

Product Environmental Profile

Modicon TMH2GDB





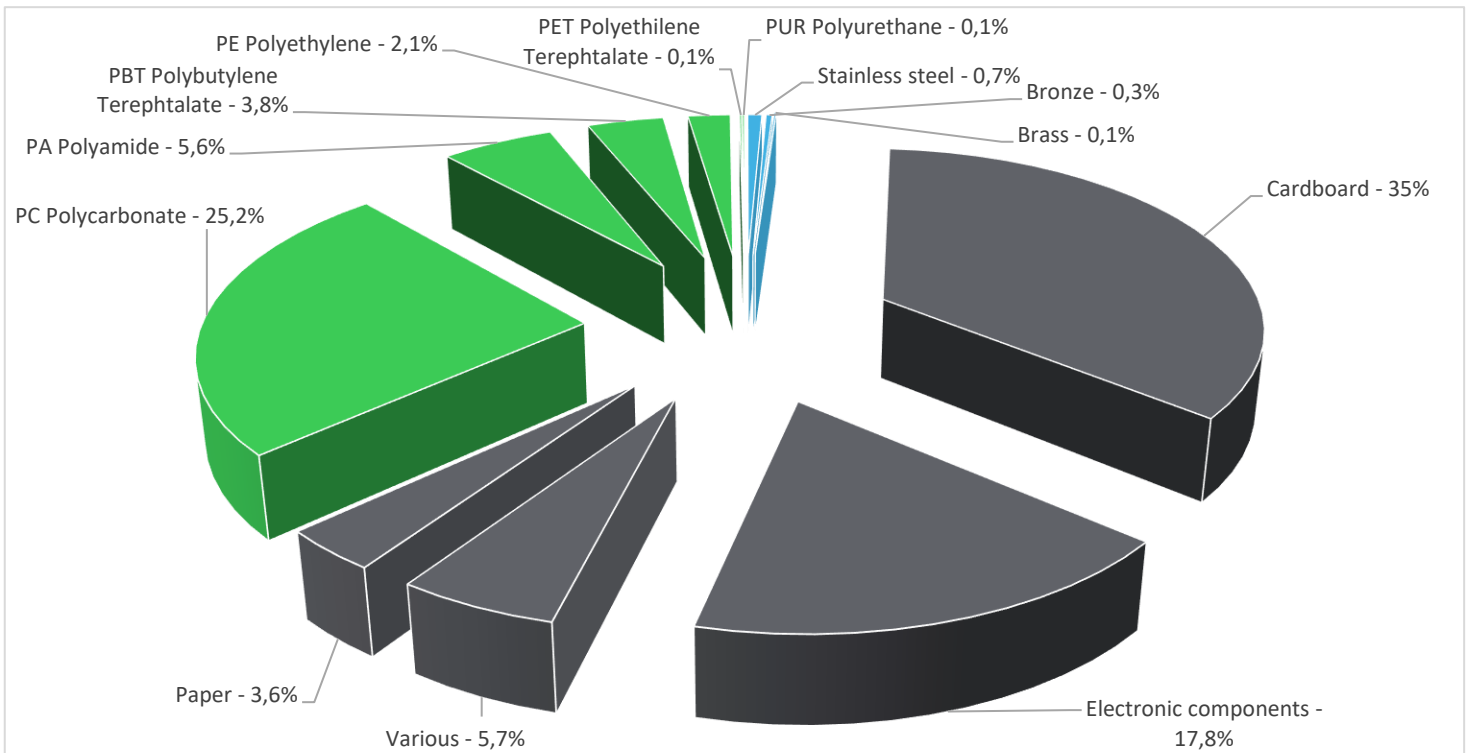
General information

Representative product	Modicon TMH2GDB - TMH2GDB
Description of the range	The Modicon TMH2GDB (Remote Graphic Display) is a local control unit designed for the Modicon M221 Controllers that perform control for applications using I/O communication from 16 to 40 I/Os. 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 perform monitoring, commissioning, operating, and maintenance operations for the Modicon M221 Logic Controller range at 0,417W with a 100% use rate during 10 years.



