

FH200 BLOCKS AND DIFFERENTIAL SWITCHES

PEP ecopassport®
Product Environmental Profile



Registration number:	ABBG-00555-V01.03-EN	Drafting rules:	PCR-ed4-EN-2021 09 06
Contact information:	EPD_ELSB@abb.com	Supplemented by:	PSR-0005-ed3-EN-2023 06 06
Verifier accreditation number:	VH50	Information and reference documents:	www.pep-ecopassport.org
Date of issue:	March-24	Validity period:	5 years
Independent verification of the declaration and data in compliance with ISO 14025: 2006			
Internal:	☐	External:	☒
The PCR review was conducted by a panel of experts chaired by Julie Orgelet (Ddomain)			
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"			





ABB Purpose & Embedding Sustainability

ABB is committed to continually promoting and embedding sustainability across its operations and value chain, aspiring to become a role model for others to follow. With its ABB Purpose, ABB is focusing on reducing harmful emissions, preserving natural resources and championing ethical and humane behavior.

The context of this PEP cannot be compared with the content based on another program/database.

Scan QR code for more information

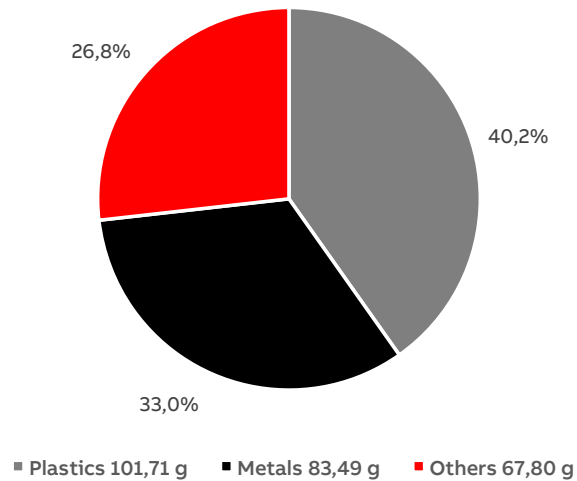


General information

Reference product	2CSF202006R1630 FH202 AC-63/0.03
Description of the product	The RCCBs FH200 series assures protection to people and installations against fault current to earth. A large offer for standard instantaneous and selective AC and A types is completed with some configurations for special applications.
Functional unit	The functional unit is to protect the installation against overloads and short circuits and protect people and premises at risk of fire or explosion against insulation defects in a circuit with rated voltage U_e 230V, rated current $I_n = 63A$, with $N_p = 2$ poles, a rated breaking capacity $I_{cn} = 6kA$, the sensitivity $S = 30mA$, and the differential protection type T_p AC, in the Household/Commercial application areas, according to the appropriate use scenario, and during the reference service life of the product of 20 years.
Other products covered	FH200 environmental homogeneous family: Family: FH200 Sizes: 2 and 4 poles Rated Current [A]: 25, 40, 63 Rated Sensitivity [A]: 0.03, 0.1, 0.3 Type of differential protection: A, AC
Manufacturing address	ABB S.p.A. – ELSB Viale dell'Industria, 18 20009 Vittuone (MI) - Italy www.new.abb.com



Constituent Materials



Total weight of reference product and packaging

253,0

g

Plastics as % of weight		Metals as % of weight		Others as % of weight	
Name and CAS number	Weight%	Name and CAS number	Weight%	Name and CAS number	Weight%
PA6, glass filled	24,2	steel	19,4	Carton and carton box	19,6
PBT, glass filled	5,5	brass	7,4	Magnetic core	3,6
PA66, glass filled	5,1	Copper	4,1	Magnetic relay	2,3
PPS, glass filled	2,9	Stainless steel	1,6	Cellulose part	0,6
other plastics	2,5	other metals	0,5	Other	0,7

Total weight of the reference product 203 g plus packaging is 253g.



