

# Product Environmental Profile

RCCB




## 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 people and premises at risk of fire or explosion against insulation defects in circuit with assigned voltage 230 V and rated current 40 A. This protection is ensured in accordance with the following parameters: - Number of poles 2 - Sensitivity 30 mA - Type of differential protection AC.
Reference Product	 Cat.No 411505 ID2 40A 30mA AC



## PRODUCTS CONCERNED

The environmental data is representative of the following products:

Catalogue Numbers
4020 24 4020 25 4020 26 4020 27 4020 28 4020 29 4020 30 4020 32 4020 33 4020 34 4020 36 4020 37 4020 38 4020 56 4020 57 4020 59 4020 60 4025 35 4025 36 4025 37 4025 38 4025 39 4025 40 4025 41 4025 42 4020 62 4020 63 4020 64 4020 66 4020 67 4020 68 4020 70 4020 71 4020 72 4020 74 4020 75 4020 76 4020 90 4020 91 4020 92 4030 00 4030 01 4030 02 4030 08 4030 09 4030 10 4030 24 4030 25 4030 26 4030 28 4030 29 4030 30 4030 32 4030 33 4030 35 4030 36 4030 38 4030 39 4030 40 4030 42 4030 43 4030 44 4031 82 4031 83 4031 84 4031 86 4031 87 4031 88 4115 00 4115 01 4115 02 4115 04 4115 05 4115 06 4115 07 4115 08 4115 09 4115 10 4115 11 4115 12 4115 13 4115 14 4115 15 4115 16 4115 17 4115 19 4115 20 4115 21 4115 22 4115 23 4115 24 4115 25 4115 26 4115 27 4115 28 4115 29 4115 30 4115 31 4115 32 4115 33 4115 37 4115 39 4115 43 4115 47 4115 50 4115 52 4115 54 4115 55 4115 56 4115 57 4115 59 4115 60 4115 61 4115 62 4115 64 4115 65 4115 66 4115 67 4115 69 4115 70 4115 71 4115 72 4115 74 4115 75 4115 76 4115 77 4115 79 4115 80 4115 84 4115 87 4115 90 4115 91 4115 92 4115 95 4115 96 4115 97 4115 98 4116 10 4116 11 4116 13 4116 14 4116 16 4116 17 4116 23 4116 31 4116 32 4116 34 4116 35 4116 37 4116 38 4116 44 4116 50 4116 51 4116 60 4116 61 4116 62 4116 63 4116 64 4116 65 4116 66 4116 67 4116 68 4116 69 4116 74 4116 75 4116 76 4116 77 4116 78 4116 84 4116 85 4116 86 4116 87 4116 88 4116 94 4116 95 4116 96 4116 97 4116 98 4116 99 4117 02 4117 03 4117 04 4117 05 4117 07 4117 08 4117 09 4117 10 4117 12 4117 13 4117 14 4117 15 4117 17 4117 18 4117 19 4117 20 4117 22 4117 23 4117 24 4117 25 4117 27 4117 28 4117 29 4117 30 4117 32 4117 33 4117 34 4117 35 4117 37 4117 38 4117 39 4117 40 4117 42 4117 43 4117 45 4117 46 4117 48 4117 49 4117 52 4117 53 4117 56 4117 57 4117 59 4117 60 4117 61 4117 62 4117 63 4117 64 4117 65 4117 66 4117 67 4117 68 4117 69 4117 70 4117 71 4117 72 4117 73 4117 74 4117 75 4117 76 4117 77 4117 78 4117 79 4117 80 4117 81 4117 82 4117 83 4117 84 4117 85 4117 86 4117 87 4117 88 4117 89 4117 90 4117 91 4117 92 4117 93 4117 94 4117 95 4117 96 4117 97 4117 98 4118 00 4118 01 4118 03 4118 04 4118 05 4118 06 4118 07 4118 08 4118 09 4118 14 4118 15 4118 16 4118 17 4118 18 4118 19 4118 21 4118 22 4118 23 4118 24 4118 25 4118 26 4118 27 4118 28 4118 29 4118 30 4118 31 4119 10 4119 11 4119 12 4119 13 4119 14 4119 22 4119 23 4119 24 4119 27 4119 28 4119 31 4119 32 4119 33 4119 36 4119 37 4119 38 4119 42 4119 43 4119 47 4119 48

# Product Environmental Profile

RCCB



## ■ 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		233 g (with unit packaging)			
Plastics as % of weight		Metals as % of weight		Other as % of weight	
PA	29.9%	Steel	21.5%	Electronics components	0.2%
PBT	3.8%	Copper alloys	17.8%		
Other plastic	0.8%	Silver alloys	0.2%		
PC	0.7%				
POM	0.2%				
PVC	<0.1%			Packaging as % of weight	
				Paper	9.5%
				Wood	7.4%
Total plastics	35.4%	Total metals	47.5%	Total other and packaging	17.1%

Estimated recycled material content: 16% by mass.



