

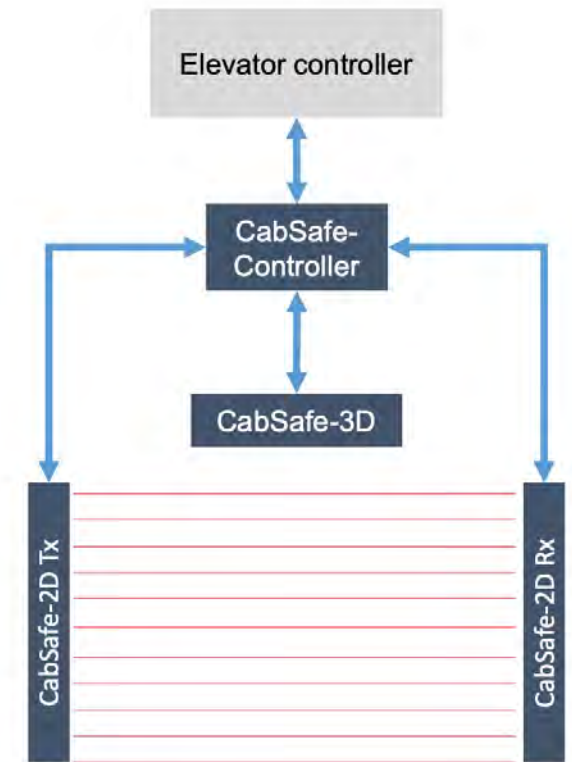


Introducing CEDES CabSafe™ System



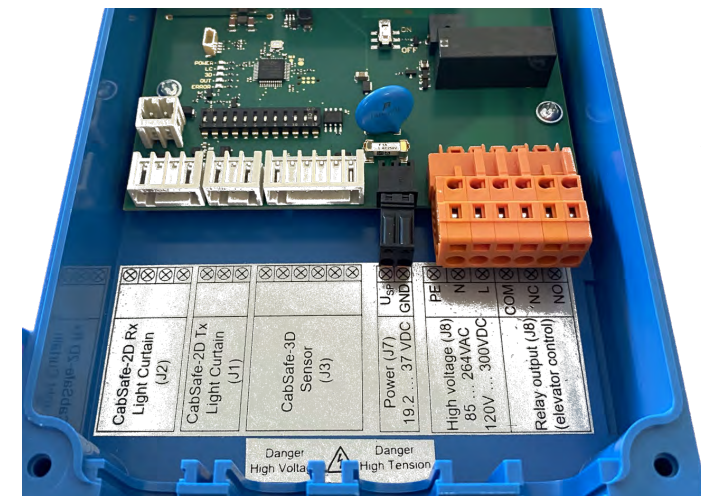
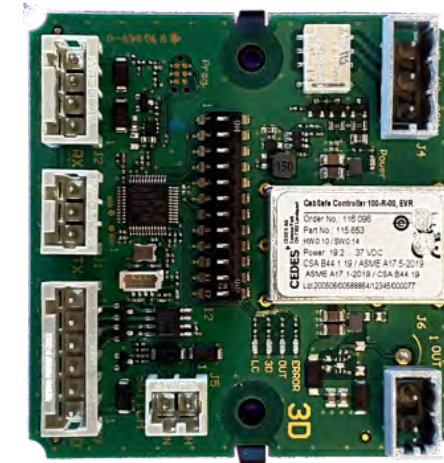
CabSafe™ System Overview

- ▶ The CEDES CabSafe™ System consists of three main components:
 - ▶ A CabSafe Controller
 - ▶ Manages signals from sensors
 - ▶ Performs logic for the system
 - ▶ Responsible for rendering inoperative
 - ▶ A CabSafe 2D Light Curtain (cegard/Pro)
 - ▶ Most-often mounted on the Elevator Cab Doors
 - ▶ Monitors for persons or objects located between the elevator doors
 - ▶ A CabSafe 3D TOF Sensor
 - ▶ Mounted in or on the Elevator Cab Transom
 - ▶ Monitors for persons or objects approaching the elevator cab entrance



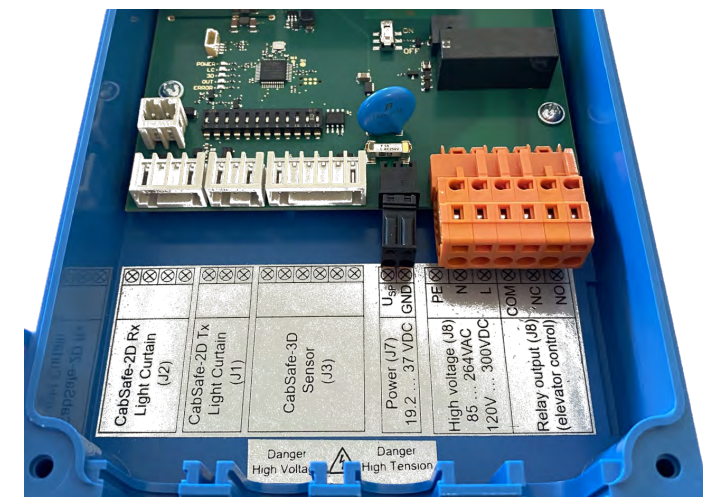
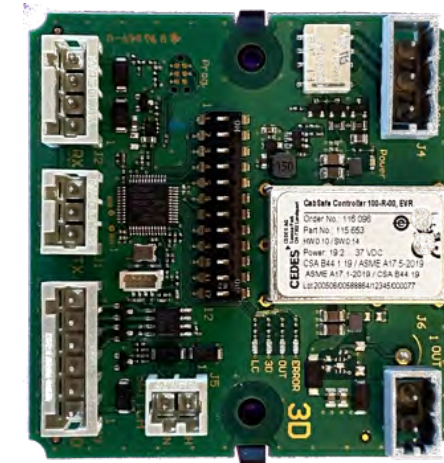
CabSafe™ Controller

- ▶ The CabSafe Controller brings the connections of all devices into a single location
- ▶ It provides system configuration functionality
 - ▶ DIP Switch Configuration
 - ▶ Defines application details
 - ▶ Configures the same, regardless of controller variant
- ▶ Logic is performed in accordance with the 2019 Code requirements and a single output represents the overall system state



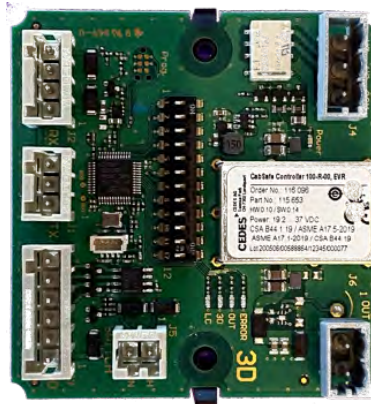
CabSafe™ Controller

- ▶ Fulfills the self-monitoring requirements outlined in the Code for the 2D and 3D detection means:
- ▶ Device outputs are either FSSL or Serial Communication
- ▶ The detection means (2D/3D) are tested on a continuous basis
- ▶ Testing includes when the door is in the fully open position and prior to the initial of a close.

