



NZM3 Molded Case Circuit Breaker (IEC) with PXR Electronic Trip Unit and Plug-in technology

Representative product	NZMH3-4-VX630-SVE (Y7-191396) Product Category: Circuit Breakers
Description of the product	Eaton Moeller series NZM3 Molded Case Circuit Breaker (IEC) with PXR Electronic Trip Unit and Plug-in technology designed to protect the installation from overload and short circuits. It is used in unearthed supply systems up to 690 V. It comes with Built-in device plug-in technique as mounting method.
Homogeneous Environmental Families Covered	The PEP concerns following product offerings from Eaton Moeller series NZM molded case circuit breaker with Thermo-Magnetic Trip Unit as mentioned below: • Series: NZM Circuit Breaker • Switching Capacity: H (High), L (Limiter), N (Normal), S (Strong) • Rated Current - Release Type MX (LI motor – motor protection, electronic): 220 A, 350 A, 450 A • Rated Current - Release Type VX (LSI – selectivity and generator protection, electronic) :250 A, 400 A, 630 A • Rated Current - Release Type PX (LSI – selectivity and generator protection, electronic, with measuring equipment) :250 A, 400 A, 630 A • Rated Current - Release Type PMX (LI motor – motor protection, electronic, with measuring equipment): 250 A, 350 A, 450 A. • Rated Current - Release Type MX (LI motor – motor protection, electronic) :220 A, 350 A, 450 A • No. of Poles: 3, 4 • Mounting Method: SVE (Plug-in Unit)
Functional unit	“Protect the installation from overloads and short circuits in a circuit with rated voltage 690V, rated current 630A, with 4 poles, a rated breaking capacity 35kA, and IP20 Rating, in the Industrial application area, according to the appropriate use scenario, and during the reference service life of the product of 20 years.”

Company information	Eaton Electro Productie s.r.l, Independentei 8, Sarbi, Romania, 437157 Email: productstewardship-es@eaton.com
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Constituent Materials			
Reference product mass	1.09E+01 Kg (With packaging)		
Category PEP Material	Material constituent	Mass (kg)	% Contribution
Metals	Steel	3.26E+00	29.9%
Metals	Copper	2.44E+00	22.4%
Plastic	Unsaturated Polyester	1.65E+00	15.2%
Plastic	Polycarbonate	1.18E+00	10.8%
Others	Cardboard	5.77E-01	5.3%
Metals	Stainless Steel	5.39E-01	5.0%
Plastic	Polyamide 6.6	3.40E-01	3.1%
Plastic	Polyphenylene sulphide 60 GF40	2.15E-01	2.0%
Plastic	Polyurethane	1.77E-01	1.6%
Plastic	Polybutylene terephthalate	1.42E-01	1.3%
Others	Wood	1.17E-01	1.1%
Others	PWB	6.57E-02	0.6%
Metals	Silver	4.00E-02	0.4%
Others	Paper	3.80E-02	0.3%
Plastic	Polyamide 6.6 (PA 6.6) with 30% glass fibers	2.65E-02	0.2%
Others	Miscellaneous	8.86E-02	0.8%
Total		1.09E+01	100%

Substance Assessment

The representative product is compliant with the EU-RoHS Directive (2011/65/EU) with exemption and the product does contain Lead + Perfluorobutane sulfonic acid (PFBS) and its salts as substance listed as Substance-of-Very-High-Concern (SVHC) on the Candidate List of the EU-REACH Regulation (1907/2006/EC).

Additional Environmental Information

Manufacturing	The reference product is assembled at an Eaton plant Sarbi, Romania holding management system certifications according to ISO 14001 standards.
Distribution	Eaton is committed to minimizing weight and volume of product and packaging with focus to optimize transport efficiency.
Installation	The installation process does not require any energy consumption and there is no waste other than the obsolete product packaging generated during this step.
Use	The product requires energy consumption during operation.
End of life	The recyclability rate of the overall product is 68.70% if it is properly dismantled prior to shredding. The rate is calculated 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	
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. System modelling was carried out using the commercial LCA software EIME v6.2.3 with database version CODDE-2024-04-Updated on 2024-06-04. Indicators Set: PEF EF 3.1 (Compliance: PEP ed.4, EN15804+A2) v2.0	
Manufacturing Phase	The product is assembled as well as packed at Eaton facility Eaton Electro Productie s.r.l, Independentei 8, Sarbi, Romania plant. 1837 km by lorry of 27t capacity from Eaton Plant to Distribution center In Rheinbach, Germany Energy model used: Romania
Distribution Phase	Distribution of the product in its packaging from the Eaton's last logistics platform to the installation place in Europe is considered as per PCR rules.
Installation Phase	Product is installed in Europe. Installation of product and treatment of packaging waste are considered in this phase. There is no energy consumption for reference product. Energy model used: Europe
Use Phase	Reference lifetime: 20 Years Usage profile: The product has power loss of 119.07 W at full load condition. For Industrial applications as per PSR-0005 section 3.2.2, considering 50% of the loading rate and 30% of the use time rate, total losses are 1564.58 kWh over the 20 years. Product do not require any maintenance/replacement during useful life. Energy model used: Europe
End of life Phase	Product disposed with WEEE guidelines. Energy model used: Europe
Module-D	Module D is calculated according to PCR-ed4-EN-2021 09 06 based on the materials recycled and the modelled end-of-life scenario. It expresses the net benefits and loads beyond the boundaries of the system and are not to be included in the life cycle totals.

