



**Eaton 9SX 0.7-3kVA Tower UPS**

<b>Representative product</b>	Eaton 9SX 3000i Tower (9SX3000I) Product Category: Uninterruptible Power Systems (UPS) with energy storage system				
<b>Description of the product</b>	Eaton 9SX 0.7-3kVA Tower UPS delivers on-line double conversion protection in convenient form factor. Eaton 9SX 0.7-3kVA Tower UPS is available in different power ratings: 700VA, 1000VA, 1500VA, 2000VA and 3000VA with inbuilt lead acid battery and available extension battery modules (EBM). It offers high availability, flexibility and advanced protection for infrastructure, industrial, medical, IT, networking, storage, and telecom.				
<b>Product specifications</b>	Power VA & W: 3000VA (2700W) UPS Configuration: Single phase, operating in normal mode/ High Efficiency Mode. UPS performance classification: UPS - VFI $\leq$ 10kW (Online double conversion) Technology of the energy storage system: Valve regulated lead acid batteries (VRLA) Product dimensions (W X H X D): 214 x 346 x 412 mm Mass of the equipment: 33.20 kg Power factor: 0.9 Reference service life (Years): 8				
<b>Homogeneous Environmental Families Covered</b>	The PEP concerns product offerings from Eaton 9SX 0.7-3kVA Tower UPS series as mentioned below:				
	<b>Product family</b>	<b>Model</b>	<b>Description</b>	<b>UPS Rating (W)</b>	<b>Backup time at full load (mins)</b>
	Eaton 9SX 0.7-3kVA Tower UPS	9SX3000I (Reference)	Eaton 9SX 3000i (Reference)	2700	6
		9SX700I	Eaton 9SX 700i	630	5
		9SX1000I	Eaton 9SX 1000i	900	6
		9SX1000IM	Eaton 9SX 1000i Marine	900	6
		9SX1500I	Eaton 9SX 1500i	1350	5.5
		9SX2000I	Eaton 9SX 2000i	1800	7
		9SX3000IM	Eaton 9SX 3000i Marine	2700	6
9SX1000I + 9SXEBM36T		Eaton 9SX 1000i + Eaton 9SX EBM 36V Tower	900	29	

	9SX1000IM + 9SXEBM36T	Eaton 9SX 1000i Marine + Eaton 9SX EBM 36V Tower	900	29
	9SX1500I + 9SXEBM48T	Eaton 9SX 1500i + Eaton 9SX EBM 48V Tower	1350	28
	9SX2000I + 9SXEBM96T	Eaton 9SX 2000i + Eaton 9SX EBM 96V Tower	1800	40
	9SX3000I + 9SXEBM96T	Eaton 9SX 3000i + Eaton 9SX EBM 96V Tower	2700	29
	9SX3000IM + 9SXEBM96T	Eaton 9SX 3000i Marine + Eaton 9SX EBM 96V Tower	2700	29
	9SX1000I + 2 * 9SXEBM36T	Eaton 9SX 1000i + 2 * Eaton 9SX EBM 36V Tower	900	53
	9SX1000IM + 2 * 9SXEBM36T	Eaton 9SX 1000i Marine + 2 * Eaton 9SX EBM 36V Tower	900	53
	9SX1500I + 2 * 9SXEBM48T	Eaton 9SX 1500i + 2 * Eaton 9SX EBM 48V Tower	1350	51
	9SX2000I + 2 * 9SXEBM96T	Eaton 9SX 2000i + 2 * Eaton 9SX EBM 96V Tower	1800	77
	9SX3000I + 2 * 9SXEBM96T	Eaton 9SX 3000i + 2 * Eaton 9SX EBM 96V Tower	2700	52
	9SX3000IM + 2 * 9SXEBM96T	Eaton 9SX 3000i Marine + 2 * Eaton 9SX EBM 96V Tower	2700	52
	9SX1000I + 3 * 9SXEBM36T	Eaton 9SX 1000i + 3 * Eaton 9SX EBM 36V Tower	900	80
	9SX1000IM + 3 * 9SXEBM36T	Eaton 9SX 1000i Marine + 3 * Eaton 9SX EBM 36V Tower	900	80
	9SX1500I + 3 * 9SXEBM48T	Eaton 9SX 1500i + 3 * Eaton 9SX EBM 48V Tower	1350	77
	9SX2000I + 3 * 9SXEBM96T	Eaton 9SX 2000i + 3 * Eaton 9SX EBM 96V Tower	1800	116
	9SX3000I + 3 * 9SXEBM96T	Eaton 9SX 3000i + 3 * Eaton 9SX EBM 96V Tower	2700	79
	9SX3000IM + 3 * 9SXEBM96T	Eaton 9SX 3000i Marine + 3 * Eaton 9SX EBM 96V Tower	2700	79
	9SX1000I + 4 * 9SXEBM36T	Eaton 9SX 1000i + 4 * Eaton 9SX EBM 36V Tower	900	108
	9SX1000IM + 4 * 9SXEBM36T	Eaton 9SX 1000i Marine + 4 * Eaton 9SX EBM 36V Tower	900	108
	9SX1500I + 4 * 9SXEBM48T	Eaton 9SX 1500i + 4 * Eaton 9SX EBM 48V Tower	1350	104
	9SX2000I + 4 * 9SXEBM96T	Eaton 9SX 2000i + 4 * Eaton 9SX EBM 96V Tower	1800	160
9SX3000I + 4 * 9SXEBM96T	Eaton 9SX 3000i + 4 * Eaton 9SX EBM 96V Tower	2700	106	
9SX3000IM + 4 * 9SXEBM96T	Eaton 9SX 3000i Marine + 4 * Eaton 9SX EBM 96V Tower	2700	106	
<b>Functional unit</b>	"To ensure the supply of power without interruption to equipment with load of 100 watts for a RSL of 1 years, including a backup time capacity of 5 minutes during power shortages."			
<b>Declared unit</b>	"To ensure the supply of power without interruption to equipment with load of 2700 watts for a RSL of 8 years, including a backup time capacity of 6 minutes (at full load condition) during power shortages."			
<b>Company information</b>	Eaton Industries France SAS; Email: <a href="mailto:productstewardship-es@eaton.com">productstewardship-es@eaton.com</a>			

