



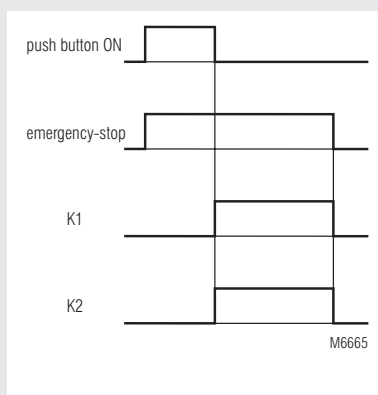
Your Advantages

- For elevators according to EN 81-1/-2
- Emergency stop in elevators

Features

- **According to**
 - Performance Level (PL) e and category 4 to EN ISO 13849-1: 2008
 - SIL Claimed Level (SIL CL) 3 to IEC/EN 62061
 - Safety Integrity Level (SIL) 3 to IEC/EN 61508
 - Directive 95/16/EG for elevators
- Output: 3 NO contacts, 1 NC contact
- Single or 2-channel operation
- Line fault detection on On-button
- Manual restart or automatic restart, switch S2
- With or without cross fault monitoring in the E-stop loop, switch S1
- LED indicator for state of operation
- LED indicator for channel 1 and 2
- Can be mounted in cabinets and installations with lower degree of protection without additional measures (depending on ambient conditions)
- Wire connection: also 2 x 1.5 mm² stranded ferruled (isolated), DIN 46 228-1/-2/-3/-4 or 2 x 2.5 mm² stranded ferruled DIN 46 228-1/-2/-3
- As option with pluggable terminal blocks for easy exchange of devices
 - with screw terminals
 - or with cage clamp terminals
- Width 22,5 mm

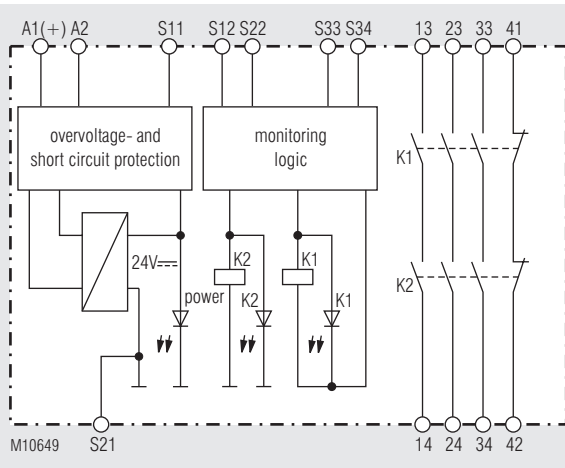
Function Diagram



Approvals and Marking



Block Diagram



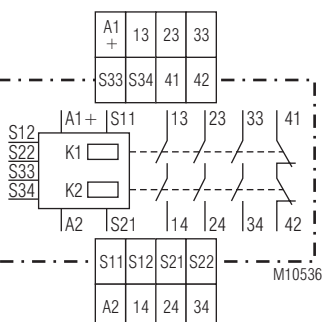
Applications

Bridging of the door and locking switches while moving the elevator in the unlocking zone with open doors according to EN81-1/-2 for elevators for people and loads.

Indicators

- LED Netz: on when supply connected
 LED K1/K2: on when relay K1 and K2 energized

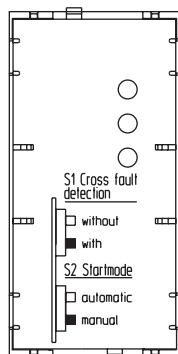
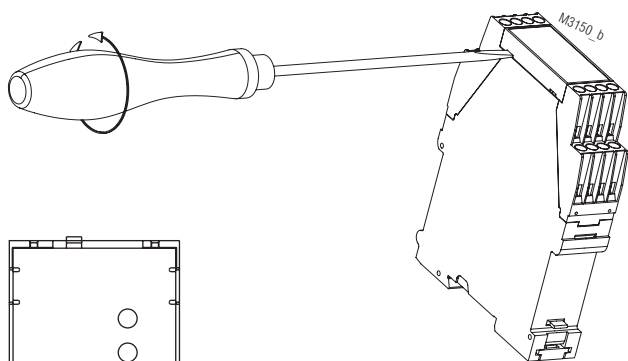
Circuit Diagram



