

# Product Environmental Profile

## MasterPacT MTZ1 16H1 3P Drawout with Micrologic 5.0X Control Unit

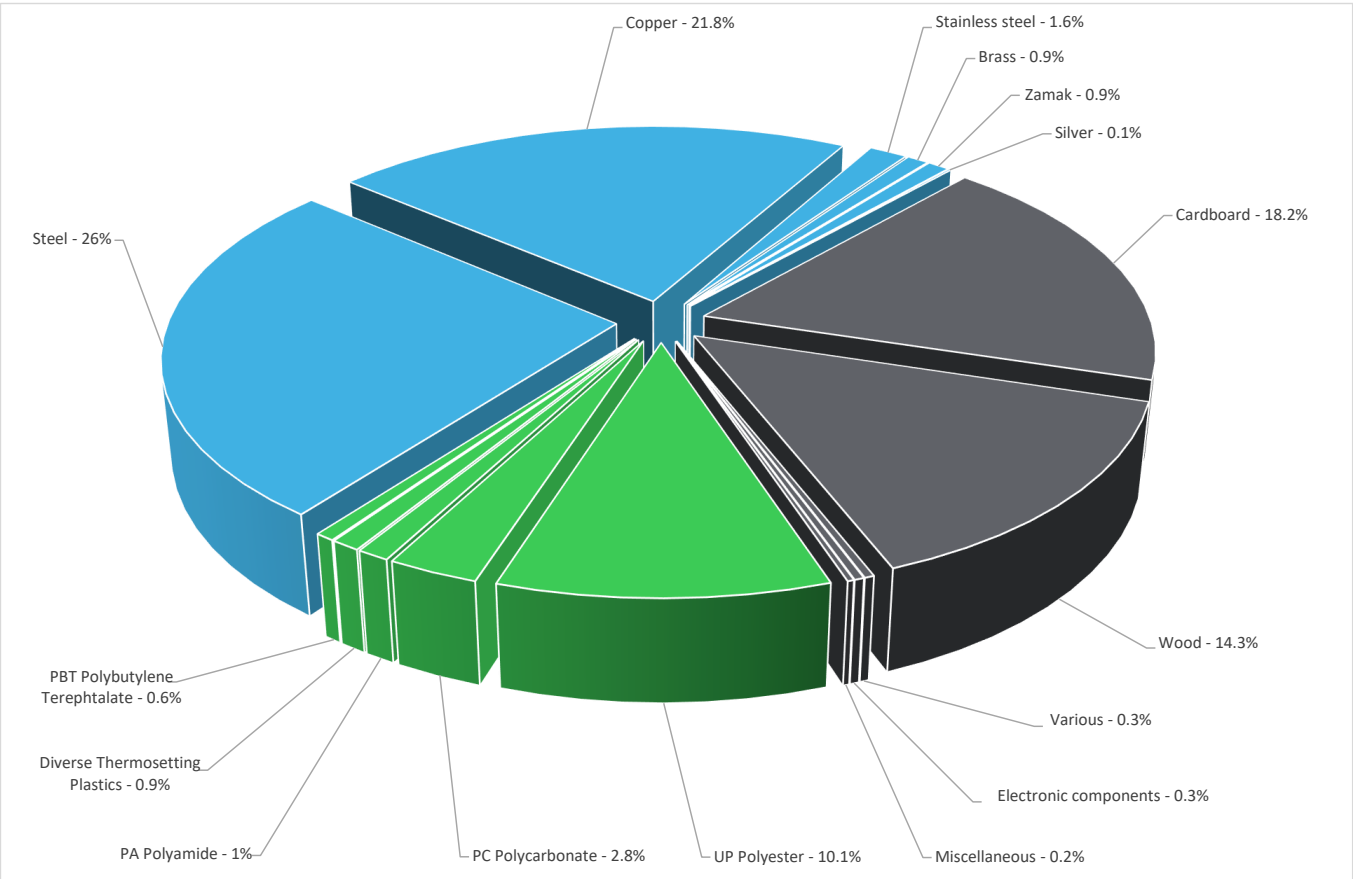


## General information

Reference product	MasterPacT MTZ1 16H1 3P Drawout with Micrologic 5.0X Control Unit - LV847240
Description of the product	The MasterPacT MTZ1 16 H1 3P drawout circuit breaker is designed to guarantee the protection of a low voltage electrical distribution system with assigned voltage up to 690VAC and rated current of 1600A. The breaker can be remotely operated using closing XF release and opening MX release. The Micrologic 5.0X control unit fitted with the circuit breaker enhances protection of electrical installation under fault conditions.
Functional unit	Protect during 20 years the installation against overloads and short-circuits in circuit with assigned voltage up to 690VAC and 1600A rated current. This protection is ensured in accordance with the following parameters: <ul style="list-style-type: none"> <li>- Number of poles: 3</li> <li>- Rated service breaking capacity Ics at 440VAC = 42 kA (Ics=100%Icu following IEC 60947-2)</li> <li>- Tripping curve: long time, short time and instantaneous protections</li> </ul>

