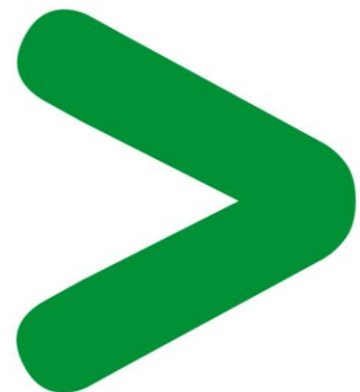
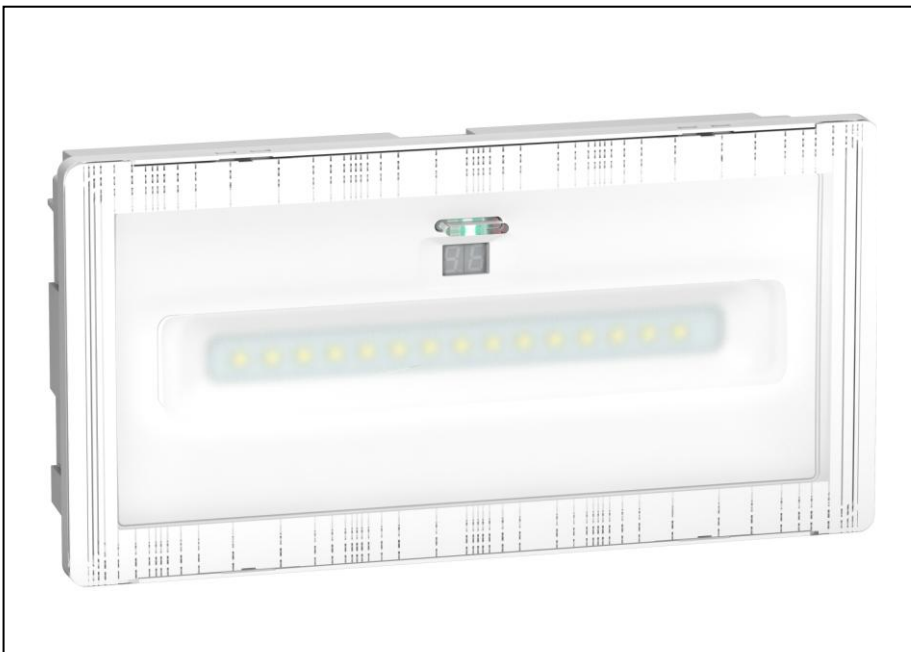


Product Environmental Profile

EXIWAY-SMART-EV-DBR IP65 ACT.L/120/1NC/T



Product Environmental Profile – PEP

Product overview

The Exiway-Smart product range consists of self contained emergency luminaires, intended to be used on the French market.

The Exiway-Smart range consist of BAES, BAES+DBR, BAEH, BAES+BAEH luminaires, designed in compliance with the relevant European and French standards EN60598-2-22, NFC71-800, NFC71-801, NFC71-805, NFC71-820, UTE71-803, UTE71806 and with the reference document P96A-101 AFNOR.

Functional unit: to provide emergency lighting in case of mains failure, for 10years

All the products of the range are non-maintained and self testing.

The light source is made up of white LED with a lifespan of at least 10 years.

It is possible to connect the luminaires of this range to a remote control to optimize the energy consumption.

The referent product used for the life cycle analysis is EXIWAY-SMART-EV-DBR IP65 ACT.L/120/1NC/T ref. OVA59102.

It is a self contained, non-maintained, self testing luminaire BAES+ DBR with IP65 protection degree whose function is to facilitate the evacuation of personnel and disabled persons to the outside or to secure waiting areas. In presence of mains supply the light emission is at least 8 lumens. In case of mains failure the light output float continuously from a minimum of 45lm to 120lm, for 1 hour or more as supplementary signposting for disabled persons.

The lifetime duration considered in the Life cycle analysis is **10** years. The product provides a constant charge to the batteries and a constant power to the vigil led so that the power consumption is the same in active and stand-by mode and it is 0.87W. The total power consumption during the product lifetime is 1.83kW.

Mains failures, maintenance tests and other non operative conditions are not considered.

