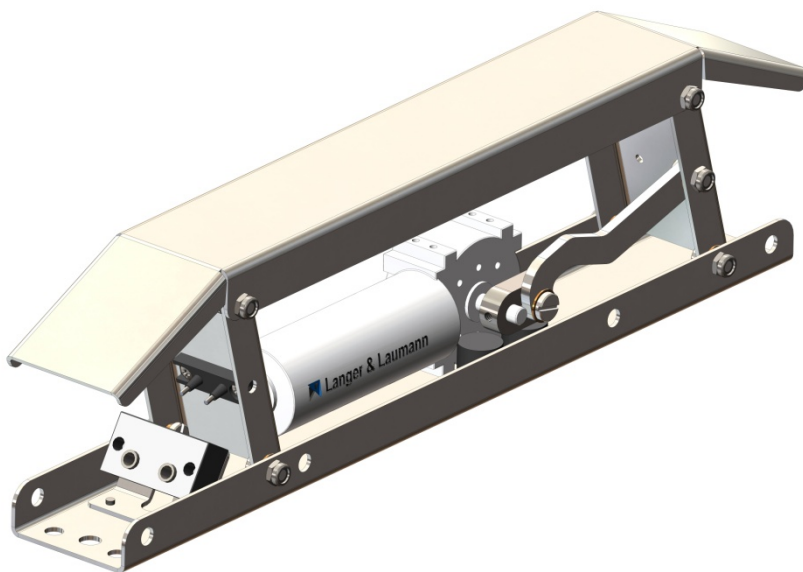


Manual
L&L retiring cam
on
TSG V4



Dokumentationshistorie

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Fordern Sie die Umbauanleitung **auf Deutsch** an, indem Sie den QR Code einscannen.

Demandez les instructions d'instruction de montage en **français**, en scannant le code QR.

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1 About this manual

1.1 General information

Before mounting the L&L retiring cam and put it into operation, please read these instructions carefully. Across the cap 2 General safety requirements / page 5 must be observed. For further use of the instructions and keep them handy.

These instructions are intended to make it easier for you to mount the L&L retiring cam and its components and to put into operation. This manual contains important information for safely and correctly mount the L&L retiring cam and put into operation.

By following these instructions will help danger, to prevent repair costs and downtime and increase reliability and service life of the L&L retiring cam.

In addition to this manual, applicable in the country and on the site regulations for accident prevention and environmental protection must be respected. This manual only describes the modules of the retiring cam are described, which are supplied by Langer & Laumann Engineering Office GmbH. Information about non Langer & Laumann Engineering Office GmbH manufactured and supplied components of the door control It corresponds please the respective instructions of the manufacturer or supplier.

These operating instructions do not purport to cover all details on all types of the product and cannot cover every conceivable case of installation, operation or maintenance also.

Should you require further information or should particular problems arise which are not covered sufficiently in the operating instructions, you can request the necessary information via telephone:

+49 (2573) 955 990 received.

1.2 Explanation of symbols



WARNING:

This symbol directs your attention to a possible hazard that could lead to severe bodily injuries or death.



CAUTION:

This symbol directs your attention to a possible hazard that could lead to minor bodily injuries. The same symbol is also used to warn of potential damage to property.



NOTE:

Your attention is drawn to applications and other useful information.

2 General safety requirements

The L&L retiring cam is designed exclusively for the automatic operation of locks on sliding doors. For applications that fall outside the defined application, the manufacturer accepts no liability. The L&L retiring cam contains dangerous voltages and controls moving mechanical parts. Failure to follow the instructions in this manual can result in death, severe personal injury or substantial property damage.

The L&L retiring cam is built according to the state of the art and recognised safety engineering rules and is intended exclusively for normal industrial usage. If it is used for any other purpose, the manufacturer must in every case be consulted. Otherwise no liability is assumed for personal injury or property damage. Any other or more extensive use is considered contrary to designated use and may result in personal injury for the user or third parties as well as damage to property.



WARNING:

When electrical devices are in operation, certain parts of the devices conduct dangerous voltage. Failure to observe the operating instructions may therefore result in serious bodily injuries or property damage! Observance of the warning notices in these operating instructions is absolutely mandatory. While the TSG is starting up, door movements cannot always be controlled externally. During commissioning, an authorised person located at the door must ensure that no other persons can reach the area close to the door. Permissible forces and energy levels must be checked by a qualified person after the door has been commissioned.

