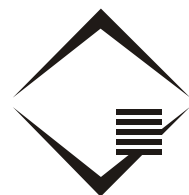
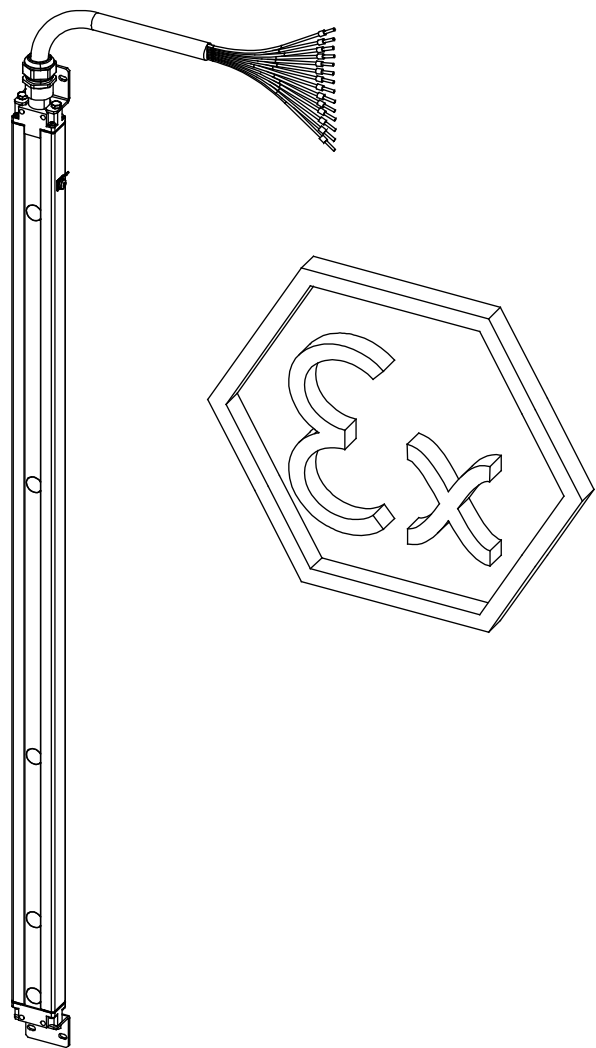


Submission document for the lift approval

Ex-LTÜ²

**Safety Light Curtain for Freight Lifts
in Explosion Hazard Areas**

Status: 10.6.2026



STRACK
LIFT AUTOMATION

Important note:

The data and information in this documentation have been compiled with greatest care. Although everything has been done to make the information contained in this document up to date and correct at the time of publication, no guarantee can be given that it is completely without any errors.

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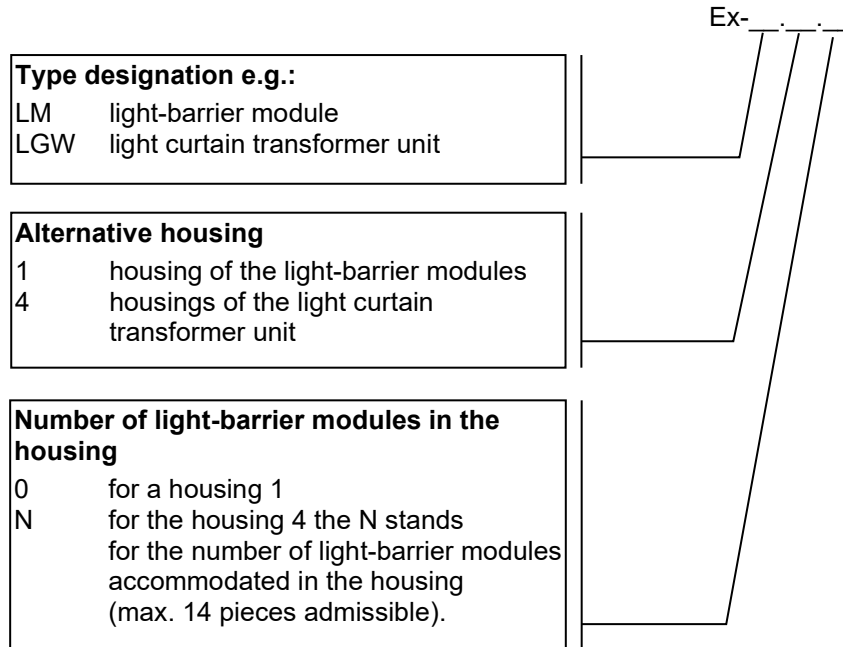
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1 Intended use

1.1 Numeric code of the individual Ex components

Rating plates as defined by the ATEX directive are attached to the individual Ex components Ex-LM (light-barrier modules) and Ex-LGW (light curtain transformer unit). The type designation included here is structured as follows:



1.2 Identifications according to ATEX

The following identifications are used:

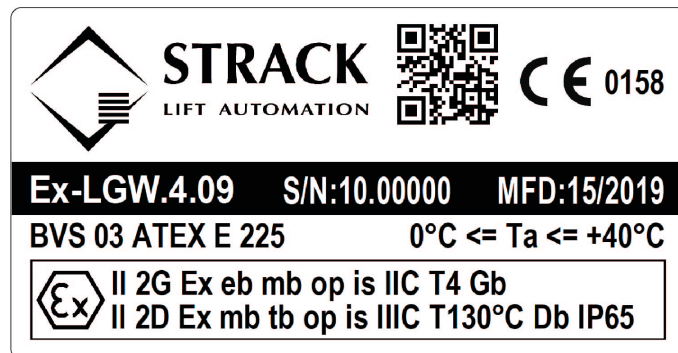
Light-barrier module Ex-LM

The modules of the individual light-barriers may only be operated within the Ex area, if they are accommodated in the transformer unit Ex-LGW because they are not resistant against all environmental influences (impact, oil, ...) in themselves.



Light curtain transformer unit Ex-LGW

The rating plate is located on the outer side wall of the unit. A unit with the following rating plate must always be operated within an Ex area:



1.3 Ex-LTÜ², all versions

The safety light curtain Ex-LTÜ² serves as a replacement for car doors of freight lifts with a travelling speed of no more than 0.85 m/s. Basis for this is the resolution of the German Lift Committee (Deutscher Aufzugausschuss - DAA) no. 6/34 of 22 Nov. 1990, which is fully met.

All parts of the Ex-LTÜ² to be attached to the car can be used in the **Ex zones 1, 2, 21 and 22**.

The Ex-LTÜ² carries the CE emblem and thus may be used in all membership states of the European Union (note that the installation provisions for electrical equipment in explosion hazard areas still partially differ in individual states).

The Ex-LTÜ² can be integrated into any Ex lift system (observe Ex classification!). The integration into the respective control system is largely identical, since only signals are used which are available in all control systems. The Ex-LTÜ² is completely set up as a safety circuit within the meaning of the Lift directive and was EC type-examination tested. Not only the light curtain but also all internal functions as well as the signals to and from the lift control are monitored for their correct function.

For lifts with accesses on both ends the connection of the light curtains is also identical. Only one control unit is required here.

As the EN 81-1/-2/-20 do not know any lifts without lift car doors, local experts demand various broader requirements on the lift depending on the field of application when safety light curtains are integrated. These can be e.g. a restriction of the travelling speed, the user group, or the type of use of the lift. The TÜV Rheinland for example prepared a sample risk evaluation of the shearing and compression points of freight lifts without a car seal. Before remodelling the lift system, ask your responsible expert.

1.4 Ex-LTÜ² without edge prevention (simple version)

The Ex-LTÜ² without edge prevention can be used in cases in which the lift is already provided with a safety circuit or a safety switch monitoring the interlocking release zone of the door, i.e. this includes all hydraulic lifts and lifts with the function "doors opening early" (see next Section).

1.5 Ex-LTÜ² with edge prevention (full version)

According to the DAA the light curtain must prevent edges. I.e. if the light curtain is interrupted shortly before reaching the target stop and within the interlocking release zone of the door the lift must not stop but continue the last centimeters of its travel so the lift car comes to a flush level stop. This prevents the development of a dangerous edge (stumbling edge).

