

# Product Environmental Profile

## Acti9 ISOBAR P B DISTRIBUTION BOARD

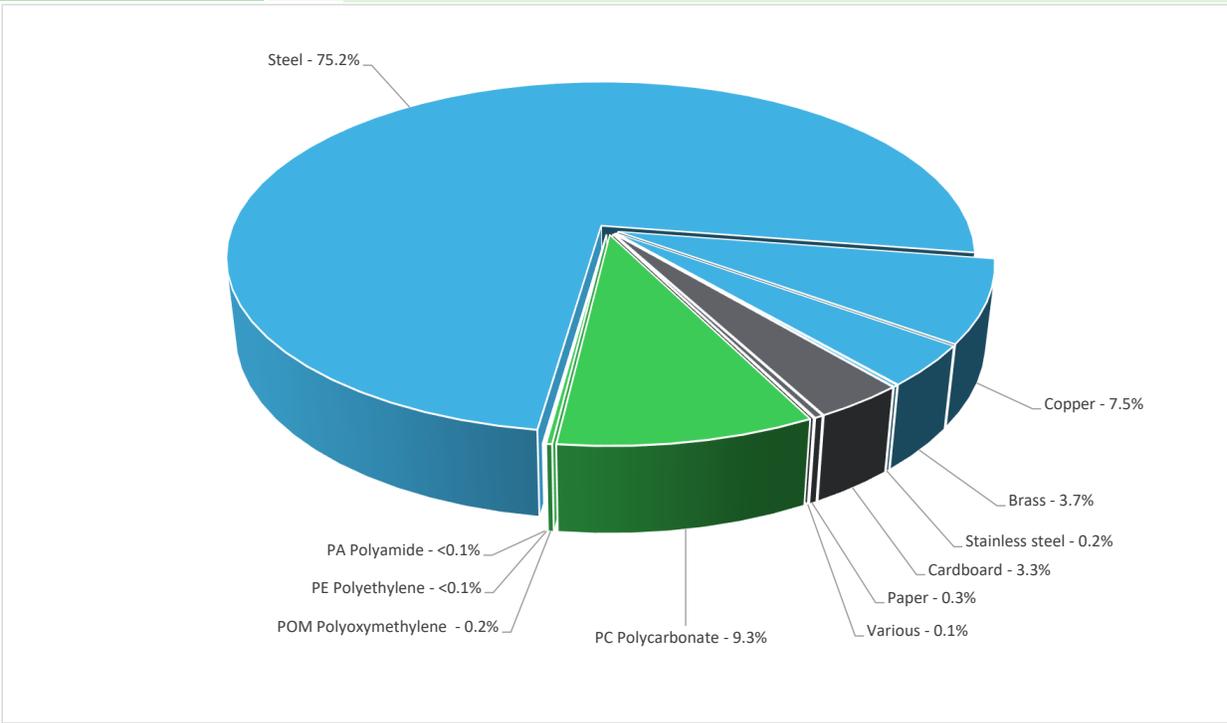


## General information

Reference product	Acti9 Isobar P B - distribution board - 12 ways TP+N - SEA9BPN12
Description of the product	Assembly designed to use switching or protective devices (e.g. circuit breakers and residual current devices) associated with one or more outgoing circuits fed from one or more incoming circuits, together with terminals for the neutral and circuit protective conductors, available in Standard, Hybrid Active, Split Metered, Meter Ready, Multi-Service and Heavy-Duty variants.
Description of the range	Single product
Functional unit	Protect people from direct contact with live active parts, distribute electrical power across X number of circuits, ensure the grouping of control, command and protection devices in a single enclosure having the following dimensions H x L x P, with rated current In, while protecting them against mechanical impacts (IK) and the penetration of solid objects and liquids (IP), according to the appropriate use scenario, and for the reference service life of the product of 20 years.
Specifications are:	X - 12 ways (3P) outgoer H x L x P - 700mm x 470mm x 139mm In - 250 A at 400/415 V AC, 250 A at 230/240 V AC IP - IP2X without cover internal conforming to BS EN 60529, IP3X with cover external conforming to BS EN 60529 IK - IK05 degree of protection against external mechanical impacts in accordance with the standard IEC 62262

## Constituent materials

Reference product mass	14700 g including the product and its packaging
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Metals	86.6%
Plastics	9.7%
Others	3.7%

## Substance assessment

Details of ROHS and REACH substances information are available on the Schneider-Electric website

