BTicino SpA
Viale Borri, 231
21100 - Varese - Italy

Your usual Sales office
www.bticino.com

Product Environmental Profile

Universal dimmer
2 BUS output

PEP ecopassport®

BTICINO'S ENVIRONMENTAL COMMITMENTS

• Incorporate environmental management into our industrial sites
Of all Legrand sites worldwide, over 85% are ISO 14001-certified (sites belonging to the Group for more than five years).

• Offer our customers environmentally friendly solutions
Develop innovative solutions to help our customers design more energy efficient, better managed and more environmentally friendly installations.

• Involve the environment in product design and provide informations in compliance with ISO 14025
Reduce the environmental impact of products over their whole life cycle.
Provide our customers with all relevant information (composition, consumption, end of life, etc.).

REFERENCE PRODUCT

Function	Manage dimmable LEDs, dimmable compact fluorescent lamps CFL, energy-saving halogen lamps and electronic transformers at 110-230 V, controlling a maximum load of 300 W for each channel or a single maximum load of 600 W in a two channel parallel configuration, for 10 years.
Reference Product	
	BT-F418U2
	Universal dimmer 2 BUS output

PRODUCTS CONCERNED

The environmental data is representative of the following products:

BT-F418U2

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CONSTITUENT MATERIALS

This Reference Product contains no substances prohibited by the regulations applicable at the time of its introduction to the market.

It respects the restrictions on use of hazardous substances as defined in the RoHS directive 2011/65/EU and its delegated directive 2015/863/EU.

Total weight of Reference Product	**277 g** (all packaging included)

Plastics as % of weight		**Metals as % of weight**		**Other as % of weight**	
Polycarbonate	21,5 %	Copper alloys	0,5 %	Electronic cards	27,0 %
ABS	4,8 %	Other metals	< 0,1 %	Other electronic components	0,8 %
Polyamide	1,6 %			Paper / Cardboard	0,4 %
Polyethylene	0,6 %				
PET	0,4 %				
POM	0,2 %				
Packaging					
				Wood	25,8 %
				Paper / cardboard	16,4 %
Total plastics	**29,1 %**	**Total metals**	**0,5 %**	**Total other and packaging**	**70,4 %**

Estimated recycled material content: 12 % by mass.

MANUFACTURE

This Reference Product comes from a site that has received ISO 14001 certification.

DISTRIBUTION

The Group's products are distributed from logistics centres located to optimize transport efficiency. The Reference Product is therefore transported over an average distance of 780 km, essentially by road, representing a marketing in Europe.

Packaging is compliant with European directive 2004/12/EC concerning packaging and packaging waste. At the packaging end of life, its recycling rate is of 97 % (as % of packaging weight).

INSTALLATION

For the installation of the product, only standard tools are needed.

USE

Under normal conditions of use, this product requires no servicing, no maintenance or additional products.

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END OF LIFE

The product end-of-life factors are taken into account during the design phase. Dismantling and sorting of components or materials is made as easy as possible with a view to recycling or failing that, another form of reuse. This product falls within the scope of the WEEE directive (2012/19/EU). Therefore it must be processed through local WEEE recycling/recovery channels.

• Elements to process specifically:
In accordance with the requirements of this Directive, the following components must be removed and sent to specific channels for processing which comply with the WEEE Directive 2012/19/EU:

- electronic cards more than 10 cm^2 : 75 g

• Extended producer responsability:
The sale of this product is subject to a contribution to eco-organisations in each country responsible for managing end-of-life products in the field of application of the European Waste Electronic and Electrical Equipment Directive.

• Recyclability rate of the Reference Product:
Calculated using the method described in technical report IEC/TR 62635, the recyclability rate of the product is estimated at 86 %. This value is based on data collected from a technological channel operating on an industrial basis. It does not pre-validate the effective use of this channel for the end of life of this product.
Separated into:

- plastic materials (excluding packaging) : 28 %
- other materials (excluding packaging) : 17 %
- packaging (all types of materials) : 41 %

ENVIRONMENTAL IMPACTS

The evaluation of environmental impacts examines the stages of the Reference Product life cycle: manufacturing, distribution, installation, use and end-of-life. It is representative from products marketed and used in Europe, in compliance with the local current standards.

