Product Environmental Profile

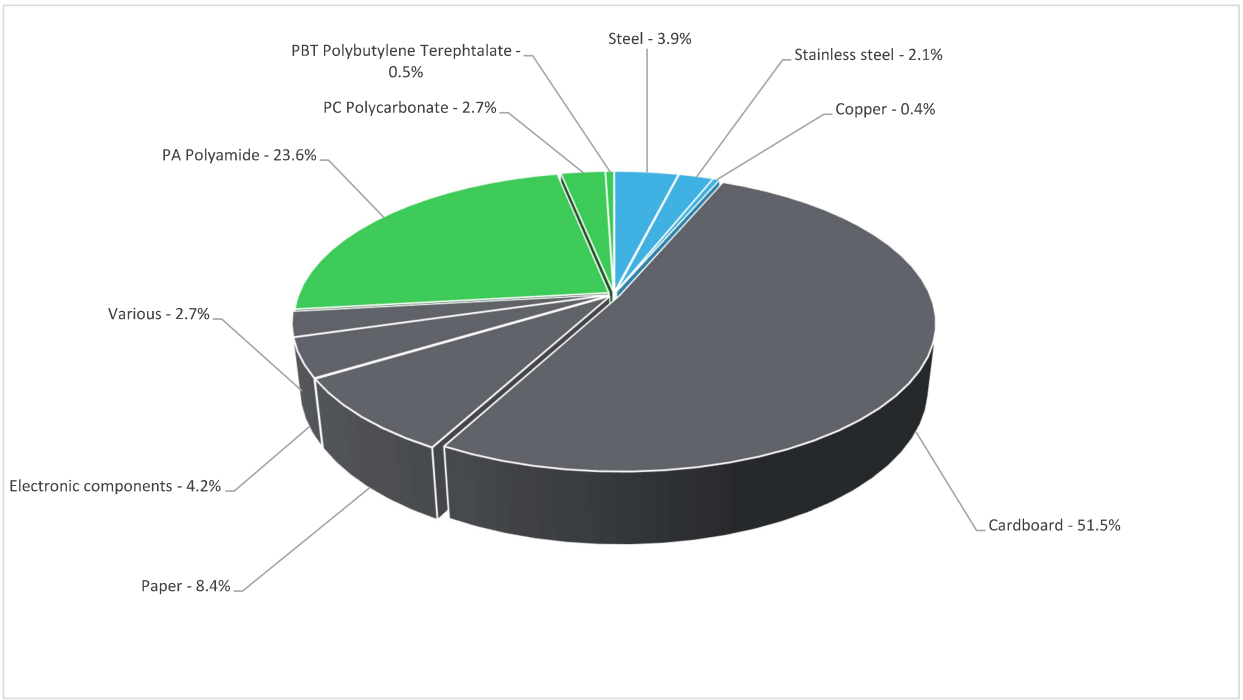
ZBV LIGHT BLOCK WITH INTEGRAL LED

General information

Reference product	ZBV LIGHT BLOCK WITH INTEGRAL LED - ZBVM15
Description of the product	ZBVM15 enables visual distinction of signaling units via illumination by integral LED. It protects operators from unexpected contact with live circuits.It is easily installed and replaced on compatible illuminated push-button or selector switch units via clip together assembly and connected with simple screw-clamp connections
Functional unit	Light blocks that attach to the back of a push button and serve as an indicator light. When the push button is pressed, the light blocks turn on and illuminate through the button head with a 30% utilisation rate and power consumption is 4.56W, and the product has a life of 10 years while adhering to standards IEC 61000-4-5 and IEC 60947-5-5.

Constituent materials

Reference product mass	12.46 g	including the product, its packaging and additional elements and accessories



	Plastics	26.80%
	Metals	6.40%
	Others	66.80%

Substance assessment

Details of ROHS and REACH substances information are available on the Schneider-Electric Green Premium website
https://www.se.com/ww/en/work/support/green-premium/

Additional environmental information

End Of Life	Recyclability potential:	**15%**	Recyclability rate has been calculated based on REEECY'LAB tool developed by Ecosystem, for components/materials not covered by the tool, data from the "ECO'DEEE recyclability and recoverability calculation method" was taken. If no data was found a conservative assumption was used (0% recyclability).