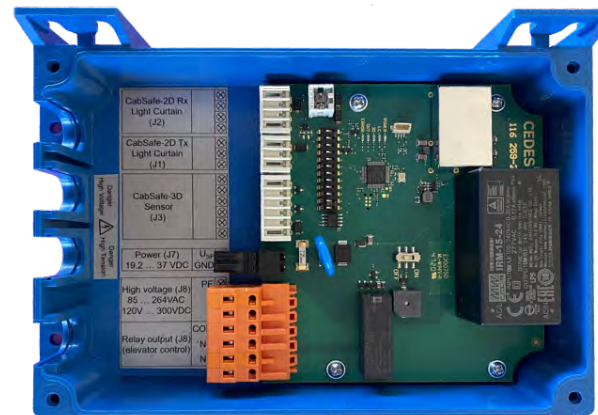


CabSafe™ Controller

- ▶ Several product variants available
 - ▶ **CabSafe 100** Controllers (low-voltage DC incoming power)
 - ▶ 19.2 to 28.8 V DC PCB with Solid State Output on PCB Carrier
 - ▶ 19.2 to 37.0 V DC PCB with Relay Output on PCB Carrier
 - ▶ 19.2 to 28.8 V DC PCB with Solid State Output in IP54 Enclosure
 - ▶ 19.2 to 37.0 V DC PCB with Relay Output in IP54 Enclosure
 - ▶ **CabSafe 200** Controllers (Wide-Ranging Power Supply)
 - ▶ 19.2 - 37, 85 to 264 V AC with Relay Output in IP 54 Enclosure



