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Product Environmental Profile

VALENA™ Switches 10AX





■ LEGRAND'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		rrent 10 AX and rated voltage 250V, for a wall-mounted escenario, and for the reference service life of the product of 20
Reference Product	Design bright of the state of t	Logicine de la constant de la consta
	Cat.No 7 744 01	Cat.No 7 744 51
	1-way switch 10AX white	One gang plate white

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:

Catalogue Num	bers					
1-way switch 10AX 250V	2-way switch 10AX 250V	1 gang plate	2 gang plate	3 gang plate	4 gang plate	5 gang plate
• 7 744 01	• 774406	• 7 743 51	• 774352	• 774353	• 774354	• 774355
• 7 743 01	• 774306	• 7 741 51	• 7 741 52	• 7 741 53	• 7 741 54	• 774155
• 7 701 01	• 770106	• 7 703 01	• 770302	• 770303	• 770304	• 770305
		• 7 703 11	• 7 703 12	• 770313	• 7 703 14	• 770315
		• 770020	• 774452	• 774453	• 774454	• 774455
		• 7 744 51	• 774462	• 774463	• 774464	• 774465
		• 7 744 61	• 770492	• 770493	• 770494	• 770495
		• 770491	• 770472	• 770473	• 770474	• 770475
		• 770471	• 7 701 52	• 770153	• 770154	• 770155
		• 770420	• 770352	• 770353	• 770354	• 770355
		• 7 701 51	• 770372	• 770373	• 770374	• 770375
		• 7 703 51	• 770392	• 770393	• 770394	• 770395
		• 770371	• 770332	• 770333	• 770334	• 770335
		• 7 703 91	• 770342	• 770343	• 770344	• 770345
		• 770331				
		• 770341				





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■ CONSTITUENT MATERIALS I

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 amended by delegated directive (EU) 2015/863, and its amendment 2017/2102/EU.

Total weight of	
Reference Product	0.12 kg (all packaging included)

Product alone weight 0.08 kg								
Plastics as % of weight		Metals as % of weight	Other as % of weight					
PC	42.0 %	Steel	24.1 %					
		Copper and copper alloys	1.4 %					
		Silver alloys	<0.1 %					
		Other metals	<0.1 %					

Packaging (alone) : 0.04 kg							
PP	1.0 %			Cardboard	17.3 %		
PE	0.4 %			Wood	13.7 %		
PET <0.1 %				Paper	0.1 %		
Total plastics : 0.05 kg	43.4 %	Total metals : 0.03 kg	25.5 %	Total others : 0.04 kg	31.1 %		

At the date of this document, the recycled content is:

- Product alone (excluding packaging): 10 % by mass
- Packaging only: 46 % by mass



■ MANUFACTURE ■

This Reference Product comes from a site that has received ISO14001 certification.



■ DISTRIBUTION

Products are distributed from logistics centres located with a view to optimize transport efficiency. The Reference Product is therefore transported over an average distance of 1325 km by road from our warehouse to the local point of distribution into the market in Europe .

Packaging is compliant with european directive 2004/12/EU concerning packaging and packaging waste.



■ 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 I

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.

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.



■ 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 A1-A3	Materials and components of the product, all transport for the manufacturing, the packaging and the waste generated by the manufacturing.
	Distribution A4	Transport between the last Group distribution centre and an average delivery point in the sales area.
n Limit	Installation A5	The end of life of the packaging.
System	Use B1-B7	 Product category: Switches Wall-mounted § 3.7 -PSR-0005-ed3-2023 06 06 Use scenario: non-continuous operation for 20 years at 10% of rated load, during 30% of the time. This modelling duration does not constitute a minimum durability requirement. Energy model: Electricity Mix_Low voltage_2018_Europe_EU-27 - 2018.
	End of life C1-C4	Choice of end-of-life by default model for PCR-ed4-EN-2021 09 06.
D Mo	odule	Module D is calculated according to PCR-ed4-EN-2021 09 06 based on the materials recycled and the modelled end-of-life scenario. It expresses the net benefits and burdens beyond the boundaries of the system, and are not to be included in the life cycle totals.
	ware and data- used	EIME V6 and its CODDE 2023-02-01

Unless otherwise indicated the modelling energetic mix are those integrated in the data modules used from the aformentioned database.



