



**Intrusion System
Communicator**

Eaton product	COM-SD-GSM
Description of the product	Communicator is a plug-on module which helps intrusion system to communicate with end users which bring the convenience and responsiveness of smart security systems using GSM mobile network or PSTN wired network. It communicates with professional alarm monitoring or to an end-user in the form of text & voice messages or phone calls in case of intrusion event.
Homogeneous Environmental Families Covered	The PEP covers below offerings in the cloud communicator – COM-SD-GSM, COM-SD-PSTN
Functional unit	To enable communication of intrusion alarm system to professional alarm monitoring or to an end-user in the form of text & voice messages or phone calls over 10 years of life, 24 hrs. a day.
Company information	Digital Lighting (Dongguan) Co Ltd. Xinmin District, Chang'an Town, Dongguan City, Guangdong Province, China 523879 Email: productstewardship-es@eaton.com

Constituent Materials			
Reference product mass	1.26E+02 g (with packaging)		
Category PEP Material	Materials	Masse (g)	Percentage (%)
Others	Cardboard	6.55E-02	52.54%
Others	Wood	1.78E-02	14.29%
Others	Paper	1.69E-02	13.54%
Plastic	Glass fiber	4.58E-03	3.68%
Plastic	Nylon 66	4.40E-03	3.53%
Plastic	Epoxy resin	4.06E-03	3.26%
Metal	Copper	3.00E-03	2.41%
Plastic	Low density polyethylene	2.99E-03	2.40%
Others	Quartz sand	1.77E-03	1.42%
Metal	Tin	6.52E-04	0.52%
Metal	Silicon	5.29E-04	0.42%
Metal	Brass	4.28E-04	0.34%
Metal	Nickel	1.83E-04	0.15%
Metal	Silver	1.31E-04	0.11%
Metal	Tantalum	1.10E-04	<0.1%
Others	Miscellaneous	1.62E-03	1.30%
Total		1.26E+02	100.00%

Substance Assessment

The representative product is compliant with the EU-RoHS Directive (2011/65/EU) by application of exemptions and the product contains lead (Pb) which is listed as Substance-of-Very-High-Concern (SVHC) on the Candidate List of the EU-REACH Regulation (1907/2006/EC).

Additional Environmental Information

Manufacturing	The reference product is assembled at Eaton plant holding management system certifications according to ISO9001 & 14001 standards.
Distribution	Eaton is committed to minimizing weight and volume of product and packaging with focus to optimize transport efficiency.
Installation	Product installation need standard tools which do not require any additional energy source and no waste other than the obsolete product packaging is generated during this step.
Use	Product do not require maintenance during operation.
End of life	Recyclability of product is equal to 40% based on the method described in IEC/TR 62635, Edition 1.0/2012-10 "Guidelines for end-of-life information provided by manufacturers and recyclers and for recyclability rate calculation of electrical and electronic equipment".

Environmental Impacts	
<p>The calculation of environmental impacts is the result of a Product Life Cycle Analysis in accordance with ISO 14040/44, covering the entire product lifecycle, i.e. "Cradle-to-Grave" including the following life cycle phases: production, distribution, installation, use and end of life.</p> <p>System modelling was carried out using the commercial LCA software EIME v5.9.3 with database version CODDE-2022-01.</p>	
Manufacturing Phase	The product is manufactured at Eaton Dong Guan, China plant. Energy modelled used: China
Distribution Phase	Distribution of the product in its packaging from the manufacturer's last logistics platform to the installation place in United Kingdom (60%) & France (40%) is considered. Distances considered are 20,450 km by ship & 2000 km by road for United Kingdom and 17,050 km by ship & 2000 km by road for France.
Installation Phase	Product installed in United Kingdom (60%) & France (40%). Only treatment of packaging waste is considered in this phase. <u>Energy model used:</u> Europe
Use Phase	<u>Reference lifetime:</u> 10 Years <u>Energy model used:</u> United Kingdom, France [Product use is considered for United Kingdom (60%) & France (40%)] <u>Usage profile:</u> The product is in active mode for 5% of the time with 1.68 W consumption and remaining 95% of the time in standby mode with 0.18 W consumption. Total energy losses are 22.34 kWh over the 10 years. Life of the product and usage profile is theoretical. No maintenance required for the product.
End of life Phase	Product disposed with WEEE guidelines. <u>Energy model used:</u> Europe