Environmental Impact Indicators: Mandatory

Mandatory environmental impact indicators	Units	Sum	A1-A3 - Manufacturing	A4 - Distribution	A5 - Installation	B6 - Operational energy use	C1-C4 - End of life	D - Benefits and loads beyond the system boundaries
Climate change – total (GWP)	kg CO2 eq.	6.41E+02	6.96E+01	2.59E+00	2.03E+00	5.51E+02	1.54E+01	-2.78E+01
Climate change - fossil fuels (GWP-f)	kg CO2 eq.	6.38E+02	6.96E+01	2.59E+00	8.50E-01	5.50E+02	1.49E+01	-2.80E+01
Climate change – biogenics (GWP-b)	kg CO2 eq.	2.69E+00	1.65E-02	0.00E+00	1.18E+00	1.01E+00	4.80E-01	1.31E-01
Climate change - land use and land use transformation (GWP-lu)	kg CO2 eq.	1.64E-03	1.63E-03	0.00E+00	0.00E+00	0.00E+00	7.85E-06	-1.49E-03
Ozone depletion (ODP)	kg eq. CFC-11	9.48E-06	6.44E-06	3.98E-09	1.81E-08	2.67E-06	3.49E-07	-2.85E-06
Acidification (AP)	mole of H+ eq.	3.81E+00	8.65E-01	1.64E-02	2.42E-03	2.83E+00	9.89E-02	-4.63E-01

Mandatory environmental impact indicators	Units	Sum	A1-A3 - Manufacturing	A4 - Distribution	A5 - Installation	B6 - Operational energy use	C1-C4 - End of life	D - Benefits and loads beyond the system boundaries
Freshwater eutrophication (EP-fw)	kg P eq.	2.25E-02	6.22E-03	9.74E-07	9.31E-06	1.45E-03	1.49E-02	-1.73E-04
Marine aquatic eutrophication (EP-m)	kg of N eq.	4.26E-01	5.82E-02	7.71E-03	1.01E-03	3.44E-01	1.46E-02	-1.93E-02
Terrestrial eutrophication (EP-t)	mole of N eq.	6.44E+00	6.61E-01	8.46E-02	7.06E-03	5.53E+00	1.54E-01	-2.11E-01
Photochemical ozone formation (POCP)	kg of NMVOC eq.	1.39E+00	2.41E-01	2.13E-02	1.70E-03	1.08E+00	4.54E-02	-9.29E-02
Depletion of abiotic resources – elements (ADPe)	kg eq. Sb	6.30E-02	6.23E-02	1.02E-07	4.51E-08	1.95E-04	4.81E-04	-2.43E-02
Depletion of abiotic resources - fossil fuels (ADP-f)	MJ	1.69E+04	2.06E+03	3.62E+01	7.33E+00	1.39E+04	8.40E+02	-7.82E+02
Water scarcity (WDP)	m3 of eq.. deprivation worldwide	1.51E+02	5.08E+01	9.86E-03	1.17E-01	4.22E+01	5.73E+01	-2.70E+01

Inventory Flow Indicators: Mandatory

Inventory flow indicators	Units	Sum	A1-A3 - Manufacturing	A4 - Distribution	A5 - Installation	B6 - Operational energy use	C1-C4 - End of life	D - Benefits and loads beyond the system boundaries
Use of renewable primary energy, excluding renewable primary energy resources used as raw materials	MJ	3.78E+03	7.37E+01	4.83E-02	2.36E+00	3.68E+03	1.50E+01	-1.98E+01
Use of renewable primary energy resources used as raw materials	MJ	1.40E+01	1.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-9.70E+00
Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)	MJ	3.79E+03	8.77E+01	4.83E-02	2.36E+00	3.68E+03	1.50E+01	-2.95E+01
Use of non-renewable primary energy, excluding non-renewable primary energy resources used as raw materials	MJ	1.68E+04	1.96E+03	3.62E+01	7.33E+00	1.39E+04	8.40E+02	-7.37E+02
Use of non-renewable primary energy resources used as raw materials	MJ	1.06E+02	1.06E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-4.47E+01
Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials)	MJ	1.69E+04	2.06E+03	3.62E+01	7.33E+00	1.39E+04	8.40E+02	-7.82E+02
Use of secondary materials	kg	2.50E-06	2.50E-06	0.00E+00	0.00E+00	0.00E+00	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
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
Net use of fresh water	m3	3.63E+00	1.18E+00	2.30E-04	5.71E-03	9.93E-01	1.45E+00	-6.29E-01
Hazardous waste disposed of	kg	6.49E+02	6.15E+02	0.00E+00	5.21E-02	2.42E+01	1.02E+01	-3.59E+02
Non-hazardous waste disposed of	kg	1.27E+02	3.06E+01	9.12E-02	3.01E-01	9.31E+01	3.38E+00	-8.15E+00
Radioactive waste disposed of	kg	3.93E-02	1.74E-02	6.49E-05	4.47E-05	2.14E-02	4.45E-04	-4.59E-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

Inventory flow indicators	Units	Sum	A1-A3 - Manufacturing	A4 - Distribution	A5 - Installation	B6 - Operational energy use	C1-C4 - End of life	D - Benefits and loads beyond the system boundaries
Materials for recycling	kg	1.10E+01	3.01E+00	0.00E+00	5.48E-01	0.00E+00	7.43E+00	-2.64E-07
Materials for energy recovery	kg	2.35E-01	6.51E-03	0.00E+00	9.55E-02	0.00E+00	1.33E-01	0.00E+00
Exported energy	MJ by energy vector	4.06E-02	4.49E-05	0.00E+00	4.05E-02	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
Biogenic carbon content of the associated packaging	kg of C	3.30E-01	3.30E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Other sub modules in the use stage (B1-B5, B7) are equal to 0, hence not listed in the table