2.1 Delivery

Using the delivery note and the operating instructions, check the delivered components to ensure completeness. At the same time perform a visual inspection for damage of delivered materials. While unpacking, check:

Whether there is any visible mechanical damage to components.

Whether the lengths of the cables included with delivery are correct.



CAUTION:

Electrostatic discharge, mechanical load, moisture and dirt will damage or destroy electronic components.

Leave electronic components in their original packages until they are installed.

If damage occurred during shipping, a claim must be filed immediately with the shipping company. If components are missing, inform the supplier immediately.

2.2 Safety and accident prevention requirements

In addition to the instructions in these operating instructions, you must also observe safety and accident prevention requirements as specified by law. Persons responsible for the safety of the system must ensure the following:

- Only appropriately qualified personnel are permitted to work on and with the L&L retiring cam.
- All personnel who work with the L&L retiring cam must be familiar with all warning signs and measures listed in the description here for installation, control and operation of the L&L retiring cam.
- Unqualified personnel are prohibited from working on the L&L retiring cam.
- Personnel must have knowledge of first aid measures and on-site rescue equipment.

2.3 Qualified personnel as defined by VDE 0105

Qualified personnel means persons who has received by virtue of their training, experience, instructions and knowledge of applicable standards, specifications, accident prevention requirements and operating conditions have been authorized by the person responsible for the safety of the system to perform necessary activities.

2.4 Exclusion of any guarantee when changes or conversions are made

Before any work is performed on the electrical or mechanical parts of the system, the TSG door operator must be disconnected from the mains voltage. Unauthorized changes or conversions to or in the TSG door operator, its components or accessories will automatically exclude all claims under the warranty. These safety instructions do not claim to be complete. The manufacturer assumes no liability for damages or operating malfunctions which may occur due to failure to observe these operating instructions.



WARNING:

Unauthorized changes to the drive or installation of non-original replacement parts shall exclude any liability on the part of the manufacturer for resulting damages.

2.5 Safety contacts

The relay outputs of the TSG door operator must not be used as safety contacts to the safety circuit of the higher-level control unit.



CAUTION:

In case of installation and commissioning of the L&L retiring cam in / on a car, make sure that the total weight of the elevator car is not exceeded at the maximum rated load!



WARNING:

If the higher-level control unit undergoes an emergency stop or off, it must be ensured that the L&L retiring cam will not cause any unintentional, dangerous or uncontrolled door movements.

2.6 Other important safety instructions

The buyer, engineer and/or fitter of the L&L retiring cam and its components are responsible for ensuring it is used correctly and safely. It must be ensured that all national and local laws and regulations regarding safety and power-operated doors and applicable national work safety requirements are observed.

Langer & Laumann Ing.-Büro GmbH is not responsible for accidents and/or consequential damage that could result from application or use of the TSG door operator and its components. Our maximum obligation and warranty is limited to the replacement cost of the purchased product.

Langer & Laumann Ing.-Büro GmbH does not make any claims or recommendations of suitability for specific protective door concepts. The buyer, engineer and/or fitter of the L&L retiring cam must decide themselves whether the drive is suitable for a specific application. Langer & Laumann Ing.-Büro GmbH furthermore declines any responsibility for damages and injuries resulting from modification of the drive, including modification of software parameters. Employees of Langer & Laumann Ing.-Büro GmbH are not authorised to modify these terms and conditions without written consent and a legally binding signature of the responsible offices.



Caution:

After mounting and commissioning of TSG Sinus drive to / on an elevator car, make sure that the latches close the shaft doors as planned and, for example, could grind no catch on the locking plate and wear out.

3 Range of service applications for the Sinus Drive

The L&L retiring cam is an additional drive for cabin and shaft door locks on elevators. For applications that fall outside the defined application, the manufacturer accepts no liability.

