

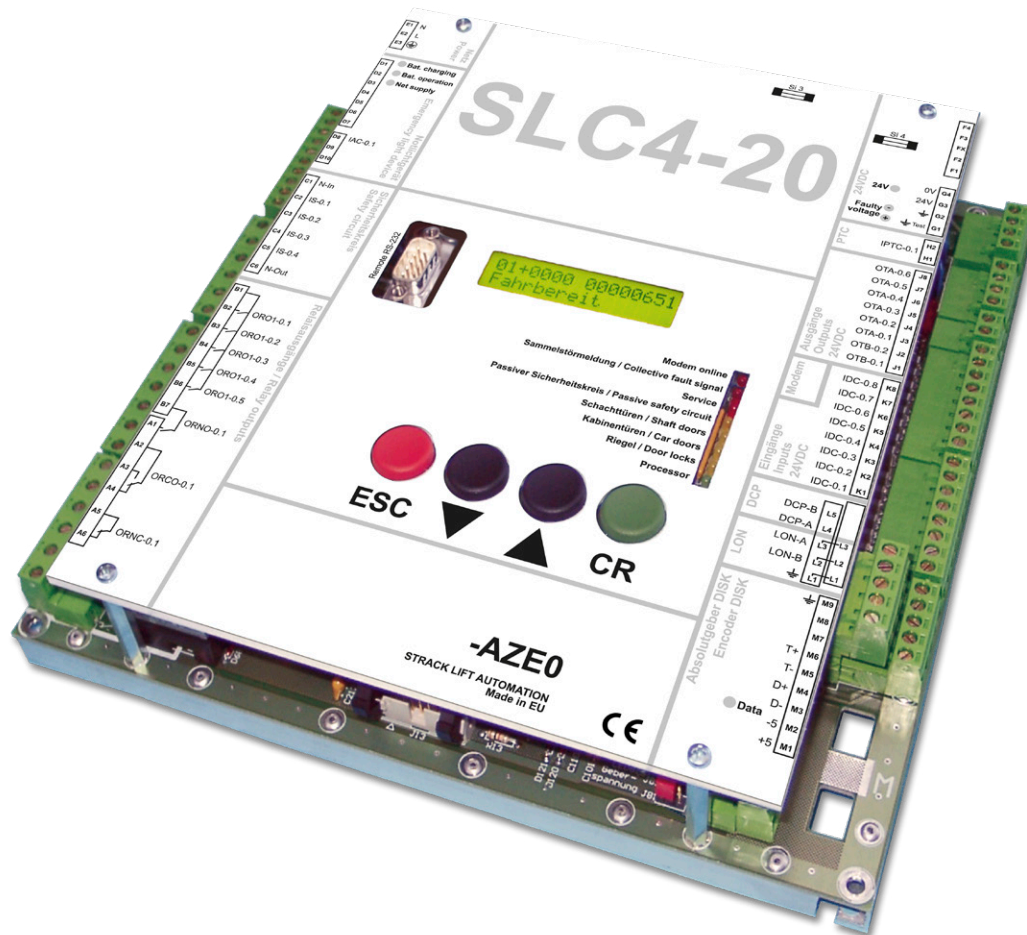


STRACK
LIFT AUTOMATION

SLC4-20

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EN 81-20

Main features:

- for all common types of lift
- backlit display and keyboard, all settings possible without tools
- thoughtful, easy menu navigation, different levels of password access protection
- built-in timers
- integrated electronic lift attendant
- shaft copying with inductive absolute encoder
- DCP3, DCP4, direct levelling, quick start, easy setup
- virtual in-/outputs
- LON-bus with free-topology-transfer
- the lift group algorithm based on real travel times with self-learning
- all special functions available, e.g. penthouse, school, hotel, bank, sabbath, chemistry, emergency, transport control, group in group, automatic conveyor system, ...

The better control for your lifts.



