

Product Environmental Profile

Altivar Soft Starter ATS430 590A

Altivar Soft Starter ATS430





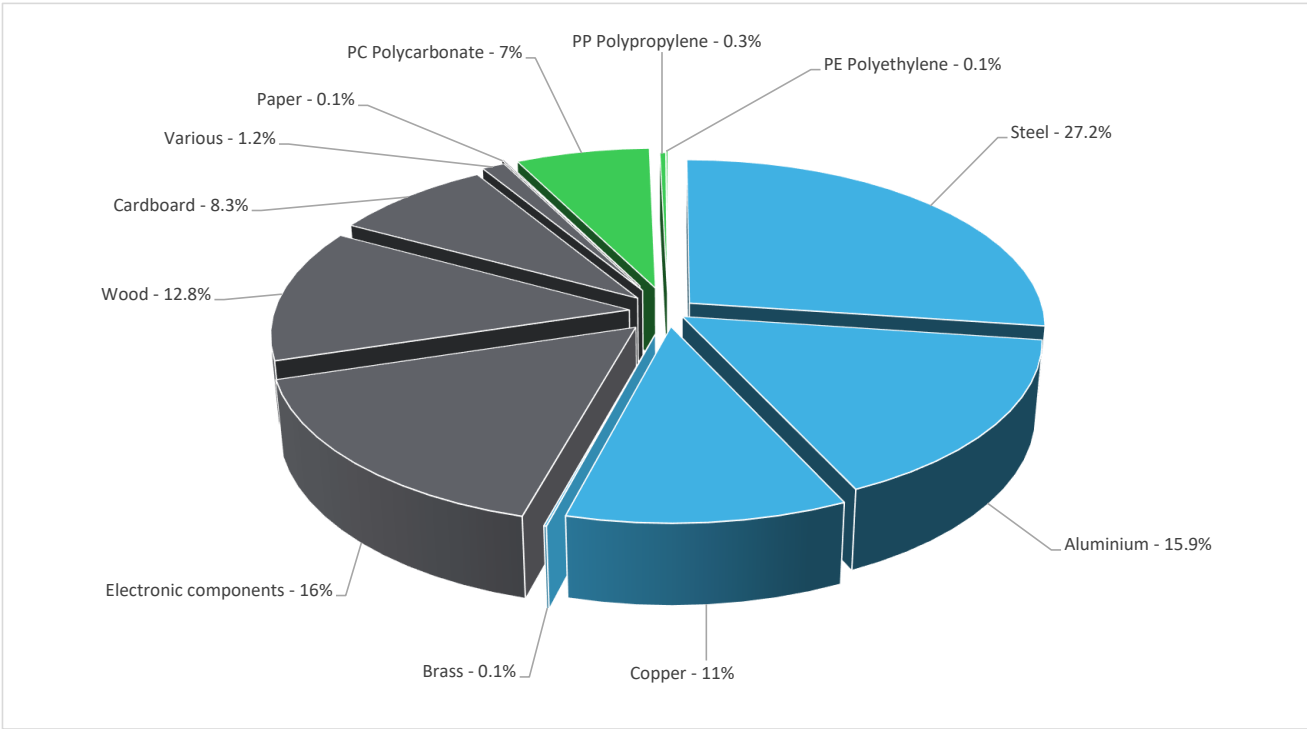
General information

Reference product	Altivar Soft Starter ATS430 590A 208 to 600V AC control supply 110 to 230V AC - ATS430C59S6
Description of the product	The main function of the Altivar Soft Starter ATV430 is primarily to intend for the soft starting and breaking of the rotational speed of an asynchronous motor for normal duty industry.
Description of the range	The products of the range are: This range consists of products ATS430 with ratings from 480A to 590A for operation on 208 to 600V AC control supply 110 to 230V AC, 3-phase supplies. 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	The aim of soft starter is to drive an asynchronous motor (squirrel cage) by limitation of the current during acceleration phase with a torque control. It's based on two phases dimmer with silicon controlled rectifier (thyristor). The rating of softstarter is given by nominal current 590A in the case study which lead to drive several power motor depending of power network voltage ie 230V power motor of 160kW and 500V power motor of 400kW. Calculation of the environmental impacts is based on 20 years of product service lifetime. The usage profile taken into account is 50% uptime in use phase and 50% uptime in stand by phase.