The environmental impact calculated for the reference product is applicable to the following commercial references:

Commercial reference	IP Protection rating	IK Mechanical shock index	Consumption in Watts
OVA59100	IP42	IK7	0,58
OVA59101	IP65	IK7	0,58
OVA59102	IP65	IK7	0,87
OVA59200	IP42	IK7	0,58
OVA59201	IP65	IK7	0,58
OVA59300	IP42	IK7	0,53
OVA59301	IP65	IK7	0,53
OVA59400	IP42	IK7	0,82
OVA59401	IP65	IK7	0,82

The energy consumption is the parameter that more affect the environmental indicators.

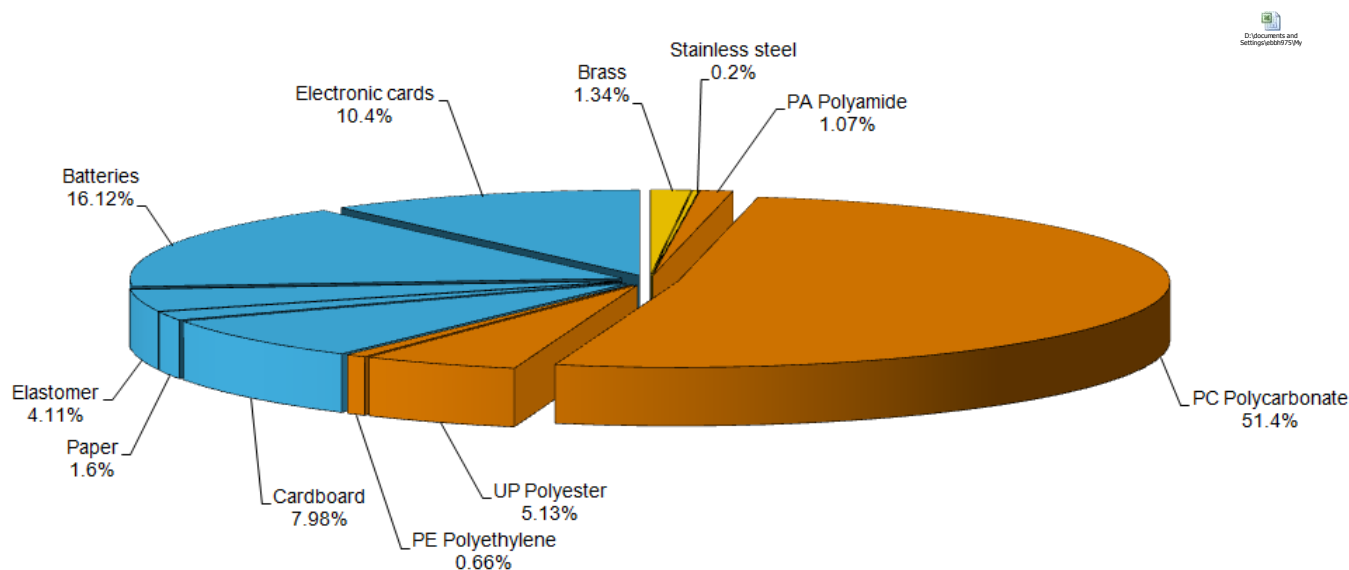
The selected reference product has the worst environmental impact.

The environmental analysis was performed in conformity with ISO 14040.

Product Environmental Profile – PEP

Constituent materials

The mass of the product range is from 520 g and 660 g including packaging. It is 585 g for the EXIWAY-SMART-EV-DBR IP65 ACT.L/120/1NC/T ref. OVA59102. The constituent materials are distributed as follows:



Substance assessment

Products of this range are designed in conformity with the requirements of the European RoHS Directive 2011/65/EU and do not contain, or only contain in the authorised proportions, lead, mercury, cadmium, hexavalent chromium or flame retardants (polybrominated biphenyls - PBB, polybrominated diphenyl ethers - PBDE) as mentioned in the Directive.

Details of ROHS and REACH substances information are available on the Schneider-Electric [Green Premium website](http://www2.schneider-electric.com/sites/corporate/en/products-services/green-premium/green-premium.page) . (<http://www2.schneider-electric.com/sites/corporate/en/products-services/green-premium/green-premium.page>)

Manufacturing

The EXIWAY-SMART product range is manufactured at a Schneider Electric production site on which an ISO14001 certified environmental management system has been established.

Distribution

The weight and volume of the packaging have been optimized, based on the European Union's packaging directive.

The EXIWAY-SMART packaging weight is 56g. It consists of 47g of cardboard and 9g of paper.

