PRODUCT ENVIRONMENTAL PROFILE
Environmental Product Declaration

ABB non-contact safety sensor EDEN

August 2025

REGISTRATION NUMBER ABBG-00456-V01.01-EN	DRAFTING RULES: PCR-ED4-EN-2021 09 06 SUPPLEMENTED BY PSR-0005-ED3.1-EN-2023 12 08
VERIFIER ACCREDITATION NUMBER VH59	INFORMATION AND REFERENCE DOCUMENTS www.pep-ecopassport.org
DATE OF ISSUE 08-2025	VALIDITY PERIOD 5 years
INDEPENDENT VERIFICATION OF THE DECLARATION AND DATA, IN COMPLIANCE WITH ISO 14025: 2006	
INTERNAL ☐ EXTERNAL ☒	
THE PCR REVIEW WAS CONDUCTED BY A PANEL OF EXPERTS CHAIRED BY JULIE ORGELET (DDEMAIN)	
PEPS ARE COMPLIANT WITH XP C08-100-1:2016 AND EN 50693:2019 THE COMPONENTS OF THE PRESENT PEP MAYNOT BE COMPARED WITH COMPONENTS FROM ANY OTHER PROGRAM.	
DOCUMENT IN COMPLIANCE WITH ISO 14025: 2006 « ENVIRONMENTAL LABELS AND DECLARATIONS. TYPE III ENVIRONMENTAL DECLARATIONS »	

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Company contacts	EPD_ELSP@in.abb.com
Reference product	EDEN (Adam DYN-Info M12-5 + Eva General code)
Description of the product	ABB EDEN non-contact safety sensor is used as an interlocking device for e.g. doors and safe position monitoring. Eden consists of two parts: Adam and Eva. Adam senses the presence of Eva without mechanical contact and therefore without any wear. The compact size of Eden and its 360° mounting possibility make it easy to use in most applications. All Eden models have an IP67/IP69K sealing and it is available with coated electronics for increased protection
Functional unit	Eden is designed as a non-contact safety sensor for interlocking and position monitoring, ensuring reliable detection without mechanical wear throughout a reference lifetime of 10 years. This product is considered as other equipment (Active Product) with 100% Load rate, 100% Use Rate in ON, 0% Use Rate in Standby, 0% Use Rate in OFF Mode. The rated current (In) is 40A and rated voltage (V) is 24V.
Other products covered	All the combinations of Adam and Eva from the list below.

	ADAM	EVA
EDEN	Adam DYN-Info M12-5	Eva General code
	Adam C DYN-Info M12-5	Eva C General code
	Adam DYN-Status M12-5	Eva Unique code
	Adam OSSD-Info M12-5	Eva C Unique code
	Adam C OSSD-Info M12-5	
	Adam OSSD-Info M12-8	
	Adam C OSSD-Info M12-8	

Reference lifetime	10 years
Product category	Electrical, Electronic and HVAC-R Products (Other Equipment)
Use Scenario	The use phase has been modeled based on the sales mix data (2023), and the corresponding low voltage electricity countries mix.
Geographical representativeness	Raw materials & Manufacturing: [RER/ Global] Assembly: [Poland] Distribution /Installation/Use: [Global] specific sales mix EoL: [Global]
Technological representativeness	Primary data are specific for the production of EDEN and secondary data are based on ecoinvent database v.3.10.
LCA Study	This study is based on the LCA study described in the LCA report 2TLC010219D0201.
EPD type	Products family declaration
EPD scope	“Cradle to grave”
Year of reported primary data	2023
LCA software	SimaPro 9.6.0.1 (2024)
LCI database	Ecoinvent v3.10 (2024)
LCIA methodology	EN 15804:2019+A2 and EF 3.1

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Contents

ABB Purpose & Embedding Sustainability **4**

General Information **4**
EDEN Product cluster 4

Constituent Materials **5**

LCA background information **6**
Functional unit and Reference Flow 6
System boundaries and life cycle stages 6
Temporal and geographical boundaries 6
Boundaries in the life cycle 7
Data quality 7
Environmental impact indicators 7
Allocation rules 7
Limitations and simplifications 7
Energy Models 8