For this purpose the Ex-LTÜ² with integrated edge prevention is provided with a safety circuit monitoring the interlocking release zone of the door and, in connection with other signals of the control system and the light curtain, preventing the development of an edge. With regard to technology and mode of operation the Ex-LTÜ² exceeds the requirements of the DAA. Provided are standard outputs such as "Holding magnetic interlocking device", "Permit re-levelling", "Reverse shaft door" and "Load control" (see Functional description).

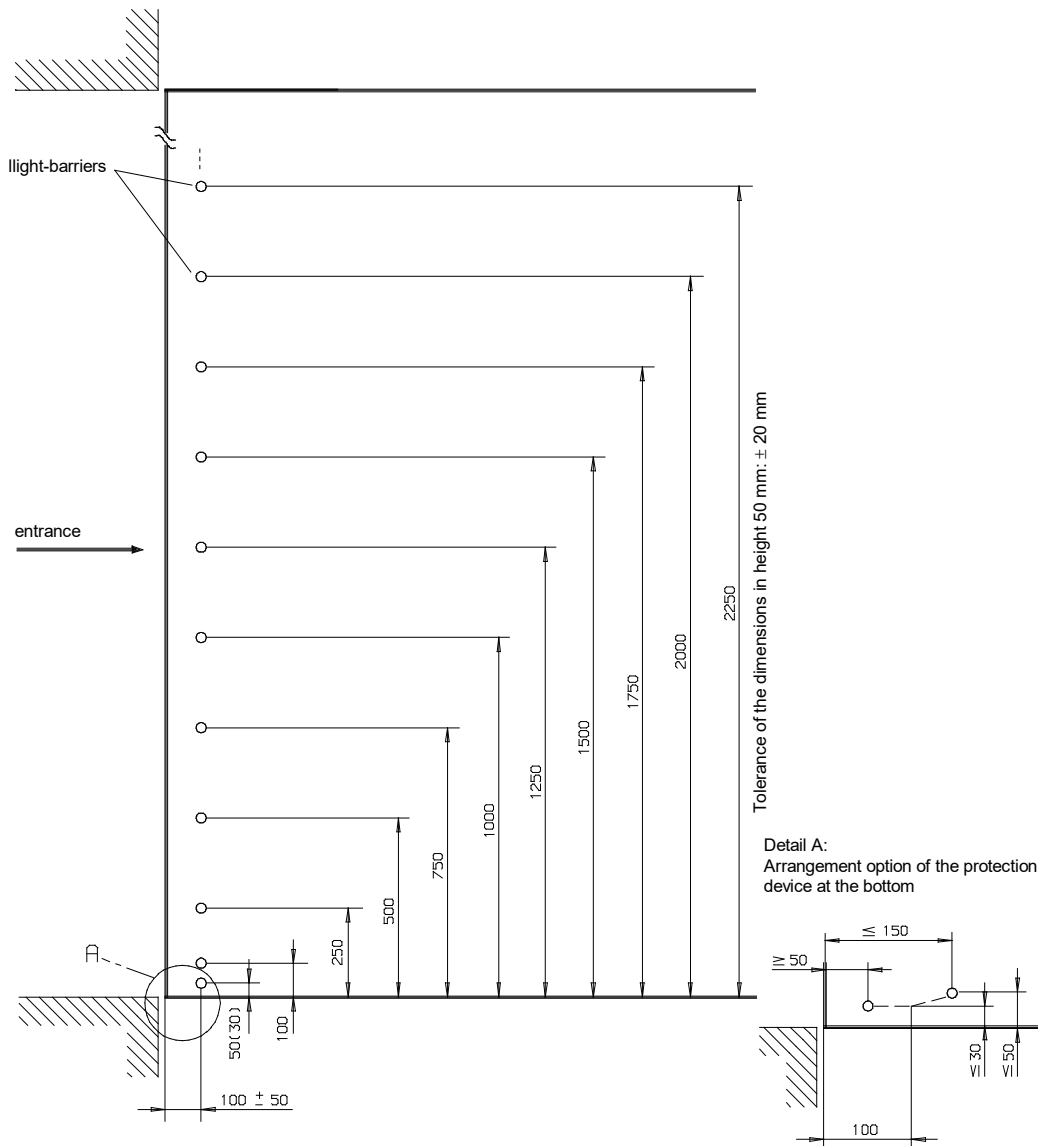
The signals can be easily integrated in lifts of all kind with all types of control systems.

1.6 Arrangement options of the light beams according to the DAA resolution



According to the DAA resolution the space between the centre of the light beam and the edge of the car threshold must be 50 - 100 mm. Note: Exceeding 100 (to 150) is **not** admissible here since the bottom light beam of the Ex-LTÜ² is fixed at a height of 30 mm. According to DAA, however, the bottom light beam must be variable, see the following figure:

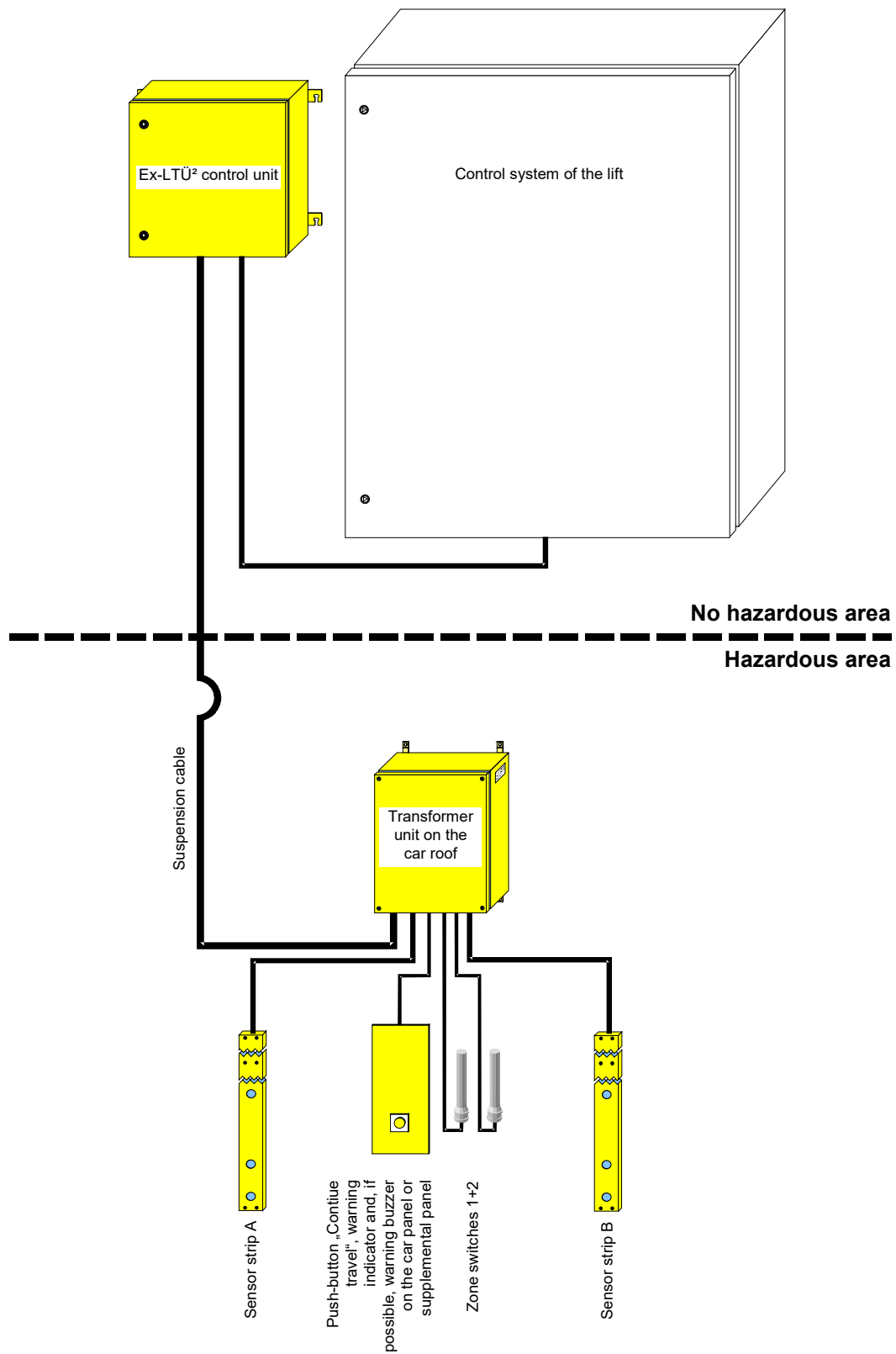
Arrangement
option
of the safety
system (light
beams)
according to the
DAA resolution
no. 6/34