SLC4-20

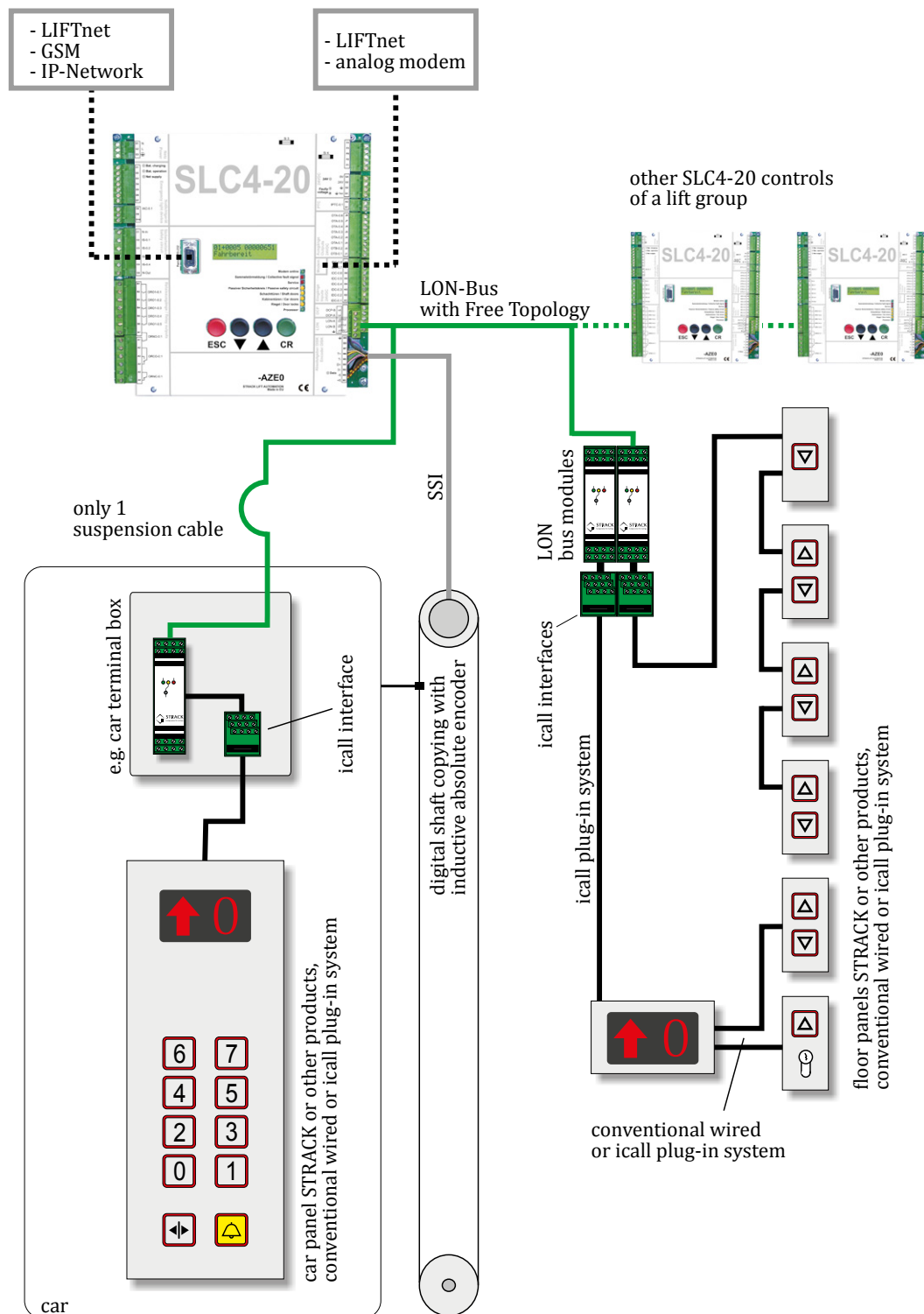
SLC4-20 is the advancement of the proven SLC4 control system for EN 81-20.

SLC4-20 provides maximum flexibility in a small space next to its reliability. For this purpose, it has more than 4000 virtual in-/outputs (VIO), which can be assigned to any terminal of the control computer and the LON bus modules. Easily handle 32 levels and groups up to 8 lifts. Speeds up to 4 m/s, an absolute encoder and a TÜV-certified electronic lift attendant are self-evident.

