F200 BLOCKS AND DIFFERENTIAL SWITCHES

PEP ecopassport®
Product Environmental Profile

Product Environmental Profile - PEP Ecopassport.
Document in compliance with ISO 14025: 2006 "Environmental labels and declarations. Type III environmental declarations"

ORGANIZATION		CONTACT INFORMATION			
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ABB Purpose & Embedding Sustainability

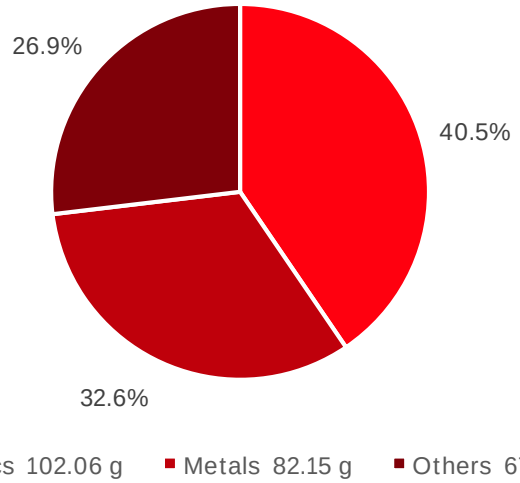
ABB is committed to continually promoting and embedding sustainability across its operations and value chain, aspiring to become a role model for others to follow.
With its ABB Purpose, ABB is focusing on reducing harmful emissions, preserving natural resources and championing ethical and humane behavior.

"other points or for example a QR code or link to ABB website, where more information on the topic"

General Information

Reference product	2CSF202001R1630 F202 AC-63/0.03
Description of the product	The RCCBs F200 family assures protection to people and installations against fault current to earth. A large offer for standard instantaneous and selective AC, A and F 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 Ue 230V, rated current In = 63A, with Np = 2 poles, a rated breaking capacity Icn = 10kA, the sensitivity S= 30mA, and the differential protection type Tp 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	F200 environmental homogeneous family: Family: F200, FX200, VY Sizes: 2 and 4 poles Rated Current [A]: 16, 25, 40. 63, 80, 100 Rated Sensitivity [A]: 0.01, 0.03, 0.1, 0.3, 0.5, 1 Type of differential protection: A, F, AC

Constituent Materials



Total weight in reference product included packaging (g)	252	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%
Polyamide PA6 part, glass filled	24.4	steel	19.5	Packaging - Carton and corrugated carton box	19.7
PBT part, glass filled	5.6	brass	7.4	Magnetic core	3.6
Polyamide PA66 part, glass filled	5.1	Copper	3.6	Magnetic relay	2.3
Polyphenylene sulfide part, 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 202 g plus packaging is 252g.

