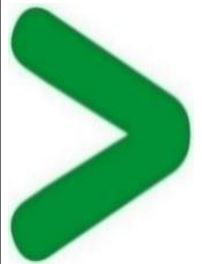


Product Environmental Profile

APC Smart-UPS Ultra Lithium-ion Battery Module

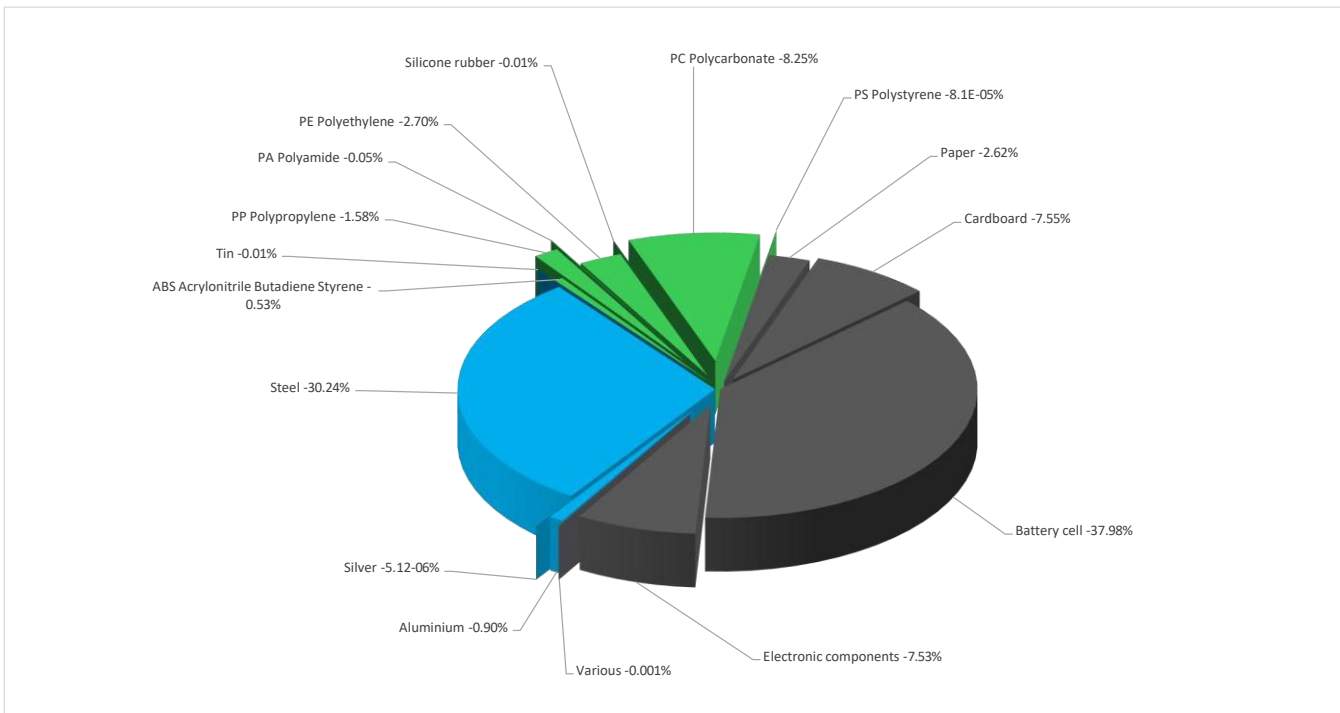


General information

Reference product	APC Smart-UPS Ultra Lithium-ion Battery Module - SRYLBM
Description of the product	This APC Smart-UPS Ultra Lithium-ion battery module is used along with Smart-UPS Ultra Uninterruptible Power Supply, which is designed for IT professionals or network administrators to maintain business uptime and continuity. This Smart-UPS offers cloud-based remote power monitoring, UPS firmware upgrades, remote diagnostics and proactive email notifications with recommended actions. The UPS can connect to EcoStruxure IT or third-party centralized management platforms
Description of the range	Single product
Functional unit	This energy storage system helps protect the load connected to the UPS against the input power failure. The conversion factor for USE phase: $(\text{Declared Unit Power in W}) * \text{Declared Unit Reference service life in years} / (100 \text{ W} * 1 \text{ year}) = 500$ The conversion factor for other phases: $(\text{Declared Unit Power in W}) * \text{Declared Unit Reference service life in years} * \text{Declared Unit Backuptime in min} / (100 \text{ W} * 1 \text{ year} * 5 \text{ min}) = 550$
Declared unit	One battery module delivering 5.3 kWh of energy storage with RSL of 10 years to ensure continuity of power for loads connected to the UPS during power failures
Specifications are:	Rated output power: 5.3kW, Nominal output voltage: 180V, max charging: 200V, 4.2A Backup time: 5.5 mins Reference service life: 10 years