Constituent Materials of			
Reference Product:	3.82E+01 kg (with packaging)		
Materials	Category PEP Material	Mass (kg)	Percentage (%)
Other	Lead Acid Battery	2.02E+01	53.0%
Metals	Steel	7.11E+00	18.6%
Other	Electronics	3.49E+00	9.1%
Other	Cardboard	1.40E+00	3.7%
Other	Wooden Pallet	1.25E+00	3.3%
Other	Kraft Liner	8.37E-01	2.2%
Plastics	Polyurethane	6.36E-01	1.7%
Metals	Copper	4.40E-01	1.2%
Plastics	Polyethylene Terephthalate	4.33E-01	1.1%
Plastics	Acrylonitrile butadiene styrene	4.18E-01	1.1%
Plastics	Polyvinyl chloride	4.05E-01	1.1%
Plastics	Low-density polyethylene	1.98E-01	<0.5%
Metals	Stainless Steel	1.95E-01	<0.5%
Metals	Nickel	1.87E-01	<0.5%
Metals	Zinc	1.54E-01	<0.4%
Other	Miscellaneous	8.20E-01	2.1%
Total		<b>3.82E+01</b>	100.0%

Substance Assessment	
<p>The representative product is compliant with the EU-RoHS Directive (2011/65/EU) by application of exemptions and the product contains lead (Pb), Lead monoxide and tetrabromobisphenol-A, which are listed as Substance-of-Very-High-Concern (SVHC) on the Candidate List of the EU-REACH Regulation (1907/2006/EC).</p>	

Additional Environmental Information	
<b>Manufacturing</b>	The reference product is assembled at an Eaton plant (LianZheng Electronic (ShenZhen) Co., Ltd.) holding management system certifications according to ISO 14001 standards.
<b>Distribution</b>	Eaton is committed to minimizing weight and volume of product and its associated packaging material with focus to optimize transport efficiency.
<b>Installation</b>	During installation of the product only standard tools are needed, which do not require any additional energy source and no waste other than the obsolete product packaging is generated during this step.
<b>Use</b>	Product consumes energy during useful life which is considered to be 8 years (as per actual designed life). During the reference service life of product, product requires one time of DC filtering capacitors, AC filtering capacitors, Fans, Power supply PCB and battery replacement needs to be considered during its RSL.
<b>End of life</b>	Recyclability of product is equal to 68.48% based on the method described in IEC/TR 62635, Edition 1.0/2012-10 "Guidelines for end-of-life information provided by manufacturers and recyclers and for recyclability rate calculation of electrical and electronic equipment".

Environmental Impacts											
<p>The calculation of the environmental impacts is the result of the Product's Life Cycle Analysis in accordance with ISO 14040/44, covering the entire lifecycle, i.e., "Cradle-to-Grave" including the following life cycle phases: production, distribution, installation, use and end of life.</p> <p>System modelling was carried out using the commercial LCA software EIME v6.3.1-3 with database version CODDE-2024-04 - updated on 2024-06-04.</p> <p>Indicators Set used: PEF EF 3.1 (Compliance: PEP ed.4, EN15804+A2) v2.0 and PSR-0010-ed2.0-EN 2023 06 01</p>											
<b>Manufacturing Phase</b>	<p>Product is assembled and prepared for shipment at the Eaton facility (Lianzheng Electronic (Shenzhen) Co., Ltd.)</p> <p>Upstream transportation of the product from manufacturing plant location to the Eaton warehouse location in Rheinbach is considered in the manufacturing stage.</p> <p>Energy model used: China &amp; Europe</p>										
<b>Distribution Phase</b>	<p>Customer location is assumed to be Europe. Intracontinental transport of 3500 km by lorry is considered as transport scenario from Eaton location to end user for this study based on actual data.</p>										
<b>Installation Phase</b>	<p>Product is installed in any European country. Hence, packaging waste treatment is considered in this phase considering country specific statistics as per PSR.</p> <p>Energy model used: Europe</p>										
<b>Use Phase</b>	<p>Reference lifetime: 8 years Energy model used: Europe.</p> <p>Usage profile: It has an average energy efficiency of 96.90% in High Efficiency Mode and 91.97% in Normal mode. The methodology for the calculation of the electricity consumption is based on Uninterruptible Power Systems (UPS) PSR0010.</p> <table border="1"> <tbody> <tr> <td>Operating loads</td> <td>25%</td> <td>50%</td> <td>75%</td> <td>100%</td> </tr> <tr> <td>Proportion of Time spent at</td> <td>0.00</td> <td>0.30</td> <td>0.40</td> <td>0.30</td> </tr> </tbody> </table> <p>Total energy losses are calculated to be equal to 11381 kWh over the 8 years for Normal Mode. • Product requires maintenance of DC filtering capacitors, AC filtering capacitors, Fan, Power supply PCB and Battery during its use life. Maintenance frequency is one time during RSL.</p>	Operating loads	25%	50%	75%	100%	Proportion of Time spent at	0.00	0.30	0.40	0.30
Operating loads	25%	50%	75%	100%							
Proportion of Time spent at	0.00	0.30	0.40	0.30							
<b>End of life Phase</b>	<p>Product disposed according to European WEEE guidelines.</p> <p>Energy model used: Europe</p>										
<b>Module-D</b>	<p>Module D is calculated according to PCR-ed4-EN-2021 09 06 based on the materials recycled and the modelled end-of-life scenario.</p> <p>It expresses the net benefits and loads beyond the boundaries of the system and are not to be included in the life cycle totals.</p>										

All environmental impacts are calculated for the declared unit, then data should be divided by the Factor calculated with below formulas to get functional unit result.