Additional Environmental Information

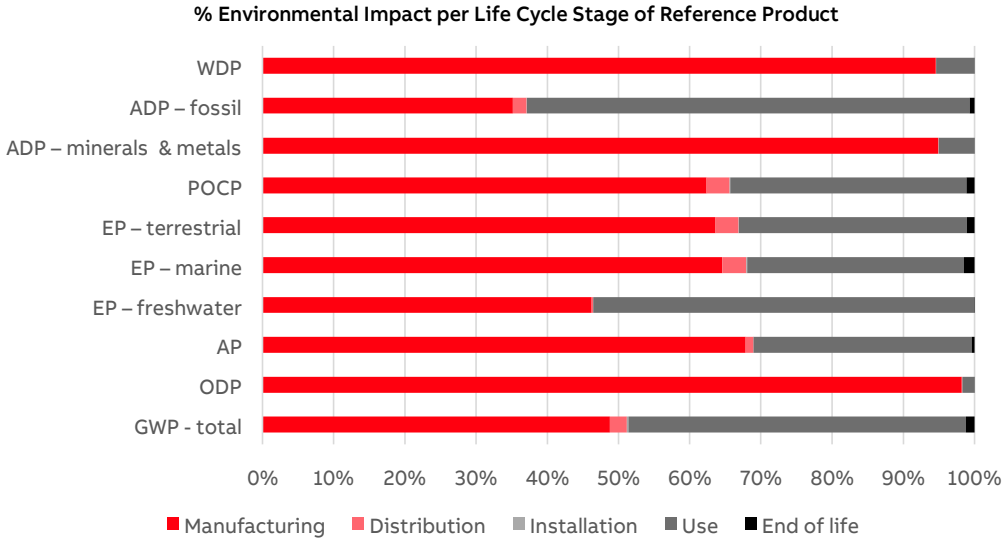
Manufacturing	The manufacturing stage includes the production and transportation to the manufacturer's last logistic platform of F200 and its packaging. The production occurs at the ABB factory located in Santa Palomba (RM).
Distribution	The transport from ABB Santa Palomba factory to Vignate, Milan 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	F200 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	Manu-facturing	Distri-bution	Installation	Use	End of life	Bene-fits
GWP-total	**kg CO_2 eq.**	5.81E+00	2.83E+00	1.40E-01	1.09E-02	2.76E+00	6.77E-02	-4.90E-02
GWP-fossil	**kg CO_2 eq.**	5.69E+00	2.76E+00	1.40E-01	2.28E-03	2.73E+00	5.74E-02	-4.41E-02
GWP-biogenic	**kg CO_2 eq.**	1.09E-01	7.32E-02	4.98E-05	8.65E-03	1.72E-02	1.02E-02	-3.90E-03
GWP-luluc	**kg CO_2 eq.**	1.19E-02	5.07E-03	6.72E-05	1.24E-06	6.71E-03	2.19E-05	-1.02E-03
GWP-fossil = Global Warming Potential fossil fuels GWP-biogenic = Global Warming Potential biogenic GWP-luluc = Global Warming Potential land use and land use change								
ODP	**kg CFC-11 eq.**	3.09E-06	3.04E-06	2.98E-09	0*	5.12E-08	9.39E-10	-1.03E-09
ODP = Depletion potential of the stratospheric ozone layer								
AP	**H+ eq.**	5.04E-02	3.42E-02	5.64E-04	9.68E-06	1.54E-02	1.86E-04	-2.89E-04
AP = Acidification potential, Accumulated Exceedance								
EP-freshwater	**kg P eq.**	4.97E-04	2.30E-04	1.10E-06	0*	2.66E-04	3.66E-07	-9.86E-06
EP-marine	**kg N eq.**	6.36E-03	4.11E-03	2.14E-04	1.05E-05	1.94E-03	9.39E-05	-1.43E-04
EP-terrestrial	**mol N eq.**	7.05E-02	4.48E-02	2.30E-03	3.21E-05	2.26E-02	7.52E-04	-9.68E-04
EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment EP-terrestrial = Eutrophication potential, Accumulated Exceedance								
POCP	**kg NMVOC eq.**	1.74E-02	1.08E-02	5.69E-04	1.04E-05	5.78E-03	1.92E-04	-1.63E-04
POCP = Formation potential of tropospheric ozone								
ADP-minerals & metals	**kg Sb eq.**	6.50E-04	6.17E-04	4.41E-07	0*	3.26E-05	1.36E-07	-1.74E-07
ADP-fossil	**MJ**	9.84E+01	3.46E+01	1.95E+00	2.29E-02	6.12E+01	6.29E-01	-5.71E-01
ADP-minerals & metals = Abiotic depletion potential for non-fossil resources ADP-fossil = Abiotic depletion for fossil resources potential								
WDP	**m^3 eq. depr.**	1.30E+01	1.23E+01	7.76E-03	0*	6.96E-01	4.62E-03	-5.55E-02
WDP = Water Deprivation potential								

Common base of mandatory indicators

* if indicator is "0*", it represents less than 0,01% of the total life cycle of the reference flow

Inventory flows indicator – Resource use indicators

Indicator	Unit	Total	Manu-facturing	Distri-bution	Installation	Use	End of life	Bene-fits
PERE	**MJ**	1.87E+01	4.97E+00	3.02E-02	0.00E+00	1.37E+01	1.01E-02	-2.96E-01
PERM	**MJ**	1.90E-01	1.90E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-1.42E-02
PERT	**MJ**	1.89E+01	5.16E+00	3.02E-02	0*	1.37E+01	1.01E-02	-3.10E-01
PENRE	**MJ**	1.03E+02	3.22E+01	1.52E+00	2.51E-02	6.88E+01	4.56E-01	-6.70E-01
PENRM	**MJ**	2.86E+00	2.86E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRT	**MJ**	1.06E+02	3.51E+01	1.52E+00	2.51E-02	6.88E+01	4.56E-01	-6.70E-01

PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials
PERM = Use of renewable primary energy resources used as raw materials
PERT = Total Use of renewable primary energy resources
PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials
PENRM = Use of non-renewable primary energy resources used as raw materials
PENRT = Total Use of non-renewable primary energy resources

Inventory flows indicator – Indicators describing the use of secondary materials, water, and energy resources

Indicator	Unit	Total	Manu-facturing	Distri-bution	Installation	Use	End of life	Bene-fits
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	**m^3**	3.36E-01	2.87E-01	2.19E-04	0*	4.93E-02	1.19E-04	-1.43E-03

SM = Use of secondary material
RSF = Use of renewable secondary fuels
NRSF = Use of non-renewable secondary fuels
FW = Use of net fresh water

Inventory flows indicator – Waste category indicators

Indicator	Unit	Total	Manu-facturing	Distri-bution	Installation	Use	End of life	Bene-fits
Hazardous waste disposed	**kg**	2.11E-03	2.11E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Non- hazardous waste disposed	**kg**	2.30E-04	2.30E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Radioactive waste disposed	**kg**	2.01E-06	2.01E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Common base of mandatory indicators