Additional Information

Manufacturing	The manufacturing stage includes the production and transportation to the manufacturer's last logistic platform of FH200 and its packaging. The production occurs at the ABB factory located in Santa Palomba (RM).
Distribution	The transport from ABB Santa Palomba factory to Vignate, Milan was taken into account. For the distribution of the product from Vignate to the final customer, the intracontinental transport scenario provided by PCR-ed4-EN-2021 09 06 standard was adopted, considering the European macro-area.
Installation	The installation phase only implies manual activities and no energy is consumed. This phase also includes the disposal of the packaging of the product. Statistical average data from Eurostat databases were considered for the disposal of the product and its packaging.
Use	FH200 dissipate some electricity due to power losses. The average power loss of the switch has been calculated as follow: - Nominal current load rate as 15% (Household / Commercial); - RSL of 20 years; - Functioning time of 30% of the RSL (α). No maintenance is planned for the product.
End of life	As the end-of-life treatment is inherently unknown, the default scenario from the reference PCR was used. This includes the default assumption of transportation of 1000 km by lorry and the assumption that the product components are disposal of via landfill (P.E.P. Association, PCR-ed4-EN-2021 09 06. page 25/78).
Benefits and loads beyond the system boundaries	The potential benefits derives from the impacts prevented by recycling and waste to energy recovery of the packaging in the installation phase



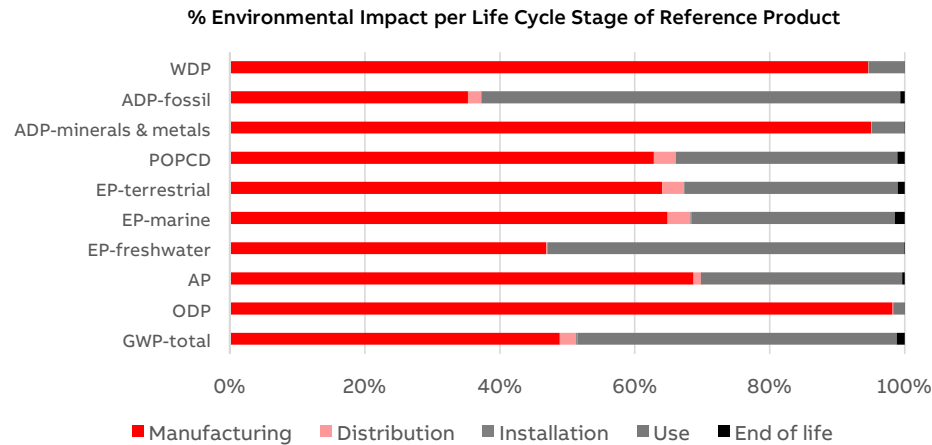
Environmental Impacts

Reference lifetime	20 years
Product category	Differential circuit-breakers
Installation elements	No installation materials are required in the life cycle of the product.
Use scenario	The calculation of the use stage electricity consumption from the average power consider the following assumptions: - Nominal current load rate as 15% (Household / Commercial); - RSL of 20 years; - Functioning time of 30% of the RSL. No maintenance is planned for the product
Geographical representativeness	Europe
Technological representativeness	Technological representativeness refers to the specific production process for primary data.
Software and database used	SimaPro 9.5 and ecoinvent 3.9.1

Energy model used

Manufacturing	ABB GO energy mix 2022. The energy-related processes used for the remaining inputs are those included in the ecoinvent v3.9.1 datasets.
Installation	No energy consumption occur during the installation stage.
Use	Electricity, low voltage {RER} market group for electricity, low voltage Cut-off, S
End of life	The energy-related processes used for the inputs of the end-of-life stage are those included in the ecoinvent datasets selected for the analysis.

