Product Environmental Profile

ATV310, 3ph 380V, HD 22kW ND 30kW, EMC

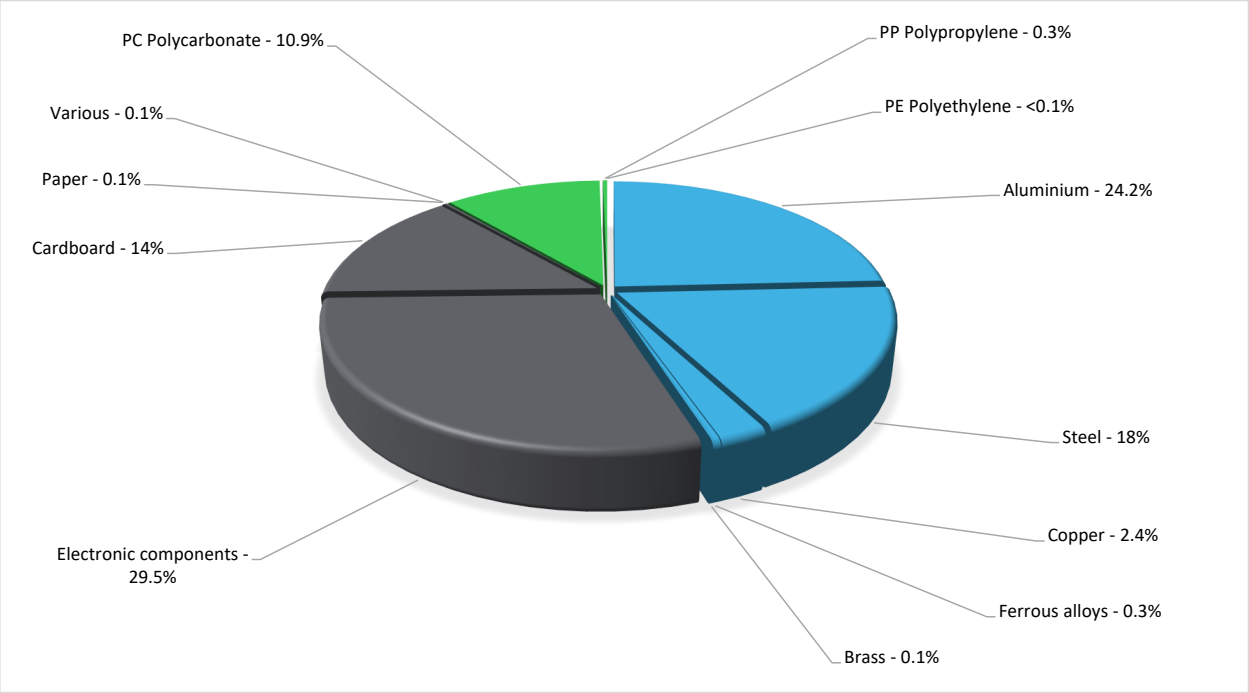
Altivar Easy 310

General information

Reference product	ATV310, 3ph 380V, HD 22kW ND 30kW, EMC - ATV310HD22N4EF
Description of the product	The Altivar Machine ATV310 Power extension driver is a variable speed for three-phase asynchronous and synchronous motors.
Description of the range	The products of the range are: This range consists of products ATV310 drives,meets simple and advanced application requirements for 3 Phases synchronous and asynchronous motors from 0.37 to 30 kW The environmental impacts of this reference product are representative of the impacts of the other products of the range which are developed with a similar technology.
Functional unit	To control the speed and torque of synchronous or asynchronous electric motor for general application during 10 years. Calculation of the enviromental impacts is based on 5.000 operating hours per year and 10 years of product service lifetime according to CEMCEP.The usage profile taken into account is 4 operation points with relative speed and torque
Specifications are:	Technical data: -Rated supply voltage:400 V -Motor Power Kw:22 Kw for heavy duty -Motor Power HP:30 HP for heavy duty -Phase :3 HP for heavy duty -Line current:64.2 A at 380 V for heavy duty and 53.2 A at 460 V for heavy duty

Constituent materials

Reference product mass	11350 g	including the product, its packaging, additional elements and accessories



	Plastics	11.2%
	Metals	45.1%
	Others	43.7%

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:	**24%**	The recyclability rate was calculated from the recycling rates of each material making up the product based on REEECY'LAB 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).