**Factor for use stage energy consumption B6:**

$$\frac{\text{Declared Unit Power (2700 W)} * \text{Declared Unit Lifetime (8 year)}}{100 \text{ W} * 1 \text{ year}} = 216$$

**Factor for all other stages (excepted B6 of use stage):**

$$\frac{\text{Declared Unit Power (2700 W)} * \text{Declared Unit Lifetime (8 year)} * \text{Declared Unit Backuptime (6 min)}}{100 \text{ W} * 1 \text{ year} * 5 \text{ min}} = 259.2$$

**Environmental Impact for Functional Unit**

**Environmental Impact Indicators: Mandatory**

Mandatory environmental impact indicators	Units	Sum	A1-A3 - Manufacturing	A4 - Distribution	A5 - Installation	B1-B7 – Use*	C1-C4 - End of life	B2 - Maintenance	B6 - Operational energy use	D - Benefits and loads beyond the system boundaries
Climate change - total	kg CO2 eq.	2.05E+01	1.02E+00	3.31E-02	1.81E-02	1.93E+01	1.35E-01	7.23E-01	1.86E+01	-2.46E-01
Climate change - fossil fuels	kg CO2 eq.	2.05E+01	1.03E+00	3.31E-02	8.92E-03	1.93E+01	1.33E-01	7.22E-01	1.85E+01	-2.54E-01
Climate change - biogenics	kg CO2 eq.	3.92E-02	-7.85E-03	1.36E-07	9.21E-03	3.56E-02	2.27E-03	1.43E-03	3.42E-02	8.23E-03
Climate change - land use and land use transformation	kg CO2 eq.	5.71E-07	2.31E-07	5.01E-08	5.24E-10	2.80E-07	9.14E-09	2.80E-07	0.00E+00	0.00E+00
Ozone depletion	kg eq. CFC-11	3.97E-07	1.46E-07	4.02E-10	1.81E-10	2.31E-07	1.99E-08	1.41E-07	9.00E-08	-5.87E-08
Acidification (AP)	mole of H+ eq.	1.13E-01	1.00E-02	5.23E-05	3.63E-05	1.02E-01	1.23E-03	6.83E-03	9.52E-02	-3.04E-03
Freshwater eutrophication	kg P eq.	5.58E-05	3.06E-06	1.24E-07	9.62E-08	5.13E-05	1.27E-06	2.37E-06	4.89E-05	-1.02E-04
Marine aquatic eutrophication	kg of N eq.	1.43E-02	1.18E-03	9.49E-06	1.19E-05	1.26E-02	4.58E-04	1.06E-03	1.16E-02	-3.39E-04
Terrestrial eutrophication	mole of N eq.	2.09E-01	1.29E-02	1.04E-04	1.07E-04	1.95E-01	9.91E-04	8.79E-03	1.86E-01	-3.78E-03
Photochemical ozone formation	kg of NMVOC eq.	4.40E-02	4.15E-03	3.37E-05	2.36E-05	3.94E-02	3.88E-04	2.94E-03	3.65E-02	-1.29E-03
Depletion of abiotic resources - elements	kg eq. Sb	8.25E-04	4.32E-04	1.18E-08	6.05E-10	3.93E-04	9.83E-08	3.86E-04	6.57E-06	-2.98E-04
Depletion of abiotic resources - fossil fuels	MJ	5.03E+02	1.73E+01	5.88E-01	1.24E-01	4.82E+02	2.43E+00	1.32E+01	4.69E+02	-4.59E+00
Water scarcity	m3 of eq.. deprivation worldwide	2.19E+01	3.91E-01	1.19E-03	6.14E-04	6.48E+00	1.50E+01	5.06E+00	1.42E+00	-3.19E+01

\*Note: B2 (Maintenance) and B6 (energy requirements during the use stage) are considered. Other sub modules in the use stage (B1, B3-B5, B7) are equal to zero. So, it is not listed in the result tables.

