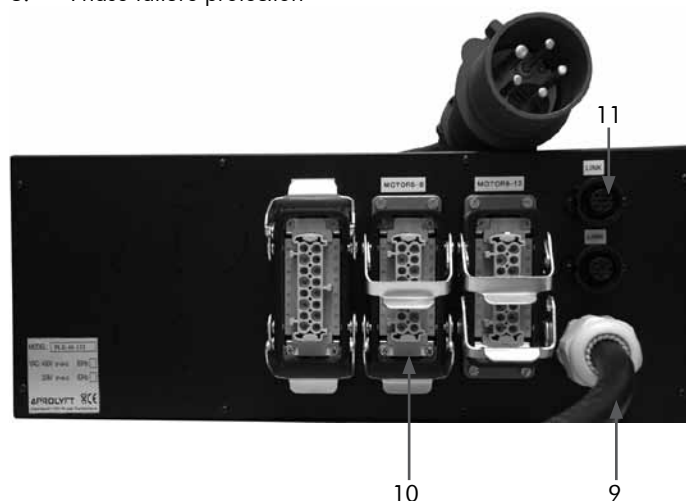


PLE-30-123 12-WAY FOR DIRECT CONTROLLED HOIST



FRONT SIDE MASTER

1. 19" 4U rack housing
2. Front plate release bolts
3. Mains switch 3 phase short circuit breaker
4. Short circuit protection for power and control
5. Up-0-Down switch for pre-selecting the individual hoist direction
6. Emergency button
7. Run button
8. Phase failure protection



BACKSIDE MASTER

9. Power cable of 100cm with 32A-5p CEE plug with phase reverse plug
10. 3 x Output HARTING 16p connector
11. Link option to daisy link multiple controllers for operating larger quantity of hoist with Hirschmann CA3LS connector

FUNCTIONAL DESCRIPTION:

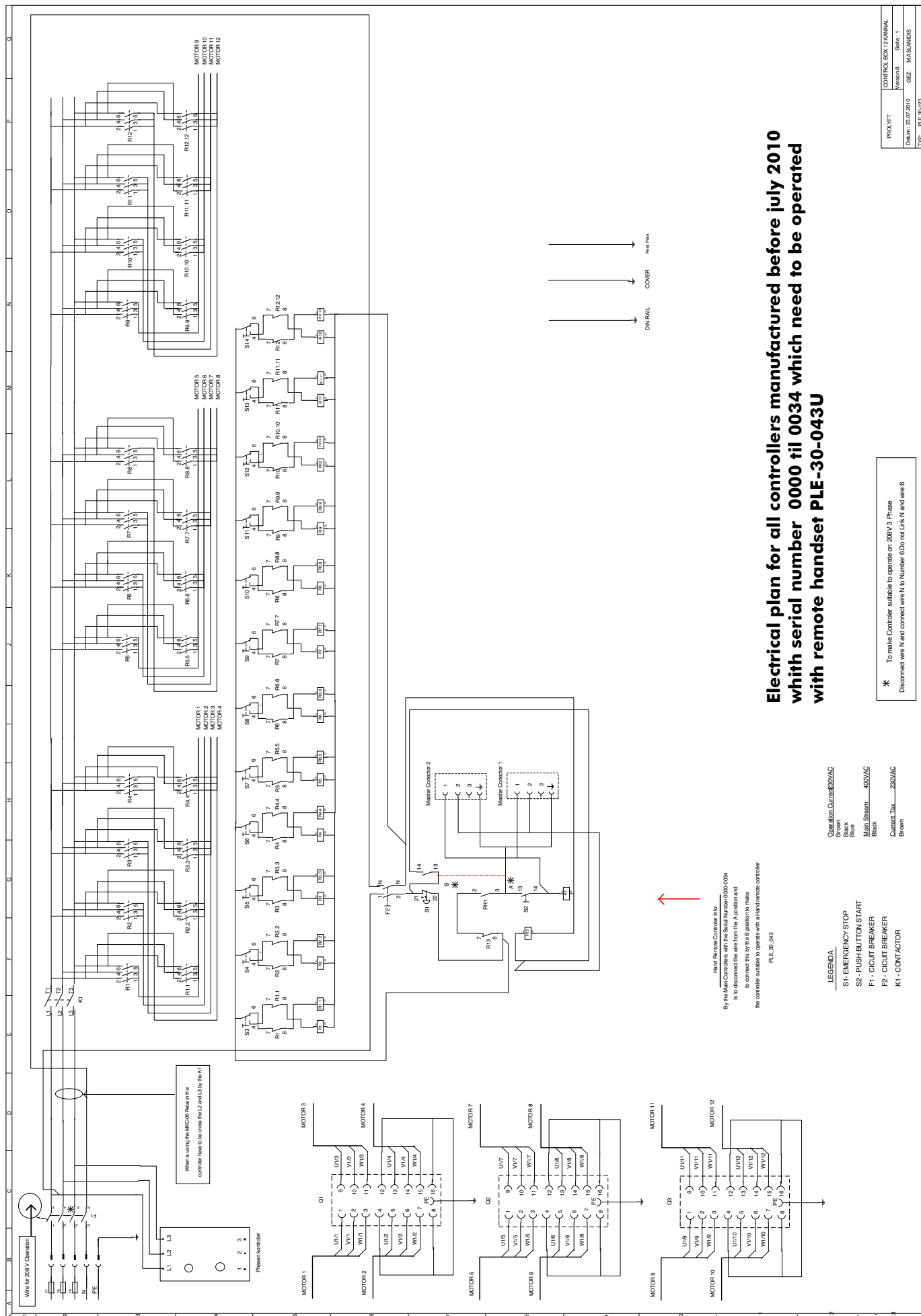
1. Measure the main power supply to be sure the operating voltage is correct and all the phases are present
2. Release the emergency button by turning it anti-clockwise
3. Connect the controller to the power supply and switch it on using the main switch
4. Connect power cords to each of the hoists to be operated. 4 single cords can be connected to one multi cord.
5. Connect the power cords to the controller by using a break-out (HARTING 16p > 4 x 16A 4p) or connect the multi cord to the controller.
6. Link the controllers if you want to operate more than 4-channels using one "run-button".
7. Check if the pre-selection switches for all hoist are in the "0" position
8. Select a hoist and switch it in the up or down direction. Press the run button for 2 seconds to make sure the hoist has power and if the running direction of the hoist matches the selected direction on the controller. Up is green LED, down is red LED.
9. If the direction of the hoist is not correct, change phases using the phase change plug on the power cable.
10. If individual hoist run in the wrong direction, check intermediate cabling or check the hoist.
11. Make sure that the load to be lifted is in the correct position
12. Clear the area from obstacles
13. No people are allowed under the load. Make sure all people have left the operating area before you start to move any load.
14. Make sure you have an unobstructed view on the full travel path of the load.
15. Pre-Select all hoist needed in the up or down direction
16. Press the run button to activate all hoists and hold it till the load has reached the desired height. It may be necessary to level the rig at certain stages.
17. Never press the run button staccato. This can severely damage controller and hoist.
18. If the desired height is reached release the run button, and switch of the mains power switch.
19. In case more hoist need to be operated than the controller allows, you can daisy link two or more controllers by means of the link cable. The emergency breaker only works for the controller from which the breaker is pushed!

Note! NEVER change the running direction of a hoist when the run button is pushed



WARNING

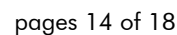
- Use only cable and connectors, which are in good condition
- Never connect more than one hoist per channel
- Not respecting this manual can cause severe injury or even death



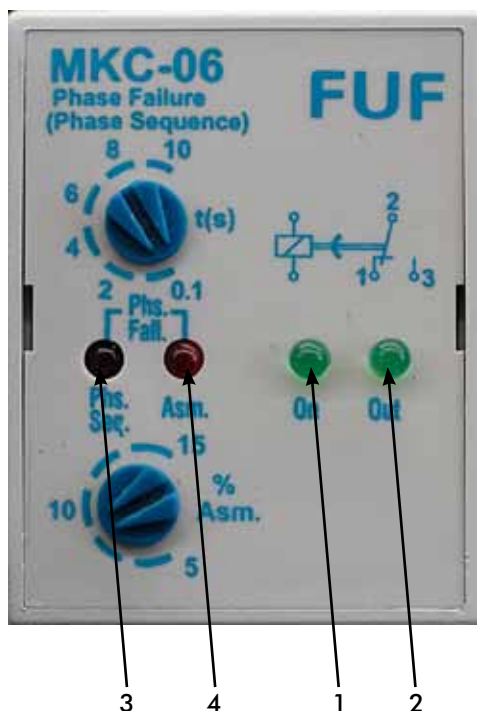
**Electrical plan for all controllers manufactured before July 2010
with serial number 0000 til 0034 which need to be operated
with remote handset PLE-30-043U**