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■ ENVIRONMENTAL IMPACTS

	Total	Life Cycle	Manufacturing	Distribution	Installation		Use ⁽¹⁾		End of Life
			A1-A3	A4	A5	Total B1-B7	B2	В6	C1-C4
Climate change - total	8.65E-01	kg CO ₂ eq.	4.65E-01	7.90E-03	8.03E-03	1.59E-01	0.00E+00	1.59E-01	2.26E-01
Climate change - fossil fuels	8.51E-01	kg CO ₂ eq.	4.51E-01	7.90E-03	8.03E-03	1.59E-01	0.00E+00	1.59E-01	2.25E-01
Climate change - biogenics	1.39E-02	kg CO ₂ eq.	1.35E-02	0.00E+00	0*	2.12E-04	0.00E+00	2.12E-04	1.98E-04
Climate change - land use and land use transformation	7.39E-05	kg CO ₂ eq.	7.39E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0*
Ozone depletion	1.34E-08	kg CFC-11 eq.	1.17E-08	1.21E-11	6.23E-11	6.79E-10	0.00E+00	6.79E-10	9.75E-10
Acidification (AP)	2.82E-03	mole of H+ eq.	1.56E-03	5.00E-05	2.87E-05	9.06E-04	0.00E+00	9.06E-04	2.74E-04
Freshwater eutrophication	1.02E-05	kg P eq.	3.47E-06	2.96E-09	7.61E-09	4.35E-07	0.00E+00	4.35E-07	6.28E-06
Marine aquatic eutrophication	4.92E-04	kg of N eq.	3.01E-04	2.34E-05	1.33E-05	1.03E-04	0.00E+00	1.03E-04	5.08E-05
Terrestrial eutrophication	5.81E-03	mole of N eq.	3.26E-03	2.57E-04	1.40E-04	1.55E-03	0.00E+00	1.55E-03	6.07E-04
Photochemical ozone formation	1.71E-03	kg NMVOC eq.	1.09E-03	6.49E-05	3.39E-05	3.30E-04	0.00E+00	3.30E-04	1.90E-04
Depletion of abiotic resources - elements	3.22E-05	kg Sb eq.	3.23E-05	0*	0*	1.15E-08	0.00E+00	1.15E-08	-1.53E-07
Depletion of abiotic resources - fossil fuels	2.51E+01	МЛ	1.61E+01	1.10E-01	3.66E-02	4.04E+00	0.00E+00	4.04E+00	4.86E+00
Water requirement	1.45E-01	m³ deprivation worldwide eq.	9.01E-02	3.00E-05	3.84E-03	5.62E-03	0.00E+00	5.62E-03	4.58E-02
Emission of fine particles	2.08E-08	incidence of diseases	1.18E-08	4.07E-10	1.53E-10	7.03E-09	0.00E+00	7.03E-09	1.38E-09

-4.17E-02
-4.43E-02
2.64E-03
0.00E+00
-3.61E-10
-1.61E-04
3.29E-07
-2.44E-06
-1.21E-04
-8.41E-05
-8.09E-07
-4.65E+00
-2.36E-02

Module D

PEP ecopassport n° LGRP-00488-V02.01-EN

^{*}Represents less than 0.01% of the total life cycle of the reference flow

⁽¹⁾ For the Use phase and according to the current PCR, the information modules B1, B3, B4, B5 and B7, all having indicator values equal to «0» (zero), are not listed in this table. In accordance with current PCR rules, the environmental indicator values in the «Module D» column must not be summed with the values in the «Total Life Cycle» column



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	Total Life Cycle		Manufacturing	Distribution	Installation		Use ⁽¹⁾		End of Life
.c.a. End dyold		A1-A3	A4	A5	Total B1-B7	B2	В6	C1-C4	
Ionizing radiation, human health	9.27E-01	kBq of U235 eq.	6.89E-01	0*	0*	2.36E-01	0.00E+00	2.36E-01	2.13E-03
Ecotoxicity (fresh water)	9.03E+00	CTUe	6.46E+00	5.32E-03	2.23E-01	1.71E+00	0.00E+00	1.71E+00	6.33E-01
Human toxicity, carcinogenic effects	1.93E-08	CTUh	1.89E-08	0*	2.95E-10	1.85E-11	0.00E+00	1.85E-11	1.47E-11
Human toxicity, non-carcinogenic effects	1.28E-08	CTUh	9.94E-09	1.50E-11	1.04E-10	7.34E-10	0.00E+00	7.34E-10	2.02E-09
Impacts related to land use/soil quality	2.46E-01	-	2.24E-01	0.00E+00	0.00E+00	3.16E-03	0.00E+00	3.16E-03	1.86E-02
Use of renewable primary energy, excluding renewable primary energy resources used as raw materials	1.17E+00	МЈ	3.91E-01	1.47E-04	0*	7.77E-01	0.00E+00	7.77E-01	5.28E-03
Use of renewable primary energy resources used as raw materials	4.59E-01	МЈ	4.59E-01	0.00E+00	0.00E+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)	1.63E+00	мЈ	8.50E-01	0*	0*	7.77E-01	0.00E+00	7.77E-01	5.28E-03
Use of non-renewable primary energy, excluding non-renewable primary energy resources used as raw materials	2.33E+01	мл	1.43E+01	1.10E-01	3.66E-02	4.04E+00	0.00E+00	4.04E+00	4.86E+00
Use of non-renewable primary energy resources used as raw materials	1.79E+00	МЈ	1.79E+00	0.00E+00	0.00E+00	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)	2.51E+01	MJ	1.61E+01	1.10E-01	3.66E-02	4.04E+00	0.00E+00	4.04E+00	4.86E+00

