

Product Environmental Profile

Lighting outlet position
Axolute series



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	The 2 products, installed in a cover plate with a screws equipped support, allow, in the domestic and tertiary sectors, the command and interruption of a low voltage electrical circuit (250 V), carrying each one a load current not exceeding 16 A. It can be completed with LEDs for the backlighting. PSR category: passive product. The life span considered for the study is 20 years and the use scenario is 30% time of use at 30% of load current.		
Reference Product			
	BT-H4703		BT-HA4803XC
	3 modules support - screws equipped		3 modules square cover plate - brushed aluminium
			
	BT-HC4001 1 way 1P Switch - 16 AX - 250 V a.c.	BT-HC4950 1 module Blank plate	BT-HC4003 2 way 1P Switch - 16 AX - 250 V a.c.

The company reserves the right to change specifications and designs without notice. All illustrations, descriptions, dimensions and weights in the document are for guidance and cannot be held binding on the company.



PRODUCTS CONCERNED

The environmental data is representative of the following products:

BT-HA4803XC	BT-H4703	BT-HC4001	BT-HC4950	BT-HC4003
BT-HA4803XS - NX - CR - BR - AZ - HD - HC - HS - BG - RC - BM - VS - SAN BT-HB4803XC - XS - NR - SAN - HD - OR - TC - OSN BT-HW4803HC - HD - HS - AW BT-HA4803VNN - VZS - VKA - VSA - VBB - VNB - VSW	BT-H4703W	BT-HD4001 BT-HS4001 BT-HC4001A BT-HD4001A BT-HS4001A	BT-HD4950 BT-HS4950	BT-HD4003 BT-HS4003 BT-HC4003A BT-HD4003A BT-HS4003A

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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.

Total weight of Reference Product		212 g (with unit packaging)			
Plastics as % of weight		Metals as % of weight		Other (packaging) as % of weight	
Polycarbonate*	34,6 %	Aluminium*	24,3 %	Paper / cardboard	16,5 %
Polypropylene	1,7 %	Steel	6,8 %	Wood	10,1 %
PBT	0,5 %	Copper alloys	3,0 %	PVC	1,5 %
Silicon rubber	0,2 %	Silver alloys	< 0,1 %	Polyethylene	0,4 %
Other plastics	0,2 %	Other metals	0,2 %	Polypropylene	< 0,1 %
Total plastics	37,2 %	Total metals	34,3 %	Total other (packaging)	28,5 %

Estimated recycled material content: 28 % by mass.

* For the lighting outlet position with zamak elliptic cover plates (total weight 245 g): Polycarbonate: 26,2% - Zamak: 38,5%.

For the lighting outlet position with glass rectangular cover plates:

Total weight of products:		342 g (unit packaging included)			
Plastics as % of weight		Metals as % of weight		Other as % of weight	
Polycarbonate	20,4 %	Steel	4,2 %	Glass	21,2 %
ABS	3,0 %	Copper alloys	1,9 %	Packaging as % of weight	
Polypropylene	1,1 %	Silver alloys	< 0,1 %	Paper / cardboard	40,4 %
PBT	0,3 %			Wood	6,2 %
Silicon rubber	0,1 %			PVC	0,9 %
Other plastics	0,1 %			Polyethylene	0,2 %
				Polypropylene	< 0,1 %
				PET	< 0,1 %
Total plastics	25,0 %	Total metals	6,1 %	Total other and packaging	68,9 %

Estimated recycled material content: 35 % by weight



■ MANUFACTURE

This Reference Product comes from sites that have received ISO14001 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 with european directive 2004/12/EC concerning packaging and packaging waste. At the packaging end of life, its recycling rate is of 91 % (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.

• 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 95 %. 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) : 35 %
- metal materials (excluding packaging) : 34 %
- packaging (all types of materials) : 26 %

• Recyclability rate for the lighting outlet positions with zamak elliptical cover plates:

Calculated using the method described in technical report IEC/TR 62635, the recyclability rate of the product is estimated at 96 %. 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) : 27 %
- metal materials (excluding packaging) : 47 %
- packaging (all types of materials) : 22 %

• Recyclability rate for the lighting outlet positions with glass rectangular cover plates:

Calculated using the method described in technical report IEC/TR 62635, the recyclability rate of the product is estimated at 97 %. 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) : 23 %
- metal materials (excluding packaging) : 6 %
- other materials (excluding packaging) : 21 %
- packaging (all types of materials) : 47 %