The product distribution flows have been optimised by setting up local distribution centres close to the market areas.

Use

The products of the EXIWAY-SMART range do not generate environmental pollution (noise, emissions) requiring special precautionary measures in standard use.

The electrical power consumption depends on the conditions under which the product is implemented and used. The electrical power consumed by the EXIWAY-SMART range is between 0.53 W and 0.87W. It is 0.87W 100% uptime in active mode for the referenced EXIWAY-SMART-EV-DBR IP65 ACT.L/120/1NC/T ref. OVA59102.

During the Product's service life, the substitution of the batteries is needed when the product becomes unable to maintain the rated performance. The standard battery lifetime of 4 years have been considered. The substitution operation is required 1.5 times.

Product Environmental Profile – PEP

End of life

At end of life, the products in the **EXIWAY-SMART** range have been optimized to decrease the amount of waste and allow recovery of the product components and materials.

This product range contains electronic cards and batteries that should be separated from the stream of waste so as to optimize end-of-life treatment by special treatments. The location of these components and other recommendations are given in the End of Life Instruction document which is available for this product range on the Schneider-Electric Green Premium website [Green Premium website](http://www2.schneider-electric.com/sites/corporate/en/products-services/green-premium/green-premium.page) (<http://www2.schneider-electric.com/sites/corporate/en/products-services/green-premium/green-premium.page>).

The recyclability potential of the products has been evaluated using the “ECO DEEE recyclability and recoverability calculation method” (version V1, 20 Sep. 2008 presented to the French Agency for Environment and Energy Management: ADEME).

According to this method, the potential recyclability ratio without packaging is: **66%**.

As described in the recyclability calculation method this ratio includes only metals and plastics which have proven industrial recycling processes.

Environmental impacts

Life cycle assessment has been performed on the following life cycle phases: Materials and Manufacturing (M), Distribution (D), Installation (I) Use (U), and End of life (E).

Modeling hypothesis and method:

- The calculation was performed on EXIWAY-SMART-EV-DBR IP65 ACT.L/120/1NC/T ref. **OVA59102**
- Product packaging is included.
- Installation components: no special components included.
- Scenario for the Use phase: this product range is included in the category 2: Energy consuming products. Assumed service lifetime is 10 years and use scenario is 0.87W 100% uptime in active mode.
- The geographical representative area for the assessment is **France** and the electrical power model used for calculation is the **French** model.
- End of life impacts are based on a worst case transport distance to the recycling plant (1000km)

Presentation of the product environmental impacts

Environmental indicators	Unit	For 1 EXIWAY-SMART-EV-DBR IP65 ACT.L/120/1NC/Tref. OVA59102					
		S = M + D + I + U + E	M	D	I	U	E
Air Acidification (AA)	kg H+ eq	3.36E-03	1.71E-03	1.90E-05	0*	1.54E-03	8.38E-05
Air toxicity (AT)	m ³	4.21E+06	2.13E+06	2.83E+04	0*	1.92E+06	1.25E+05
Energy Depletion (ED)	MJ	9.85E+02	1.18E+02	1.42E+00	0*	8.60E+02	6.02E+00
Global Warming Potential (GWP)	kg CO ₂ eq.	1.63E+01	7.00E+00	1.01E-01	0*	8.73E+00	4.27E-01
Hazardous Waste Production (HWP)	kg	2.02E-01	9.71E-02	1.25E-07	0*	1.05E-01	5.29E-07
Ozone Depletion Potential (ODP)	kg CFC-11 eq.	1.12E-06	4.62E-07	1.92E-10	0*	6.56E-07	8.09E-10
Photochemical Ozone Creation Potential (POCP)	kg C ₂ H ₄ eq.	6.25E-03	2.31E-03	2.61E-05	0*	3.80E-03	1.06E-04
Raw Material Depletion (RMD)	Y-1	1.18E-13	1.17E-13	2.07E-18	0*	5.09E-16	8.73E-18
Water Depletion (WD)	dm ³	2.39E+02	7.50E+01	1.05E-02	0*	1.64E+02	4.44E-02
Water Eutrophication (WE)	kg PO ₄ ³⁻ eq.	2.69E-03	2.59E-03	1.88E-07	0*	9.94E-05	7.94E-07
Water Toxicity (WT)	m ³	4.12E+00	2.41E+00	4.32E-02	0*	1.48E+00	1.83E-01

Life cycle assessment has been performed with the EIME software (Environmental Impact and Management Explorer), version 5 and with its database version 2013-02, and complies with the specific rules applicable to self

Product Environmental Profile – PEP

contained emergency electrical equipment PSR0007-ed1-FR-2013 04 09, available on the website www.pep-ecopassport.org »

The **U** phase is the life cycle phase which has the greatest impact on the majority of environmental indicators.

