



EPD
INTERNATIONAL EPD SYSTEM

ENVIRONMENTAL PRODUCT DECLARATION

LZR[®]-FLATSCAN 3D SW KIT

FROM BEA SENSORS



Life cycle impact assessment (LCIA) realised according to ISO 14025:2006, ISO 14040:2006, ISO 14044:2006, and EPD following The International EPD System guidance, www.environdec.com

Version date | 2026-03-20
Validity date | 2031-03-20



GENERAL INFORMATION

Programme Information	
Programme:	The International EPD® System
Address:	EPD International AB Box 210 60 SE-100 31 Stockholm Sweden
Website:	www.environdec.com
E-mail:	support@environdec.com

Product Category Rules (PCR)
Product Category Rules (PCR): Electronic and Electric Equipment, and Electronic Components (non-Construction, PCR 2024:06, Version 1.0.1, 2024-12-09, div 43-48 and 84.
PCR review was conducted by: Sophie KIESELBACH, chair of the PCR review, The Technical Committee of the International EPD System, support@environdec.com
c-PCR, if applicable: no c-PCR applicable

Third-party Verification
No independent third-party verification of the declaration conducted. EPD conducted internally.

INFORMATION ABOUT EPD OWNER

Owner of the EPD:

BEA Sensors
Allée des Noisetiers 5, 4031 ANGLEUR, BELGIQUE

Description of the organisation: BEA is a leading manufacturer of sensing solutions for automatic doors systems. The company was founded in 1965, and its headquarters are located in Liège, Belgium. BEA also has offices in the United States, Japan and China and our products can be found across the globe. Success within the pedestrian market and rapid advancements in technology have fuelled BEA's growth into new markets and the company now also offers a complete line of access control, safety and security solutions for industrial-, security- and transportation-based segments.

Product-related or management system-related certifications:

ISO 9001 & ISO14001

PRODUCT INFORMATION

Laser sensor for hinge and leaf safety of swing doors:

The **LZR®-FLATSCAN 3D SW** kit is a kit of 2 safety sensors designed for swing doors. Using laser time-of-flight technology, its volumetric detection field covers the complete opening area of the door, guaranteeing more comfort and safety to the users. Completely touchless. It prevents any contact with the user by avoiding sudden movements of door leaves.

The coverage of the hinge area and the leading edge area is increased to avoid any risk of contact.

More information : eu.beasensors.com/en/product/lzr-flatscan-3d-sw/

UN CPC code 46



Name and location of production site(s):

- BEA S.A. Allée des Noisetiers, 12 4031 Angleur, Belgium
- BEA S.A. Rue du Charbonnage, 7 4100 Seraing, Belgium



LZR®-FLATSCAN 3D SW KIT EQUIPMENT

CONTENT DECLARATION

The **LZR®-FLATSCAN 3D SW kit**, has a weight of 1022 gr, packaging included.

Sensors Total Weight: **743 gr** (without packaging)

Product content	Material	Mass (g)	% mass	% post-consumer recycled material
Cables	Copper	36.51 gr	4.92%	0%
	Polyvinyl chloride	95.58 gr	12.87%	0%
	Plasticizer	1.82 gr	0.24%	0%
	Flame retardants	1.55 gr	0.21%	0%
Electronic components	PCB and SMT or TH e-components	109.26 gr	14.72%	0%
Metal	Electro-galvanized Steel	7.66 gr	1.03%	0%
	Aluminium	24.20 gr	3.26%	
	Tin	3.93 gr	0.53%	0%
Plastics	Polycarbonate	315.49 gr	42.49%	0%
	Polyamide	11.05 gr	1.49%	0%
	Flame retardants	14.91 gr	2.01%	0%
	Polymethyl methacrylate	10.80 gr	1.45%	0%
	Glass fibre	34.64 gr	4.67%	0%
	ABS	43.40 gr	5.85%	0%
	ASA	31.68 gr	4.27%	0%

Hazardous substances from the candidate list of SVHC	EC No.	CAS No.	Mass-% per product or declared unit
Lead	231-100-4	7439-92-1	0.067%