Constituent materials

Reference product mass	332,4 g including the product, its packaging and additional elements and accessories
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Plastics	36,9%
Metals	1,1%
Others	62,1%

Substance assessment

Products of this range are designed in conformity with the requirements of the RoHS directive (European Directive 2011/05/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

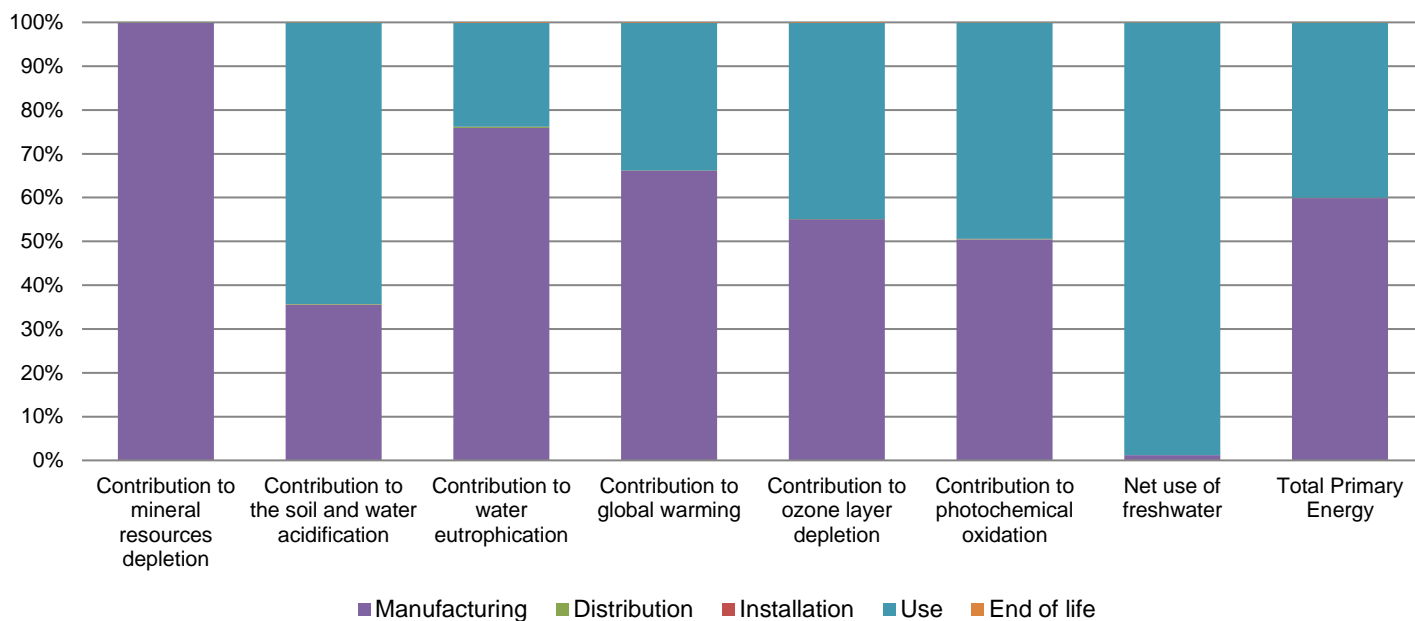
The Modicon TMH2GDB presents the following relevant environmental aspects

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 128,4 g, consisting of cardboard (91%) and paper (9%) Product distribution optimised by setting up local distribution centres
Installation	The product does not require any specific 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 Electronic card (27g) and LCD (24,5g) 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: 27% 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 specific installation operation.			
Use scenario	The product is in active mode 100% of the time and stand-by mode 0% of the time with a power use of 0,417W for 10 years.			
Geographical representativeness	Europe			
Energy model used	Manufacturing	Installation	Use	End of life
	Energy model used: China	Electricity grid mix; AC; consumption mix, at consumer; < 1kV; EU-27	Electricity grid mix; AC; consumption mix, at consumer; < 1kV; EU-27	Electricity grid mix; AC; consumption mix, at consumer; < 1kV; EU-27