Common base of mandatory indicators



Environmental impact indicators

Indicator		Unit	Total	Manufacturin g	Distribu tion	Installation	Use	End of life	Benefits
GWP	Total	kg CO2 eq.	5,83E+00	2,85E+00	1,41E-01	1,09E-02	2,76E+00	6,79E-02	-3,27E-02
	Fossil	kg CO2 eq.	5,71E+00	2,77E+00	1,40E-01	2,28E-03	2,73E+00	5,77E-02	-2,76E-02
	Biogenic	kg CO2 eq.	1,09E-01	7,33E-02	5,00E-05	8,65E-03	1,72E-02	1,02E-02	-4,55E-03
	Luluc	kg CO2 eq.	1,19E-02	5,10E-03	6,74E-05	1,24E-06	6,71E-03	2,21E-05	-5,50E-04
ODP		kg CFC-11 eq.	3,09E-06	3,04E-06	2,99E-09	0*	5,12E-08	9,44E-10	-8,13E-10
AP		H+ eq.	5,17E-02	3,55E-02	5,67E-04	9,68E-06	1,54E-02	1,87E-04	-1,11E-04
EP	Freshwater	kg P eq.	5,03E-04	2,35E-04	1,10E-06	0*	2,66E-04	3,69E-07	-2,02E-06
	Marine	kg N eq.	6,42E-03	4,17E-03	2,14E-04	1,05E-05	1,94E-03	9,43E-05	-9,14E-05
	Terrestrial	mol N eq.	7,14E-02	4,57E-02	2,31E-03	3,21E-05	2,26E-02	7,56E-04	-3,33E-04
POPCD		kg NMVOC eq.	1,76E-02	1,11E-02	5,72E-04	1,04E-05	5,78E-03	1,93E-04	-6,06E-05
ADP	Minerals & metals	kg SB eq.	6,68E-04	6,35E-04	4,42E-07	0*	3,26E-05	1,36E-07	-9,59E-08
	Fossil	MJ	9,85E+01	3,48E+01	1,95E+00	2,29E-02	6,12E+01	6,33E-01	-3,57E-01
WDP		m³ eq. depr.	1,31E+01	1,24E+01	7,79E-03	0*	6,96E-01	4,64E-03	-1,56E-02

Resource use indicators

Indicator	Unit	Total	Manufacturin g	Distribution	Installation	Use	End of life	Benefits
PERE	MJ	1,79E+01	4,18E+00	3,03E-02	0,00E+00	1,37E+01	1,01E-02	-3,05E-02
PERM	MJ	1,03E+00	1,03E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-4,18E-02
PERT	MJ	1,90E+01	5,21E+00	3,03E-02	0*	1,37E+01	1,01E-02	-7,23E-02
PENRE	MJ	1,11E+02	3,71E+01	1,99E+00	2,51E-02	7,14E+01	6,45E-01	-4,14E-01
PENRM	MJ	2,85E+00	2,85E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	MJ	1,14E+02	3,99E+01	1,99E+00	2,51E-02	7,14E+01	6,45E-01	-4,14E-01

Common base of mandatory indicators

Use of secondary materials, water, and energy resources

Indicator	Unit	Total	Manufacturing	Distribution	Installation	Use	End of life	Benefits
SM	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	m³	3,37E-01	2,87E-01	2,20E-04	0*	4,93E-02	1,20E-04	-4,52E-04

Waste category indicators

Indicator	Unit	Total	Manufacturing	Distribution	Installation	Use	End of life	Benefits
HWD	kg	2,11E-03	2,11E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
N-HWD	kg	2,30E-04	2,30E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RWD	kg	2,01E-06	2,01E-06	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Output flow indicators

Indicator	Unit	Total	Manufacturing	Distribution	Installation	Use	End of life	Benefits
CfRu	kg	3,13E-03	3,13E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MfR	kg	4,07E-02	0,00E+00	0,00E+00	4,07E-02	0,00E+00	0,00E+00	0,00E+00
MfER	kg	4,47E-03	0,00E+00	0,00E+00	4,47E-03	0,00E+00	0,00E+00	0,00E+00
EE	MJ	7,60E-02	0,00E+00	0,00E+00	7,60E-02	0,00E+00	0,00E+00	0,00E+00