4 Technical Drawing and Dimensions

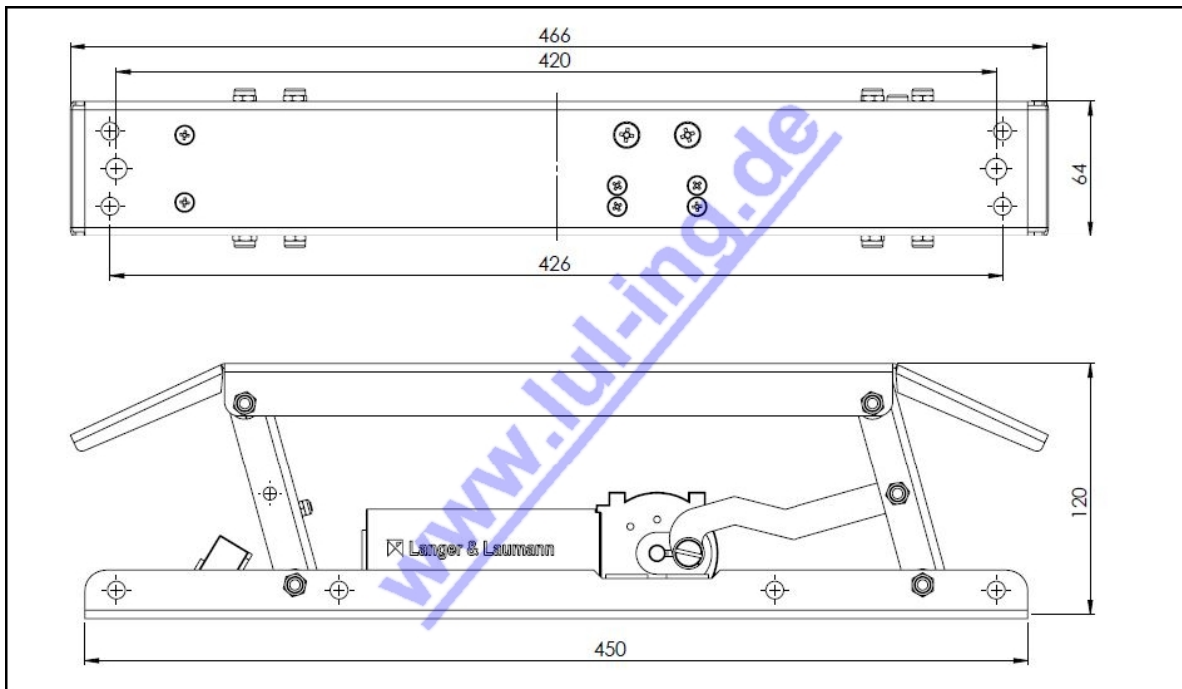


Fig. 1: L&L retiring cam in start position

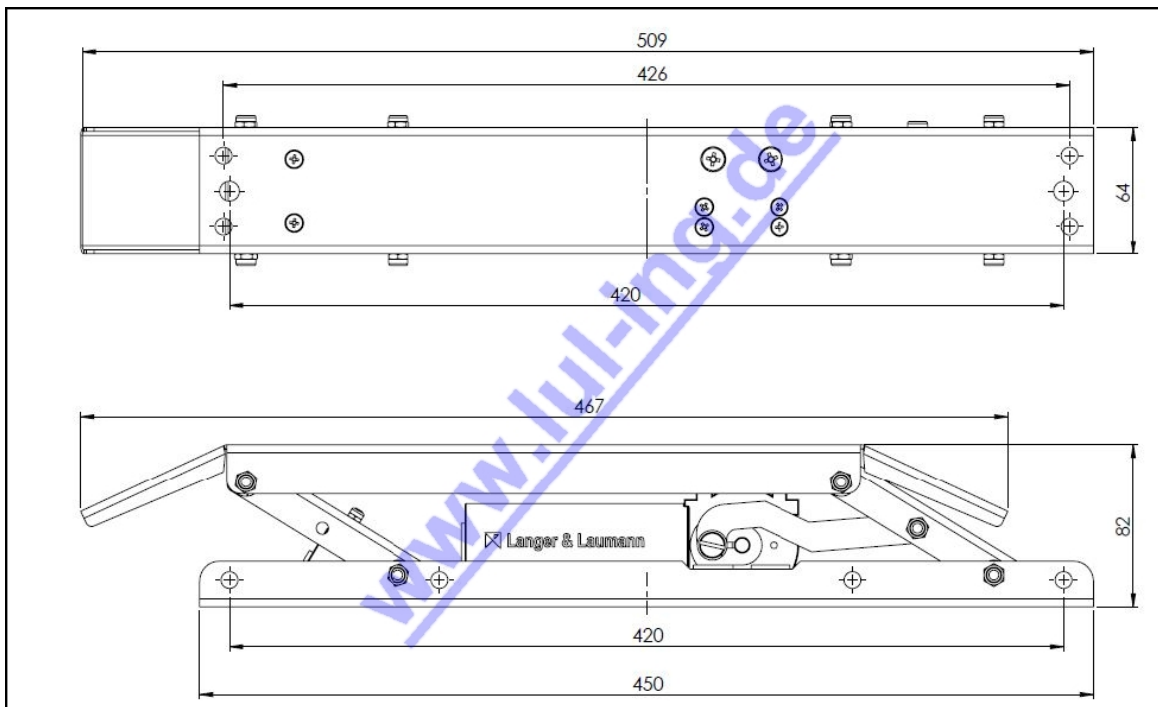


Fig. 2: L&L retiring cam attracted

5 Description

The L&L retiring cam performs a linear movement, which can be used to actuate a lock or camlock on an elevator car. It is controlled via the TSG electronic.

