Product Environmental Profile

ClimaSys Connected Cooling Unit

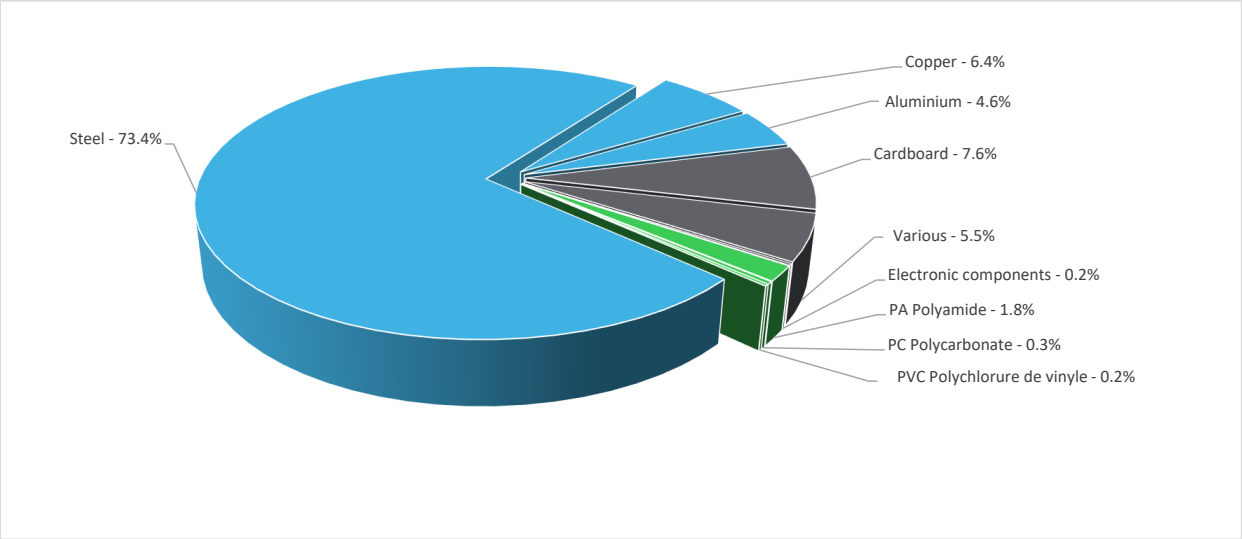
General information

Reference product	ClimaSys Connected Cooling Unit - NSYCU2K3P4DG
Description of the product	The main purpose of the ClimaSys Connected Cooling Unit product is the dissipation of heat from any electrical panel in order to protect temperature sensitive components in an industrial environment.
Description of the range	Single product
Functional unit	To produce 2 kW of cooling, according to the appropriate usage scenario defined in the EN 14825 standard and during the 22-year reference lifetime of the product. - Product dimensions 1000mm x 405mm x 225mm - IP55 conforming to IEC 60529 (on the internal circuit) - IP24 conforming to IEC 60529 (on the external circuit) - Technology: Air/Air - Non-reversible - Cooling capacity - 2kW - SEER - 1.9806 -* Refrigerant used - R513a - Refill threshold - Cannot Refill - Where Used - Industrial

*The previous version Cooling Unit PEP with R134a created in 2022 uses 2019 calculation rules and 2022 datasets; where in the latest version Cooling Unit with R513a uses 2023 rules and 2024 datasets. As a result R153A is 6,4% lower in “Total (without Module D)” than R134A

Constituent materials

Reference product mass	46025 g	including the product, its packaging, additional elements and accessories



	Plastics	2.3%
	Metals	84.4%
	Others	13.3%

Substance assessment

Details of ROHS and REACH substances information are available on the Schneider-Electric website
https://www.se.com

Additional environmental information

End Of Life	Recyclability potential:	**90%**	The recyclability rate was calculated from the recycling rates of each material making up the product based on REEECY'LAB tool developed by Ecosystem, for components/materials not covered by the tool, data from the EIME database and the related PSR was taken. If no data was found a conservative assumption was used (0% recyclability).

Environmental impacts

Reference service life time	22 years
Product category	As per PSR-0013
Life cycle of the product	The manufacturing, the distribution, the installation, the use and the end of life were taken into consideration in this study
Electricity consumption	The electricity consumed during manufacturing processes is considered for each part of the product individually, the final assembly generates a negligible consumption
Installation elements	No special components needed
Use scenario	The product is in active mode 40% of the time with a power use of 1941W and in Standby mode 60% of the time for 22 years.
Time representativeness	The collected data are representative of the year 2025
Technological representativeness	The Modules of Technologies such as material production, manufacturing processes and transport technology used in the PEP analysis (LCA EIME in the case) are similar and representative of the actual type of technologies used to make the product.

