

# Product Environmental Profile

## FRONT DISPLAY MODULE - FDM 121





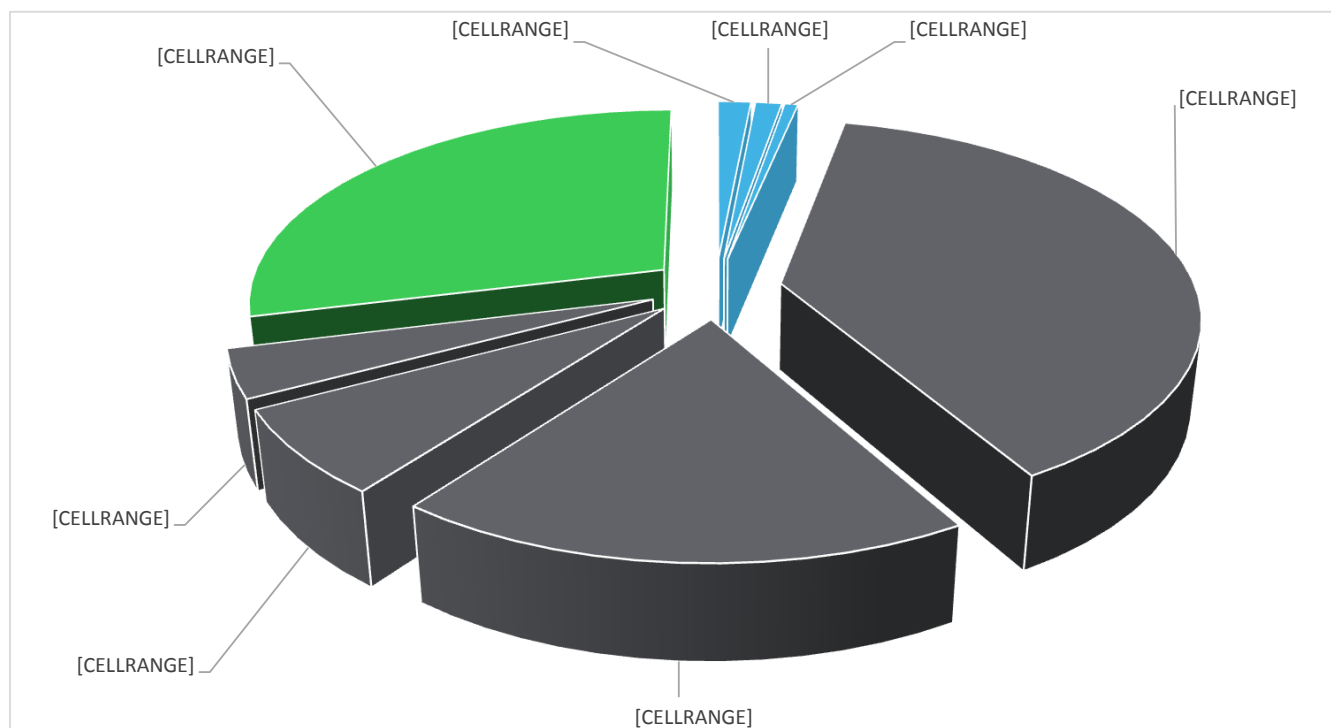
## General information

Representative product	FRONT DISPLAY MODULE - FDM 121 - TRV00121
Description of the product	The FDM121 display unit can control the circuit breaker equipped with a motor mechanism or the pre-defined application performed by the IO module. The FDM121 display unit is compatible with Masterpact™ NT/NW, Compact™ NS, Compact™ NSX, and PowerPact™ circuit breakers.
Functional unit	This product displays the measurements, alarms, and operating assistance data from the intelligent modular unit (IMU) and can control the circuit breaker equipped with a motor mechanism or the pre-defined application performed by the IO module during 10 years and 100% use rate in accordance to product standard 61326-1 and meeting the safety standard 61010-2.