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: passive product. • Use scenario: non-continuous operation for 20 years at 30% of rated load, during 30% of the time. This modelling duration does not constitute a minimum durability requirement. • Energy model: Electricity Mix, Europe 27 - 2002.
End of life	The default end of life scenario maximizing the impacts.
Software and database used	EIME V5 and its database «CODDE-2015-04»

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SELECTION OF ENVIRONMENTAL IMPACTS

	Total for Life cycle		Raw material and manufacture		Distribution		Installation		Use		End of life	
Global warming	6,08E+00	kgCO ₂ eq.	2,22E+00	37%	8,22E-03	< 1%	3,72E-03	< 1%	3,83E+00	63%	1,40E-02	< 1%
Ozone depletion	1,31E-06	kgCFC-11 eq.	3,78E-07	29%	1,67E-11	< 1%	2,97E-11	< 1%	9,30E-07	71%	2,69E-10	< 1%
Acidification of soils and water	3,45E-02	kgSO ₂ eq.	5,48E-03	16%	3,69E-05	< 1%	1,73E-05	< 1%	2,90E-02	84%	5,54E-05	< 1%
Water eutrophication	2,14E-03	kg[PO ₄] ³⁻ eq.	9,53E-04	45%	8,49E-06	< 1%	1,47E-05	< 1%	1,09E-03	51%	7,36E-05	3%
Photochemical ozone formation	1,81E-03	kgC ₂ H ₄ eq.	4,35E-04	24%	2,63E-06	< 1%	1,23E-06	< 1%	1,37E-03	76%	4,26E-06	< 1%
Depletion of abiotic resources - elements	1,52E-04	kgSb eq.	1,52E-04	100%	3,29E-10	< 1%	1,69E-10	< 1%	1,74E-07	< 1%	7,99E-10	< 1%
Total use of primary energy	1,13E+02	MJ	3,54E+01	31%	1,16E-01	< 1%	5,36E-02	< 1%	7,76E+01	68%	2,07E-01	< 1%
Net use of fresh water	3,67E-02	m ³	2,67E-02	73%	7,36E-07	< 1%	1,21E-06	< 1%	9,99E-03	27%	9,45E-06	< 1%
Depletion of abiotic resources - fossil fuels	6,29E+01	MJ	2,31E+01	37%	1,16E-01	< 1%	5,21E-02	< 1%	3,94E+01	63%	1,95E-01	< 1%
Water pollution	8,56E+02	m ³	6,92E+02	81%	1,35E+00	< 1%	5,65E-01	< 1%	1,61E+02	19%	1,72E+00	< 1%
Air pollution	3,60E+02	m ³	1,93E+02	54%	3,37E-01	< 1%	3,76E-01	< 1%	1,64E+02	46%	1,38E+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.

For products covered by the PEP other than the Reference Product: the environmental impacts are calculated for a configuration composed by 1 way Switch, 2 way Switch, Blank plate, Support and Cover plate. To obtain the environmental impacts for each phase of the lifecycle, multiply those of Reference Product for these coefficients:

Lighting outlet position with cover plates:	Total			Manufacturing			Distribution	Installation	Use	End of life
	Depletion abiotic resources	Air pollution	Other indicators	Depletion abiotic resources	Air pollution	Other indicators	All indicators	All indicators	All indicators	All indicators
Zamak elliptical	1,4	3,3	0,9	1,4	4,3	0,8	1,2	1,0	1,0	1,1

Lighting outlet position with cover plates:	Total	Manufacturing	Distribution	Installation	Use	End of life
	All indicators	Acidification soils and water	All indicators	All indicators	All indicators	All indicators
Glass rectangular	0,9	0,3	0,7	1,6	2,8	1,5

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Lighting outlet position with cover plates:	Total			Manufacturing			Distribution	Installation	Use	End of life
	Depletion abiotic resources	Air pollution	Other indicators	Depletion abiotic resources	Air pollution	Other indicators	All indicators	All indicators	All indicators	All indicators
Axolute AIR	1,4	2,4	0,9	1,4	3,7	0,7	1,1	1,0	1,0	1,0

Registration N°: LGRP-00220-V01.01-EN	Drafting rules: PEP-PCR-ed3-EN-2015 04 02 Supplemented by PSR-0005-ed1-2012 12 11
Verifier accreditation N°: VH02	Information and reference documents : www.pep-ecopassport.org
Date of issue: 07-2016	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)	
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	

