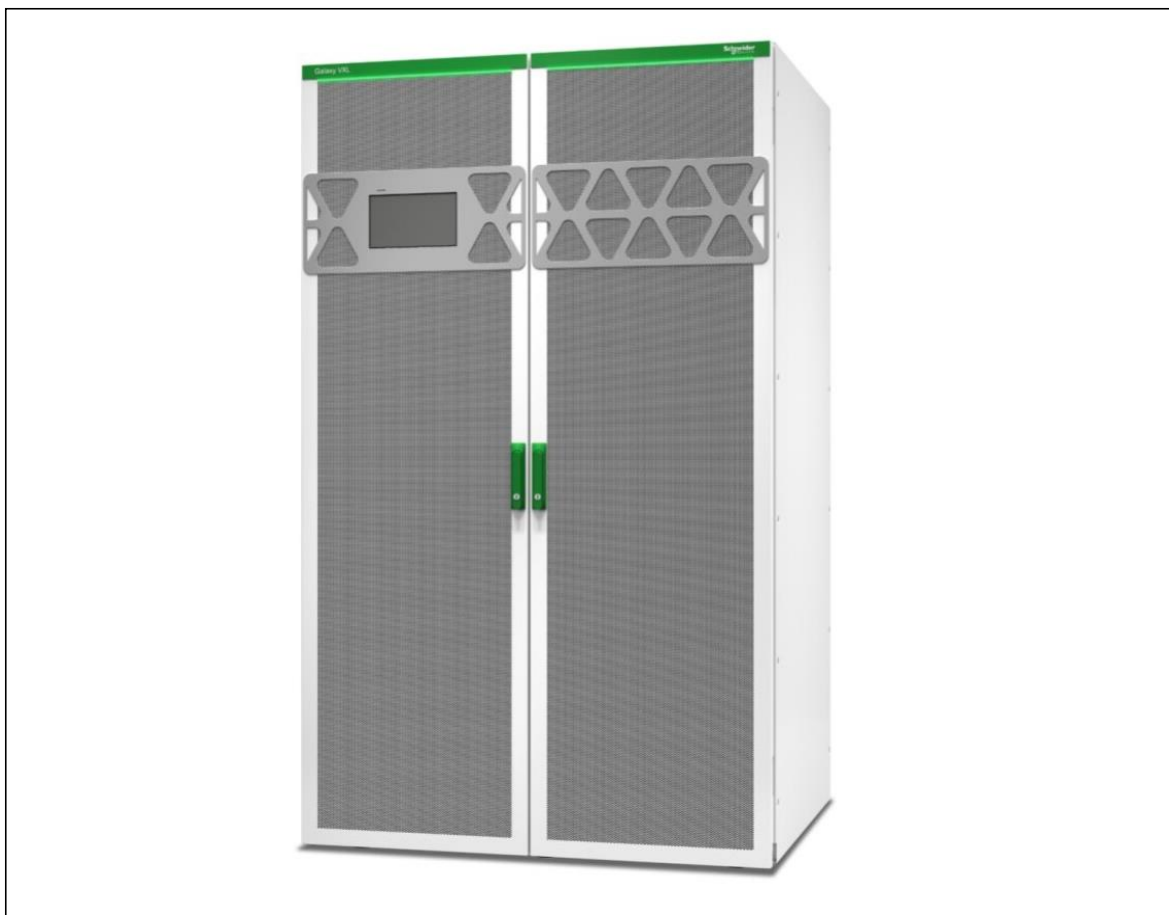


# Product Environmental Profile

## Galaxy VXL UPS

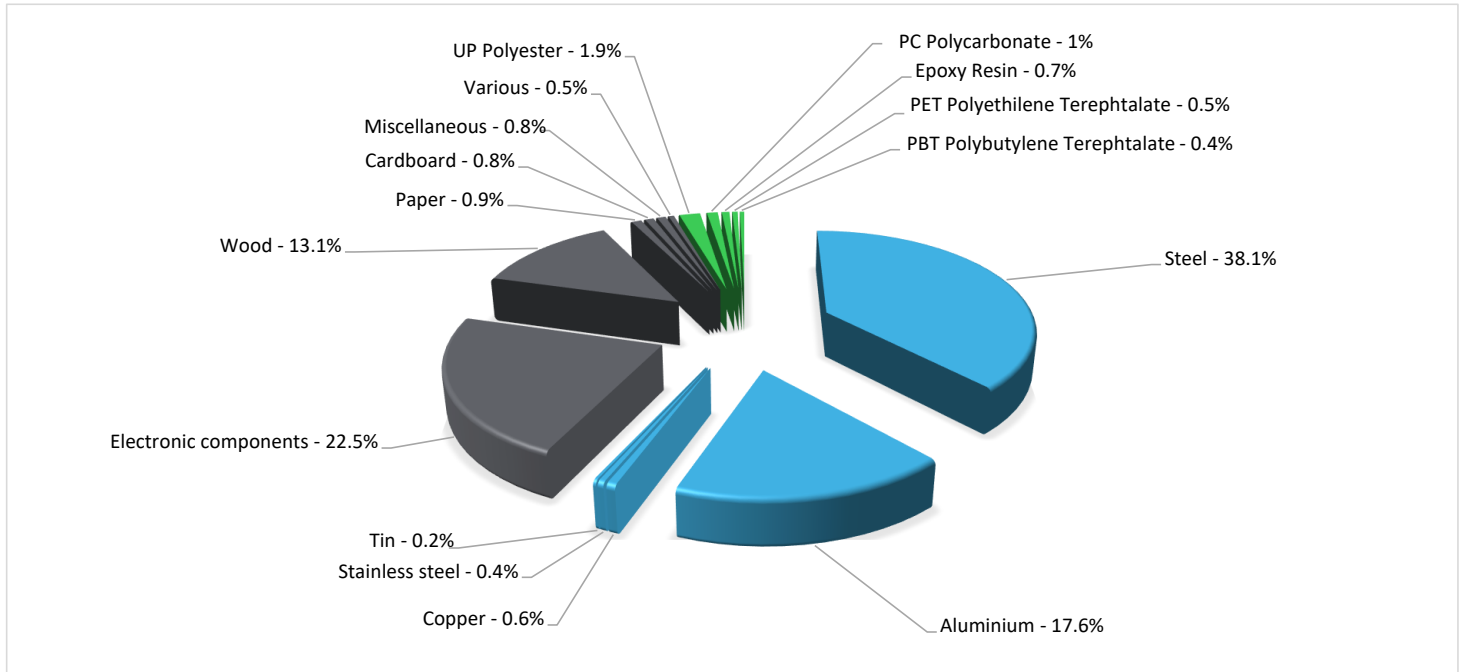


## General information

<b>Reference product</b>	Galaxy VXL UPS 1250kW, 400V, Start-up 5x8 - GVXL1250KHS																																																								
<b>Description of the product</b>	Galaxy VXL is a highly efficient, compact, modular, scalable, and redundant 500-1250 kW (400V) 3-phase UPS with Live Swap. Available in all IEC regions, it delivers top performance for colocation, large and extra-large data centers, as well as critical infrastructure in commercial & industrial and cloud & service provider facilities.																																																								
<b>Description of the range</b>	<p>The products of the range are: Galaxy VXL UPS (GVXL500K1250HS, GVXL600K600HS, GVXL625K1250HS, GVXL750K1250HS, GVXL875K1250HS, GVXL1000K1250HS, GVXL1125K1250HS, GVXL1250KHS)</p> <p>The environmental impacts of this reference product are representative of the impacts of the other products of the range which are developed with a similar technology.</p> <table border="1"> <thead> <tr> <th>Linked products</th> <th>Type</th> <th>Net weight (kg)</th> <th>Weight with packaging (kg)</th> <th>Dimension (mm) HxWxD</th> <th>Output performance classification</th> <th>UPS rating (PF=1)</th> </tr> </thead> <tbody> <tr> <td>GVXL500K1250HS</td> <td>Galaxy