<https://www.se.com>

## Additional environmental information

End Of Life	Recyclability potential:	<b>88%</b>	The recyclability rate was calculated from the recycling rates of each material making up the product based on REEECYLAB tool developed by Ecosystem, for components/materials not covered by the tool, data from the EIME database and the related PSR was taken. If no data was found a conservative assumption was used (0% recyclability).
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**Environmental impacts**

Reference service life time	20 years		
Product category	Other equipments - Passive product - continuous operation		
Life cycle of the product	The manufacturing, the distribution, the installation, the use and the end of life were taken into consideration in this study		
Electricity consumption	The electricity consumed during manufacturing processes is considered for each part of the product individually, the final assembly generates a negligible consumption		
Installation elements	The product does not require special installation procedure and requires little to no energy to install. The disposal of the packaging materials are accounted during the installation phase (including transport to disposal). The material constituents of the packaging are cardboard (92%), paper (6.2%), and LD-PE film (1.8%).		
Use scenario	Load rate = 30 % In Use rate = 100% RLT		
Time representativeness	The collected data are representative of the year 2023		
Technological representativeness	The Modules of Technologies such as material production, manufacturing processes and transport technology used in the PEP analysis (LCA EIME in the case) are Similar and representative of the actual type of technologies used to make the product.		
Geographical representativeness	Europe		
Energy model used	[A1 - A3]	[A5]	[B6]
	Electricity Mix; Low voltage; Europe, EU-27 Electricity Mix; Low voltage; Global, GLO Electricity Mix; Low voltage; RER	Electricity Mix; Low voltage; Europe, EU-27	Electricity Mix; Low voltage; 2020; United Kingdom, GB
	[C1 - C4]		
	Electricity Mix; Low voltage; Europe, EU-27 Electricity Mix; Low voltage; Global, GLO		

Detailed results of the optional indicators mentioned in PCRed4 are available in the LCA report and on demand in a digital format - Country Customer Care Center - <http://www.se.com/contact>

Mandatory Indicators		Acti9 ISOBAR P B DISTRIBUTION BOARD - SEA9BPN12						
Impact indicators	Unit	Total (without Module D)	[A1 - A3] - Manufacturing	[A4] - Distribution	[A5] - Installation	[B1 - B7] - Use	[C1 - C4] - End of life	[D] - Benefits and loads
Contribution to climate change	kg CO2 eq	1.32E+02	7.09E+01	3.40E+00	5.72E-01	1.85E+01	3.86E+01	-4.63E+01
Contribution to climate change-fossil	kg CO2 eq	1.31E+02	7.07E+01	3.40E+00	5.46E-01	1.84E+01	3.84E+01	-4.66E+01
Contribution to climate change-biogenic	kg CO2 eq	5.34E-01	2.20E-01	0*	2.65E-02	5.72E-02	2.31E-01	2.97E-01
Contribution to climate change-land use and land use change	kg CO2 eq	1.87E-03	1.87E-03	0*	0*	0*	3.67E-06	0.00E+00
Contribution to ozone depletion	kg CFC-11 eq	2.10E-06	1.86E-06	5.20E-09	7.27E-09	1.04E-07	1.22E-07	-7.63E-06
Contribution to acidification	mol H+ eq	7.75E-01	5.13E-01	2.20E-02	1.65E-03	9.02E-02	1.48E-01	-4.38E-01
Contribution to eutrophication, freshwater	kg (PO4) <sup>3-</sup> eq	7.79E-03	7.68E-04	1.27E-06	1.29E-05	5.45E-05	6.95E-03	-8.25E-05
Contribution to eutrophication, marine	kg N eq	9.58E-02	4.44E-02	1.03E-02	7.14E-04	1.13E-02	2.91E-02	-2.88E-02
Contribution to eutrophication, terrestrial	mol N eq	1.23E+00	4.83E-01	1.14E-01	4.98E-03	3.08E-01	3.26E-01	-3.33E-01
Contribution to photochemical ozone formation - human health	kg COVNM eq	3.49E-01	1.83E-01	2.92E-02	1.14E-03	3.12E-02	1.05E-01	-1.25E-01
Contribution to resource use, minerals and metals	kg Sb eq	4.75E-03	4.51E-03	0*	0*	7.32E-06	2.26E-04	-1.51E-02
Contribution to resource use, fossils	MJ	5.69E+03	2.69E+03	4.73E+01	5.58E+00	4.91E+02	2.46E+03	-1.06E+03
Contribution to water use	m3 eq	6.21E+01	4.22E+01	1.29E-02	4.43E-02	1.31E+00	1.86E+01	-2.77E+01