## Constituent materials

Reference product mass	58500 g including the product, its packaging and additional elements and accessories
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Plastics	15.4%
Metals	51.3%
Others	33.3%

## Substance assessment

Details of ROHS and REACH substances information are available on the Schneider-Electric Green Premium website <https://www.se.com/ww/en/work/support/green-premium/>

**Additional environmental information**

End Of Life	Recyclability potential:	<b>74%</b>	Recyclability rate has been calculated based on REEECYLAB tool developed by Ecosystem, for components/materials not covered by the tool, data from the "ECO'DEEE recyclability and recoverability calculation method" was taken. If no data was found a conservative assumption was used (0% recyclability).
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**Environmental impacts**

Reference service life time	20 years			
Product category	Circuit-breakers			
Installation elements	No special components needed during the installation Phase. The disposal of the packaging materials are accounted for during the installation phase (including transport to disposal).			
Use scenario	As Per PSR @ Load rate 50% and RLT 30%, The power dissipated by the MasterPacT MTZ1 16 H1 3P drawout circuit breaker is 460W for 20 years			
Technological representativeness	The Modules of Technologies such as material production, manufacturing process and transport technology used in this PEP analysis (LCA-EIME in this case) are Similar and representative of the actual type of technologies used to make the product in production.			
Geographical representativeness	Europe			
Energy model used	[A1 - A3]	[A5]	[B6]	[C1 - C4]
	Electricity Mix; Production mix; Low voltage; FR	Electricity Mix; Production mix; Low voltage; UE-27	Electricity Mix; Production mix; Low voltage; UE-27	Electricity Mix; Production mix; Low voltage; UE-27

Detailed results, including all the optional indicators mentioned in PCRed4, and the split of the Use Phase (B1 to B7), are available in the LCA report and on demand in a digital format - Country Customer Care Center - <http://www.schneider-electric.com/contact>

Mandatory Indicators		MasterPacT MTZ1 16H1 3P Drawout with Micrologic 5.0X Control Unit - LV847240						
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life	Loads and Benefits
			[A1 - A3]	[A4]	[A5]	[B1 - B7]	[C1 - C4]	[D]
Contribution to climate change	kg CO2 eq	2.91E+03	2.74E+02	6.64E+00	2.74E+01	2.52E+03	8.14E+01	-1.07E+02
Contribution to climate change-fossil	kg CO2 eq	2.91E+03	2.70E+02	6.64E+00	3.14E+01	2.52E+03	7.87E+01	-1.04E+02
Contribution to climate change-biogenic	kg CO2 eq	6.60E+00	4.50E+00	0*	0*	3.35E+00	2.71E+00	-2.91E+00
Contribution to climate change-land use and land use change	kg CO2 eq	4.53E-05	1.49E-07	0*	4.45E-08	1.47E-07	4.50E-05	0.00E+00
Contribution to ozone depletion	kg CFC-11 eq	2.35E-04	2.11E-04	0*	1.35E-06	2.13E-05	1.72E-06	-2.02E-05
Contribution to acidification	mol H+ eq	1.90E+01	3.87E+00	4.20E-02	8.71E-02	1.45E+01	5.37E-01	-2.63E+00
Contribution to eutrophication, freshwater	kg (PO4) <sup>3-</sup> eq	1.03E-01	5.62E-04	0*	1.96E-04	6.91E-03	9.58E-02	-2.27E-04
Contribution to eutrophication marine	kg N eq	2.03E+00	2.53E-01	1.97E-02	2.43E-02	1.64E+00	9.11E-02	-8.18E-02
Contribution to eutrophication, terrestrial	mol N eq	2.87E+01	2.78E+00	2.16E-01	1.90E-01	2.45E+01	1.02E+00	-9.26E-01
Contribution to photochemical ozone formation - human health	kg COVNM eq	6.68E+00	1.02E+00	5.45E-02	5.35E-02	5.27E+00	2.83E-01	-4.30E-01
Contribution to resource use, minerals and metals	kg Sb eq	1.02E-01	9.27E-02	0*	0*	6.30E-03	2.70E-03	-3.80E-02
Contribution to resource use, fossils	MJ	7.29E+04	4.93E+03	9.25E+01	2.28E+02	6.37E+04	3.96E+03	-2.08E+03
Contribution to water use	m3 eq	5.78E+02	1.92E+02	0*	8.77E+00	1.79E+02	1.98E+02	-1.36E+02