VXL UPS 500kW Scalable to 1250kW, 400V, Start-up 5x8</td> <td>851</td> <td>926</td> <td>1970mmX1200mmX1000mm</td> <td rowspan="8">VFISS 11</td> <td>500 kW/KVA</td> </tr> <tr> <td>GVXL600K600HS</td> <td>Galaxy VXL UPS, 600 kW not scalable, 400V, Start-up 5x8</td> <td>904</td> <td>1000</td> <td>1970mmX1200mmX1000mm</td> <td>600 kW/KVA</td> </tr> <tr> <td>GVXL625K1250HS</td> <td>Galaxy VXL UPS 625kW Scalable to 1250kW, 400V, Start-up 5x8</td> <td>904</td> <td>1000</td> <td>1970mmX1200mmX1000mm</td> <td>625 kW/KVA</td> </tr> <tr> <td>GVXL750K1250HS</td> <td>Galaxy VXL UPS 750kW Scalable to 1250kW, 400V, Start-up 5x8</td> <td>957</td> <td>1074</td> <td>1970mmX1200mmX1000mm</td> <td>750 kW/KVA</td> </tr> <tr> <td>GVXL875K1250HS</td> <td>Galaxy VXL UPS 875kW Scalable to 1250kW, 400V, Start-up 5x8</td> <td>1010</td> <td>1148</td> <td>1970mmX1200mmX1000mm</td> <td>875 kW/KVA</td> </tr> <tr> <td>GVXL1000K1250HS</td> <td>Galaxy VXL UPS 1000kW Scalable to 1250kW, 400V, Start-up 5x8</td> <td>1063</td> <td>1222</td> <td>1970mmX1200mmX1000mm</td> <td>1000 kW/KVA</td> </tr> <tr> <td>GVXL1125K1250HS</td> <td>Galaxy VXL UPS 1125kW Scalable to 1250kW, 400V, Start-up 5x8</td> <td>1116</td> <td>1296</td> <td>1970mmX1200mmX1000mm</td> <td>1125 kW/KVA</td> </tr> <tr> <td>GVXL1250KHS</td> <td>Galaxy VXL UPS 1250kW, 400V, Start-up 5x8</td> <td>1169</td> <td>1411</td> <td>1970mmX1200mmX1000mm</td> <td>1250 