Environmental Impact Indicators: Mandatory

Impact Indicators	Unit	Total	Manufacturing	Distribution	Installation	Use (Only B6*)	End of life
Global warming (GWP100)	kg CO ₂ eq.	1.42E+01	9.99E+00	1.15E-01	6.49E-02	4.04E+00	1.63E-02
Ozone layer depletion	kg CFC-11 eq.	1.28E-06	1.27E-06	2.37E-10	1.67E-10	1.55E-08	6.69E-10
Acidification potential	kg SO ₂ eq.	2.21E-02	1.24E-02	1.17E-03	3.12E-05	8.54E-03	1.19E-05
Eutrophication	kg PO ₄ ³⁻ eq.	5.55E-03	3.44E-03	2.26E-04	1.21E-04	1.76E-03	5.39E-06
Photochemical oxidation	kg ethylene eq.	1.67E-03	1.21E-03	7.31E-05	1.61E-05	3.70E-04	1.16E-06
Abiotic depletion (elements)	kg antimony eq.	1.87E-03	1.87E-03	2.23E-09	2.69E-10	1.07E-06	1.01E-10
Abiotic depletion (fossil fuels)	MJ	1.67E+02	1.01E+02	7.57E-01	9.13E-02	6.51E+01	4.59E-02
Water Pollution	m ³	8.93E+02	7.93E+02	1.05E+01	4.10E+00	8.50E+01	7.42E-01
Air pollution	m ³	9.60E+02	7.40E+02	6.76E+00	5.20E-01	2.13E+02	4.68E-01

*B6 is energy requirements during the use stage. Other sub modules in the use stage (B1-B5,B7) are equal to zero. So, it is not listed in the table.

Environmental Impact Indicators: Optional

Impact Indicators	Unit	Total	Manufacturing	Distribution	Installation	Use (Only B6*)	End of life
Use of renewable primary energy, excluding renewable primary energy resources used as raw materials	MJ	4.53E+01	3.50E+00	1.55E-03	2.29E-04	4.18E+01	5.50E-05
Use of renewable primary energy resources used as raw materials	MJ	1.73E+00	1.73E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)	MJ	4.70E+01	5.22E+00	1.55E-03	2.29E-04	4.18E+01	5.50E-05
Use of non-renewable primary energy, excluding non-renewable primary energy resources used as raw materials	MJ	3.27E+02	1.09E+02	7.64E-01	9.51E-02	2.17E+02	5.88E-02
Use of non-renewable primary energy resources used as raw materials	MJ	5.00E-01	5.00E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials)	MJ	3.27E+02	1.10E+02	7.64E-01	9.51E-02	2.17E+02	5.88E-02
Use of secondary materials	Kg	1.28E-03	1.28E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Net use of fresh water	m3	1.22E-01	5.62E-02	1.25E-05	2.47E-06	6.62E-02	9.87E-06
Hazardous waste disposed of	Kg	3.29E+01	3.28E+01	3.41E-05	4.59E-05	5.10E-02	7.03E-02
Non-hazardous waste disposed of	Kg	4.13E+00	3.74E+00	4.54E-02	4.63E-02	2.91E-01	1.70E-04
Radioactive waste disposed of	Kg	1.04E-03	9.71E-04	1.99E-06	3.53E-07	6.29E-05	3.95E-07
Materials for recycling	Kg	1.59E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E-02
Exported energy	MJ by energy vector	1.64E-02	0.00E+00	1.58E-02	5.90E-04	0.00E+00	0.00E+00
Total use of primary energy during the life cycle	MJ	3.74E+02	1.15E+02	7.66E-01	9.53E-02	2.59E+02	5.89E-02


*B6 is energy requirements during the use stage. Other sub modules in the use stage (B1-B5,B7) are equal to zero. So, it is not listed in the table.

To evaluate the environmental impact of other product covered by this PEP, multiply the impact figures by –

Product	Life cycle Phases	Acidification Potential	Abiotic Depletion Potential - Elements	Abiotic Depletion Potential - Fuel	Air Pollution	Eutrophication Potential	Global Warming Potential	Ozone Depletion Potential	Photochemical Oxidation Potential	Water Pollution
COM-SD-GSM (Baseline)	All phases	1	1	1	1	1	1	1	1	1
COM-SD-PSTN	Manufacturing	1.73	1.67	1.76	1.72	1.74	1.76	1.79	1.68	1.73
	Distribution					1.03				
	Installation					1.00				
	Use					0.96				
	End of Life	1.07	1.07	1.07	1.08	1.06	1.06	1.04	1.07	1.06

Disclaimer

This Product Environmental Profile and its content is based on information available to us. It refers to the product at the date of issue. We make no express or implied representations or warranties with respect to the information contained herein.

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<i>Date of issue</i>	4-2022	<i>Information and reference documents</i>	www.pep-ecopassport.org
		<i>Validity period</i>	5 years
Independent verification of the declaration and data, in compliance with ISO 14025: 2010			
Internal		External	X
The PCR review was conducted by a panel of experts chaired by Philippe Osset (SOLINNEN)			
<i>The elements of the present PEP cannot be compared with elements from another program.</i>			
<i>Document in compliance with ISO 14025: 2010 « Environmental labels and declarations. Type III environmental declarations »</i>			