* To make Controller suitable to operate on 230V/3 Phase
Disconnect wire N and connect wire N to Number 6. Do not Link N and wire 6

CONTROL BOX 12 MANUAL
Version 8
Date: 11
GEZ: MARSANDS
Typ: PLE-30-123



PHASE FAILURE PROTECTOR



PHASE FAILURE

This document describes the phase failure protector inside the Prolyft PLE 30 and 40 series controllers

Phase Failure

- When all phases are present and in correct order LED no: 1 (On) and LED no: 2 (Out) are lighten ON
- When phases are not in correct order LED no: 1 (On) and LED no: 3 (Phs Seq.) are lighten ON. In this case the phases shall be turned. This can be done by disconnecting the controller. The power cord is equipped with a phase reverse plug. Use a screwdriver to turn phases.
- In case of missing phases or when there is a voltage unbalance of 15% or more between phases, LED no: 1 (On) and LED no: 4 (Asm.) are lighten ON. In this case the controllers main relay is not activated.

Voltage Unbalance:

When the phase to phase voltage unbalance is less than the adjusted value by the user, the output relay is activated. If the unbalance value exceeds the limit value (5%-15%) (to be set by the user), the output relay is switched OFF at the end of delay time (0,1....10s) (also to be set by the user). LED No: 2 (Out) is lighten OFF, and Asymmetry error LED no: 4 (Asm.) is lighten ON. If the fault disappears within the delay time, the output relay is not switched OFF.

The voltage unbalance occurs if the L1,L2,L3 are loaded unequally. This can be caused by a non-uniform distribution of loads on the lines. The voltage asymmetry causes a rise of the motor temperature and a reduction of the rated motor power. Voltage asymmetry limit values can be adjusted between 5% and 15%. The Hysteresis is fixed at 20%

Example:

Given 3x380V supply with 10% asymmetry, relay switches OFF at:
 $380 - (380 \times 10\%) = 342V$
 Relay switches ON at: $342 + (342 \times 10\% \times 20\%) = 348V$

REMOTE CONTROL

A remote control for the PLE-030 series is available. The master and connected slaves can be controlled with this remote unit. The remote should be plugged into link connector. The remote works as a run button and emergency stop only. Individual presets for each hoist have to be made with the pre-set switches first.



