# Maintenance instructions for the vertical platform lift STL300

## The work is to be carried out by qualified technical personnel only!

The following work may **only be carried out by qualified personnel**:

Installation
Adjustments and settings
**Maintenance work**
Fault finding/rectification

Qualified personnel are persons who

- know how the machine works
- have received instruction on how it works
- have read and understood the operating, installation and service manuals
- are aware of the dangers posed by the machine (and also its components)
- know and understand the interrelationships between the mechanical components
- know and understand the interrelationships between the electrical components
- have the appropriate tools/measuring instruments and know how to use them
- have a sufficient understanding of the German or English language respectively

When carrying out any work on the machine, please note:

- Do not allow other persons to access the machine when there is an increased danger potential (covers removed, safety devices disabled etc.).
- Avoid the risk of tripping up due to the open machine, tools lying around, electrical cables etc.
- The potential dangers of the machine may not have been increased after conclusion of the work on the machine
- Parts of the machine that are not yet firmly connected to the building/running rail are to be secured against falling over

**The safety instructions in the operating manual are to be observed!!**

Original parts and accessories are specially designed for our platform lifts. We expressly draw your attention to the fact that parts and accessories not supplied by us have also not been tested and approved by us. The installation and/or use of such products can therefore, under certain circumstances, negatively affect the constructive specified characteristics of the lift and impair the active and/or passive travelling safety as a result. The manufacturer accepts no liability whatsoever for damage caused by the use of non-original parts and accessories.

# Tools / operating resources and auxiliary materials / measuring and testing devices

Torque wrench 110 Nm (10 to 24 mm)
Spanner, open-ended/ring (7 / 8 / 10 / 13 / 14 / 17 / 30 / 40 mm)
Hexagon keys (2 / 3 / 4 /5 /6 mm)
Taper pin punch (4 / 6 mm)
Long nose pliers
Side cutters
Circlip pliers A01, A11
Phillips screwdriver (PH1, PH2)
Flat blade screwdriver (1 x 6 mm / 0.6 x 4.5 mm)

Loctite 243
Cable drum
Lamp
Voltmeter (230 V AC / 30 V DC)
Ammeter 24 V DC min. 1A max. 50A
Ohmmeter

9V block battery (1x)
1.5 V AA battery (2x for each external command unit)
Battery 1.5V AAA (2x for each UHF handheld transmitter)

Lubricants:
Check overview on next page.

Wearing parts / parts that should be carried in case exchange is necessary:
12 V batteries (4 x)
Roller lever switch (1x)
Plunger switch (1x)
Microswitch
Command unit on coiled cable with socket (1x)
Battery charger (1x)
Fuses: 6.3 A slow-blow micro-fuse / 2 A blade fuse / 10 A blade fuse / 25 A torpedo fuse

Lubricants and cleaner

| | T80 | Konstanz | LL12 | STL300 ↓ |
|---|---|---|---|---|
| Rail joint | 8* | xxx | xxx | xxx |
| Rack / Pinion | xxx | xxx | 9 | 9 |
| Main chain | 2 | 2* or 3** | xxx | xxx |
| Drivebox - plastic guidiance | 1 | xxx | xxx | xxx |
| Drivebox - lugs | 1 | xxx | xxx | xxx |
| Antrieb Zwischenklötze | 6 | xxx | xxx | xxx |
| Locking bolt | 2* or 3** | 2* or 3** | 3 | 2* or 3** |
| Bowder line | 3* | 3* | 3* | 3* |
| Bearing for pramps | 2* or 3** | 2* or 3** | 3 | 2* or 3** |
| Barriers - bars | 2* or 3** | 2* or 3** | 3 | 2* or 3** |
| Bearing OSG | 4 | 4 | 4 | 4 |
| Cleaning OSG | 7 | 7 | 7 | 7 |
| Unlocking clamps | 2* or 3** | 2* or 3** | 3 | 2* or 3** |

* Indoorn unit

** Outdoor unit

| | |
|---|---|
| **1** | OKS 469 NLGL 2 plastic and elastomer lubricant (-40°C bis 150°C) |
| **2** | E-COLL NLGI 2 multi-purpose graphite grease II (-30°C bis 120°C) |
| **3** | E-COLL NLGI 2 multi-purpose grease I, lithium soaped |
| **4** | Mixture (50/50) of No.3 and No.5 |
| **5** | Eurotech Neoval Oil MTO 300 |
| **6** | Interflon Fin Grease (Aerosol) multi-purpose grease (-20°C bis 150°C) |
| **7** | Ultraclean Eurotech (technical cleaner) |
| **8** | OKS 2101 |
| **9** | Ballistol Teflon Spray |

