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Your usual Sales office
www.legrand.com

Product Environmental Profile

MCB - 1 Phase+ 1 Neutral -1 module

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	Protect during 20 years the installation against overloads and short-circuits in circuit with assigned voltage 250 V and rated current 16 A. This protection is ensured in accordance with the following parameters: - Number of poles 2p; Rated breaking capacity 10 kA; Tripping curve C
Reference Product	
	Cat.No 407742
	DX3 1P+NR C16 6000A

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 Numbers
407691 406763 406764 406765 406766 406767 406768 406769 406771 406772 406773 406774 406775 406776 406777 406780 406781 406782 406783 406784 406785 406786 406789 406791 406793 406794 406795 406796 406797 406798 406799 406801 406802 406803 406804 406805 406808 406809 406810 406811 406812 406861 406862 406863 406864 406865 406867 406868 406869 406870 406871 406872 406873 406875 406876 406877 406878 406879 406881 406882 406883 406884 406885 406886 406887 407454 407455 407456 407457 407458 407460 407467 407468 407469 407470 407471 407472 407473 407474 407475 407476 407477 407478 407479 407692 407693 407694 407695 407696 407697 407698 407699 407700 407701 407702 407703 407704 407705 407706 407707 407708 407709 407710 407712 407713 407714 407715 407716 407717 407718 407724 407726 407728 407729 407730 407731 407732 407733 407734 407735 407736 407737 407738 407740 407741 407742 407743 407744 407745 407746 409145 409148 409150 409151 409152 409153 419496 419497 419499 419500 419501 419502 419946 419947 419949 419950 419951 419952

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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.

Total weight of Reference Product	119 g (with unit packaging)

Plastics as % of weight		Metals as % of weight		Other as % of weight	
PA	37.9%	Steel	38.3%		
PBT	2.7%	Copper alloys	7.3%		
Other plastic	1.0%	Al	0.8%		
PC	0.3%	Other steel	0.4%		
PVC	<0.1%	Zamak	0.2%		
PS	<0.1%	Ag alloys	0.1%	Packaging as % of weight	
				Paper	6.8%
				Wood	4.2%
Total plastics	41.9%	Total metals	47.1%	Total other and packaging	11.0%

Estimated recycled material content: 22% by mass.

For products covered by the PEP other than the Reference products with tripping curve C > or = 25A, the % of weight of PA=64%, Steel =28.5%, Copper aloys=14.6% and Paper=13.9%

MANUFACTURE

This Reference Product comes from sites that have received ISO 14001 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 market in Europe.

Packaging is compliant with european directive 2004/12/EU concerning packaging and packaging waste. At their end of life, its recyclability rate is 98 % (in % of the mass of the packaging).

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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PEP ecopassport®

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.

• Recyclability rate:
Calculated using the method described in technical report IEC/TR 62635, the recyclability rate of the product is estimated at 97%. This value is based on data collected from a technological channel using industrial procedures. It does not prevalidate the effective use of this channel for end-of-life electrical and eletronic products.

Separated into:

- plastic materials (excluding packaging) : 39 %
- metal materials (excluding packaging) : 47 %
- other materials (excluding packaging) : 0 %
- packaging (all types of materials) : 11%

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	• Product category: circuit breaker • Use scenario: non-continuous operation for 20 years at 50% of rated load, during 30% of the time. This modelling duration does not constitute a minimum durability requirement. • Energy model: Electricity Mix; Europe 27, year 2008
End of life	The default end of life scenario maximizing the environmental impacts.
Software and database used	EIME V5 and its database «CODDE-2018-11»

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SELECTION OF ENVIRONMENTAL IMPACTS

	Total for Life cycle		Raw material and manufacture		Distribution		Installation		Use		End of life	
Global warming	2.60E+01	kg~CO_2 eq.	7.52E-01	3%	4.62E-03	< 1%	7.50E-04	< 1%	2.52E+01	97%	9.56E-03	< 1%
Ozone depletion	1.69E-06	kg~CFC-11 eq.	4.99E-08	3%	9.36E-12	< 1%	3.92E-12	< 1%	1.64E-06	97%	1.76E-10	< 1%
Acidification of soils and water	1.07E-01	kgSO2 eq.	1.40E-03	1%	2.08E-05	< 1%	3.58E-06	< 1%	1.05E-01	99%	3.79E-05	< 1%
Water eutrophication	6.77E-03	kg~PO_4^{3-}eq.	3.51E-04	5%	4.77E-06	< 1%	2.91E-06	< 1%	6.36E-03	94%	5.13E-05	< 1%
Photochemical ozone formation	5.92E-03	kg~C_2H_4 eq.	1.29E-04	2%	1.48E-06	< 1%	2.53E-07	< 1%	5.78E-03	98%	2.91E-06	< 1%
Depletion of abiotic resources - elements	1.78E-04	kgSb eq.	1.76E-04	99%	1.85E-10	< 1%	3.17E-11	< 1%	2.19E-06	1%	5.35E-10	< 1%
Total use of primary energy	5.18E+02	MJ	1.40E+01	3%	6.53E-02	< 1%	1.04E-02	< 1%	5.04E+02	97%	1.10E-01	< 1%
Net use of fresh water	9.16E+01	m^3	6.06E-02	< 1%	4.14E-07	< 1%	1.79E-07	< 1%	9.15E+01	100%	6.18E-06	< 1%
Depletion of abiotic resources - fossil fuels	2.92E+02	MJ	5.48E+00	2%	6.49E-02	< 1%	1.02E-02	< 1%	2.86E+02	98%	1.02E-01	< 1%
Water pollution	1.09E+03	m^3	4.37E+01	4%	7.60E-01	< 1%	1.18E-01	< 1%	1.04E+03	96%	1.19E+00	< 1%
Air pollution	1.21E+03	m^3	1.22E+02	10%	1.89E-01	< 1%	7.35E-02	< 1%	1.09E+03	90%	9.11E-01	< 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.

For products covered by the PEP other than the Reference product, the environmental impacts of each phase of the lifecycle are calculated with

-for the Manufacturing, Distribution, Installation and End of life phases, take the same impact values as the reference product except for the tripping curve C > or = 25A, the impact values of ADPe are multplied by 1.25 for the Manufacturing phase

- for the environmental impacts of the use phase, values are proportional to the dissipated power

Registration N°: LGRP-00358-V02.01-EN	Drafting rules: «PEP-PCR-ed3-EN-2015 04 02» Supplemented by «PSR-0005-ed2-FR-2016 03 29»
Verifier accreditation N°: VH33	Information and reference documents : www.pep-ecopassport.org
Date of issue: 07-2019	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»	
Environmental data in alignment with EN 15804 : 2012 + A1 : 2013	