Inventory analysis **8**

Manufacturing stage **8**

Distribution **9**

Installation **9**

Use **10**

End of life **10**

Environmental impacts **11**

Extrapolation for Homogeneous environmental family **13**

Additional environmental information **14**

References **15**

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ABB Purpose & Embedding Sustainability

ABB is a leading global technology company that energizes the transformation of society and industry to achieve a more productive, sustainable future. By connecting software to its electrification, robotics, automation and motion portfolio, ABB pushes the boundaries of technology to drive performance to new levels. With a history of excellence stretching back more than 130 years, ABB's success is driven by about 110 thousand talented employees in over 100 countries.
ABB's Electrification business offers a wide-ranging portfolio of products, digital solutions and services, from substation to socket, enabling safe, smart and sustainable electrification. Offerings encompass digital and connected innovations for low voltage and medium voltage, including EV infrastructure, solar inverters, modular substations, distribution automation, power protection, wiring accessories, switchgear, enclosures, cabling, sensing and control.
ABB is committed to continually promoting and embedding sustainability across its operations and value chain, aspiring to become a role model for others to follow. With its ABB Purpose, ABB is focusing on reducing harmful emissions, preserving natural resources and championing ethical and human behaviour.

General Information

The ABB facility located in Vasteras, is for the Smart Power Division, the competence center for Softstarters, Contactors >100A, Safety products and one of leading manufacturing site. All the products are produced in an automated system with precision and accuracy. These are supplied to utilities, industrial, and tertiary sector customers.
ABB adopts and implements for its own activities an integrated Quality/ Environmental/ Health Management System in compliance with the following standards:

ISO 9001: 2015 - Quality Management Systems- Requirements
ISO 14001: 2015 - Environmental management systems - Requirements with guidance for use
ISO 45001:2018 - Occupational Health and Safety Assessment Series
ISO 50001: 2018 - Energy management systems

EDEN non-contact safety sensor is assembled at a supplier location in Poland and then transported to ABB Electrification Sweden AB manufacturing unit in Västerås, Sweden, from where they are sold to customers.

EDEN Product cluster

ABB EDEN non-contact safety sensor used as an interlocking device for e.g. doors and safe position monitoring. Eden consists of two parts: Adam and Eva. Adam senses the presence of Eva without mechanical contact and therefore without any wear. The compact size of Eden and its 360° mounting possibility make it easy to use in most applications.

All Eden models have an IP67/IP69K sealing and it is available with coated electronics for increased protection

Reference Product:
The reference product for the LCA is EDEN (Adam DYN-Info M12-5 + Eva General code)

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Constituent Materials

EDEN (Adam DYN-Info M12-5 + Eva General code) weights about 94.67 g including its packaging and paper documentation.

Materials	Name	IEC 62474 MC	[g]	Weight %
Plastics	PBT	M-261	50.43	53.3%
	Polyethylene	M-251	1.98	2.1%
	Unsaturated Polyester	M-301	0.43	0.4%
	Polyamide	M-258	0.01	<0.1%
Other	Paper	M-341	20.61	21.8%
	Others	N/A	10.10	10.7%
Metals	Other metal	M-101	9.36	9.9%
	Cu and Cu Alloys	M-121	1.75	1.8%
Total			94.67	100.0%

Table 1: Weight of materials EDEN (Adam DYN-Info M12-5 + Eva General code)