Other indicators

Indicator		Unit	Total
Biogenic Carbon	Product	kg of C	2,20E-04
	Packaging	kg of C	2,19E-02

Extrapolation Factors

For other products than the Reference product covered by this PEP, the environmental impacts for each phase of the lifecycle are obtained by a linear correlation with respect to weight for the production, distribution, and end-of-life phase and with respect to average power loss for the use phase. Each environmental indicator value shall be calculated using the following formulas:

For the manufacturing stage, distribution stage and end-of-life stage: $y = ax_1 + b$ where x_1 is the weight of the product

For the use stage: $y = ax_2 + b$ where x_2 is the average power loss of the product

* if the coefficient is 1!, the impacts of the phase of the life cycle are assimilated to the Reference product, meaning that the impacts are unchanged in comparison to the Reference product

Impact Category	Manufacturing		Distribution		Installation		Use		End of Life	
	a1	b1	a2	b2	a3	b3	a4	b4	a5	b5
GWP-total	1,16E-02	-9,37E-02	5,58E-04	-5,28E-04	0,00E+00	0,00E+00	1,90E+01	2,19E-02	4,11E-03	-9,71E-01
GWP-fossil	1,15E-02	-1,41E-01	5,57E-04	-5,28E-04	0,00E+00	0,00E+00	1,88E+01	2,17E-02	-3,03E-04	1,34E-01
GWP-biogenic	1,06E-04	4,64E-02	1,98E-07	-1,88E-07	0,00E+00	0,00E+00	1,18E-01	1,36E-04	4,41E-03	-1,10E+00
GWP-luluc	1,55E-05	1,18E-03	2,68E-07	-2,54E-07	0,00E+00	0,00E+00	4,62E-02	5,33E-05	-6,40E-08	3,82E-05
ODP	1,35E-08	-3,84E-07	1,19E-11	-1,13E-11	0,00E+00	0,00E+00	3,53E-07	4,06E-10	-4,83E-12	2,17E-09
AP	1,53E-04	-3,27E-03	2,25E-06	-2,13E-06	0,00E+00	0,00E+00	1,06E-01	1,22E-04	-5,14E-07	3,17E-04
EP-freshwater	9,64E-07	-8,58E-06	4,37E-09	-4,15E-09	0,00E+00	0,00E+00	1,83E-03	2,11E-06	-6,15E-10	5,24E-07
EP-marine	1,71E-05	-1,69E-04	8,51E-07	-8,06E-07	0,00E+00	0,00E+00	1,33E-02	1,54E-05	3,49E-06	-7,89E-04
EP-terrestrial	1,89E-04	-2,06E-03	9,15E-06	-8,68E-06	0,00E+00	0,00E+00	1,55E-01	1,79E-04	-3,25E-06	1,58E-03
POCP	4,69E-05	-7,94E-04	2,27E-06	-2,15E-06	0,00E+00	0,00E+00	3,98E-02	4,58E-05	4,81E-07	7,17E-05
ADPE	2,82E-06	-7,87E-05	1,76E-09	-1,66E-09	0,00E+00	0,00E+00	2,25E-04	2,59E-07	-6,26E-10	2,95E-07
ADPF	1,45E-01	-1,94E+00	7,75E-03	-7,34E-03	0,00E+00	0,00E+00	4,22E+02	4,86E-01	-2,90E-03	1,37E+00
WDP	5,37E-02	-1,24E+00	3,09E-05	-2,93E-05	0,00E+00	0,00E+00	4,79E+00	5,52E-03	2,89E-07	4,57E-03
CRU	1,40E-05	-4,01E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	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	0,00E+00
MER	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	0,00E+00
EE	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	0,00E+00
PM	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	0,00E+00
IRP	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	0,00E+00
PENRE	1,54E-01	-1,94E+00	7,88E-03	-7,47E-03	0,00E+00	0,00E+00	4,92E+02	5,67E-01	-2,86E-03	1,37E+00
PENRM	1,21E-02	-2,07E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	1,66E-01	-2,15E+00	7,88E-03	-7,47E-03	0,00E+00	0,00E+00	4,92E+02	5,67E-01	-2,86E-03	1,37E+00
PERE	1,58E-02	1,69E-01	1,20E-04	-1,14E-04	0,00E+00	0,00E+00	9,45E+01	1,09E-01	-9,11E-06	1,24E-02
PERM	0,00E+00	1,03E+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
PERT	1,58E-02	1,20E+00	1,20E-04	-1,14E-04	0,00E+00	0,00E+00	9,45E+01	1,09E-01	-9,11E-06	1,24E-02
PE	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	0,00E+00
SM	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	0,00E+00
RSF	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	0,00E+00
NRSF	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	0,00E+00
FW	1,25E-03	-2,86E-02	8,74E-07	-8,28E-07	0,00E+00	0,00E+00	3,39E-01	3,91E-04	-1,58E-08	1,24E-04
HWD	9,39E-06	-2,71E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NHWD	1,02E-06	-2,95E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RWD	8,97E-09	-2,58E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
ETP-fw	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	0,00E+00
HTP-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	0,00E+00
HTP-nc	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	0,00E+00
SQP	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	0,00E+00
BCProd	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	0,00E+00
BCPack	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	0,00E+00

