

# Product Environmental Profile

**Rear horizontal connection, MasterPact MTZ2 fixed/drawout, 3P, top connection, 2500A-3200A**

**Representative of MasterPacT and ComPacT NS copper rear connections**

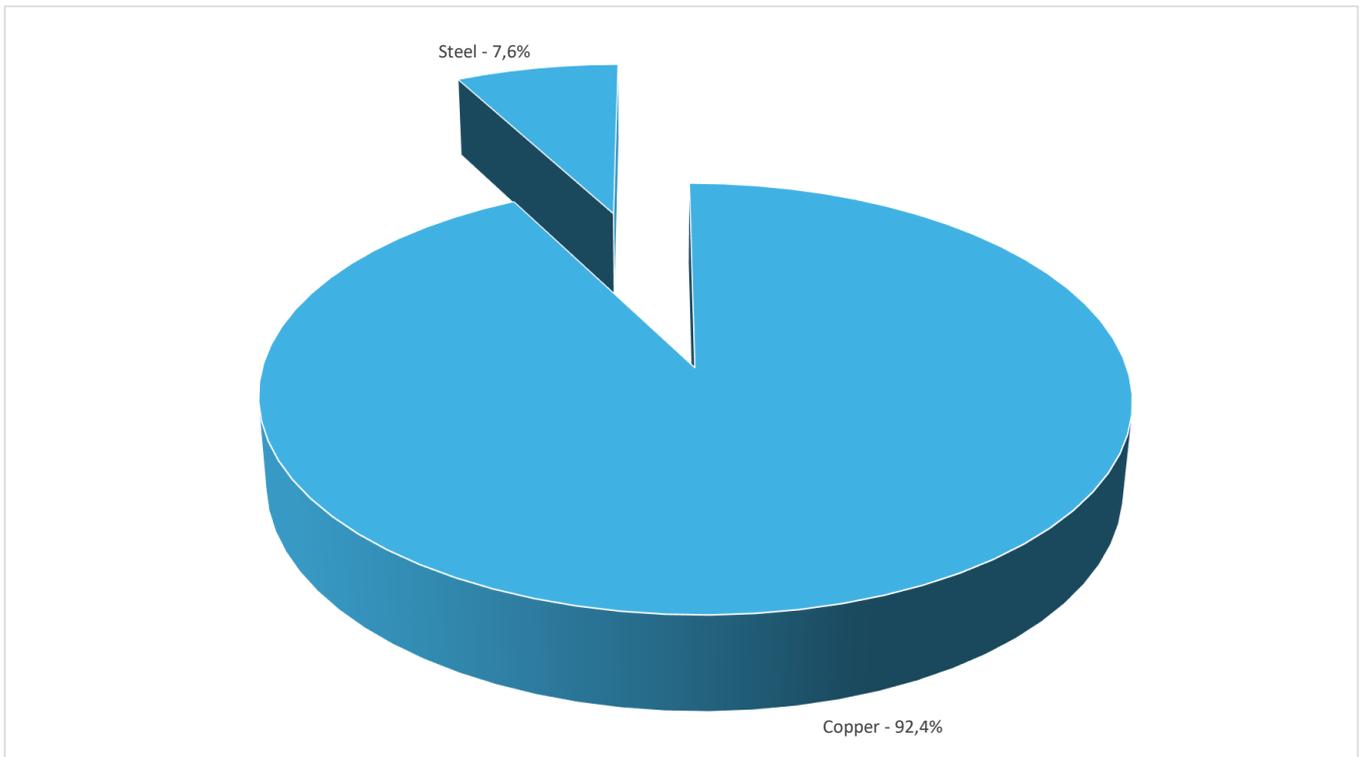


## General information

Reference product	Rear horizontal connection, MasterPact MTZ2 fixed/drawout, 3P, top connection, 2500A-3200A - LV848144
Description of the product	The rear horizontal connection is used to connect the MTZ2 circuit breaker to the electrical circuit. This type of connector can be used in a fixed or withdrawable configuration. This reference includes 3 copper connections.
Description of the range	The products of the range are: Representative of MasterPacT and ComPacT NS copper rear connections 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.
Functional unit	Other switchgear and controlgear solutions mentioned in the scope (e.g. fuses TC32, all-or-nothing relays TC94, Measuring relays and protection equipment TC95), apply the general rules of PCR and mention in the accompanying report the functional unit, the reference product characteristics, the reference lifetime and the use scenario which are applied consistently with the relevant IEC technical standards.
Specifications are:	Protect the installation from overloads and short circuits in a circuit with rated voltage $U_e$ up to 690V AC, rated current $I_n$ up to 3200A, with 3 poles, a rated breaking capacity $I_{cu}$ up to 100kA rms, and in the Industrial application area, according to the appropriate use scenario, and during the reference service life of the product of 20 years. The specifications mentioned previously will vary depending on the type of circuit breaker (MasterPact MTZ2 range of products) the connection is connected to. This connection allow a connection between the circuit breaker and the electrical circuit of the installation for 20 years. Nominal current for this analysis is 3200A.