According to this environmental analysis, proportionality rules may be used to evaluate the impacts of other products of this range: the environmental indicators (without RMD) of other products in this family may be proportional extrapolated by energy consumption values”. For RMD, impact may be proportional extrapolated by mass of the product.

System approach

As the products of the range are designed in accordance with the European RoHS Directive 2011/65/EU, they can be incorporated without any restriction in an assembly or an installation subject to this Directive.

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.

The use of a remote control to place the system on stand-by in periods when the establishment is idle can reduce the environmental impact of your installation by as much as 20% and reduce your electricity bill.

Glossary

Air Acidification (AA)	The acid substances present in the atmosphere are carried by rain. A high level of acidity in the rain can cause damage to forests. The contribution of acidification is calculated using the acidification potentials of the substances concerned and is expressed in mode equivalent of H ⁺ .
Air Toxicity (AT)	This indicator represents the air toxicity in a human environment. It takes into account the usually accepted concentrations for several gases in the air and the quantity of gas released over the life cycle. The indication given corresponds to the air volume needed to dilute these gases down to acceptable concentrations.
Energy Depletion (ED)	This indicator gives the quantity of energy consumed, whether it is from fossil, hydroelectric, nuclear or other sources. It takes into account the energy from the material produced during combustion. It is expressed in MJ.
Global Warming (GW)	The global warming of the planet is the result of the increase in the greenhouse effect due to the sunlight reflected by the earth's surface being absorbed by certain gases known as "greenhouse-effect" gases. The effect is quantified in gram equivalent of CO ₂ .
Hazardous Waste Production (HWP)	This indicator quantifies the quantity of specially treated waste created during all the life cycle phases (manufacturing, distribution and utilization). For example, special industrial waste in the manufacturing phase, waste associated with the production of electrical power, etc. It is expressed in kg.
Ozone Depletion (OD)	This indicator defines the contribution to the phenomenon of the disappearance of the stratospheric ozone layer due to the emission of certain specific gases. The effect is expressed in gram equivalent of CFC-11.
Photochemical Ozone Creation (POC)	This indicator quantifies the contribution to the "smog" phenomenon (the photochemical oxidation of certain gases which generates ozone) and is expressed in gram equivalent of ethylene (C ₂ H ₄).
Raw Material Depletion (RMD)	This indicator quantifies the consumption of raw materials during the life cycle of the product. It is expressed as the fraction of natural resources that disappear each year, with respect to all the annual reserves of the material.
Water Depletion (WD)	This indicator calculates the volume of water consumed, including drinking water and water from industrial sources. It is expressed in dm ³ .
Water Eutrophication (WE)	Eutrophication is a natural process defined as the enrichment in mineral salts of marine or lake waters or a process accelerated by human intervention, defined as the enrichment in nutritive elements (phosphorous compounds, nitrogen compounds and organic matter). This indicator represents the water eutrophication of lakes and marine waters by the release of specific substances in the effluents. It is expressed in grams equivalency of PO43-(phosphate).
Water Toxicity (WT)	This indicator represents the water toxicity. It takes into account the usually accepted concentrations for several substances in water and the quantity of substances released over the life cycle. The indication given corresponds to the water volume needed to dilute these substances down to acceptable concentrations.

PEP achieved with Schneider-Electric TT01 V10.3 and TT02 V20 procedures in compliance with ISO14040 series standards

Registration N° : SCHN-2015-022	Applicable PCR : PEP-PCR-ed 2.1-EN-2012 12 11 and PSR0007-ed1-FR-2013 04 09
Verifier accreditation N° : VH08	Program information: www.pep-ecopassport.org
Date of issue: 04-2015	Period of validity: 4 years
Independent verification of the declaration and data, according to ISO 14025:2006	
Internal	External <input checked="" type="checkbox"/>
In compliance with ISO 14025:2006 type III environmental declarations	
PCR review was conducted by an expert panel chaired by J. Chevalier (CSTB).	
The elements of the actual PEP cannot be compared with elements from another program.	



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