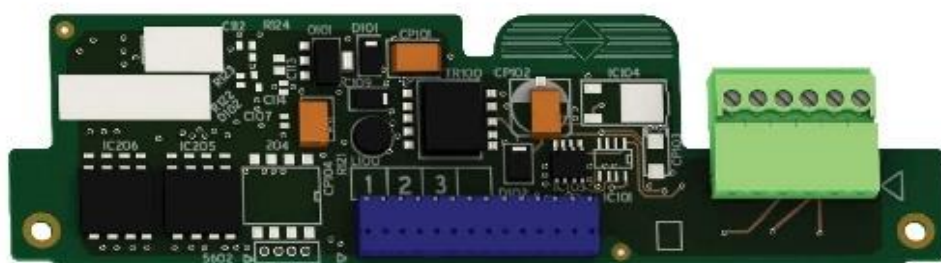


# Product Environmental Profile

Encoder interface card with RS422 compatible differential outputs  
- 5 V DC





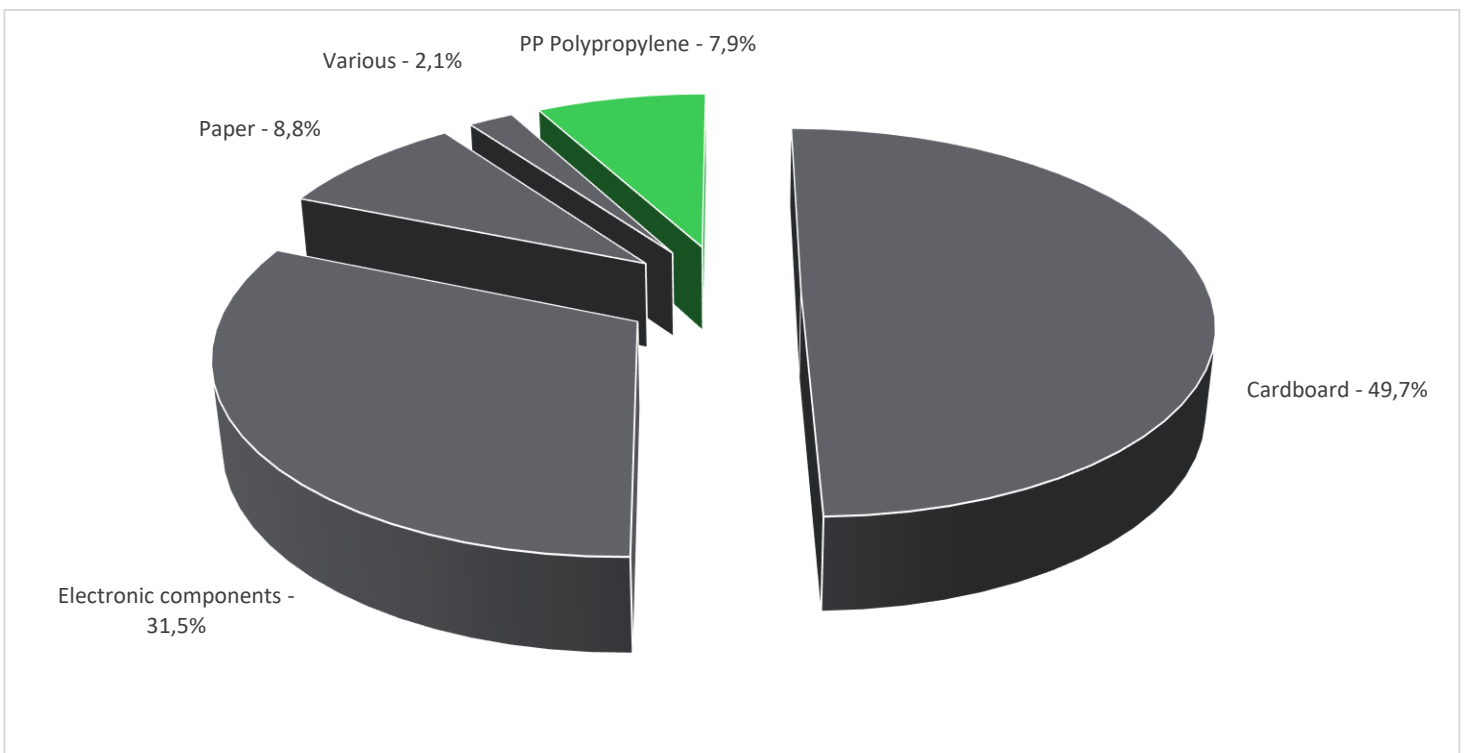
## General information

<b>Representative product</b>	Encoder interface card with RS422 compatible differential outputs - 5 V DC - VW3A3401
<b>Description of the product</b>	This encoder interface card is used in the control operation of Altivar variable speed drive.
<b>Functional unit</b>	To allow the control operation of a variable speed drive. Calculation of the environmental impacts is based on 20 years of product service lifetime. The usage profile taken into account is 100% uptime in use phase.