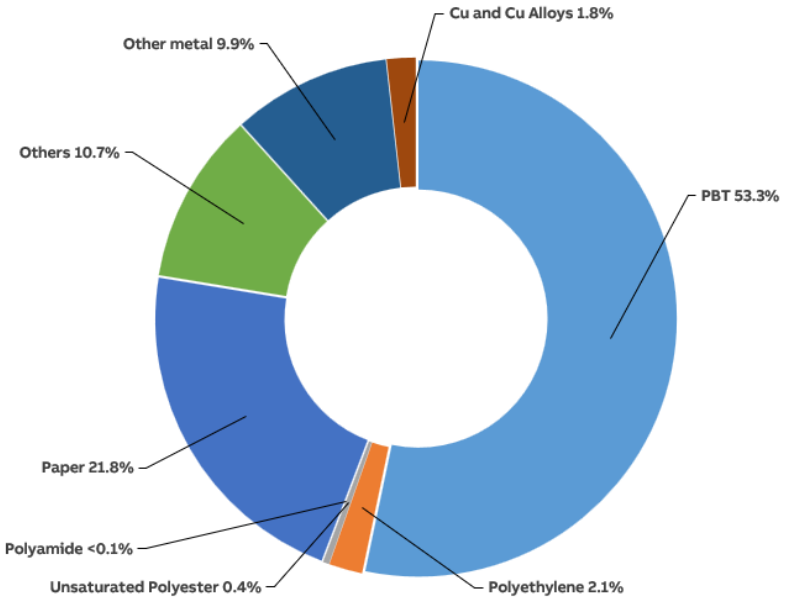

Figure 1: Composition of EDEN (Adam DYN-Info M12-5 + Eva General code)

Packaging weight for EDEN and its composition is tabulated below.

Materials	Name	IEC 62474 MC	[g]	Weight %
Plastic	Polyethylene	M-251	1.98	2.1%

Table 2: Weight of materials EDEN Packaging (Adam DYN-Info M12-5 + Eva General code)

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LCA background information

Functional unit and Reference Flow

The functional unit is the reference unit used to quantify the performance of the service delivered by a product to the user. The main purpose of the functional unit is to provide a reference to which inputs and outputs are related in the LCA.

Eden is designed as a non-contact safety sensor for interlocking and position monitoring, ensuring reliable detection without mechanical wear throughout a reference lifetime of 10 years. This product is considered as other equipment (Active Product) with 100% Load rate, 100% Use Rate in ON, 0% Use Rate in Standby, 0% Use Rate in OFF Mode. The rated current (In) is 40A and rated voltage (V) is 24V.

The Reference Flow of the study is a single EDEN (including its packaging and paper documentation) with mass described in table 1.

System boundaries and life cycle stages

The life cycle of the EDEN, an EEPS (Electronic and Electrical Products and Systems), is a “from cradle to grave” analysis and covers the following main life cycle stages: manufacturing, including the relevant acquisition of raw material, preparation of semi-finished goods, etc. and processing steps; distribution; installation, including the relevant steps for the preparation of the product for use; use including the required maintenance steps within the RSL (reference service life of the product) associated to the reference product; end-of-life stage, including the necessary steps until final disposal or recovery of the product system.

The following table shows the stages of the product life cycle and the information stages according to EN 50693:2019 [3] for the evaluation of electronic and electrical products and systems.

Manufacturing	Distribution	Installation	Use	End-of-Life (EoL)
Acquisition of raw materials Transport to manufacturing site Components/parts manufacturing Assembly Packaging EoL treatment of generated waste	Transport to distributor/ logistic center Transport to place of use	Installation EoL treatment of generated waste (packaging)	Usage Maintenance EoL treatment of generated waste	Deinstallation Collection and transport EoL treatment

Table 3: Phases for the evaluation of construction products according to EN50693:2019 [3].

Temporal and geographical boundaries

The ABB component suppliers are sourced all over the world. All primary data collected are from 2023, which is a representative production year for production technology of Eden at a qualified external supplier in Poland manufacturing facility. The technological representativeness for the secondary data is ecoinvent [4].

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The selected ecoinvent [4] processes in the LCA model have a global representativeness, due to the unclear origin of each component. In this way, a conservative approach has been adopted.

