

Product Environmental Profile

Area Manager BMS controller




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	Enable, analyse and remotely control the management of building systems (lighting management, HVAC, door contactors, control of switchgear, panel energy metering) by connecting to a network of sensors and actuators and providing information/alerts on the status of the system for a lifetime of 10 years.
Reference Product	<div style="text-align: center;">  </div> <p>LG-048584 Area Manager BMS controller</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.

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Area Manager BMS controller



■ 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	0.27 kg (all packaging included)
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Product alone weight 0.15 kg					
Plastics as % of weight		Metals as % of weight		Other as % of weight	
ABS	30.1 %	Steel	0.7 %	Electronic board with button cell lithium	22.9 %
PC	0.7 %			Connectors	1.3 %
PET	<0.1 %				

Packaging (alone) : 0.12 kg					
PE	0.2%			Cardboard	30.5 %
				Wood	11.7 %
				Paper	1.9 %

Total plastics : 0.08 kg	31.0 %	Total metals : <0.01 kg	0.7 %	Total others : 0.18 kg	68.3 %
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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: 63% by mass



■ MANUFACTURE

This Reference Product comes from sites that have received ISO14001 certification. The final assembly site is located at Lagord in France.



■ 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 610.64 km by plane and 1060.28 km by truck from our warehouse to the local point of distribution into the market in Europe.



■ INSTALLATION

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



■ USE

Under normal conditions of use, this product does not require any maintenance.



■ 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.

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 : 45.69g

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Area Manager BMS controller



ENVIRONMENTAL IMPACTS

The evaluation of environmental impacts examines the stages of the Reference Product life cycle: manufacturing, distribution, installation, use and end of life.

The data collected in this PEP are representative of the year 2024.

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. Origin of parts: China. Assembly area: France
	Distribution A4	Transport between the group's last distribution centre and an average delivery point in the sales area, taking into account sales volumes and transport distances. Zone concerned: Europe
	Installation A5	The end of life of the packaging. Zone concerned: Europe
	Use B1-B7	<ul style="list-style-type: none"> ▪ Product category: Other equipments : Active Products _ Connected equipments ▪ Use scenario: For 10 years of continuous operation at 100% of rated load (15.4 W at 230 V) for 100% of the time. This modelling time is not a minimum durability requirement. ▪ Energy model: Energy mix Europe - 2018.
	End of life C1-C4	The default end-of-life scenario impacts in accordance with appendix D of PCR ed4 ad with PSR 0005. Zone concerned: Europe
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 set of indicators used is Indicators for PEF EF 3.1 (Conforme: PEP ed.4, EN15804+A2) v2.0 EIME V6 and its CODDE-2024-06-11 database

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

Product Environmental Profile

Area Manager BMS controller



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	4.89E+02	kg CO2 eq.	1.26E+01	3.62E-01	2.25E-01	4.76E+02	0.00E+00	4.76E+02	8.48E-02	-2.26E-01
Climate change - fossil fuels	4.88E+02	kg CO2 eq.	1.27E+01	3.62E-01	0*	4.75E+02	0.00E+00	4.75E+02	8.42E-02	-1.16E-01
Climate change - biogenics	9.00E-01	kg CO2 eq.	-1.58E-01	0.00E+00	1.82E-01	8.75E-01	0.00E+00	8.75E-01	6.01E-04	-1.10E-01
Climate change - land use and land use transformation	2.77E-06	kg CO2 eq.	2.76E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.36E-09	0.00E+00
Ozone depletion	3.84E-06	kg.equivalent. CFC-11	1.53E-06	4.25E-10	1.48E-09	2.30E-06	0.00E+00	2.30E-06	8.07E-09	-1.77E-08
Acidification (AP)	2.52E+00	mole of H+ equiv	8.54E-02	1.54E-03	2.53E-04	2.44E+00	0.00E+00	2.44E+00	6.53E-04	-1.36E-03
Freshwater eutrophication	1.29E-03	kg P eq.	2.05E-05	0*	0*	1.25E-03	0.00E+00	1.25E-03	1.69E-05	1.62E-07
Marine aquatic eutrophication	3.07E-01	kg of N equiv	9.42E-03	6.94E-04	6.12E-05	2.97E-01	0.00E+00	2.97E-01	1.22E-04	-4.43E-05
Terrestrial eutrophication	4.88E+00	mole of N equiv	1.00E-01	7.60E-03	8.05E-04	4.77E+00	0.00E+00	4.77E+00	1.51E-03	-8.42E-04
Photochemical ozone formation	9.69E-01	kg of NMVOC equiv	3.31E-02	1.86E-03	1.73E-04	9.34E-01	0.00E+00	9.34E-01	3.66E-04	-3.58E-04
Depletion of abiotic resources - elements	2.35E-03	kg.equivalent. Sb	2.19E-03	0*	0*	1.68E-04	0.00E+00	1.68E-04	5.52E-07	-7.17E-04
Depletion of abiotic resources - fossil fuels	1.22E+04	MJ	1.66E+02	5.06E+00	0*	1.20E+04	0.00E+00	1.20E+04	1.80E+00	-3.04E+00
Water requirement	4.02E+01	m3 of equiv. deprivation worldwide	3.76E+00	0*	0*	3.64E+01	0.00E+00	3.64E+01	2.57E-02	-1.30E-01
Emission of fine particles	2.01E-05	incidence of diseases	4.79E-07	9.72E-09	0*	1.96E-05	0.00E+00	1.96E-05	4.83E-09	-1.02E-08

*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.