Environmental Impact Indicators: Optional

Optional Environmental impact indicators	Units	Sum	A1-A3 - Manufacturing	A4 - Distribution	A5 - Installation	B6 - Operational energy use	C1-C4 - End of life	D - Benefits and loads beyond the system boundaries
Emission of fine particles	incidence of diseases	2.99E-05	6.53E-06	1.34E-07	1.43E-08	2.27E-05	5.22E-07	-3.44E-06
Ionizing radiation, human health	kBq of U235 eq.	1.76E+03	9.32E+02	6.33E-03	3.63E+01	7.93E+02	1.82E+00	-6.41E+02
Ecotoxicity, fresh water	CTUe	7.97E+03	6.47E+03	1.70E+00	1.02E+01	1.04E+03	4.45E+02	-5.59E+03
Human toxicity, cancer effects	CTUh	8.24E-06	8.08E-06	4.56E-11	6.97E-08	6.93E-08	1.60E-08	-4.59E-06
Human toxicity, non-cancer effects	CTUh	1.22E-05	9.30E-06	8.83E-10	2.27E-09	1.66E-06	1.24E-06	-5.81E-06
Impacts related to land use/soil quality	-	8.24E+01	2.20E+01	0.00E+00	2.23E-03	1.53E+01	4.52E+01	-4.16E+00
Total use of primary energy during the life cycle	MJ	2.07E+04	2.15E+03	3.63E+01	9.69E+00	1.76E+04	8.55E+02	-8.11E+02

To evaluate the environmental impact of other product covered by this PEP, multiply the impact figures by

Factors for Manufacturing, Distribution, Installation, End-of-Life, and Module-D Phase:

Product Number	Product Number	Phases	GWP (kg CO ₂ eq.)	GWP-f (kg CO ₂ eq.)	GWP-b (kg CO ₂ eq.)	GWP-lu (kg CO ₂ eq.)	ODP (kg CFC- 11 eq.)	AP (mol H+ eq.)	EP-fw (kg P eq.)	EP-m (kg N eq.)	EP-t (mol N eq.)	POCP (kg NMVOC eq.)	ADP-e (kg Sb eq.)	ADP-f (MJ)	WDP (m3 eq.)
Y7-191396	NZMH3-4-VX630-SVE	Manufacturing	1												
		Distribution													
		Installation													

Product Number	Product Number	Phases	GWP (kg CO ₂ eq.)	GWP-f (kg CO ₂ eq.)	GWP-b (kg CO ₂ eq.)	GWP-lu (kg CO ₂ eq.)	ODP (kg CFC-11 eq.)	AP (mol H+ eq.)	EP-fw (kg P eq.)	EP-m (kg N eq.)	EP-t (mol N eq.)	POCP (kg NMVOC eq.)	ADP-e (kg Sb eq.)	ADP-f (MJ)	WDP (m3 eq.)
		End of life													
		Module-D													
Y7-191397	NZMH3-4-VX400/VAR-SVE	Manufacturing	1												
		Distribution													
		Installation													
		End of life													
		Module-D													
Y7-191395	NZMH3-4-VX400-SVE	Manufacturing	1												
		Distribution													
		Installation													
		End of life													
		Module-D													
Y7-191398	NZMH3-4-VX630/VAR-SVE	Manufacturing	1												
		Distribution													
		Installation													
		End of life													
		Module-D													
Y7-191484	NZMN3-4-VX400/VAR-SVE	Manufacturing	1												
		Distribution													
		Installation													
		End of life													
		Module-D													
Y7-191482	NZMN3-4-VX400-SVE	Manufacturing	1												
		Distribution													
		Installation													
		End of life													
		Module-D													
Y7-191485	NZMN3-4-VX630/VAR-SVE	Manufacturing	1												
		Distribution													
		Installation													
		End of life													
		Module-D													
Y7-191483	NZMN3-4-VX630-SVE	Manufacturing	1												
		Distribution													
		Installation													
		End of life													
		Module-D													
Y7-191542	NZMS3-4-VX400/VAR-SVE	Manufacturing	1												
		Distribution													

Product Number	Product Number	Phases	GWP (kg CO ₂ eq.)	GWP-f (kg CO ₂ eq.)	GWP-b (kg CO ₂ eq.)	GWP-lu (kg CO ₂ eq.)	ODP (kg CFC-11 eq.)	AP (mol H+ eq.)	EP-fw (kg P eq.)	EP-m (kg N eq.)	EP-t (mol N eq.)	POCP (kg NMVOC eq.)	ADP-e (kg Sb eq.)	ADP-f (MJ)	WDP (m3 eq.)
		Installation													
		End of life													
		Module-D													
Y7-191541	NZMS3-4-VX400-SVE	Manufacturing	1												
		Distribution													
		Installation													
		End of life													
		Module-D													
Y7-191544	NZMS3-4-VX630/VAR-SVE	Manufacturing	1												
		Distribution													
		Installation													
		End of life													
		Module-D													
Y7-191543	NZMS3-4-VX630-SVE	Manufacturing	1												
		Distribution													
		Installation													
		End of life													
		Module-D													
Y7-192301	NZMH3-4-PX250/VAR-SVE	Manufacturing	1												
		Distribution													
		Installation													
		End of life													
		Module-D													
Y7-192302	NZMH3-4-PX400/VAR-SVE	Manufacturing	1												
		Distribution													
		Installation													
		End of life													
		Module-D													
Y7-192303	NZMH3-4-PX630/VAR-SVE	Manufacturing	1												
		Distribution													
		Installation													
		End of life													
		Module-D													
Y7-192298	NZMS3-4-PX250/VAR-SVE	Manufacturing	1												
		Distribution													
		Installation													
		End of life													
		Module-D													
Y7-192299	NZMS3-4-PX400/VAR-SVE	Manufacturing	1												