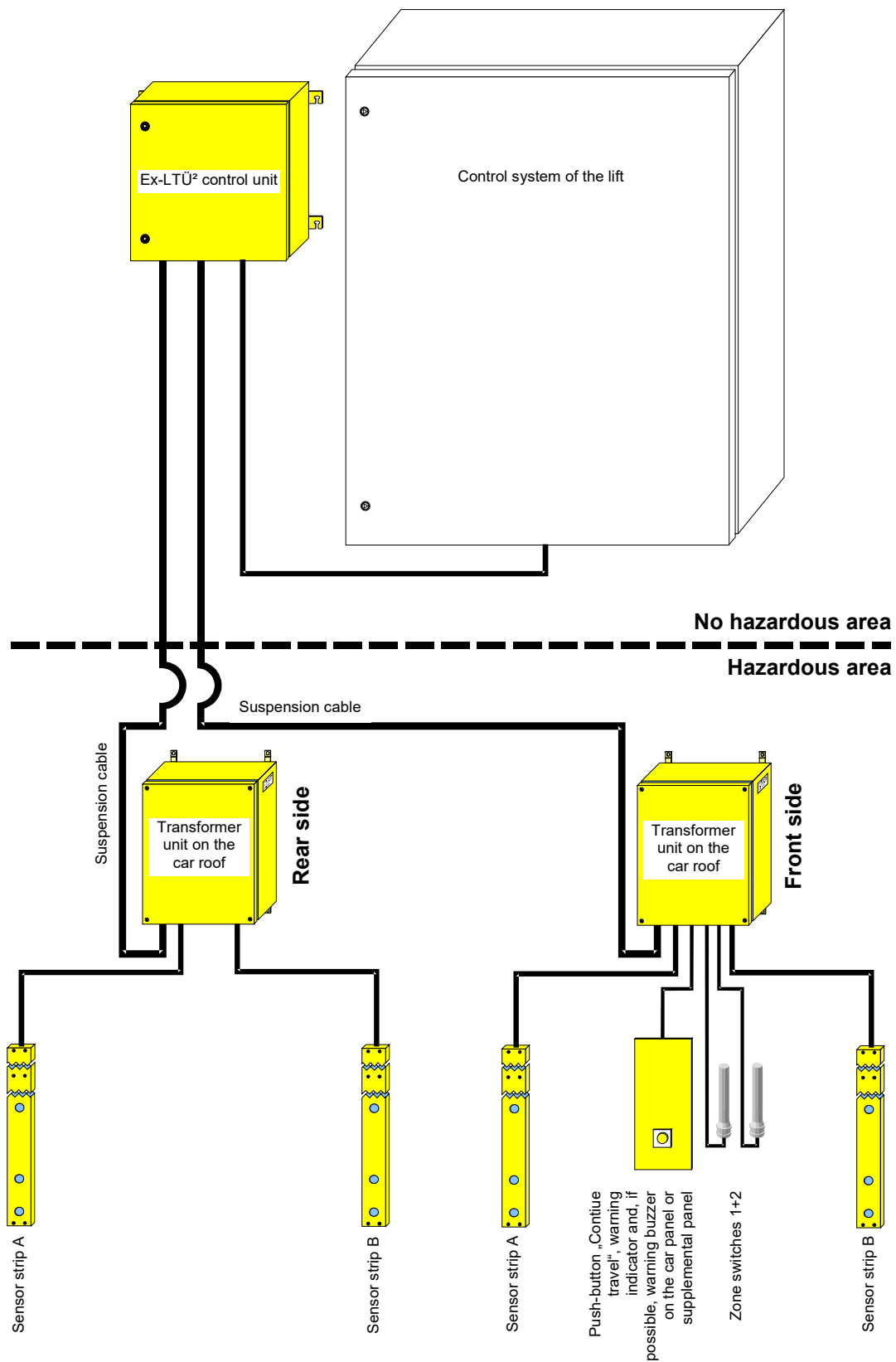
It is also **not admissible** to place the sensor strips between the front edge of the car and the shaft wall since the safety clearance to the shaft wall is too narrow.