The connection is as easy as their operation. Installation and commissioning costs are minimal and thus your costs in new construction, modernisation and during the entire further life. Spare parts are always in stock and long term available.



Example of an overall system



Product description

SLC4-20 system

The SLC4-20 system is one of the most reliable control systems on the market. Starting at 2 floors of hydraulic lift up to fast-running 32 floors rope lift group with 8 lifts. And all this with minimal hardware costs on the basis of virtual in-/outputs, integrated absolute encoder and LON bus.

Virtual in-/outputs

SLC4-20 by default works with so-called „Virtual inputs and outputs“ (VIO). This VIO are only included with the software. A VIO can be assigned to any terminal of the SLC4-20 computer or any LON bus module. Thus, the function of this VIO number is assigned to the real terminal so that the terminal has then the function „return on/off“, for example. So the wiring is low, no additional relay is required, possible contact faults and space requirements are minimal.

Comfort with DCP4

SLC4-20 customers are free to decide with a simple menu selection, if the used inverter is controlled with normal in-/outputs or with „Drive Control and Position“ (DCP). In the SLC4-20, DCP3 and DCP4 are implemented.

The advantages of DCP compared to conventional regulatory control are:

DCP3:

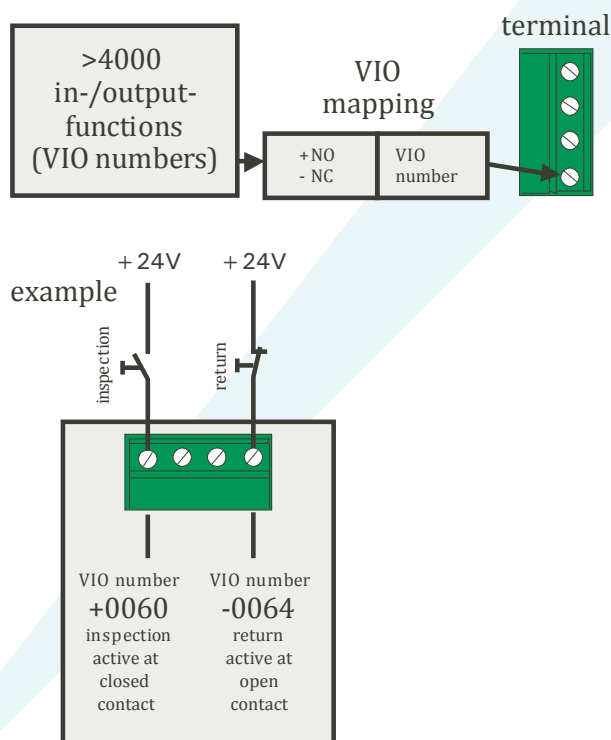
- low wiring between control and inverter
- status messages of the system are transmitted to the control system and can be monitored remotely via LIFTnet
- parameterisation and operation of the inverter via lift controller or LIFTnet
- speed monitoring of re-level, drive-in and overspeed

DCP4 also:

- convenient commissioning
- precise adjustment depending on distance as usual at SLC4-20, but without settings when starting up
- direct levelling depending on remaining distance, i.e. increase the flow rate at the same nominal speed and best comfort
- additional speed monitoring to verify the proper deceleration at the shaft ends

Quick start function

For 2015, the so-called quick start function is available for our users. The drive motor is already energized when the door closes. Thus the travel can go off immediately when the door is closed. All times are configurable. The frequency converter must also support the function (in case of doubt please ask us).



DCP
DRIVE CONTROL POSITION

Shaft copying with absolute encoder

STRACK opts for as long as no other absolute encoder (since 1994) and took advantage of inductive absolute shaft encoders as first (since 2006). SLC4-20 works by default with this procedure, it requires no switches in the shaft. The disc is quickly installed, virtually noise-free, durable, precise and inexpensive.

The inductive working absolute encoder contains no battery, no gears and no optical sensors, i.e., not things that can be damaged by wear or dirt accumulation.