Environmental impacts

Reference service life time	10 years
Product category	Other equipments - Active product
Installation elements	No special installation components need during installation phase, but transport of packaging to disposal, and disposal of packaging accounted for during installation.
Use scenario	The product is in active mode 30% of the time with a power use of 4.56W and 70% of the time with off mode with power use of 0W for 10 years
Technological representativeness	The Modules of Technologies such as material production, manufacturing process and transport technology used in this PEP analysis (LCA-EIME in this case) are similar and representative of the actual type of technologies used to make the product)
Geographical representativeness	Europe, USA, Australia, Brazil

Energy model used	[A1 - A3]	[A5]	[B6]	[C1 - C4]
	Electricity Mix; Production mix; Low voltage; UE-27	Electricity Mix; Production mix; Low voltage; UE-27	Electricity Mix; Production mix; Low voltage; UE-27	Electricity Mix; Production mix; Low voltage; UE-27
		Electricity Mix; Production mix; Low voltage; US	Electricity Mix; Production mix; Low voltage; US	Electricity Mix; Production mix; Low voltage; US
		Electricity Mix; Production mix; Low voltage; BR	Electricity Mix; Production mix; Low voltage; BR	Electricity Mix; Production mix; Low voltage; BR
		Electricity Mix; Production mix; Low voltage; AUS	Electricity Mix; Production mix; Low voltage; AUS	Electricity Mix; Production mix; Low voltage; AUS

Detailed results, including all the optional indicators mentioned in PCRed4, and the split of the Use Phase (B1 to B7), are available in the LCA report and on demand in a digital format - Country Customer Care Center - http://www.schneider-electric.com/contact

Mandatory Indicators		ZBV LIGHT BLOCK WITH INTEGRAL LED - ZBVM15						
Impact indicators	Unit	Total	Manufacturing [A1 - A3]	Distribution [A4]	Installation [A5]	Use [B1 - B7]	End of Life [C1 - C4]	Benefits [D]
Contribution to climate change	kg CO2 eq	5.22E+01	1.17E-01	0*	9.97E-03	5.21E+01	1.43E-02	-6.71E-03
Contribution to climate change-fossil	kg CO2 eq	5.21E+01	1.15E-01	0*	9.88E-03	5.20E+01	1.42E-02	-6.61E-03
Contribution to climate change-biogenic	kg CO2 eq	6.73E-02	1.74E-03	0*	8.90E-05	6.54E-02	5.60E-05	-9.87E-05
Contribution to climate change-land use and land use change	kg CO2 eq	7.23E-10	6.57E-10	0*	0*	0*	6.65E-11	0.00E+00
Contribution to ozone depletion	kg CFC-11 eq	2.48E-07	2.05E-08	3.84E-09	1.48E-10	2.24E-07	1.09E-10	-7.39E-10
Contribution to acidification	mol H+ eq	2.97E-01	8.77E-04	0*	0*	2.96E-01	3.77E-05	-4.23E-05
Contribution to eutrophication, freshwater	kg $(PO4)^{3-}$ eq	1.28E-04	1.37E-06	0*	1.52E-07	1.27E-04	1.60E-07	-3.08E-08
Contribution to eutrophication marine	kg N eq	3.40E-02	1.59E-04	8.73E-06	5.13E-06	3.38E-02	2.13E-05	-5.45E-06
Contribution to eutrophication, terrestrial	mol N eq	4.89E-01	1.68E-03	9.46E-05	0*	4.88E-01	0*	-5.37E-05
Contribution to photochemical ozone formation - human health	kg COVNM eq	1.10E-01	4.96E-04	3.10E-05	1.20E-05	1.09E-01	1.19E-05	-1.70E-05
Contribution to resource use, minerals and metals	kg Sb eq	8.13E-06	4.72E-06	0*	0*	3.41E-06	4.11E-09	-1.32E-06
Contribution to resource use, fossils	MJ	1.27E+03	1.52E+00	0*	0*	1.27E+03	1.78E-01	-1.17E-01
Contribution to water use	m3 eq	2.22E+00	2.18E-02	0*	9.41E-04	1.86E+00	3.42E-01	-3.50E-03