kW/KVA</td> </tr> </tbody> </table>	Linked products	Type	Net weight (kg)	Weight with packaging (kg)	Dimension (mm) HxWxD	Output performance classification	UPS rating (PF=1)	GVXL500K1250HS	Galaxy VXL UPS 500kW Scalable to 1250kW, 400V, Start-up 5x8	851	926	1970mmX1200mmX1000mm	VFISS 11	500 kW/KVA	GVXL600K600HS	Galaxy VXL UPS, 600 kW not scalable, 400V, Start-up 5x8	904	1000	1970mmX1200mmX1000mm	600 kW/KVA	GVXL625K1250HS	Galaxy VXL UPS 625kW Scalable to 1250kW, 400V, Start-up 5x8	904	1000	1970mmX1200mmX1000mm	625 kW/KVA	GVXL750K1250HS	Galaxy VXL UPS 750kW Scalable to 1250kW, 400V, Start-up 5x8	957	1074	1970mmX1200mmX1000mm	750 kW/KVA	GVXL875K1250HS	Galaxy VXL UPS 875kW Scalable to 1250kW, 400V, Start-up 5x8	1010	1148	1970mmX1200mmX1000mm	875 kW/KVA	GVXL1000K1250HS	Galaxy VXL UPS 1000kW Scalable to 1250kW, 400V, Start-up 5x8	1063	1222	1970mmX1200mmX1000mm	1000 kW/KVA	GVXL1125K1250HS	Galaxy VXL UPS 1125kW Scalable to 1250kW, 400V, Start-up 5x8	1116	1296	1970mmX1200mmX1000mm	1125 kW/KVA	GVXL1250KHS	Galaxy VXL UPS 1250kW, 400V, Start-up 5x8	1169	1411	1970mmX1200mmX1000mm	1250 kW/KVA
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<b>Functional unit</b>	To protect the load of 1250 kW against input power failure during 15 years and switch to the energy storage system to avoid power outage																																																								