Constituent materials

Reference product mass	32100 g including the product, its packaging and additional elements and accessories
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Plastic	7.40%
Metals	54.20%
Others	38.40%



Substance assessment

Details of ROHS and REACH substances information are available on the Schneider-Electric Green Premium website <https://www.se.com/ww/en/work/support/green-premium/>



Additional environmental information

End Of Life	Recyclability potential:	69%	The recyclability rate was calculated from the recycling rates of each material making up the product with the exception of data using the ESR database. For materials or components using the ESR database or the absence of data the conservative hypothesis "0% recyclability" was used.
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Environmental impacts

Reference service life time	20 years			
Product category	Contactors - Industrial			
Installation elements	The product does not require any installation operations.			
Use scenario	Load rate = 50 % le Use rate = 50 % RLT			
Time representativeness	The collected data are representative of the year 2023			
Technological representativeness	The main function of the Altivar Soft Starter ATV430 is primarily to intend for the soft starting and breaking of the rotational speed of an asynchronous motor for normal duty industry.			
Geographical representativeness	Rest of the World			
Energy model used	[A1 - A3]	[A5]	[B6]	[C1 - C4]
	Indonesia, ID	Electricity Mix; Low voltage; 2018; Europe, EU-27	Electricity Mix; Low voltage; 2018; Europe, EU-27	Electricity Mix; Low voltage; 2018; Europe, EU-27

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.schneider-electric.com/contact>

Mandatory Indicators		Altivar Soft Starter ATS430 590A 208 to 600V AC control supply 110 to 230V AC - ATS430C59S6						
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	1.39E+04	4.26E+02	6.26E+00	7.57E+00	1.34E+04	6.06E+01	-4.27E+01
Contribution to climate change-fossil	kg CO2 eq	1.39E+04	4.21E+02	6.26E+00	0*	1.34E+04	5.99E+01	-4.19E+01
Contribution to climate change-biogenic	kg CO2 eq	3.01E+01	4.64E+00	0*	6.84E+00	1.79E+01	7.46E-01	-7.29E-01
Contribution to climate change-land use and land use change	kg CO2 eq	2.73E-03	2.71E-03	0*	0*	0*	1.47E-05	0.00E+00
Contribution to ozone depletion	kg CFC-11 eq	1.01E-04	4.26E-05	0*	1.37E-08	5.73E-05	5.88E-07	-7.35E-06
Contribution to acidification	mol H+ eq	8.11E+01	4.39E+00	3.96E-02	0*	7.64E+01	2.14E-01	-7.64E-01
Contribution to eutrophication, freshwater	kg (PO4) ³⁻ eq	6.49E-02	4.45E-03	0*	0*	3.67E-02	2.37E-02	-6.32E-05
Contribution to eutrophication marine	kg N eq	9.26E+00	5.16E-01	1.86E-02	1.27E-03	8.68E+00	4.20E-02	-2.84E-02
Contribution to eutrophication, terrestrial	mol N eq	1.37E+02	5.62E+00	2.04E-01	1.49E-02	1.30E+02	4.80E-01	-3.32E-01
Contribution to photochemical ozone formation - human health	kg COVNM eq	2.98E+01	1.76E+00	5.13E-02	3.27E-03	2.79E+01	1.39E-01	-1.44E-01
Contribution to resource use, minerals and metals	kg Sb eq	1.49E-01	1.47E-01	0*	0*	9.70E-04	7.52E-04	-1.53E-02
Contribution to resource use, fossils	MJ	3.52E+05	8.43E+03	8.72E+01	0*	3.41E+05	2.06E+03	-9.20E+02
Contribution to water use	m3 eq	6.44E+02	1.39E+02	0*	1.06E+00	4.74E+02	3.06E+01	-4.07E+01

