

Product Environmental Profile

RCCB DX3, TX3, RX3



LEGRAND'S ENVIRONMENTAL COMMITMENTS

- Incorporate environmental management into our industrial sites
Of all Legrand sites worldwide, over 80% are ISO 14001-certified (sites belonging to the Group for more than five years).
- Involve the environment in product design
Provide our customers with all relevant information (composition, consumption, end of life, etc.).
Reduce the environmental impact of products over their whole life cycle.
- Offer our customers environmentally friendly solutions
Develop innovative solutions to help our customers design more energy efficient, better managed and more environmentally friendly installations.



REFERENCE PRODUCT

Function	RCCBs with positive contact indication for control, protection and isolation of electrical circuits, protecting people from direct and indirect contact and protecting installations from insulation faults Reference product standards according NF EN 61008-1/IEC 61008-1 and EN/IEC 60 529 (IP) during of life time to 20 years
Reference Product	 <p>Cat.No 4 115 05 RCCB AC - 2P - 40 A - 30 mA</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 are representative of the following products:

Catalogue Numbers
402024,402025,402026,402027,402028,402029,402030,402032,402033,402034,402036,402037,402038,402056,402057,402059,402060,402062,402063,402064,402066,402067,402068,402070,402071,402072,402074,402075,402076,402086,402087,402088,402090,402091,402092,402535,402536,402537,402538,402539,402540,402541,402542,403000,403001,403002,403004,403005,403006,403008,403009,403010,403032,403033,403035,403036,403038,403039,403040,403042,403043,403044,403182,403183,403184,403186,403187,403188,403190,403191,403192,403194,403195,403196,411500,411502,411504,411505,411506,411507,411508,411509,411510,411511,411512,411513,411514,411515,411516,411517,411519,411520,411521,411522,411523,411524,411525,411526,411527,411528,411529,411530,411531,411532,411533,411537,411539,411543,411547,411550,411521,411552,411554,411555,411556,411557,411559,411560,411561,411562,411564,411565,411566,411567,411572,411574,411575,411576,411577,411579,411580,411584,411587,411590,411591,411592,411595,411596,411597,411598,411660,411661,411662,411663,411664,411665,411666,411667,411668,411669,411674,411675,411676,411677,411678,411684,411685,411686,411687,411688,411694,411695,411696,411697,411702,411703,411704,411705,411707,411708,411709,411710,411712,411713,411714,411715,411717,411718,411719,411720,411722,411723,411724,411727,411728,411729,411730,411732,411733,411734,411735,411737,411738,411739,411740,411742,411743,411745,411746,411748,411749,411752,411753,411756,411757,411759,411760,411761,411762,411763,411764,411765,411766,411767,411768,411769,411770,411771,411772,411773,411774,411775,411776,411777,411778,411779,411780,411781,411782,411783,411784,411785,411786,411787,411788,411789,411790,411791,411792,411793,411794,411795,411796,411797,411798,411800,411801,411803,411804,411805,411806,411807,411808,411809,411814,411815,411816,411817,411821,411822,411823,411824,411825,411826,411827,411828,411829,411830,411831,411910,411911,411912,411913,411914,411922,411923,411924,411927,411928,411931,411932,411933,411936,411937,411938,411942,411943,411947,411948,411832,411833,411834,411835,411836,411837,411838,411839,411840,411841



■ CONSTITUENT MATERIALS

This Reference Product contains no substances prohibited by the regulations applicable at the time of its introduction to the market.

It does not contain substances covered by the RoHS Directive (2002/95/EC and its revision 2011/65/EC)

It contains none of the 138 candidate substances covered by appendix XIV of the REACH regulation dated 19/12/2012

Total weight of Reference Product		221 g (with unit packaging)			
Plastics as % of weight		Metals as % of weight		Other as % of weight	
PA	33.0%	Steel	26.6%		
PBT	4.0%	Copper alloys	17%		
Other plastics	1.1%	Other metals	7.7%		
PC	0.7%	Silver alloys	0.2%		
POM	0.3%				
PVC	<0,1%			Packaging as % of weight	
				paper	9.5%
Other plastics	39.1%	Other metals	51.4%	Total other and packaging	9.5%

Estimated recycled material content: 22 % of weight.



■ MANUFACTURE

This Reference Product comes from sites that have 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 market in Europe

Packaging is compliant with european directive 2004/12/EC concerning packaging and packaging waste and french decree 98-638. At their end of life the recyclability rate is 100% (in % of packaging weight).



■ INSTALLATION

Installation components not delivered with the product are not taken into account.



■ 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

Development teams integrate product end-of-life factors in 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:

This product falls within the scope of the WEEE directive (2002/96/EC). Therefore it must be processed through local WEEE recovery/recycling channels. 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:

- waste list WEEE
- hazardous waste list*

(*) Hazardous waste as defined by European Commission decision 2000/532/EC.

• End of life channels:

In France the sale of products covered by the scope of the European Directive on Waste Electrical and Electronic Equipment (WEEE) is subject to a contribution to the eco-organisations Recylum and ERP, responsible for the end of life management of products.

