

Product Environmental Profile

Modular Gigabit POE switch with 4 or 5 ports and 48V power supply



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.

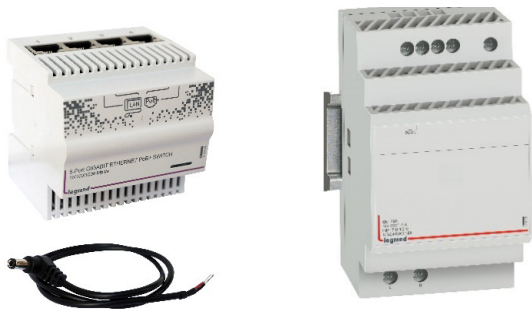
• Involve the environment in product design and provide informations in compliance with ISO 14025

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	Insure communication between 1 RJ45 input port (max. 12 Gbps) and 4 Gigabit 802.3af/at Ethernet ports, and provision of up to 30W PoE output power for LAN-tertiary and residential applications, in accordance with PSR-0005-ed3-2023 06 06, during the reference service life of the product of 10 years.
Reference Product	 <p>Cat.No 413109 + 413110 5 ports DIN Gigabit POE switch and DIN 60W 48V power supply.</p>

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:

<p>Catalogue Numbers</p> <p>LG-413109_Modular Gigabit POE switch with LG-413110_48V modular power supply</p>

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and 48V power supply**



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

Total weight of Reference Product	0.51 kg (all packaging included)
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Product alone weight 0.31 kg					
Plastics as % of weight		Metals as % of weight		Other as % of weight	
PC	17.4 %	Al	2.9 %	PWB > 10cm ²	34.1 %
ABS	1.6 %	Copper and copper alloys	1.0 %		
PVC	1.5 %	Steel	0.5 %		
PA	0.3 %	others metals	<0.1 %		
Other plastics	0.2 %	Various metals	<0.1 %		
PE	<0.1 %				
Various plastics	<0.1 %				

Packaging (alone) : 0.20 kg					
PE	0.1 %			wood	23.1 %
				Cardboard	15.8 %
				Paper	1.3 %

Total plastics : 0.11 kg	21.2 %	Total metals : 0.02 kg	4.5 %	Total others : 0.38 kg	74.3 %
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At the date of edition of this document, the content of recycled material(s) is :

- Product alone (excluding packaging): 0 % by mass
- Packaging only: 36 % by mass



■ MANUFACTURE

This Reference Product comes from sites that have 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 1 000 Km by Truck from our warehouse to the local point of distribution into the market in France.

Packaging is compliant with European directive 2004/12/EU concerning packaging and packaging waste and french decree 98-638



■ 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.

Product Environmental Profile

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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:

- PWB > 10cm² : 174 g

Extended producer responsibility:

In France, the sale of products covered by the field of application of the European Directive on Waste Electronic and Electrical Equipment (WEEE) is subject to a contribution to a certified eco-organisation.



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 of products marketed and used in France in an electrical installation in compliance with NF C 15100 and associated product standards.

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

System Limit	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.
	Installation A5	The end of life of the packaging.
	Use B1-B7	<ul style="list-style-type: none"> • Other equipment: Active products • Use scenario : Continuous operation (100% of the time) for 10 years at 100% rated load. This modeling period does not constitute a requirement for maximum durability. • Energy model : Electricity Mix_Low voltage_2018_France_FR
	End of life C1-C4	Choice of end-of-life by default model for PCR-ed4-EN-2021 09 06
D Module	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.	
Software and data-base used	The indicators set used is « Indicators for PEF EF 3.0 (compliance: PEF ed.4, EN15804+A2) v2.0 » EIME V6 & its database CODDE-2023-02	