* if indicator is "0*", it represents less than 0,01% of the total life cycle of the reference flow

Inventory flows indicator – Output flow indicators

Indicator	Unit	Total	Manu-facturing	Distri-bution	Installation	Use	End of life	Bene-fits
Components for re-use	kg	3.13E-03	3.13E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	4.07E-02	0.00E+00	0.00E+00	4.07E-02	0.00E+00	0.00E+00	0.00E+00
Materials for energy recovery	kg	4.47E-03	0.00E+00	0.00E+00	4.47E-03	0.00E+00	0.00E+00	0.00E+00
Exported energy	MJ	7.60E-02	0.00E+00	0.00E+00	7.60E-02	0.00E+00	0.00E+00	0.00E+00

Inventory flow indicator – other indicators

Indicator	Unit	Total	Manu-facturing	Distri-bution	Installation	Use	End of life	Bene-fits
Biogenic carbon content of the product	kg of C	2.20E-04	2.20E-04	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	2.19E-02	2.19E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Optional indicators

* if indicator is "0*", it represents less than 0,01% of the total life cycle of the reference flow

Environmental indicators

Indicator	Unit	Total	Manu-facturing	Distri-bution	Installation	Use	End of life	Bene-fits
No Environmental indicators used								

Other indicators

Indicator	Unit	Total	Manu-facturing	Distri-bution	Installation	Use	End of life	Bene-fits
No Other indicators used								

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: $y = ax1 + b$
where x1 is the weight of the product

For the use stage: $y = ax2 + b$
where x2 is the average power loss of the product

Impact category	Manu-facturing		Distribution		Use		End of Life	
	a	b	a	b	a	b	a	b
Climate change - Total	2.04E-02	-2.31E+00	5.87E-04	-7.98E-03	1.85E+01	1.01E-01	4.29E-04	-4.04E-02
Climate change - Fossil	2.04E-02	-2.38E+00	5.87E-04	-7.97E-03	1.83E+01	1.00E-01	3.91E-04	-4.11E-02
Climate change - Biogenic standard	-1.20E-05	7.63E-02	2.09E-07	-2.84E-06	1.15E-01	6.28E-04	3.77E-05	6.89E-04
Climate change - Land use and LU change	2.61E-05	-1.51E-03	2.82E-07	-3.83E-06	4.49E-02	2.46E-04	1.64E-07	-1.94E-05
Ozone depletion	1.74E-10	2.99E-06	1.25E-11	-1.70E-10	3.43E-07	1.87E-09	7.06E-12	-8.40E-10
Acidification	1.11E-03	-2.46E-01	2.37E-06	-3.22E-05	1.03E-01	5.64E-04	1.39E-06	-1.65E-04
Eutrophication, freshwater	4.56E-06	-9.19E-04	4.61E-09	-6.26E-08	1.78E-03	9.72E-06	2.73E-09	-3.23E-07
Eutrophication, marine	5.60E-05	-1.00E-02	8.96E-07	-1.22E-05	1.30E-02	7.08E-05	6.25E-07	-6.37E-05
Eutrophication, terrestrial	7.69E-04	-1.49E-01	9.64E-06	-1.31E-04	1.51E-01	8.25E-04	5.65E-06	-6.71E-04
Photochemical ozone formation	1.95E-04	-3.82E-02	2.39E-06	-3.24E-05	3.86E-02	2.11E-04	1.42E-06	-1.66E-04
Resource use, minerals and metals	1.39E-05	-2.88E-03	1.85E-09	-2.51E-08	2.18E-04	1.19E-06	1.02E-09	-1.21E-07
Resource use, fossils	2.62E-01	-3.15E+01	8.16E-03	-1.11E-01	4.09E+02	2.24E+00	4.73E-03	-5.62E-01
Water use	2.66E-02	5.63E+00	3.25E-05	-4.42E-04	4.65E+00	2.54E-02	3.46E-05	-4.11E-03
Primary renewable energy (carrier)	-3.35E-02	1.34E+01	1.27E-04	-1.72E-03	9.18E+01	5.02E-01	7.49E-05	-8.82E-03
Primary renewable energy (feedstock)	8.15E-02	-2.04E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Primary renewable energy (total)	4.80E-02	-6.94E+00	1.27E-04	-1.72E-03	9.18E+01	5.02E-01	7.49E-05	-8.82E-03
Primary non-renewable energy (carrier)	5.61E-01	-1.09E+02	3.39E-02	-7.04E+00	5.23E+02	-6.49E+00	1.51E-02	-3.36E+00
Primary non-renewable energy (feedstock)	2.45E-04	2.80E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Primary non-renewable energy (total)	5.61E-01	-1.06E+02	3.39E-02	-7.04E+00	5.23E+02	-6.49E+00	1.51E-02	-3.36E+00
Secondary materials	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Renewable secondary fuels	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Non-renewable secondary fuels	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 (EI3.6)	6.19E-04	1.31E-01	9.20E-07	-1.25E-05	3.30E-01	1.80E-03	8.96E-07	-1.06E-04
Hazardous waste disposed	0.00E+00	2.11E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Non hazardous waste disposed	0.00E+00	2.30E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Radioactive waste disposed	0.00E+00	2.01E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Components for re-use	0.00E+00	3.13E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	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 energy recovery	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported Energy	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