## Inventory Flow Indicators: Mandatory

Inventory flow indicators	Units	Sum	A1-A3 - Manufacturing	A4 - Distribution	A5 - Installation	B1-B7 – Use*	C1-C4 - End of life	B2 - Maintenance	B6 - Operational energy use	D - Benefits and loads beyond the system boundaries
Use of renewable primary energy, excluding renewable primary energy resources used as raw materials	MJ	1.25E+02	4.04E-01	1.85E-03	3.63E-02	1.24E+02	6.82E-02	1.59E-01	1.24E+02	-1.74E-01
Use of renewable primary energy resources used as raw materials	MJ	2.23E-01	2.23E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-1.20E-01
Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)	MJ	1.25E+02	6.27E-01	1.85E-03	3.63E-02	1.24E+02	6.82E-02	1.59E-01	1.24E+02	-2.95E-01
Use of non-renewable primary energy, excluding non-renewable primary energy resources used as raw materials	MJ	5.02E+02	1.68E+01	5.88E-01	1.24E-01	4.82E+02	2.43E+00	1.30E+01	4.69E+02	-4.43E+00
Use of non-renewable primary energy resources used as raw materials	MJ	8.02E-01	5.50E-01	0.00E+00	0.00E+00	2.52E-01	0.00E+00	2.52E-01	0.00E+00	-1.59E-01
Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials)	MJ	5.03E+02	1.73E+01	5.88E-01	1.24E-01	4.82E+02	2.43E+00	1.32E+01	4.69E+02	-4.59E+00
Use of secondary materials	kg	2.37E-06	1.35E-06	0.00E+00	0.00E+00	1.02E-06	0.00E+00	1.02E-06	0.00E+00	0.00E+00
Use of renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of non-renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Net use of fresh water	m3	5.87E-01	9.11E-03	2.78E-05	1.58E-05	1.66E-01	4.11E-01	1.33E-01	3.34E-02	-8.08E-01
Hazardous waste disposed of	kg	2.57E+00	1.05E+00	1.39E-04	2.52E-03	1.33E+00	1.90E-01	5.18E-01	8.14E-01	-5.09E-03

Inventory flow indicators	Units	Sum	A1-A3 - Manufacturing	A4 - Distribution	A5 - Installation	B1-B7 – Use*	C1-C4 - End of life	B2 - Maintenance	B6 - Operational energy use	D - Benefits and loads beyond the system boundaries
Non-hazardous waste disposed of	kg	3.76E+00	5.03E-01	3.07E-03	2.22E-03	3.24E+00	1.39E-02	1.01E-01	3.14E+00	-8.41E-03
Radioactive waste disposed of	kg	8.50E-04	6.42E-05	2.44E-06	5.67E-07	7.72E-04	1.05E-05	5.26E-05	7.20E-04	-6.09E-06
Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	2.59E-03	8.85E-08	0.00E+00	2.59E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for energy recovery	kg	3.97E-10	3.37E-10	0.00E+00	0.00E+00	6.02E-11	0.00E+00	6.02E-11	0.00E+00	0.00E+00
Exported energy	MJ by energy vector	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic carbon content of the product	kg of C.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic carbon content of the associated packaging	kg of C.	4.62E-03	4.62E-03	0.00E+00	0.00E+00	2.24E-06	0.00E+00	2.24E-06	0.00E+00	0.00E+00

\*Note: B2 (Maintenance) and B6 (energy requirements during the use stage) are considered. Other sub modules in the use stage (B1, B3-B5, B7) are equal to zero. So, it is not listed in the result tables.

### Environmental Impact Indicators: Optional

Optional Environmental impact indicators	Units	Sum	A1-A3 - Manufacturing	A4 - Distribution	A5 - Installation	B1-B7 - Use	C1-C4 - End of life	B2 - Maintenance	B6 - Operational energy use	D - Benefits and loads beyond the system boundaries
Emission of fine particles	incidence of diseases	8.65E-07	5.69E-08	4.49E-10	2.36E-10	8.02E-07	5.37E-09	3.57E-08	7.66E-07	-1.68E-08
Ionizing radiation, human health	kBq of U235 eq.	7.74E+01	2.59E+01	1.17E-03	2.63E-03	5.15E+01	3.09E-02	2.48E+01	2.67E+01	-5.99E-02
Ecotoxicity, fresh water	CTUe	6.28E+01	1.43E+01	9.66E-01	1.59E-01	4.54E+01	1.89E+00	1.04E+01	3.51E+01	-1.78E+00
Human toxicity, cancer effects	CTUh	1.44E-07	1.67E-08	6.49E-12	7.38E-10	6.66E-08	5.98E-08	6.43E-08	2.34E-09	-2.95E-09
Human toxicity, non-cancer effects	CTUh	8.32E-07	3.91E-07	1.24E-10	4.08E-11	4.35E-07	5.61E-09	3.80E-07	5.58E-08	-3.17E-07
Impacts related to land use/soil quality	-	7.13E-01	4.24E-03	1.42E-04	6.47E-05	5.82E-01	1.27E-01	6.80E-02	5.14E-01	-3.12E-01
Total use of primary energy during the life cycle	MJ	6.27E+02	1.80E+01	5.90E-01	1.60E-01	6.06E+02	2.50E+00	1.34E+01	5.93E+02	-4.89E+00

\*Note: B2 (Maintenance) and B6 (energy requirements during the use stage) are considered. Other sub modules in the use stage (B1, B3-B5, B7) are equal to zero. So, it is not listed in the result tables.