07/2019

| **Maintenance plan** based on EN 13015 | Manufacturer: **LIPPE Lift GmbH** **Weststrasse 48, 32657 Lemgo** | | **Location:** | |
|---|---|---|---|---|
| **Page 1 of 5** | Designation of the lift: **STL300 vertical platform lift** | | **Serial no.:** | |
| Seq. no. | Work to be carried out (by qualified technical personnel only) | Measuring and testing devices, operating and auxiliary materials | | Remarks |
| **1.** | **Supports** | | | If present |
| 1.1 | *Check firm seating* | | A | |
| 1.2 | *Examine for corrosion, breakages and deformations* | | A | |
| **2.** | **Running track** | | | |
| 2.1 | Fastening | | | |
| 2.1.1 | *Examine for corrosion, breakages and deformations* | | A | |
| 2.1.2 | *Check firm seating* | | A | |
| 2.2 | Upper and lower roller blind | | | |
| 2.2.1 | Check fixing, function and disruption | | A | |
| 2.2.2 | Check rolling-up / rolling-down without rubbing | | A | |
| 2.3 | Limit switch curves | | | |
| 2.3.1 | *Examine for corrosion* | | A | |
| 2.3.2 | *Check position, function and firm seating* | | A | |
| 2.4 | Unlocking curves | | | |
| 2.4.1 | *Examine for corrosion and breakages* | | A | |
| 2.4.2 | *Check position, function and firm seating* | | A | Replace plastic if necessary |
| 2.5 | Strip for Bypass switch | | | |
| 2.5.1 | *Check function, examine for breakages* | | A | |
| 2.5.2 | *Check position and fixing* | | A | |
| 2.6 | Battery charging station | | | |
| 2.6.1 | *Examine for breakages, deformation, corrosion and wear* | | A | |
| 2.6.2 | *Check contact, function, adjustment and fastening* | Voltmeter / Ammeter | A | Voltage at the battery charging station must be between 25.5 V and 29.5 V |
| 2.7 | Cable shaft and guidance of cable shaft | | | |
| 2.7.1 | *Examine for breakages, deformation and wear* | | A | |
| 2.7.2 | *Check function and fixing* | | A | |
| Intervals: A = once by year B = every 2 years | | | | |

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| **Page 2 of 5** | Designation of the lift: **STL300 vertical platform lift** | **Serial no.:** |

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|---|---|---|---|---|
| **3.** | **Carriage** | | | |
| 3.1 | Roller set | | | |
| 3.1.1 | *Examine for corrosion, breakages and deformations* | | A | |
| 3.1.2 | *Examine the fastening, adjustment and clearance* | | A | |
| 3.1.3 | *Examine for noises, deformation, wear and dirt* | | A | |
| 3.2 | Rotating drive | | | |
| 3.2.1 | *Examine for corrosion, breakages, noises, dirt and deformation* | See page 3 | A | |
| 3.2.2 | *Check adjustment, arrester, firm seating, cotter pins, function and lubrication* | See page 3 | A | |
| 3.2.3 | Main drive chain (duplex) | | | |
| 3.2.3.1 | *Check adjustment, play, lubrication/ re-tension via eccentric bush* | See page 3 | A | |
| 3.3 | Controller: *Check firm seating* | | B | |
| 3.3.1 | Replace battery (for acoustic signals) | 9V block battery | A | |
| 3.4 | Barriers | | | |
| 3.4.1 | *Check adjustment, function, play and lubrication (bearings and linkage).* | See page 3 | A | |
| 3.4.2 | *Check function and wear of the locking device* | | A | |
| 3.4.3 | *Examine for corrosion and dirt* | | A | |
| 3.5 | Contact floor | | | |
| 3.5.1 | *Examine for deformation and dirt* | | A | |
| 3.5.2 | *Check function, fastening and play* | | A | |
| 3.6 | Internal controller | | | |
| 3.6.1 | *Check function, fastening,* | | A | |
| 3.6.2 | *Examine for breakages and missing labelling* | | A | |
| | | | | |
| | | | | |

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|---|---|---|
| **Page 3 of 5** | Designation of the lift: **STL300 vertical platform lift** | **Serial no.:** |