Additional indicators for the French regulation are available as well

Inventory flows Indicators		ZBV LIGHT BLOCK WITH INTEGRAL LED - ZBVM15						
Inventory flows	Unit	Total	Manufact. [A1 - A3]	Distribution [A4]	Installation [A5]	Use [B1 - B7]	End of Life [C1 - C4]	Benefits [D]
Contribution to use of renewable primary energy excluding renewable primary energy used as raw material	MJ	2.34E+02	0*	0*	0*	2.34E+02	0*	1.10E-02
Contribution to use of renewable primary energy resources used as raw material	MJ	1.52E-01	1.52E-01	0*	0*	0*	0*	-1.98E-02
Contribution to total use of renewable primary energy resources	MJ	2.34E+02	1.06E-01	0*	0*	2.34E+02	0*	-8.84E-03
Contribution to use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	1.27E+03	1.41E+00	0*	0*	1.27E+03	1.78E-01	-1.17E-01
Contribution to use of non renewable primary energy resources used as raw material	MJ	1.12E-01	1.12E-01	0*	0*	0*	0*	0.00E+00
Contribution to total use of non-renewable primary energy resources	MJ	1.27E+03	1.52E+00	0*	0*	1.27E+03	1.78E-01	-1.17E-01
Contribution to use of secondary material	kg	2.15E-05	2.15E-05	0*	0*	0*	0*	0.00E+00
Contribution to use of renewable secondary fuels	MJ	0.00E+00	0*	0*	0*	0*	0*	0.00E+00
Contribution to use of non renewable secondary fuels	MJ	0.00E+00	0*	0*	0*	0*	0*	0.00E+00
Contribution to net use of freshwater	m^3	5.27E-02	5.07E-04	0*	2.19E-05	4.32E-02	8.94E-03	-8.14E-05
Contribution to hazardous waste disposed	kg	1.08E+00	8.17E-02	0*	0*	9.94E-01	5.58E-03	-1.05E-01
Contribution to non hazardous waste disposed	kg	7.83E+00	2.48E-01	0*	1.41E-02	7.56E+00	3.73E-03	-3.20E-02
Contribution to radioactive waste disposed	kg	1.57E-03	5.04E-05	8.65E-07	1.13E-06	1.52E-03	0*	-2.95E-06
Contribution to components for reuse	kg	0.00E+00	0*	0*	0*	0*	0*	0.00E+00
Contribution to materials for recycling	kg	1.89E-03	0*	0*	1.10E-03	0*	7.86E-04	0.00E+00
Contribution to materials for energy recovery	kg	0.00E+00	0*	0*	0*	0*	0*	0.00E+00
Contribution to exported energy	MJ	3.87E-03	0*	0*	3.87E-03	0*	0*	0.00E+00
Contribution to biogenic carbon content of the product	kg de C	0.00E+00	0*	0*	0*	0*	0*	0.00E+00
Contribution to biogenic carbon content of the associated packaging	kg de C	0.00E+00	0*	0*	0*	0*	0*	0.00E+00

** represents less than 0.01% of the total life cycle of the reference flow*

Life cycle assessment performed with EIME version v5.9.4, database version 2022-01 in compliance with ISO14044.

Detailed results, including all the optional indicators mentioned in PCRed4, and the split of the Use Phase (B1 to B7), are available in the LCA report and on demand in a digital format - Country Customer Care Center - http://www.schneider-electric.com/contact

Manufacturing phase has the greatest impacts contribution on environmental indicators like Climate change-Land use and land use change (GWPlu),Resource use, minerals and metals (PEF-ADPe).Use phase has greatest contributor on Climate change-Fossil (GWPb),Acidification (PEF-AP), Resource use, fossils (PEF-ADPf),Acidification(PEF-AP),Eutrophication,Climate change-Biogenic (GWPb), Eutrophication freshwater (PEF-Epf) ,Ozone depletion (PEF-ODP) Terrestrial(PEF-Ept),Photochemical ozone formation - human health(PEF-POCP),Water Use (PEF-WU).

Please note that the values given above are only valid within the context specified and cannot be used directly to draw up the environmental assessment of an installation.

Registration number :	ENVPEP2302007_V1	*Drafting rules*	PEP-PCR-ed4-2021 09 06
		Supplemented by	PSR-0005-ed2-2016 03 29
Date of issue	04/2023	*Information and reference documents*	www.pep-ecopassport.org
		Validity period	5 years

Independent verification of the declaration and data, in compliance with ISO 14021 : 2016

Internal X External

The PCR review was conducted by a panel of experts chaired by Julie ORGELET (DDemain)

PEP are compliant with XP C08-100-1 :2016 or EN 50693:2019

The elements of the present PEP cannot be compared with elements from another program.

Document in compliance with ISO 14021 : 2016 « Environmental labels and declarations. Type II environmental declarations »

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