2 Installation

Overview
Ex-LTÜ²
for one
access side

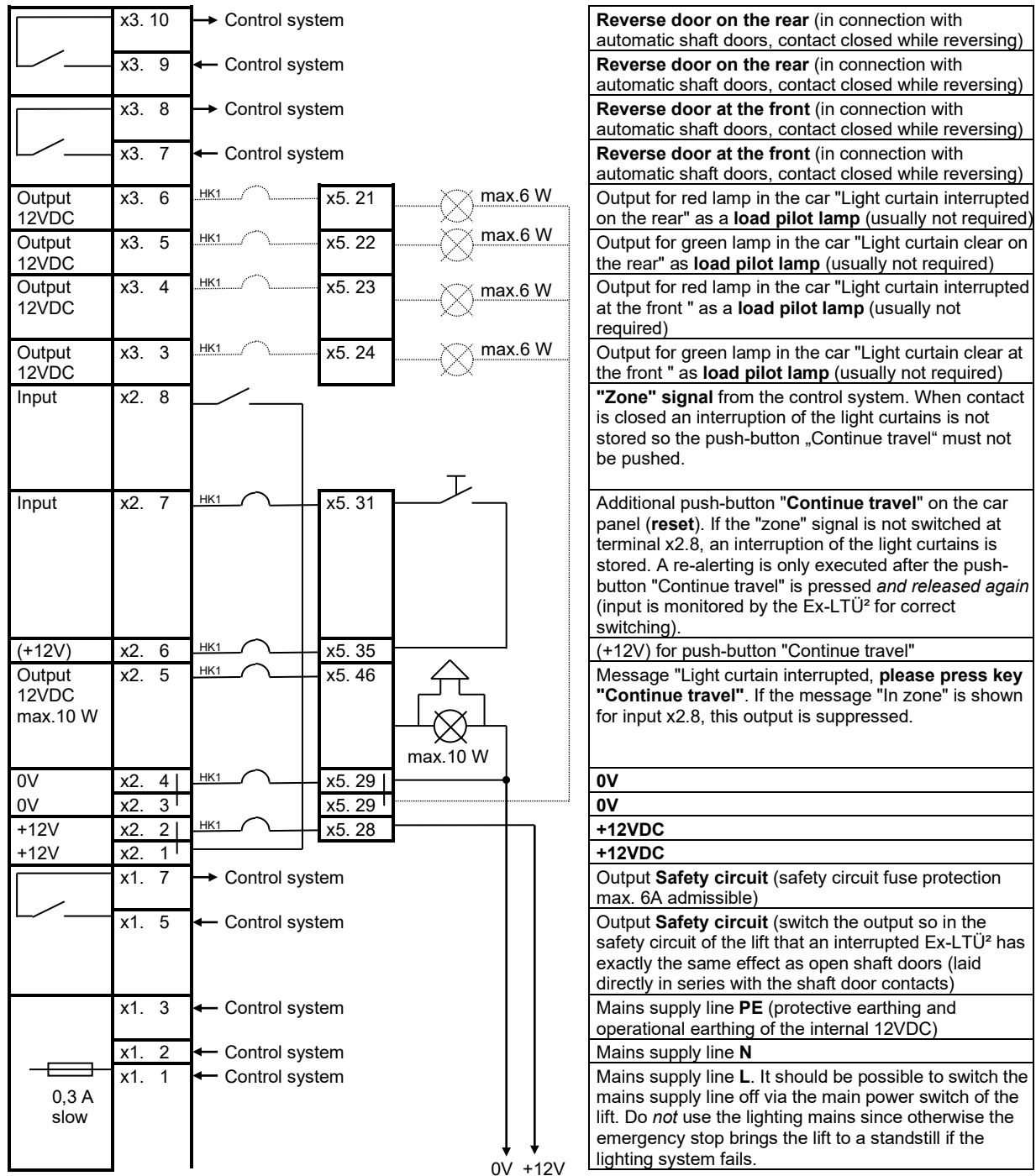


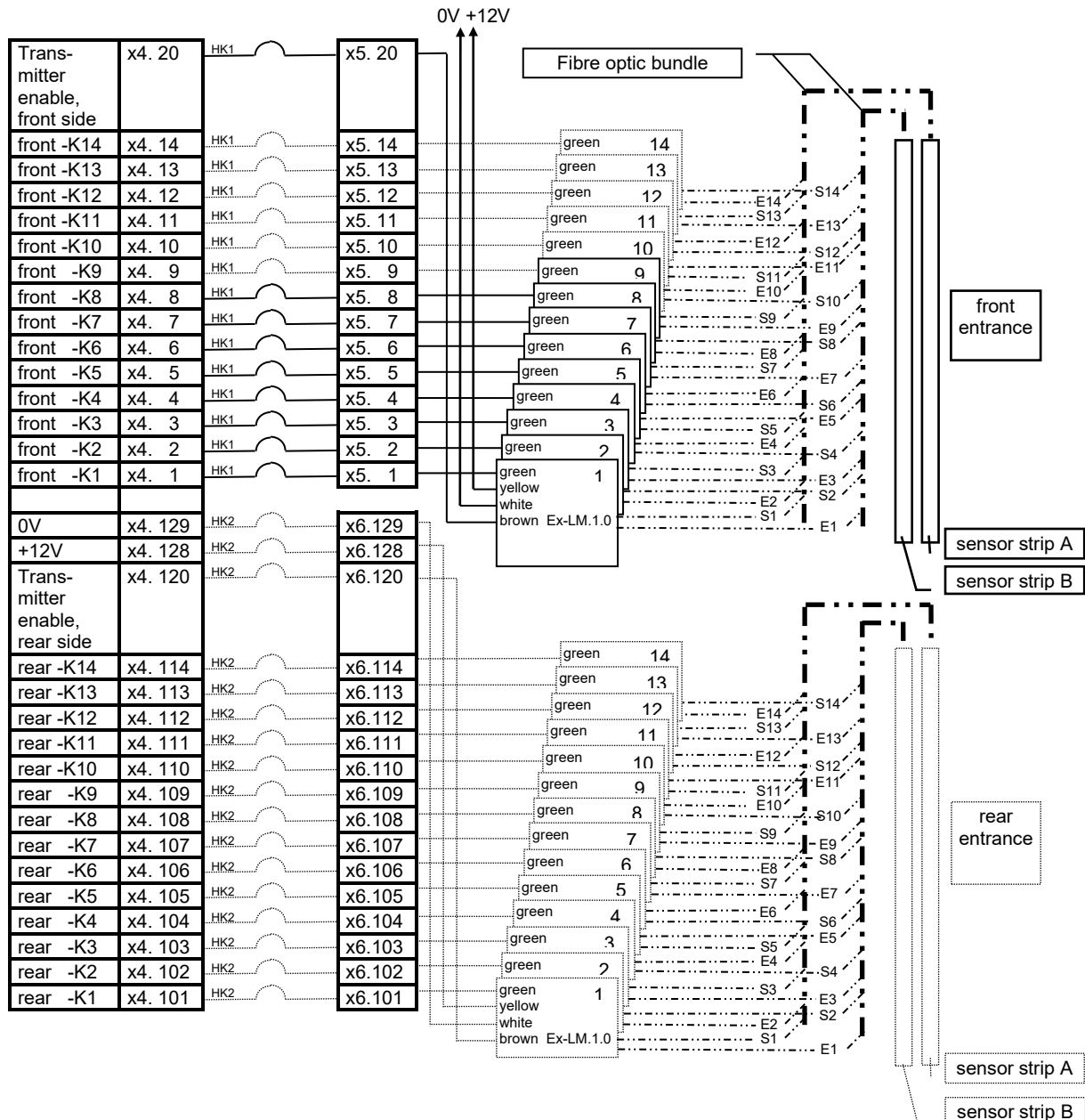
Overview
Ex-LTÜ² for lifts
with accesses
on both ends



3 Electrical connection

3.1 Ex-LTÜ² without edge prevention (simple version)



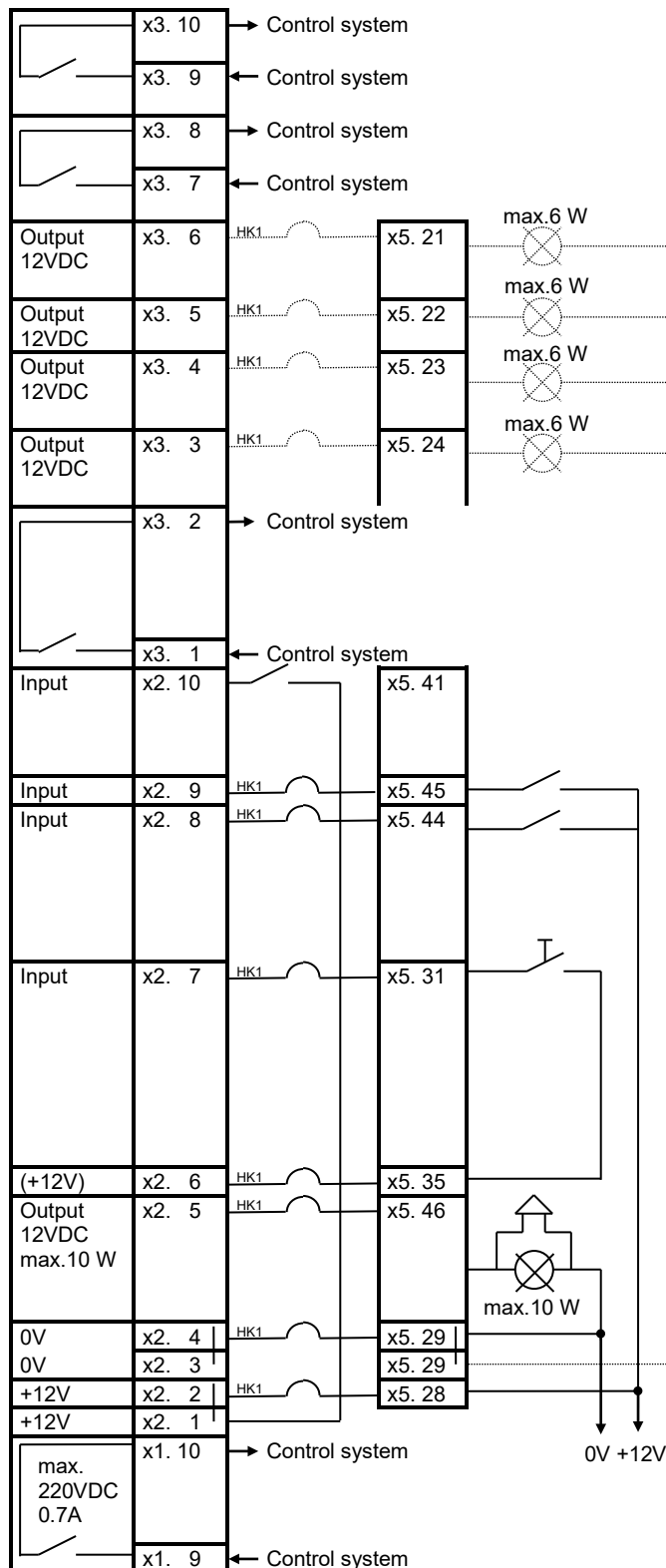


Note:

1. Use suspension cable HK1 and HK2 only for Ex-LTÜ²
2. The potential equalization for the sensor strips must be established, e.g. by connecting the 6.3mm flat plugs on the side to earth using a 4mm² conductor

