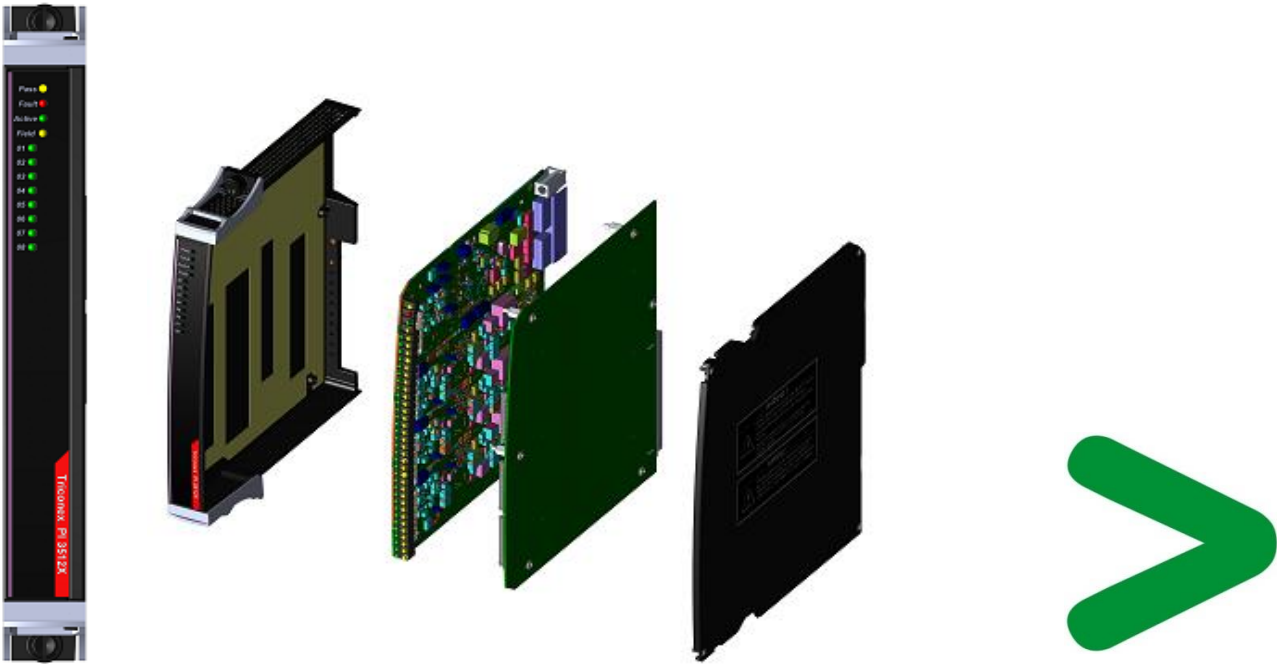


# Product Environmental Profile

## Tricon CX Pulse Input Module

### Tricon CX I/O modules





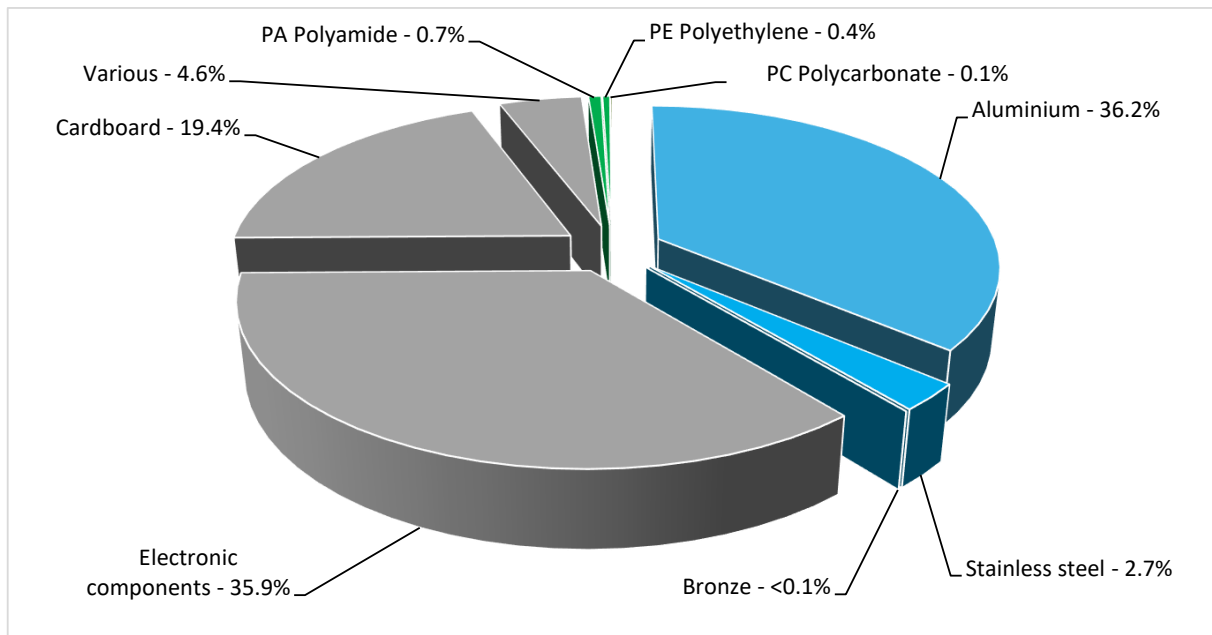
## General information

<b>Representative product</b>	Tricon CX Pulse Input Module - 3512X
<b>Description of the product</b>	Pulse Input Module is part of Tricon CX Safety System which is based on the 2003 TMR Fault Tolerant Architecture. This module will measure 0.5 Hz to 32000 Hz Frequency Input. This module can tolerate single fault and provides measurements from Pulse Inputs.
<b>Description of the range</b>	All the I/O modules functionality is similar to present module in Tricon CX system  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.
<b>Functional unit</b>	Captures and measures input signal transitions of frequencies ranging from 0.5 Hz to 32,000 Hz for 100% usage during 10 years.



## Constituent materials

**Reference product mass** 1530 g including the product, its packaging and additional elements and accessories



Plastics	1.2%
Metals	38.9%
Others	59.9%



## Substance assessment

Products of this range are designed in conformity with the requirements of the RoHS directive (European Directive 2011/65/EU of 2 January 2013, amended in March 2015, 2015/863/EU and in November 2017, 2017/2102/EU) 