• Recyclability rate:

Calculated using the method given 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 operating on an industrial basis. It does not prejudice the effective use of the channel for electrical and electronic products at the end of their life.

Separated into:

- plastic materials (excluding packaging) : 41 %
- metal materials (excluding packaging) : 45 %
- 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-lifelt is representative from products marketed and used in Europe, in compliance with the local current standards

The following modelling elements were taken into account:

Manufacture	Unit packaging taken into account. As required by the "PEP ecopassport" programme all transport for the manufacturing of the Reference Product, including materials and components, has been taken in account.
Distribution	Transport between the last Group distribution centre and an average delivery to the sales area.
Installation	Installation components not delivered with the product are not taken into account.
Use	<ul style="list-style-type: none"> • 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: passive product • Use scenario: non-continuous operation for 20 years at 30% of rated load, during 30% of the time. This modelling duration does not constitute a minimum durability requirement • Energy model: Electricity (Europe) 2005
End of life	In view of the data available on the date of creation of the document, and in accordance with the requirements of the PCR of the "PEP ecopassport" programme, transport of the Reference Product by road only once, over a distance of 1000 km, to a processing site at end of life was counted.
Software used	EIME V5 and its database «Legrand-2012-08-22 version 2» made from the database «CODDE-2012-07»



ENVIRONMENTAL IMPACTS (continued)

	Total for Life cycle		Raw material and manufacture		Distribution		Installation		Use		End of life		
	Value	Unit	Value	%	Value	%	Value	%	Value	%	Value	%	
Mandatory indicators	Global warming	2.33E+04	g~CO ₂ eq.	1.39E+03	6%	2.54E+01	< 1%	0.00E+00	0%	2.19E+04	94%	1.68E+01	< 1%
	Ozone depletion	1.46E-03	g~CFC-11 eq.	2.44E-04	17%	1.80E-05	1%	0.00E+00	0%	1.19E-03	81%	1.19E-05	< 1%
	Water eutrophication	2.29E-01	g~PO ₄ ³⁻ eq.	1.77E-01	77%	4.22E-04	< 1%	0.00E+00	0%	5.14E-02	22%	2.80E-04	< 1%
	Photochemical ozone creation	8.48E+00	g~C ₂ H ₄ eq.	7.93E-01	9%	2.20E-02	< 1%	0.00E+00	0%	7.65E+00	90%	1.46E-02	< 1%
	Air acidification	3.67E+00	g~H+ eq.	7.29E-01	20%	3.23E-03	< 1%	0.00E+00	0%	2.93E+00	80%	2.22E-03	< 1%
	Total energy depletion	4.56E+02	MJ	2.27E+01	5%	3.21E-01	< 1%	0.00E+00	0%	4.33E+02	95%	2.13E-01	< 1%
	Water depletion	8.04E+01	dm ³	1.78E+01	22%	3.04E-02	< 1%	0.00E+00	0%	6.26E+01	78%	2.02E-02	< 1%

Optional indicators	Raw material depletion	2.74E-14	year ¹	2.69E-14	98%	4.37E-19	< 1%	0.00E+00	0%	4.92E-16	2%	2.90E-19	< 1%
	Air toxicity	4.69E+06	m ³	1.06E+06	23%	4.78E+03	< 1%	0.00E+00	0%	3.63E+06	77%	3.29E+03	< 1%
	Water toxicity	7.59E+00	m ³	1.30E+00	17%	3.54E-03	< 1%	0.00E+00	0%	6.28E+00	83%	2.34E-03	< 1%
	Hazardous waste production	3.90E-01	kg	2.74E-02	7%	9.44E-06	< 1%	0.00E+00	0%	3.63E-01	93%	6.26E-06	< 1%

The environmental impacts of the Reference Product are representative of the products covered by the PEP, which therefore constitute a homogeneous environmental family. To determine the environmental impact of a product covered by the PEP other than the cat.number (ref 4 115 05), the following rules apply :

To determine the environmental impact of a product covered by the PEP other than the cat.number (ref 4 115 05), the following rules apply :

- Distribution, Installation phases : impacts are the same
- Manufacturing and End of life phases are proportional to the mass of the product.
- Use phase impacts are proportional to the power dissipated.

The values of these impacts are valid for the context specified in this document. They must not be used directly to draw up the environmental balance sheet for the installation.

N°enregistrement : LGRP-2013-191-v1-en	Règles de rédaction : PCR : PEP-PCR-ed 2.1-FR-2012 12 11 complété par le PSR : PSR-0005-ed1-FR-2012 12 11
N° d'habilitation du vérificateur : VH02	Information programme : www.pep-ecopassport.org
Date d'édition : 11-2013	Durée de validité : 4 ans
Vérification indépendante de la déclaration et des données, conformément à l'ISO 14025:2006 Interne <input checked="" type="checkbox"/> Externe <input type="checkbox"/>	
Conforme à la norme ISO 14025 : 2006 déclarations environnementales de type III	
La revue critique du PCR a été conduite par un panel d'experts présidé par J.Chevalier (CSTB)	
Les éléments du présent PEP ne peuvent pas être comparés avec les éléments issus d'un autre programme	