Connection Terminals

Terminal designation	Signal designation
A1+	+ / L
A2	- / N
S12, S22, S33, S34	Inputs
S11, S21	Outputs
13, 14, 23, 24, 33, 34	Positive driven NO contacts for release circuit
41, 42	Positive guided indicator output

Setting



Disconnect unit before setting of S1

M8892

Notes

Line fault detection on On-button:

The line fault detection is only active when S12 and S22 are switched simultaneously. If The On-button is closed before S12, S22 is connected to voltage (also when line fault across On-Button), the output contacts will not close. A line fault across the On-button which occurred after activation of the relay, will be detected with the next activation and the output contacts will not close.

ATTENTION! If a line fault occurs after the voltage has been connected to S12, S22, the unit will be activated because this line fault is similar to the normal On-function.

The terminal S21 permits the operation of the device in IT-systems with insulation monitoring, serves as a reference point for testing the control voltage and is used to connect the E-stop loop when cross fault monitoring is selected.

Connecting the terminal S21 to the protective ground bridges the internal short-circuit protection of Line A2 (-). The short-circuit protection of line A1 (+) remains active.

To alter the functions automatic start - manual start and with or without cross fault monitoring, the switches S1 and S2 are used. These are located behind the front cover (see unit programming).

The setting with or without cross fault monitoring on E-stop buttons is made with S1

Attention! Switch S1 must not be set while device is under supply voltage! S2 is used to change between automatic an manual restart. On automatic start also the terminals S33 - S34 have to be linked. For connection please see application examples.

ATTENTION - AUTOMATIC START!



According to IEC/EN 60 204-1 part 9.2.5.4.2 and 10.8.3 it is not allowed to restart automatically after emergency stop. Therefore the machine control has to disable the automatic start after emergency stop.

Technical Data

Input circuit

Nominal Voltage U_N:	AC/DC 24 V
LG 5925:	0.9 ... 1.1 U_N
Voltage range:	DC ca. 1.5 U_N
Nominal consumption at U_N:	250 ms
Min. Off-time:	DC 22 V
Control voltage on S11 at U_N:	
Control current typ. over S12, S22	30 mA at U_N
Min. voltage on S12, S22 when relay activated	DC 20 V
Short-circuit protection:	Internal PTC
Overvoltage protection:	Internal VDR

Output

Contacts: 3 NO, 1 NC contact

The NO contacts are safety contacts.

ATTENTION! The NC contacts 41-42 can only be used for monitoring

Operate delay typ. at U_N :

Manual start:	30 ms
Automatic start:	350 ms

Release delay typ. at U_N :

Disconnecting the supply:	typ. 20 ms
Disconnecting S12, S22:	typ. 15 ms
Contact type:	forcibly guided

Nominal output voltage: AC 250 V

DC see limit curve for arc-free operation
max. 2 A per contact

Thermal current I_{th} :

Switching capacity

to AC 15:		
NO contacts:	3 A / AC 230 V	IEC/EN 60 947-5-1
NC contacts:	2 A / AC 230 V	IEC/EN 60 947-5-1
to DC 13:		
NO contacts:	2 A / DC 24 V	IEC/EN 60 947-5-1
NC contacts:	2 A / DC 24 V	IEC/EN 60 947-5-1

Electrical contact life
to 5 A, AC 230 V $\cos \varphi = 1$:

> 2.2 x 10⁵ switching cycles

Permissible operating frequency:

max. 1 200 operating cycles / h

Short circuit strength

max. fuse rating:	10 A gL	IEC/EN 60 947-5-1
line circuit breaker:	B 6 A	

Mechanical life:

> 20 x 10⁶ switching cycles

General Data

Operating mode: Continuous operation

Temperature range

operation:	- 15 ... + 55 °C
storage :	- 40 ... + 85 °C
altitude:	< 2.000 m

Clearance and creepage distances

Rated impuls voltage / pollution degree:	4 kV / 3 (basis insulation)	IEC 60 664-1
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EMC

Electrostatic discharge (ESD):	15 kV (Luftentladung)	IEC/EN 61 000-4-2
HF irradiation:	30 V / m	IEC/EN 61 000-4-3
Fast transients:	4 kV	IEC/EN 61 000-4-4