## Environmental Impact considering for Declared Unit

### Environmental Impact Indicators: Mandatory

Mandatory environmental impact indicators	Units	Sum	A1-A3 - Manufacturing	A4 - Distribution	A5 - Installation	B1-B7 - Use*	C1-C4 - End of life	B2 - Maintenance	B6 - Operational energy use	D - Benefits and loads beyond the system boundaries
Climate change - total	kg CO2 eq.	4.51E+03	2.64E+02	8.59E+00	4.70E+00	4.70E+00	3.50E+01	1.87E+02	4.01E+03	-6.37E+01
Climate change - fossil fuels	kg CO2 eq.	4.50E+03	2.66E+02	8.59E+00	2.31E+00	2.31E+00	3.44E+01	1.87E+02	4.00E+03	-6.58E+01
Climate change - biogenics	kg CO2 eq.	8.69E+00	-2.04E+00	3.51E-05	2.39E+00	2.39E+00	5.88E-01	3.70E-01	7.38E+00	2.13E+00
Climate change - land use and land use transformation	kg CO2 eq.	1.48E-04	5.98E-05	1.30E-05	1.36E-07	1.36E-07	2.37E-06	7.27E-05	0.00E+00	0.00E+00
Ozone depletion	kg eq. CFC-11	9.91E-05	3.79E-05	1.04E-07	4.70E-08	4.70E-08	5.16E-06	3.65E-05	1.94E-05	-1.52E-05
Acidification (AP)	mole of H+ eq.	2.53E+01	2.59E+00	1.36E-02	9.42E-03	9.42E-03	3.18E-01	1.77E+00	2.06E+01	-7.88E-01
Freshwater eutrophication	kg P eq.	1.24E-02	7.92E-04	3.21E-05	2.49E-05	2.49E-05	3.30E-04	6.15E-04	1.06E-02	-2.64E-02
Marine aquatic eutrophication	kg of N eq.	3.21E+00	3.05E-01	2.46E-03	3.07E-03	3.07E-03	1.19E-01	2.75E-01	2.50E+00	-8.80E-02
Terrestrial eutrophication	mole of N eq.	4.61E+01	3.34E+00	2.70E-02	2.77E-02	2.77E-02	2.57E-01	2.28E+00	4.02E+01	-9.80E-01
Photochemical ozone formation	kg of NMVOC eq.	9.83E+00	1.07E+00	8.72E-03	6.13E-03	6.13E-03	1.01E-01	7.61E-01	7.88E+00	-3.35E-01
Depletion of abiotic resources - elements	kg eq. Sb	2.14E-01	1.12E-01	3.06E-06	1.57E-07	1.57E-07	2.55E-05	1.00E-01	1.42E-03	-7.72E-02
Depletion of abiotic resources - fossil fuels	MJ	1.10E+05	4.50E+03	1.52E+02	3.21E+01	3.21E+01	6.30E+02	3.43E+03	1.01E+05	-1.19E+03
Water scarcity	m3 of eq.. deprivation worldwide	5.61E+03	1.01E+02	3.09E-01	1.59E-01	1.59E-01	3.89E+03	1.31E+03	3.07E+02	-8.27E+03

\*Note: B2 (Maintenance) and B6 (energy requirements during the use stage) are considered. Other sub modules in the use stage (B1, B3-B5, B7) are equal to zero. So, it is not listed in the result tables.

### Inventory Flow Indicators: Mandatory

Inventory flow indicators	Units	Sum	A1-A3 - Manufacturing	A4 - Distribution	A5 - Installation	B1-B7 - Use	C1-C4 - End of life	B2 - Maintenance	B6 - Operational energy use	D - Benefits and loads beyond the system boundaries
Use of renewable primary energy, excluding renewable primary energy resources used as raw materials	MJ	2.70E+04	1.05E+02	4.81E-01	9.41E+00	2.68E+04	1.77E+01	4.11E+01	2.68E+04	-4.52E+01
Use of renewable primary energy resources used as raw materials	MJ	5.78E+01	5.78E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-3.12E+01
Total use of renewable primary energy resources (primary energy)	MJ	2.70E+04	1.63E+02	4.81E-01	9.41E+00	2.68E+04	1.77E+01	4.11E+01	2.68E+04	-7.63E+01

Inventory flow indicators	Units	Sum	A1-A3 - Manufacturing	A4 - Distribution	A5 - Installation	B1-B7 - Use	C1-C4 - End of life	B2 - Maintenance	B6 - Operational energy use	D - Benefits and loads beyond the system boundaries
and primary energy resources used as raw materials)										
Use of non-renewable primary energy, excluding non-renewable primary energy resources used as raw materials	MJ	1.10E+05	4.35E+03	1.52E+02	3.21E+01	1.05E+05	6.30E+02	3.37E+03	1.01E+05	-1.15E+03
Use of non-renewable primary energy resources used as raw materials	MJ	2.08E+02	1.43E+02	0.00E+00	0.00E+00	6.54E+01	0.00E+00	6.54E+01	0.00E+00	-4.13E+01
Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials)	MJ	1.10E+05	4.50E+03	1.52E+02	3.21E+01	1.05E+05	6.30E+02	3.43E+03	1.01E+05	-1.19E+03
Use of secondary materials	kg	6.13E-04	3.49E-04	0.00E+00	0.00E+00	2.65E-04	0.00E+00	2.65E-04	0.00E+00	0.00E+00
Use of renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of non-renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Net use of fresh water	m3	1.51E+02	2.36E+00	7.20E-03	4.09E-03	4.17E+01	1.07E+02	3.45E+01	7.22E+00	-2.09E+02
Hazardous waste disposed of	kg	6.32E+02	2.72E+02	3.59E-02	6.54E-01	3.10E+02	4.92E+01	1.34E+02	1.76E+02	-1.32E+00
Non-hazardous waste disposed of	kg	8.39E+02	1.30E+02	7.97E-01	5.75E-01	7.04E+02	3.61E+00	2.62E+01	6.77E+02	-2.18E+00
Radioactive waste disposed of	kg	1.89E-01	1.66E-02	6.31E-04	1.47E-04	1.69E-01	2.72E-03	1.36E-02	1.55E-01	-1.58E-03
Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	6.71E-01	2.29E-05	0.00E+00	6.71E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for energy recovery	kg	1.03E-07	8.74E-08	0.00E+00	0.00E+00	1.56E-08	0.00E+00	1.56E-08	0.00E+00	0.00E+00
Exported energy	MJ by energy vector	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic carbon content of the product	kg of C.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic carbon content of the associated packaging	kg of C.	9.40E-01	9.40E-01	0.00E+00	0.00E+00	5.81E-04	0.00E+00	5.81E-04	0.00E+00	0.00E+00

**\*Note:** B2 (Maintenance) and B6 (energy requirements during the use stage) are considered. Other sub modules in the use stage (B1, B3-B5, B7) are equal to zero. So, it is not listed in the result tables.