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|---|---|---|---|---|
| 3.7 | External controller | | | |
| 3.7.1 | *Check function, fastening* | | A | |
| 3.7.2 | *Examine for breakages and missing labelling* | | A | |
| 3.7.3 | Replace battery | 2x 1.5 V AA | A | |
| 3.8 | Motor: *Check fastening* | | A | |
| 3.9 | All switches | | | |
| 3.9.1 | *Examine for breakages, wear and dirt* | | A | |
| 3.9.2 | *Check function, adjustment, fastening and play* | | A | |
| 3.10 | Main breaker | | | |
| 3.10.1 | *Examine for breakages, wear and dirt* | | B | |
| 3.10.2 | *Check function and fastening* | | A | |
| 3.11 | Worm gear: *Examine for breakages and leaks* | | B | |
| 3.12 | Rear panel: *Check fastening* | | B | |
| 3.13 | Batteries (6 V and/or 12 V) | | | |
| 3.13.1 | *Examine for corrosion and dirt* | | B | |
| 3.13.2 | *Check firm seating, function and voltage* | Voltmeter | A | The voltage of each individual battery: min. 6.3 V (12.3 V). Difference between the individual batteries max. 0.2 V (only replace complete blocks!) |
| 3.14 | Battery charger | | | |
| 3.14.1 | *Examine for breakages and dirt* | | A | |
| 3.14.2 | *Check function and fastening* | | A | |
| 3.15 | Charging fuse | | | |
| 3.15.1 | *Examine for breakages and dirt* | | A | |
| 3.15.2 | *Check function and fastening* | | A | |

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|---|---|---|---|---|
| **Page 4 of 5** | Designation of the lift: **STL300 vertical platform lift** | | **Serial no.:** | |
| Seq. no. | Work to be carried out (by qualified technical personnel only) | Measuring and testing devices, operating and auxiliary materials | | Remarks |
| 3.16 | Charging brushes | | | |
| 3.16.1 | *Examine for breakages, deformation and wear* | | A | |
| 3.16.2 | *Check function, adjustment and fastening* | | A | |
| 3.17 | - Empty - | | | |
| 3.18 | Ramp | | | |
| 3.18.1 | *Examine for corrosion, deformation and dirt* | | A | |
| 3.18.2 | *Check fastening, adjustment (folded up and down), function and lubrication* | See page 3 | A | Readjust via eccentric if necessary; readjust tension spring if necessary; angle when folded up at least 45° |
| 3.19 | Automatic gearbox (barriers) | | | |
| 3.19.1 | *Examine for breakages, deformation and wear* | | A | |
| 3.19.2 | *Check chain elongation, function, fastening and cotter pins* | | A | |
| 3.20 | Couplings (barriers) | | | |
| 3.20.1 | *Examine for breakages, deformations, noises and wear* | | A | |
| 3.20.2 | *Check function, adjustment and cotter pins* | | A | |
| 3.21 | Folding seat / safety belt | | | If present |
| 3.21.1 | *Examine for breakages, tears and deformation* | | A | |
| 3.21.2 | *Check function and fastening* | | A | |
| 3.22 | Unlocking cams | | | |
| 3.22.1 | *Examine for deformation and dirt* | | A | |
| 3.22.2 | *Check function, adjustment and lubrication* | See page 3 | A | |
| 3.23 | Emergency unlocking device: *Check function and marking* | | A | |
| 3.24 | Hand wheel: *Check fastening and labelling* | | A | |
| 3.25 | Emergency call: *Check function* | | A | Check batteries if present (9V) |
| | | | Intervals: | A = once per year B = every 2 years |

| | | | | |
|---|---|---|---|---|
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| **Page 5 of 5** | Designation of the lift: **STL300 vertical platform lift** | | | **Serial no.:** |