Inventory flows Indicators		Acti9 ISOBAR P B DISTRIBUTION BOARD - SEA9BPN12						
Inventory flows	Unit	Total (without Module D)	[A1 - A3] - Manufacturing	[A4] - Distribution	[A5] - Installation	[B1 - B7] - Use	[C1 - C4] - End of life	[D] - Benefits and loads
Contribution to renewable primary energy used as energy	MJ	2.56E+02	3.76E+01	6.31E-02	7.33E-01	2.12E+02	5.47E+00	-1.07E+01
Contribution to renewable primary energy used as raw material	MJ	1.08E+01	1.08E+01	0*	0*	0*	0*	-7.72E+00
Contribution to total renewable primary energy	MJ	2.67E+02	4.84E+01	6.31E-02	7.33E-01	2.12E+02	5.47E+00	-1.84E+01
Contribution to non renewable primary energy used as energy	MJ	5.64E+03	2.64E+03	4.73E+01	5.58E+00	4.91E+02	2.46E+03	-1.06E+03
Contribution to non renewable primary energy used as raw material	MJ	4.54E+01	4.54E+01	0*	0*	0*	0*	-1.89E-01

Contribution to total non renewable primary energy	MJ	5.69E+03	2.69E+03	4.73E+01	5.58E+00	4.91E+02	2.46E+03	-1.06E+03
Contribution to use of secondary material	kg	1.94E-03	1.94E-03	0*	0*	0*	0*	0.00E+00
Contribution to use of renewable secondary fuels	MJ	0.00E+00	0*	0*	0*	0*	0*	0.00E+00
Contribution to use of non renewable secondary fuels	MJ	0.00E+00	0*	0*	0*	0*	0*	0.00E+00
Contribution to net use of fresh water	m³	1.45E+00	9.82E-01	3.00E-04	1.03E-03	3.14E-02	4.32E-01	-6.46E-01
Contribution to hazardous waste disposed	kg	2.32E+02	2.30E+02	0*	0*	1.71E+00	0*	-1.21E+03
Contribution to non hazardous waste disposed	kg	4.63E+01	4.16E+01	1.19E-01	2.46E-01	2.48E+00	1.91E+00	-3.57E+01
Contribution to radioactive waste disposed	kg	1.85E-02	1.71E-02	8.48E-05	3.00E-05	1.11E-03	1.36E-04	-1.62E-02
Contribution to components for reuse	kg	0.00E+00	0*	0*	0*	0*	0*	0.00E+00
Contribution to materials for recycling	kg	1.42E+01	1.72E+00	0*	4.02E-03	0*	1.25E+01	0.00E+00
Contribution to materials for energy recovery	kg	0.00E+00	0*	0*	0*	0*	0*	0.00E+00
Contribution to exported energy	MJ	1.64E-01	1.73E-02	0*	2.28E-02	0*	1.24E-01	0.00E+00

\* represents less than 0.01% of the total life cycle of the reference flow

Contribution to biogenic carbon content of the product	kg of C	5.10E-03
Contribution to biogenic carbon content of the associated packaging	kg of C	1.50E-01

\* The calculation of the biogenic carbon is based on the Ademe for the Cardboard (28%), EN16485 for Wood (39,52%), and APESA/RECORD for Paper (37,8%)