## Constituent materials

<b>Reference product mass</b>	200 g	including the product, its packaging and additional elements and accessories
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	Plastics	7,9%
	Metals	0,0%
	Others	92,1%



## 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

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 Encoder interface card with RS422 compatible differential outputs - 5 V DC presents the following relevant environmental aspects

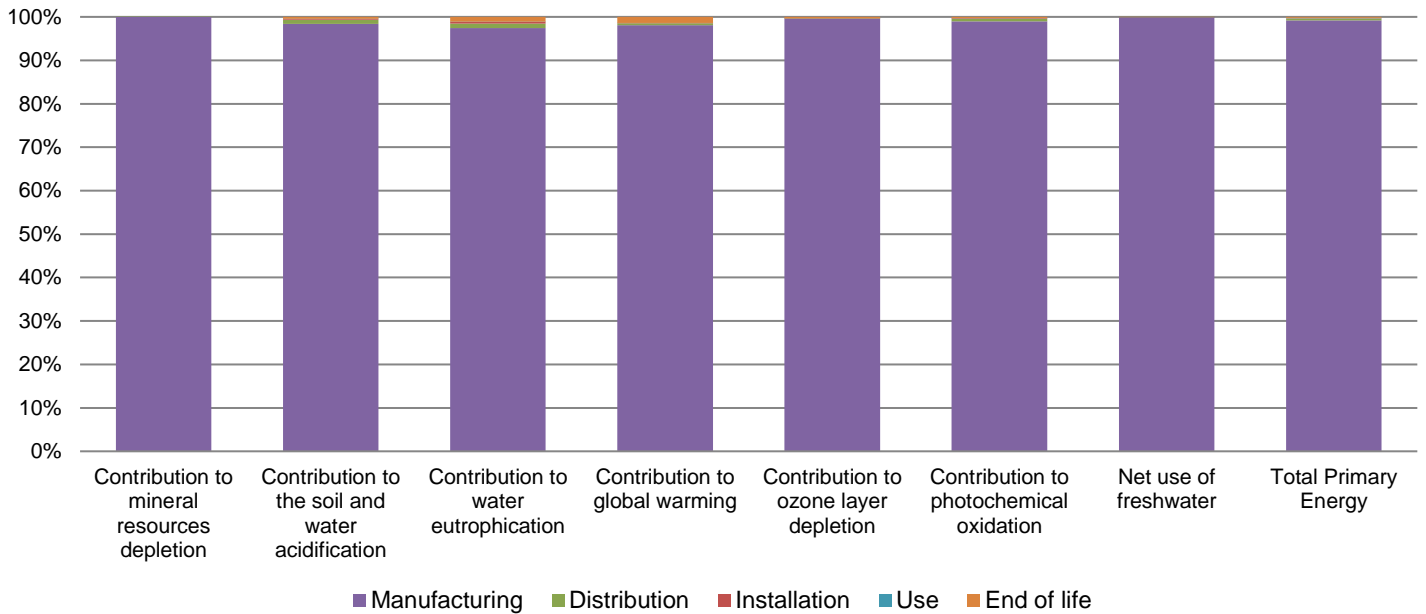
<b>Design</b>	Indicate all the eco-design improvements brought to the product at the design phase compared to previous offer range, refer to ecoDesign Way results
<b>Manufacturing</b>	Manufactured at a Schneider Electric production site ISO14001 certified
<b>Distribution</b>	Weight and volume of the packaging optimized, based on the European Union's packaging directive Packaging weight is 114,6 g, consisting of papers and Carboard (83%) and plastics (polyester and PP 17%)
<b>Installation</b>	The product does not require any installation operation.
<b>Use</b>	The product does not require special maintenance operations.
<b>End of life</b>	<p>End of life optimized to decrease the amount of waste and allow recovery of the product components and materials</p> <p>This product contains PWB carboard (75,45g) that should be separated from the stream of waste so as to optimize end-of-life treatment.</p> <p>No special end-of-life treatment required. According to countries' practices this product can enter the usual end-of-life treatment process.</p> <p>Recyclability potential: <b>11%</b> 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).</p>