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

Product Environmental Profile

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ENVIRONMENTAL IMPACTS

	Total Life Cycle		Manufacturing	Distribution	Installation	Use ⁽¹⁾			End of Life	Module D
			A1-A3	A4	A5	Total B1-B7	B2	B6	C1-C4	
Climate change - total	2.23E+01	kg CO₂ eq.	1.38E+01	2.56E-02	1.73E-02	8.02E+00	0*	8.02E+00	4.01E-01	-1.89E-01
Climate change - fossil fuels	2.22E+01	kg CO₂ eq.	1.38E+01	2.56E-02	1.73E-02	8.00E+00	0*	8.00E+00	4.00E-01	-1.98E-01
Climate change - biogenics	6.42E-02	kg CO₂ eq.	4.20E-02	0*	0*	2.07E-02	0*	2.07E-02	1.51E-03	8.45E-03
Climate change - land use and land use transformation	1.22E-04	kg CO₂ eq.	1.22E-04	0*	0*	0*	0*	0*	2.64E-08	0.00E+00
Ozone depletion	3.37E-06	kg CFC-11 eq.	3.24E-06	0*	0*	1.18E-07	0*	1.18E-07	7.98E-09	-3.00E-08
Acidification (AP)	1.51E-01	mole of H+ eq.	1.04E-01	1.62E-04	1.52E-04	4.64E-02	0*	4.64E-02	5.57E-04	-4.67E-03
Freshwater eutrophication	4.65E-04	kg P eq.	3.48E-05	0*	0*	3.81E-04	0*	3.81E-04	4.85E-05	-7.41E-08
Marine aquatic eutrophication	1.74E-02	kg of N eq.	1.07E-02	7.59E-05	7.16E-05	6.39E-03	0*	6.39E-03	8.75E-05	-1.24E-04
Terrestrial eutrophication	2.09E-01	mole of N eq.	1.15E-01	8.33E-04	7.47E-04	9.18E-02	0*	9.18E-02	1.11E-03	-1.84E-03
Photochemical ozone formation	5.81E-02	kg NMVOC eq.	3.85E-02	2.10E-04	1.82E-04	1.89E-02	0*	1.89E-02	2.76E-04	-7.97E-04
Depletion of abiotic resources - elements	3.87E-03	kg Sb eq.	3.87E-03	0*	0*	3.79E-06	0*	3.79E-06	0*	-7.35E-04
Depletion of abiotic resources - fossil fuels	1.74E+03	MJ	1.93E+02	3.57E-01	1.91E-01	1.54E+03	0*	1.54E+03	1.88E+00	-5.75E+00
Water requirement	6.17E+00	m³ deprivation worldwide eq.	5.48E+00	0*	1.89E-02	5.81E-01	0*	5.81E-01	8.82E-02	-2.97E-01
Emission of fine particles	2.40E-06	incidence of diseases	5.99E-07	1.32E-09	8.04E-10	1.80E-06	0*	1.80E-06	3.81E-09	-2.97E-08

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

(!) 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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Modular Gigabit POE switch with 4 or 5 ports and 48V power supply



	Total Life Cycle		Manufacturing	Distribution	Installation	Use ⁽¹⁾			End of Life	Module D
			A1-A3	A4	A5	Total B1-B7	B2	B6	C1-C4	
Ionizing radiation, human health	3.47E+02	kBq of U235 eq.	1.39E+02	0*	0*	2.08E+02	0*	2.08E+02	0*	-2.13E+00
Ecotoxicity (fresh water)	5.65E+02	CTUe	2.88E+02	0*	1.23E+00	5.66E+01	0*	5.66E+01	2.20E+02	-1.20E+01
Human toxicity, carcinogenic effects	1.90E-07	CTUh	1.86E-07	0*	1.63E-09	1.34E-09	0*	1.34E-09	5.18E-10	-4.88E-08
Human toxicity, non-carcinogenic effects	4.66E-07	CTUh	4.00E-07	4.86E-11	5.69E-10	5.79E-08	0*	5.79E-08	7.79E-09	-8.55E-08
Impacts related to land use/soil quality	8.05E-01	-	4.07E-01	0*	0*	2.56E-01	0*	2.56E-01	1.43E-01	8.56E-04
Use of renewable primary energy, excluding renewable primary energy resources used as raw materials	1.49E+02	MJ	6.63E+00	0*	0*	1.42E+02	0*	1.42E+02	6.07E-02	-4.63E-01
Use of renewable primary energy resources used as raw materials	2.86E+00	MJ	2.86E+00	0*	0*	0*	0*	0*	0*	1.32E+00
Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)	1.52E+02	MJ	9.49E+00	0*	0*	1.42E+02	0*	1.42E+02	6.07E-02	8.55E-01
Use of non-renewable primary energy, excluding non-renewable primary energy resources used as raw materials	1.73E+03	MJ	1.88E+02	3.57E-01	1.91E-01	1.54E+03	0*	1.54E+03	1.88E+00	-5.68E+00
Use of non-renewable primary energy resources used as raw materials	5.07E+00	MJ	5.07E+00	0*	0*	0*	0*	0*	0*	-6.58E-02
Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials)	1.74E+03	MJ	1.93E+02	3.57E-01	1.91E-01	1.54E+03	0*	1.54E+03	1.88E+00	-5.75E+00

