# **Product Environmental Profile**

## ATV320 4.0kW 3PH 400V COMPACT CONTROL ATV320 – 2.2kW - 4.0kW 3PH 400V/600V; 3.0kW - 4.0kW 3PH 200V compact control



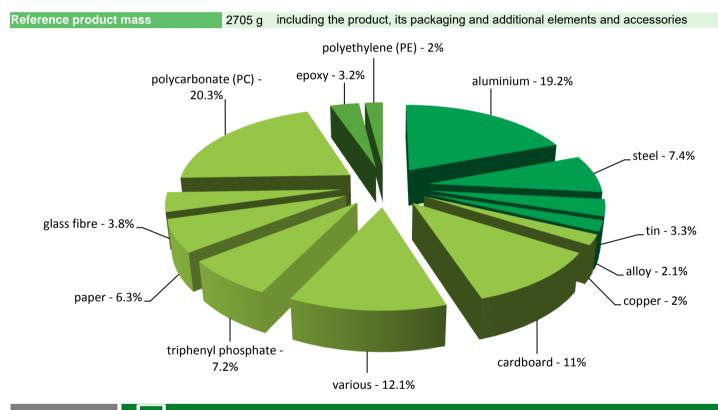




#### General information

Representative product	ATV320 4.0kW 3PH 400V COMPACT CONTROL -ATV320U40N4C
Description of the product	To control the speed and variate of an synchronous electric motor for general application
Description of the range	ATV320 – 2.2kW - 4.0kW 3PH 400V/600V; 3.0kW - 4.0kW 3PH 200V compact control 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 control the speed and variate of an synchronous electric motor for general application during

### Constituent materials



#### 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 <a href="http://www2.schneider-electric.com/sites/corporate/en/products-services/green-premium/green-premium.page">http://www2.schneider-electric.com/sites/corporate/en/products-services/green-premium/green-premium.page</a>

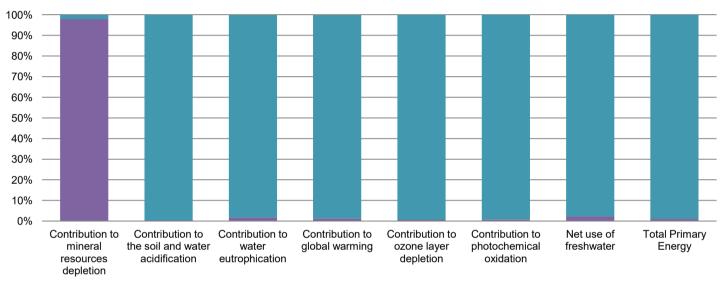
## Additional environmental information

The A	IV320 4.0kW 3PH 400V COMPACT CONTROL presents the following relevent environmental aspects						
Design	Products are designed to be "Green Premium".						
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 451 g, consisting of cardboard (65.85%), paper(33.26%), polyethylene(6.65%), packaging Packaging recycled materials is 16.66% of total packaging mass. Product distribution optimised by setting up local distribution centres						
Installation	Does not require any special installation operations						
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 Electronic card(611.65g) Electrolytic capacitor(233.30g) Cable (7.10g) Steel (127.05g) Alumimium (405.16g) PC (770.79g) 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 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).						

## **C** Environmental impacts

Reference life time	10 years					
Product category	Active products					
Installation elements	No special components needed	1				
Use scenario	Consumed power is 111.8 W 46 % of the time in Active mode, 0 W 54 % of the time in Standby mode, 0 W 0 % of the time in Sleep mode and 0 W 0 % of the time in Off mode. The product is in active mode 46% of the time with a power use of 111.8 W and in stand-by mode 54% of the time with a power use of 0 W, for 10 years					
Geographical representativeness	Worldwide					
Technological representativeness	To control the speed and variate of an synchronous electric motor for general application					
	Manufacturing	Installation	Use	End of life		
Energy model used	Energy model used: Indonesia	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	ATV320 4.0kW 3PH 400V COMPACT CONTROL - ATV320U40N4C						
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to mineral resources depletion	kg Sb eq	5,59E-03	5,47E-03	0*	0*	1,21E-04	0*
Contribution to the soil and water acidification	kg SO <sub>2</sub> eq	2,02E+01	7,64E-02	0*	0*	2,01E+01	0*
Contribution to water eutrophication	kg PO₄ <sup>3-</sup> eq	7,68E-01	1,28E-02	3,67E-04	0*	7,54E-01	3,25E-04
Contribution to global warming	kg CO <sub>2</sub> eq	2,69E+03	3,26E+01	3,49E-01	0*	2,66E+03	7,84E-01
Contribution to ozone layer depletion	kg CFC11 eq	6,51E-04	4,33E-06	0*	0*	6,46E-04	0*
Contribution to photochemical oxidation	kg $C_2H_4$ eq	9,59E-01	7,87E-03	1,14E-04	0*	9,51E-01	0*
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Net use of freshwater	m3	7,10E+00	1,61E-01	0*	0*	6,94E+00	0*
Total Primary Energy	MJ	5,45E+04	6,08E+02	0*	0*	5,39E+04	0*