Constituent materials

Reference product mass 11.9 kg including the product, its packaging, additional elements and accessories



Others	55.7%
Metals	31.1%
Plastics	13.1%

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:	62%	The recyclability rate was calculated from the recycling rates of each material making up the product based on REEECYLAB 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).
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Environmental impacts

Reference service life time	10 years			
Product category	Ultra Lithium-ion battery module in APC Smart-UPS			
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 installation components need during installation phase, but transport of packaging to disposal and disposal of packaging accounted for during installation.			
Use scenario	The battery module is modeled as consuming approximately 8W for the Battery Management System, plus the necessary power to compensate the batteries self-discharge, resulting in 764.51 kWh over 10 years			
Time representativeness	The collected data are representative of the year 2026			
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
	China	Global		Global
	[A1 - A3]	[A5]	[B6]	[C1 - C4]
Energy model used	Electricity Mix; Low voltage; 2020; China, CN	No energy used	Electricity Mix; Low voltage; 2020; United States, US Electricity Mix; Low voltage; 2020; Germany, DE Electricity Mix; Low voltage; 2020; Canada, CA Electricity Mix; Low voltage; 2020; Italy, IT United Kingdom, GB	Global, European and French datasets are used.

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>

Declared Unit								
Mandatory Indicators			APC Smart-UPS Ultra Lithium-ion Battery Module - SRYLBM					
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	4.96E+02	1.47E+02	3.43E+00	1.15E+00	3.27E+02	1.72E+01	-7.72E+00
Contribution to climate change-fossil	kg CO2 eq	4.93E+02	1.48E+02	3.43E+00	1.15E+00	3.23E+02	1.71E+01	-7.68E+00
Contribution to climate change-biogenic	kg CO2 eq	2.79E+00	0*	0*	0*	3.80E+00	3.01E-02	-4.70E-02
Contribution to climate change-land use and land use change	kg CO2 eq	6.87E-05	6.69E-05	0*	0*	0*	1.86E-06	0.00E+00
Contribution to ozone depletion	kg CFC-11 eq	1.40E-04	1.36E-04	3.03E-06	0*	1.37E-06	2.13E-07	-1.13E-06
Contribution to acidification	mol H+ eq	3.11E+00	1.39E+00	1.49E-02	8.02E-04	1.66E+00	4.13E-02	-4.66E-02
Contribution to eutrophication, freshwater	kg P eq	7.98E-03	7.44E-03	0*	0*	4.81E-04	6.73E-05	-1.51E-05
Contribution to eutrophication, marine	kg N eq	3.80E-01	1.63E-01	6.85E-03	3.35E-04	1.99E-01	1.07E-02	-4.43E-03
Contribution to eutrophication, terrestrial	mol N eq	4.17E+00	1.29E+00	7.42E-02	3.75E-03	2.69E+00	1.17E-01	-5.11E-02
Contribution to photochemical ozone formation - human health	kg COVM eq	1.24E+00	5.37E-01	2.43E-02	8.36E-04	6.49E-01	3.08E-02	-1.77E-02
Contribution to resource use, minerals and metals	kg Sb eq	1.32E-02	1.32E-02	0*	0*	8.01E-05	0*	-2.02E-03
Contribution to resource use, fossils	MJ	9.28E+03	2.32E+03	4.27E+01	0*	6.82E+03	1.02E+02	-1.67E+02
Contribution to water use	m3 eq	1.85E+03	1.82E+03	0*	2.06E-01	2.14E+01	1.25E+00	-2.99E+00