For the weight and average power loss data of the variants, please refer to the table below

Product ID	Product Type	Total Weight [g]	Average power loss [W]
2CSF202001R0160	F202 AC-16/0.01	252	0.07
2CSF202001R1250	F202 AC-25/0.03	252	0.05
2CSF202001R1400	F202 AC-40/0.03	252	0.11
2CSF202001R1630	F202 AC-63/0.03	252	0.14
2CSF202001R2250	F202 AC-25/0.1	252	0.05
2CSF202001R2400	F202 AC-40/0.1	252	0.11
2CSF202001R2630	F202 AC-63/0.1	252	0.14
2CSF202001R3250	F202 AC-25/0.3	252	0.05
2CSF202001R3400	F202 AC-40/0.3	252	0.11
2CSF202001R3630	F202 AC-63/0.3	252	0.14
2CSF202001R4250	F202 AC-25/0.5	252	0.05
2CSF202001R4400	F202 AC-40/0.5	252	0.11
2CSF202001R0250	F202 AC-25/0.01	252	0.05
2CSF202001R4630	F202 AC-63/0.5	252	0.14
2CSF202005R0160	F202 AC-16/0.01 IEC	252	0.07
2CSF202005R1250	F202 AC-25/0.03 IEC	252	0.05
2CSF202005R3250	F202 AC-25/0.3 IEC	252	0.05
2CSF202005R1400	F202 AC-40/0.03 IEC	252	0.11
2CSF202005R3400	F202 AC-40/0.3 IEC	252	0.11
2CSF202005R1630	F202 AC-63/0.03 IEC	252	0.14
2CSF202005R3630	F202 AC-63/0.3 IEC	252	0.14
2CSF202005R2250	F202 AC-25/0.1 IEC	252	0.05
2CSF202005R4250	F202 AC-25/0.5 IEC	252	0.05
2CSF202005R2400	F202 AC-40/0.1 IEC	252	0.11
2CSF202011R1630	F202 AC-63/0.03	252	0.14
2CSF202005R4400	F202 AC-40/0.5 IEC	252	0.11
2CSF202005R2630	F202 AC-63/0.1 IEC	252	0.14
2CSF202011R3630	F202 AC-63/0.3	252	0.14
2CSF202005R4630	F202 AC-63/0.5 IEC	252	0.14
2CSF202011R0160	F202 AC-16/0.01	252	0.07
2CSF202101R0160	F202 A-16/0.01	252	0.07
2CSF202011R1250	F202 AC-25/0.03	252	0.05
2CSF202101R1250	F202 A-25/0.03	252	0.05
2CSF202011R3250	F202 AC-25/0.3	252	0.05
2CSF202011R1400	F202 AC-40/0.03	252	0.11
2CSF202101R1400	F202 A-40/0.03	252	0.11
2CSF202011R3400	F202 AC-40/0.3	252	0.11
2CSF202101R1630	F202 A-63/0.03	252	0.14
2CSF202101R4400	F202 A-40/0.5	252	0.11
2CSF202001U1250	F202 AC-25/0.03 U	252	0.05
2CSF202101R2250	F202 A-25/0.1	252	0.05
2CSF202001U1400	F202 AC-40/0.03 U	252	0.11
2CSF202101R4630	F202 A-63/0.5	252	0.14
2CSF202001U1630	F202 AC-63/0.03 U	252	0.14
2CSF202101R2400	F202 A-40/0.1	252	0.11
2CSF202101R2630	F202 A-63/0.1	252	0.14
2CSF202101R3250	F202 A-25/0.3	252	0.05
2CSF202121R1250	F202 A-25/0.03 CEBEC	252	0.05
2CSF202101R3400	F202 A-40/0.3	252	0.11