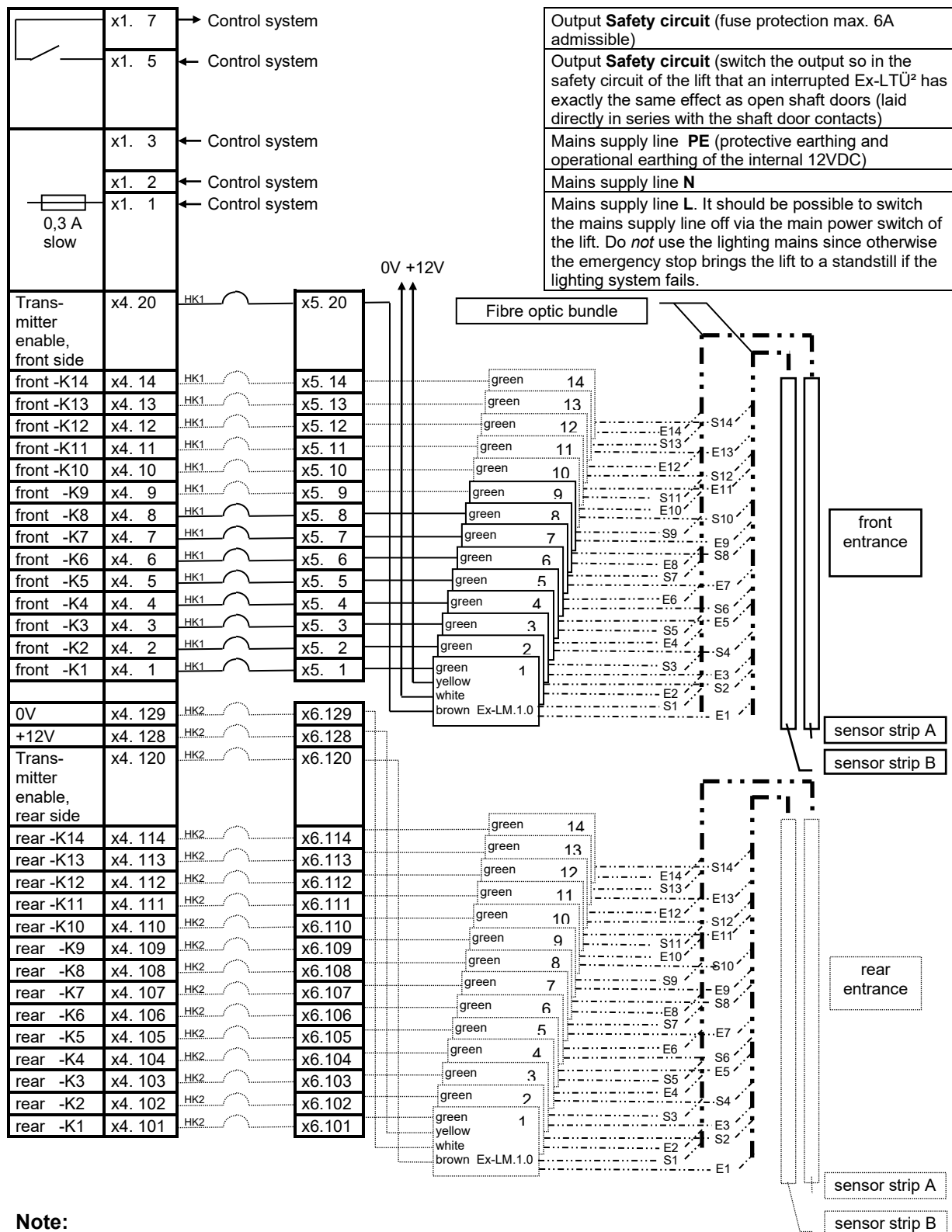
3.2 Ex-LTÜ² with edge prevention (full version)

3.2.1 Connection



Reverse door on the rear (only for automatic shaft doors)
Reverse door on the rear (only for automatic shaft doors)
Reverse door at the front (only for automatic shaft doors)
Reverse door at the front (only for automatic shaft doors)
Output for red lamp in the car "Light curtain interrupted on the rear" as a load control device (usually not required)
Output for green lamp in the car "Light curtain clear on the rear" as load control device (usually not required)
Output for red lamp in the car "Light curtain interrupted at the front" as a load control device (usually not required)
Output for green lamp in the car "Light curtain clear at the front" as load control device (usually not required)
Permit re-levelling The contact is closed when the light curtain zone is switched to alert, meaning the lift pulled into the target stop. (see example A [*]).
Permit re-levelling Signal "Pulling into target stop". The contact must be closed when pulling in, i.e. as of point of delay up to the final standstill (so open during speeding and standstill) (B [*]).
Zone switch 2 Zone switch 1 If the zone evaluation is switched to alert (green LED lights up on the right printed-circuit board), an interruption of the light curtain is not stored so the push-button „Continue travel" must not be pushed (see example C [*]).
Additional push-button "Continue travel" on the car panel (reset). If the zone evaluation is not switched to alert (red LED lights up on the right printed-circuit board), an interruption of the light curtain is stored. A re-alerting is only executed after the push-button „Continue travel" is pressed <i>and released again</i> (input is monitored by the Ex-LTÜ ² for correct switching). (see example D [*]).
(+12V) for push-button "Continue travel"
Message "Light curtain interrupted, please press key "Continue travel" ". If the zone evaluation is switched to alert (green LED lights up on the right printed-circuit board) the message is suppressed.
0V
0V
+12VDC
+12VDC
Holding magnetic interlocking device (continuous duty!) . The contact is open when the light curtain zone is switched to alert, meaning the lift pulled into the target stop. (see example E [*]).
Holding magnetic interlocking device

* see page 13 "Connection examples"



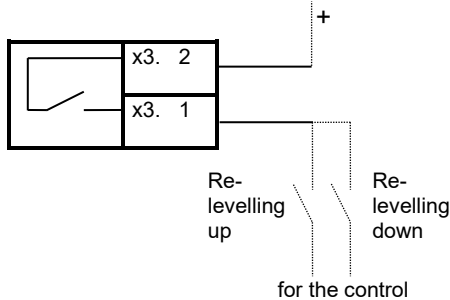
Note:

1. Use suspension cable HK1 and HK2 only for Ex-LTÜ²
2. The potential equalization for the sensor strips must be established, e.g. by connecting the 6.3mm flat plugs on the side to earth using a 4mm² conductor

3.2.2 Connection examples for the full version

A

Connection examples
full version:
re-levelling



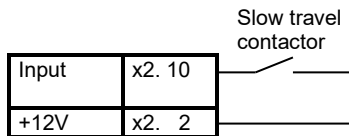
Permit output re-levelling

For lifts with the function "Re-levelling" the re-levelling can be prevented via this output.

The contact is only closed when the lift is at the target stop. If the light curtain is interrupted during a travel and the lift accidentally comes to a standstill within the interlock release range of the door of an intermediate stop (i.e. other than the target stop) this contact is opened. This ensures that during a possible accident situation the lift does not even re-adjust at an intermediate stop and thus increases possible injuries. The output contact is only closed again when the additional push-button "Continue travel" is pressed within the zone or the lift enters a zone.

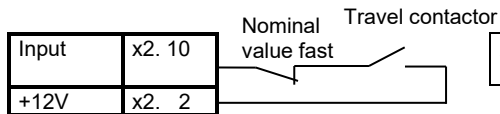
B

Connection examples
full version:
Approach
signal



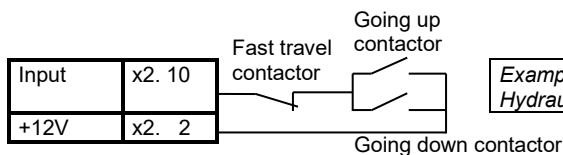
Example

Cable lift pole-changeable uncontrolled



Example

Cable lift controlled

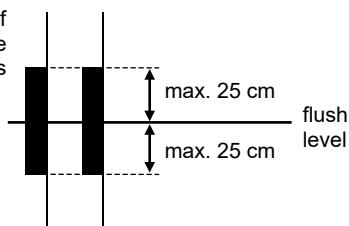


Example

Hydraulic lift

C

Arrangement
of the zone
switches

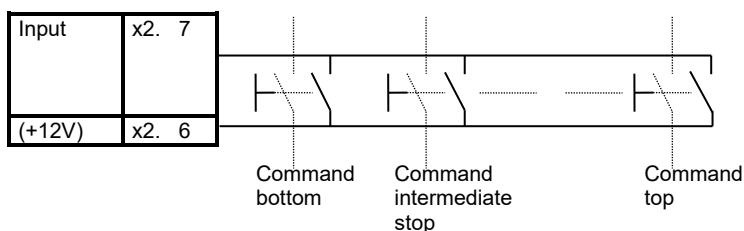


The two transmitters (e.g. solenoid switches) must be mounted so that they do not affect each other.