Inventory flows Indicators								
APC Smart-UPS Ultra Lithium-ion Battery Module - SRYLBM								
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 renewable primary energy used as energy	MJ	3.07E+00	2.88E-01	0*	0*	2.78E+00	7.81E-03	-3.82E-03
Contribution to renewable primary energy used as raw material	MJ	2.89E-02	2.89E-02	0*	0*	0*	0*	-1.94E-04
Contribution to total renewable primary energy	MJ	3.10E+00	3.17E-01	0*	0*	2.78E+00	7.81E-03	-4.02E-03
Contribution to non renewable primary energy used as energy	MJ	1.79E+01	4.03E+00	7.76E-02	0*	1.36E+01	1.86E-01	-3.04E-01
Contribution to non renewable primary energy used as raw material	MJ	1.88E-01	1.88E-01	0*	0*	0*	0*	0.00E+00
Contribution to total non renewable primary energy	MJ	1.81E+01	4.22E+00	7.76E-02	0*	1.36E+01	1.86E-01	-3.04E-01
Contribution to use of secondary material	kg	1.80E-03	1.80E-03	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 fresh water	m³	7.83E-02	7.72E-02	0*	8.73E-06	1.00E-03	6.39E-05	-1.27E-04
Contribution to hazardous waste disposed	kg	7.29E-01	7.09E-01	0*	0*	1.56E-02	4.49E-03	-2.90E-01
Contribution to non hazardous waste disposed	kg	2.32E-01	1.15E-01	0*	2.85E-03	1.04E-01	1.08E-02	-1.40E-02
Contribution to radioactive waste disposed	kg	9.06E-05	6.72E-05	1.24E-06	2.35E-08	2.15E-05	5.43E-07	-7.84E-06
Contribution to components for reuse	kg	0.00E+00	0*	0*	0*	0*	0*	0.00E+00
Contribution to materials for recycling	kg	7.06E-03	3.78E-04	0*	0*	0*	6.68E-03	0.00E+00
Contribution to materials for energy recovery	kg	0.00E+00	0*	0*	0*	0*	0*	0.00E+00
Contribution to exported energy	MJ	6.92E-05	4.15E-06	0*	0*	0*	6.50E-05	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 6.80E-04

* 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%)

Functional Unit								
Mandatory Indicators			APC Smart-UPS Ultra Lithium-ion Battery Module - SRYLBM					
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	9.61E-01	2.67E-01	6.23E-03	2.08E-03	6.55E-01	3.12E-02	-1.40E-02
Contribution to climate change-fossil	kg CO2 eq	9.55E-01	2.68E-01	6.23E-03	2.08E-03	6.47E-01	3.11E-02	-1.40E-02
Contribution to climate change-biogenic	kg CO2 eq	7.65E-03	0*	0*	0*	7.60E-03	5.47E-05	-8.55E-05
Contribution to climate change-land use and land use change	kg CO2 eq	1.25E-07	1.22E-07	0*	0*	0*	3.37E-09	0.00E+00
Contribution to ozone depletion	kg CFC-11 eq	2.56E-07	2.47E-07	5.50E-09	0*	2.74E-09	3.88E-10	-2.05E-09
Contribution to acidification	mol H+ eq	5.96E-03	2.53E-03	2.71E-05	1.46E-06	3.33E-03	7.51E-05	-8.48E-05
Contribution to eutrophication, freshwater	kg P eq	1.46E-05	1.35E-05	0*	0*	9.63E-07	1.22E-07	-2.75E-08
Contribution to eutrophication, marine	kg N eq	7.27E-04	2.96E-04	1.25E-05	6.10E-07	3.99E-04	1.94E-05	-8.05E-06
Contribution to eutrophication, terrestrial	mol N eq	8.07E-03	2.35E-03	1.35E-04	6.82E-06	5.37E-03	2.13E-04	-9.29E-05
Contribution to photochemical ozone formation - human health	kg COVNM eq	2.38E-03	9.76E-04	4.43E-05	1.52E-06	1.30E-03	5.60E-05	-3.21E-05
Contribution to resource use, minerals and metals	kg Sb eq	2.41E-05	2.39E-05	0*	0*	1.60E-07	0*	-3.67E-06
Contribution to resource use, fossils	MJ	1.81E+01	4.22E+00	7.76E-02	0*	1.36E+01	1.86E-01	-3.04E-01
Contribution to water use	m3 eq	3.36E+00	3.32E+00	0*	3.75E-04	4.29E-02	2.27E-03	-5.43E-03