Surge voltages

between wires for power supply:	0.5 kV	IEC/EN 61 000-4-5
between wire and ground:	2 kV	IEC/EN 61 000-4-5
Interference suppression:	Limit value class B	EN 55 011

Degree of protection

Housing:	IP 40	IEC/EN 60 529
Terminals:	IP 20	IEC/EN 60 529

Housing: Thermoplastic with V0 behaviour according to UL subject 94

Vibration resistance: Amplitude 0.35 mm IEC/EN 60 068-2-6 frequency 10 ... 55 Hz

Climate resistance: 15 / 055 / 04 IEC/EN 60 068-1

Terminal designation: EN 50 005

Technical Data

Terminal designation:	EN 50 005
Wire connection	DIN 46 228-1/-2/-3/-4
Screw terminals (integrated):	1 x 4 mm ² solid or 1 x 2.5 mm ² stranded ferruled or 2 x 1.5 mm ² stranded ferruled or 2 x 2.5 mm ² solid
Insulation of wires or sleeve length:	8 mm
Plug in with screw terminals	
max. cross section for connection:	1 x 2.5 mm ² solid or 1 x 2.5 mm ² stranded ferruled
Insulation of wires or sleeve length:	8 mm
Plug in with cage clamp terminals	
max. cross section for connection:	1 x 4 mm ² solid or 1 x 2.5 mm ² stranded ferruled
min. cross section for connection:	0.5 mm ²
Insulation of wires or sleeve length:	12 ^{+0.5} mm
Wire fixing:	Plus-minus terminal screws M 3.5 box terminals with wire protection or cage clamp terminals
Mounting:	DIN rail IEC/EN 60 715
Weight:	210 g

Dimensions

Width x height x depth

LG 5925:	22.5 x 90 x 121 mm
LG 5925 PC:	22.5 x 111 x 121 mm
LG 5925 PS:	22.5 x 104 x 121 mm

Safety Related Data

Values according to EN ISO 13849-1:

Category:	4	
PL:	e	
MTTF _d :	176.2	a (year)
DC _{avg} :	99.0	%
d _{op} :	365	d/a (days/year)
h _{op} :	24	h/d (hours/day)
t _{Zyklus} :	3600	s/Zyklus
	≥ 1	/h (hour)

Values according to IEC EN 62061 / IEC EN 61508:

SIL CL:	3	IEC EN 62061
SIL:	3	IEC EN 61508
HFT ¹⁾ :	1	
DC _{avg} :	99.0	%
SFF:	99.7	%
PFH _D :	2.66E-10	h ⁻¹
T _r :	20	a (year)

¹⁾ HFT = Hardware-Failure Tolerance



The values stated above are valid for the standard type. Safety data for other variants are available on request.

The safety relevant data of the complete system has to be determined by the manufacturer of the system.

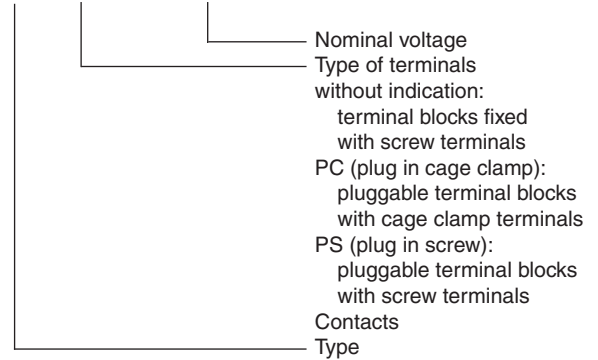
Standard Type

LG 5925.03/034 AC / DC 24 V

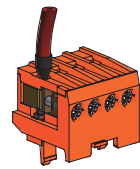
Article number:	0064797
• Output:	3 Schließer, 1 Öffner
• Nominal voltage U _N :	AC/DC 24 V
• Width:	22,5 mm

Ordering Example

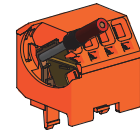
LG 5925.03 /034 AC / DC 24 V



Options with Pluggable Terminal Blocks



Screw terminal (PS/plugin screw)