Geographical representativeness	**Final assembly site**	**Use phase**		**End-of-life**
	Europe	Europe		Europe
Energy model used	**[A1 - A3]**	**[A5]**	**[B6]**	**[C1 - C4]**
	Electricity Mix; Low voltage; 2020; Malta, MT	Electricity Mix; Low voltage; 2020; Europe, EU-27	Electricity Mix; Low voltage; 2020; Europe, EU-27	Electricity Mix; Low voltage; 2020; Europe, EU-27

Detailed results of the optional indicators mentioned in PCRed4 are available in the LCA report and on demand in a digital format - Country Customer Care Center - http://www.se.com/contact

Mandatory Indicators		**ClimaSys Connected Cooling Unit - NSYCU2K3P4DG**						
Impact indicators	**Unit**	**Total (without Module D)**	**[A1 - A3] - Manufacturing**	**[A4] - Distribution**	**[A5] - Installation**	**[B1 - B7] - Use**	**[C1 - C4] - End of life**	**[D] - Benefits and loads**
Contribution to climate change	kg CO2 eq	3.38E+03	1.74E+02	4.40E+00	6.68E+00	3.10E+03	8.90E+01	-1.54E+02
Contribution to climate change-fossil	kg CO2 eq	3.31E+03	1.78E+02	4.40E+00	2.92E+00	3.04E+03	8.75E+01	-1.56E+02
Contribution to climate change-biogenic	kg CO2 eq	6.79E+01	0*	0*	3.76E+00	6.65E+01	1.49E+00	2.22E+00
Contribution to climate change-land use and land use change	kg CO2 eq	2.32E-04	1.96E-04	6.36E-06	6.45E-08	4.47E-07	2.89E-05	0.00E+00
Contribution to ozone depletion	kg CFC-11 eq	6.60E-05	5.00E-05	5.03E-08	4.29E-08	1.39E-05	2.06E-06	-2.35E-05
Contribution to acidification	mol H+ eq	1.79E+01	1.73E+00	6.95E-03	8.99E-03	1.59E+01	2.54E-01	-1.36E+00
Contribution to eutrophication, freshwater	kg P eq	9.52E-03	1.90E-03	1.61E-05	3.94E-05	7.38E-03	1.86E-04	-3.49E-04
Contribution to eutrophication marine	kg N eq	2.11E+00	2.29E-01	1.33E-03	3.68E-03	1.84E+00	2.96E-02	-9.68E-02
Contribution to eutrophication, terrestrial	mol N eq	3.24E+01	2.46E+00	1.46E-02	2.72E-02	2.95E+01	3.48E-01	-1.10E+00
Contribution to photochemical ozone formation - human health	kg COVNM eq	6.71E+00	7.52E-01	4.67E-03	6.16E-03	5.84E+00	1.04E-01	-4.01E-01
Contribution to resource use, minerals and metals	kg Sb eq	8.02E-03	7.01E-03	1.41E-06	0*	9.96E-04	9.76E-06	-4.32E-02
Contribution to resource use, fossils	MJ	7.54E+04	2.61E+03	7.68E+01	2.99E+01	7.19E+04	8.14E+02	-3.35E+03
Contribution to water use	m3 eq	8.10E+02	5.60E+02	1.56E-01	2.52E-01	2.40E+02	9.63E+00	-8.01E+01

Impact indicators	**Unit**	***Total (without Module D)**	**[A1 - A3] - Manufacturing**	**[A4] - Distribution**	**[A5] - Installation**	**[B1 - B7] - Use**	**[C1 - C4] - End of life**	**[D] - Benefits and loads**
Contribution to climate change	kg CO2 eq	3.61E+03	1.91E+02	4.41E+00	8.33E+00	3.31E+03	9.56E+01	-1.13E+02

*Co2 impact indicators follow the previous Cooling unit version with **R134a**

Impact indicators	**Unit**	**Total (without Module D)**	**[A1 - A3] - Manufacturing**	**[A4] - Distribution**	**[A5] - Installation**	**[B1 - B7] - Use**	**[C1 - C4] - End of life**	**[D] - Benefits and loads**
Contribution to climate change	kg CO2 eq	3.38E+03	1.74E+02	4.40E+00	6.68E+00	3.10E+03	8.90E+01	-1.54E+02