Extrapolation Factors

Product Code	Product Name	Weight [g]	Average power loss [W]
2CSF202003R3250	FH202 AC-25/0.3	253	0,045
2CSF202003R3400	FH202 AC-40/0.3	253	0,108
2CSF202006R1250	FH202 AC-25/0.03	253	0,045
2CSF202003R3630	FH202 AC-63/0.3	253	0,144
2CSF202006R1400	FH202 AC-40/0.03	253	0,108
2CSF202004R1250	FH202 AC-25/0.03	253	0,045
2CSF202006R1630	FH202 AC-63/0.03	253	0,144
2CSF202004R1400	FH202 AC-40/0.03	253	0,108
2CSF202006R2250	FH202 AC-25/0.1	253	0,045
2CSF202004R1630	FH202 AC-63/0.03	253	0,144
2CSF202006R2400	FH202 AC-40/0.1	253	0,108
2CSF202006R2630	FH202 AC-63/0.1	253	0,144
2CSF202006R3250	FH202 AC-25/0.3	253	0,045
2CSF202006R3400	FH202 AC-40/0.3	253	0,108
2CSF202006R3630	FH202 AC-63/0.3	253	0,144
2CSF202002R1250	FH202 AC-25/0.03	253	0,045
2CSF202002R1400	FH202 AC-40/0.03	253	0,108
2CSF202002R1630	FH202 AC-63/0.03	253	0,144
2CSF202102R1250	FH202 A-25/0.03	253	0,045
2CSF202102R1400	FH202 A-40/0.03	253	0,108
2CSF202102R1630	FH202 A-63/0.03	253	0,144
2CSF202122U1400	FH202 A-40/0.03 U CEBEC	253	0,108
2CSF202122U3400	FH202 A-40/0.3 U CEBEC	253	0,108
2CSF202120U1400	FH202 A-40/0.03 U HAF	253	0,108
2CSF202066R1400	FH202 AC-40/0.03	253	0,108
2CSF202066R3630	FH202 AC-63/0.3	253	0,144
2CSF202066R2400	FH202 AC-40/0.1	253	0,108
2CSF202066R1630	FH202 AC-63/0.03	253	0,144
2CSF202102U1250	FH202 A-25/0.03 U	253	0,045
2CSF202066R2630	FH202 AC-63/0.1	253	0,144
2CSF202120R1400	FH202 A-40/0.03	253	0,108
2CSF202066R3400	FH202 AC-40/0.3	253	0,108
2CSF202102U1400	FH202 A-40/0.03 U	253	0,108
2CSF202066R1250	FH202 AC-25/0.03	253	0,045
2CSF202102U1630	FH202 A-63/0.03 U	253	0,144
2CSF202066R2250	FH202 AC-25/0.1	253	0,045
2CSF202066R3250	FH202 AC-25/0.3	253	0,045
2CSF204006R1250	FH204 AC-25/0.03	394	0,08775
2CSF204006R1400	FH204 AC-40/0.03	394	0,216
2CSF204006R1630	FH204 AC-63/0.03	394	0,297
2CSF204006R2250	FH204 AC-25/0.1	394	0,08775
2CSF204006R2400	FH204 AC-40/0.1	394	0,216