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

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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	Module D
			A1-A3	A4	A5	Total B1-B7	B2	B6	C1-C4	
Use of secondary materials	7.62E-02	kg	7.62E-02	0*	0*	0*	0*	0*	0*	0.00E+00
Use of renewable secondary fuels	0.00E+00	MJ	0*	0*	0*	0*	0*	0*	0*	0.00E+00
Use of non-renewable secondary fuels	0.00E+00	MJ	0*	0*	0*	0*	0*	0*	0*	0.00E+00
Net use of fresh water	1.45E-01	m ³	1.29E-01	0*	4.39E-04	1.35E-02	0*	1.35E-02	2.05E-03	-6.92E-03
Hazardous waste disposed of	3.92E+01	kg	3.90E+01	0*	0*	1.19E-01	0*	1.19E-01	1.37E-01	-1.26E+01
Non-hazardous waste disposed of	7.33E+00	kg	6.25E+00	8.98E-04	2.05E-01	7.71E-01	0*	7.71E-01	1.05E-01	-3.48E-01
Radioactive waste disposed of	4.35E-03	kg	3.96E-03	6.40E-07	0*	3.24E-04	0*	3.24E-04	6.67E-05	-2.00E-04
Components for re-use	0.00E+00	kg	0*	0*	0*	0*	0*	0*	0*	0.00E+00
Materials for recycling	4.00E-02	kg	7.87E-03	0*	0*	0*	0*	0*	3.22E-02	0.00E+00
Materials for energy recovery	0.00E+00	MJ by energy vector	0*	0*	0*	0*	0*	0*	0*	0.00E+00
Exported energy	0.00E+00	MJ	0*	0*	0*	0*	0*	0*	0*	0.00E+00
Total use of primary energy during the life cycle	1.89E+03	MJ	2.03E+02	3.57E-01	1.92E-01	1.68E+03	0*	1.68E+03	1.94E+00	-4.89E+00

Biogenic carbon content of the product	0.00E+00	kg of C	0*	0*	0*	0*	0*	0*	0*	0.00E+00
Biogenic carbon content of the associated packaging	7.11E-02	kg of C	7.11E-02	0*	0*	0*	0*	0*	0*	0.00E+00

For biogenic carbon storage, the methodology use is 0/0

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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.

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Registration number: LGRP-01870-V01.01-EN	Drafting rules : PEP-PCR-ed4-2021 09 06 PSR-0005-ed3-2023 06 06
Verifier accreditation N°: VH18	Information and reference documents : www.pep-ecopassport.org
Date of issue: 12-2023	Validity period: 5 years
Independent verification of the declaration and data, in compliance with ISO 14025 : 2006	
Internal <input type="checkbox"/> External <input checked="" type="checkbox"/>	
The PCR review was conducted by a panel of experts chaired by Julie ORGELET (DDemain)	
PEP are compliant with XP C08-100-1 :2016 or EN 50693 :2019 The elements of the present PEP cannot be compared with elements from another program	
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