CabSafe 100 (OEM)
24 VDC - Relay



CabSafe 200 (MOD)
Wide Ranging PS - Relay

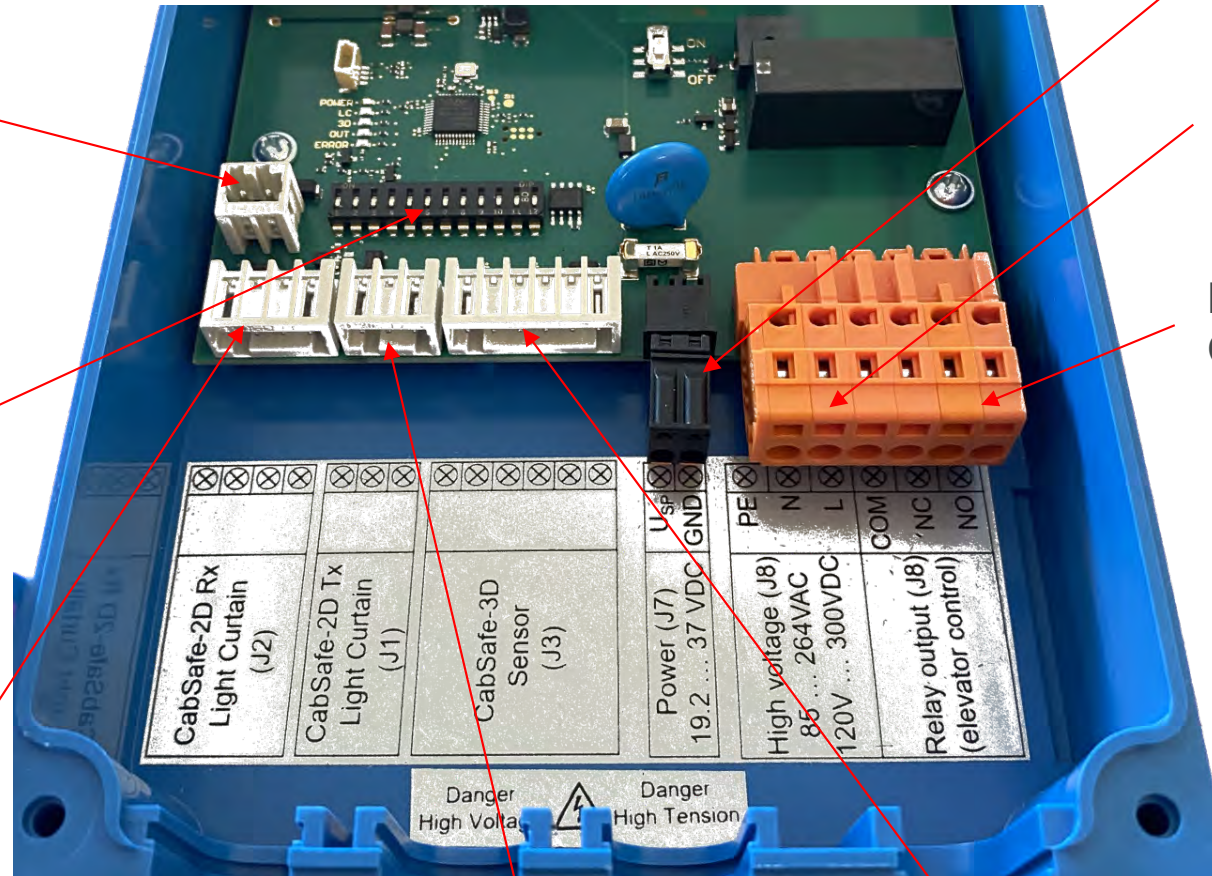
CabSafe™ Controller

CabSafe 200 WR Power Supply with Relay Out

External Door
Closed Signal

DIP Switch
Configuration

CabSafe 2D
Receiver
Connection



Input voltage
19...37 V DC

Input Voltage:
85 ... 264 V AC

Relay Output
Connection

CabSafe 2D
Transmitter
Connection

CabSafe 3D
Connection

CabSafe™ Controller Configuration

DIP Switch	1	2	3	4	5	6	7	8	9	10	11	12
No Function	0	0										
Sensor Mounted on Left (Looking into the cab from the hall)	1	0										
Sensor Mounted on Right (Looking into the cab from the hall)	0	1										
Center	1	1										
Door Signal by Light Curtain			1	0								
Door Signal by External Output			0	1								
Door Height > 6.7 - 7.5 ft					1	0	0	0				
Door Height > 7.5 - 8.5 ft					0	1	0	0				
Door Height > 8.5 - 9.0 ft					0	0	1	0				
Door Height > 9.0 -10.0 ft					0	0	0	1				
2D/3D Active									0			
2D Only (3D Inactive)									1			

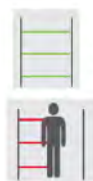
CabSafe™ Controller Configuration

DIP Switch	1	2	3	4	5	6	7	8	9	10	11	12
Output Active when Clear (see diagram below)										0		
Output Active when Obstructed (see diagram below)										1		
Frequency Group A											1	
Frequency Group B											0	
Reserved												X

DIP10 = 0 for Output PNP / Normally Open (NO-COM) or DIP10=1 for Normally Closed (NC-COM)



DIP10 = 1 for Output PNP / Normally Open (NO-COM) or DIP10=0 for Normally Closed (NC-COM)



No object detected by light curtain



Object detected by light curtain



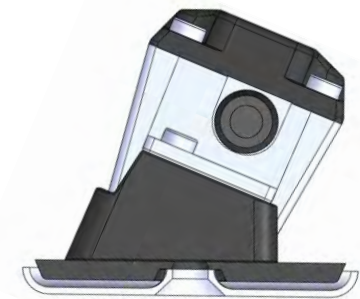
No object detected by 3D-sensor



Object detected by 3D-sensor

CabSafe™ 3D

- ▶ The CabSafe 3D Time-of-Flight (TOF) sensor is mounted in or on the transom and projects a detection field in front of the elevator doors
- ▶ The detection field complies with 2019 Code requirements
- ▶ The CabSafe 3D is suitable for 7-10 ft door heights and is suitable for left-, right- and center-opening applications
 - ▶ Configuration occurs on the CabSafe controller



CabSafe™ 3D Product Portfolio

**Black Anodized
Mounting Bracket
(Standard)**



**Silver Finish
Mounting Bracket
(Special Order)**



Side Open:

Elevator door heights from
6.67 ft to **8 ft** and door
opening widths up to 4.5 ft.

Center Open:

Elevator door heights from
6.67 ft to **10 ft** and door
opening widths up to 4.5 ft.

CabSafe™ 3D Product Portfolio incl. TD

**Black Anodized
Mounting Bracket**



**Silver Finish
Mounting Bracket**



Side Open:
Elevator door heights from
8 ft to **10 ft** and door
opening widths up to 4.5 ft.

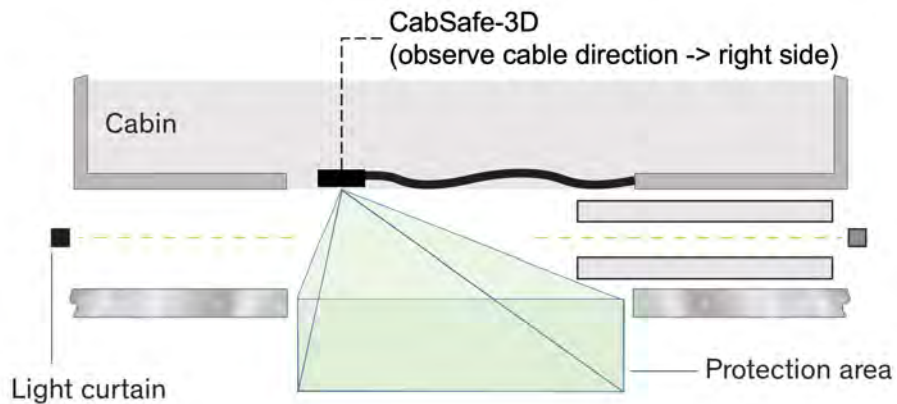
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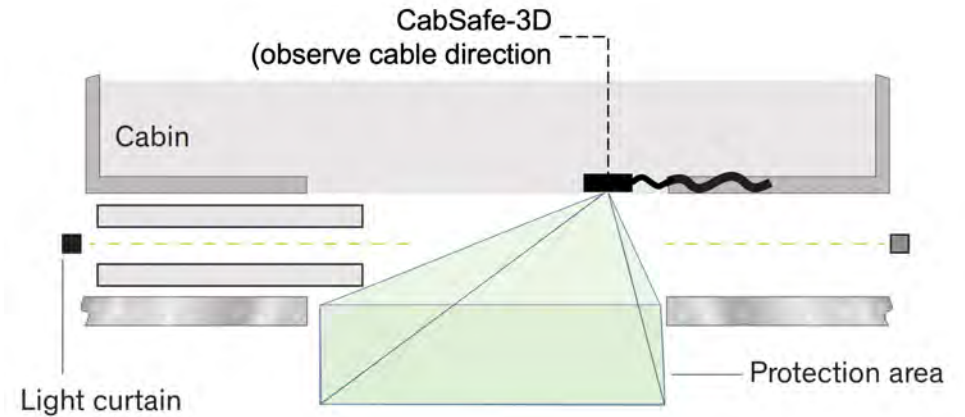
Center Open:
Elevator door heights from
6.67 ft to **10 ft** and door
opening widths up to 4.5 ft.