The TSG expansion board can control and process up to two additional L&L retiring cams and is connected to the control part of the TSG motherboard. In the TSG motherboard parameters of the drive and the time delay between the opening of the drive and open the door (hC) can be set to activate the feature (hA), the open time (h7), the closing time (hb).

5.1 Activating the function

The function to use the TSG expansion board can drive, the parameter hA must be set accordingly. This is only possible with optional add-on board stocked.

hA = 03: Lock with NSG (eg Koch door operator, can be used with additional board additional drive)
(first the additional drive then the car door)

hA=06: Locking for shaft revolving door
(first the car door then the additional drive)

* (valid from version TSG V4.60.06)



CAUTION:

The setting hA = 01, 02, 04 or 05 is not suitable for the L&L retiring cam.



NOTE:

Is ha = 00, the L&L retiring cam is not actuated.



NOTE:

For more information on parameter setting see also the manual door control unit TSG.

5.2 Open and closed time

The Open and the closing time of the L&L retiring cam can be set via the parameter h7 and hb. The values can be changed in 0.01 second increments. The default value can be assumed for both the input and for the exit of the drive for a time of 0.50 seconds. However, this value must be controlled and must be adapted according to local circumstances.

Max load	parameter h7 (Opening time of the skate)	parameter hb (Closing time of the skate)
5,0kg	51	47



CAUTION:

The values must not be set higher than the time that is really needed to drive on and extend. Otherwise it can cause failure of the L&L retiring cam!



NOTE:

If a value is changed and confirmed, the value is stored permanently, ie even after a power failure, the changed value is available again.



NOTE:

For more information on parameter setting see also the manual door control unit TSG.

5.3 Time delay between door-drive and L&L retiring cam

It is possible to set that in a open command from the lift controller to the door control device TSG first drive the L&L retiring cam apart and then opens the door. For this purpose, the parameter hC can be adjusted. The value can be varied in 0.01 second increments.



NOTE:

For more information on parameter setting see also the manual door control unit TSG.

5.4 Special function emergency power supply

The function of the emergency power supply is needed during a power outage. In this case "opens" the TSG electronics with the help of the battery pack after about 3 seconds the L&L retiring cam, which opens the door lock and the car door is thus free to move.

The L&L retiring cam must be installed so that the shaft door is unlocked in the voltage-free condition. During the power outage, no further input commands are accepted from the lift controller.



NOTE:

If a malfunction of the elevator leading to a standstill, the TSG automatically voltage is switched off.



NOTE:

A1 appears in the display. The point in the second display flashes.



CAUTION:

The emergency power supply and the battery have to be checked at a regular interval (min. 1x per year).



NOTE:

For more information on parameter setting see also the manual door control unit TSG.