Boundaries in the life cycle

As indicated in the PCR capital goods such as buildings, machinery, tools and infrastructure, the packaging for internal transport which cannot be allocated directly to the production of the reference product, may be excluded from the system boundary.

Infrastructures, when present, such as processes deriving from the ecoinvent [4] database have not been excluded.

Data quality

In this LCA, both primary and secondary data are used. Site specific foreground data have been provided by ABB. Main data sources are the bill of materials & drawings which are available on the ERP (SAP) & Windchill. For all processes for which primary are not available, generic data originating from the ecoinvent database [4], allocation cut-off by classification, are used. The ecoinvent database available in the SimaPro software [5] is used for the calculations.

The data quality characterized by quantitative and qualitative aspects, is presented in Appendix 1. Each data quality parameter has been rated according to DQR tables from Chapter 7.19.2.2 of the Product Environmental Footprint Guide v.6.3 to give an indication of geography, technology and temporal representativeness.

Environmental impact indicators

The information obtained from the inventory analysis is aggregated according to the effects related to the various environmental issues. According to “PCR-ed4-EN-2021 09 06” and EN 50693:2019 [3] the environmental impact indicators must be determined using the characterization factors and impact assessment methods specified in EN 15804:2012+A2:2019 [6].

PCR-ed4-EN-2021 09 06 and the EN 50693:2019 [3] standard establish four indicators for climate change: Climate change (total) which includes all greenhouse gases; Climate change (fossil fuels); Climate change (biogenic) which includes the emissions and absorption of biogenic carbon dioxide and biogenic carbon stored in the product; Climate change (land use) - land use and land use transformation. Other indicators as per the PCR [1].

Allocation rules

Allocation coefficients for electricity consumption and waste generated by the EDEN production line, have both been determined based on the total number of pieces produced.

Limitations and simplifications

Raw materials life cycle stage includes the extraction of raw materials as well as the transport distances to the manufacturing suppliers. These distances are assumed to be 1000 km as per PCR. This distance has been added to the one already included in the market processes used for the model, as a result of a conservative choice made by the LCA operators. Default scraps for metal working, plastic and packaging processes are included as per PSR [2].

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Energy Models

LCA Stage	EN 15804:2012 +A2:2019 module	Energy model	Notes
Raw material extraction and processing	A1-A2	Electricity, {GLO}| market group for | Cut-off	Based on materials and supplier's locations
		Electricity, {RER}| market group for | Cut-off	
Manufacturing	A3	Electricity, low voltage {PL}| market for electricity, low voltage | Cut-off, S	Based on supplier location
Installation (Packaging EoL)	A5	Electricity, {GLO}| market group for | Cut-off	-
Use Stage	B1	Electricity, [country]x | market for | Cut-off, S	Low voltage, based on 2023 country sales mix
EoL	C1-C4	Electricity, {GLO}| market group for | Cut-off	-

Table 4: Energy models used in each LCA stage

Inventory analysis

In this LCA, both primary and secondary data are used. Site specific foreground data have been provided by ABB. For data collection, Bills of Material (BOM) extracted from ABB's internal SAP and Windchill ERP were used. They are a list of all the components and assemblies that constitute the finished product, organized by hierarchy level. Each item is matched with its code, quantity, weight and supplier. The BOMs were then processed, adding material and weight data, taken from technical drawings/datasheets/declaration. Finally, the manufacturing process was assigned, according to information provided by R&D personnel. Road distances between the suppliers and ABB were calculated using Google Maps.

All primary data collected from ABB are from 2023, which was a representative production year. The ecoinvent cut-off by classification system processes [4] are used to represent the LCA model.

Due to the large amounts of components in the product, raw material inputs have been modelled with data from ecoinvent [4] representing Global [GLO] or European [RER] market coverage based on the supplier's location including the corresponding electricity consumption sub-datasets. These datasets are assumed to be representative.

Manufacturing stage

The safety sensors are composed of a multitude of components, all of which are made from of numerous materials. Most of the inputs to the products' manufacturing stage are already produced component parts.