## Environmental Impact Indicators: Optional

Optional Environmental impact indicators	Units	Sum	A1-A3 - Manufacturing	A4 - Distribution	A5 - Installation	B1-B7 - Use	C1-C4 - End of life	B2 - Maintenance	B6 - Operational energy use	D - Benefits and loads beyond the system boundaries
Emission of fine particles	incidence of diseases	1.91E-04	1.48E-05	1.16E-07	6.12E-08	1.75E-04	1.39E-06	9.26E-06	1.65E-04	-4.36E-06
Ionizing radiation, human health	kBq of U235 eq.	1.89E+04	6.70E+03	3.04E-01	6.81E-01	1.22E+04	8.00E+00	6.44E+03	5.77E+03	-1.55E+01
Ecotoxicity, fresh water	CTUe	1.48E+04	3.71E+03	2.51E+02	4.12E+01	1.03E+04	4.89E+02	2.69E+03	7.58E+03	-4.60E+02
Human toxicity, cancer effects	CTUh	3.72E-05	4.32E-06	1.68E-09	1.91E-07	1.72E-05	1.55E-05	1.67E-05	5.04E-07	-7.63E-07
Human toxicity, non-cancer effects	CTUh	2.13E-04	1.01E-04	3.21E-08	1.06E-08	1.10E-04	1.45E-06	9.84E-05	1.21E-05	-8.20E-05
Impacts related to land use/soil quality	-	1.63E+02	1.10E+00	3.67E-02	1.68E-02	1.29E+02	3.29E+01	1.76E+01	1.11E+02	-8.09E+01
Total use of primary energy during the life cycle	MJ	1.37E+05	4.66E+03	1.53E+02	4.15E+01	1.32E+05	6.48E+02	3.47E+03	1.28E+05	-1.27E+03

\*Note: B2 (Maintenance) and B6 (energy requirements during the use stage) are considered. Other sub modules in the use stage (B1, B3-B5, B7) are equal to zero. So, it is not listed in the result tables.

Other Products covered in homogeneous family of Eaton 9SX 0.7-3kVATower UPS and the relevant data are shown in the below table:

Product family	Model	Description	UPS Rating (VA)	Power factor (pf)	UPS Rating (W)	Backup time at full load (mins)	UPS efficiency (Normal Mode) [%]	Use phase losses (Normal Mode) (kWh)	Product Net weight (Actual) kg	Packaging weight (Actual) kg
Eaton 9SX 0.7-3kVATower	9SX3000I (Reference)	Eaton 9SX 3000i (Reference)	3000	0.9	2700	6	91.97	11381	33.2	5.05
	9SX700I	Eaton 9SX 700i	700	0.9	630	5	85.36	4683	11.93	3.57
	9SX1000I	Eaton 9SX 1000i	1000	0.9	900	6	88.20	5422	14.99	3.43
	9SX1000IM	Eaton 9SX 1000i Marine	1000	0.9	900	6	88.20	5422	15.11	3.64
	9SX1500I	Eaton 9SX 1500i	1500	0.9	1350	5.5	91.32	6031	18.45	3.72
	9SX2000I	Eaton 9SX 2000i	2000	0.9	1800	7	91.55	7904	29.23	5.19
	9SX3000IM	Eaton 9SX 3000i Marine	3000	0.9	2700	6	91.97	11381	32.26	6.24
	9SX1000I + 9SXEBM36T	Eaton 9SX 1000i + Eaton 9SX EBM 36V Tower	1000	0.9	900	29	88.20	5422	34.08	7.09
	9SX1000IM + 9SXEBM36T	Eaton 9SX 1000i Marine + Eaton 9SX EBM 36V Tower	1000	0.9	900	29	88.20	5422	34.2	7.3
	9SX1500I + 9SXEBM48T	Eaton 9SX 1500i + Eaton 9SX EBM 48V Tower	1500	0.9	1350	28	91.32	6031	42.31	8.11
	9SX2000I + 9SXEBM96T	Eaton 9SX 2000i + Eaton 9SX EBM 96V Tower	2000	0.9	1800	40	91.55	7904	76.31	10.61
	9SX3000I + 9SXEBM96T	Eaton 9SX 3000i + Eaton 9SX EBM 96V Tower	3000	0.9	2700	29	91.97	11381	80.28	10.47
	9SX3000IM + 9SXEBM96T	Eaton 9SX 3000i Marine + Eaton 9SX EBM 96V Tower	3000	0.9	2700	29	91.97	11381	79.34	11.66