Module D -8.59E-02 3.22E-01 -2.77E-09 -2.11E-09 2.20E-04 -7.46E-02 3.18E-01 2.43E-01 -4.66E+00 1.09E-02 -4.65E+00

PEP ecopassport n° LGRP-00488-V02.01-EN

^{*}Represents less than 0.01% of the total life cycle of the reference flow

⁽¹⁾ For the Use phase and according to the current PCR, the information modules B1, B3, B4, B5 and B7, all having indicator values equal to «0» (zero), are not listed in this table In accordance with current PCR rules, the environmental indicator values in the «Module D» column must not be summed with the values in the «Total Life Cycle» column



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	Total I	Total Life Cycle		Distribution	Installation		Use ⁽¹⁾		End of Life
			A1-A3	A4	A5	Total B1-B7	B2	В6	C1-C4
Use of secondary materials	2.81E-02	kg	2.81E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of renewable secondary fuels	0.00E+00	МЈ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of non-renewable secondary fuels	0.00E+00	МЈ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Net use of fresh water	4.26E-03	m³	2.97E-03	6.98E-07	8.95E-05	1.31E-04	0.00E+00	1.31E-04	1.07E-03
Hazardous waste disposed of	3.19E-01	kg	2.43E-01	0.00E+00	0*	2.97E-03	0.00E+00	2.97E-03	7.37E-02
Non-hazardous waste disposed of	4.11E-01	kg	3.18E-01	2.77E-04	3.88E-02	2.28E-02	0.00E+00	2.28E-02	3.06E-02
Radioactive waste disposed of	2.04E-04	kg	1.93E-04	1.97E-07	1.21E-07	4.78E-06	0.00E+00	4.78E-06	5.47E-06
Components for re-use	0.00E+00	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	3.13E-02	kg	7.60E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.37E-02
Materials for energy recovery	0.00E+00	MJ by energy vector	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy	0.00E+00	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of primary energy during the life cycle	2.67E+01	МЈ	1.69E+01	1.10E-01	3.67E-02	4.82E+00	0.00E+00	4.82E+00	4.87E+00
Biogenic carbon content of the product	0.00E+00	kg of C	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic carbon content of the associated packaging	1.22E-02	kg of C	1.22E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

⁽¹⁾ For the Use phase and according to the current PCR, the information modules B1, B3, B4, B5 and B7, all having indicator values equal to «0» (zero), are not listed in this table In accordance with current PCR rules, the environmental indicator values in the «Module D» column must not be summed with the values in the «Total Life Cycle» column

The values of the indicators defined in the PCR-ed4-EN-2021 09 06 are available in the digital database of pep-ecopassport.org website.

For all products concerned (see § «products concerned»), take these impacts values.

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

Module D

0.00E+00

0.00E+00

-5.49E-04

-6.62E-02

1.22E-02

5.53E-06

0.00E+00

0.00E+00

-4.40E+00

0.00E+00

0.00E+00

0.00E+00



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VALENATM **Switches 10AX**



The environmental impacts are calculated for a configuration composed by a 1-way switch with a plate (Reference Product).

For color configurations different from that of the Reference Product, take the same values as the Reference Product for each environmental impact at each phase of the lifecycle. For the configurations composed by a 2-way switch, the environmental impacts of each phase of the lifecycle are calculated by applying the following cofficients on those of the Reference Product.

Moreover, for the multi-gang configurations, the described environmental impacts of 1 way or 2 way switches have to be multiplied by the number of installed products.