CabSafe™ 3D Detection Fields

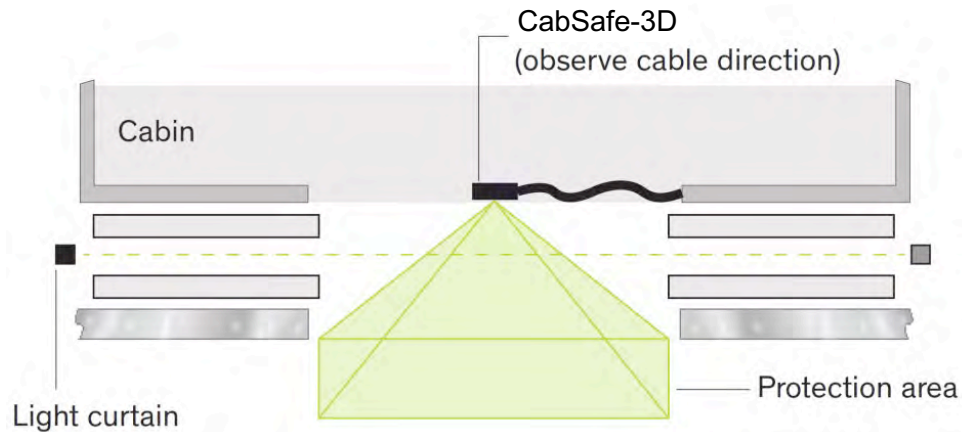
Sensor on Left (e.g. TDL)



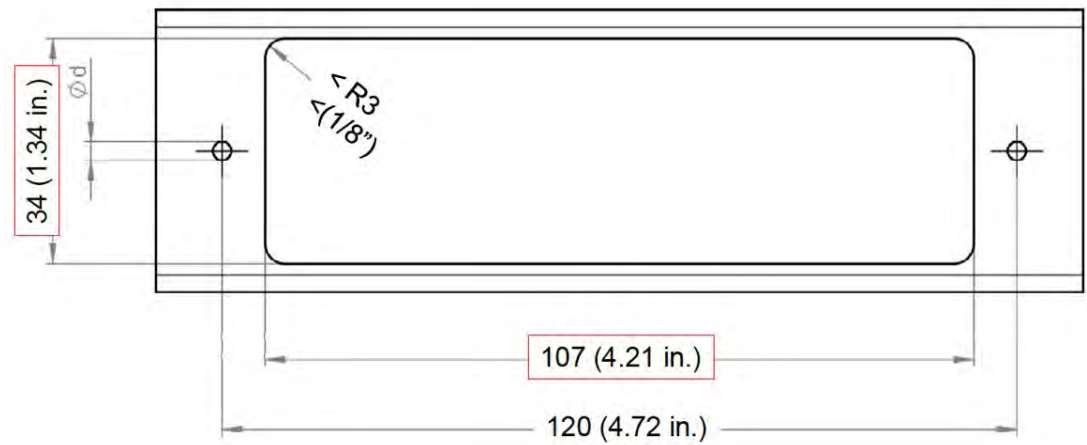
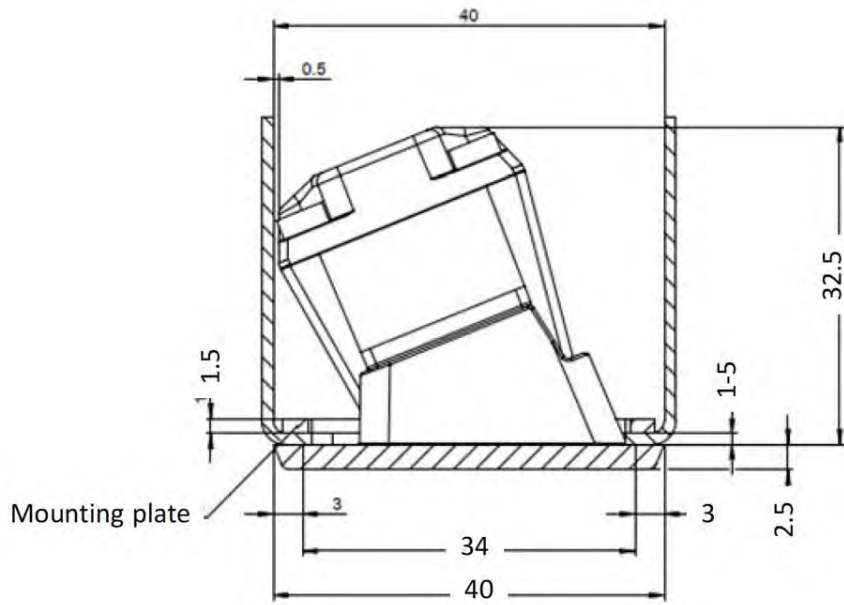
Sensor on Right (e.g. TDR)