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), Bis (2-ethylhexyl)phthalate - DEHP, Benzyl butyl phthalate– BBP, Dibutyl phthalate - DBP, Diisobutyl phthalate - DIBP) 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 Tricon CX Pulse Input Module presents the following relevant environmental aspects

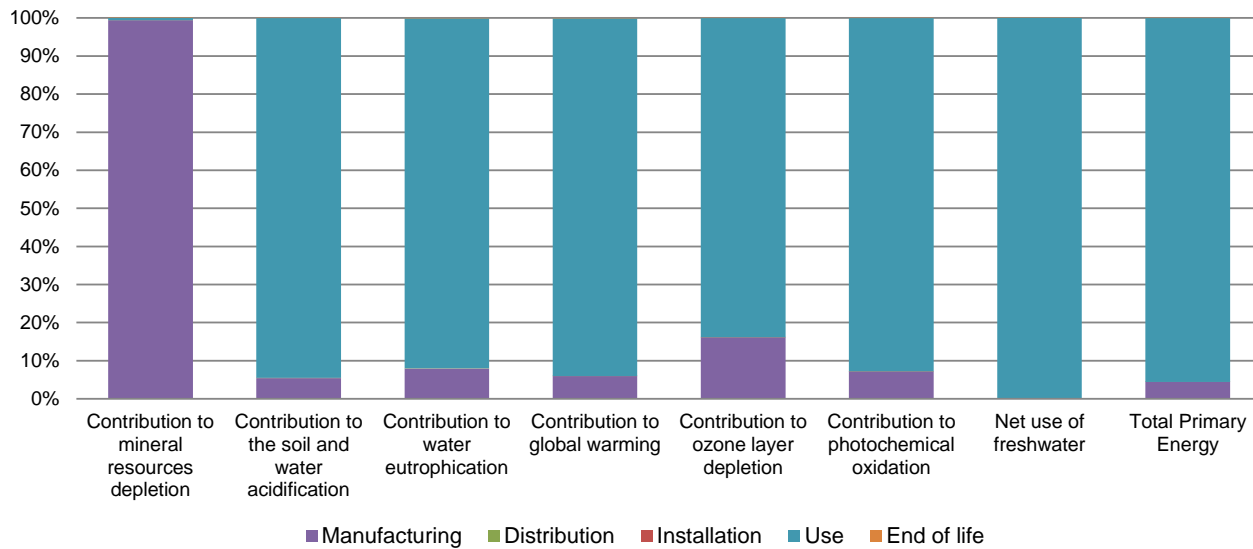
<b>Manufacturing</b>	Manufactured at a Schneider Electric production site ISO14001 certified
<b>Distribution</b>	Weight and volume of the packaging optimized, based on the European Union's packaging directive Packaging weight is 300 g, consisting of cardboard (99.9%), paper (0.1%) Product distribution optimised by setting up local distribution centres
<b>Installation</b>	The System and Module installation instructions are given in the Tricon CX Installation Guide, Safety Considerations Guide and Field Terminations Guide as applicable.
<b>Use</b>	The product does not require special maintenance operations.
<b>End of life</b>	End of life optimized to decrease the amount of waste and allow recovery of the product components and materials  This product contains Electronic Board(445g) 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 <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>  Recyclability potential: <b>50%</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).