## Constituent materials

Reference product mass 2450 g including the product, its packaging and additional elements and accessories



Plastics	0,00%
Metals	100,00%
Others	0,00%

## 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/>

 <b>Additional environmental information</b>			
End Of Life	Recyclability potential:	<b>98%</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, the ESR database and the related PSR was taken. If no data was found a conservative assumption was used (0% recyclability).

 <b>Environmental impacts</b>				
Reference service life time	20 years			
Product category	Other equipments - Passive product - non-continuous operation			
Installation elements	No special components needed during the installation phase.			
Use scenario	PSR5 Circuit breaker use case scenario : Use time rate = 30% Load rate = 50% Dissipation per pole = 15,97W			
Time representativeness	The collected data are representative of the year 2023			
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]
	Electricity Mix; High voltage; 2018; France, FR	Electricity Mix; Low voltage; 2018; Europe, EU-27	Electricity Mix; Low voltage; 2018; Europe, EU-27	Electricity Mix; Low voltage; 2018; 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.schneider-electric.com/contact>

Mandatory Indicators		Rear horizontal connection, MasterPact MTZ2 fixed/drawout, 3P, top connection, 2500A-3200A - LV848144						
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	1,03E+02	1,14E+01	3,92E-01	0*	8,60E+01	4,96E+00	-5,90E+00
Contribution to climate change-fossil	kg CO2 eq	1,02E+02	1,08E+01	3,92E-01	0*	8,59E+01	4,50E+00	-5,47E+00
Contribution to climate change-biogenic	kg CO2 eq	1,21E+00	6,43E-01	0*	0*	1,15E-01	4,56E-01	-4,35E-01
Contribution to climate change-land use and land use change	kg CO2 eq	8,84E-06	1,15E-06	0*	0*	0*	7,69E-06	0,00E+00
Contribution to ozone depletion	kg CFC-11 eq	2,71E-06	2,10E-06	5,99E-10	0*	3,68E-07	2,39E-07	-1,59E-06
Contribution to acidification	mol H+ eq	1,03E+00	4,81E-01	2,61E-03	0*	4,91E-01	5,66E-02	-3,78E-01
Contribution to eutrophication, freshwater	kg (PO4) <sup>3-</sup> eq	1,69E-02	2,20E-03	0*	0*	2,35E-04	1,45E-02	-7,80E-06
Contribution to eutrophication marine	kg N eq	7,59E-02	1,26E-02	1,23E-03	0*	5,57E-02	6,26E-03	-5,96E-03
Contribution to eutrophication, terrestrial	mol N eq	1,08E+00	1,46E-01	1,35E-02	0*	8,38E-01	8,52E-02	-7,01E-02
Contribution to photochemical ozone formation - human health	kg COVNM eq	2,71E-01	6,85E-02	3,43E-03	0*	1,79E-01	2,04E-02	-4,36E-02
Contribution to resource use, minerals and metals	kg Sb eq	5,13E-03	4,67E-03	0*	0*	6,23E-06	4,61E-04	-3,19E-03
Contribution to resource use, fossils	MJ	2,49E+03	1,97E+02	5,46E+00	0*	2,19E+03	9,32E+01	-9,81E+01
Contribution to water use	m3 eq	3,83E+01	2,31E+01	0*	0*	3,04E+00	1,22E+01	-1,79E+01