Sensor in Center



CabSafe™ 3D Dimensions



CabSafe™ Back of Transom Mount



CabSafe™ 3D

CabSafe 3D flush-mounted
In Cab Transom



CabSafe 3D with
Back-of-Transom SS Bracket

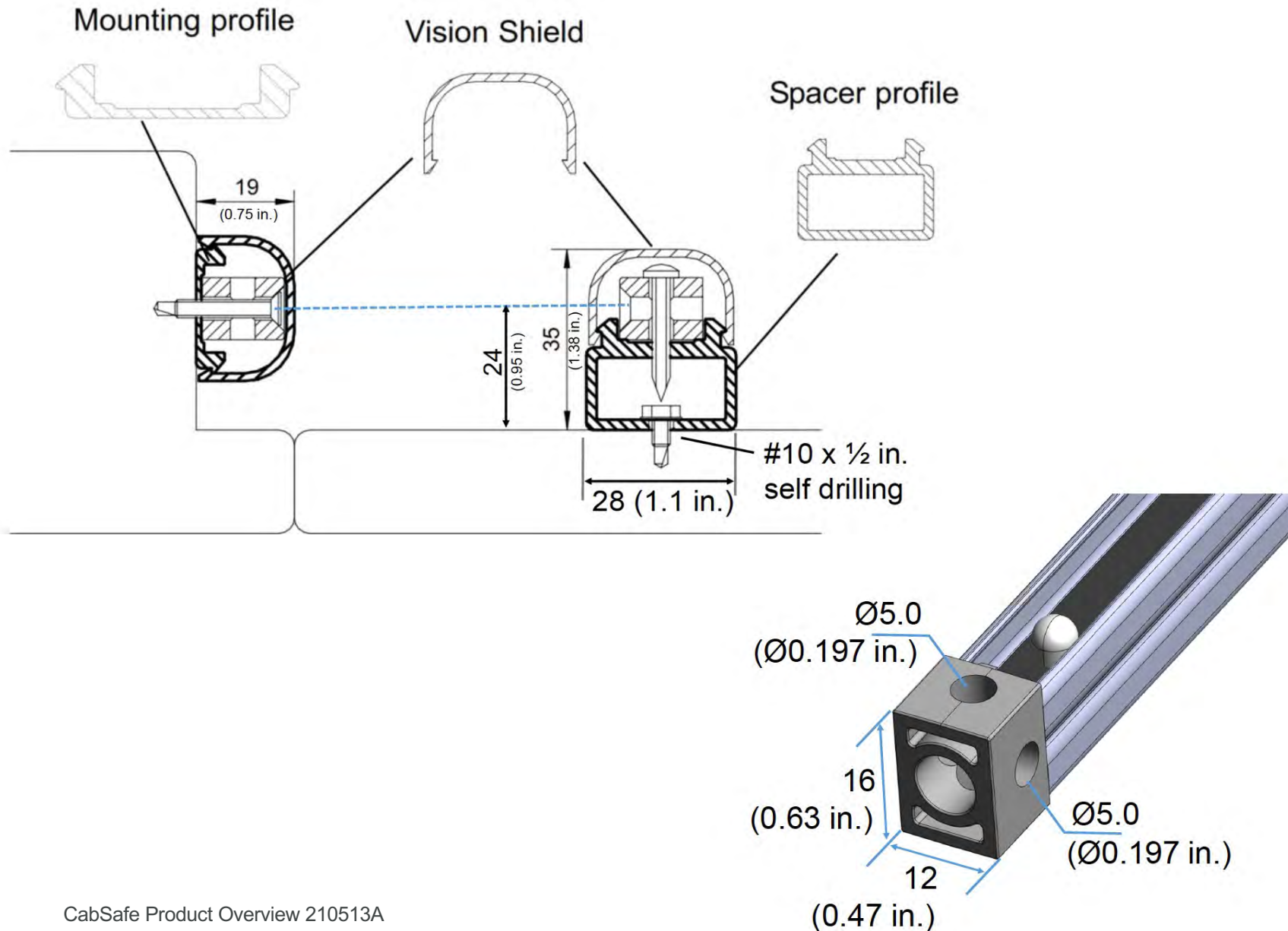


CabSafe™ 2D

- ▶ Operating Range 0.01 ... 4 m (0.033 ... 13.1 ft)
- ▶ Detection Field
 - ▶ Fulfills 2019 Code Requirements
 - ▶ 1600 mm (5.2 ft) Protection Height
 - ▶ 36 Elements / 106 Criss-Cross Beams
- ▶ Selectable output: FSSL or Push-pull
 - ▶ Fulfills Self-Monitoring Requirement in 2019 Code
- ▶ High ambient light robustness to 100 kLux
- ▶ Electrical Synchronization to ensure robust operation
- ▶ IP 65 Enclosure Rating
- ▶ Slim design
 - ▶ 12 x 16 x 1'722 mm (0.47 x 0.63 x 67.8 in.)
- ▶ Same mounting as existing Adams GateKeeper products





CabSafe™ 2D Dimensions



CabSafe™ System – EMC Emission

eurofins | E&E
Test laboratory accredited according to ISO 17025 by the Swiss Accreditation Service SAS

Registration number: **STS 0001** Swiss testing service

Report:	Electromagnetic compatibility	Report no:	20CH-01291.E01
Test item description:	CabSafe System		
Applicant:	Cedes AG, Kantonsstrasse 14, 7302 Landquart, SWITZERLAND		
Manufacturer:	Cedes AG, Kantonsstrasse 14, 7302 Landquart, SWITZERLAND		
Model/Type reference:	cegard/Pro CabSafe 2D Light Curtain: P/N 116 073 and 116 074 CabSafe 3D Sensor: P/N 115 868 CabSafe Controller Relay: P/N 115 653 CabSafe Controller PP: P/N 116 088		
Serial no:	cegard/Pro CabSafe 2D Light Curtain: Tx: 200915/00602094/00724/000764 Rx: 201005/00590691/00428/000863 CabSafe 3D Sensor: 201103/0S001175/00109/2994 CabSafe Controller Relay: 201001/00606203/00068/000666 CabSafe Controller PP: 201005/00606201/00883/000559		
Trade mark:	CabSafe System	Date of tests:	2020-11-05

Standards	Result
47 CFR, Part 15, Subpart B, Class B	Pass

Code of Federal Regulations - Title 47 - Telecommunication, Part 15- Radio frequency devices, Subpart B: "Unintentional Radiators"

These results were achieved without any modification of the EUT

Test performed by: Mr C. Mauron, EMC test-engineer
Report prepared by: Mr C. Mauron, EMC test-engineer
Report controlled and approved by: Mr J. Ding, EMC test-engineer

Rossens, 2020-11-24 (issue Date)


- ▶ The CabSafe System has been third-party tested for EMC **Emission**
- ▶ The system fulfills the more stringent Class B digital device requirements.
- ▶ A Class B digital device may be marketed in residential, industrial, commercial and/or business environments – see CFR 47§15.3(i)
- ▶ IC Canada requirements closely mirror FCC requirements
- ▶ This is very important since the International Building Code(IBC) and many local codes categorize:
 - ▶ Hotels: Residential Class R-1
 - ▶ Apartment Bldgs.: Residential Class R-2

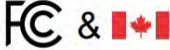
CabSafe™ System – EMC Immunity

		
EMC-Testcenter AG Moosackerstrasse 77 8105 Regensdorf SWITZERLAND		
Accredited according to ISO / IEC 17025 by: Swiss Accreditation Service SAS Registration number 0034		
		
