Product Environmental Profile

ATV930 160KW 400V WITH BU

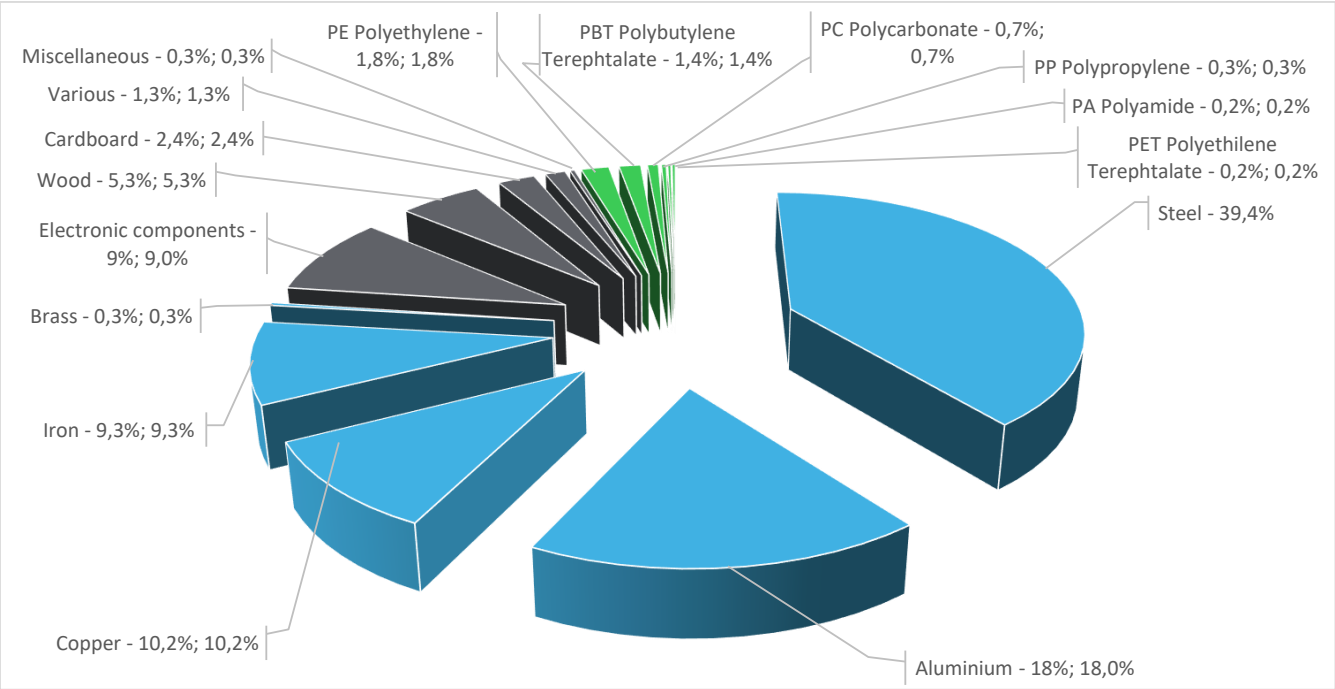
Altivar Process - 110 to 160 kW / 400V

General information

Representative product	ATV930 160KW 400V WITH BU - ATV930C16N4
Description of the product	The main function of the Altivar Process product range is the speed control and variation of a synchronous, asynchronous or reluctance electric motor for fluid management and industrial applications.
Description of the range	This range consists of products Altivar 930 with braking unit with ratings from 110 to 160 kW for operation on 400V, 3-phase supplies IP21. The representative product used for the analysis is the Altivar 930 – 160 kW / 400V / 3-ph rating / IP21 (ref. ATV930C16N4). The environmental impacts of this referenced product are representative of the impacts of the other products of the range which are developed with a similar technology.
Functional unit	To adapt the speed and torque of synchronous, asynchronous or reluctance motor to the machine's operating point. Calculation of the environmental impacts is based on 10 years of product service lifetime. The usage profile taken into account is 80% uptime in use phase at 75% loading rate and 20% uptime in stand by phase.

Constituent materials

Reference product mass	122500 g including the product, its packaging and additional elements and accessories



	Plastics	4,6%
	Metals	77,2%
	Others	18,3%

Substance assessment

Products of this range are designed in conformity with the requirements of the RoHS directive (European Directive 2011/65/EU of 8 June 2011) and do not contain, or only contain in the authorised proportions, lead, mercury, cadmium, hexavalent chromium or flame retardants (polybrominated biphenyls - PBB, polybrominated diphenyl ethers - PBDE) as mentioned in the Directive

As the products of the range are designed in accordance with the RoHS Directive (European Directive 2002/95/EC of 27 January 2003), they can be incorporated without any restriction in an assembly or an installation subject to this Directive.