Inventory flows Indicators			APC Smart-UPS Ultra Lithium-ion Battery Module - SRYLBM					
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 renewable primary energy used as energy	MJ	1.55E+03	1.59E+02	0*	0*	1.39E+03	4.30E+00	-2.10E+00
Contribution to renewable primary energy used as raw material	MJ	1.59E+01	1.59E+01	0*	0*	0*	0*	-1.07E-01
Contribution to total renewable primary energy	MJ	1.57E+03	1.74E+02	0*	0*	1.39E+03	4.30E+00	-2.21E+00
Contribution to non renewable primary energy used as energy	MJ	9.18E+03	2.22E+03	4.27E+01	0*	6.82E+03	1.02E+02	-1.67E+02
Contribution to non renewable primary energy used as raw material	MJ	1.04E+02	1.04E+02	0*	0*	0*	0*	0.00E+00
Contribution to total non renewable primary energy	MJ	9.28E+03	2.32E+03	4.27E+01	0*	6.82E+03	1.02E+02	-1.67E+02
Contribution to use of secondary material	kg	9.92E-01	9.92E-01	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 fresh water	m³	4.30E+01	4.25E+01	0*	4.80E-03	5.00E-01	3.51E-02	-6.96E-02
Contribution to hazardous waste disposed	kg	4.00E+02	3.90E+02	0*	0*	7.80E+00	2.47E+00	-1.59E+02
Contribution to non hazardous waste disposed	kg	1.23E+02	6.31E+01	0*	1.57E+00	5.20E+01	5.93E+00	-7.68E+00
Contribution to radioactive waste disposed	kg	4.87E-02	3.70E-02	6.82E-04	1.29E-05	1.08E-02	2.99E-04	-4.31E-03
Contribution to components for reuse	kg	0.00E+00	0*	0*	0*	0*	0*	0.00E+00
Contribution to materials for recycling	kg	3.88E+00	2.08E-01	0*	0*	0*	3.67E+00	0.00E+00
Contribution to materials for energy recovery	kg	0.00E+00	0*	0*	0*	0*	0*	0.00E+00
Contribution to exported energy	MJ	3.81E-02	2.28E-03	0*	0*	0*	3.58E-02	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	3.74E-01

* The calculation of the biogenic carbon is based on the Ademe for the Cardboard (26%), EN16485 for Wood (39,52%), and APESA/RECORD for Paper (37,8%)

Mandatory Indicators		APC Smart-UPS Ultra Lithium-ion Battery Module - SRYLBM							
Impact indicators	Unit	[B1 - B7] - Use	[B1]	[B2]	[B3]	[B4]	[B5]	[B6]	[B7]
Contribution to climate change	kg CO2 eq	6.55E-01	0*	0*	0*	0*	0*	3.27E+02	0*
Contribution to climate change-fossil	kg CO2 eq	6.47E-01	0*	0*	0*	0*	0*	3.23E+02	0*
Contribution to climate change-biogenic	kg CO2 eq	7.60E-03	0*	0*	0*	0*	0*	3.80E+00	0*
Contribution to climate change-land use and land use change	kg CO2 eq	0*	0*	0*	0*	0*	0*	0*	0*
Contribution to ozone depletion	kg CFC-11 eq	2.74E-09	0*	0*	0*	0*	0*	1.37E-06	0*
Contribution to acidification	mol H+ eq	3.33E-03	0*	0*	0*	0*	0*	1.66E+00	0*
Contribution to eutrophication, freshwater	kg P eq	9.63E-07	0*	0*	0*	0*	0*	4.81E-04	0*
Contribution to eutrophication marine	kg N eq	3.99E-04	0*	0*	0*	0*	0*	1.99E-01	0*
Contribution to eutrophication, terrestrial	mol N eq	5.37E-03	0*	0*	0*	0*	0*	2.69E+00	0*
Contribution to photochemical ozone formation - human health	kg CO2NM eq	1.30E-03	0*	0*	0*	0*	0*	6.49E-01	0*
Contribution to resource use, minerals and metals	kg Sb eq	1.60E-07	0*	0*	0*	0*	0*	8.01E-05	0*
Contribution to resource use, fossils	MJ	1.36E+01	0*	0*	0*	0*	0*	6.82E+03	0*
Contribution to water use	m3 eq	4.29E-02	0*	0*	0*	0*	0*	2.14E+01	0*

Inventory flows Indicators		APC Smart-UPS Ultra Lithium-ion Battery Module - SRYLBM							
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	1.39E+03	0*	0*	0*	0*	0*	1.39E+03	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	1.39E+03	0*	0*	0*	0*	0*	1.39E+03	0*
Contribution to use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	6.82E+03	0*	0*	0*	0*	0*	6.82E+03	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	6.82E+03	0*	0*	0*	0*	0*	6.82E+03	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	m³	5.00E-01	0*	0*	0*	0*	0*	5.00E-01	0*
Contribution to hazardous waste disposed	kg	7.80E+00	0*	0*	0*	0*	0*	7.80E+00	0*
Contribution to non hazardous waste disposed	kg	5.20E+01	0*	0*	0*	0*	0*	5.20E+01	0*
Contribution to radioactive waste disposed	kg	1.08E-02	0*	0*	0*	0*	0*	1.08E-02	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	0*	0*	0*	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 :	ENVPEP2602002EN_v1	Drafting rules	PEP-PCR-ed4-2021 09 06
Date of issue	02-2026	Supplemented by Information and reference documents	No PSR www.pep-ecopassport.org
		Validity period	5 years
Independent verification of the declaration and data, in compliance with ISO 14021 : 2016			
Internal <input checked="" type="checkbox"/> External			
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 14021:2016 "Environmental labels and declarations. Type II environmental declarations"			

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