Extrapolation Factors

2CSF202121R1400	F202 A-40 / 0.03 CEBEC	252	0.11
2CSF202005U1400	F202 AC-40 / 0.03 U IEC	252	0.11
2CSF202101R3630	F202 A-63 / 0.3	252	0.14
2CSF202005U1630	F202 AC-63 / 0.03 U IEC	252	0.14
2CSF202121R1630	F202 A-63 / 0.03 CEBEC	252	0.14
2CSF202101R4250	F202 A-25 / 0.5	252	0.05
2CSF202005U2400	F202 AC-40 / 0.1 U IEC	252	0.11
2CSF202121R3250	F202 A-25 / 0.3 CEBEC	252	0.05
2CSF202005U2630	F202 AC-63 / 0.1 U IEC	252	0.14
2CSF202121R3400	F202 A-40 / 0.3 CEBEC	252	0.11
2CSF202005U3400	F202 AC-40 / 0.3 U IEC	252	0.11
2CSF202121R3630	F202 A-63 / 0.3 CEBEC	252	0.14
2CSF202005U3630	F202 AC-63 / 0.3 U IEC	252	0.14
2CSF202101U1250	F202 A-25 / 0.03 U	252	0.05
2CSF202101U1400	F202 A-40 / 0.03 U	252	0.11
2CSF202101U1630	F202 A-63 / 0.03 U	252	0.14
2CSF202401R1250	F202 A-25 / 0.03 AP-R	252	0.05
2CSF202201R2400	F202 A S-40 / 0.1	252	0.11
2CSF202401R1400	F202 A-40 / 0.03 AP-R	252	0.11
2CSF202201R2630	F202 A S-63 / 0.1	252	0.14
2CSF202401R1630	F202 A-63 / 0.03 AP-R	252	0.14
2CSF202201R3400	F202 A S-40 / 0.3	252	0.11
2CSF202201R3630	F202 A S-63 / 0.3	252	0.14
2CSF202201R4400	F202 A S-40 / 0.5	252	0.11
2CSF202319R1400	F202 AC-40 / 0.03 G	252	0.11
2CSF202201R4630	F202 A S-63 / 0.5	252	0.14
2CSF202319R1630	F202 AC-63 / 0.03 G	252	0.14
2CSF202201R5400	F202 A S-40 / 1	252	0.11
2CSF202319R2400	F202 AC-40 / 0.1 G	252	0.11
2CSF202201R5630	F202 A S-63 / 1	252	0.14
2CSF202319R2630	F202 AC-63 / 0.1 G	252	0.14
2CSF202419R1400	F202 A-40 / 0.03 G	252	0.11
2CSF202419R1630	F202 A-63 / 0.03 G	252	0.14
2CSF202419R2400	F202 A-40 / 0.1 G	252	0.11
2CSF202419R2630	F202 A-63 / 0.1 G	252	0.14
2CSF202196R1630	F202 A-63 / 0.03 16-2 / 3Hz	252	0.14
2CSF202196R3630	F202 A-63 / 0.3 16-2 / 3Hz	252	0.14
2CSF202196R4630	F202 A-63 / 0.5 16-2 / 3Hz	252	0.14
2CSF202199R1250	F202 A-25 / 0.03 110V	252	0.05
2CSF202199R1400	F202 A-40 / 0.03 110V	252	0.11
2CSF202199R1630	F202 A-63 / 0.03 110V	252	0.14
2CSF202325R1250	F202 F-25 / 0.03	252	0.05
2CSF202325R1400	F202 F-40 / 0.03	252	0.11
2CSF202325R1630	F202 F-63 / 0.03	252	0.14
2CSF202301R1250	F202 AC-25 / 0.03 AP-R	252	0.05
2CSF202301R1400	F202 AC-40 / 0.03 AP-R	252	0.11
2CSF202301R1630	F202 AC-63 / 0.03 AP-R	252	0.14
2CSF202165R1250	FX202 A-25 / 0.03	233	0.04
2CSF202165R1400	FX202 A-40 / 0.03	233	0.10
2CSF204001R1250	F204 AC-25 / 0.03	408	0.09
2CSF204001R1400	F204 AC-40 / 0.03	408	0.22
2CSF204001R2250	F204 AC-25 / 0.1	408	0.09
2CSF204001R1630	F204 AC-63 / 0.03	408	0.30
2CSF204001R2400	F204 AC-40 / 0.1	408	0.22