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

http://www2.schneider-electric.com/sites/corporate/en/products-services/green-premium/green-premium.page

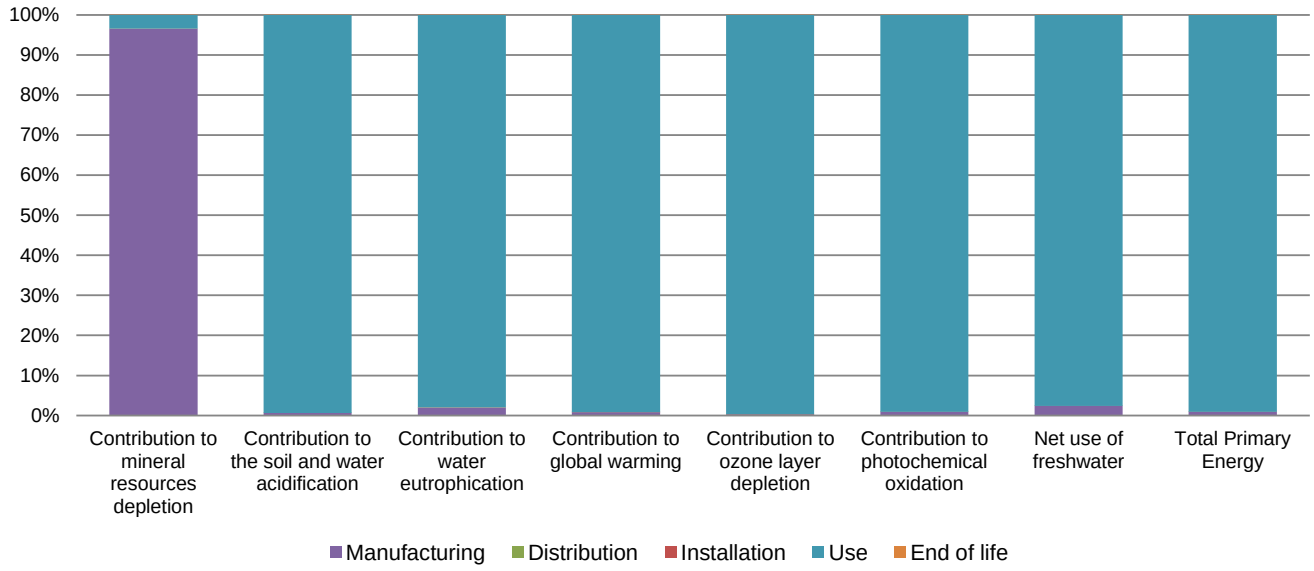
Additional environmental information

The ATV930 160KW 400V WITH BU presents the following relevent environmental aspects	
Design	The variable speed drive saves up to 50% energy by optimising the operating cycles of the machines used for fluid applications with Altivar Process.
Manufacturing	Manufactured at a Schneider Electric production site ISO14001 certified
Distribution	Weight and volume of the packaging optimized, based on the European Union's packaging directive Packaging weight is 12302,1 g, consisting of wood pallet (54%), recyclable cardboard (24,5 %), foam wedge (14,1%), desiccant dryer (6%), paper (0,6%), polyethylene film (0,5%) and sheet polypropylene (0,3%).
Installation	The product does not require any installation operation.
Use	The product does not require special maintenance operations.
End of life	End of life optimized to decrease the amount of waste and allow recovery of the product components and materials This product contains electrolyte capacitors (4736g), electronic card (3655g), cables (3269g), LCD (6,7g) and batteries (2,9g) that should be separated from the stream of waste so as to optimize end-of-life treatment. The location of these components and other recommendations are given in the End of Life Instruction document which is available on the Schneider-Electric Green Premium website http://www2.schneider-electric.com/sites/corporate/en/products-services/green-premium/green-premium.page Recyclability potential: **70%** Based on “ECO’DEEE recyclability and recoverability calculation method” (version V1, 20 Sep. 2008 presented to the French Agency for Environment and Energy Management: ADEME).

Environmental impacts

Reference life time	10 years			
Installation elements	The product does not require any installation operations.			
Use scenario	The product is in active phase 80% of the time at 75% loading rate with a power use of 2485 W and in stand-by phase 20% of the time with a power use of 52 W, for 10 years.			
Geographical representativeness	Europe			
Technological representativeness	The main function of the Altivar Process product range is the speed control and variation of a synchronous, asynchronous or reluctance electric motor for fluid management and industrial applications.			
Energy model used	**Manufacturing**	**Installation**	**Use**	**End of life**
	Energy model used: China	Electricity Mix; AC; consumption mix, at consumer; < 1kV; EU-27	Electricity Mix; AC; consumption mix, at consumer; < 1kV; EU-27	Electricity Mix; AC; consumption mix, at consumer; < 1kV; EU-27