Phone	+41 44 302 45 00	
E-mail	info@emc-testcenter.com	
Web	www.emc-testcenter.com	
TEST REPORT REF.	EMCKP4366A	
PROJECT NO.	EMCK4366	
DATE OF ISSUE	2020-06-26	
MANUFACTURER	Cedes AG	
TRADE MARK	CEDES	
EQUIPMENT UNDER TEST (EUT)	CabSafe	
STANDARD	EN 12015:2014 EN 12016:2013 (non-safety circuits) <small>(EN 12015/ 12016 not covered by scope of accreditation / Type B Laboratory)</small> EN 61000-6-2:2019 EN 61000-6-4:2007+A1:2011 ISO 22199:2009 ISO 22200:2009 (non-safety circuits) <small>(ISO Standards not covered by scope of accreditation / Type B Laboratory)</small>	
TEST RESULT	Complied according to test table on page 2	
CLIENT	Cedes AG Kantonsstrasse 14 7302 Landquart SWITZERLAND	
Contact name	Mr. Zoltan BALAJTI	
Telephone	+41 81 307 23 42	
E-Mail	zoltan.balajti@cedes.com	
Web	www.cedes.com	
<small>This report shall not be reproduced except in full without the written approval of the testing laboratory. The hard copy of the electronically recorded document at EMC-Testcenter AG shall be the original document reference. The results in this report apply only to the sample(s) tested, if technical changes on the sample(s) are performed later a re-test shall be necessary.</small>		
Report Ref. EMCKP4366A	Issue Date: 2020-06-26	Page 1 of 43

- ▶ The CabSafe System has been third-party tested for **EMC Immunity**
- ▶ The system fulfills the more stringent Class A digital device requirements.
- ▶ Class A immunity makes the system suitable for marketing in residential, industrial, commercial, and/or business environments
- ▶ The FCC currently does not currently have specific immunity requirements defined in CFR 47§15 Radio Frequency Devices.
- ▶ However, the FCC does reference the standards shown in the certificate (left) for EMC immunity testing.
- ▶ IC Canada requirements closely mirror FCC requirements

CabSafe™ System – FCC SDoC





Innovation, Sciences et
Développement économique Canada

Innovation, Science and
Economic Development Canada

Suppliers Declaration of Conformity (SDoC)

In accordance with the United States Federal Communications Commission requirements outlined in 47 CFR §15 and in accordance with Canada's Innovation, Science and Economic Development requirements outlined in ICES requirements, CEDES Corporation of America declares that the CEDES CabSafe System as manufactured by:

CEDES AG
Kantonsstrasse 14
7302 Landquart
Switzerland

Consisting of:

- a CEDES CabSafe Controller HW Index 1.00 or later,
- a CEDES CabSafe 2D (cegard/Pro) light curtain HW Index 1.01 (Tx) or later / 1.00 (Rx) or later, and
- a CEDES CabSafe 3D sensor HW Index 1.04 or later (optional)

fulfills the following digital device classifications defined by

- 47 CFR §15.109 Radiated Emission – Class B
- ICES-003 §6.2 Radiated Emission – Class B
- CISPR 16-2-1:2014 Emission Interference – Class B
- EN 61000-4-2 Electrostatic Discharge Immunity, Table 1
- EN 61000-4-3 Radiated RF Electromagnetic Field Immunity, Table 1
- EN 61000-4-4 Burst Immunity Test, Table 2,4
- EN 61000-4-5 Surge Immunity Test, Table 4
- EN 61000-4-6 Immunity to Conductive Disturbances, Table 2,4


The operation of these devices is subject to the following two conditions.

- 1) This device(s) may not cause harmful interference, and
- 2) This device(s) must accept any interference received, including interference that may cause undesired operation.

This self-Declaration of Conformity (sDoC) is based on third-party electro-magnetic compatibility (EMC) testing performed by the following test laboratories:

<p>For Emission: Eurofins Electric & Electronic Product Testing AG Rte de Montena 75 1728 Rossens Switzerland Test Report: 20CH-01291.E01</p>	<p>For Immunity: EMC-Testcenter AG Moosackerstrasse 77 8105 Regensdorf Switzerland Test Report: EMCKP4366A</p>
--	---





The following subsidiary / importer is responsible for this declaration:

<p>Company Name: Name / Title: Address: Phone: E-Mail: Date: Signature:</p>	<p>CEDES Corporation of America James O'Laughlin / Technical Sales Manager 7107 Ohms Lane, Minneapolis, MN 55439 USA +1 (612) 424-8400 info.americas@cedes.com 25 November 2020 </p>
---	---

116 421 FCC Self-Declaration of Conformity – CabSafe (201125A)

- ▶ CFR 47§2.906 and CFR 47§15.101 define requirements for Equipment Authorization
- ▶ Other Class B Digital Devices and Peripherals can
 - ▶ Obtain FCC certification via an FCC Authorized Lab, or
 - ▶ Provide a Supplier's Declaration of Conformity (SDoC)
- ▶ IC Canada requirements closely mirror the FCC requirements

CabSafe™ System – Eye Safety

		Ref. Certif. No.
		AT 4388
IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST CERTIFICATES FOR ELECTRICAL EQUIPMENT (IECEE) CB SCHEME		
CB TEST CERTIFICATE		
Product	Time of flight system with VCSELs emitting pulsed IR-radiation	
Name and address of the applicant	CEDES AG Science Park, Kantonstrasse 14, 7302 Landquart, Switzerland	
Name and address of the manufacturer	CEDES AG Science Park, Kantonstrasse 14, 7302 Landquart, Switzerland	
Name and address of the factory	CEDES AG Science Park, Kantonstrasse 14, 7302 Landquart, Switzerland	
Note: When more than one factory, please report on page 2	<input type="checkbox"/> Additional information on page 2	
Ratings and principal characteristics	LASER CLASS 1; wavelength: 850 nm Power supply: DC 24 V ±20% (19,2 to 28,8 V) Operating temperature: -20°C to +50°C	
Trademark / Brand (if any)		
Customer's Testing Facility (GTF) Stage used	-	
Model / Type Ref.	CabSafe-3D-F	
Additional information (if necessary may also be reported on page 2)	Only hazards resulting from laser radiation have been addressed. <input type="checkbox"/> Additional information on page 2	
A sample of the product was tested and found to be in conformity with	IEC 60825-1:2014	
As shown in the Test Report Ref. No. which forms part of this Certificate	LE-L32/20	
This CB Test Certificate is issued by the National Certification Body		
	Österreichischer Verband für Elektrotechnik Testing and Certification Kahlenberger Str. 2A, 1190 Wien, Austria	
Date: 2020-06-22	Digitally signed by W. Martin Email: w.martin@ove.at Signature: Dipl.-Ing. W. Martin	

ZVR: 327279890 | www.ove.at

- ▶ The CabSafe System has been third-party tested for **Eye Safety**
- ▶ Fulfills the requirements defined by IEC 60825-1:2014
- ▶ The certificate shown left and the associated test report formed the basis for FDA submittals
- ▶ An FDA Accession Number has been assigned to the CabSafe system

CabSafe™ at www.cedes.com



CabSafe™ at www.cedes.com

TOF 3D SENSORS



IMS 100 Pro

The IMS 100 Pro provides a new level of safeguarding by monitoring the entrance area to elevators. This reduces overall door-opening times and improves elevator efficiency.