Remote control
PLE-30-043

GUARANTEE

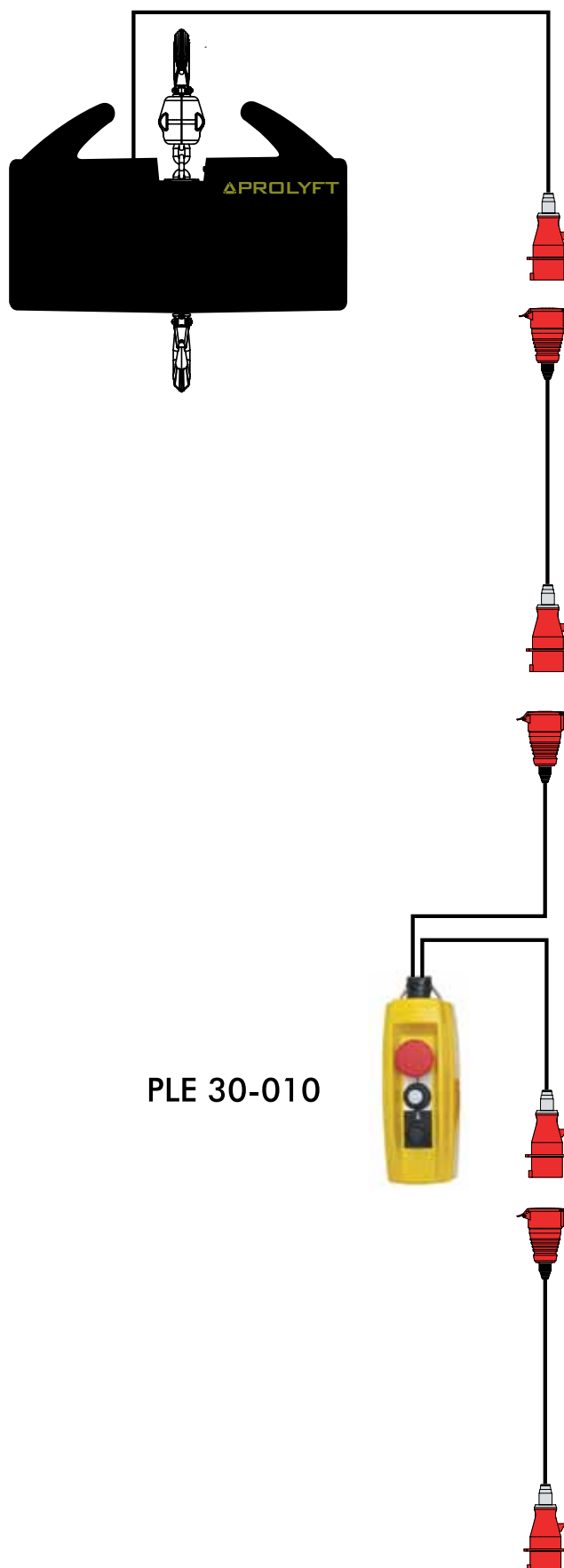
- 1) Prolift controllers are delivered with a one-year guarantee.
- 2) If for a reason outside the control of the vendor, the delivery is delayed, the time lag cannot exceed three months.
- 3) If the use (installation) of the controller is delayed, the corresponding extension of the guarantee (a single extension limited to three months) must be requested, and written confirmation obtained.
- 4) The vendor undertakes to eliminate all operating errors originating from the concept, the execution, the components or the materials themselves.
- 5) The guarantee does not cover normal wear, or the failures resulting from abnormal use. It does not cover damage due to a lack of supervision, to false operation or to a bad utilisation of the controller, particularly due to overload, inching, under voltage or over voltage or connecting errors.
- 6) The guarantee does not apply when there is disassembly, modification or replacement of parts (mechanical or electrical) by an unauthorised party or without our prior agreement.
- 7) The guarantee only applies for original, factory-installed spare parts. For the duration of the guarantee, the vendor undertakes to replace or repair, free of charge, the parts, in his workshop, that are acknowledged to be damaged following examination by a qualified and authorised service.
- 8) The guarantee excludes any other services or indemnities. The repairs covered by the guarantee are carried out, as a rule, in the workshops of the vendor or authorised agent. When servicing of the equipment is done outside these workshops, the labour costs for disassembly or assembly of these parts are borne by the vendor when these are done exclusively by his staff or by an authorised agent.
- 9) The replaced parts become the property of the vendor and must be returned to the vendor at his expense.
- 10) For components of a relative particular importance that are not manufactured by the vendor and which carry the brand name of specialised manufacturers, the manufacturer's guarantee (which can vary according to the manufacturer) is applicable.

*The guarantee does not apply for expendable parts defined by the manufacturer:

- Fuses
- Contactor contacts

TROUBLE SHOOTING	
Hoists do not respond to the "run" signal	Solution
1) Check cabling and connections	Connect properly / measure
2) Corresponding switch is pre-selected in the "0" position	Select "up" or "down"
3) Thermal motor protector is switched off	This can be any of the switches from the connected masters / slaves
4) The thermal motor protector has the wrong setting	Set to 1.9amp for Prolift hoist
5) Mains switch is switched off	Switch "on"
6) Emergency button is activated	Turn button clockwise to release
7) There is too much resistance in one of the connectors	Measure the resistance in Ohm's of the connectors
The controller doesn't respond	Solution
8) Check the power cable	Connect properly / measure
9) Phase failure indicator shows red	Change phases, measure power supply
9) Power supply is switched off	Switch "on"
10) Control circuit breaker is switched off	Switch "on"
11) Mains switch is switched off	Switch "on"
12) Emergency button is activated	Turn button clockwise to release
13) Environmental temperatures are too high	Place the controller in a cooler/warmer surrounding
14) There is too much resistance in one of the connectors	Measure the resistance in Ohm's of the connectors