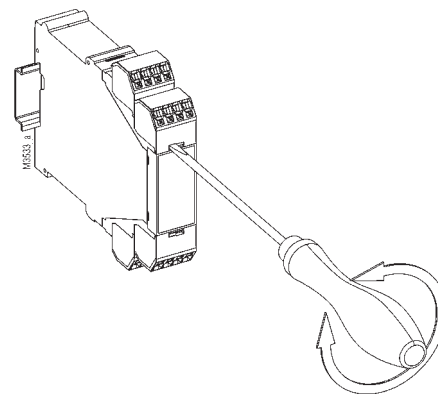


Cage clamp terminal (PC/plugin cage clamp)

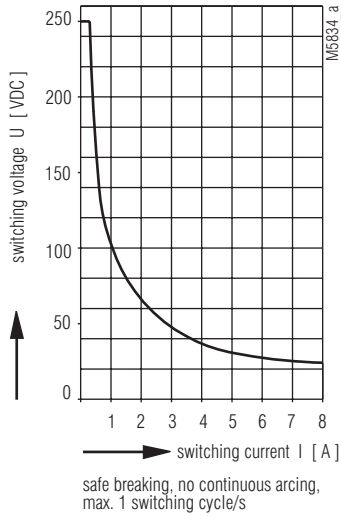
Notes

Removing the terminal blocks with cage clamp terminals

1. The unit has to be disconnected.
2. Insert a screwdriver in the side recess of the front plate.
3. Turn the screwdriver to the right and left.
4. Please note that the terminal blocks have to be mounted on the belonging plug in terminations.

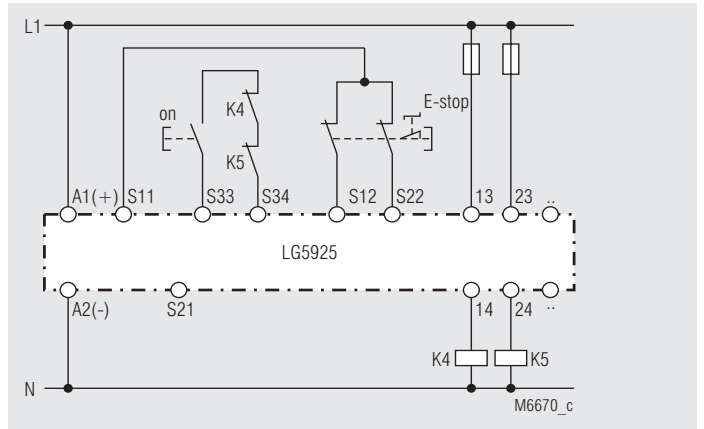


Characteristics



Arc limit curve under resistive load

Application Examples

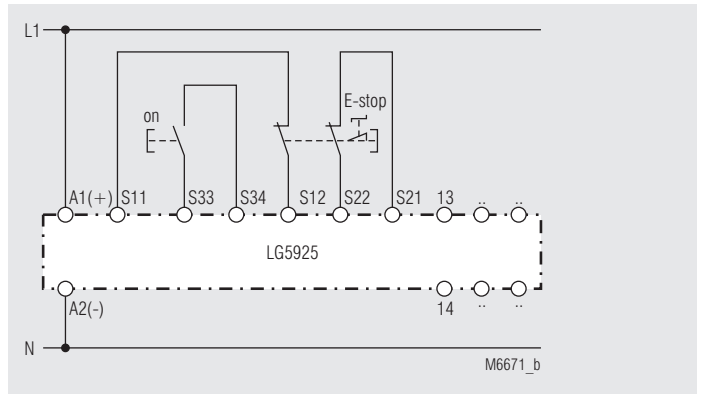


Contact reinforcement by external contactors, 2-channel controlled. The output contacts can be reinforced by external contactors with forcibly guided contacts for switching currents > 8 A. Functioning of the external contactors is monitored by looping the NC contacts into the closing circuit (terminals S33-S34).

Note: Refer to "Unit programming"!

Switches in pos.: S1 no cross fault detection
S2 manual start

Suited up to SIL3, Performance Level e, Cat. 4



2-channel emergency stop circuit with cross fault detection

Note: Refer to "Unit programming"!

Switches in pos.: S1 cross fault detection
S2 manual start

Suited up to SIL3, Performance Level e, Cat. 4