Product Number	Product Number	Phases	GWP (kg CO ₂ eq.)	GWP-f (kg CO ₂ eq.)	GWP-b (kg CO ₂ eq.)	GWP-lu (kg CO ₂ eq.)	ODP (kg CFC-11 eq.)	AP (mol H+ eq.)	EP-fw (kg P eq.)	EP-m (kg N eq.)	EP-t (mol N eq.)	POCP (kg NMVOC eq.)	ADP-e (kg Sb eq.)	ADP-f (MJ)	WDP (m3 eq.)
		Distribution													
		Installation													
		End of life													
		Module-D													
Y7-192300	NZMS3-4-PX630/VAR-SVE	Manufacturing	1												
		Distribution													
		Installation													
		End of life													
		Module-D													
Y7-192295	NZMN3-4-PX250/VAR-SVE	Manufacturing	1												
		Distribution													
		Installation													
		End of life													
		Module-D													
Y7-192296	NZMN3-4-PX400/VAR-SVE	Manufacturing	1												
		Distribution													
		Installation													
		End of life													
		Module-D													
Y7-192297	NZMN3-4-PX630/VAR-SVE	Manufacturing	1												
		Distribution													
		Installation													
		End of life													
		Module-D													
Y7-191372	NZMH3-MX220-SVE	Manufacturing	0.80	0.80	-7.93	0.78	0.81	0.77	0.75	0.79	0.79	0.79	0.76	0.79	0.79
		Distribution	0.78												
		Installation	0.90	0.90	0.89	1.00	0.72	0.86	0.90	0.89	0.89	0.88	0.79	0.88	0.69
		End of life	0.79	0.79	0.75	0.75	0.78	0.78	0.76	0.81	0.78	0.78	0.75	0.79	0.93
		Module-D	0.79	0.79	1.48	0.78	0.77	0.76	0.78	0.79	0.79	0.78	0.75	0.78	0.79
Y7-191373	NZMH3-MX350-SVE	Manufacturing	0.80	0.80	-7.93	0.78	0.81	0.77	0.75	0.79	0.79	0.79	0.76	0.79	0.79
		Distribution	0.78												
		Installation	0.90	0.90	0.89	1.00	0.72	0.86	0.90	0.89	0.89	0.88	0.79	0.88	0.69
		End of life	0.79	0.79	0.75	0.75	0.78	0.78	0.76	0.81	0.78	0.78	0.75	0.79	0.93
		Module-D	0.79	0.79	1.48	0.78	0.77	0.76	0.78	0.79	0.79	0.78	0.75	0.78	0.79
Y7-191374	NZMH3-MX450-SVE	Manufacturing	0.80	0.80	-7.93	0.78	0.81	0.77	0.75	0.79	0.79	0.79	0.76	0.79	0.79
		Distribution	0.78												
		Installation	0.90	0.90	0.89	1.00	0.72	0.86	0.90	0.89	0.89	0.88	0.79	0.88	0.69
		End of life	0.79	0.79	0.75	0.75	0.78	0.78	0.76	0.81	0.78	0.78	0.75	0.79	0.93
		Module-D	0.79	0.79	1.48	0.78	0.77	0.76	0.78	0.79	0.79	0.78	0.75	0.78	0.79