Packaging Total Weight: **279 gr**

Packaging materials	Material	Mass, kg	Mass-%	Biogenic material, kg C/packaging material
Cardboard & paper	Recycled cardboard (min 90%)	232.93 gr	83.43%	0.12 kg C
	Printed paper	26.25 gr	9.40%	0.013 kg C
Labels	Polyethylene high density	13.89 gr	4.98%	0 kg C
Screw kit	Electro-galvanized Steel	6.12 gr	2.19%	0 kg C

LCA INFORMATION

Functional unit

The functional unit is a kit of 2 units of the LZR – Flatscan 3D SW sensor whose function is to secure an automatic sliding door. The lifetime is estimated at 10 years¹.

Reference service life and its relationship with the technical/actual lifespan:

According to CEN (2019), the Reference Service Life (RSL) is an estimation of the time length during which the product should remain functional when used under normal conditions. In this case, it corresponds to a 10-year lifetime.

Time representativeness: Fiscal year 2024

Geographical scope: This analysis is based on a sensor unit produced in Belgium (BEA) and used in Europe, using the average European electricity mix of the Ecoinvent 3.10 database.

Database(s) and LCA software used:

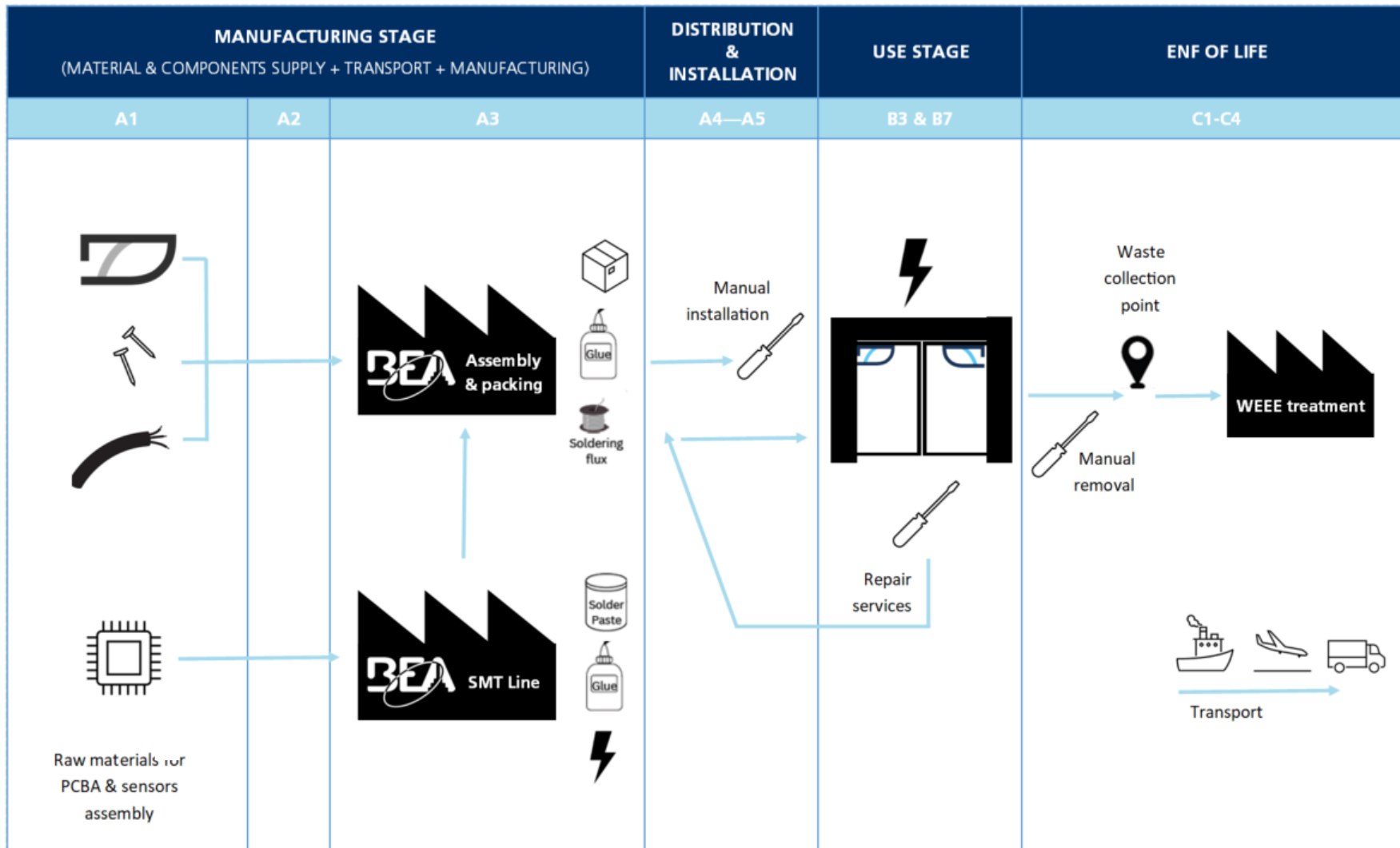
Ecoinvent v3.10.1 Cutoff Unit-Processes 2024-12-06 / Open LCA 2.4.1