6 Illustration

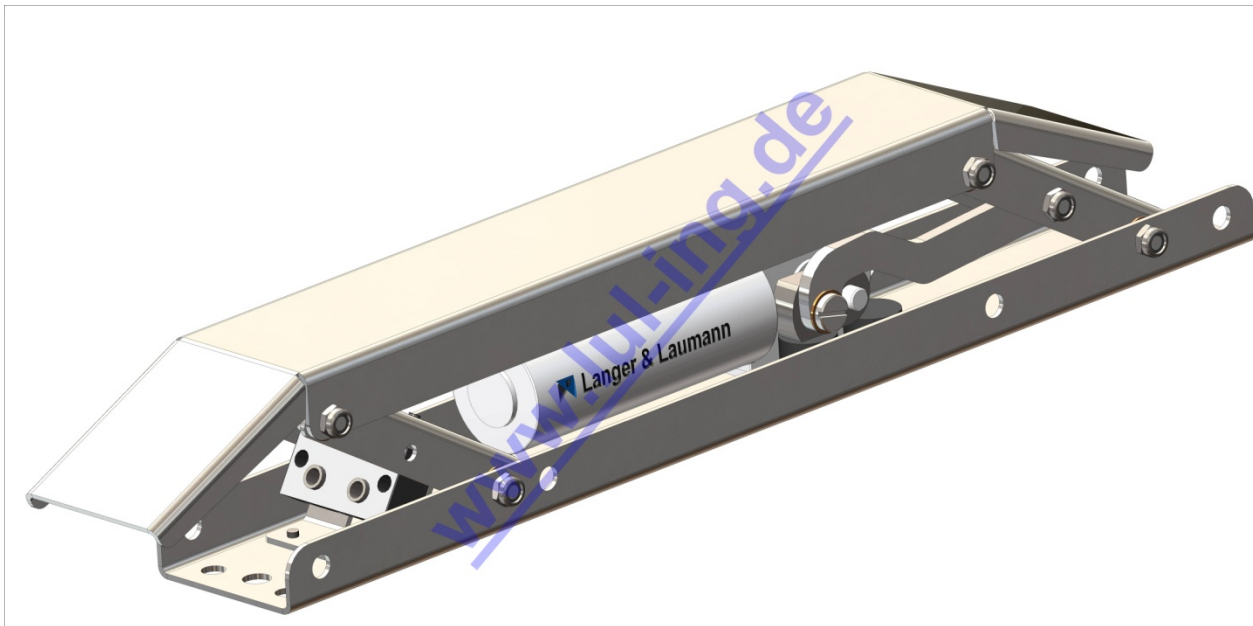


Fig. 3: L&L retiring cam attracted

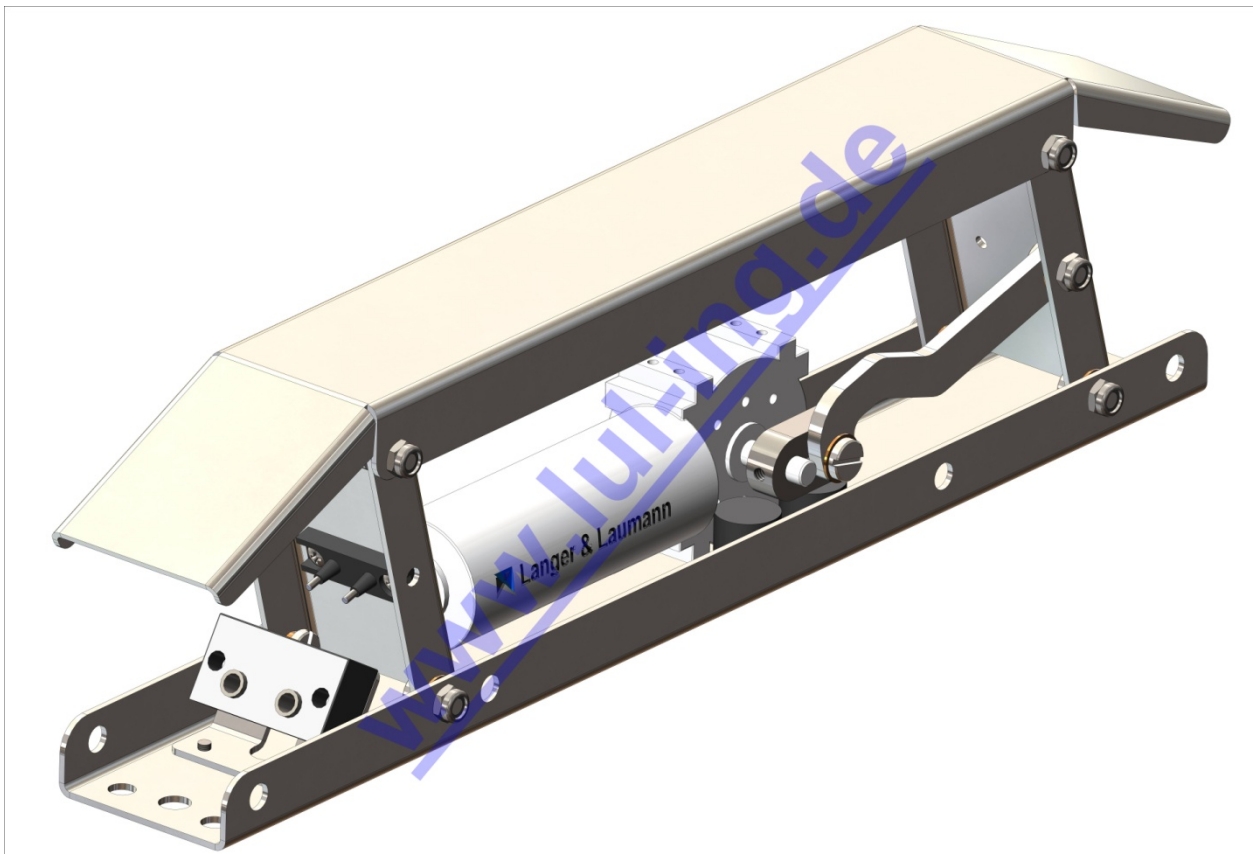


Fig. 4: L&L retiring cam in start position



Fig. 5: TSG electronics with expansion board for controlling the L&L retiring cam