[More](#)



TOF/Start

The TOF/Start detects people or objects approaching escalators, revolving and swing doors, industrial doors and personnel sluices. Cross-traffic is ignored, ensuring energy-efficient usage.

[More](#)



CabSafe™


The 2019 North American Elevator Safety Code (ANSI A17.1-2019 / CSA B44-19) defines new and clarifies existing requirements for the means of detecting persons or objects between the doors (2D) or approaching the elevator (3D). CEDES CabSafe™ system, consisting of a Controller, a 2D light curtain and a 3D TOF sensor, can fulfill all these code requirements and more.

[More](#)




CabSafe™ at www.cedes.com

PRODUCT LINE
TOF 3D SENSORS, LIGHT CURTAINS



CabSafe™

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[Support Request](#) [Support & Troubleshooting](#)



Features

CabSafe™ 3D

- Reduces risk of accidents caused by being hit by the doors
- Reduces risk of damage caused by objects hitting the elevator doors
- Reliable detection of people and objects in front of the cab using TOF technology
- Fulfills detection requirements of A17.1-2019 / CSA B44-19
- Ideal for both new installations and modernization
- Flush and surface mounting options available

CabSafe™ 2D

- Ideal for both: static and dynamic installations
- Criss-cross beams for a reliable detection
- Meets ASME A17.1-2019 / CSA B44-19 code detection requirements
- Meets all requirements under EN81-20

Advantages

- Not disturbed by metal objects in the field
- Can detect moving people and objects
- Clearly defined and stable detection area
- Fully restable with doors fully open as required by the new standard
- Not subject to upcoming FCC limitations of frequency bands that currently allows UWB for interference protection

Applications

- Entrance area monitoring for all types of elevators

Benefits

- State-of-the-art 3D Infrared Image sensor for true 3D protection
- Transom mounted - flush and surface mounting available
- Fully compliant with all 2D and 3D detection requirements in A17.1-2019/B44-19

Downloads

DATASHEET CABS SAFE 3D SENSOR & CONTROLLER En	A17.1-2019 / B44-19 LIFTINSTITUT CERTIFICATE En
DATASHEET CABS SAFE 2D LIGHT CURTAIN En	A17.5-2019 / B44.1-19 CSA CERTIFICATE En
MANUAL CABS SAFE 3D SENSOR & CONTROLLER En	CE DECLARATION CABS SAFE SYSTEM En
MANUAL CABS SAFE 2D LIGHT CURTAIN En	CONSTULTANT'S SPECIFICATION En
WHITE PAPER En Pt Es	

CabSafe™ Troubleshooting Tool at www.cedes.com



CEDES CabSafe™

▶ CabSafe™ Home Page

CEDES CabSafe™ provides door protection compliant to ANSI ASME A17.1-2019 / CAN CSA B44-19. This decision tree provides general, configuration, troubleshooting, and installation information of the CabSafe system. Please click on the links below to get started.

If you should have any technical issues, please contact your local CEDES representative.

❓ What information are you looking for?

- System overview >
- Important Safety Measures
- CabSafe™ Controller
- CabSafe™ 2D
- CabSafe™ 3D
- CabSafe™ Magnetic Switch
- CabSafe™ System Troubleshooting
- CabSafe™ Maintenance
- CabSafe™ Documentation



An online support and troubleshooting tool is available to assist with installation and troubleshooting. **Scan the QR code** This link is also available at www.cedes.com under Product Listing – CabSafe.



From CEDES CabSafe Quick Start Guide

CabSafe™ at www.cedes.com

PRODUCT LINE
TOF 3D SENSORS, LIGHT CURTAINS

CabSafe™

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[Support Request](#) [Support & Troubleshooting](#)



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DATASHEET CABS SAFE 2D LIGHT CURTAIN En	A17.5-2019 / B44.1-19 CSA CERTIFICATE En
MANUAL CABS SAFE 3D SENSOR & CONTROLLER En	CE DECLARATION CABS SAFE SYSTEM En
MANUAL CABS SAFE 2D LIGHT CURTAIN En	CONSTULTANT'S SPECIFICATION En
WHITE PAPER En Pr Es	



Certificate of Compliance

Certificate: 80040205	Master Contract: 187273
Project: 80055217	Date Issued: 2020-11-06

Issued To: **Cedes AG**
Science Park
Landquart, Graubuenden, 7302
Switzerland

Attention: Remo Degiacomi

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US or with adjacent indicator 'US' for US only or without either indicator for Canada only.

Issued by: *Rowell Manipula*
Rowell Manipula



CSA B44.1/ASME A17.5

PRODUCTS
CLASS - C241102 - ELEVATOR EQUIPMENT-Enclosed Elevator and Escalator Electrical Equipment
CLASS - C241182 - ELEVATOR EQUIPMENT-Enclosed Elevator Electrical Equipment-Certified to U.S. Standards


2D Light curtain sensor, Model: cegard/Pro, rated: 10Vdc to 30Vdc, 150mA max

Note:
1) Connection cord with length exceeding 2 meters shall be protected in a raceway.

3D sensor, Model: CabSafe-3D, rated 24.0 to 28.8Vdc, 450mA RMS at 24Vdc

Note:
1) Connection cord with length exceeding 2 meters shall be protected in a raceway.

DOD 507 Rev. 2019-04-30
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Page 1



CERTIFICATE OF COMPLIANCE

issued by Liftinstituut B.V.