## Constituent materials

**Reference product mass** 1411 kg including the product, its packaging, additional elements and accessories



Plastics	4.50%
Metals	56.90%
Others	38.60%

## Substance assessment

<b>RoHS compliance</b>	Products of this range are designed in conformity with the requirements of the RoHS directive (European Directive 2011/65/EU of 8 June 2011) on restriction of lead, mercury, cadmium, hexavalent chromium or flame retardants -PBB&PBDE or phthalates-DEHP, BBP, DBP, DIBP.
<b>REACH compliance</b>	Products of this range are designed in conformity with the requirements of the REACH 1907/2006 regulation and its latest updates.
<b>Battery Directive compliance</b>	The battery within this product range are designed in conformity with the requirements of the Battery and Accumulator Directive (European Directive 2006/66/EC of 26 September 2006).

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:	<b>65%</b>	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	15 years					
Product category	Uninterruptible Power Supply (UPS) - without energy storage system incorporated - P > 10000W					
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	The product does not need specific tools or services, only packaging of the product needs to be eliminated.					
Use scenario	Power consumption conforms to the requirements in PSR-0010-ed2-EN-2023 12 08:					
	Load rate	25%	50%	75%	100%	
	Proportion of time at specified load	0.25	0.5	0.25	0	
	The referent UPS can operate in 2 modes. It has an average energy efficiency of 97.1% in Double Conversion mode and 99.0% in eConversion mode. Total energy losses are calculated to be 2,350,828 kWh in Double Conversion and 759,656 kWh in eConversion after 15 years.					
	Linked products	Type (400V UPS system)	Double conversion		eConversion	
			Average energy efficiency	Electricity consumption (kWh over 15 years)	Average energy efficiency	Electricity consumption (kWh over 15 years)
GVXL500K1250HS	Galaxy VXL UPS 500kW Scalable to 1250kW, 400V, Start-up 5x8	97.3%	874,631	99.1%	258,694	
GVXL600K600HS	Galaxy VXL UPS, 600 kW not scalable, 400V, Start-up 5x8	97.2%	1,069,268	99.1%	320,288	
GVXL625K1250HS	Galaxy VXL UPS 625kW Scalable to 1250kW, 400V, Start-up 5x8	97.3%	1,108,688	99.2%	328,500	
GVXL750K1250HS	Galaxy VXL UPS 750kW Scalable to 1250kW, 400V, Start-up 5x8	97.2%	1,336,584	99.1%	431,156	
GVXL875K1250HS	Galaxy VXL UPS 875kW Scalable to 1250kW, 400V, Start-up 5x8	97.3%	1,537,791	99.1%	474,272	
GVXL1000K1250HS	Galaxy VXL UPS 1000kW Scalable to 1250kW, 400V, Start-up 5x8	97.2%	1,782,113	99.2%	492,750	
GVXL1125K1250HS	Galaxy VXL UPS 1125kW Scalable to 1250kW, 400V, Start-up 5x8	97.3%	1,995,638	99.1%	600,539	
GVXL1250KHS	Galaxy VXL UPS 1250kW, 400V, Start-up 5x8	97.2%	2,227,641	99.1%	646,734	
Time representativeness	The collected data are representative of the year 2024					
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	Europe					
Energy model used	[A1 - A3]	[A5]	[B6]	[C1 - C4]		
	India, IN; Low voltage	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		Galaxy VXL UPS - GVXL1250KHS							
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	9.22E+05	1.81E+04	6.54E+02	4.34E+02	9.00E+05	2.85E+03	-5.23E+03	
Contribution to climate change-fossil	kg CO2 eq	9.02E+05	1.79E+04	6.54E+02	1.56E+02	8.81E+05	2.84E+03	-5.22E+03	
Contribution to climate change-biogenic	kg CO2 eq	2.04E+04	2.35E+02	0*	2.78E+02	1.99E+04	1.19E+01	-1.03E+01	
Contribution to climate change-land use and land use change	kg CO2 eq	1.58E-02	1.57E-02	0*	0*	0*	2.59E-05	0.00E+00	
Contribution to ozone depletion	kg CFC-11 eq	7.12E-03	2.67E-03	5.78E-04	0*	3.86E-03	9.19E-06	-7.53E-04	
Contribution to acidification	mol H+ eq	4.85E+03	1.29E+02	2.85E+00	0*	4.71E+03	7.06E+00	-3.45E+01	
Contribution to eutrophication, freshwater	kg (PO4) <sup>3-</sup> eq	2.26E+00	4.28E-02	0*	9.16E-04	2.16E+00	5.82E-02	-1.60E-02	
Contribution to eutrophication marine	kg N eq	5.69E+02	1.47E+01	1.31E+00	0*	5.51E+02	1.79E+00	-2.99E+00	
Contribution to eutrophication, terrestrial	mol N eq	9.04E+03	1.61E+02	1.42E+01	0*	8.84E+03	1.92E+01	-3.36E+01	
Contribution to photochemical ozone formation - human health	kg NMVOC eq	1.81E+03	5.48E+01	4.65E+00	0*	1.75E+03	5.96E+00	-1.14E+01	
Contribution to resource use, minerals and metals	kg Sb eq	2.94E+00	2.65E+00	0*	0*	2.92E-01	1.60E-03	-6.44E-01	
Contribution to resource use, fossils	MJ	2.22E+07	4.65E+05	8.15E+03	0*	2.16E+07	1.15E+05	-9.15E+04	
Contribution to water use	m3 eq	7.35E+04	4.59E+03	3.32E+01	1.35E+01	6.83E+04	6.43E+02	-1.55E+03	