Extrapolation Factors

2CSF204001R2630	F204 AC-63/0.1	408	0.30
2CSF204001R3250	F204 AC-25/0.3	408	0.09
2CSF204001R3400	F204 AC-40/0.3	408	0.22
2CSF204005R1250	F204 AC-25/0.03 IEC	408	0.09
2CSF204001R3630	F204 AC-63/0.3	408	0.30
2CSF204001R4250	F204 AC-25/0.5	408	0.09
2CSF204005R1400	F204 AC-40/0.03 IEC	408	0.22
2CSF204001R4400	F204 AC-40/0.5	408	0.22
2CSF204005R1630	F204 AC-63/0.03 IEC	408	0.30
2CSF204001R4630	F204 AC-63/0.5	408	0.30
2CSF204023R1250	F204 AC-25/0.03-L	408	0.09
2CSF204005R2250	F204 AC-25/0.1 IEC	408	0.09
2CSF204005R2400	F204 AC-40/0.1 IEC	408	0.22
2CSF204005R2630	F204 AC-63/0.1 IEC	408	0.30
2CSF204005R3250	F204 AC-25/0.3 IEC	408	0.09
2CSF204005R3400	F204 AC-40/0.3 IEC	408	0.22
2CSF204005R3630	F204 AC-63/0.3 IEC	408	0.30
2CSF204005R4250	F204 AC-25/0.5 IEC	408	0.09
2CSF204005U2630	F204 AC-63/0.1 U IEC	408	0.30
2CSF204005R4400	F204 AC-40/0.5 IEC	408	0.22
2CSF204005R4630	F204 AC-63/0.5 IEC	408	0.30
2CSF204005U3400	F204 AC-40/0.3 U IEC	408	0.22
2CSF204023R1400	F204 AC-40/0.03-L	408	0.22
2CSF204005U3630	F204 AC-63/0.3 U IEC	408	0.30
2CSF204001U1250	F204 AC-25/0.03 U	408	0.09
2CSF204023R1630	F204 AC-63/0.03-L	408	0.30
2CSF204001U1400	F204 AC-40/0.03 U	408	0.22
2CSF204023R2250	F204 AC-25/0.1-L	408	0.09
2CSF204001U1630	F204 AC-63/0.03 U	408	0.30
2CSF204011R1630	F204 AC-63/0.03	408	0.30
2CSF204101R1250	F204 A-25/0.03	408	0.09
2CSF204023R2400	F204 AC-40/0.1-L	408	0.22
2CSF204011R3630	F204 AC-63/0.3	408	0.30
2CSF204101R1400	F204 A-40/0.03	408	0.22
2CSF204023R2630	F204 AC-63/0.1-L	408	0.30
2CSF204011R1250	F204 AC-25/0.03	408	0.09
2CSF204023R3250	F204 AC-25/0.3-L	408	0.09
2CSF204101R1630	F204 A-63/0.03	408	0.30
2CSF204011R3250	F204 AC-25/0.3	408	0.09
2CSF204005U1400	F204 AC-40/0.03 U IEC	408	0.22
2CSF204101R2250	F204 A-25/0.1	408	0.09
2CSF204005U1630	F204 AC-63/0.03 U IEC	408	0.30
2CSF204023R3400	F204 AC-40/0.3-L	408	0.22
2CSF204101R2400	F204 A-40/0.1	408	0.22
2CSF204023R3630	F204 AC-63/0.3-L	408	0.30
2CSF204101R2630	F204 A-63/0.1	408	0.30
2CSF204005U2400	F204 AC-40/0.1 U IEC	408	0.22
2CSF204023R4250	F204 AC-25/0.5-L	408	0.09
2CSF204011R1400	F204 AC-40/0.03	408	0.22
2CSF204101R3250	F204 A-25/0.3	408	0.09
2CSF204011R3400	F204 AC-40/0.3	408	0.22
2CSF204101R3400	F204 A-40/0.3	408	0.22
2CSF204023R4400	F204 AC-40/0.5-L	408	0.22
2CSF204023R4630	F204 AC-63/0.5-L	408	0.30

