

Product Environmental Profile

Compact FBM219 Discrete I/O Interface Module

Discrete I/O Compact 200 Series





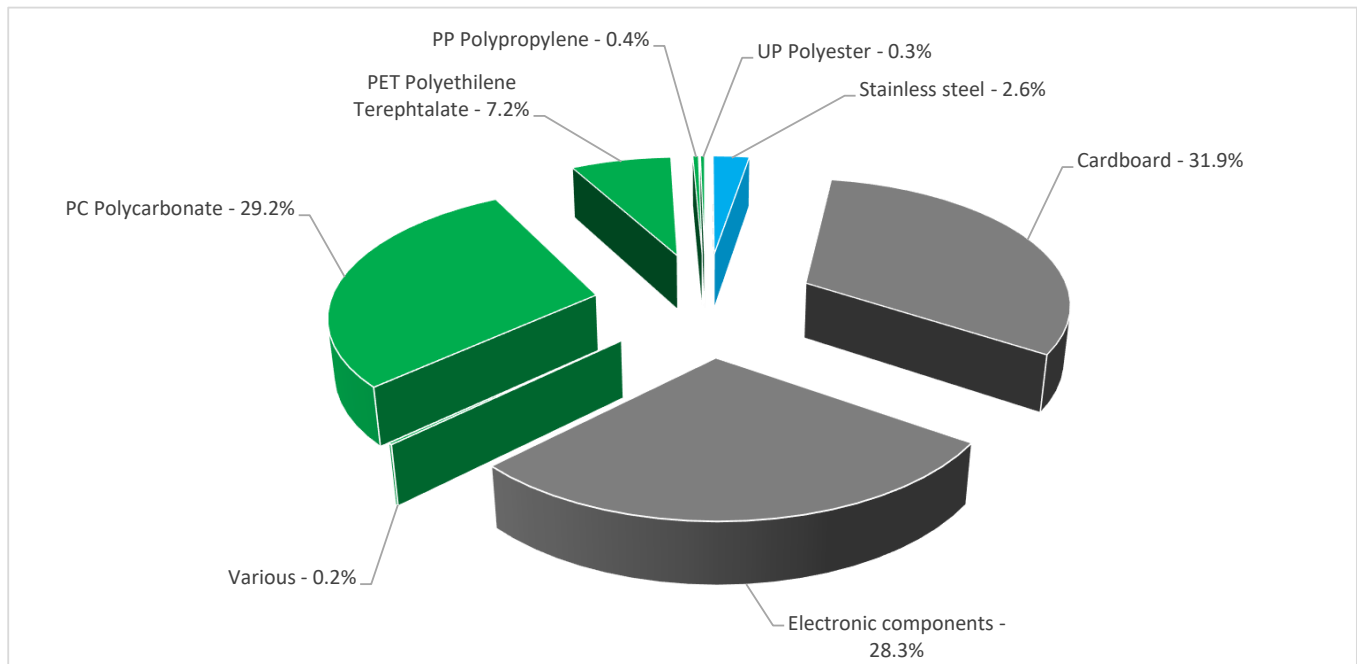
General information

Representative product	Compact FBM219 Discrete I/O Interface Module - RH101GG
Description of the product	The Compact FBM219 Discrete I/O Module has 24 discrete input channels and 8 discrete output channels, Depending on the type of I/O signal required.
Description of the range	The Compact Discrete I/O Modules contain discrete input and output channels, Associated termination assemblies support discrete input or output signals at different voltages. 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	The FBM219 accepts communication from either path (A or B) of the 2 Mbps Fieldbus - should one path fail or be switched at the system level, the TAs contain current limiting devices, fuses, relays, or relay outputs with internal or external power source and fusing, during its 10 years lifetime with a maximum power consumption of 6 W, at 100% use rate.



Constituent materials

Reference product mass	305 g including the product, its packaging and additional elements and accessories
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Plastics	37.1%
Metals	2.6%
Others	60.4%



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

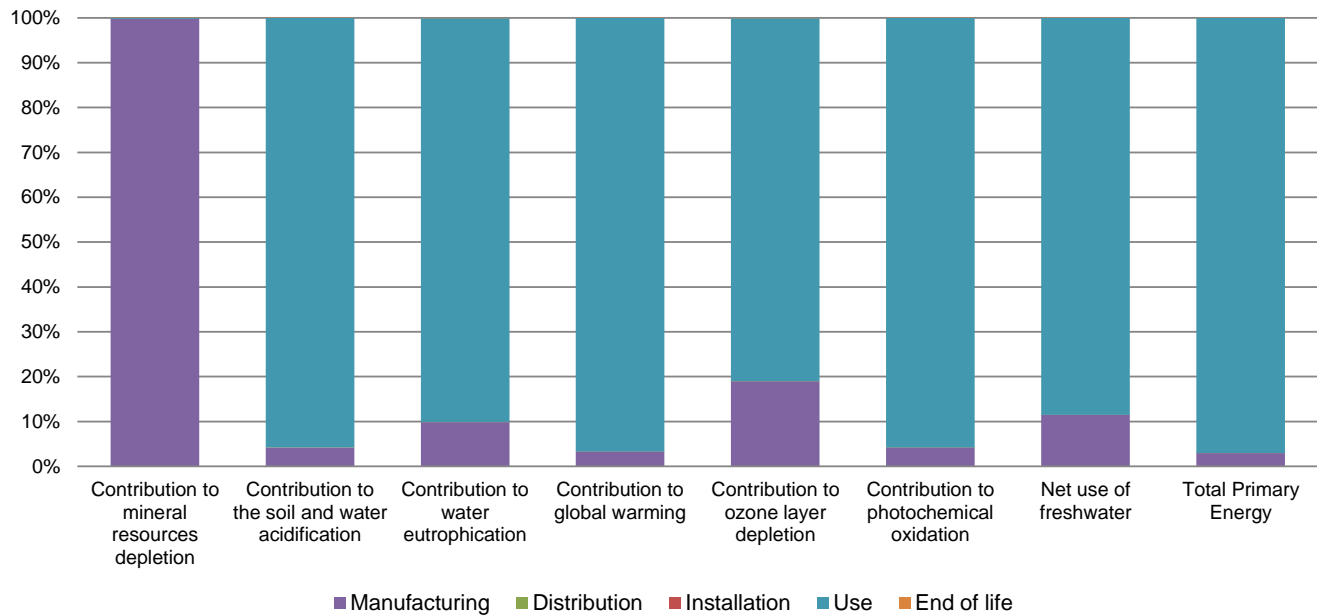
The Compact FBM219 Discrete I/O Interface Module presents the following relevant environmental aspects