The single use packaging as well as paper documentation are also included in the analysis in the manufacturing stage. An average raw material packaging content of 5% of the mass of the reference equipment has been considered as per PSR [2].

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The manufacturing of the product is carried out by a qualified external supplier in Poland. Then, the finished product is delivered to ABB facilities for warehousing and subsequent distribution, The entire supplier's network has been modelled with the calculation of each transportation stage, from the first manufacturing supplier to the next. All the specific distances from the last subassembly suppliers' factories up to the ABB manufacturing facility have been calculated.

The electric energy model used for the manufacturing phase is representative of the supplier production site.

Distribution

The transport distances from ABB manufacturing plant to the distribution centers (regional distribution centers / local sales organizations) have been calculated considering the specific 2023 sales mix data.

Since no specific data is available for the transport distances from the Distribution Centre to place of actual use (Customer site), distances of 1000 km are assumed (local/domestic transport by lorry, according to PCR [1]).

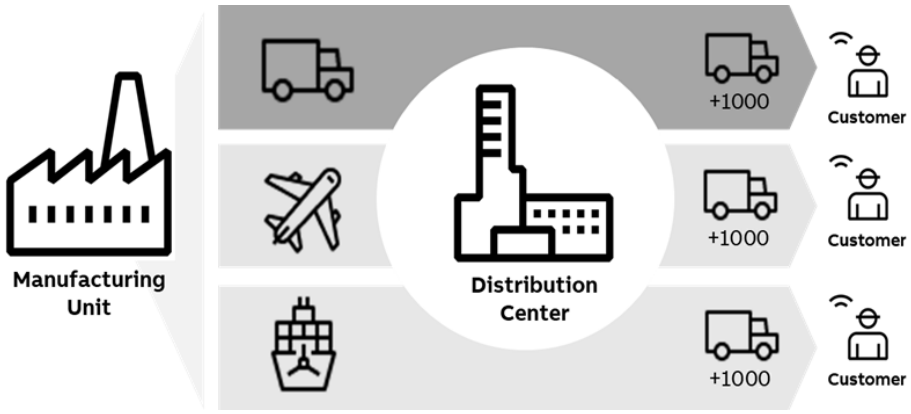

Figure 2: Distribution methodology

Installation

The installation phase only implies manual activities, and no energy is consumed. This phase also includes the disposal of the packaging of the EDEN non-contact safety sensors.

For the disposal of the packaging after installation at the end of its life, a transport distance of 100 km (according to PSR [2]) was assumed as the actual disposal site is unknown. The chosen transportation dataset is from Ecoinvent [4].

The disposal scenario of the packaging was calculated based on actual sales mix. For European countries Eurostat data (2021) and for non-European countries default scenario from PSR [2] is used.

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Use

During the use phase, EDEN dissipates some electricity due to power consumption. The respective energy for each specific configuration of the entire product family has been calculated according to the data provided in the catalogue of the EDEN and following the PCR [1] & PSR [2] rules:

Parameters	
Load rate	100% In
h/year	8760 h
Reference service life, RSL	10 years
Use time rate,α	100% RSL

Table 5: Use phase parameters

The formula for the calculation of the electricity consumed is shown below and it is described as follows, where P_{use} is the power consumed by the EDEN non-contact safety sensors at a given value of current:

$$E_{use}\ [kWh] = \frac{P_{use} * 8760 * RSL * \alpha}{1000}$$

The above calculations have been performed according to the below listed power loss and rated current flows during use phase.

The Energy model used for this phase has been modeled based on the 2023 actual sales mix data (SAP ERP sales data as a source). From the Ecoinvent [4] database, the low voltage electricity country mix for each country(x) has been selected with its respective percentage on the total sales mix (Electricity, low voltage [country]x | market for electricity, low voltage | Cut-off, S).

Since no maintenance happens during the use phase, the environmental impacts linked to this procedure have been considered as null in the analysis.