*Co2 impact indicators follow the previous Cooling unit version with **R513a**

The CO2 impact indicators show that R513a gas has a total value (without Module D) that is 6.4% lower than R134a

Inventory flows Indicators		ClimaSys Connected Cooling Unit - NSYCU2K3P4DG						
Inventory flows	Unit	Total (without Module D)	[A1 - A3] - Manufacturing	[A4] - Distribution	[A5] - Installation	[B1 - B7] - Use	[C1 - C4] - End of life	[D] - Benefits and loads
Contribution to use of renewable primary energy excluding renewable primary energy used as raw material	MJ	1.74E+04	1.21E+02	0*	4.13E+00	1.72E+04	4.52E+01	-4.05E+01
Contribution to use of renewable primary energy resources used as raw material	MJ	6.77E+01	6.77E+01	0*	0*	0*	0*	-4.91E+01
Contribution to total use of renewable primary energy resources	MJ	1.74E+04	1.89E+02	0*	4.13E+00	1.72E+04	4.52E+01	-8.96E+01
Contribution to use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	7.53E+04	2.48E+03	7.68E+01	2.99E+01	7.19E+04	8.14E+02	-3.35E+03
Contribution to use of non renewable primary energy resources used as raw material	MJ	1.32E+02	1.32E+02	0*	0*	0*	0*	0.00E+00
Contribution to total use of non-renewable primary energy resources	MJ	7.54E+04	2.61E+03	7.68E+01	2.99E+01	7.19E+04	8.14E+02	-3.35E+03
Contribution to use of secondary material	kg	0.00E+00	0*	0*	0*	0*	0*	0.00E+00
Contribution to use of renewable secondary fuels	MJ	0.00E+00	0*	0*	0*	0*	0*	0.00E+00
Contribution to use of non renewable secondary fuels	MJ	0.00E+00	0*	0*	0*	0*	0*	0.00E+00
Contribution to net use of freshwater	m³	1.90E+01	1.30E+01	3.64E-03	1.90E-02	5.62E+00	2.88E-01	-1.86E+00
Contribution to hazardous waste disposed	kg	5.07E+02	4.20E+02	0*	1.69E-01	8.45E+01	2.14E+00	-3.40E+03
Contribution to non hazardous waste disposed	kg	7.92E+02	2.90E+02	3.90E-01	8.23E-01	4.58E+02	4.27E+01	-1.50E+02
Contribution to radioactive waste disposed	kg	2.03E-01	9.89E-02	3.09E-04	1.89E-04	1.02E-01	2.47E-03	-8.39E-02
Contribution to components for reuse	kg	0.00E+00	0*	0*	0*	0*	0*	0.00E+00
Contribution to materials for recycling	kg	4.65E+01	7.84E+00	0*	2.19E+00	0*	3.65E+01	0.00E+00
Contribution to materials for energy recovery	kg	1.70E+00	0*	0*	0*	1.30E+00	4.01E-01	0.00E+00
Contribution to exported energy	MJ	4.15E-01	5.40E-02	0*	0*	0*	3.61E-01	0.00E+00

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

Contribution to biogenic carbon content of the product	kg of C	0.00E+00
Contribution to biogenic carbon content of the associated packaging	kg of C	9.32E-01

* The calculation of the biogenic carbon is based on the Ademe for the Cardboard (28%), EN16485 for Wood (39,52%), and APESA/RECORD for Paper (37,8%)

Mandatory Indicators		ClimaSys Connected Cooling Unit - NSYCU2K3P4DG						
Impact indicators	Unit	[B1 - B7] - Use	[B1]	[B2]	[B3]	[B4]	[B5]	[B6]	[B7]
Contribution to climate change	kg CO2 eq	3.10E+03	0*	1.51E+02	0*	0*	0*	2.95E+03	0*
Contribution to climate change-fossil	kg CO2 eq	3.04E+03	0*	1.51E+02	0*	0*	0*	2.89E+03	0*
Contribution to climate change-biogenic	kg CO2 eq	6.65E+01	0*	0*	0*	0*	0*	6.65E+01	0*
Contribution to climate change-land use and land use change	kg CO2 eq	4.47E-07	0*	4.47E-07	0*	0*	0*	0*	0*
Contribution to ozone depletion	kg CFC-11 eq	1.39E-05	0*	7.95E-07	0*	0*	0*	1.31E-05	0*
Contribution to acidification	mol H+ eq	1.59E+01	0*	0*	0*	0*	0*	1.59E+01	0*
Contribution to eutrophication, freshwater	kg P eq	7.38E-03	0*	2.16E-05	0*	0*	0*	7.36E-03	0*
Contribution to eutrophication marine	kg N eq	1.84E+00	0*	2.16E-04	0*	0*	0*	1.84E+00	0*
Contribution to eutrophication, terrestrial	mol N eq	2.95E+01	0*	0*	0*	0*	0*	2.95E+01	0*
Contribution to photochemical ozone formation - human health	kg COVNM eq	5.84E+00	0*	6.85E-04	0*	0*	0*	5.84E+00	0*
Contribution to resource use, minerals and metals	kg Sb eq	9.96E-04	0*	8.51E-07	0*	0*	0*	9.95E-04	0*
Contribution to resource use, fossils	MJ	7.19E+04	0*	0*	0*	0*	0*	7.19E+04	0*
Contribution to water use	m3 eq	2.40E+02	0*	9.49E+00	0*	0*	0*	2.31E+02	0*