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 120 g, consisting of Cardboard (81.7%) and PET film (18.3%)
Installation	FBM219 Module does not require any installation operations.
Use	The product does not require special maintenance operations.
End of life	<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 Electronic boards (86.9g) that should be separated from the stream of waste so as to optimize end-of-life treatment.</p> <p>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</p> <p>Recyclability potential: 11% 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

Reference life time	10 years			
Product category	Other equipments - Active product			
Installation elements	No special components needed for installation			
Use scenario	The product is in active mode 100% of the time with a power use of 6 W for 10 years			
Geographical representativeness	USA			
Technological representativeness	The Compact FBM219 Discrete I/O Module has 24 discrete input channels and 8 discrete output channels, Depending on the type of I/O signal required.			
Energy model used	Manufacturing	Installation	Use	End of life
	Energy model used: Mexico	Electricity mix; AC; consumption mix, at consumer; 120V; US	Electricity mix; AC; consumption mix, at consumer; 120V; US	Electricity mix; AC; consumption mix, at consumer; 120V; US

Compulsory indicators		Compact FBM219 Discrete I/O Interface Module - RH101GG					
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to mineral resources depletion	kg Sb eq	1.85E-03	1.85E-03	0*	0*	3.58E-06	0*
Contribution to the soil and water acidification	kg SO ₂ eq	3.64E-01	1.51E-02	1.80E-04	0*	3.48E-01	9.58E-05
Contribution to water eutrophication	kg PO ₄ ³⁻ eq	1.02E-01	1.01E-02	4.14E-05	1.39E-05	9.18E-02	4.85E-05
Contribution to global warming	kg CO ₂ eq	3.76E+02	1.23E+01	3.94E-02	0*	3.64E+02	1.53E-01
Contribution to ozone layer depletion	kg CFC11 eq	8.15E-06	1.55E-06	0*	0*	6.60E-06	5.21E-09
Contribution to photochemical oxidation	kg C ₂ H ₄ eq	5.83E-02	2.44E-03	1.28E-05	0*	5.58E-02	7.85E-06
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Net use of freshwater	m3	7.27E-01	8.35E-02	0*	0*	6.43E-01	7.67E-05
Total Primary Energy	MJ	5.05E+03	1.50E+02	5.56E-01	0*	4.90E+03	0*



Optional indicators		Compact FBM219 Discrete I/O Interface Module - RH101GG					
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to fossil resources depletion	MJ	4.54E+03	1.12E+02	5.53E-01	0*	4.43E+03	0*
Contribution to air pollution	m ³	3.21E+04	1.17E+03	0*	0*	3.09E+04	0*
Contribution to water pollution	m ³	1.95E+04	1.55E+03	6.47E+00	0*	1.79E+04	6.50E+00
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Use of secondary material	kg	8.56E-02	8.56E-02	0*	0*	0*	0*
Total use of renewable primary energy resources	MJ	3.01E+02	6.71E+00	0*	0*	2.94E+02	0*
Total use of non-renewable primary energy resources	MJ	4.75E+03	1.43E+02	5.56E-01	0*	4.61E+03	0*
Use of renewable primary energy excluding renewable primary energy used as raw material	MJ	3.01E+02	6.61E+00	0*	0*	2.94E+02	0*
Use of renewable primary energy resources used as raw material	MJ	9.93E-02	9.93E-02	0*	0*	0*	0*
Use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	4.74E+03	1.38E+02	5.56E-01	0*	4.61E+03	0*
Use of non renewable primary energy resources used as raw material	MJ	5.03E+00	5.03E+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	4.04E+01	3.03E+01	0*	0*	9.73E+00	4.42E-01
Non hazardous waste disposed	kg	5.87E+01	3.03E+00	0*	1.82E-02	5.56E+01	0*
Radioactive waste disposed	kg	7.18E-03	1.45E-03	9.96E-07	7.49E-07	5.73E-03	2.70E-06
Other environmental information	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Materials for recycling	kg	1.45E-01	2.06E-02	0*	1.04E-01	0*	2.07E-02
Components for reuse	kg	0.00E+00	0*	0*	0*	0*	0*
Materials for energy recovery	kg	4.19E-02	0*	0*	0*	0*	4.19E-02
Exported Energy	MJ	3.10E-04	2.91E-05	0*	2.81E-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 v5.9.1, 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.

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	ENVPEP2104018_V1	Drafting rules	PCR-ed3-EN-2015 04 02
Date of issue	06/2021		
Validity period	5 years	Information and reference documents	www.pep-ecopassport.org
<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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<http://www2.schneider-electric.com/sites/corporate/en/support/operations/local-operations/local-operations.page>

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