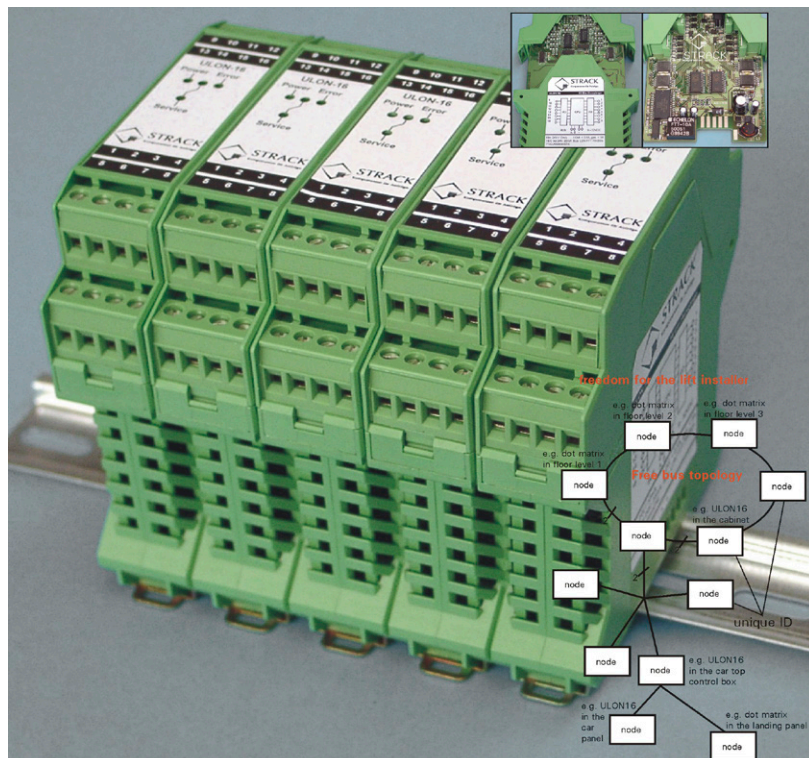
The electric stopping and re-level accuracy of a lift controlled by SLC4-20 is always better than 1 mm. The exact positioning is also guaranteed at strongly fluctuating cars with bad guide rails or different loading conditions. It requires no homing after switching-on the control, all control functions access to the always existing millimeter-precise position. Short distances of floors can be implemented without additional expense. Even in the event of a fault, the technician is dealt with the exact position of the event relative to the floor.

DISK is also available to Ex lifts.



LON bus with FTT

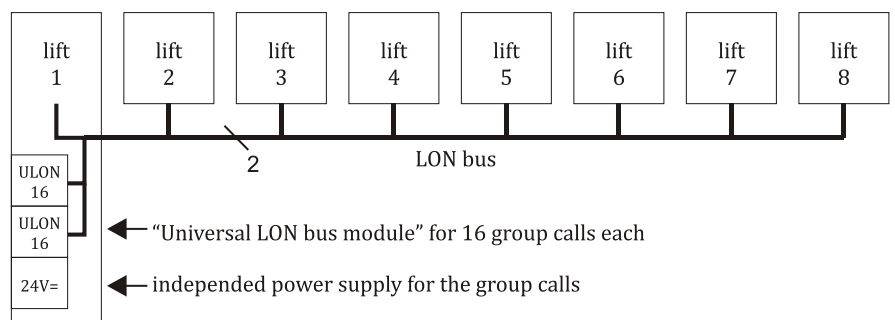
A 2-wire-LON-bus connects the LON modules with the SLC4-20 control computer and multiple SLC4-20 control computer with each other. The bus is optional, i.e. a conventional, central control installation is possible, e.g. for ex-protected lifts. Through the bus, in-/outputs at any point can be positioned in the shaft, machine room, car, or building. SLC4-20 uses the free-topology transceiver technology. As a result, the bus wiring is free, i.e. the fitter can mix the cable guides (bus structure). It is allowed to connect the modules with ring-, line-, star- and mixed topology. The bus is very forgiving.