Extrapolation Factors

2CSF204101R3630	F204 A-63/0.3	408	0.30
2CSF204101R4250	F204 A-25/0.5	408	0.09
2CSF204101R4400	F204 A-40/0.5	408	0.22
2CSF204101R4630	F204 A-63/0.5	408	0.30
2CSF204201R2400	F204 A S-40/0.1	408	0.22
2CSF204201R2630	F204 A S-63/0.1	408	0.30
2CSF204201R5400	F204 A S-40/1	408	0.22
2CSF204201R3400	F204 A S-40/0.3	408	0.22
2CSF204201R5630	F204 A S-63/1	408	0.30
2CSF204401R1250	F204 A-25/0.03 AP-R	408	0.09
2CSF204123R1250	F204 A-25/0.03-L	408	0.09
2CSF204201R3630	F204 A S-63/0.3	408	0.30
2CSF204401R1400	F204 A-40/0.03 AP-R	408	0.22
2CSF204123R1400	F204 A-40/0.03-L	408	0.22
2CSF204201R4400	F204 A S-40/0.5	408	0.22
2CSF204401R1630	F204 A-63/0.03 AP-R	408	0.30
2CSF204123R1630	F204 A-63/0.03-L	408	0.30
2CSF204201R4630	F204 A S-63/0.5	408	0.30
2CSF204123R2250	F204 A-25/0.1-L	408	0.09
2CSF204123R2400	F204 A-40/0.1-L	408	0.22
2CSF204121R1250	F204 A-25/0.03 CEBEC	408	0.09
2CSF204123R2630	F204 A-63/0.1-L	408	0.30
2CSF204197R1250	F204 A-25/0.03 400Hz	408	0.09
2CSF204123R3250	F204 A-25/0.3-L	408	0.09
2CSF204197R1400	F204 A-40/0.03 400Hz	408	0.22
2CSF204123R3400	F204 A-40/0.3-L	408	0.22
2CSF204101U1250	F204 A-25/0.03 U	408	0.09
2CSF204101U1400	F204 A-40/0.03 U	408	0.22
2CSF204123R3630	F204 A-63/0.3-L	408	0.30
2CSF204101U1630	F204 A-63/0.03 U	408	0.30
2CSF204123R4250	F204 A-25/0.5-L	408	0.09
2CSF204123R4400	F204 A-40/0.5-L	408	0.22
2CSF204123R4630	F204 A-63/0.5-L	408	0.30
2CSF204319R1400	F204 AC-40/0.03 G	408	0.22
2CSF204419R1400	F204 A-40/0.03 G	408	0.22
2CSF204196R1630	F204 A-63/0.03 16-2/3Hz	408	0.30
2CSF204319R1630	F204 AC-63/0.03 G	408	0.30
2CSF204419R1630	F204 A-63/0.03 G	408	0.30
2CSF204196R3630	F204 A-63/0.3 16-2/3Hz	408	0.30
2CSF204319R2400	F204 AC-40/0.1 G	408	0.22
2CSF204419R2400	F204 A-40/0.1 G	408	0.22
2CSF204319R2630	F204 AC-63/0.1 G	408	0.30
2CSF204196R4630	F204 A-63/0.5 16-2/3Hz	408	0.30
2CSF204219R2400	F204 A S-40/0.1 T	408	0.22
2CSF204419R2630	F204 A-63/0.1 G	408	0.30
2CSF204219R2630	F204 A S-63/0.1 T	408	0.30
2CSF204519R1400	F204 AC-40/0.03 T	408	0.22
2CSF204199R1250	F204 A-25/0.03 110V	408	0.09
2CSF204219R3400	F204 A S-40/0.3 T	408	0.22
2CSF204519R1630	F204 AC-63/0.03 T	408	0.30
2CSF204199R1400	F204 A-40/0.03 110V	408	0.22
2CSF204219R3630	F204 A S-63/0.3 T	408	0.30
2CSF204199R1630	F204 A-63/0.03 110V	408	0.30
2CSF204325R1250	F204 F-25/0.03	408	0.09

Extrapolation Factors

2CSF204519R2400	F204 AC-40 / 0.1 T	408	0.22
2CSF204719R1400	F204 A-40 / 0.03 T	408	0.22
2CSF204519R2630	F204 AC-63 / 0.1 T	408	0.30
2CSF204325R1400	F204 F-40 / 0.03	408	0.22
2CSF204121R1400	F204 A-40 / 0.03 CEBEC	408	0.22
2CSF204719R1630	F204 A-63 / 0.03 T	408	0.30
2CSF204325R1630	F204 F-63 / 0.03	408	0.30
2CSF204121R1630	F204 A-63 / 0.03 CEBEC	408	0.30
2CSF204719R2400	F204 A-40 / 0.1 T	408	0.22
2CSF204719R2630	F204 A-63 / 0.1 T	408	0.30
2CSF204121R3250	F204 A-25 / 0.3 CEBEC	408	0.09
2CSF204619R1400	F204 AC-40 / 0.03 TG	408	0.22
2CSF204121R3400	F204 A-40 / 0.3 CEBEC	408	0.22
2CSF204301R1250	F204 AC-25 / 0.03 AP-R	408	0.09
2CSF204619R1630	F204 AC-63 / 0.03 TG	408	0.30
2CSF204121R3630	F204 A-63 / 0.3 CEBEC	408	0.30
2CSF204619R2400	F204 AC-40 / 0.1 TG	408	0.22
2CSF204165R1250	FX204 A-25 / 0.03	385	0.06
2CSF204619R2630	F204 AC-63 / 0.1 TG	408	0.30
2CSF204165R1400	FX204 A-40 / 0.03	385	0.16
2CSF204123U1400	F204A-40 / 0.03L U	408	0.22
2CSF204819R1400	F204 A-40 / 0.03 TG	408	0.22
2CSF204819R1630	F204 A-63 / 0.03 TG	408	0.30
2CSF204819R2400	F204 A-40 / 0.1 TG	408	0.22
2CSF204819R2630	F204 A-63 / 0.1 TG	408	0.30
2CSF702157R0160	VYA216 / 010	243	0.03
2CSF702157R1250	VYA225 / 030	243	0.05
2CSF704157R1250	VYA425 / 030	393	0.13
2CSF704157R3250	VYA425 / 300	393	0.13
2CSF702157R3250	VYA225 / 300	243	0.05
2CSF702157R1400	VYA240 / 030	243	0.08
2CSF704957R1400	VYA440 / 030PN	393	0.20
2CSF704157R1400	VYA440 / 030	393	0.20
2CSF704157R3400	VYA440 / 300	393	0.20
2CSF702157R3400	VYA240 / 300	243	0.08
2CSF702157R1630	VYA263 / 030	243	0.18
2CSF704157R1630	VYA463 / 030	393	0.34
2CSF704157R3630	VYA463 / 300	393	0.34
2CSF702157R3630	VYA263 / 300	243	0.18
2CSF704257R3400	VYS440 / 300	393	0.20
2CSF702257R3400	VYS240 / 300	243	0.08
2CSF704257R3630	VYS463 / 300	393	0.34
2CSF702257R3630	VYS263 / 300	243	0.18
2CSF704957R1630	VYA463 / 030PN	393	0.34
2CSF202001R1800	F202 AC-80 / 0.03	271	0.20
2CSF202001R1900	F202 AC-100 / 0.03	271	0.29
2CSF202001R2800	F202 AC-80 / 0.1	271	0.20
2CSF202001R2900	F202 AC-100 / 0.1	271	0.29
2CSF202001R3800	F202 AC-80 / 0.3	271	0.20
2CSF202001R3900	F202 AC-100 / 0.3	271	0.29
2CSF202001R4800	F202 AC-80 / 0.5	271	0.20
2CSF202001R4900	F202 AC-100 / 0.5	271	0.29
2CSF202005R2900	F202 AC-100 / 0.1 IEC	271	0.29
2CSF202005R1800	F202 AC-80 / 0.03 IEC	271	0.20