Product Number	Product Number	Phases	GWP (kg CO ₂ eq.)	GWP-f (kg CO ₂ eq.)	GWP-b (kg CO ₂ eq.)	GWP-lu (kg CO ₂ eq.)	ODP (kg CFC-11 eq.)	AP (mol H+ eq.)	EP-fw (kg P eq.)	EP-m (kg N eq.)	EP-t (mol N eq.)	POCP (kg NMVOC eq.)	ADP-e (kg Sb eq.)	ADP-f (MJ)	WDP (m3 eq.)
Y7-191369	NZMH3-VX250-SVE	Manufacturing	0.80	0.80	-7.93	0.78	0.81	0.77	0.75	0.79	0.79	0.79	0.76	0.79	0.79
		Distribution	0.78												
		Installation	0.90	0.90	0.89	1.00	0.72	0.86	0.90	0.89	0.89	0.88	0.79	0.88	0.69
		End of life	0.79	0.79	0.75	0.75	0.78	0.78	0.76	0.81	0.78	0.78	0.75	0.79	0.93
		Module-D	0.79	0.79	1.48	0.78	0.77	0.76	0.78	0.79	0.79	0.78	0.75	0.78	0.79
Y7-191370	NZMH3-VX400-SVE	Manufacturing	0.80	0.80	-7.93	0.78	0.81	0.77	0.75	0.79	0.79	0.79	0.76	0.79	0.79
		Distribution	0.78												
		Installation	0.90	0.90	0.89	1.00	0.72	0.86	0.90	0.89	0.89	0.88	0.79	0.88	0.69
		End of life	0.79	0.79	0.75	0.75	0.78	0.78	0.76	0.81	0.78	0.78	0.75	0.79	0.93
		Module-D	0.79	0.79	1.48	0.78	0.77	0.76	0.78	0.79	0.79	0.78	0.75	0.78	0.79
Y7-191371	NZMH3-VX630-SVE	Manufacturing	0.80	0.80	-7.93	0.78	0.81	0.77	0.75	0.79	0.79	0.79	0.76	0.79	0.79
		Distribution	0.78												
		Installation	0.90	0.90	0.89	1.00	0.72	0.86	0.90	0.89	0.89	0.88	0.79	0.88	0.69
		End of life	0.79	0.79	0.75	0.75	0.78	0.78	0.76	0.81	0.78	0.78	0.75	0.79	0.93
		Module-D	0.79	0.79	1.48	0.78	0.77	0.76	0.78	0.79	0.79	0.78	0.75	0.78	0.79
Y7-191596	NZMN3-MX220-SVE	Manufacturing	0.80	0.80	-7.93	0.78	0.81	0.77	0.75	0.79	0.79	0.79	0.76	0.79	0.79
		Distribution	0.78												
		Installation	0.90	0.90	0.89	1.00	0.72	0.86	0.90	0.89	0.89	0.88	0.79	0.88	0.69
		End of life	0.79	0.79	0.75	0.75	0.78	0.78	0.76	0.81	0.78	0.78	0.75	0.79	0.93
		Module-D	0.79	0.79	1.48	0.78	0.77	0.76	0.78	0.79	0.79	0.78	0.75	0.78	0.79
Y7-191597	NZMN3-MX350-SVE	Manufacturing	0.80	0.80	-7.93	0.78	0.81	0.77	0.75	0.79	0.79	0.79	0.76	0.79	0.79
		Distribution	0.78												
		Installation	0.90	0.90	0.89	1.00	0.72	0.86	0.90	0.89	0.89	0.88	0.79	0.88	0.69
		End of life	0.79	0.79	0.75	0.75	0.78	0.78	0.76	0.81	0.78	0.78	0.75	0.79	0.93
		Module-D	0.79	0.79	1.48	0.78	0.77	0.76	0.78	0.79	0.79	0.78	0.75	0.78	0.79
Y7-191598	NZMN3-MX450-SVE	Manufacturing	0.80	0.80	-7.93	0.78	0.81	0.77	0.75	0.79	0.79	0.79	0.76	0.79	0.79
		Distribution	0.78												
		Installation	0.90	0.90	0.89	1.00	0.72	0.86	0.90	0.89	0.89	0.88	0.79	0.88	0.69
		End of life	0.79	0.79	0.75	0.75	0.78	0.78	0.76	0.81	0.78	0.78	0.75	0.79	0.93
		Module-D	0.79	0.79	1.48	0.78	0.77	0.76	0.78	0.79	0.79	0.78	0.75	0.78	0.79
Y7-191593	NZMN3-VX250-SVE	Manufacturing	0.80	0.80	-7.93	0.78	0.81	0.77	0.75	0.79	0.79	0.79	0.76	0.79	0.79
		Distribution	0.78												
		Installation	0.90	0.90	0.89	1.00	0.72	0.86	0.90	0.89	0.89	0.88	0.79	0.88	0.69
		End of life	0.79	0.79	0.75	0.75	0.78	0.78	0.76	0.81	0.78	0.78	0.75	0.79	0.93
		Module-D	0.79	0.79	1.48	0.78	0.77	0.76	0.78	0.79	0.79	0.78	0.75	0.78	0.79
Y7-191594	NZMN3-VX400-SVE	Manufacturing	0.80	0.80	-7.93	0.78	0.81	0.77	0.75	0.79	0.79	0.79	0.76	0.79	0.79
		Distribution	0.78												
		Installation	0.90	0.90	0.89	1.00	0.72	0.86	0.90	0.89	0.89	0.88	0.79	0.88	0.69
		End of life	0.79	0.79	0.75	0.75	0.78	0.78	0.76	0.81	0.78	0.78	0.75	0.79	0.93