For each phase, the following modelling elements were taken in account:

Manufacture	Materials and components of the product, all transport for the manufacturing, the packaging and the waste generated by the manufacturing.
Distribution	Transport between the last Group distribution centre and an average delivery point in the sales area.
Installation	The end of life of the packaging.
Use	• Product category: PSR-0005-ed2-2016 03 29 §3.13 Other equipments - active products. • Use scenario: ten-year working life. Stand-by mode power: 0,8 W for 91,7 % of the time; active mode power: 5,0 W for 8,3 % of the time. This modelling duration does not constitute a minimum durability requirement. • Energy model: Electricity Mix, Europe 27 - 2008.
End of life	The default end of life scenario maximizing the impacts.
Software and database used	EIME V5 and its database «CODDE-2018-11»

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SELECTION OF ENVIRONMENTAL IMPACTS

	Total for Life cycle		Raw material and manufacture		Distribution		Installation		Use		End of life	
Global warming	**5.41E+01**	**kgCO_2 eq.**	4.75E+00	**9%**	1.07E-02	**< 1%**	6.43E-03	**< 1%**	4.93E+01	**91%**	1.90E-02	**< 1%**
Ozone depletion	**4.53E-06**	**kgCFC-11 eq.**	1.31E-06	**29%**	2.18E-11	**< 1%**	2.68E-11	**< 1%**	3.21E-06	**71%**	4.83E-10	**< 1%**
Acidification of soils and water	**2.14E-01**	**kgSO_2 eq.**	7.64E-03	**4%**	4.83E-05	**< 1%**	3.01E-05	**< 1%**	2.06E-01	**96%**	7.23E-05	**< 1%**
Water eutrophication	**1.72E-02**	**kg$(PO_4)^{3-}$ eq.**	4.62E-03	**27%**	1.11E-05	**< 1%**	1.89E-05	**< 1%**	1.24E-02	**72%**	8.26E-05	**< 1%**
Photochemical ozone formation	**1.22E-02**	**kgC_2H_4 eq.**	8.66E-04	**7%**	3.43E-06	**< 1%**	2.13E-06	**< 1%**	1.13E-02	**93%**	5.64E-06	**< 1%**
Depletion of abiotic resources - elements	**1.67E-03**	**kgSb eq.**	1.66E-03	**100%**	4.30E-10	**< 1%**	2.67E-10	**< 1%**	4.29E-06	**< 1%**	1.22E-09	**< 1%**
Total use of primary energy	**1.06E+03**	**MJ**	7.66E+01	**7%**	1.52E-01	**< 1%**	8.98E-02	**< 1%**	9.85E+02	**93%**	2.07E-01	**< 1%**
Net use of fresh water	**1.79E+02**	**m^3**	4.11E-01	**< 1%**	9.62E-07	**< 1%**	1.22E-06	**< 1%**	1.79E+02	**100%**	1.67E-05	**< 1%**
Depletion of abiotic resources - fossil fuels	**5.91E+02**	**MJ**	3.11E+01	**5%**	1.51E-01	**< 1%**	8.83E-02	**< 1%**	5.60E+02	**95%**	1.85E-01	**< 1%**
Water pollution	**2.75E+03**	**m^3**	7.10E+02	**26%**	1.77E+00	**< 1%**	1.03E+00	**< 1%**	2.04E+03	**74%**	2.15E+00	**< 1%**
Air pollution	**2.49E+03**	**m^3**	3.68E+02	**15%**	4.41E-01	**< 1%**	5.09E-01	**< 1%**	2.12E+03	**85%**	2.24E+00	**< 1%**

The values of the 27 impacts defined in the PCR-ed3-EN-2015 04 02 are available in the digital database of pep-ecopassport.org website.

Registration N°: LGRP-01289-V01.01-EN	Drafting rules: PEP-PCR-ed3-EN-2015 04 02 Supplemented by PSR-0005-ed2-2016 03 29
Verifier accreditation N°: VH02	Information and reference documents : **www.pep-ecopassport.org**
Date of issue: 11-2020	Validity period: 5 years
Independent verification of the declaration and data, in compliance with ISO 14025:2010 Internal ☒ External ☐	
The PCR review was conducted by a panel of experts chaired by Philippe Osset (SOLINNEN)	
PEP are compliant with XP C08-100-1 : 2016 The elements of the present PEP cannot be compared with elements from another program	
Document in compliance with ISO 14025 : 2010: «Environmental labels and declarations. Type III environmental declarations»	
Environmental data in alignment with EN 15804 : 2012 + A1 : 2013	