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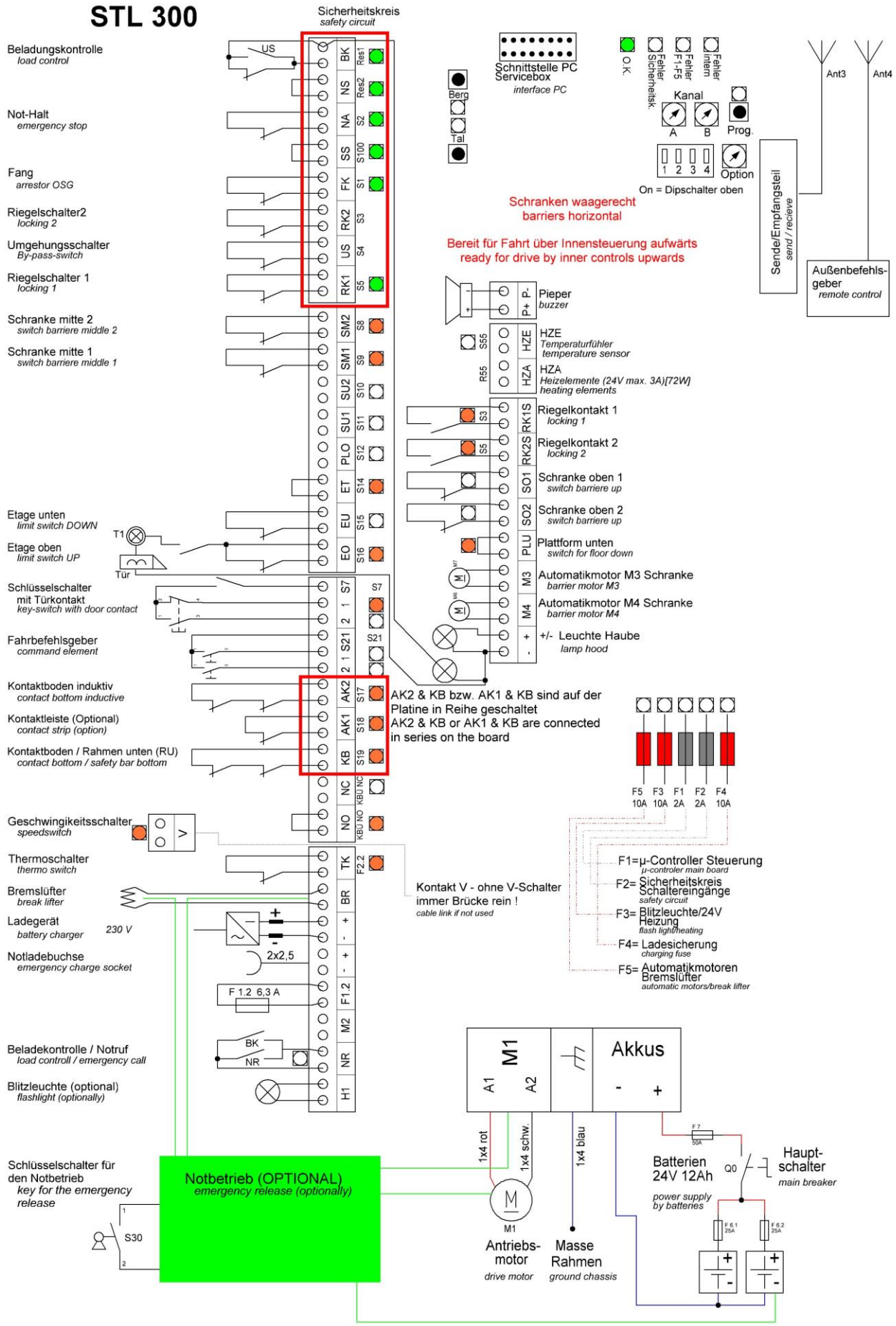
|---|---|---|---|---|
| 3.26 | Contact switch, underside of frame | | | |
| 3.26.1 | *Check function, adjustment and play* | | A | |
| 3.27 | - Empty - | | | |
| 3.28 | Overload protection | | | |
| 3.28.1 | *Check function, adjustment and play* | | A | |
| 3.29 | Electrical emergency lowering | | | If present |
| 3.29.1 | *Check function* | | A | |
| **4.** | **Others** | | | |
| 4.1 | Test drive: *Check all functions and driving behaviour* | | A | |
| 4.2 | Labelling (stickers, warning notices etc.): complete | | A | *Possibly not supplemented at customer's request?* |
| 4.3 | Sensitive strip (balcony) | | | If present |
| 4.3.1 | *Check function, fixation and cabeling* | | A | |
| 4.4 | Door at stop | | | If present |
| 4.4.1 | *Check electrical function as a function of the platform* | | A | |
| 4.4.2 | *Check mechanical function, adjustment, fixing and free movement* | | A | |
| 4.4.3 | Filling material (glas, metal, plastic, etc.) | | | Triangular key (metal) |
| 4.4.3.1 | *Check breakage and fixing* | | A | |
| 4.4.4 | *Check function of emergency unlocking* | | A | |
| 4.4.5 | Automatic door | | | If present |
| 4.4.5.1 | *Check function, fixing and wiring* | | A | |
| 4.4.5.2 | *Check emergency unlocking motor* | | A | Triangular key (plastic) |
| | | | | |
| | | | | |