Extrapolation Factors

Product Code	Product Name	Weight [g]	Average power loss [W]
2CSF204006R2630	FH204 AC-63/0.1	394	0,297
2CSF204006R3250	FH204 AC-25/0.3	394	0,088
2CSF204006R3400	FH204 AC-40/0.3	394	0,216
2CSF204006R3630	FH204 AC-63/0.3	394	0,297
2CSF204003R3250	FH204 AC-25/0.3	394	0,088
2CSF204003R3400	FH204 AC-40/0.3	394	0,216
2CSF204003R3630	FH204 AC-63/0.3	394	0,297
2CSF204004R1250	FH204 AC-25/0.03	394	0,088
2CSF204002R1250	FH204 AC-25/0.03	394	0,088
2CSF204004R1400	FH204 AC-40/0.03	394	0,216
2CSF204002R1400	FH204 AC-40/0.03	394	0,216
2CSF204004R1630	FH204 AC-63/0.03	394	0,297
2CSF204002R1630	FH204 AC-63/0.03	394	0,297
2CSF204066R1250	FH204 AC-25/0.03	394	0,088
2CSF204026R3630	FH204 AC-63/0.3-L	394	0,297
2CSF204066R2250	FH204 AC-25/0.1	394	0,088
2CSF204066R3250	FH204 AC-25/0.3	394	0,088
2CSF204026R3250	FH204 AC-25/0.3-L	394	0,088
2CSF204066R1630	FH204 AC-63/0.03	394	0,297
2CSF204026R1250	FH204 AC-25/0.03-L	394	0,088
2CSF204066R2630	FH204 AC-63/0.1	394	0,297
2CSF204026R1630	FH204 AC-63/0.03-L	394	0,297
2CSF204066R3400	FH204 AC-40/0.3	394	0,216
2CSF204026R3400	FH204 AC-40/0.3-L	394	0,216
2CSF204066R1400	FH204 AC-40/0.03	394	0,216
2CSF204026R1400	FH204 AC-40/0.03-L	394	0,216
2CSF204066R2400	FH204 AC-40/0.1	394	0,216
2CSF204066R3630	FH204 AC-63/0.3	394	0,297
2CSF204102R1250	FH204 A-25/0.03	394	0,088
2CSF204102R1400	FH204 A-40/0.03	394	0,216
2CSF204102R1630	FH204 A-63/0.03	394	0,297
2CSF204120R1400	FH204 A-40/0.03 HAF	394	0,216
2CSF204120R1630	FH204 A-63/0.03 HAF	394	0,297
2CSF204120R3400	FH204 A-40/0.3 HAF	394	0,216
2CSF204120U1400	FH204 A-40/0.03 U HAF	394	0,216
2CSF204102U1250	FH204 A-25/0.03 U	394	0,088
2CSF204102U1400	FH204 A-40/0.03 U	394	0,216
2CSF204102U1630	FH204 A-63/0.03 U	394	0,297
2CSF204122U1400	FH204 A-40/0.03 U CEBEC	394	0,216
2CSF204122U3400	FH204 A-40/0.3 U CEBEC	394	0,216
2CSF302120U1400	FH202 A-40/0.03 U HAF	253	0,108