## ■ 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.

# Product Environmental Profile

RCCB



## 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 96%. 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 electronic products.

### Separated into:

- plastic materials (excluding packaging) : 33 %
- metal materials (excluding packaging) : 47 %
- other materials (excluding packaging) : 0 %
- packaging (all types of materials) : 16 %



## 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 into 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"> <li>• Product category: passive product«</li> <li>• Use scenario: PSR 0005-ed2-EN-2016 03 29 § 3.21 « Blocks and differential switches »</li> <li>• Energy model: Electricity Mix; Europe 27, year 2008</li> </ul>
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»

# Product Environmental Profile

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## SELECTION OF ENVIRONMENTAL IMPACTS

	Total for Life cycle		Raw material and manufacture		Distribution		Installation		Use		End of life	
Global warming	4.21E+01	kg~CO <sub>2</sub> eq.	1.34E+00	3%	9.04E-03	< 1%	2.23E-03	< 1%	4.07E+01	97%	1.71E-02	< 1%
Ozone depletion	2.79E-06	kg~CFC-11 eq.	1.36E-07	5%	1.83E-11	< 1%	1.11E-11	< 1%	2.65E-06	95%	3.01E-10	< 1%
Acidification of soils and water	1.73E-01	kgSO <sub>2</sub> eq.	2.70E-03	2%	4.06E-05	< 1%	1.06E-05	< 1%	1.70E-01	98%	6.83E-05	< 1%
Water eutrophication	1.11E-02	kg~PO <sub>4</sub> <sup>3-</sup> eq.	7.58E-04	7%	9.34E-06	< 1%	8.15E-06	< 1%	1.02E-02	92%	9.40E-05	< 1%
Photochemical ozone formation	9.56E-03	kg~C <sub>2</sub> H <sub>4</sub> eq.	2.25E-04	2%	2.89E-06	< 1%	7.50E-07	< 1%	9.33E-03	98%	5.24E-06	< 1%
Depletion of abiotic resources - elements	5.31E-04	kgSb eq.	5.28E-04	99%	3.62E-10	< 1%	9.41E-11	< 1%	3.54E-06	< 1%	9.44E-10	< 1%
Total use of primary energy	8.34E+02	MJ	2.10E+01	3%	1.28E-01	< 1%	3.10E-02	< 1%	8.13E+02	97%	1.98E-01	< 1%
Net use of fresh water	1.48E+02	m <sup>3</sup>	2.17E-01	< 1%	8.09E-07	< 1%	5.06E-07	< 1%	1.48E+02	100%	1.06E-05	< 1%
Depletion of abiotic resources - fossil fuels	4.72E+02	MJ	9.46E+00	2%	1.27E-01	< 1%	3.04E-02	< 1%	4.62E+02	98%	1.85E-01	< 1%
Water pollution	1.87E+03	m <sup>3</sup>	1.91E+02	10%	1.49E+00	< 1%	3.54E-01	< 1%	1.68E+03	90%	2.15E+00	< 1%
Air pollution	2.14E+03	m <sup>3</sup>	3.84E+02	18%	3.71E-01	< 1%	2.09E-01	< 1%	1.75E+03	82%	1.59E+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](http://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

To determine the environmental impact of a product covered by the PEP other than the cat.number, the following rules apply :

of the Manufacturing , Distribution, Installation End of life phases are proportional to the mass of the product and the Use phase is proportional to the dissipated power

Registration N°: LGRP-00366-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 : <a href="http://www.pep-ecopassport.org">www.pep-ecopassport.org</a>
Date of issue: 07-2019	Validity period: 5 years
Independent verification of the declaration and data, in compliance with ISO 14025:2010 Internal <input type="checkbox"/> External <input checked="" type="checkbox"/>	
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	