Environmental impacts

Reference service life time	10 years
Product category	Other equipments - Active product
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 consumtion	The electricity consumed during manufacturing processes is considered for each part of the product individually, the final assembly generates a negligable consumption
Installation elements	No special installation components need during installation phase
Use scenario	The product is in active mode 5000h uptime in use phase at different loading rate(20% uptime in full phase with a power of 748W, 30% uptime in medium high phase with a power of 377W,40% uptime in medium low phase with a power of 234W and 10% uptime in low phase with a power of 265W) and in stand-by mode 1000h of the time with a power of 34W, net losses 130 W,for 10 years.
Time representativeness	The collected data are representative of the year 2025
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 représentaive of the actual type of technologies used to make the product.

Geographical representativeness	**Final assembly site**	**Use phase**		**End-of-life**
	China	China		China
Energy model used	**[A1 - A3]**	**[A5]**	**[B6]**	**[C1 - C4]**
	Electricity Mix; Low voltage; 2020; China, CN	No energy used	Electricity Mix; Low voltage; 2020; China, CN	Global, European and French datasets are used.

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		**ATV310, 3ph 380V, HD 22kW ND 30kW, EMC - ATV310HD22N4EF**						
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	2.29E+04	3.40E+02	0*	3.05E+00	2.25E+04	2.54E+01	-8.45E+00
Contribution to climate change-fossil	kg CO2 eq	2.29E+04	3.43E+02	0*	0*	2.25E+04	2.51E+01	-8.38E+00
Contribution to climate change-biogenic	kg CO2 eq	1.99E+01	0*	0*	2.51E+00	1.97E+01	2.55E-01	-7.01E-02
Contribution to climate change-land use and land use change	kg CO2 eq	1.91E-03	1.91E-03	1.66E-06	0*	0*	1.18E-06	0.00E+00
Contribution to ozone depletion	kg CFC-11 eq	1.89E-04	5.85E-05	0*	1.96E-08	1.30E-04	1.39E-07	-1.37E-06
Contribution to acidification	mol H+ eq	1.72E+02	1.85E+00	0*	0*	1.70E+02	3.38E-02	-9.01E-02
Contribution to eutrophication, freshwater	kg P eq	6.78E-03	8.83E-04	4.11E-06	0*	5.74E-03	1.51E-04	-1.31E-05
Contribution to eutrophication, marine	kg N eq	1.84E+01	2.02E-01	0*	0*	1.81E+01	1.09E-02	-5.18E-03
Contribution to eutrophication, terrestrial	mol N eq	2.11E+02	2.23E+00	0*	0*	2.08E+02	1.14E-01	-6.05E-02
Contribution to photochemical ozone formation - human health	kg NMVOC eq	6.13E+01	7.09E-01	0*	0*	6.05E+01	2.91E-02	-2.34E-02
Contribution to resource use, minerals and metals	kg Sb eq	7.59E-02	7.36E-02	0*	0*	2.28E-03	0*	-2.91E-03
Contribution to resource use, fossils	MJ	3.74E+05	4.47E+03	0*	0*	3.70E+05	7.72E+01	-1.92E+02
Contribution to water use	m3 eq	1.41E+03	1.04E+02	0*	0*	1.31E+03	1.07E+00	-5.53E+00