Inventory flows Indicators		Galaxy VXL UPS - GVXL1250KHS						
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	5.06E+06	6.52E+03	0*	8.28E+02	5.06E+06	0*	-2.48E+03
Contribution to use of renewable primary energy resources used as raw material	MJ	6.10E+03	6.10E+03	0*	0*	0*	0*	-1.24E+03
Contribution to total use of renewable primary energy resources	MJ	5.07E+06	1.26E+04	0*	8.28E+02	5.06E+06	0*	-3.72E+03
Contribution to use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	2.22E+07	4.61E+05	8.15E+03	0*	2.16E+07	1.15E+05	-9.14E+04
Contribution to use of non renewable primary energy resources used as raw material	MJ	4.69E+03	4.69E+03	0*	0*	0*	0*	-1.34E+02
Contribution to total use of non-renewable primary energy resources	MJ	2.22E+07	4.65E+05	8.15E+03	0*	2.16E+07	1.15E+05	-9.15E+04
Contribution to use of secondary material	kg	3.68E-01	3.68E-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 freshwater	m³	1.72E+03	1.07E+02	7.74E-01	3.13E-01	1.60E+03	1.50E+01	-3.62E+01
Contribution to hazardous waste disposed	kg	4.87E+04	2.35E+04	0*	0*	2.49E+04	3.15E+02	-5.11E+04
Contribution to non hazardous waste disposed	kg	1.47E+05	1.08E+04	0*	1.46E+02	1.36E+05	1.39E+02	-7.26E+03
Contribution to radioactive waste disposed	kg	3.99E+01	7.73E+00	1.30E-01	5.57E-03	3.20E+01	1.26E-02	-5.21E+00
Contribution to components for reuse	kg	0.00E+00	0*	0*	0*	0*	0*	0.00E+00
Contribution to materials for recycling	kg	9.51E+02	1.23E+02	0*	5.89E+01	0*	7.69E+02	0.00E+00
Contribution to materials for energy recovery	kg	1.01E-05	1.01E-05	0*	0*	0*	0*	0.00E+00
Contribution to exported energy	MJ	8.49E+01	1.73E+01	0*	6.00E+01	0*	7.60E+00	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	7.45E+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%)

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

Life cycle assessment performed with EIME version v6.2.2, database version 2024-01 in compliance with ISO14044, EF3.1 method is applied, for biogenic carbon storage, assessment methodology 0/0 is used

According to this environmental analysis, proportionality rules may be used to evaluate the impacts of other products of this range, ratios to apply can be provided upon request

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.