Intervals: A = once per year B = every 2 years




## Legende Dokumentation Platine

| Mainboard | Connectors | Anschluß | Connection |
|---|---|---|---|
| RES1 | (leer) BK | Beladungskontrolle | *weight-control* |
| S2 | NA | NOT-HALT | *emergency off* |
| S1 | FK | Fangschalter | *switch at arrestor OSG* |
| S3 | RK2 | Riegelschalter 2 | *switch for locking 2* |
| S4 | US | Umgehungsschalter | *by-pass-switch* |
| S5 | RK1 | Riegelschalter 1 | *switch for locking 1* |
| S8 | SM2 | Schranke 2 Mitte | *switch for barrier 2 middle* |
| S9 | SM1 | Schranke 1 Mitte | *switch for barrier 1 middle* |
| S14 | ET | Etagenschalter | *switch for intermediate stop (optionally)* |
| S15 | EU | Endschalter Unten | *limit switch DOWN* |
| S16 | EO | Endschalter Oben | *limit switch UP* |
| S7 | S7 / 1 / 2 | Schlüsselschalter an Lift | *key switch at carriage* |
| S21 | S21 / 1 / 2 | Befehlsgeber an Lift | *somand element at carriage* |
| S17 | AK2 | Kontaktboden induktiv | *Switch for contact bottom inductive* |
| S18 | AK1 | Kontaktleiste (Optional) | *Contact strip (option)* |
| S19 | KB | Kontaktboden (Serie) | *switch for contact bottom (series)* |
| V | V | Geschwindigkeit (optional) | *switch for speed (optionally)* |
| F2.2 | TK | Thermokontakt M1 | *thermo switch drive motor* |
| Y1 | BR | Bremslüfter M1 | *brake lifter* |
| 1X20 | + / - | Ladegerät | *battery charger* |
| 1X30 | + / - | Notladebuchse | *emergency battery charging socket* |
| F1.2 | F1.2 | Ladesicherung 6,3A | *short circuit - charge contacts* |
| M2 | M2 | Automatikmotor Boden (optional) | *automatic motor (optionally)* |
| S50 | NR | Notruftaster (optional) | *emergency call switch (optionally)* |
| H1 | H1 | Blitzleuchte (optional) | *flash light (optionally)* |
| Pieper | P+ P- | Pieper | *buzzer* |
| Heizung (72/73) | HZE | Fühler Heizung | *temperature sensor* |
| Heizung (74/75) | HZA | Heizelemente | *heating elements* |
| (76/77) | RK1S | Riegelschalter 1 (Schliesser) | *switch for locking 1* |
| (78/79) | RK2S | Riegelschalter 2 (Schliesser) | *switch for locking 2* |
| (80/81) | SO1 | Schranke 1 oben | *switch for barrier 1 up* |
| (82/83) | SO2 | Schranke 2 oben | *switch for barrier 2 up* |
| (84/85) | PLU | Plattformboden unten | *floor switch, floor down* |
| M3 (86/87) | M3 | Automatikmotor Schranke 1 | *automatic motor barrier 1* |
| M4 (88/89) | M4 | Automatikmotor Schranke 2 | *automatic motor barrier 2* |
| 24V | + - | 24V | *24 V* |
| M1 (A1 / A2) | A1 / A2 | Antriebsmotor | *drive motor* |
| AKKU 24V | AKKU + - | Akkus 24V 9Ah | *power supply by batteries* |
| Rahmen Masse | GND | Masse Rahmen | *ground chassis* |

| **zusätzliche, nicht in der Steuerung aufgeführten Schalter und Sicherungen** | | | |
|---|---|---|---|
| ***additional switches and fuses, not mentioned on the control board*** | | | |
| | Q0 | Hauptschalter | *main breaker* |
| | F4 | Ladesicherung extern | *external charging fuse* |
| | F6.1/F6.2 | Sicherungen Akku´s | *accumulator fuses* |
| | F7 | Hauptsicherung | *main fuse* |
| | RU 1/2 | Kontakt Rahmen Unterseite | *contact frame bottom side* |
| | S30 | Notbetrieb (optional) | *emergency release (optionally)* |