Compulsory indicators	ATV930 160KW 400V WITH BU - ATV930C16N4						
Impact indicators	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to mineral resources depletion	kg Sb eq	1,40E-01	1,35E-01	0*	0*	4,71E-03	0*
Contribution to the soil and water acidification	kg SO_2 eq	7,87E+02	5,01E+00	0*	0*	7,82E+02	0*
Contribution to water eutrophication	kg PO_4^{3-} eq	2,99E+01	5,88E-01	1,66E-02	0*	2,93E+01	9,56E-03
Contribution to global warming	kg CO_2 eq	1,04E+05	8,84E+02	1,58E+01	0*	1,03E+05	1,74E+01
Contribution to ozone layer depletion	kg CFC11 eq	2,52E-02	8,75E-05	0*	0*	2,51E-02	0*
Contribution to photochemical oxidation	kg C_2H_4 eq	3,73E+01	3,49E-01	5,15E-03	0*	3,69E+01	3,78E-03
Resources use	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Net use of freshwater	m3	2,76E+02	6,57E+00	0*	0*	2,70E+02	0*
Total Primary Energy	MJ	2,11E+06	1,97E+04	2,23E+02	0*	2,09E+06	0*



Optional indicators	ATV930 160KW 400V WITH BU - ATV930C16N4						
Impact indicators	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to fossil resources depletion	MJ	1,07E+06	9,31E+03	2,22E+02	0*	1,06E+06	1,46E+02
Contribution to air pollution	m^3	4,61E+06	1,72E+05	6,72E+02	0*	4,43E+06	1,27E+03
Contribution to water pollution	m^3	4,41E+06	6,46E+04	2,60E+03	0*	4,34E+06	4,94E+03
Resources use	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Use of secondary material	kg	3,55E+01	3,55E+01	0*	0*	0*	0*
Total use of renewable primary energy resources	MJ	1,50E+05	5,93E+02	0*	0*	1,50E+05	0*
Total use of non-renewable primary energy resources	MJ	1,96E+06	1,91E+04	2,23E+02	0*	1,94E+06	0*
Use of renewable primary energy excluding renewable primary energy used as raw material	MJ	1,50E+05	3,97E+02	0*	0*	1,50E+05	0*
Use of renewable primary energy resources used as raw material	MJ	1,97E+02	1,97E+02	0*	0*	0*	0*
Use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	1,96E+06	1,88E+04	2,23E+02	0*	1,94E+06	0*
Use of non renewable primary energy resources used as raw material	MJ	3,37E+02	3,37E+02	0*	0*	0*	0*
Use of non renewable secondary fuels	MJ	0,00E+00	0*	0*	0*	0*	0*
Use of renewable secondary fuels	MJ	0,00E+00	0*	0*	0*	0*	0*
Waste categories	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life

Hazardous waste disposed	kg	2,16E+03	2,01E+03	0*	0*	0*	1,49E+02
Non hazardous waste disposed	kg	3,87E+05	4,57E+02	0*	0*	3,87E+05	0*
Radioactive waste disposed	kg	3,15E+02	3,26E-01	0*	0*	3,15E+02	0*
Other environmental information	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Materials for recycling	kg	9,18E+01	8,52E+00	0*	6,17E+00	0*	7,71E+01
Components for reuse	kg	0,00E+00	0*	0*	0*	0*	0*
Materials for energy recovery	kg	1,10E+00	0*	0*	0*	0*	1,10E+00
Exported Energy	MJ	4,47E+00	4,20E-01	0*	4,05E+00	0*	0*

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

Life cycle assessment performed with EIME version EIME v5.8.1, database version 2016-11 in compliance with ISO14044.

The use phase is the life cycle phase which has the greatest impact on the majority of environmental indicators (based on compulsory indicators).

According to this environmental analysis, proportionality rules may be used to evaluate the impacts of other products of this range.

According to this environmental analysis, all the impacts (excepted “Mineral resources depletion”) of other products in this family may be proportionally extrapolated by energy consumption values.
For “Mineral resources depletion”, the impacts may be proportionally extrapolated by the products weights.

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.

Registration number :	SCHN-00451-V01.01-EN	*Drafting rules*	PCR-ed3-EN-2015 04 02
Verifier accreditation N°	VH26		
Date of issue	06/2019	*Information and reference documents*	www.pep-ecopassport.org
		Validity period	5 years

Independent verification of the declaration and data, in compliance with ISO 14025 : 2010

Internal External X

The PCR review was conducted by a panel of experts chaired by Philippe Osset (SOLINNEN)

PEP are compliant with XP C08-100-1 :2014

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 »

Schneider Electric Industries SAS

Country Customer Care Center
http://www.schneider-electric.com/contact

35, rue Joseph Monier

CS 30323

F- 92506 Rueil Malmaison Cedex

RCS Nanterre 954 503 439
Capital social 896 313 776 €

www.schneider-electric.com

Published by Schneider Electric

SCHN-00451-V01.01-EN