## Extrapolated data


Referent product

400V UPS system		Galaxy VXL UPS (kVA)							
Product type		500	600	625	750	875	1000	1125	1250
Product information	UPS Cabinet	1	1	1	1	1	1	1	1
	Power Modules (125 kW/U)	4	5	5	6	7	8	9	10
	Weight with Packaging (kg)	926	1000	1000	1074	1148	1222	1296	1411
Compulsory environmental indicators - 'Total' of Life Cycle Phases (UPS in Double conversion mode)	Contribution to climate change (kg CO2 eq)	3.68E+05	4.48E+05	4.64E+05	5.57E+05	6.40E+05	7.39E+05	8.27E+05	9.22E+05
	Contribution to Ozone depletion (kg CFC11 eq)	3.65E-03	4.16E-03	4.23E-03	4.80E-03	5.31E-03	5.91E-03	6.45E-03	7.12E-03
	Contribution to Acidification (mol H+ eq)	1.94E+03	2.36E+03	2.44E+03	2.93E+03	3.37E+03	3.89E+03	4.35E+03	4.85E+03
	Contribution to eutrophication, freshwater (kg PO43- eq)	9.14E-01	1.11E+00	1.15E+00	1.37E+00	1.57E+00	1.81E+00	2.03E+00	2.26E+00
	Contribution to eutrophication marine (kg N eq)	2.28E+02	2.77E+02	2.87E+02	3.45E+02	3.95E+02	4.57E+02	5.10E+02	5.69E+02
	Contribution to eutrophication, terrestrial (mol N eq)	3.60E+03	4.38E+03	4.54E+03	5.45E+03	6.26E+03	7.24E+03	8.10E+03	9.04E+03
	Contribution to photochemical ozone formation - human health (kg COVNM eq)	7.30E+02	8.86E+02	9.17E+02	1.10E+03	1.26E+03	1.46E+03	1.63E+03	1.81E+03
	Contribution to resource use, minerals and metals (kgSbeq)	1.85E+00	2.02E+00	2.02E+00	2.19E+00	2.36E+00	2.53E+00	2.70E+00	2.94E+00
	Contribution to resource use, fossils (MJ)	8.86E+06	1.08E+07	1.12E+07	1.34E+07	1.54E+07	1.78E+07	1.99E+07	2.22E+07
Contribution to water use (m3 eq)	3.03E+04	3.65E+04	3.77E+04	4.50E+04	5.14E+04	5.92E+04	6.60E+04	7.35E+04	
Environmental indicators- 'Total' of Life Cycle Phases (UPS in eConversion mode)	Contribution to climate change (kg CO2 eq)	1.19E+05	1.45E+05	1.48E+05	1.91E+05	2.10E+05	2.18E+05	2.63E+05	2.83E+05


**Other Additional information**

Operating the Galaxy VXL in eConversion mode results in significantly reduced environmental impact, in particular Carbon emissions (up to 69% reduction) compared to operation in Double Conversion mode. This is mainly due to an improved energy efficiency in eConversion of 99.1% (average) compared to an efficiency of 97.2% (average) in Double Conversion mode.

For details about eConversion, consult the Schneider-Electric eConversion page: <https://www.se.com/ww/en/work/products/product-launch/econversion-high-efficiency-upsmode/>

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		Supplemented by	PSR-0010-ed2-EN-2023 12 08
Verifier accreditation N°	VH45	Information and reference documents	<a href="http://www.pep-ecopassport.org">www.pep-ecopassport.org</a>
Date of issue	12-2024	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"			
			

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