## Constituent materials

Reference product mass	250 g	including the product, its packaging and additional elements and accessories
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Plastics	28,9%
Metals	3,3%
Others	67,8%



## 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

<http://www2.schneider-electric.com/sites/corporate/en/products-services/green-premium/green-premium.page>



## Additional environmental information

The FRONT DISPLAY MODULE - FDM 121 presents the following relevant environmental aspects

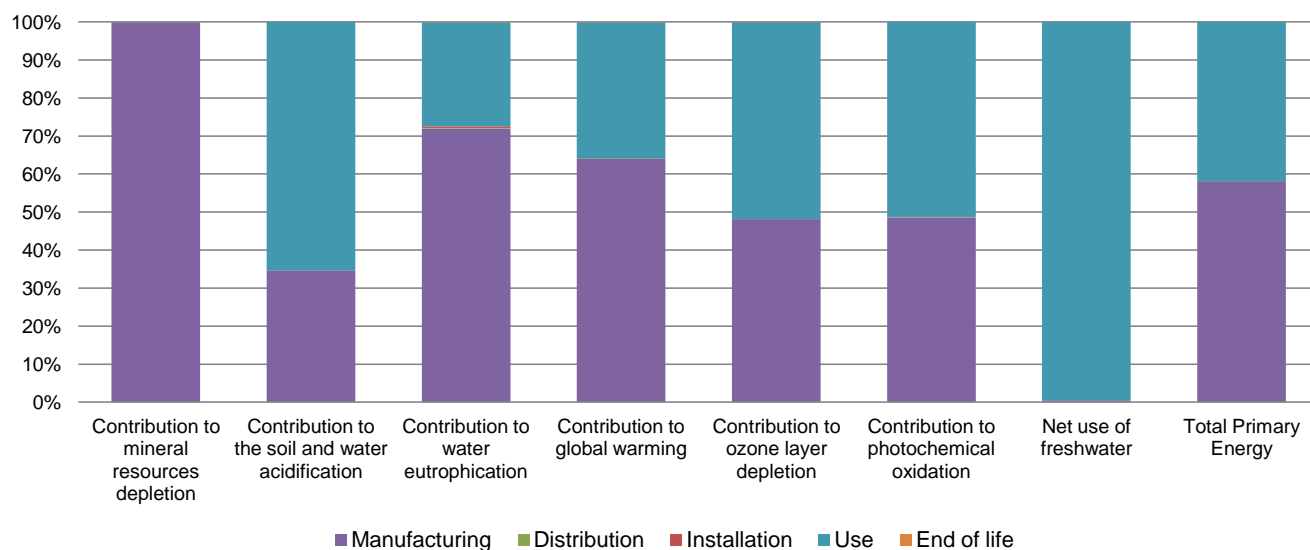
<b>Manufacturing</b>	Manufactured at a Schneider Electric production site ISO14001 certified
<b>Distribution</b>	Weight and volume of the packaging optimized, based on the European Union's packaging directive Packaging weight is 63.2 g, consisting of Cardboard (72.8%) and Paper (27.2%) Product distribution optimised by setting up local distribution centres
<b>Installation</b>	The product does not require special installation procedure and requires little to no energy to install. The disposal of the packaging materials are accounted for during the installation phase (including transport to disposal).
<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 FDM121 V3 PCBA ASSEMBLY with Electronic parts (42.7g) and LCD Display Panel (42.5g) 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  <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>6%</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 in active mode with a power use of 0.72W at 100% of the time for 10 years			
<b>Geographical representativeness</b>	Europe (EMEA)			
<b>Technological representativeness</b>	The FDM121 display unit can control the circuit breaker equipped with a motor mechanism or the pre-defined application performed by the IO module. The FDM121 display unit is compatible with Masterpact™ NT/NW, Compact™ NS, Compact™ NSX, and PowerPact™ circuit breakers.			
<b>Energy model used</b>	<b>Manufacturing</b>	<b>Installation</b>	<b>Use</b>	<b>End of life</b>
	Plant location: WPF-WUXI, 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		FRONT DISPLAY MODULE - FDM 121 - TRV00121					
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to mineral resources depletion	kg Sb eq	3,20E-03	3,20E-03	0*	0*	2,69E-06	0*
Contribution to the soil and water acidification	kg SO <sub>2</sub> eq	1,97E-01	6,79E-02	1,47E-04	0*	1,29E-01	7,03E-05
Contribution to water eutrophication	kg PO <sub>4</sub> <sup>3-</sup> eq	2,85E-02	2,05E-02	3,39E-05	1,35E-04	7,78E-03	2,75E-05
Contribution to global warming	kg CO <sub>2</sub> eq	8,64E+01	5,53E+01	3,23E-02	7,86E-02	3,09E+01	7,43E-02
Contribution to ozone layer depletion	kg CFC11 eq	3,89E-06	1,87E-06	0*	0*	2,01E-06	2,73E-09
Contribution to photochemical oxidation	kg C <sub>2</sub> H <sub>4</sub> eq	1,38E-02	6,72E-03	1,05E-05	1,86E-05	7,08E-03	6,51E-06
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Net use of freshwater	m3	1,13E+02	5,75E-01	0*	0*	1,12E+02	0*
Total Primary Energy	MJ	1,47E+03	8,55E+02	4,56E-01	0*	6,17E+02	3,18E-01