7 Electrical connection and startup

1. The electrical connection is via the supplied cable (see cap. Fig. 5: TSG electronics with expansion board for controlling the L&L retiring cam / page 13).
2. If the rotation direction of the L&L retiring cam is wrong, only the polarity of the motor must be replaced.



WARNING:

When operating electrical equipment, certain parts of the devices conduct dangerous voltage. Ignoring the safety instructions can result in serious personal injury or property damage! The warnings in this instruction must be followed. During commissioning of the TSG door movements cannot always be influenced from the outside. During start-up is by an authorized person, which is located on the door to ensure that no other person may enter the vicinity of the door. The allowable forces and energies are to be checked after commissioning at the door by the executive personnel.

8 User setting h-parameter

Tab. 1: h-parameter

Parameter	Funktion	Min.-Wert	Default-Wert	Max.-Wert	Faktor	Einheit
hA	<p>Only for use with optional add on boards (valid from version TSG V4).</p> <p>00: Opportunity to move to the intermediate position and Ready For Operation (usable with add on board 4E/4A relais or 4E/4A electronic)</p> <p>01: interlock or skate drive (e.g. QKS9, usable with add on board additional drive)</p> <p>02: retiring cam magnet (e.g. KONE ADC, usable with add on board additional drive)</p> <p>03: interlock with emergency power supply (e.g. Koch, usable with add on board additional drive)</p> <p>04: enabling mode (usable with add on board 4E/4A electronic)</p> <p>05: external sensor, two channel (usable with add on board 4E/4A electronic)</p> <p>06: interlock drive for shaft hinged doors (usable with add on board additional drive)</p>	00	00	18		
h7	opening time of the skate	00	50	80		[1/100 Sekunde]
hb	closing time of the skate	01	50	80		[1/100 Sekunde]
hC	pause between opening of the skate and opening of the door	01	50	99		[1/100 Sekunde]

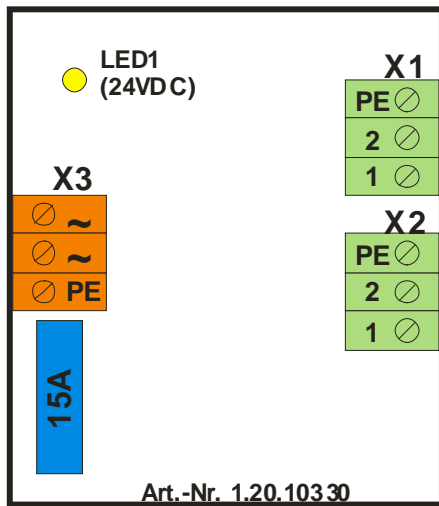


Note:

For more information on parameter setting see also the manual door control unit TSG.

9 Technical data for TSG electronic

9.1 Overview TSG expansion board



X1: Drive connection 1

X2: Drive connection 2

X3: Connecting AC

LED 1: 24[VDC] ok

9.2 Terminal assignment TSG expansion board

Tab. 2: TSG expansion board X1 - drive 1

X1 drive 1 (3-pin screw plug):		
1	connection 1	
2	connection 2	
PE	PE	

Tab. 3: TSG expansion board X2 - drive 2

X2 drive 2 (3-pin screw plug):		
1	connection 1	
2	connection 2	
PE	PE	

Tab. 4: TSG expansion board X3

X3 connecting AC:		
~	connection 1	
~	connection 2	
PE	PE	

10 Maintenance and servicing

The maintenance of L & L door drives is limited by their constructive approach to a minimum. Components, which are subject to normal wear and tear shall be included in regular maintenance and repair measures.



WARNING:

During maintenance is essential to ensure that the drive cannot be powered on and that no exposed parts can come under electrical voltage unintentionally. Once these measures have existing protective and safety devices on the drive have to be installed again.

11 Contact

For questions and / or doubts, you can reach us at the following address:

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