Legrand North America
Wattstopper Inc.
2234 Rutherford Drive
Carlsbad, CA 92008
1.877.BY.LEGRAND (295.3472)
www.legrand.us

Product Environmental Profile

Wattstopper® - Relay Panel Interior LMCP8

COMPANY OVERVIEW

• Sustainability built in to support our associates, customers, and the environment
At Legrand North America, we're committed to leading by example within our own operations, to developing high quality solutions for our customers' High Performance Buildings, and to transforming how people live and work – more safely, more comfortably, more efficiently.

• Better Performance
A core principle of designing for sustainability drives us to innovate products and systems that enable buildings to reach exceptional levels of performance, bringing about industry-leading ideas, inventions and initiatives.

• Better Operations
A commitment to a leadership role in operational excellence through environmental management, optimizing the way we manage energy, water and waste.

• Better Lives
A dedication to enhancing employee and community welfare through programs that help people enjoy healthier, more productive and more rewarding lives.

For more information on Legrand's PEPs and other sustainability initiatives, visit legrand.us/sustainability.

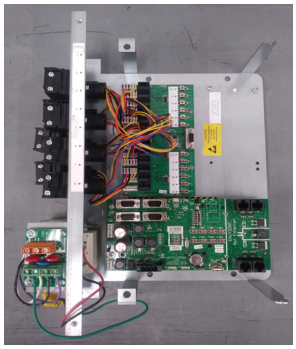
LEGRAND'S ENVIRONMENTAL COMMITMENTS

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

• 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
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	Relay Panel Interiors enable the automation of lighting functions throughout an entire building. Relays in each LMCP retrofit panel can be assigned to up to 99 automation groups in any combination which can each respond to unique scheduled events and light/dark photocell operations. These relays respond directly to inputs from Digital Lighting Management (DLM) switches, occupancy sensors, daylight sensors, and input modules continuously for 10 years.
Reference Product	
	Part Number: 100-8153-101
	Relay Panel Interior.

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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PEP ecopassport®

PRODUCTS CONCERNED

The environmental data is representative of the following products:

LMCPxx

Where "xx" constitutes the number of relays.

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/EC.

Total weight of Reference Product (with unit packaging)	(5505.86 g)

Plastics as % of weight		Metals as % of weight		Other as % of weight	
Polybutylene terephthalate	0.6%	Steel	47.2%	Various Electronic Components	32.6%
Polyamide	0.4%	Copper Alloys	0.7%	Printed Circuit Board	2.2%
Polyvinyl chloride	0.2%			Fiberboard	<0.1%
Polyethylene	<0.1%			Packaging as % of weight	
Acrylonitrile butadiene styrene	<0.1%			Cardboard	14.5%
Other Plastic	<0.1%			Paper	1.5%
Total plastics	1.2%	Total metals	47.9%	Total other and packaging	50.8%

Estimated recycled material content: 23% of weight.

MANUFACTURING

The Reference Product comes from sites that have received ISO 14001 certification.

DISTRIBUTION

Products are distributed from logistics centers located to optimize transport efficiency using EPA SmartWay® certified carriers to reduce greenhouse gas emissions. Information on the distance of distribution is not available, so the PCR hypothesis for "Intercontinental transport," 2175 miles (3500 km) by heavy truck, was used. This represents transportation of the Reference Product from our warehouse to the local point of distribution in the North American market.

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INSTALLATION

No required components, products, parts nor processes for installation. No electricity is required for installing the Reference Product.

USE

Servicing and maintenance:
Under normal conditions of use, this type of product requires no servicing or maintenance.

Consumable:
No consumables are necessary to use this type of product.

END OF LIFE

• Hazardous waste* contained in the product:

No hazardous waste.
*Hazardous waste as defined by European Commission decision 2000/532/EC.

• Recycling rate:
Calculated using the method described in the IEC/TR 62635 technical report; the recyclability rate of the Reference Product, including packaging, is estimated as 65%. This value is based on data collected from a technological channel using industrial procedures. It does not pre-validate the effective use of this channel for end-of-life electrical and electronic products.

Separated into:	(% mass of Reference Product without packaging)
- plastic materials (excluding packaging):	1%
- metal materials (excluding packaging):	48%

Recycling rate of packaging (all types of materials): 16% (% mass of packaging)

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 North America.

The following modelling elements were taken into account:

Manufacturing	Packaging taken into account. As required by the PEP ecopassport program, all transport for the manufacturing of the Reference Product, including materials and components, has been taken into account. International transport, as defined by the PCR, was used to take into account transportation from the production site to the final distribution center. The waste generated during manufacturing phase has been taken into account.
Distribution	Transport between the last distribution center and an average delivery to the sales area.
Installation	The end of life of the packaging (871.86 g) is taken into account at this phase. Transport of packaging to end of life treatment.
Use	• Under normal conditions of use, this type of product requires no servicing or maintenance. • No consumables are necessary to use this type of product. • Product category: Other equipment - Category 2, active product. • Use scenario: Active mode (19.2 W) in continuous operation (100% of the time) for a period of 10 years. This modeling duration does not constitute a minimum durability requirement. • Energy model: Electricity (US) - 2009.
End of life	The default end of life scenario modeled maximizes the environmental impact.
Software used	EIME V5 and its database, "CODDE-2015-04," and the indicators defined in the PCR ed 3 in alignment with the EN15804 standard.