Product Number	Product Number	Phases	GWP (kg CO ₂ eq.)	GWP-f (kg CO ₂ eq.)	GWP-b (kg CO ₂ eq.)	GWP-lu (kg CO ₂ eq.)	ODP (kg CFC-11 eq.)	AP (mol H+ eq.)	EP-fw (kg P eq.)	EP-m (kg N eq.)	EP-t (mol N eq.)	POCP (kg NMVOC eq.)	ADP-e (kg Sb eq.)	ADP-f (MJ)	WDP (m3 eq.)
		Module-D	0.79	0.79	1.48	0.78	0.77	0.76	0.78	0.79	0.79	0.78	0.75	0.78	0.79
Y7-191595	NZMN3-VX630-SVE	Manufacturing	0.80	0.80	-7.93	0.78	0.81	0.77	0.75	0.79	0.79	0.79	0.76	0.79	0.79
		Distribution	0.78												
		Installation	0.90	0.90	0.89	1.00	0.72	0.86	0.90	0.89	0.89	0.88	0.79	0.88	0.69
		End of life	0.79	0.79	0.75	0.75	0.78	0.78	0.76	0.81	0.78	0.78	0.75	0.79	0.93
		Module-D	0.79	0.79	1.48	0.78	0.77	0.76	0.78	0.79	0.79	0.78	0.75	0.78	0.79
Y7-191514	NZMS3-MX220-SVE	Manufacturing	0.80	0.80	-7.93	0.78	0.81	0.77	0.75	0.79	0.79	0.79	0.76	0.79	0.79
		Distribution	0.78												
		Installation	0.90	0.90	0.89	1.00	0.72	0.86	0.90	0.89	0.89	0.88	0.79	0.88	0.69
		End of life	0.79	0.79	0.75	0.75	0.78	0.78	0.76	0.81	0.78	0.78	0.75	0.79	0.93
		Module-D	0.79	0.79	1.48	0.78	0.77	0.76	0.78	0.79	0.79	0.78	0.75	0.78	0.79
Y7-191515	NZMS3-MX350-SVE	Manufacturing	0.80	0.80	-7.93	0.78	0.81	0.77	0.75	0.79	0.79	0.79	0.76	0.79	0.79
		Distribution	0.78												
		Installation	0.90	0.90	0.89	1.00	0.72	0.86	0.90	0.89	0.89	0.88	0.79	0.88	0.69
		End of life	0.79	0.79	0.75	0.75	0.78	0.78	0.76	0.81	0.78	0.78	0.75	0.79	0.93
		Module-D	0.79	0.79	1.48	0.78	0.77	0.76	0.78	0.79	0.79	0.78	0.75	0.78	0.79
Y7-191516	NZMS3-MX450-SVE	Manufacturing	0.80	0.80	-7.93	0.78	0.81	0.77	0.75	0.79	0.79	0.79	0.76	0.79	0.79
		Distribution	0.78												
		Installation	0.90	0.90	0.89	1.00	0.72	0.86	0.90	0.89	0.89	0.88	0.79	0.88	0.69
		End of life	0.79	0.79	0.75	0.75	0.78	0.78	0.76	0.81	0.78	0.78	0.75	0.79	0.93
		Module-D	0.79	0.79	1.48	0.78	0.77	0.76	0.78	0.79	0.79	0.78	0.75	0.78	0.79
Y7-191512	NZMS3-VX400-SVE	Manufacturing	0.80	0.80	-7.93	0.78	0.81	0.77	0.75	0.79	0.79	0.79	0.76	0.79	0.79
		Distribution	0.78												
		Installation	0.90	0.90	0.89	1.00	0.72	0.86	0.90	0.89	0.89	0.88	0.79	0.88	0.69
		End of life	0.79	0.79	0.75	0.75	0.78	0.78	0.76	0.81	0.78	0.78	0.75	0.79	0.93
		Module-D	0.79	0.79	1.48	0.78	0.77	0.76	0.78	0.79	0.79	0.78	0.75	0.78	0.79
Y7-191513	NZMS3-VX630-SVE	Manufacturing	0.80	0.80	-7.93	0.78	0.81	0.77	0.75	0.79	0.79	0.79	0.76	0.79	0.79
		Distribution	0.78												
		Installation	0.90	0.90	0.89	1.00	0.72	0.86	0.90	0.89	0.89	0.88	0.79	0.88	0.69
		End of life	0.79	0.79	0.75	0.75	0.78	0.78	0.76	0.81	0.78	0.78	0.75	0.79	0.93
		Module-D	0.79	0.79	1.48	0.78	0.77	0.76	0.78	0.79	0.79	0.78	0.75	0.78	0.79
Y7-192331	NZMH3-PMX250-SVE	Manufacturing	0.80	0.80	-7.93	0.78	0.81	0.77	0.75	0.79	0.79	0.79	0.76	0.79	0.79
		Distribution	0.78												
		Installation	0.90	0.90	0.89	1.00	0.72	0.86	0.90	0.89	0.89	0.88	0.79	0.88	0.69
		End of life	0.79	0.79	0.75	0.75	0.78	0.78	0.76	0.81	0.78	0.78	0.75	0.79	0.93
		Module-D	0.79	0.79	1.48	0.78	0.77	0.76	0.78	0.79	0.79	0.78	0.75	0.78	0.79
Y7-192332	NZMH3-PMX350-SVE	Manufacturing	0.80	0.80	-7.93	0.78	0.81	0.77	0.75	0.79	0.79	0.79	0.76	0.79	0.79
		Distribution	0.78												
		Installation	0.90	0.90	0.89	1.00	0.72	0.86	0.90	0.89	0.89	0.88	0.79	0.88	0.69

Product Number	Product Number	Phases	GWP (kg CO ₂ eq.)	GWP-f (kg CO ₂ eq.)	GWP-b (kg CO ₂ eq.)	GWP-lu (kg CO ₂ eq.)	ODP (kg CFC-11 eq.)	AP (mol H+ eq.)	EP-fw (kg P eq.)	EP-m (kg N eq.)	EP-t (mol N eq.)	POCP (kg NMVOC eq.)	ADP-e (kg Sb eq.)	ADP-f (MJ)	WDP (m3 eq.)
		End of life	0.79	0.79	0.75	0.75	0.78	0.78	0.76	0.81	0.78	0.78	0.75	0.79	0.93
		Module-D	0.79	0.79	1.48	0.78	0.77	0.76	0.78	0.79	0.79	0.78	0.75	0.78	0.79
Y7-192333	NZMH3-PMX450-SVE	Manufacturing	0.80	0.80	-7.93	0.78	0.81	0.77	0.75	0.79	0.79	0.79	0.76	0.79	0.79
		Distribution	0.78												
		Installation	0.90	0.90	0.89	1.00	0.72	0.86	0.90	0.89	0.89	0.88	0.79	0.88	0.69
		End of life	0.79	0.79	0.75	0.75	0.78	0.78	0.76	0.81	0.78	0.78	0.75	0.79	0.93
		Module-D	0.79	0.79	1.48	0.78	0.77	0.76	0.78	0.79	0.79	0.78	0.75	0.78	0.79
Y7-192345	NZMH3-PX250-SVE	Manufacturing	0.80	0.80	-7.93	0.78	0.81	0.77	0.75	0.79	0.79	0.79	0.76	0.79	0.79
		Distribution	0.78												
		Installation	0.90	0.90	0.89	1.00	0.72	0.86	0.90	0.89	0.89	0.88	0.79	0.88	0.69
		End of life	0.79	0.79	0.75	0.75	0.78	0.78	0.76	0.81	0.78	0.78	0.75	0.79	0.93
		Module-D	0.79	0.79	1.48	0.78	0.77	0.76	0.78	0.79	0.79	0.78	0.75	0.78	0.79
Y7-192346	NZMH3-PX400-SVE	Manufacturing	0.80	0.80	-7.93	0.78	0.81	0.77	0.75	0.79	0.79	0.79	0.76	0.79	0.79
		Distribution	0.78												
		Installation	0.90	0.90	0.89	1.00	0.72	0.86	0.90	0.89	0.89	0.88	0.79	0.88	0.69
		End of life	0.79	0.79	0.75	0.75	0.78	0.78	0.76	0.81	0.78	0.78	0.75	0.79	0.93
		Module-D	0.79	0.79	1.48	0.78	0.77	0.76	0.78	0.79	0.79	0.78	0.75	0.78	0.79
Y7-192347	NZMH3-PX630-SVE	Manufacturing	0.80	0.80	-7.93	0.78	0.81	0.77	0.75	0.79	0.79	0.79	0.76	0.79	0.79
		Distribution	0.78												
		Installation	0.90	0.90	0.89	1.00	0.72	0.86	0.90	0.89	0.89	0.88	0.79	0.88	0.69
		End of life	0.79	0.79	0.75	0.75	0.78	0.78	0.76	0.81	0.78	0.78	0.75	0.79	0.93
		Module-D	0.79	0.79	1.48	0.78	0.77	0.76	0.78	0.79	0.79	0.78	0.75	0.78	0.79
Y7-192328	NZMN3-PMX250-SVE	Manufacturing	0.80	0.80	-7.93	0.78	0.81	0.77	0.75	0.79	0.79	0.79	0.76	0.79	0.79
		Distribution	0.78												
		Installation	0.90	0.90	0.89	1.00	0.72	0.86	0.90	0.89	0.89	0.88	0.79	0.88	0.69
		End of life	0.79	0.79	0.75	0.75	0.78	0.78	0.76	0.81	0.78	0.78	0.75	0.79	0.93
		Module-D	0.79	0.79	1.48	0.78	0.77	0.76	0.78	0.79	0.79	0.78	0.75	0.78	0.79
Y7-192329	NZMN3-PMX350-SVE	Manufacturing	0.80	0.80	-7.93	0.78	0.81	0.77	0.75	0.79	0.79	0.79	0.76	0.79	0.79
		Distribution	0.78												
		Installation	0.90	0.90	0.89	1.00	0.72	0.86	0.90	0.89	0.89	0.88	0.79	0.88	0.69
		End of life	0.79	0.79	0.75	0.75	0.78	0.78	0.76	0.81	0.78	0.78	0.75	0.79	0.93
		Module-D	0.79	0.79	1.48	0.78	0.77	0.76	0.78	0.79	0.79	0.78	0.75	0.78	0.79
Y7-192330	NZMN3-PMX450-SVE	Manufacturing	0.80	0.80	-7.93	0.78	0.81	0.77	0.75	0.79	0.79	0.79	0.76	0.79	0.79
		Distribution	0.78												
		Installation	0.90	0.90	0.89	1.00	0.72	0.86	0.90	0.89	0.89	0.88	0.79	0.88	0.69
		End of life	0.79	0.79	0.75	0.75	0.78	0.78	0.76	0.81	0.78	0.78	0.75	0.79	0.93
		Module-D	0.79	0.79	1.48	0.78	0.77	0.76	0.78	0.79	0.79	0.78	0.75	0.78	0.79
Y7-192264	NZMN3-PX250-SVE	Manufacturing	0.80	0.80	-7.93	0.78	0.81	0.77	0.75	0.79	0.79	0.79	0.76	0.79	0.79
		Distribution	0.78												