Extrapolation Factors

Product Code	Product Name	Weight [g]	Average power loss [W]
2CSF202162R1250	FH202 A-25/0.03	253	0,045
2CSF202162R1400	FH202 A-40/0.03	253	0,108
2CSF202162U1250	FH202 A-25/0.03 U	253	0,045
2CSF202162U1400	FH202 A-40/0.03 U	253	0,108
2CSF204162R1250	FH204 A-25/0.03	381	0,088
2CSF204162R1400	FH204 A-40/0.03	381	0,216
2CSF204162R1630	FH204 A-63/0.03	381	0,297
2CSF204162U1400	FH204 A-40/0.03 U	381	0,216
1SPK007904F0525	FH 202 A 40/0,03	253	0,108
1SPK007904F0665	FH 204 A 40/0,3	394	0,216

Glossary

Environmental impact Indicators			
GWP-total	Global Warming Potential total (Climate change)		
GWP-fossil	Global Warming Potential fossil		
GWP-biogenic	Global Warming Potential biogenic		
GWP-luluc	Global Warming Potential land use and land use change		
ODP	Depletion potential of the stratospheric ozone layer		
AP	Acidification potential		
EP-freshwater	Eutrophication potential - freshwater compartment		
EP-marine	Eutrophication potential - fraction of nutrients reachin marine end compartment		
EP-terrestrial	Eutrophication potential - Accumulated Exceedance		
POPCD	Formation potential of tropospheric ozone		
ADP-m&m	Abiotic Depletion for non-fossil resources potential		
ADP-fossil	Abiotic Depletion for fossil resources potential, WDP		
WDP	Water deprivation potential		
Resource indicators			
PENRE	Use of non-renewable primary energy excluding renewable primary energy resources used as raw		
PENRM	Use of non-renewable primary energy resources used as raw material		
PENRT	Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials		
PERE	Use of renewable primary energy excluding non-renewable primary energy resources used as raw material.		
PERM	Use of renewable primary energy resources used as raw material		
PERT	Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)		
Secondary materials, water and energy resources		Waste category indicators	
SM	Use of secondary materials	HWD	Hazardous waste disposed
RSF	Use of renewable secondary fuels	N-HWD	Non-hazardous waste disposed
NRSF	Use of non-renewable secondary fuels	RWD	Radioactive waste disposed
FW	Net use of fresh water		
Output flow indicators			
CfRu	Components for re-use		
MfR	Materials for recycling		
MfER	Materials for energy recovery		
EE	Exported Energy		

References

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- [1] PEP ecopassport® PROGRAM. PCR-ed4-EN-2021 09 06. Product Category Rules for Electrical. Electronic and HVAC-R Products.
 - [2] PEP ecopassport® PROGRAM. PSR-0005-ed3-EN-2023 06 06. Specific rules for Electrical switchgear and control gear Solutions.
 - [3] PRé Consultants. Software SimaPro v 9.5. 2024 (www.simapro.com).
 - [4] ISO 14040:2006/Amd 1:2020. Life cycle assessment. Environmental management. Principles and Framework. International Organization for Standardization. 2020.
 - [5] ISO 14044:2006/Amd 1:2017/Amd 2:2020. Life cycle assessment. Environmental management. Requirements and guidelines. International Organization for Standardization.
 - [6] ABB website. <https://global.abb/group/en/about> [accessed 12-01-2023]
 - [7] ABB website. <https://global.abb/group/en/sustainability/sustainability-strategy-2030> [accessed 12-01-2023]
 - [8] Ecoinvent. 2023. Swiss Centre for Life Cycle Assessment. v3.9.1 (www.ecoinvent.ch).
 - [9] UNI EN 15804:2012+A2:2019: Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products
 - [10] Google Maps. <https://www.google.it/maps/preview>.
 - [11] Sea Rates. <https://www.searates.com/>.
 - [12] ABB. 2022. Cert GSE GO 2022 ABB SPA
 - [13] EN 50693:2019 Product category rules for life cycle assessments of electronic and
 - [14] Engineering safety assessment, LHV MJ/kg
 - [15] Unified text safety assessment, LHV MJ/kg