1-WAY HANDHELD



Motor cable:

5 m. PLA-30-05

10 m. PLA-30-10

20 m. PLA-30-20

PLE 30-010

Power input

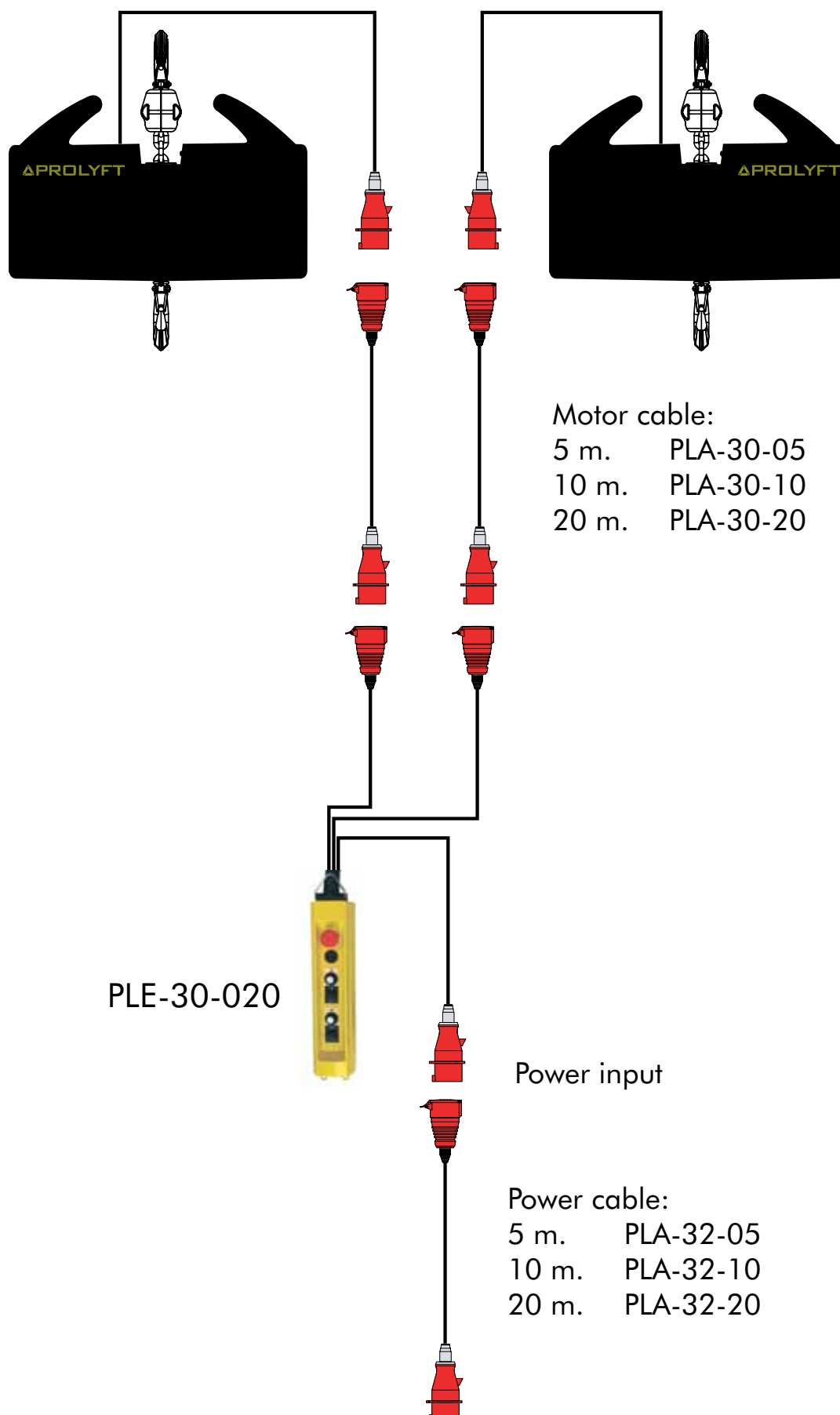
Power cable:

5 m. PLA-32-05

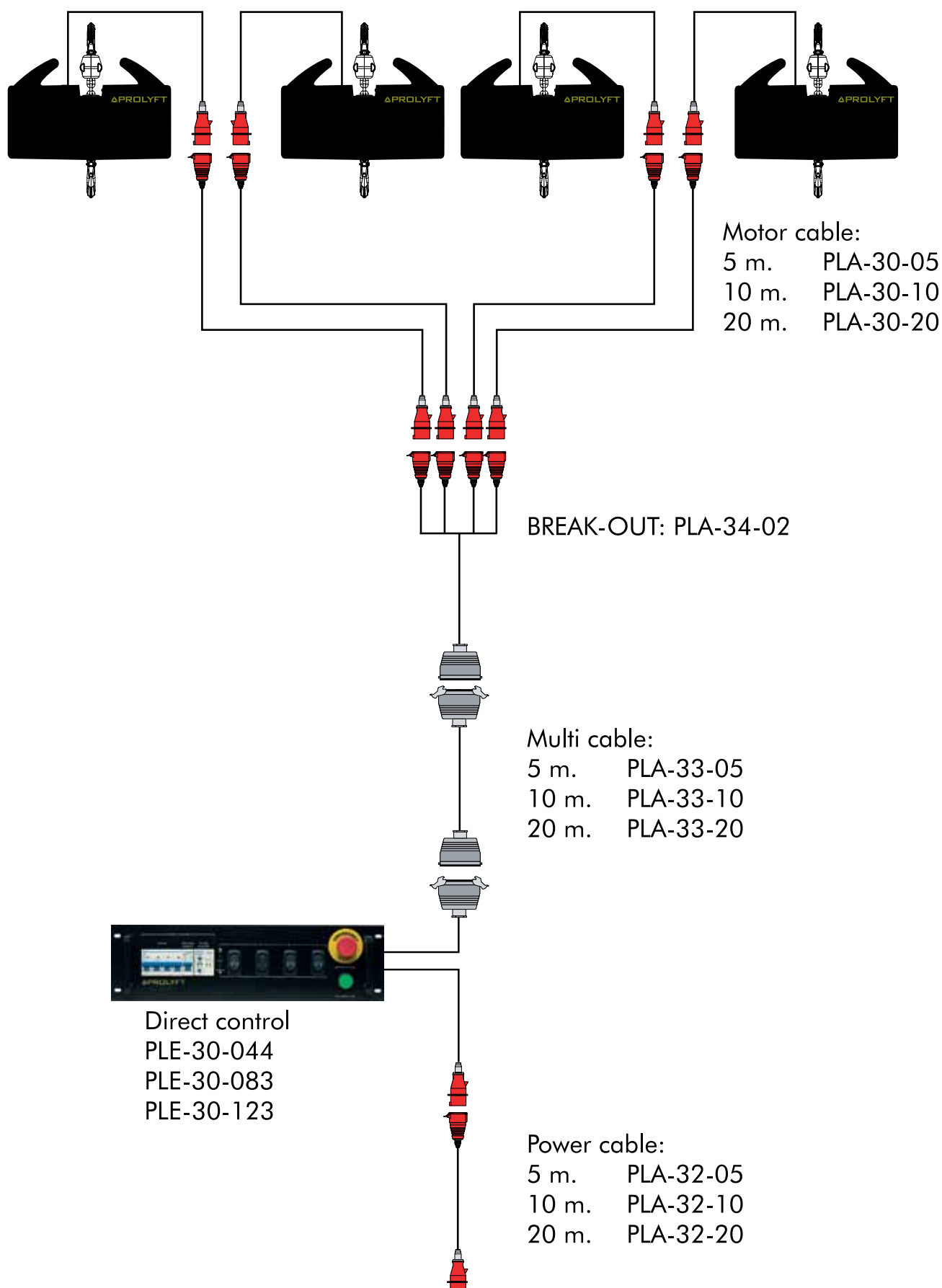
10 m. PLA-32-10

20 m. PLA-32-20

2-WAY HANDHELD



4-WAY BASIC



8-WAY BASIC