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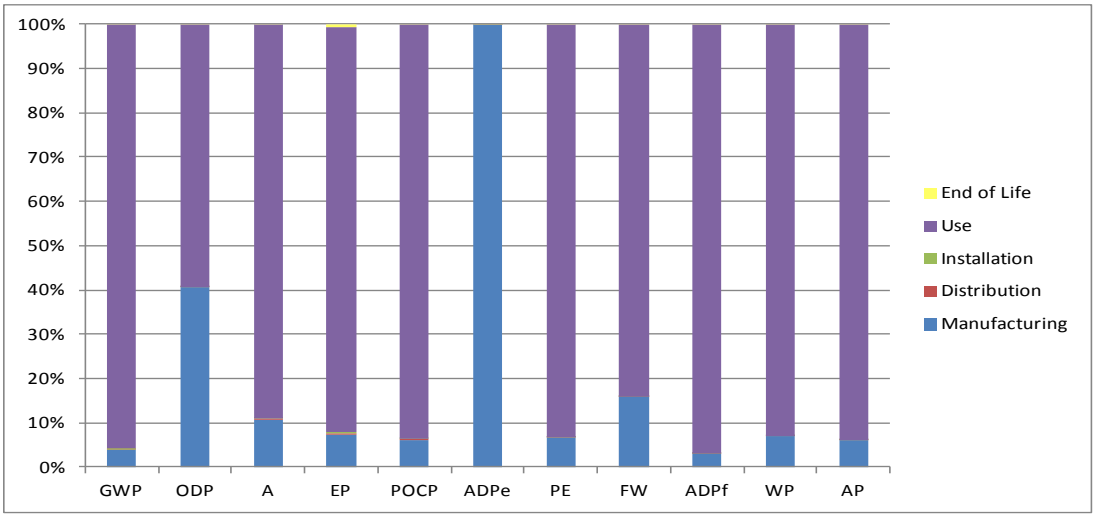
ENVIRONMENTAL IMPACTS (continued)

	Total for Lifecycle		Raw material and manufacturing		Distribution		Installation		Use		End of life	
Global warming (GWP)	1.22E+03	kg CO_2 eq.	4.86E+01	4%	9.59E-01	< 1%	7.98E-01	< 1%	1.16E+03	96%	4.09E-01	< 1%
Ozone depletion (ODP)	3.55E-05	kg CFC-11 eq.	1.44E-05	41%	1.94E-09	< 1%	2.67E-09	< 1%	2.11E-05	59%	7.20E-09	< 1%
Acidification of soil and water (A)	1.25E+00	kg SO_2 eq.	1.32E-01	11%	4.31E-03	< 1%	5.22E-04	< 1%	1.12E+00	89%	1.63E-03	< 1%
Water eutrophication (EP)	3.21E-01	kg PO_4^{3-} eq.	2.35E-02	7%	9.90E-04	< 1%	6.39E-04	< 1%	2.94E-01	91%	2.24E-03	< 1%
Photochemical ozone creation (POCP)	1.91E-01	kg C_2H_4 eq.	1.17E-02	6%	3.06E-04	< 1%	1.81E-04	< 1%	1.79E-01	94%	1.25E-04	< 1%
Depletion of abiotic resources - elements (ADPe)	2.52E-02	kg Sb eq.	2.52E-02	100%	3.84E-08	< 1%	6.74E-09	< 1%	1.14E-05	< 1%	2.25E-08	< 1%
Total use of primary energy (PE)	1.68E+04	MJ	1.12E+03	7%	1.29E+01	< 1%	1.11E+00	< 1%	1.57E+04	93%	4.56E+00	< 1%
Net use of fresh water (FW)	2.45E+00	m^3	3.91E-01	16%	8.58E-05	< 1%	2.57E-04	< 1%	2.06E+00	84%	2.54E-04	< 1%
Depletion of abiotic resources – fossil fuels (ADPf)	1.90E+04	MJ	5.69E+02	3%	1.35E+01	< 1%	1.49E+00	< 1%	1.84E+04	97%	5.65E+00	< 1%
Water pollution (WP)	6.19E+04	m^3	4.25E+03	7%	1.58E+02	< 1%	1.11E+01	< 1%	5.74E+04	93%	5.12E+01	< 1%
Air pollution (AP)	1.05E+05	m^3	6.35E+03	6%	3.93E+01	< 1%	2.23E+01	< 1%	9.89E+04	94%	3.80E+01	< 1%

The values of the 27 impacts defined in the PCR-ed3-EN-2015 04 02 are available in the digital database of the pep-ecopassport.org website. The environmental impacts of the Reference Product are representative of the products covered by the PEP, which therefore constitute a homogeneous environmental family.



The environmental impact of the Reference Product occurs predominantly during the manufacturing and use phases.

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ENVIRONMENTAL IMPACTS (continued)

For products other than the Reference Product, the environmental impacts are can be determined for each lifecycle phase by multiplying the Reference Product impacts by the factors listed below.

Factor	Ratio to calculate factor
A	Wattage of product energy use/ Wattage of reference product energy use
B	Weight of product and packaging/ Weight of reference product and packaging
C	Weight of product's packaging/ Weight of reference product's packaging
D	Weight of product/ Weight of reference product

Part Number	Manufacturing	Distribution	Installation	Use	End of Life
LMCP24	D	B	C	A	D
LMCP48	D	B	C	A	D

Registration number: LGRP-00339-V01.01-EN	Drafting rules: "PCR-ed3-EN-2015 04" Supplemented by "PSR-0005-ed2-EN-2016 03 29"
Verifier's accreditation number: VH25	Information and reference documents: www.pep-ecopassport.org
Date of issue: 11-2017	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"	
In compliance with ISO 14040:2006: "Environmental management – LCA – Principles and framework" In compliance with ISO 14044:2006: "Environmental management – LCA – Requirements and guidelines" In alignment with EN 15804:2012+A1:2013: "Sustainability of construction works - EPD's - Core rules for the product category of construction products"	