Inventory flows Indicators		ATV310, 3ph 380V, HD 22kW ND 30kW, EMC - ATV310HD22N4EF						
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	3.93E+04	2.93E+02	0*	0*	3.90E+04	0*	-2.57E+00
Contribution to renewable primary energy used as raw material	MJ	3.25E+01	3.25E+01	0*	0*	0*	0*	0.00E+00
Contribution to total renewable primary energy	MJ	3.94E+04	3.25E+02	0*	0*	3.90E+04	0*	-2.57E+00
Contribution to non renewable primary energy used as energy	MJ	3.74E+05	4.39E+03	0*	0*	3.70E+05	7.72E+01	-1.92E+02
Contribution to non renewable primary energy used as raw material	MJ	7.91E+01	7.91E+01	0*	0*	0*	0*	0.00E+00
Contribution to total non renewable primary energy	MJ	3.74E+05	4.47E+03	0*	0*	3.70E+05	7.72E+01	-1.92E+02
Contribution to use of secondary material	kg	0.00E+00	0*	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	m^3	3.28E+01	2.40E+00	0*	0*	3.04E+01	2.88E-02	-1.29E-01
Contribution to hazardous waste disposed	kg	1.03E+03	3.28E+02	0*	5.93E-01	7.00E+02	5.79E+00	-2.29E+02
Contribution to non hazardous waste disposed	kg	4.28E+03	8.22E+01	0*	0*	4.20E+03	4.54E+00	-6.44E+00
Contribution to radioactive waste disposed	kg	2.10E-01	3.95E-02	8.08E-05	3.00E-05	1.70E-01	2.25E-04	-2.93E-03
Contribution to components for reuse	kg	0.00E+00	0*	0*	0*	0*	0*	0.00E+00
Contribution to materials for recycling	kg	2.70E+00	3.80E-01	0*	0*	0*	2.32E+00	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	2.64E-02	3.49E-03	0*	0*	0*	2.29E-02	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	0.00E+00
Contribution to biogenic carbon content of the associated packaging	kg of C	4.50E-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		ATV310, 3ph 380V, HD 22kW ND 30kW, EMC - ATV310HD22N4EF							
Impact indicators	Unit	[B1 - B7] - Use	[B1]	[B2]	[B3]	[B4]	[B5]	[B6]	[B7]
Contribution to climate change	kg CO2 eq	2.25E+04	0*	0*	0*	0*	0*	2.25E+04	0*
Contribution to climate change-fossil	kg CO2 eq	2.25E+04	0*	0*	0*	0*	0*	2.25E+04	0*
Contribution to climate change-biogenic	kg CO2 eq	1.97E+01	0*	0*	0*	0*	0*	1.97E+01	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	1.30E-04	0*	0*	0*	0*	0*	1.30E-04	0*
Contribution to acidification	mol H+ eq	1.70E+02	0*	0*	0*	0*	0*	1.70E+02	0*
Contribution to eutrophication, freshwater	kg P eq	5.74E-03	0*	0*	0*	0*	0*	5.74E-03	0*
Contribution to eutrophication marine	kg N eq	1.81E+01	0*	0*	0*	0*	0*	1.81E+01	0*
Contribution to eutrophication, terrestrial	mol N eq	2.08E+02	0*	0*	0*	0*	0*	2.08E+02	0*
Contribution to photochemical ozone formation - human health	kg NMVOC eq	6.05E+01	0*	0*	0*	0*	0*	6.05E+01	0*
Contribution to resource use, minerals and metals	kg Sb eq	2.28E-03	0*	0*	0*	0*	0*	2.28E-03	0*
Contribution to resource use, fossils	MJ	3.70E+05	0*	0*	0*	0*	0*	3.70E+05	0*
Contribution to water use	m3 eq	1.31E+03	0*	0*	0*	0*	0*	1.31E+03	0*

Inventory flows Indicators		ATV310, 3ph 380V, HD 22kW ND 30kW, EMC - ATV310HD22N4EF							
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	3.90E+04	0*	0*	0*	0*	0*	3.90E+04	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	3.90E+04	0*	0*	0*	0*	0*	3.90E+04	0*
Contribution to use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	3.70E+05	0*	0*	0*	0*	0*	3.70E+05	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	3.70E+05	0*	0*	0*	0*	0*	3.70E+05	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	m^3	3.04E+01	0*	0*	0*	0*	0*	3.04E+01	0*
Contribution to hazardous waste disposed	kg	7.00E+02	0*	0*	0*	0*	0*	7.00E+02	0*
Contribution to non hazardous waste disposed	kg	4.20E+03	0*	0*	0*	0*	0*	4.20E+03	0*
Contribution to radioactive waste disposed	kg	1.70E-01	0*	0*	0*	0*	0*	1.70E-01	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 v6.2.4, database version 2024-01 in compliance with ISO14044, EF3.1 method is applied, for biogenic carbon storage, assessment methodology -1/1 is used

According to this environmental analysis, proportionality rules may be used to evaluate the impacts of other products of this range, ratios to apply can be provided upon request

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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		Supplemented by	PSR-0005-ed3-2023 06 06
Date of issue	15/07/2025	*Information and reference documents*	www.pep-ecopassport.org
		Validity period	5 years

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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