Additional indicators for the French regulation are available as well

Inventory flows Indicators			MasterPacT MTZ1 16H1 3P Drawout with Micrologic 5.0X Control Unit - LV847240						
Inventory flows	Unit	Total	Manufact.	Distribution	Installation	Use	End of Life	Loads and Benefits	
			[A1 - A3]	[A4]	[A5]	[B1 - B7]	[C1 - C4]	[D]	
Contribution to use of renewable primary energy excluding renewable primary energy used as raw material	MJ	1.23E+04	8.94E+01	0*	5.14E+01	1.21E+04	6.51E+01	-3.06E+01	
Contribution to use of renewable primary energy resources used as raw material	MJ	2.48E+02	2.48E+02	0*	0*	0*	0*	-1.07E+02	
Contribution to total use of renewable primary energy resources	MJ	1.26E+04	3.38E+02	0*	5.14E+01	1.21E+04	6.51E+01	-1.38E+02	
Contribution to use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	7.28E+04	4.79E+03	9.25E+01	2.28E+02	6.37E+04	3.96E+03	-2.08E+03	
Contribution to use of non renewable primary energy resources used as raw material	MJ	1.45E+02	1.38E+02	0*	0*	6.75E+00	0*	-3.78E-01	
Contribution to total use of non-renewable primary energy resources	MJ	7.29E+04	4.93E+03	9.25E+01	2.28E+02	6.37E+04	3.96E+03	-2.08E+03	
Contribution to use of secondary material	kg	8.60E+00	8.58E+00	0*	0*	2.36E-02	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	1.40E+01	4.48E+00	0*	2.04E-01	4.37E+00	4.92E+00	-3.17E+00	
Contribution to hazardous waste disposed	kg	3.54E+03	3.34E+03	0*	0*	1.60E+02	4.15E+01	-3.22E+03	
Contribution to non hazardous waste disposed	kg	6.71E+02	2.28E+02	2.33E-01	7.27E+01	3.68E+02	2.70E+00	-1.43E+02	
Contribution to radioactive waste disposed	kg	1.58E-01	6.96E-02	1.66E-04	9.05E-03	7.88E-02	3.60E-04	-3.09E-02	
Contribution to components for reuse	kg	0.00E+00	0*	0*	0*	0*	0*	0.00E+00	
Contribution to materials for recycling	kg	4.40E+01	1.80E-02	0*	1.36E+01	5.79E-02	3.03E+01	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	5.95E+00	5.60E-01	0*	5.39E+00	0*	0*	0.00E+00	
Contribution to biogenic carbon content of the product	kg de C	0.00E+00	0*	0*	0*	0*	0*	0.00E+00	
Contribution to biogenic carbon content of the associated packaging	kg de C	0.00E+00	0*	0*	0*	0*	0*	0.00E+00	

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

Life cycle assessment performed with EIME version v5.9.4, database version 2022-01 in compliance with ISO14044.

Detailed results, including all the optional indicators mentioned in PCR<sub>ed4</sub>, and the split of the Use Phase (B1 to B7), are available in the LCA report and on demand in a digital format - Country Customer Care Center - <http://www.schneider-electric.com/contact>

For all the impact indicators, the Use stage is the greatest contributor due to the energy losses occurring throughout the product reference service lifetime except the Climate change-Biogenic(GWPb), Climate change-Land use and land use change(GWPlu), Ozone depletion(PEF-ODP), Eutrophication, freshwater(PEF-Epf), Resource use, minerals and metals(ADPe), Water use(PEF-WU) stages. The manufacturing stage is the main contributor on Climate change-Biogenic(GWPb), Ozone depletion(PEF-ODP) & Resource use, minerals and metals(ADPe) stage. The End Of Life stage is the main contributor on Climate change-Land use and land use change(GWPlu), Eutrophication, freshwater stage(Epf) & Water use(PEF-WU) Stage.

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.

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Verifier accreditation N°	VH08	Supplemented by	PSR-0005-ed2-2016 03 29
Date of issue	12/2023	Information and reference documents	<a href="http://www.pep-ecopassport.org">www.pep-ecopassport.org</a>
		Validity period	5 years

Independent verification of the declaration and data, in compliance with ISO 14025 : 2010

Internal External X

The PCR review was conducted by a panel of experts chaired by Julie ORGELET (DDemain)

PEP are compliant with XP C08-100-1 :2016 or EN 50693:2019

The elements of the present PEP cannot be compared with elements from another program.

Document in compliance with ISO 14025 : 2010 « Environmental labels and declarations. Type III environmental declarations »



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