Inventory flows Indicators		ClimaSys Connected Cooling Unit - NSYCU2K3P4DG							
Inventory flows	Unit	[B1 - B7] - Use	[B1]	[B2]	[B3]	[B4]	[B5]	[B6]	[B7]
Contribution to use of renewable primary energy excluding renewable primary energy used as raw material	MJ	1.72E+04	0*	0*	0*	0*	0*	1.72E+04	0*
Contribution to use of renewable primary energy resources used as raw material	MJ	0*	0*	0*	0*	0*	0*	0*	0*
Contribution to total use of renewable primary energy resources	MJ	1.72E+04	0*	0*	0*	0*	0*	1.72E+04	0*
Contribution to use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	7.19E+04	0*	0*	0*	0*	0*	7.19E+04	0*
Contribution to use of non renewable primary energy resources used as raw material	MJ	0*	0*	0*	0*	0*	0*	0*	0*
Contribution to total use of non-renewable primary energy resources	MJ	7.19E+04	0*	0*	0*	0*	0*	7.19E+04	0*
Contribution to use of secondary material	kg	0*	0*	0*	0*	0*	0*	0*	0*
Contribution to use of renewable secondary fuels	MJ	0*	0*	0*	0*	0*	0*	0*	0*
Contribution to use of non renewable secondary fuels	MJ	0*	0*	0*	0*	0*	0*	0*	0*
Contribution to net use of freshwater	m^3	5.62E+00	0*	2.21E-01	0*	0*	0*	5.39E+00	0*
Contribution to hazardous waste disposed	kg	8.45E+01	0*	5.66E-02	0*	0*	0*	8.44E+01	0*
Contribution to non hazardous waste disposed	kg	4.58E+02	0*	0*	0*	0*	0*	4.58E+02	0*
Contribution to radioactive waste disposed	kg	1.02E-01	0*	0*	0*	0*	0*	1.02E-01	0*
Contribution to components for reuse	kg	0*	0*	0*	0*	0*	0*	0*	0*
Contribution to materials for recycling	kg	0*	0*	0*	0*	0*	0*	0*	0*
Contribution to materials for energy recovery	kg	1.30E+00	0*	1.30E+00	0*	0*	0*	0*	0*
Contribution to exported energy	MJ	0*	0*	0*	0*	0*	0*	0*	0*

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

Life cycle assessment performed with EIME version v6.2.5-6, database version 2024-01 in compliance with ISO14044, EF3.1 method is applied, for biogenic carbon storage, assessment methodology -1/1 is used

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-00927-V02.01-EN	*Drafting rules*	PEP-PCR-ed4-2021 09 06
		Supplemented by	PSR-0013-ed3-EN-2023 06 06
Verifier accreditation N°	VH45	*Information and reference documents*	www.pep-ecopassport.org
Date of issue	12-2025	*Validity period*	5 years
Independent verification of the declaration and data, in compliance with ISO 14025 : 2006			
Internal	External X		
The PCR review was conducted by a panel of experts chaired by Julie Orgelet (DDemain)			
PEPs are compliant with XP C08-100-1:2016 and EN 50693:2019 or NF E38-500 :2022			
The components of the present PEP may not be compared with components from any other program.			
Document complies with ISO 14025:2006 "Environmental labels and declarations. Type III environmental declarations"			

Schneider Electric Industries SAS

Country Customer Care Center
http://www.se.com/contact

Head Office

35, rue Joseph Monier

CS 30323

F- 92500 Rueil Malmaison Cedex

RCS Nanterre 954 503 439
Capital social 928 298 512 €

www.se.com

Published by Schneider Electric

SCHN-00927-V02.01-EN

12-2025