End of life

The end-of-life stage is modelled according to IEC/TR 62635 [7]. The percentages for end-of-life treatments of materials are taken from IEC/TR 62635 [7].

Since no specific data is available, the transport distances from the place of use to the place of disposal are assumed to be 1000 km (local/domestic transport by lorry, according to PCR [1]

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Environmental impacts

The following table shows the environmental impact indicators of the life cycle of a single EDEN as indicated by PCR [1] and EN 50693:2019 [3]. The indicators are divided into the contribution of the processes to the different stages (manufacturing, distribution, installation, use and end-of-life).

Impact category	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
GWP-total	kg CO2 eq	3.69E+01	4.16E+00	8.68E-01	3.47E-03	3.18E+01	4.22E-02
GWP-fossil	kg CO2 eq	3.52E+01	4.17E+00	8.68E-01	3.47E-03	3.02E+01	3.60E-02
GWP-biogenic	kg CO2 eq	1.52E+00	-9.93E-03	1.62E-04	2.22E-07	1.52E+00	6.27E-03
GWP-luluc	kg CO2 eq	1.52E-01	3.99E-03	1.25E-04	1.43E-07	1.47E-01	6.55E-06
ODP	kg CFC11-eq	1.08E-06	6.81E-07	1.40E-08	2.02E-12	3.89E-07	1.97E-10
AP	mol H+ eq	1.67E-01	3.90E-02	3.98E-03	1.11E-06	1.24E-01	6.05E-05
EP-freshwater	kg P eq	2.86E-02	4.50E-03	2.54E-05	4.81E-08	2.40E-02	1.74E-06
EP-marine	kg N eq	3.20E-02	5.39E-03	1.52E-03	4.53E-07	2.50E-02	1.26E-04
EP-terrestrial	mol N eq	3.03E-01	5.63E-02	1.66E-02	3.99E-06	2.30E-01	2.27E-04
POCP	kg NMVOC eq	9.81E-02	1.89E-02	5.46E-03	1.15E-06	7.37E-02	8.05E-05
ADP-m&m	kg Sb eq	1.09E-03	7.19E-04	7.11E-07	6.46E-10	3.68E-04	3.03E-08
ADP-fossil	MJ	6.17E+02	5.43E+01	1.18E+01	2.27E-03	5.51E+02	1.90E-01
WDP	m3 of equiv. depriv.	7.88E+00	9.52E-01	2.73E-02	-1.50E-05*a	6.90E+00	-6.68E-03*b
PENRE	MJ	6.16E+02	5.34E+01	1.18E+01	2.27E-03	5.51E+02	1.90E-01
PENRM	MJ	9.02E-01	9.02E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRT	MJ	6.17E+02	5.43E+01	1.18E+01	2.27E-03	5.51E+02	1.90E-01
PERE	MJ	1.87E+02	6.41E+00	7.83E-02	1.77E-04	1.80E+02	4.60E-03
PERM	MJ	2.91E-01	2.91E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	1.87E+02	6.70E+00	7.83E-02	1.77E-04	1.80E+02	4.60E-03
SM	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PET	MJ	8.04E+02	6.10E+01	1.18E+01	2.45E-03	7.31E+02	1.94E-01
FW	m3	4.97E-01	6.53E-02	8.75E-04	7.04E-08	4.31E-01	-1.42E-04*b
HWD	kg	1.65E-03	2.37E-04	8.00E-05	1.24E-08	1.33E-03	1.17E-06
N-HWD	kg	3.06E+00	6.37E-01	2.55E-01	9.61E-04	2.07E+00	9.24E-02
RWD	kg	3.36E-03	8.78E-05	1.51E-06	3.26E-09	3.27E-03	8.49E-08
CfR	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MfR	kg	1.35E-01	1.06E-01	0.00E+00	5.94E-04	0.00E+00	2.89E-02
MfER	kg	3.37E-02	2.37E-02	0.00E+00	1.07E-03	0.00E+00	8.95E-03
EN	MJ by energy vector	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PM	disease inc.	1.11E-06	2.00E-07	2.80E-08	1.12E-11	8.85E-07	1.23E-09
IRP	kBq U-235 eq	1.40E+01	3.55E-01	6.15E-03	1.33E-05	1.37E+01	3.47E-04
ETP-fw	CTUe	1.83E+02	6.05E+01	1.33E+00	1.22E-03	1.21E+02	3.79E-01
HTP-c	CTUh	7.50E-08	1.02E-08	1.92E-09	7.31E-13	6.29E-08	6.15E-11
HTP-nc	CTUh	5.69E-07	1.42E-07	8.52E-09	6.13E-12	4.18E-07	5.53E-10
SQP	Pt	1.70E+02	2.57E+01	3.59E+00	8.12E-04	1.41E+02	1.81E-01