Digital service-related impacts of the product are not assessed (terminals, telecommunication networks and computer centres).

Product Environmental Profile

Area Manager BMS controller



	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	7.23E+02	kBq of U235 equiv.	3.92E+01	0*	0*	6.84E+02	0.00E+00	6.84E+02	0*	-7.34E-01
Ecotoxicity (fresh water)	9.55E+02	CTUe	5.37E+01	2.32E-01	1.01E+00	8.98E+02	0.00E+00	8.98E+02	1.80E+00	2.82E-02
Human toxicity. carcinogenic effects	8.64E-08	CTUh	2.61E-08	0*	0*	5.98E-08	0.00E+00	5.98E-08	5.00E-10	8.67E-09
Human toxicity. non-carcinogenic effects	1.66E-06	CTUh	2.28E-07	0*	3.05E-10	1.43E-06	0.00E+00	1.43E-06	2.43E-09	-6.44E-08
Impacts related to land use/soil quality	1.33E+01	-	6.55E-02	0.00E+00	0*	1.32E+01	0.00E+00	1.32E+01	5.09E-02	0.00E+00
Use of renewable primary energy, excluding renewable primary energy resources used as raw materials	3.18E+03	MJ	5.70E+00	0*	0*	3.18E+03	0.00E+00	3.18E+03	0*	-4.11E-01
Use of renewable primary energy resources used as raw materials	1.04E+00	MJ	1.04E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.34E+00
Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)	3.18E+03	MJ	6.75E+00	0*	0*	3.18E+03	0.00E+00	3.18E+03	0*	9.29E-01
Use of non-renewable primary energy, excluding non-renewable primary energy resources used as raw materials	1.22E+04	MJ	1.61E+02	5.06E+00	0*	1.20E+04	0.00E+00	1.20E+04	1.80E+00	-2.39E+00
Use of non-renewable primary energy resources used as raw materials	4.63E+00	MJ	4.63E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-6.52E-01
Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials)	1.22E+04	MJ	1.66E+02	5.06E+00	0*	1.20E+04	0.00E+00	1.20E+04	1.80E+00	-3.04E+00

*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.

Digital service-related impacts of the product are not assessed (terminals, telecommunication networks and computer centres).

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Area Manager BMS controller



	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	7.49E-02	kg	7.49E-02	0.00E+00	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	MJ	0.00E+00	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	MJ	0.00E+00	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	9.44E-01	m ³	8.75E-02	0*	0*	8.56E-01	0.00E+00	8.56E-01	6.16E-04	-3.04E-03
Hazardous waste disposed of	5.36E+01	kg	3.26E+01	0.00E+00	4.42E-02	2.08E+01	0.00E+00	2.08E+01	1.55E-01	-1.17E+01
Non-hazardous waste disposed of	8.40E+01	kg	3.62E+00	1.08E-02	0*	8.03E+01	0.00E+00	8.03E+01	7.85E-02	-8.90E-02
Radioactive waste disposed of	2.05E-02	kg	1.99E-03	6.93E-06	2.55E-06	1.84E-02	0.00E+00	1.84E-02	5.52E-05	-7.54E-05
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	0.00E+00
Materials for recycling	3.66E-02	kg	5.65E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.10E-02	0.00E+00
Materials for energy recovery	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	0.00E+00
Exported energy	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	0.00E+00
Total use of primary energy during the life cycle	1.54E+04	MJ	1.73E+02	5.07E+00	0*	1.52E+04	0.00E+00	1.52E+04	1.91E+00	-2.12E+00

Biogenic carbon content of the product	0.00E+00	kg of C.	0.00E+00
Biogenic carbon content of the associated packaging	5.47E-02	kg of C.	5.47E-02

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

(1) For the Use stage and in accordance with the PCR in force, information modules B1, B3, B4, B5 and B7, which all have indicator values equal to «0» (zero), are not represented in this table.

For biogenic carbon storage, the methodology used is -1/+1.

In accordance with current RCP 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 PCR-ed4-EN-2021 09 06 are available in digital format in the database on the pep-ecopassport.org website.

The life cycle analysis complies with the specific rules applicable to Autonomous Electrical Safety Devices PSR0005-ed31-FR-2023 12 08, available at www.pep-ecopassport.org.


For all the products concerned (see § «Products concerned»), take these impact values.

Digital service-related impacts of the product are not assessed (terminals, telecommunication networks and computer centres).

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Area Manager BMS controller



Registration number: LGRP-01999-V01.01-EN	Drafting rules: « PEP-PCR-ed4-EN-2021 09 06 » Supplemented by « PSR-0005 ed3.1-2023 12 08 »
Verifier accreditation N°: VH55	Information and reference documents: www.pep-ecopassport.org
Date of issue: 09-2024	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 NF C08-100-1 :2016 and EN 50693 :2019 or NF E38-500 :2022 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