Product Number	Product Number	Phases	GWP (kg CO ₂ eq.)	GWP-f (kg CO ₂ eq.)	GWP-b (kg CO ₂ eq.)	GWP-lu (kg CO ₂ eq.)	ODP (kg CFC-11 eq.)	AP (mol H+ eq.)	EP-fw (kg P eq.)	EP-m (kg N eq.)	EP-t (mol N eq.)	POCP (kg NMVOC eq.)	ADP-e (kg Sb eq.)	ADP-f (MJ)	WDP (m3 eq.)
		Installation	0.90	0.90	0.89	1.00	0.72	0.86	0.90	0.89	0.89	0.88	0.79	0.88	0.69
		End of life	0.79	0.79	0.75	0.75	0.78	0.78	0.76	0.81	0.78	0.78	0.75	0.79	0.93
		Module-D	0.79	0.79	1.48	0.78	0.77	0.76	0.78	0.79	0.79	0.78	0.75	0.78	0.79
Y7-192340	NZMN3-PX400-SVE	Manufacturing	0.80	0.80	-7.93	0.78	0.81	0.77	0.75	0.79	0.79	0.79	0.76	0.79	0.79
		Distribution	0.78												
		Installation	0.90	0.90	0.89	1.00	0.72	0.86	0.90	0.89	0.89	0.88	0.79	0.88	0.69
		End of life	0.79	0.79	0.75	0.75	0.78	0.78	0.76	0.81	0.78	0.78	0.75	0.79	0.93
		Module-D	0.79	0.79	1.48	0.78	0.77	0.76	0.78	0.79	0.79	0.78	0.75	0.78	0.79
Y7-192341	NZMN3-PX630-SVE	Manufacturing	0.80	0.80	-7.93	0.78	0.81	0.77	0.75	0.79	0.79	0.79	0.76	0.79	0.79
		Distribution	0.78												
		Installation	0.90	0.90	0.89	1.00	0.72	0.86	0.90	0.89	0.89	0.88	0.79	0.88	0.69
		End of life	0.79	0.79	0.75	0.75	0.78	0.78	0.76	0.81	0.78	0.78	0.75	0.79	0.93
		Module-D	0.79	0.79	1.48	0.78	0.77	0.76	0.78	0.79	0.79	0.78	0.75	0.78	0.79
Y7-192342	NZMS3-PX250-SVE	Manufacturing	0.80	0.80	-7.93	0.78	0.81	0.77	0.75	0.79	0.79	0.79	0.76	0.79	0.79
		Distribution	0.78												
		Installation	0.90	0.90	0.89	1.00	0.72	0.86	0.90	0.89	0.89	0.88	0.79	0.88	0.69
		End of life	0.79	0.79	0.75	0.75	0.78	0.78	0.76	0.81	0.78	0.78	0.75	0.79	0.93
		Module-D	0.79	0.79	1.48	0.78	0.77	0.76	0.78	0.79	0.79	0.78	0.75	0.78	0.79
Y7-192343	NZMS3-PX400-SVE	Manufacturing	0.80	0.80	-7.93	0.78	0.81	0.77	0.75	0.79	0.79	0.79	0.76	0.79	0.79
		Distribution	0.78												
		Installation	0.90	0.90	0.89	1.00	0.72	0.86	0.90	0.89	0.89	0.88	0.79	0.88	0.69
		End of life	0.79	0.79	0.75	0.75	0.78	0.78	0.76	0.81	0.78	0.78	0.75	0.79	0.93
		Module-D	0.79	0.79	1.48	0.78	0.77	0.76	0.78	0.79	0.79	0.78	0.75	0.78	0.79
Y7-192344	NZMS3-PX630-SVE	Manufacturing	0.80	0.80	-7.93	0.78	0.81	0.77	0.75	0.79	0.79	0.79	0.76	0.79	0.79
		Distribution	0.78												
		Installation	0.90	0.90	0.89	1.00	0.72	0.86	0.90	0.89	0.89	0.88	0.79	0.88	0.69
		End of life	0.79	0.79	0.75	0.75	0.78	0.78	0.76	0.81	0.78	0.78	0.75	0.79	0.93
		Module-D	0.79	0.79	1.48	0.78	0.77	0.76	0.78	0.79	0.79	0.78	0.75	0.78	0.79