If solenoid switches are used the solenoids must be screwed on or permanently glued on.

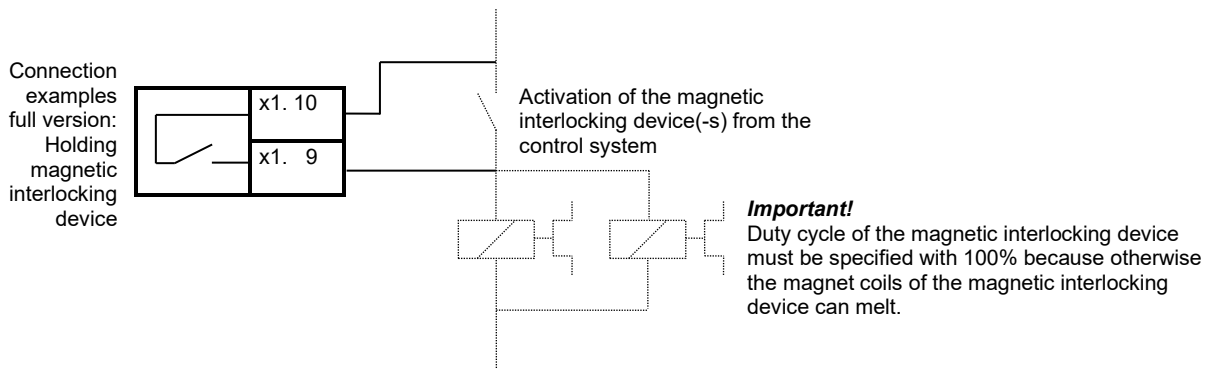
D

Connection examples
full version:
Continue
travel input



Instead of the additional push-button "Continue travel" the available internal command push-buttons can also be used

E



Output "Holding magnetic interlocking device"

If the light curtain is interrupted during a travel and the lift accidentally comes to a standstill within the interlock release range of the door of an intermediate stop (i.e. other than the target stop) this contact remains closed. This ensures that the shaft door cannot be opened and thus an incorrect behaviour of the passengers cannot shut-down the lift drive. The output contact is only opened when the additional push-button "Continue travel" is pressed. Operationally (without interruption of the light curtain) the output contact opens the output contact only upon reaching the interlocking release zone of the target stop. After leaving the interlocking release zone and during the continued travel the contact closes.

4 Test instructions

4.1 Ex-LTÜ² without edge prevention

1. For lifts with accesses on both ends the following steps must each be carried out twice, i.e. for each access separately.
2. Lift stops between floors. Switch off light curtain (usually main power switch of lift).
3. Wait one second
4. Switch voltage back on
5. After no more than one second the light curtain must switch to alert (indicated by the green LED at the front of the printed circuit board of the light curtain)
6. Switch off inspection
7. Let lift pull flush level into a stop
8. Interrupt light curtain $\Rightarrow$ the green LED on the printed circuit board of the light curtain goes off and the red LED lights up $\Rightarrow$ the lamp and/or the buzzer on the car panel (message "Continue travel") must stay off
9. Release light curtain again $\Rightarrow$ the light curtain must automatically switch to alert after the release (indicated by the green LED at the front of the printed circuit board of the light curtain)
10. Interrupt light curtain, close shaft doors and give command
11. The lift must not start moving
12. Release light curtain $\Rightarrow$ lift moves
13. Outside the interlock release range of the door and during fast travel interrupt light curtain $\Rightarrow$ the Ex-LTÜ² must interrupt the safety circuit and the lift must stop immediately. The lamp "Continue travel" must light and a possibly available buzzer must sound.
14. Release light curtain again $\Rightarrow$ if an additional push-button "Continue travel" has been included in the panel the lift must neither continue its travel with an internal command nor with an external request. $\Rightarrow$ If the internal command push-buttons has been switched to release the light curtains, the lift may not start moving at an external request. Only when an internal command has been pushed the lift may continue its travel.
15. Lift moves level into the target stop.
16. Give internal command for a new stop, and interrupt the light curtain when pulling into the target stop **but** interrupt the light curtain **before the interlock release range of the door** $\Rightarrow$ same performance characteristics as under items 14. to 16. must follow. But usually an internal command for the same stop as should have been approached before will not be accepted any more (depending on control). Then another stop must be selected.
17. Give internal command for a new stop, and interrupt the light curtain while pulling into the target stop **but now within the interlock release range of the door briefly before the final stop** $\Rightarrow$ lift does not stop but continues its travel until levelling the car flush, in order to prevent the development of an edge. This function must be provided by the lift control system.

4.2 Commissioning Ex-LTÜ² with edge prevention

1. For lifts with accesses on both ends the following steps must each be carried out twice, i.e. for each access separately.
2. Lift stops between floors. Switch off light curtain (usually main power switch of lift).
3. Wait one second
4. Switch voltage back on
5. After no more than one second the light curtain must switch to alert (indicated by the green LED at the front of the printed circuit board of the light curtain)
6. Switch off inspection
7. Let lift pull flush level into a stop. While pulling in the approach signal of the Ex-LTÜ² must be activated.
8. The two zone switches must be switched on within the interlock release range of the door. The printed circuit board of the zone evaluation (right printed circuit board) must switch to alert (indicated by the green LED at the front of the printed circuit board of the zone evaluation).
9. Interrupt light curtain $\Rightarrow$ the green LED on the printed circuit board of the light curtain goes off and the red LED lights up $\Rightarrow$ the lamp and/or the buzzer on the car panel (message "Continue travel") must stay off
10. Release light curtain again $\Rightarrow$ the light curtain must automatically switch to alert after the release (indicated by the green LED at the front of the printed circuit board of the light curtain)
11. Interrupt light curtain, close shaft doors and give command
12. The lift must not start moving
13. Release light curtain $\Rightarrow$ lift moves
14. Interrupt light curtain during the fast travel outside an interlock release range of a door $\Rightarrow$ the Ex-LTÜ² must interrupt the safety circuit and the lift must stop immediately. The lamp „Continue travel“ must light and the possibly available buzzer must sound. The magnetic interlocking device must not drop off (optional, since not required by DAA) because it is held by the Ex-LTÜ².
15. Release light curtain again $\Rightarrow$ if an additional push-button "Continue travel" has been included in the panel the lift must neither continue its travel with an internal command nor with an external request. Only when the additional push-button has been pressed a new travel may start. $\Rightarrow$ If the internal command push-buttons has been switched to release the light curtains, the lift may not start moving at an external request. Only when an internal command has been pushed the lift may continue its travel.
16. Lift moves level into the target stop.
17. Give internal command for a new stop, and interrupt the light curtain while pulling into the target stop **but** interrupt the light curtain **before the interlock release range of the door** $\Rightarrow$ same performance characteristics as under items 15. to 17. must follow. But usually an internal command for the same stop as should have been approached before will not be accepted any more (depending on control). Then another stop must be selected.
18. Give internal command for a new stop, and interrupt the light curtain while pulling into the target stop **but now within the interlock release range of the door briefly before the final stop** $\Rightarrow$ lift does not stop but continues its travel until levelling the car flush, in order to prevent the development of an edge.
19. Interrupt the Ex-LTÜ² **within the interlock release range of the door** during the fast travel to a stop that has not been selected. I.e. the lift now stops almost level at a stop that has not been selected. $\Rightarrow$ The lamp "Continue travel" must light and a possibly available buzzer must sound. The magnetic interlocking device must not drop out because it is held by the Ex-LTÜ². If the lift is equipped with a re-levelling device ("Go flush level"), it may **not** re-adjust now (optional, since not requested by DAA) because this is blocked by the Ex-LTÜ². Only when the additional push-button (or if the push-button is missing another internal command) has been pressed the lift can re-adjust and the magnetic interlocking device is released again by the Ex-LTÜ².