Certificate no. : NA20-0842-1004-035-01	Revision no.: -
---	-----------------

Description of the product : Reopening Device for Power-Operated Horizontally Sliding Doors and Gates with Detection of Approaching Objects and Detection of Objects in the Door Path

Trademark : CEDES

Model / Type no. : CabSafe System (containing controller, 3D sensor and cegard/Pro 2D light curtain system)

Name and address of the manufacturer : **CEDES AG**
Kantonstrasse 14
7302 Landquart, Switzerland

Name and address of the certificate holder : **CEDES AG**
Kantonstrasse 14
7302 Landquart, Switzerland

Certificate issued on the basis of the following requirements : ASME A17.1-2019 / CSA B44:19

Test location : CEDES, Landquart Switzerland

Date and number of the laboratory report : None

Date of verification of compliance : November 2019 – May 2020

Annexes with this certificate : Certificate of Compliance Report
no: NA20-0842-1004-035-01


Additional remarks : See chapter 5 of the supporting report belonging to this certificate.

Conclusion : The Product as referred to in this certificate meets the requirements of the ASME A 17.1-2019 / CSA B44:19, taking into account any additional remarks mentioned above.


Amsterdam

Date : May 29th, 2020

Valid thru : May 29th, 2023



ing. P.J. Peeters
Manager Certification



Certification decision by

Liftinstituut B.V. · Buikslotermeerplein 381 · P.O. Box 36027 · 1020 MA Amsterdam Netherlands · www.liftinstituut.com
Registered at the KvK under number 34157363
F23-05-02-v11.0

Konformitätserklärung
Declaration of Conformity
Déclaration de Conformité
Dichiarazione di Conformità
Deklaracja zgodności

Wir / We / Nous / Noi / My

erklären in alleiniger Verantwortung, dass
declare in sole responsibility that
déclarons sous notre propre responsabilité que
dichiariamo sotto propria responsabilità che
deklarujemy z pełną odpowiedzialnością, że


die Produktfamilie
the product range
la famille de produit
la gamma dei prodotti
rodzina wyrobów

die Produktbeschreibung
the product description
la description du produit
la descrizione del prodotto
opis produktu

den Anforderungen der folgenden Richtlinien entspricht
meets all the provisions of the following directives
remplit toutes les exigences de la directives suivantes
adempie a tutte le esigenze delle direttive seguenti
odpowiada wszystkim wymaganiom następującej dyrektywy

Andere normative Dokumente
Other standards
D'autres normes
Altre norme
Inne dokumenty normatywne

Prüfberichte / Zertifikate
Test reports / Certificates
Rapports de test / certificats
Relazioni sulle prove / Certificati
Nr raportu technicznego / Certyfikaty



CEDES AG
Science Park
CH-7302 Landquart
Switzerland


**CabSafe Controller &
CabSafe 3D Sensor**

Kamera Sensor
Camera sensor
Capteur de caméra
Sensore ottico CCD
Czujnik - kamera


2014/30/EU
2014/33/EU

ASME A17.1-2019 / CSA B44:19
ASME A17.5-2019 / CSA B44.1:19
EN 12015:2014 EMC – Emission
EN 12016:2013 EMC – Immunity
ISO 22199:2009 – Emission
ISO 22200:2009 – Immunity
IEC 60825-1:2014 – Safety of laser products
IEC 60068-2-6:2007 – Vibration
IEC 60068-2-27:2008 – Shock


QC report CabSafe




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CabSafe™ 3D



CabSafe™ 2D



CEDES CabSafe Door Protection System

Technical Specification for ARCHITECTS, CONSULTANTS, AND SPECIFIERS

The elevator door protection system shall consist of a Light Curtain, a Time-of-Flight (ToF) Sensor and a Controller. The system shall be designed to detect persons and objects that are in the path of the elevator cab doors or approaching the elevator cab door entrance in accordance with ANSI A17.1-2019 / CSA B44-19. The system shall also be designed to ignore stationary persons or objects that are not entering the elevator.

The detection means for objects in the path of the elevator doors (2D field) shall be an infrared light curtain with a minimum of 106 light beams that form a dense crisscross pattern. The detection field of the light curtain shall be no less than 63 inches (1.6 m) high, have 100,000 Lux ambient light immunity, and an operating range of 13.1 ft (4 m). Automatic gain adjustment will also be implemented to minimize the amount of energy required for operation.

The Time-of-Flight (ToF) sensor (approaching object detection means / 3D field) shall detect approaching persons or objects in accordance with ANSI A17.1-2019 / CSA B44-19 requirements. It shall be mounted flush in the elevator cab transom or via a back-of-transom stainless steel housing and shall not extend down into the clear opening of the elevator entrance by more than 3 mm. The sensor shall fulfill FDA requirements and have an assigned accession number from the FDA. The sensor shall also implement a "sleep" mode to minimize energy consumption when the doors are closed.

The Light Curtain and the Time-of-Flight sensor shall plug directly into a separate Controller. The Controller will manage the signals from these devices and provide a single system output as the reopening device signal to elevator control. The Controller shall perform continuous testing of the Light Curtain and the Time-of-Flight (ToF) sensor. It shall also manage the configuration parameters for the connected devices.

The system shall be third-party certified by a Nationally Recognized Testing Laboratory (NRTL) for use in elevator systems in accordance with ANSI A17.5-2019 / CSA B44.1-19. The system shall also be third-party certified for use in elevator systems in accordance with Clause 2.13.5 Reopening Device(s) for Power-Operated Horizontally Sliding Doors and Gates as defined by ANSI A17.1-2019 / CSA B44-19. Furthermore, the system shall be suitable for both static (Light Curtain is stationary) and dynamic mounting (Light Curtain moves with the elevator cab doors) applications.

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Complete Kit Ordering Information

CabSafe 200 Wide-Ranging Power Supply Kits with Relay Output

Adams Part No.	Model Designation / Description
A850-471	CabSafe SY-MOD-RLY-7FT-3DFLUSH Includes: CabSafe 200 Controller, CabSafe 2D Transmitter/Receiver and Associated Mounting Hardware, CabSafe 3D (Black) for Flush Mount
A850-472	CabSafe SY-MOD-RLY-7FT-3DSS Same as A850-471 and Stainless-Steel Back-of-Transom Mounting for 3D