Table 6: Impact indicators for EDEN (Adam DYN-Info M12-5 + Eva General code)

**Negative value due to the treatment of waste in sanitary landfills:*

***a** Ecoinvent dataset: Waste polyethylene {RoW}| treatment of waste polyethylene, sanitary landfill | Cut-off, S*

***b** Ecoinvent data set: Waste plastic, mixture {RoW}| treatment of waste plastic, mixture, sanitary landfill | Cut-off, S*
Waste graphical paper {RoW}| treatment of waste graphical paper, sanitary landfill | Cut-off, S
Municipal solid waste {RoW}| treatment of municipal solid waste, sanitary landfill | Cut-off, S

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Impact category	Unit	EDEN (Adam DYN-Info M12-5 + Eva General code)
Biogenic Carbon content of the product	kg	1.04E-02
Biogenic Carbon content of the associated packaging	kg	0.00E+00

Table 7: Inventory flow other indicators

Environmental impact indicators	
GWP-total	Global Warming Potential total (Climate change)
GWP-fossil	Global Warming Potential fossil
GWP-biogenic	Global Warming Potential biogenic
GWP-luluc	Global Warming Potential land use and land use change
ODP	Depletion potential of the stratospheric ozone layer
AP	Acidification potential
EP-freshwater	Eutrophication potential - freshwater compartment
EP-marine	Eutrophication potential - fraction of nutrients reaching marine end compartment
EP-terrestrial	Eutrophication potential -Accumulated Exceedance
POCP	Formation potential of tropospheric ozone
ADP-m&m	Abiotic Depletion for non-fossil resources potential
ADP-fossil	Abiotic Depletion for fossil resources potential
WDP	Water deprivation potential
Resource use indicators	
PERE	Use of renewable primary energy excluding renewable primary energy resources used as raw material
PERM	Use of renewable primary energy resources used as raw material
PERT	Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)
PENRE	Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw material
PNERM	Use of non-renewable primary energy resources used as raw material
PENRT	Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials)
PET	Total use of primary energy in the lifecycle
Secondary materials, water and energy resources	
SM	Use of secondary materials
RSF	Use of renewable secondary fuels
NRSF	Use of non-renewable secondary fuels
FW	FW: Net use of fresh water
Waste category indicators	
HWD	Hazardous waste disposed
N-HWD	Non-hazardous waste disposed
RWD	Radioactive waste disposed
Output flow indicators	
CfR	Components for reuse
MfR	Materials for recycling
MfER	Materials for energy recovery
EN	Exported energy
Other indicators	
Efp	Emissions of Fine particles
IrHH	Ionizing radiation, human health
ETX FW	Ecotoxicity, freshwater
HTX CE	Human toxicity, carcinogenic effects
HTX N-CE	Human toxicity, non-carcinogenic effects
IrLS	Impact related to Land use / soil quality

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Extrapolation for Homogeneous environmental family

This LCA covers different build configurations than the representative product. All the analyzed configurations have the same main functionality, product standards and manufacturing technology. The LCA SimaPro model has been fully parametrized to fulfill each different configuration.

For other products than the Reference product covered by this PEP, the environmental impacts for each phase of the lifecycle are obtained by multiplying the values of the Reference product by the following factor in listed table.