■ Manufacturing ■ Distribution ■ Installation ■ Use ■ E

End of life

Optional indicators		ATV320 4.0kW 3PH 400V COMPACT CONTROL - ATV320U40N4C				
Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
MJ	2,78E+04	4,37E+02	4,90E+00	0*	2,74E+04	4,18E+00
m³	1,18E+05	4,12E+03	1,48E+01	0*	1,14E+05	3,03E+01
m³	1,18E+05	6,37E+03	5,74E+01	0*	1,12E+05	5,59E+01
Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
kg	2,31E-01	2,31E-01	0*	0*	0*	0*
MJ	3,87E+03	1,55E+01	0*	0*	3,86E+03	0*
MJ	5,06E+04	5,92E+02	0*	0*	5,00E+04	0*
MJ	3,86E+03	6,76E+00	0*	0*	3,86E+03	0*
MJ	8,76E+00	8,76E+00	0*	0*	0*	0*
MJ	5,06E+04	5,53E+02	0*	0*	5,00E+04	0*
MJ	3,95E+01	3,95E+01	0*	0*	0*	0*
MJ	0,00E+00	0*	0*	0*	0*	0*
MJ	0,00E+00	0*	0*	0*	0*	0*
	MJ m <sup>3</sup> m <sup>3</sup> MJ MJ MJ MJ MJ MJ MJ MJ	Unit         Total           MJ         2,78E+04           m³         1,18E+05           m³         1,18E+05           m³         1,18E+05           m³         1,18E+05           Mail         2,31E           MJ         2,31E-01           MJ         3,87E+03           MJ         5,06E+04           MJ         3,86E+03           MJ         5,06E+04           MJ         5,06E+04           MJ         3,95E+01           MJ         3,95E+01	UnitTotalManufacturingMJ2,78E+044,37E+02m³1,18E+054,12E+03m³1,18E+056,37E+03ManufacturingManufacturingkg2,31E-012,31E-01MJ3,87E+031,55E+01MJ5,06E+045,92E+02MJ3,86E+036,76E+00MJ5,06E+045,53E+02MJ3,95E+013,95E+01MJ0,00E+000*	UnitTotalManufacturingDistributionMJ2,78E+044,37E+024,90E+00m³1,18E+054,12E+031,48E+01m³1,18E+056,37E+035,74E+01UnitTotalManufacturingDistributionkg2,31E-012,31E-010*MJ3,87E+031,55E+010*MJ5,06E+045,92E+020*MJ3,86E+036,76E+000*MJ5,06E+045,53E+020*MJ3,95E+013,95E+010*MJ0,00E+000*0*	UnitTotalManufacturingDistributionInstallationMJ $2,78E+04$ $4,37E+02$ $4,90E+00$ $0^*$ m³ $1,18E+05$ $4,12E+03$ $1,48E+01$ $0^*$ m³ $1,18E+05$ $6,37E+03$ $5,74E+01$ $0^*$ UnitTotalManufacturingDistributionInstallationkg $2,31E-01$ $2,31E-01$ $0^*$ $0^*$ MJ $3,87E+03$ $1,55E+01$ $0^*$ $0^*$ MJ $5,06E+04$ $5,92E+02$ $0^*$ $0^*$ MJ $3,86E+03$ $6,76E+00$ $0^*$ $0^*$ MJ $5,06E+04$ $5,53E+02$ $0^*$ $0^*$ MJ $5,06E+04$ $5,53E+02$ $0^*$ $0^*$ MJ $3,95E+01$ $3,95E+01$ $0^*$ $0^*$	UnitTotalManufacturingDistributionInstallationUseMJ $2,78E+04$ $4,37E+02$ $4,90E+00$ $0^*$ $2,74E+04$ m³ $1,18E+05$ $4,12E+03$ $1,48E+01$ $0^*$ $1,14E+05$ m³ $1,18E+05$ $6,37E+03$ $5,74E+01$ $0^*$ $1,12E+05$ UnitTotalManufacturingDistributionInstallationUsekg $2,31E-01$ $2,31E-01$ $0^*$ $0^*$ $0^*$ MJ $3,87E+03$ $1,55E+01$ $0^*$ $0^*$ $3,86E+03$ MJ $5,06E+04$ $5,92E+02$ $0^*$ $0^*$ $3,86E+03$ MJ $3,86E+03$ $6,76E+00$ $0^*$ $0^*$ $0^*$ MJ $3,86E+03$ $6,76E+00$ $0^*$ $0^*$ $0^*$ MJ $5,06E+04$ $5,53E+02$ $0^*$ $0^*$ $0^*$ MJ $3,95E+01$ $3,95E+01$ $0^*$ $0^*$ $0^*$ MJ $0,00E+00$ $0^*$ $0^*$ $0^*$ $0^*$

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Waste categories	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Hazardous waste disposed	kg	3,60E+01	3,11E+01	0*	9,04E-01	0*	3,96E+00
Non hazardous waste disposed	kg	9,96E+03	1,03E+01	0*	0*	9,95E+03	0*
Radioactive waste disposed	kg	8,12E+00	7,58E-03	0*	0*	8,11E+00	0*
Other environmental information	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Materials for recycling	kg	1,60E+00	1,89E-01	0*	0*	0*	1,41E+00
Components for reuse	kg	0,00E+00	0*	0*	0*	0*	0*
Materials for energy recovery	kg	1,86E-01	4,46E-03	0*	2,25E-02	0*	1,59E-01
Exported Energy	MJ	0,00E+00	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 EIME v5.5, database version 2015-04.

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.

The mineral resources depletion of the product of the family maybe proportional extrapolated by mass of product. 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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The elements of the	present PEP cannot be compared v	with elements from another program.	
declarations »	ance with ISO 14025 : 2010 « Enviro n alignment with EN 15804 : 2012 +	onmental labels and declarations. Type III en + A1 : 2013	vironmental

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