4.2.1 Zone evaluation (only with the full version)

The printed circuit board for the zone evaluation (right printed circuit board) evaluates two independent signals for even switching. The two signals can be generated e.g. by solenoid switches or initiators. When both channels have switched and the circuit does not show internal errors an output is switched with which the safety devices (e.g. the safety light curtain Ex-LTÜ²) may be bypassed. Further outputs of the circuit serve as a connection to the higher-ranking light curtain and to detect abnormal behaviour.

4.2.1.1 Trouble-free operation

When the input x2.10 ("Pulling into target stop") is energized and the zone switch 1 and 2 do not give a signal, relay -K3 is tripped. Thus relay -K1 can be tripped when zone switch 1 is activated and relay -K2 when zone switch 2 is activated. When zone switch 1 is activated relay -K1 locks in. When zone switch 2 is activated, relay -K2 locks also in. -K3 is energized via one normally-closed contact of -K1 and -K2. Now the zone circuit is switched to alert and the green LED at the front lights up. If the zone circuit is not switched to alert, the red LED lights. The circuit is reset by switching off zone switch 1 and zone switch 2.

4.2.1.2 Switching error of a zone switch

Both channels must always switch simultaneously. Here the channels should switch as simultaneously as possible. If the zone switches are switched unevenly, switching to alert again is blocked when the light curtain is interrupted. Rebounding zone switches (e.g. with an emergency stop directly at the switching on point of the zone switches) do not cause the error, if the rebounding lasts for no more than 1.5 sec. After these 1.5 sec both switches must have the same status otherwise the error is stored and the Ex-LTÜ² blocks.

4.2.1.3 Testing zone switch 1

1. The lift is level, zone switch 1 and 2 are closed
2. Insert bridge between terminals x2.2 and x2.8 (error simulation of zone switch 1)
3. Send lift to the next stop
4. When levelled flush at the target stop interrupt the light curtain and release it again
5. The light curtain must not switch to alert again ⇒ the next travel remains blocked
6. Remove bridge, switch Ex-LTÜ² off and on again
7. The light curtain switches to alert, the next travel is normal

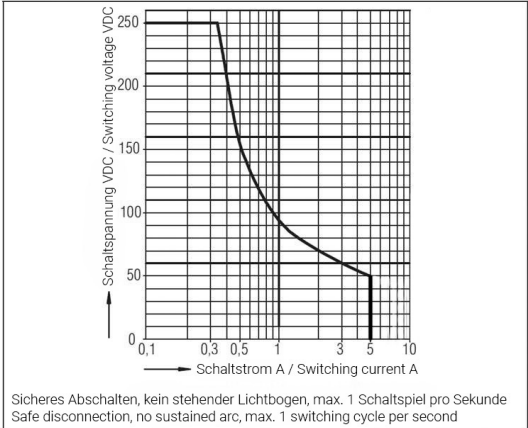
4.2.1.4 Testing zone switch 2

1. The lift is level, zone switch 1 and 2 are closed
2. Insert bridge between terminals x2.2 and x2.9 (error simulation of zone switch 2)
3. Send lift to the next stop
4. When levelled flush at the target stop interrupt the light curtain and release it again
5. The light curtain must not switch to alert again ⇒ the next travel remains blocked
6. Remove bridge, switch Ex-LTÜ² off and on again
7. The light curtain switches to alert, the next travel is normal

5 Technical data

Total system		
Supply voltage	V	230 +5/-10% 50Hz / N / PE
Current consumption type.	A	0.1 (0.18 for lifts with accesses on both ends)
Prim. fuse protection of power supply	AT	2
Internal signal voltage	V	12 DC
Sec. fuse protection of power supply	AT	3.15
Ambient temperature	°C	0 to +40

Control unit		
Protection class acc. to EN 60529		IP 54 (not Ex protected)
Ambient temperature	°C	0 to +40
Casing		Steel plate painted
Dimensions housing (HxBxT)	mm	500x400x250 (without fastening bars)
Power dissipation	W	30 max.
Weight	kg	10
Connection of all external units		screwless terminal strips
Connectable core cross-section	mm²	0.08 – 2.5

Output for safety circuit (terminal x1.5 / x1.7)		
Switching voltage, max.	V	250
Starting / continuous current / current on breaking	A max.	20 / 6 / 6
Switching capacity AC12 / AC15	VA max	1250 / 500
Switching capacity max. DC		
Series fuse max.	A	the output circuit must be protected with max. 6 A

Transformer unit on the car roof		
Protection class acc. to EN 60529		IP 65
Ex protection	gas	II 2G Ex eb mb op is IIC T4 Gb
Ex protection	dust	II 2D Ex mb tb op is IIC T130°C Db IP65

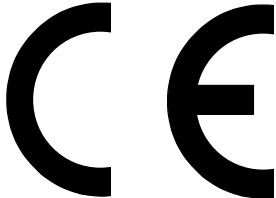
Light-barrier modules		
Protection class acc. to EN 60529		IP 65
Ex protection		Type of protection m (must only be operated built-into the transformer housing)
Supply voltage	V	12 ±5%
Nominal current consumption	mA	12
Output voltage	V	12.6 max
Output current	mA	30 max.

Connection sensor strips		
Type of connection		Individual optical fibre plugged directly
Length of the connection cable	m	5 (cannot be extended later!)

Optical data of the sensor strips		
Surface the lenses		Silicate glass
Insensitive against ambient light	Lux	80000 (constant light)
Range	m	0 - 4
Arrangement of the light beams		Parallel, transmitter/receiver alternating
Size of light spot with 4 meters	mm	200
Type of light		Impulse-commutated red light

6 EU Declaration of conformity

We hereby declare that the units listed below fully comply with the relevant essential protection requirements of the listed directives with regard to their design and components as well as in the version marketed by us in compliance with our circuit and assembly suggestions. The units complying with this declaration are provided with CE emblem. This declaration becomes invalid should the unit be modified without our approval.

Type designation	Ex-LTÜ ² -... incl. controller unit with PCB of version E incl transformer unit Ex-LGW... with modules Ex-LM.1.0
Manufacturing date	2026 / 2027 / 2028 / 2029 / 2030
Short description	Safety light curtain as a substitution for the car door of freight lifts with an operational speed up to 0.85 m/s
Basis are the following directives	Lift directive 2014/33/EU ATEX directive 2014/34/EU EMC directive 2014/30/EU
Applied standards	EN 81-1:1998 + A3:2009 EN 81-2:1998 + A3:2009 EN 81-20:2020 EN IEC 60079-0:2018 EN IEC 60079-7:2015 + A1:2018 EN 60079-18:2015 + A1:2017 EN 60079-28:2015
	

This explanation is issued by the responsible manufacturer
STRACK LIFT AUTOMATION GmbH
on 10.6.2026
by
Dipl.-Ing. Dirk Strack, Managing Director



Note

The aforementioned STRACK products are exclusively intended for the installation in lifts or the assembly with other lift parts. The commissioning or distribution within the European Union is only admissible, if the conformity of the finished product corresponds with the relevant harmonised directives of the EU.

7 Certificates

Zertifikat



Nr.: 968/A 129.02/24

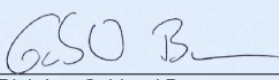
Prüfgegenstand	Sicherheitsschaltungen als Teilbereiche der Leiterplatten LTUE_E und ZONE_E	Zertifikatsinhaber	STRACK LIFT AUTOMATION GmbH Lise-Meitner-Straße 2 42489 Wülfrath Germany
Typbezeichnung	LTÜ ² , basierend auf den Leiterplatten LTUE_E, ZONE_E, HP_E und optional DUM_ZONE_E		
Prüfgrundlagen	EN 81-20:2020, 5.11.2.3	EN 81-50:2020, 5.15	
Bestimmungsgemäße Verwendung	Ersatz von zwangsläufigen Sicherheitsschaltern durch eine Sicherheitsschaltung.		
Besondere Bedingungen	Die Hinweise in der zugehörigen Betriebs- und Wartungsanleitung sowie dem Anhang zu diesem Zertifikat sind zu beachten.		
Gültig bis 03.05.2029			

Der Ausstellung dieses Zertifikates liegt eine Evaluierung entsprechend dem Zertifizierungsprogramm CERT FSP5 V3.0:2020 in der aktuellen Version zugrunde, deren Ergebnisse im Bericht Nr. 968/A 129.02/24 vom 17.04.2024 dokumentiert sind. Dieses Zertifikat ist nur gültig für Erzeugnisse, die mit dem Prüfgegenstand übereinstimmen. Ausgestellt von der durch die DAkkS nach DIN EN ISO/IEC 17065 akkreditierte Zertifizierungsstelle. Die Akkreditierung gilt nur für den in der Urkundenanlage D-ZE-11052-02-00 aufgeführten Akkreditierungsumfang.