Inventory flows Indicators		Rear horizontal connection, MasterPact MTZ2 fixed/drawout, 3P, top connection, 2500A-3200A - LV848144							
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	4,47E+02	1,56E+01	0*	0*	4,21E+02	1,10E+01	-9,43E+00	
Contribution to use of renewable primary energy resources used as raw material	MJ	2,05E+00	2,05E+00	0*	0*	0*	0*	0,00E+00	
Contribution to total use of renewable primary energy resources	MJ	4,49E+02	1,77E+01	0*	0*	4,21E+02	1,10E+01	-9,43E+00	
Contribution to use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	2,49E+03	1,96E+02	5,46E+00	0*	2,19E+03	9,32E+01	-9,81E+01	
Contribution to use of non renewable primary energy resources used as raw material	MJ	5,76E-01	5,76E-01	0*	0*	0*	0*	0,00E+00	
Contribution to total use of non-renewable primary energy resources	MJ	2,49E+03	1,97E+02	5,46E+00	0*	2,19E+03	9,32E+01	-9,81E+01	
Contribution to use of secondary material	kg	0,00E+00	0*	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	8,92E-01	5,37E-01	0*	0*	7,09E-02	2,84E-01	-4,17E-01	
Contribution to hazardous waste disposed	kg	3,29E+02	3,27E+02	0*	0*	1,61E+00	0*	-2,90E+02	
Contribution to non hazardous waste disposed	kg	1,93E+01	6,88E+00	1,37E-02	0*	1,24E+01	7,28E-02	-9,47E-01	
Contribution to radioactive waste disposed	kg	8,04E-03	5,42E-03	9,78E-06	0*	2,59E-03	1,53E-05	-6,53E-04	
Contribution to components for reuse	kg	0,00E+00	0*	0*	0*	0*	0*	0,00E+00	
Contribution to materials for recycling	kg	2,76E+00	3,60E-01	0*	0*	0*	2,40E+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	2,74E-02	3,61E-03	0*	0*	0*	2,37E-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 0,00E+00

\* 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%)

Mandatory Indicators		Rear horizontal connection, MasterPact MTZ2 fixed/drawout, 3P, top connection, 2500A-3200A - LV848144								
Impact indicators	Unit	[B1 - B7] - Use	[B1]	[B2]	[B3]	[B4]	[B5]	[B6]	[B7]	
Contribution to climate change	kg CO2 eq	8,60E+01	0*	0*	0*	0*	0*	8,60E+01	0*	
Contribution to climate change-fossil	kg CO2 eq	8,59E+01	0*	0*	0*	0*	0*	8,59E+01	0*	
Contribution to climate change-biogenic	kg CO2 eq	1,15E-01	0*	0*	0*	0*	0*	1,15E-01	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	3,68E-07	0*	0*	0*	0*	0*	3,68E-07	0*	
Contribution to acidification	mol H+ eq	4,91E-01	0*	0*	0*	0*	0*	4,91E-01	0*	
Contribution to eutrophication, freshwater	kg (PO4) <sup>3-</sup> eq	2,35E-04	0*	0*	0*	0*	0*	2,35E-04	0*	
Contribution to eutrophication marine	kg N eq	5,57E-02	0*	0*	0*	0*	0*	5,57E-02	0*	
Contribution to eutrophication, terrestrial	mol N eq	8,38E-01	0*	0*	0*	0*	0*	8,38E-01	0*	
Contribution to photochemical ozone formation - human health	kg COVNM eq	1,79E-01	0*	0*	0*	0*	0*	1,79E-01	0*	
Contribution to resource use, minerals and metals	kg Sb eq	6,23E-06	0*	0*	0*	0*	0*	6,23E-06	0*	
Contribution to resource use, fossils	MJ	2,19E+03	0*	0*	0*	0*	0*	2,19E+03	0*	
Contribution to water use	m3 eq	3,04E+00	0*	0*	0*	0*	0*	3,04E+00	0*	

Inventory flows Indicators		Rear horizontal connection, MasterPact MT22 fixed/drawout, 3P, top connection, 2500A-3200A - LV848144							
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	4,21E+02	0*	0*	0*	0*	0*	4,21E+02	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	4,21E+02	0*	0*	0*	0*	0*	4,21E+02	0*
Contribution to use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	2,19E+03	0*	0*	0*	0*	0*	2,19E+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	2,19E+03	0*	0*	0*	0*	0*	2,19E+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	7,09E-02	0*	0*	0*	0*	0*	7,09E-02	0*
Contribution to hazardous waste disposed	kg	1,61E+00	0*	0*	0*	0*	0*	1,61E+00	0*
Contribution to non hazardous waste disposed	kg	1,24E+01	0*	0*	0*	0*	0*	1,24E+01	0*
Contribution to radioactive waste disposed	kg	2,59E-03	0*	0*	0*	0*	0*	2,59E-03	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 v6.1, database version 2023-02 in compliance with ISO14044, EF 3.0 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.

Registration number :	SCHN-01170-V01.01-EN	Drafting rules	PCR-4-ed4-EN-2021 09 06
		Supplemented by	PSR-0005-ed3.1-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	09-2024	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"			

Schneider Electric Industries SAS

Country Customer Care Center  
<http://www.se.com/contact>

35, rue Joseph Monier  
CS 30323  
F- 92500 Rueil Malmaison Cedex  
RCS Nanterre 954 503 439  
Capital social 928 298 512 €

[www.se.com](http://www.se.com)

Published by Schneider Electric

SCHN-01170-V01.01-EN

©2024 - Schneider Electric – All rights reserved

09-2024

ENVPEP2404003\_V1-EN - SCHN-01170-V01.01-EN

09-2024