## Environmental impacts

<b>Reference life time</b>	20 years			
<b>Product category</b>	Other equipments - Passive product - continuous operation			
<b>Installation elements</b>	The disposal of the packaging materials are accounted for during the installation phase (including transport to disposal).			
<b>Use scenario</b>	The product is in active mode 100% of the time with a power use of 1W for 20 years. You can also refer to support table: <a href="https://schneider-electric.box.com/s/un94xtvdhijefzip4az10j0xvmenyv3r">https://schneider-electric.box.com/s/un94xtvdhijefzip4az10j0xvmenyv3r</a>			
<b>Geographical representativeness</b>	Europe			
<b>Technological representativeness</b>	This encoder interface card is used in the control operation of Altivar variable speed drive.			
<b>Energy model used</b>	<b>Manufacturing</b>	<b>Installation</b>	<b>Use</b>	<b>End of life</b>
	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		Encoder interface card with RS422 compatible differential outputs - 5 V DC - VW3A3401					
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to mineral resources depletion	kg Sb eq	5,56E-03	5,56E-03	0*	0*	0*	0*
Contribution to the soil and water acidification	kg SO <sub>2</sub> eq	1,23E-02	1,21E-02	1,18E-04	2,90E-05	4,46E-06	4,90E-05
Contribution to water eutrophication	kg PO <sub>4</sub> <sup>3-</sup> eq	2,59E-03	2,52E-03	2,71E-05	1,26E-05	0*	2,75E-05
Contribution to global warming	kg CO <sub>2</sub> eq	6,67E+00	6,54E+00	2,58E-02	7,07E-03	0*	9,13E-02
Contribution to ozone layer depletion	kg CFC11 eq	8,44E-07	8,41E-07	0*	0*	1,43E-10	3,20E-09
Contribution to photochemical oxidation	kg C <sub>2</sub> H <sub>4</sub> eq	1,47E-03	1,46E-03	8,41E-06	2,18E-06	2,11E-07	3,72E-06
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Net use of freshwater	m <sup>3</sup>	8,34E-02	8,34E-02	0*	0*	0*	4,36E-05
Total Primary Energy	MJ	8,35E+01	8,28E+01	3,65E-01	8,91E-02	1,20E-02	2,00E-01



Optional indicators		Encoder interface card with RS422 compatible differential outpts - 5 V DC - VW3A3401					
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to fossil resources depletion	MJ	6,46E+01	6,40E+01	3,63E-01	8,67E-02	0*	1,66E-01
Contribution to air pollution	m <sup>3</sup>	7,23E+02	7,20E+02	1,10E+00	4,10E-01	0*	1,44E+00
Contribution to water pollution	m <sup>3</sup>	5,72E+02	5,63E+02	4,24E+00	1,01E+00	0*	3,65E+00
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Use of secondary material	kg	8,98E-02	8,98E-02	0*	0*	0*	0*
Total use of renewable primary energy resources	MJ	2,70E+00	2,70E+00	4,86E-04	5,55E-04	8,56E-04	0*
Total use of non-renewable primary energy resources	MJ	8,08E+01	8,01E+01	3,64E-01	8,86E-02	1,11E-02	2,00E-01
Use of renewable primary energy excluding renewable primary energy used as raw material	MJ	2,14E+00	2,14E+00	4,86E-04	5,55E-04	8,56E-04	0*
Use of renewable primary energy resources used as raw material	MJ	5,58E-01	5,58E-01	0*	0*	0*	0*
Use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	7,95E+01	7,88E+01	3,64E-01	8,86E-02	1,11E-02	2,00E-01
Use of non renewable primary energy resources used as raw material	MJ	1,29E+00	1,29E+00	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	4,16E+01	4,14E+01	0*	0*	0*	2,05E-01
Non hazardous waste disposed	kg	2,30E+00	2,28E+00	9,17E-04	1,58E-02	2,21E-03	5,05E-04
Radioactive waste disposed	kg	7,31E-04	7,26E-04	6,53E-07	6,63E-07	1,80E-06	1,48E-06
Other environmental information	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Materials for recycling	kg	1,19E-01	1,04E-02	0*	1,01E-01	0*	8,41E-03
Components for reuse	kg	0,00E+00	0*	0*	0*	0*	0*
Materials for energy recovery	kg	2,58E-02	0*	0*	0*	0*	2,58E-02
Exported Energy	MJ	3,02E-04	2,82E-05	0*	2,74E-04	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 2018-11 in compliance with ISO14044.

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

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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<i>Validity period</i>	5 years	<i>Information and reference documents</i>	<a href="http://www.pep-ecopassport.org">www.pep-ecopassport.org</a>
<i>Independent verification of the declaration and data</i>			
Internal	X	External	
<i>The elements of the present PEP cannot be compared with elements from another program.</i>			
<i>Document in compliance with ISO 14021:2016 « Environmental labels and declarations - Self-declared environmental claims (Type II environmental labelling) »</i>			

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