Description of system boundaries:

The study is based on a cradle-to-grave analysis, meaning that the product system is assessed from the manufacturing to the end-of-life stage. Included steps are presented in the Figure below. Steps are presented both according to life cycle stages as per PCR 2024:06, and their correspondence to modules A1 to C4 as per EN 15804+A2.

¹ The decision behind the RSL is made by mutual agreement between several company departments such as Research and Development, Sales and Quality, based on commercial, quality and RD products statistics.

Process flow diagram:



Data quality assessment :

Raw material and manufacturing components	Primary data	Based on BEA and manufacturers technical sheets + manual weight and measure.
Transport	Primary data	Based detailed transport record by transporter, transport mode, distance and shipments weights.
Manufacturing processes	Secondary data	Electricity: based on the average electricity needs of Ecoinvent dataset for PCBA assembly.
	Primary data	Solder Paste and Glue: based on manual measure on a batch of 6700 PCBs.
	Primary data	Reject rates based of the data of rejects of this sensor model on a one-year period.
Installation and delivery	Primary data	Based on the total of annual deliveries across the European market (by transport mode, destination and shipment weights).
Use stage	Primary data	Energy consumption: Based on the total of annual deliveries across the European market (by country of delivery).
	Primary data	Repair: based of the data of repair of this sensor model on a one-year period.
End-of-Life	Secondary data	Waste transport and treatment: based on Waste statistics - electrical and electronic equipment (Eurostat, October 2024).

ENVIRONMENTAL PERFORMANCE

Impact category indicators

The below table shows the relevant life cycle stages as per PCR 2024:06, and their correspondence to modules A1 to C4 as per EN 15804+A2.