Inventory flows Indicators		Altivar Soft Starter ATS430 590A 208 to 600V AC control supply 110 to 230V AC - ATS430C59S6						
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 use of renewable primary energy excluding renewable primary energy used as raw material	MJ	6.57E+04	2.08E+02	0*	0*	6.55E+04	1.82E+01	-2.03E+01
Contribution to use of renewable primary energy resources used as raw material	MJ	1.51E+02	1.51E+02	0*	0*	0*	0*	0.00E+00
Contribution to total use of renewable primary energy resources	MJ	6.59E+04	3.59E+02	0*	0*	6.55E+04	1.82E+01	-2.03E+01
Contribution to use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	3.52E+05	8.31E+03	8.72E+01	0*	3.41E+05	2.06E+03	-9.20E+02
Contribution to use of non renewable primary energy resources used as raw material	MJ	1.18E+02	1.18E+02	0*	0*	0*	0*	0.00E+00
Contribution to total use of non-renewable primary energy resources	MJ	3.52E+05	8.43E+03	8.72E+01	0*	3.41E+05	2.06E+03	-9.20E+02
Contribution to use of secondary material	kg	2.15E-02	2.15E-02	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 freshwater	m³	1.50E+01	3.26E+00	0*	2.47E-02	1.10E+01	7.13E-01	-9.48E-01
Contribution to hazardous waste disposed	kg	1.40E+03	1.15E+03	0*	0*	2.50E+02	5.34E+00	-1.27E+03
Contribution to non hazardous waste disposed	kg	2.24E+03	2.99E+02	0*	7.47E+00	1.93E+03	3.79E+00	-2.89E+01
Contribution to radioactive waste disposed	kg	5.56E-01	1.52E-01	1.56E-04	1.55E-04	4.03E-01	3.44E-04	-1.35E-02
Contribution to components for reuse	kg	0.00E+00	0*	0*	0*	0*	0*	0.00E+00
Contribution to materials for recycling	kg	2.09E+01	2.76E+00	0*	0*	0*	1.81E+01	0.00E+00
Contribution to materials for energy recovery	kg	2.66E-06	2.66E-06	0*	0*	0*	0*	0.00E+00
Contribution to exported energy	MJ	6.05E-01	4.18E-01	0*	0*	0*	1.87E-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 de C 0.00E+00

Contribution to biogenic carbon content of the associated packaging kg de C 2.48E+00

Mandatory Indicators		Altivar Soft Starter ATS430 590A 208 to 600V AC control supply 110 to 230V AC - ATS430C59S6							
Impact indicators	Unit	[B1 - B7] - Use	[B1]	[B2]	[B3]	[B4]	[B5]	[B6]	[B7]
Contribution to climate change	kg CO2 eq	1.34E+04	0*	0*	0*	0*	0*	1.34E+04	0*
Contribution to climate change-fossil	kg CO2 eq	1.34E+04	0*	0*	0*	0*	0*	1.34E+04	0*
Contribution to climate change-biogenic	kg CO2 eq	1.79E+01	0*	0*	0*	0*	0*	1.79E+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	5.73E-05	0*	0*	0*	0*	0*	5.73E-05	0*
Contribution to acidification	mol H+ eq	7.64E+01	0*	0*	0*	0*	0*	7.64E+01	0*
Contribution to eutrophication, freshwater	kg (PO4) ³⁻ eq	3.67E-02	0*	0*	0*	0*	0*	3.67E-02	0*
Contribution to eutrophication marine	kg N eq	8.68E+00	0*	0*	0*	0*	0*	8.68E+00	0*
Contribution to eutrophication, terrestrial	mol N eq	1.30E+02	0*	0*	0*	0*	0*	1.30E+02	0*
Contribution to photochemical ozone formation - human health	kg COVNM eq	2.79E+01	0*	0*	0*	0*	0*	2.79E+01	0*
Contribution to resource use, minerals and metals	kg Sb eq	9.70E-04	0*	0*	0*	0*	0*	9.70E-04	0*
Contribution to resource use, fossils	MJ	3.41E+05	0*	0*	0*	0*	0*	3.41E+05	0*
Contribution to water use	m3 eq	4.74E+02	0*	0*	0*	0*	0*	4.74E+02	0*

Inventory flows Indicators		Altivar Soft Starter ATS430 590A 208 to 600V AC control supply 110 to 230V AC - ATS430C59S6							
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	6.55E+04	0*	0*	0*	0*	0*	6.55E+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	6.55E+04	0*	0*	0*	0*	0*	6.55E+04	0*
Contribution to use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	3.41E+05	0*	0*	0*	0*	0*	3.41E+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	3.41E+05	0*	0*	0*	0*	0*	3.41E+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	m³	1.10E+01	0*	0*	0*	0*	0*	1.10E+01	0*
Contribution to hazardous waste disposed	kg	2.50E+02	0*	0*	0*	0*	0*	2.50E+02	0*
Contribution to non hazardous waste disposed	kg	1.93E+03	0*	0*	0*	0*	0*	1.93E+03	0*
Contribution to radioactive waste disposed	kg	4.03E-01	0*	0*	0*	0*	0*	4.03E-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 v6.1, database version 2023-02 in compliance with ISO14044, EF 3.0 method is applied, for biogenic carbon storage, assessment methodology 0/0 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-EN-2023 06 06
Verifier accreditation N°	VH45	Information and reference documents	www.pep-ecopassport.org
Date of issue	07-2024	Validity period	5 years
Independent verification of the declaration and data, in compliance with ISO 14025 : 2006			
Internal External X			
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 14025:2006 "Environmental labels and declarations. Type III environmental declarations"			



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