* If the factor is "1", the impacts of the phase of the life cycle are the same in comparison to the Reference product

Manufacturing

Product	GWP-total	GWP-fossil	GWP-biogenic	GWP-luluc	ODP	AP	EP-freshwater	EP-marine	EP-terrestrial	POCP	ADP-minerals & metals	ADP-fossil	WDP
Adam DYN with Eva/ Adam C DYN with Eva/ Adam DYN with Eva C/ Adam C DYN with Eva C	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adam OSSD with Eva/ Adam C OSSD with Eva/ Adam OSSD with Eva C/ Adam C OSSD with Eva C	0.84	0.84	1.18	0.77	0.93	0.93	0.75	0.82	0.81	0.87	0.51	0.84	0.88

Table 8: Manufacturing phase Extrapolation factors

Reference product: EDEN (Adam DYN-Info M12-5 + Eva General code)

Distribution

Product	Factor
Adam DYN with Eva/ Adam C DYN with Eva/ Adam DYN with Eva C/ Adam C DYN with Eva C	1.00
Adam OSSD with Eva/ Adam C OSSD with Eva/ Adam OSSD with Eva C/ Adam C OSSD with Eva C	1.01

Table 9: Distribution phase Extrapolation factor

Reference product: EDEN (Adam DYN-Info M12-5 + Eva General code)

Installation

Installation phase impacts are common across all the variants.

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Use

Product	Factor
Adam DYN/Adam C DYN with any Eva variant	1.00
Adam OSSD/Adam C OSSD with any Eva variant	1.63

Table 10: Use phase Extrapolation factors

Reference product: EDEN (Adam DYN-Info M12-5 + Eva General code)

End of life

Product	GWP-total	GWP-fossil	GWP-biogenic	GWP-luluc	ODP	AP	EP-freshwater	EP-marine	EP-terrestrial	POCP	ADP-minerals & metals	ADP-fossil	WDP
Adam DYN with Eva/ Adam C DYN with Eva/ Adam DYN with Eva C/ Adam C DYN with Eva C	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adam OSSD with Eva/ Adam C OSSD with Eva/ Adam OSSD with Eva C/ Adam C OSSD with Eva C	1.02	1.03	1.00	1.01	1.01	1.01	1.01	1.00	1.01	1.01	1.01	1.01	1.00

Table 11: End of Life phase Extrapolation factors

Reference product: EDEN (Adam DYN-Info M12-5 + Eva General code)

Additional environmental information

According to the waste treatment scenario calculation in Simapro [5], based on the recycling rate in the technical report IEC/TR 62635 Edition 1.0 [7] Table D.6, the following recyclability potentials were calculated. The recyclability potential is calculated based on the product weight (excluding packaging).

Product	Recyclability potential
EDEN	31.1%

Table 12: Recyclability potential

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References

[1] PCR “PEP-PCR-ed4-EN-2021 09 06” - Product Category Rules for Electrical, Electronic and HVAC-R Products (published: 6th September 2021)

[2] PSR “PSR-0005-ed3.1-EN-2023 12 08” - Specific rules for Electrical switchgear and control gear Solutions (Other equipment family)

[3] EN 50693:2019 - Product category rules for life cycle assessments of electronic and electrical products and systems

[4] Ecoinvent database version 3.10 - (https://ecoinvent.org/)

[5] SimaPro Software version 9.6.0.1 - PRé Sustainability

[6] UNI EN 15804:2012+A2:2019: Sustainability of constructions - Environmental product declarations (September 2019).

[7] IEC/TR 62635 - Guidelines for end-of-life information provided by manufacturers and recyclers and for recyclability rate calculation of electrical and electronic equipment - Edition 1.0 2012-10

[8] ISO 14040:2006 - Environmental management -Life cycle assessment - Principles and framework

[9] ISO 14044:2006 - Environmental management - Life cycle assessment - Requirements and guidelines

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