Multiplying Factors for Use Phase for homogenous products:

Part Number	Product Description	Use Phase Extrapolation Factors(kwh)
Y7-191396(Reference)	NZMH3-4-VX630-SVE (Reference)	1.00
Y7-191397	NZMH3-4-VX400/VAR-SVE	0.40
Y7-191395	NZMH3-4-VX400-SVE	0.40
Y7-191398	NZMH3-4-VX630/VAR-SVE	1.00
Y7-191484	NZMN3-4-VX400/VAR-SVE	0.40
Y7-191482	NZMN3-4-VX400-SVE	0.40
Y7-191485	NZMN3-4-VX630/VAR-SVE	1.00
Y7-191483	NZMN3-4-VX630-SVE	1.00
Y7-191542	NZMS3-4-VX400/VAR-SVE	0.60
Y7-191541	NZMS3-4-VX400-SVE	0.60
Y7-191544	NZMS3-4-VX630/VAR-SVE	1.50
Y7-191543	NZMS3-4-VX630-SVE	1.50
Y7-192301	NZMH3-4-PX250/VAR-SVE	0.24
Y7-192302	NZMH3-4-PX400/VAR-SVE	0.60
Y7-192303	NZMH3-4-PX630/VAR-SVE	1.50
Y7-192298	NZMS3-4-PX250/VAR-SVE	0.24
Y7-192299	NZMS3-4-PX400/VAR-SVE	0.60
Y7-192300	NZMS3-4-PX630/VAR-SVE	1.50
Y7-192295	NZMN3-4-PX250/VAR-SVE	0.24
Y7-192296	NZMN3-4-PX400/VAR-SVE	0.60
Y7-192297	NZMN3-4-PX630/VAR-SVE	1.50
Y7-191372	NZMH3-MX220-SVE	0.12
Y7-191373	NZMH3-MX350-SVE	0.31
Y7-191374	NZMH3-MX450-SVE	0.51
Y7-191369	NZMH3-VX250-SVE	0.16
Y7-191370	NZMH3-VX400-SVE	0.40
Y7-191371	NZMH3-VX630-SVE	1.00
Y7-191596	NZMN3-MX220-SVE	0.12
Y7-191597	NZMN3-MX350-SVE	0.31
Y7-191598	NZMN3-MX450-SVE	0.51
Y7-191593	NZMN3-VX250-SVE	0.16
Y7-191594	NZMN3-VX400-SVE	0.40
Y7-191595	NZMN3-VX630-SVE	1.00
Y7-191514	NZMS3-MX220-SVE	0.12

Part Number	Product Description	Use Phase Extrapolation Factors(kwh)
Y7-191515	NZMS3-MX350-SVE	0.31
Y7-191516	NZMS3-MX450-SVE	0.51
Y7-191512	NZMS3-VX400-SVE	0.40
Y7-191513	NZMS3-VX630-SVE	1.00
Y7-192331	NZMH3-PMX250-SVE	0.16
Y7-192332	NZMH3-PMX350-SVE	0.31
Y7-192333	NZMH3-PMX450-SVE	0.51
Y7-192345	NZMH3-PX250-SVE	0.16
Y7-192346	NZMH3-PX400-SVE	0.40
Y7-192347	NZMH3-PX630-SVE	1.00
Y7-192328	NZMN3-PMX250-SVE	0.16
Y7-192329	NZMN3-PMX350-SVE	0.31
Y7-192330	NZMN3-PMX450-SVE	0.51
Y7-192264	NZMN3-PX250-SVE	0.16
Y7-192340	NZMN3-PX400-SVE	0.40
Y7-192341	NZMN3-PX630-SVE	1.00
Y7-192342	NZMS3-PX250-SVE	0.16
Y7-192343	NZMS3-PX400-SVE	0.40
Y7-192344	NZMS3-PX630-SVE	1.00

Disclaimer

This Product Environmental Profile and its content is based on information available to us. It refers to the product at the date of issue. We make no express or implied representations or warranties with respect to the information contained herein.

Registration Number	EATO-00227-V01.01-EN	Drafting rules	PCR-ed4-EN-2021 09 06
Verifier accreditation Number	VH53	Supplemented by	PSR-0005-ed3.1-EN-2023 12 08
Date of issue	11-2024	Information and reference documents	www.pep-ecopassport.org
		Validity period	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)			
PEPs are compliant with XP C08-100-1:2016 and EN 50693:2019 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 »			