Product family	Model	Description	UPS Rating (VA)	Power factor (pf)	UPS Rating (W)	Backup time at full load (mins)	UPS efficiency (Normal Mode) [%]	Use phase losses (Normal Mode) (kWh)	Product Net weight (Actual) kg	Packaging weight (Actual) kg
	9SX1000I + 2 * 9SXEBM36T	Eaton 9SX 1000i + 2 * Eaton 9SX EBM 36V Tower	1000	0.9	900	53	88.20	5422	53.17	10.75
	9SX1000IM + 2 * 9SXEBM36T	Eaton 9SX 1000i Marine + 2 * Eaton 9SX EBM 36V Tower	1000	0.9	900	53	88.20	5422	53.29	10.96
	9SX1500I + 2 * 9SXEBM48T	Eaton 9SX 1500i + 2 * Eaton 9SX EBM 48V Tower	1500	0.9	1350	51	91.32	6031	66.17	12.5
	9SX2000I + 2 * 9SXEBM96T	Eaton 9SX 2000i + 2 * Eaton 9SX EBM 96V Tower	2000	0.9	1800	77	91.55	7904	123.39	16.03
	9SX3000I + 2 * 9SXEBM96T	Eaton 9SX 3000i + 2 * Eaton 9SX EBM 96V Tower	3000	0.9	2700	52	91.97	11381	127.36	15.89
	9SX3000IM + 2 * 9SXEBM96T	Eaton 9SX 3000i Marine + 2 * Eaton 9SX EBM 96V Tower	3000	0.9	2700	52	91.97	11381	126.42	17.08
	9SX1000I + 3 * 9SXEBM36T	Eaton 9SX 1000i + 3 * Eaton 9SX EBM 36V Tower	1000	0.9	900	80	88.20	5422	72.26	14.41
	9SX1000IM + 3 * 9SXEBM36T	Eaton 9SX 1000i Marine + 3 * Eaton 9SX EBM 36V Tower	1000	0.9	900	80	88.20	5422	72.38	14.62
	9SX1500I + 3 * 9SXEBM48T	Eaton 9SX 1500i + 3 * Eaton 9SX EBM 48V Tower	1500	0.9	1350	77	91.32	6031	90.03	16.89
	9SX2000I + 3 * 9SXEBM96T	Eaton 9SX 2000i + 3 * Eaton 9SX EBM 96V Tower	2000	0.9	1800	116	91.55	7904	170.47	21.45
	9SX3000I + 3 * 9SXEBM96T	Eaton 9SX 3000i + 3 * Eaton 9SX EBM 96V Tower	3000	0.9	2700	79	91.97	11381	80.28	10.47
	9SX3000IM + 3 * 9SXEBM96T	Eaton 9SX 3000i Marine + 3 * Eaton 9SX EBM 96V Tower	3000	0.9	2700	79	91.97	11381	173.5	22.5
	9SX1000I + 4 * 9SXEBM36T	Eaton 9SX 1000i + 4 * Eaton 9SX EBM 36V Tower	1000	0.9	900	108	88.20	5422	91.35	18.07
	9SX1000IM + 4 * 9SXEBM36T	Eaton 9SX 1000i Marine + 4 * Eaton 9SX EBM 36V Tower	1000	0.9	900	108	88.20	5422	91.47	18.28
	9SX1500I + 4 * 9SXEBM48T	Eaton 9SX 1500i + 4 * Eaton 9SX EBM 48V Tower	1500	0.9	1350	104	91.32	6031	113.89	21.28
	9SX2000I + 4 * 9SXEBM96T	Eaton 9SX 2000i + 4 * Eaton 9SX EBM 96V Tower	2000	0.9	1800	160	91.55	7904	217.55	26.87
	9SX3000I + 4 * 9SXEBM96T	Eaton 9SX 3000i + 4 * Eaton 9SX EBM 96V Tower	3000	0.9	2700	106	91.97	11381	221.52	26.73
	9SX3000IM + 4 * 9SXEBM96T	Eaton 9SX 3000i Marine + 4 * Eaton 9SX EBM 96V Tower	3000	0.9	2700	106	91.97	11381	220.58	27.92

To evaluate the environmental impact of other product covered by this PEP, apply the following conversion factors to the Environmental Impact shown above. The extrapolation factors are calculated based on the PSR0010 section 3.6.:

**Conversion Factors for Manufacturing, Distribution, Installation, Use and End-of-Life Phase for all environmental impacts for declared unit impacts:**

Model	A1-A3 Manufacturing	A4 Distribution	A5 Installation	B2 Use Phase	B6 Use Phase (Normal Mode)	B6 Use Phase (High Efficiency)	C1-C4 End-of Life	D - Module
9SX3000I (Reference Declared Unit) - Normal Mode only)	1.00	1.00	1.00	1.00	1.00	-	1.00	1.00
9SX3000I – HE Mode	1.00	1.00	1.00	1.00	-	0.38	1.00	1.00