Optional indicators		FRONT DISPLAY MODULE - FDM 121 - TRV00121					
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to fossil resources depletion	MJ	1,19E+03	8,42E+02	4,53E-01	0*	3,51E+02	2,94E-01
Contribution to air pollution	m³	6,90E+03	5,57E+03	1,37E+00	0*	1,33E+03	2,32E+00
Contribution to water pollution	m³	4,51E+03	3,22E+03	5,30E+00	3,52E+00	1,28E+03	3,85E+00
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Use of secondary material	kg	2,00E-02	2,00E-02	0*	0*	0*	0*
Total use of renewable primary energy resources	MJ	8,32E+01	4,69E+00	0*	0*	7,85E+01	0*
Total use of non-renewable primary energy resources	MJ	1,39E+03	8,50E+02	4,55E-01	0*	5,39E+02	3,17E-01
Use of renewable primary energy excluding renewable primary energy used as raw material	MJ	8,22E+01	3,74E+00	0*	0*	7,85E+01	0*
Use of renewable primary energy resources used as raw material	MJ	9,49E-01	9,49E-01	0*	0*	0*	0*
Use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	1,39E+03	8,46E+02	4,55E-01	0*	5,39E+02	3,17E-01
Use of non renewable primary energy resources used as raw material	MJ	3,68E+00	3,68E+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	7,97E+00	7,56E+00	0*	0*	1,61E-02	3,89E-01
Non hazardous waste disposed	kg	1,26E+02	1,08E+01	0*	6,52E-02	1,15E+02	0*
Radioactive waste disposed	kg	7,86E-02	1,62E-03	0*	0*	7,69E-02	0*
Other environmental information	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Materials for recycling	kg	2,14E-02	1,02E-02	0*	0*	0*	1,12E-02
Components for reuse	kg	0,00E+00	0*	0*	0*	0*	0*
Materials for energy recovery	kg	1,83E-02	5,90E-04	0*	0*	0*	1,78E-02
Exported Energy	MJ	9,83E-03	0*	0*	9,83E-03	0*	0*

\* represents less than 0.01% of the total life cycle of the reference flow

Life cycle assessment performed with EIME version EIME v5.6.0.1, database version 2016-11.


The Manufacturing (M) phase is the life cycle phase which has the greatest impact on the majority of environmental indicators such as Abiotic depletion (elements, ultimate reserves) (ADPe for EN15804) and Eutrophication (fate not incl.) (EP for EN15804) based on the ratio of the product's mass and compulsory indicators.

Depending on the impact analysis, for the impacts on the Acidification potential of soil and water (total average for Europe) (A for PEP), Global warming (GWP100) (GWP for EN15804), Ozone layer depletion ODP steady state (ODP for EN15804), Photochemical oxidation (high NOx) (POCP for EN15804) & Total Primary Energy (TPE), half of the impacts may be based on the ratio of the product's mass and half may be based on the ratio of the product's electricity use.

The USE (U) phase is responsible for the major impacts on the Net use of freshwater (NUFW).

*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 :	SCHN-00255-V01.01-EN	Drafting rules	PCR-ed3-EN-2015 04 02
Verifier accreditation N°	VH25	Supplemented by	PSR-0005-ed2-EN-2016 03 29
Date of issue	10/2017	Information and reference documents	<a href="http://www.pep-ecopassport.org">www.pep-ecopassport.org</a>
		Validity period	5 years
Independent verification of the declaration and data, in compliance with ISO 14025 : 2010			
Internal	External	X	
The PCR review was conducted by a panel of experts chaired by Philippe Osset (SOLINNEN)			
PEP are compliant with XP C08-100-1 :2014			
The elements of the present PEP cannot be compared with elements from another program.			
Document in compliance with ISO 14025 : 2010 « Environmental labels and declarations. Type III environmental declarations »			





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Published by Schneider Electric

SCHN-00255-V01.01-EN

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10/2017