Mandatory Indicators		Acti9 ISOBAR P B DISTRIBUTION BOARD - SEA9BPN12							
Impact indicators	Unit	[B1 - B7] - Use	[B1]	[B2]	[B3]	[B4]	[B5]	[B6]	[B7]
Contribution to climate change	kg CO2 eq	1.85E+01	0*	0*	0*	0*	0*	1.85E+01	0*
Contribution to climate change-fossil	kg CO2 eq	1.84E+01	0*	0*	0*	0*	0*	1.84E+01	0*
Contribution to climate change-biogenic	kg CO2 eq	5.72E-02	0*	0*	0*	0*	0*	5.72E-02	0*
Contribution to climate change-land use and land use change	kg CO2 eq	0*	0*	0*	0*	0*	0*	0*	0*
Contribution to ozone depletion	kg CFC-11 eq	1.04E-07	0*	0*	0*	0*	0*	1.04E-07	0*
Contribution to acidification	mol H+ eq	9.02E-02	0*	0*	0*	0*	0*	9.02E-02	0*
Contribution to eutrophication, freshwater	kg (PO4) <sup>3-</sup> eq	5.45E-05	0*	0*	0*	0*	0*	5.45E-05	0*
Contribution to eutrophication marine	kg N eq	1.13E-02	0*	0*	0*	0*	0*	1.13E-02	0*
Contribution to eutrophication, terrestrial	mol N eq	3.08E-01	0*	0*	0*	0*	0*	3.08E-01	0*
Contribution to photochemical ozone formation - human health	kg COVNM eq	3.12E-02	0*	0*	0*	0*	0*	3.12E-02	0*
Contribution to resource use, minerals and metals	kg Sb eq	7.32E-06	0*	0*	0*	0*	0*	7.32E-06	0*
Contribution to resource use, fossils	MJ	4.91E+02	0*	0*	0*	0*	0*	4.91E+02	0*
Contribution to water use	m3 eq	1.31E+00	0*	0*	0*	0*	0*	1.31E+00	0*

Inventory flows Indicators		Acti9 ISOBAR P B DISTRIBUTION BOARD - SEA9BPN12							
Inventory flows	Unit	[B1 - B7] - Use	[B1]	[B2]	[B3]	[B4]	[B5]	[B6]	[B7]
Contribution to use of renewable primary energy excluding renewable primary energy used as raw material	MJ	2.12E+02	0*	0*	0*	0*	0*	2.12E+02	0*
Contribution to use of renewable primary energy resources used as raw material	MJ	0*	0*	0*	0*	0*	0*	0*	0*
Contribution to total use of renewable primary energy resources	MJ	2.12E+02	0*	0*	0*	0*	0*	2.12E+02	0*
Contribution to use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	4.91E+02	0*	0*	0*	0*	0*	4.91E+02	0*

Contribution to use of non renewable primary energy resources used as raw material	MJ	0*	0*	0*	0*	0*	0*	0*	0*
Contribution to total use of non-renewable primary energy resources	MJ	4.91E+02	0*	0*	0*	0*	0*	4.91E+02	0*
Contribution to use of secondary material	kg	0*	0*	0*	0*	0*	0*	0*	0*
Contribution to use of renewable secondary fuels	MJ	0*	0*	0*	0*	0*	0*	0*	0*
Contribution to use of non renewable secondary fuels	MJ	0*	0*	0*	0*	0*	0*	0*	0*
Contribution to net use of freshwater	m³	3.14E-02	0*	0*	0*	0*	0*	3.14E-02	0*
Contribution to hazardous waste disposed	kg	1.71E+00	0*	0*	0*	0*	0*	1.71E+00	0*
Contribution to non hazardous waste disposed	kg	2.48E+00	0*	0*	0*	0*	0*	2.48E+00	0*
Contribution to radioactive waste disposed	kg	1.11E-03	0*	0*	0*	0*	0*	1.11E-03	0*
Contribution to components for reuse	kg	0*	0*	0*	0*	0*	0*	0*	0*
Contribution to materials for recycling	kg	0*	0*	0*	0*	0*	0*	0*	0*
Contribution to materials for energy recovery	kg	0*	0*	0*	0*	0*	0*	0*	0*
Contribution to exported energy	MJ	0*	0*	0*	0*	0*	0*	0*	0*

\* represents less than 0.01% of the total life cycle of the reference flow

Life cycle assessment performed with EIME version v6.2.3, database version 2024-01 in compliance with ISO14044, EF3.1 method is applied, for biogenic carbon storage, assessment methodology 0/0 is used

Please note that the values given above are only valid within the context specified and cannot be used directly to draw up the environmental assessment of an installation.

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Validity period	5 years	Supplemented by	PSR-0005-ed3.1-EN-2023 12 08
Date of issue	11-2024	Information and reference documents	<a href="http://www.pep-ecopassport.org">www.pep-ecopassport.org</a>
Independent verification of the declaration and data, in compliance with ISO 14021 : 2016			
Internal	X	External	
The PCR review was conducted by a panel of experts chaired by Julie Orgelet (DDemain)			
PEPs are compliant with XP C08-100-1:2016 and EN 50693:2019 or NF E38-500 :2022			
The components of the present PEP may not be compared with components from any other program.			
Document complies with ISO 14021:2016 "Environmental labels and declarations. Type II environmental declarations"			

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