## Environmental impacts

<b>Reference life time</b>	10 years		
<b>Product category</b>	Other equipments - Active product		
<b>Installation elements</b>	No special components needed		
<b>Use scenario</b>	The product is for high availability applications for process safety. The product is in active mode "100% ON" for 10 years with a power consumption of 15 W.		
<b>Geographical representativeness</b>	USA, Europe		
<b>Technological representativeness</b>	Pulse Input Module is part of Tricon CX Safety System which is based on the 2oo3 TMR Fault Tolerant Architecture. This module will measure 0.5 Hz to 32000 Hz Frequency Input. This module can tolerate single fault and provides measurements from Pulse Inputs.		
<b>Energy model used</b>	<b>Manufacturing</b>	<b>Installation</b>	<b>Use</b>
	Energy model used: Mexico	Electricity mix AC; Europe consistent; consumption mix, at power plant; US	Electricity mix AC; Europe consistent; consumption mix, at power plant; US
			<b>End of life</b>
			Electricity mix AC; Europe consistent; consumption mix, at power plant; US

Compulsory indicators		Tricon CX Pulse Input Module - 3512X					
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to mineral resources depletion	kg Sb eq	6.09E-03	6.06E-03	0*	0*	3.40E-05	0*
Contribution to the soil and water acidification	kg SO <sub>2</sub> eq	1.92E+00	1.04E-01	9.01E-04	0*	1.81E+00	6.11E-04
Contribution to water eutrophication	kg PO <sub>4</sub> <sup>3-</sup> eq	2.24E-01	1.76E-02	2.08E-04	0*	2.06E-01	2.95E-04
Contribution to global warming	kg CO <sub>2</sub> eq	8.49E+02	5.05E+01	1.97E-01	0*	7.97E+02	9.11E-01
Contribution to ozone layer depletion	kg CFC11 eq	4.79E-05	7.75E-06	0*	0*	4.02E-05	3.28E-08
Contribution to photochemical oxidation	kg C <sub>2</sub> H <sub>4</sub> eq	1.71E-01	1.23E-02	6.43E-05	0*	1.58E-01	5.14E-05
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Net use of freshwater	m3	1.17E+03	2.56E-01	0*	0*	1.17E+03	0*
Total Primary Energy	MJ	1.54E+04	6.85E+02	2.79E+00	0*	1.48E+04	2.64E+00



Optional indicators		Tricon CX Pulse Input Module - 3512X					
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to fossil resources depletion	MJ	1.03E+04	4.63E+02	2.77E+00	0*	9.80E+03	2.16E+00
Contribution to air pollution	m <sup>3</sup>	6.83E+04	5.39E+03	8.40E+00	0*	6.28E+04	1.90E+01
Contribution to water pollution	m <sup>3</sup>	4.03E+04	4.87E+03	3.25E+01	0*	3.54E+04	4.01E+01
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Use of secondary material	kg	2.76E-01	2.76E-01	0*	0*	0*	0*
Total use of renewable primary energy resources	MJ	8.62E+02	2.81E+01	0*	0*	8.34E+02	0*
Total use of non-renewable primary energy resources	MJ	1.46E+04	6.57E+02	2.79E+00	0*	1.39E+04	2.64E+00
Use of renewable primary energy excluding renewable primary energy used as raw material	MJ	8.62E+02	2.81E+01	0*	0*	8.34E+02	0*
Use of renewable primary energy resources used as raw material	MJ	0.00E+00	0*	0*	0*	0*	0*
Use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	1.46E+04	6.48E+02	2.79E+00	0*	1.39E+04	2.64E+00
Use of non renewable primary energy resources used as raw material	MJ	9.37E+00	9.37E+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	1.49E+02	1.08E+02	0*	0*	3.83E+01	2.44E+00
Non hazardous waste disposed	kg	1.30E+03	2.90E+01	0*	0*	1.27E+03	0*
Radioactive waste disposed	kg	8.46E-01	2.07E-02	0*	0*	8.25E-01	0*
Other environmental information	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Materials for recycling	kg	1.03E+00	9.93E-02	0*	2.99E-01	0*	6.28E-01
Components for reuse	kg	0.00E+00	0*	0*	0*	0*	0*
Materials for energy recovery	kg	2.44E-01	0*	0*	0*	0*	2.44E-01
Exported Energy	MJ	9.48E-04	8.92E-05	0*	8.59E-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 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.

Depending on the impact analysis, the environmental indicators of other products in this family may be proportional extrapolated by mass of the 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.*

<i>Registration number</i>	ENVPEP2002014_V1	<i>Drafting rules</i>	PCR-ed3-EN-2015 04 02
<i>Date of issue</i>	06/2021	<i>Supplemented by</i>	PSR-0005-ed2-EN-2016 03 29
<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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