PARAMETER	UNIT	MANUFACTURING			DISTRIBUTION	INSTALLATION	USE		END OF LIFE	
		Material & components A1	Transport A2	Manufacturing A3	A4	A5	Repair B3	Energy use B6	Waste transport & treatment C2-3	
Global warming potential (GWP)	Fossil	kg CO ₂ eq.	1.53E+01	3.47E+00	5.70E-01	3.27E-01	1.00E-02	2.62E-02	9.98E+01	4.84E-02
	Biogenic	kg CO ₂ eq.	3.28E-02	2.25E-04	9.14E-03	5.62E-04	2.18E-01	3.27E-04	2.23E-01	6.61E-05
	Land use and transformation	kg CO ₂ eq.	2.25E-02	2.27E-04	2.46E-03	1.13E-04	4.46E-06	3.23E-05	3.05E-01	6.66E-05
	TOTAL	kg CO ₂ eq.	1.54E+01	3.47E+00	5.81E-01	3.28E-01	2.28E-01	2.65E-02	1.00E+02	4.85E-02
Ozone layer depletion (ODP)	kg CFC 11 eq.	4.72E-07	5.33E-08	1.18E-08	6.19E-09	1.57E-10	7.16E-10	1.84E-06	4.54E-10	
Acidification potential (AP)	mol H ⁺ eq.	1.55E-01	1.49E-02	2.94E-03	1.23E-03	1.00E-04	2.29E-04	5.87E-01	2.56E-04	
Eutrophication potential (EP)	Freshwater	kg P eq.	2.20E-03	5.87E-06	4.17E-05	2.66E-06	4.46E-07	2.93E-06	9.66E-03	2.00E-06
	Marine	kg N eq.	1.94E-02	6.00E-03	8.64E-04	4.24E-04	1.81E-04	3.56E-05	7.18E-02	5.05E-05
	Terrestrial	mol N eq.	2.31E-01	6.56E-02	8.49E-03	4.68E-03	4.07E-04	4.11E-04	8.25E-01	5.87E-04
Photochemical oxidant creation potential (POCP)	kg NMVOC eq.	7.42E-02	2.09E-02	2.62E-03	1.85E-03	1.97E-04	1.33E-04	2.72E-01	1.86E-04	
Abiotic depletion potential (ADP)*	Metals and minerals	kg Sb eq.	4.04E-03	7.35E-07	1.00E-04	1.40E-06	2.61E-08	5.39E-06	1.35E-03	4.33E-07
	Fossil resources	MJ, net calorific value	2.12E+02	4.59E+01	8.63 E+00	4.55E+00	1.08E-01	3.61E-01	2.32E+03	6.29E-01
Water deprivation potential (WDP)*	m ³ world eq. deprived	5.60E+00	6.05E-02	3.56E-01	2.22E-02	1.11E-02	7.86E-03	6.32E+01	9.65E-03	

B1, B2, B4, B5, C1 & C4 modules are not applicable to the LCA of the Flatscan Sensor and have not been considered. .

Resource use indicators

PARAMETER		UNIT	UPSTREAM A1 - A2	CORE A3	DOWNSTREAM A4 - C3	TOTAL
Primary energy resources – Renewable	Use as energy carrier	MJ, net calorific value	2.35E+01	3.21E+00	6.37E+02	6.64E+02
	Used as raw materials	MJ, net calorific value	0	0	0	0
	TOTAL	MJ, net calorific value	2.35E+01	3.21E+00	6.37E+02	6.64E+02
Primary energy resources – Non-renewable	Use as energy carrier	MJ, net calorific value	2.75E+02	9.27E+00	2.43E+03	2.71E+03
	Used as raw materials	MJ, net calorific value	0	0	0	0
	TOTAL	MJ, net calorific value	2.75E+02	9.27E+00	2.43E+03	2.71E+03
Secondary material (optional)		kg	0	0.20	0	0.20
Renewable secondary fuels (optional)		MJ, net calorific value	0	0	0	0
Non-renewable secondary fuels (optional)		MJ, net calorific value	0	0	0	0

VERSION HISTORY

Original Version of the EPD, 2026-03-20

ABBREVIATIONS

Abbreviation	Definition
General Abbreviations	
EN	European Norm (Standard)
EF	Environmental Footprint
GPI	General Programme Instructions
ISO	International Organization for Standardization
CEN	European Committee for Standardization
CLC	Co-location centre
CPC	Central product classification
GHS	Globally harmonized system of classification and labelling of chemicals
GRI	Global Reporting Initiative
SVHC	Substances of Very High Concern
ND	Not Declared
LCA	Life Cycle Assessment
RSL	Reference service life

LEGAL DISCLAIMER

This publication is for information purposes only.

BEA reserves the right to modify product design and specifications at any time. Features such as those described in this EPD may be modified during further product development. This publication therefore does not guarantee that the product's composition and functionality will be guaranteed over a defined period.

Please note that the data declared in this EPD follow the PCR for Electronic and Electric Equipment, and Electronic Components (non-Construction, PCR 2024:06). It means it cannot be compared with data calculated based on other product category rules (PCR). The results and values given are valid only in the context specified, using a specific software and environmental impacts database.

BEA therefore assumes no responsibility for any errors or consequences that may result from the use of this information.



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The EPD logo graphic consists of a horizontal bar divided into three segments of varying shades of green and black.