Auto-adaptive lift groups

All SLC4-20 controls are generally capable of groups. You will need no additional control computer or „group selector“.

SLC4-20 lift groups maximize the capacity, because each SLC4-20 itself decides whether or not it uses a group call. This decision is made on the basis of the continuously measured travel times from each floor to each floor and the door lost time per floor. No adjustments are needed, which makes the operation easy and avoids errors. Use changes of the group lifts are automatically detected, because it finds the current drive and stop loss times live. Different lift speeds, door transit times, door open times etc are always respected. Different levels of spacing due to different floors of the group are also automatically considered. Different access doors sizes or door sides of the lifts and also temporarily blocked accesses are always included in the calculation.



Electronic lift attendant integrated

On request, an electronic lift attendant is integrated in the SLC4-20, certified by TÜV Rheinland. For that, the SLC4-20 requires no data connection to LIFTnet. Also, the lift can use nearly every usual remote alarm device, the emergency call centre needs no other lift attendant functions. The additional costs for the electronic lift attendant are thus extremely low and have paid off quickly.

The tasks of the human lift attendant be partially replaced by the SLC4-20. The required weekly checks of the lift can be omitted. The inspection intervals of the human lift attendant are limited to 4 months or 30,000 travels thus for lifts with power-operated doors and for systems with manually operated doors to 2

months or 15,000 travels and can be done also by the lift mechanic as part of normal maintenance.

SLC4-20 monitors,

- that no ride happens with an open door contact or door lock,
- level alignments,
- cabin light,
- remote emergency call system,
- number of travels,
- and the own parameter settings.

Upon an error detection, the SLC4-20 first generates a warning message. If this are not followed permanently, the lift will be stopped.

SLC4-20 as electronic lift attendant is TÜV certified according to:

- BetrSichV
- EN 81-1/-2
- EN 81-28
- TRA 007
- TRA 006
- DAA decision 10/38



Protection against unintentional car movement (UCM)

The safety circuit MULTIBUS-SHB also serves the protection against unintentional car movement (UCM) acc. to EN 81-1/-2:1998+A3:2009 and EN 81-20:2014. SHB has been certified by the TÜV and takes on the task of detecting and tripping, so that only a braking device certified for emergency braking („emergency brake“) has to be installed. To this end, SHB is designed in such a universal manner that it is able to work together with many commercially available emergency brakes such as a blocking magnet at the overspeed governor (without additional electronics!), a separate emergency brake or safety brake, a certified service brake (e.g. for gearless drives), for hydraulic lifts a redundant valve system or a separate safety valve.



Machine-room-less lifts

The S-MRL control cabinet is designed for machine-room-less rope lifts with a frequency converter installed in the vicinity of the drive unit, usually inside the shaft. Direct visual contact to the drive unit when work is being performed at the control system for maintenance purposes, TÜV inspection or rescue of persons has not been considered possible. The installation location of the control system is specified to be next to a lift shaft door in a brickwork recess or a part of the door system of the lift (general technical approval or individual acceptance required).

Special features

- Compact, very stable design HxBxT(mm) 2050 x 400 x 150
- Possibility of assembling outside the shaft
- Construction acc. DIN 18091 (shaft sliding doors for lift shafts with walls of fire resistance class F90)
- Cabinet door inside the frame, so flush wall mounting without plaster frames is possible
- Self locking door EN81-20, 5.2.6.5.1.3, right/left 120° (removable)
- Lockable by DIN half cylinders (changeable)
- Steel RAL 7035 (light grey), optional V2A grain 240
- Type of protection EN 60529: front and sides IP51
- Includes document pocket, socket and MULTILED cabinet lighting
- Rear cable entry
- Can be used also inside the shaft (cable entries prepared from below)
- Smoke vent on rear bottom and top
- Proper control layout with generously dimensioned, clean wiring
- Lift attendant panel and control computer in user-friendly height
- Includes a UPS for rescue of passengers during mains voltage loss
- Monitoring of the drive by control computer, also during UPS operation you get precise information about lift position, direction, speed and levelling.
- Only 1x 400V AC3 for the connection of the lift required