Model	A1-A3 Manufacturing	A4 Distribution	A5 Installation	B2 Use Phase	B6 Use Phase (Normal Mode)	B6 Use Phase (High Efficiency)	C1-C4 End-of Life	D - Module
9SX700I	0.41	0.41	0.71	0.41	0.41	0.27	0.36	0.41
9SX1000I	0.48	0.48	0.68	0.48	0.48	0.26	0.45	0.48
9SX1000IM	0.49	0.49	0.72	0.49	0.48	0.26	0.46	0.49
9SX1500I	0.58	0.58	0.74	0.58	0.53	0.23	0.56	0.58
9SX2000I	0.90	0.90	1.03	0.90	0.69	0.28	0.88	0.90
9SX3000IM	1.01	1.01	1.24	1.01	1.00	0.38	0.97	1.01
9SX1000I + 9SXEBM36T	1.08	1.08	1.40	1.08	0.48	0.26	1.03	1.08
9SX1000IM + 9SXEBM36T	1.08	1.08	1.45	1.08	0.48	0.26	1.03	1.08
9SX1500I + 9SXEBM48T	1.32	1.32	1.61	1.32	0.53	0.23	1.27	1.32
9SX2000I + 9SXEBM96T	2.27	2.27	2.10	2.27	0.69	0.28	2.30	2.27
9SX3000I + 9SXEBM96T	2.37	2.37	2.07	2.37	1.00	0.38	2.42	2.37
9SX3000IM + 9SXEBM96T	2.38	2.38	2.31	2.38	1.00	0.38	2.39	2.38
9SX1000I + 2 * 9SXEBM36T	1.67	1.67	2.13	1.67	0.48	0.26	1.60	1.67
9SX1000IM + 2 * 9SXEBM36T	1.68	1.68	2.17	1.68	0.48	0.26	1.61	1.68
9SX1500I + 2 * 9SXEBM48T	2.06	2.06	2.48	2.06	0.53	0.23	1.99	2.06
9SX2000I + 2 * 9SXEBM96T	3.64	3.64	3.17	3.64	0.69	0.28	3.72	3.64
9SX3000I + 2 * 9SXEBM96T	3.75	3.75	3.15	3.75	1.00	0.38	3.84	3.75
9SX3000IM + 2 * 9SXEBM96T	3.75	3.75	3.38	3.75	1.00	0.38	3.81	3.75
9SX1000I + 3 * 9SXEBM36T	2.27	2.27	2.85	2.27	0.48	0.26	2.18	2.27
9SX1000IM + 3 * 9SXEBM36T	2.27	2.27	2.90	2.27	0.48	0.26	2.18	2.27
9SX1500I + 3 * 9SXEBM48T	2.80	2.80	3.34	2.80	0.53	0.23	2.71	2.80
9SX2000I + 3 * 9SXEBM96T	5.02	5.02	4.25	5.02	0.69	0.28	5.13	5.02
9SX3000I + 3 * 9SXEBM96T	2.37	2.37	2.07	2.37	1.00	0.38	2.42	2.37
9SX3000IM + 3 * 9SXEBM96T	5.12	5.12	4.46	5.12	1.00	0.38	5.23	5.12
9SX1000I + 4 * 9SXEBM36T	2.86	2.86	3.58	2.86	0.48	0.26	2.75	2.86
9SX1000IM + 4 * 9SXEBM36T	2.87	2.87	3.62	2.87	0.48	0.26	2.76	2.87
9SX1500I + 4 * 9SXEBM48T	3.53	3.53	4.21	3.53	0.53	0.23	3.43	3.53
9SX2000I + 4 * 9SXEBM96T	6.39	6.39	5.32	6.39	0.69	0.28	6.55	6.39
9SX3000I + 4 * 9SXEBM96T	6.49	6.49	5.29	6.49	1.00	0.38	6.67	6.49
9SX3000IM + 4 * 9SXEBM96T	6.50	6.50	5.53	6.50	1.00	0.38	6.64	6.50

**\*Note:** The normal mode of the representative product is considered as 1.00 for calculating extrapolation factor High efficiency mode and Normal mode of homogeneous product.

To get functional unit impacts, the declared unit results of specific part numbers need to be divided by the below factors calculated as per PSR10 section 3.1.3:

Model	FU factor for Use B6	FU factor for other phases (Excluding B6)
9SX3000I (Reference)	216	259.2
9SX700I	50.4	50.4
9SX1000I	72	86.4
9SX1000IM	72	86.4
9SX1500I	108	118.8
9SX2000I	144	201.6
9SX3000IM	216	259.2
9SX1000I + 9SXEBM36T	72	417.6

Model	FU factor for Use B6	FU factor for other phases (Excluding B6)
9SX1000IM + 9SXEBM36T	72	417.6
9SX1500I + 9SXEBM48T	108	604.8
9SX2000I + 9SXEBM96T	144	1152
9SX3000I + 9SXEBM96T	216	1252.8
9SX3000IM + 9SXEBM96T	216	1252.8
9SX1000I + 2 * 9SXEBM36T	72	763.2
9SX1000IM + 2 * 9SXEBM36T	72	763.2
9SX1500I + 2 * 9SXEBM48T	108	1101.6
9SX2000I + 2 * 9SXEBM96T	144	2217.6
9SX3000I + 2 * 9SXEBM96T	216	2246.4
9SX3000IM + 2 * 9SXEBM96T	216	2246.4
9SX1000I + 3 * 9SXEBM36T	72	1152
9SX1000IM + 3 * 9SXEBM36T	72	1152
9SX1500I + 3 * 9SXEBM48T	108	1663.2
9SX2000I + 3 * 9SXEBM96T	144	3340.8
9SX3000I + 3 * 9SXEBM96T	216	3412.8
9SX3000IM + 3 * 9SXEBM96T	216	3412.8
9SX1000I + 4 * 9SXEBM36T	72	1555.2
9SX1000IM + 4 * 9SXEBM36T	72	1555.2
9SX1500I + 4 * 9SXEBM48T	108	2246.4
9SX2000I + 4 * 9SXEBM96T	144	4608
9SX3000I + 4 * 9SXEBM96T	216	4579.2
9SX3000IM + 4 * 9SXEBM96T	216	4579.2

## Disclaimer

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<i>Date of issue</i>	09-2025	<i>Information and reference documents</i>	<a href="http://www.pep-ecopassport.org">www.pep-ecopassport.org</a>
		<i>Validity period</i>	5 years
Independent verification of the declaration and data, in compliance with ISO 14025: 2006			
Internal	X	External	
The PCR review was conducted by a panel of experts chaired by Julie ORGELET (DDemain)			
<i>PEPs are compliant with XP C08-100-1:2016 and EN 50693:2019</i> <i>The components of the present PEP may not be compared with components from any other program.</i>			
<i>Document complies with ISO 14025: 2006 « Environmental labels and declarations. Type III environmental declarations »</i>			