Compulsory indicators		Modicon TMH2GDB - TMH2GDB					
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to mineral resources depletion	kg Sb eq	1,41E-03	1,41E-03	0*	0*	1,56E-06	0*
Contribution to the soil and water acidification	kg SO ₂ eq	1,16E-01	4,13E-02	1,96E-04	2,90E-05	7,47E-02	7,73E-05
Contribution to water eutrophication	kg PO ₄ ³⁻ eq	1,91E-02	1,45E-02	4,51E-05	7,04E-06	4,51E-03	2,98E-05
Contribution to global warming	kg CO ₂ eq	5,31E+01	3,51E+01	4,29E-02	6,95E-03	1,79E+01	7,95E-02
Contribution to ozone layer depletion	kg CFC11 eq	2,60E-06	1,43E-06	0*	0*	1,17E-06	3,02E-09
Contribution to photochemical oxidation	kg C ₂ H ₄ eq	8,32E-03	4,20E-03	1,40E-05	2,16E-06	4,10E-03	7,21E-06
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Net use of freshwater	m3	6,57E+01	7,99E-01	0*	0*	6,49E+01	0*
Total Primary Energy	MJ	8,94E+02	5,35E+02	6,06E-01	9,08E-02	3,57E+02	3,52E-01



Optional indicators		Modicon TMH2GDB - TMH2GDB					
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to fossil resources depletion	MJ	7,12E+02	5,08E+02	6,03E-01	9,01E-02	2,03E+02	2,86E-01
Contribution to air pollution	m ³	4,29E+03	3,52E+03	1,82E+00	0*	7,70E+02	2,55E+00
Contribution to water pollution	m ³	2,91E+03	2,15E+03	7,05E+00	1,05E+00	7,39E+02	4,20E+00
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Use of secondary material	kg	1,34E-02	1,34E-02	0*	0*	0*	0*
Total use of renewable primary energy resources	MJ	5,15E+01	6,07E+00	0*	0*	4,55E+01	0*
Total use of non-renewable primary energy resources	MJ	8,42E+02	5,29E+02	6,06E-01	9,06E-02	3,12E+02	3,52E-01
Use of renewable primary energy excluding renewable primary energy used as raw material	MJ	4,92E+01	3,76E+00	0*	0*	4,55E+01	0*
Use of renewable primary energy resources used as raw material	MJ	2,31E+00	2,31E+00	0*	0*	0*	0*
Use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	8,37E+02	5,24E+02	6,06E-01	9,06E-02	3,12E+02	3,52E-01
Use of non renewable primary energy resources used as raw material	MJ	5,58E+00	5,58E+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	2,73E+01	2,69E+01	0*	0*	9,33E-03	3,89E-01
Non hazardous waste disposed	kg	7,37E+01	6,95E+00	0*	0*	6,67E+01	0*
Radioactive waste disposed	kg	4,58E-02	1,25E-03	0*	0*	4,46E-02	0*
Other environmental information	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Materials for recycling	kg	2,08E-01	2,58E-02	0*	1,28E-01	0*	5,46E-02
Components for reuse	kg	0,00E+00	0*	0*	0*	0*	0*
Materials for energy recovery	kg	1,87E-02	0*	0*	0*	0*	1,87E-02
Exported Energy	MJ	4,06E-04	3,82E-05	0*	3,68E-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 v5.9.3, database version 2020-12 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).

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	ENVPEP1409016_V2	Drafting rules	PCR-ed3-EN-2015 04 02
Date of issue	09/2022		
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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ENVPEP1409016_V2

Published by Schneider Electric

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09/2022