Coefficient of extrapolation of environnemental indicators								
	Total life Cycle	Manufacturing	Distribution	Installation	Use	End of life		
Climate change - total	1,0	1,0	1,0	1,0	1,1	1,0		
Climate change - fossil fuels	1,0	1,0	1,0	1,0	1,1	1,0		
Climate change - biogenics	1,0	1,0	0,0	1,0	1,1	1,0		
Climate change - land use and land use transformation	1,0	1,0	0,0	0,0	0,0	1,0		
Ozone depletion	1,2	1,2	1,0	1,0	1,1	1,0		
Acidification (AP)	1,1	1,0	1,0	1,0	1,1	1,0		
Freshwater eutrophication	1,0	1,0	1,0	1,0	1,1	1,0		
Marine aquatic eutrophication	1,0	1,0	1,0	1,0	1,1	1,0		
Terrestrial eutrophication	1,0	1,0	1,0	1,0	1,1	1,0		
Photochemical ozone formation	1,0	1,0	1,0	1,0	1,1	1,0		
Depletion of abiotic resources - elements	1,9	1,9	1,0	1,0	1,1	1,1		
Depletion of abiotic resources - fossil fuels	1,0	1,0	1,0	1,0	1,1	1,1		
Water requirement	1,0	1,0	1,0	1,0	1,1	1,0		
Emission of fine particles	1,1	1,1	1,0	1,0	1,1	1,0		
Ionizing radiation, human health	1,0	1,0	1,0	1,0	1,1	1,0		
Ecotoxicity (fresh water)	1,1	1,0	1,0	1,0	1,1	1,0		
Human toxicity, carcinogenic effects	1,0	1,0	1,0	1,0	1,1	1,0		
Human toxicity, non-carcinogenic effects	1,1	1,1	1,0	1,0	1,1	1,0		
Impacts related to land use/soil quality	1,0	1,0	0,0	0,0	1,1	1,0		
Use of renewable primary energy, excluding renewable primary energy resources used as raw materials	1,1	1,0	1,0	1,0	1,1	1,0		
Use of renewable primary energy resources used as raw materials	1,0	1,0	0,0	0,0	0,0	0,0		
Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)	1,1	1,0	1,0	1,0	1,1	1,0		
Use of non-renewable primary energy, excluding non-renewable primary energy resources used as raw materials $\frac{1}{2} \left(\frac{1}{2} \right) = \frac{1}{2} \left(\frac{1}{2} \right) $	1,0	1,0	1,0	1,0	1,1	1,1		
Use of non-renewable primary energy resources used as raw materials	1,0	1,0	0,0	0,0	0,0	0,0		
Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials)	1,0	1,0	1,0	1,0	1,1	1,1		
Use of secondary materials	1,0	1,0	0,0	0,0	0,0	0,0		
Use of renewable secondary fuels	0,0	0,0	0,0	0,0	0,0	0,0		
Use of non-renewable secondary fuels	0,0	0,0	0,0	0,0	0,0	0,0		
Net use of fresh water	1,0	1,0	1,0	1,0	1,1	1,0		
Hazardous waste disposed of	1,4	1,5	0,0	1,0	1,1	1,0		
Non-hazardous waste disposed of	1,0	1,0	1,0	1,0	1,1	1,0		
Radioactive waste disposed of	1,0	1,0	1,0	1,0	1,1	1,0		
Components for re-use	0,0	0,0	0,0	0,0	0,0	0,0		
Materials for recycling	1,1	1,1	0,0	0,0	0,0	1,1		
Materials for energy recovery	0,0	0,0	0,0	0,0	0,0	0,0		
Exported energy	0,0	0,0	0,0	0,0	0,0	0,0		
Total use of primary energy during the life cycle	1,0	1,0	1,0	1,0	1,1	1,1		
Biogenic carbon content of the product	0,0	0,0	0,0	0,0	0,0	0,0		
Biogenic carbon content of the associated packaging	1,0	1,0	0,0	0,0	0,0	0,0		

Registration number: LGRP-00488-V02.01-EN	Drafting rules: PEP-PCR-ed4-2021 09 06 Supplemented by PSR-0005-ed3-2023 06 06		
Verifier accreditation N°: VH08	Information and reference documents: www.pep-ecopassport.org		
Date of issue: 02-2024	Validity period: 5 years		
Independent verification of the declaration and data, in continuous External The PCR review was conducted by a panel of experts chaired.	PEP		
PEP are compliant with XP C08-100-1:2016 or EN 50693:20 The elements of the present PEP cannot be compared with	D19 PASS		
Document in compliance with ISO 14025 : 2006: «Environmental labels and declarations. Type III environmental declarations»			

Environmental data in alignment with EN 15804: 2012 + A2: 2019