

Product Environmental Profile

Multi-voltage frontal motor operator for DPX³ 160 and DPX³ 250



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	Allow, during 20 years and with a voltage from 24 to 230 V~/=, the remote opening, closing and reset of the associated device automatically.
Reference Product	 <p style="text-align: center;">LG-421061 Frontal motor operator - for DPX³ 160 and DPX³ 250 - 24 to 230 V~/=</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:

LG-421061

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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 amended by delegated directive (EU) 2015/863.

Total weight of Reference Product	878 g (all packaging included)				
Plastics as % of weight		Metals as % of weight		Other as % of weight	
Polycarbonate	12,5 %	Steel	21,1 %	Electronic boards	7,4 %
Polyamide	7,2 %	Copper alloys	3,0 %	Electrolytic capacitors	4,4 %
ABS	0,6 %	Zamak	1,7 %	Cables / Electric wires	1,8 %
Other plastics	1,0 %	Other metals	0,1 %	Other components	0,7 %
Packaging as % of weight					
Polyethylene	0,8 %			Paper / Cardboard	20,8 %
				Wood	16,9 %
Total plastics	22,1 %	Total metals	25,9 %	Total others	52,0 %

Estimated recycled material content: 19 % 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 780 km by road from our warehouse to the local point of distribution into the European market.

Packaging is compliant with european directive 2004/12/EU concerning packaging and packaging waste. At their end of life, its recyclability rate is 95 % (in % 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.

• 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:

- electronic cards more than 10 cm²: 65 g
- electrolyte capacitors (height > 25 mm, diameter > 25 mm or proportionately similar volume): 39 g

• Extended producer responsibility:

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.

• Recyclability rate:

Calculated using the method described in technical report IEC/TR 62635, the recyclability rate of the product is estimated at 88 %. 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) : 20 %
- metal materials (excluding packaging) : 26 %
- others (excluding packaging) : 5 %
- packaging (all types of materials) : 37 %



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	<ul style="list-style-type: none"> • Product category: active product. • Use scenario: twenty-year working life. Stand-by mode with a consumption of 0,2 W for the whole life of the Reference Product, with the exception of the active mode operating time where, for a duration ≤ 2 seconds/year, the consumption is 10,0 W. This modelling duration does not constitute a minimum durability requirement. • Energy model: Electricity mix, Europe 27 - 2008.
End of life	The default end of life scenario maximizing the impacts.
Software and database used	EIME V5 and its database «CODDE-2018-11»

The calculation of the product power loss is compliant to the specific rules applicable to «Electrical switchgear and control gear solutions – paragraph 3.13 PSR-0005-ed2-EN-2016 03 29», available on the site www.pep.ecopassport.org, while the reference life time adopted is compliant to the real product features and to its specific installation prescriptions.

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SELECTION OF ENVIRONMENTAL IMPACTS

	Total for Life cycle		Raw material and manufacture		Distribution		Installation		Use		End of life	
	Value	Unit	Value	%	Value	%	Value	%	Value	%	Value	%
Global warming	2.36E+01	kgCO2 eq.	6.37E+00	27%	3.41E-02	< 1%	1.92E-02	< 1%	1.72E+01	73%	5.21E-02	< 1%
Ozone depletion	2.50E-06	kgCFC-11 eq.	1.38E-06	55%	6.91E-11	< 1%	1.05E-10	< 1%	1.12E-06	45%	1.05E-09	< 1%
Acidification of soils and water	8.32E-02	kgSO2 eq.	1.11E-02	13%	1.53E-04	< 1%	8.94E-05	< 1%	7.16E-02	86%	2.05E-04	< 1%
Water eutrophication	1.23E-02	kg(P04)3- eq.	7.57E-03	62%	3.52E-05	< 1%	6.21E-05	< 1%	4.32E-03	35%	2.66E-04	2%
Photochemical ozone formation	5.16E-03	kgC2H4 eq.	1.19E-03	23%	1.09E-05	< 1%	6.35E-06	< 1%	3.93E-03	76%	1.58E-05	< 1%
Depletion of abiotic resources - elements	9.57E-04	kgSb eq.	9.56E-04	100%	1.36E-09	< 1%	8.23E-10	< 1%	1.49E-06	< 1%	3.03E-09	< 1%
Total use of primary energy	4.64E+02	MJ	1.19E+02	26%	4.82E-01	< 1%	2.65E-01	< 1%	3.43E+02	74%	5.92E-01	< 1%
Net use of fresh water	6.33E+01	m3	1.05E+00	2%	3.05E-06	< 1%	4.51E-06	< 1%	6.22E+01	98%	3.67E-05	< 1%
Depletion of abiotic resources - fossil fuels	2.46E+02	MJ	4.99E+01	20%	4.79E-01	< 1%	2.59E-01	< 1%	1.95E+02	79%	5.44E-01	< 1%
Water pollution	1.66E+03	m3	9.38E+02	56%	5.61E+00	< 1%	3.02E+00	< 1%	7.08E+02	43%	6.32E+00	< 1%
Air pollution	1.63E+03	m3	8.87E+02	54%	1.40E+00	< 1%	1.65E+00	< 1%	7.39E+02	45%	5.27E+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.

Registration N°: LGRP-01585-V01.01-EN	Drafting rules: «PEP-PCR-ed3-EN-2015 04 02»
Verifier accreditation N°: VH23	Information and reference documents : www.pep-ecopassport.org
Date of issue: 07-2022	Validity period: 5 years
Independent verification of the declaration and data, in compliance with ISO 14025:2010 Internal <input checked="" type="checkbox"/> External <input type="checkbox"/>	
The PCR review was conducted by a panel of experts chaired by Philippe Osset (SOLINNEN)	
PEP are compliant with XP C08-100-1 : 2016 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	