TÜV Rheinland Industrie Service GmbH
Bereich Automation
Funktionale Sicherheit
Am Grauen Stein, 51105 Köln

Köln, 03.05.2024

Zertifizierungsstelle Safety & Security for Automation & Grid



Dipl.-Ing. Gebhard Bouwer

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17.04.2024

Anlage zum Zertifikat Reg.-Nr. 968/A 129.02/24

1. Komponente	LTÜ ² basierend auf den Leiterplatten ZONE_E, LTUE_E, HP_E und optional DUM_ZONE_E
2. Hersteller	STRACK LIFT AUTOMATION GmbH Lise-Meitner-Straße 2 42489 Wülfrath
3. Baugruppen	Sicherheitsschaltungen als Teilbereiche der Leiterplatten LTUE_E und ZONE_E (aufgesteckt auf der Leiterplatte HP_E) der Komponente LTÜ ² und optional DUM_ZONE_E als Dummy Ersatz für ZONE_E
4. ID-Nr. / Kennzeichnung auf den Baugruppen	ZONE_E, LTUE_E, HP_E, DUM_ZONE_E
5. Bisherige Prüfgrundlagen	EN 81-20:2014, 5.11.2.3 / EN 81-50:2014, 5.15
6. Anwendungsbereich	Aufzüge für den Personen- und Gütertransport
7. Bestimmungsgemäßer Gebrauch / Bestimmungsgemäße Verwendung	Ersatz von zwangsläufigen Sicherheitsschaltern durch eine Sicherheitsschaltung
8. Nenndaten	Versorgungsspannung: 230 V AC +5% / -10%, 50 Hz L Klemme X1.1 N Klemme X1.2 PE Klemme X1.3
	<u>Sicherheitskreis</u> Klemme X1.5 - X1.7 Ausgangsspannung: max. 250 V AC / 24 V DC Ausgangsstrom: max. 6 A Schaltvermögen: AC15: 250 V 5 A DC13: 24 V 4 A
	<u>Zonenschalter</u> Eingangsspannung: 24 V DC Zonensignal 1 Klemme X2.8 Zonensignal 2 Klemme X2.9 Bezugspotential Klemme X2.2 24 V DC
	Schutzgrad ¹ : IP54
	Betriebstemperatur: 0...+40°C
	Weitere technische Daten zu den Sicherheitsschaltungen siehe Betriebs- und Wartungshandbuch der Baugruppe LTÜ ² der Fa. STRACK LIFT AUTOMATION GmbH.
9. Installation	- Die Vorgaben im Betriebs- und Wartungshandbuch für die Installation, die Inbetriebnahme sowie den Betrieb der Sicherheitsschaltungen sind zu beachten. Des Weiteren sind die relevanten nationalen Vorschriften und die EN 81-20 bei der Installation einzuhalten und es ist eine EMV-gerechte Verdrahtung zu gewährleisten. - Die Zuleitungen zu den Zonenschaltern sowie der Ausgangskreis (Anschluss an den Sicherheitskreis) sind kurzschlussicher auszuführen.

¹ Durch Gehäuseschutzgrad / Einbauraum zu gewährleisten.

17.04.2024



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9. Installation (fortgesetzt)	- Durch die Wahl eines geeigneten Einbauorts muss sichergestellt sein, dass Umwelteinflüsse keine negativen Auswirkungen auf die Funktion der Sicherheitsschaltung haben.
10. Wartung	Die korrekte Installation ist regelmäßig zu überprüfen.
11. Besondere Bedingungen	Im Rahmen der Erstinbetriebnahme und der wiederkehrenden Prüfungen des Aufzugs sind folgende Überprüfungen durchzuführen: - Prüfung der korrekten Installation, - Prüfung der Hardwareversion, - Prüfung der Sicherheitsfunktion (Zonenschalter) gemäß Kap. 6.3.1 in der Betriebs- und Wartungsanleitung.



Translation

EU-Type Examination Certificate Supplement 1

Change to Directive 2014/34/EU

1 **Equipment intended for use in potentially explosive atmospheres**
Directive 2014/34/EU

2 EU-Type Examination Certificate Number: **BVS 03 ATEX E 225**

3 Product: **Light barrier module type Ex-LM.1.0**
with light grid converter type Ex-LGW.4.*

4 Manufacturer: **STRACK LIFT AUTOMATION GmbH**

5 Address: **Lise Meitner-Straße 2, 42489 Wülfrath, Germany**

6 This supplementary certificate extends EC-Type Examination Certificate No. BVS 03 ATEX E 225 to apply to products designed and constructed in accordance with the specification set out in the appendix of the said certificate but having any acceptable variations specified in the appendix to this certificate and the documents referred to therein.

7 The certification body of DEKRA Testing and Certification GmbH, Notified Body number 0158, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.
The examination and test results are recorded in the confidential Report No. BVS PP 03.2165 EU.

8 The Essential Health and Safety Requirements are assured in consideration of:

EN 60079-0:2012 + A11:2013	General requirements
EN 60079-7:2015	Increased Safety "e"
EN 60079-18:2015	Encapsulation "m"
EN 60079-28:2015	Optical Radiation "op is/pr/sh"

9 If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Special Conditions for Use specified in the appendix to this certificate.

10 This EU-Type Examination Certificate relates only to the design and construction of the specified product.
Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

11 The marking of the product shall include the following:



II 2G Ex eb mb op is IIC T4 Gb

II 2D Ex mb tb op is IIIC T130°C Db

12 DEKRA Testing and Certification GmbH
Bochum, 14-06-2019

signed: Jörg-Timm Kilisch

Managing Director



Page 1 of 3 of BVS 03 ATEX E 225 / N1
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Appendix

EU-Type Examination Certificate

BVS 03 ATEX E 225
Supplement 1

Product description

Subject and type

Light barrier module type Ex-LM.1.0
with light grid converter type Ex-LGW.4.*

The asterisk is replaced by the number of light barrier modules installed inside an enclosure.

Description

The light barrier module type Ex-LM.1.0 with light grid converter type Ex-LGW.4.* is used for monitoring tasks in explosive atmospheres. Up to 14 light barrier modules of the type of protection Encapsulation m and a separately certified junction and terminal box type 06.162609 (PTB 00 ATEX 1002) of the type of protection Increased Safety e are installed in a metal enclosure and together form the light grid converter.

Reason for the supplement:

- change to Directive 2014/34/EU
- modification to comply with current version of standards and addition of EN 60079-28 (optical radiation)
- types Ex-RFX.* and Ex-HSTG.* have been ceased, type names have been modified
- group III has been added

Parameters

Supply circuit			
Rated voltage		DC	12 V ± 5%
Rated current			12 mA
Output circuit			
Output voltage	up to	DC	12.6 V
Output circuit	up to		30 mA

Report Number

BVS PP 03.2165 EU, as of 2019-06-14



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17	Special Conditions for Use None
18	Essential Health and Safety Requirements The Essential Health and Safety Requirements are covered by the standards listed under item 9.
19	Drawings and Documents Drawings and documents are listed in the confidential report.

We confirm the correctness of the translation from the German original.
In the case of arbitration only the German wording shall be valid and binding.

DEKRA Testing and Certification GmbH
Bochum, 2020-08-19
BVS-Hk/Ar E 9680/20



Managing Director

Page 3 of 3 of BVS 03 ATEX E 225 / N1
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 **DAKKS**
Deutsche
Zertifizierungsstelle
D-20 17438-02-00

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