Extrapolation Factors

2CSF202005R3800	F202 AC-80 / 0.3 IEC	271	0.20
2CSF202005R1900	F202 AC-100 / 0.03 IEC	271	0.29
2CSF202005R3900	F202 AC-100 / 0.3 IEC	271	0.29
2CSF202005R2800	F202 AC-80 / 0.1 IEC	271	0.20
2CSF202005R4800	F202 AC-80 / 0.5 IEC	271	0.20
2CSF202005R4900	F202 AC-100 / 0.5 IEC	271	0.29
2CSF202101R4800	F202 A-80 / 0.5	271	0.20
2CSF202001U1800	F202 AC-80 / 0.03 U	271	0.20
2CSF202101R4900	F202 A-100 / 0.5	271	0.29
2CSF202001U1900	F202 AC-100 / 0.03 U	271	0.29
2CSF202101R1800	F202 A-80 / 0.03	271	0.20
2CSF202101R1900	F202 A-100 / 0.03	271	0.29
2CSF202101R2800	F202 A-80 / 0.1	271	0.20
2CSF202101R2900	F202 A-100 / 0.1	271	0.29
2CSF202101R3800	F202 A-80 / 0.3	271	0.20
2CSF202101R3900	F202 A-100 / 0.3	271	0.29
2CSF202401R1800	F202 A-80 / 0.03 AP-R	271	0.20
2CSF202401R1900	F202 A-100 / 0.03 AP-R	271	0.29
2CSF202201R2900	F202 A S-100 / 0.1	271	0.29
2CSF202201R3900	F202 A S-100 / 0.3	271	0.29
2CSF202201R4900	F202 A S-100 / 0.5	271	0.29
2CSF202201R5900	F202 A S-100 / 1	271	0.29
2CSF202199R1800	F202 A-80 / 0.03 110V	271	0.20
2CSF202199R1100	F202 A-100 / 0.03 110V	271	0.29
2CSF204005R1800	F204 AC-80 / 0.03 IEC	428	0.36
2CSF204005R1900	F204 AC-100 / 0.03 IEC	428	0.55
2CSF204001R1800	F204 AC-80 / 0.03	428	0.36
2CSF204001R1900	F204 AC-100 / 0.03	428	0.55
2CSF204001R2800	F204 AC-80 / 0.1	428	0.36
2CSF204005R2800	F204 AC-80 / 0.1 IEC	428	0.36
2CSF204005R2900	F204 AC-100 / 0.1 IEC	428	0.55
2CSF204001R2900	F204 AC-100 / 0.1	428	0.55
2CSF204001R3800	F204 AC-80 / 0.3	428	0.36
2CSF204001R3900	F204 AC-100 / 0.3	428	0.55
2CSF204005R3800	F204 AC-80 / 0.3 IEC	428	0.36
2CSF204005R3900	F204 AC-100 / 0.3 IEC	428	0.55
2CSF204001R4800	F204 AC-80 / 0.5	428	0.36
2CSF204001R4900	F204 AC-100 / 0.5	428	0.55
2CSF204005R4800	F204 AC-80 / 0.5 IEC	428	0.36
2CSF204005R4900	F204 AC-100 / 0.5 IEC	428	0.55
2CSF204023R1800	F204 AC-80 / 0.03-L	428	0.36
2CSF204101R1800	F204 A-80 / 0.03	428	0.36
2CSF204101R1900	F204 A-100 / 0.03	428	0.55
2CSF204023R1900	F204 AC-100 / 0.03-L	428	0.55
2CSF204023R3800	F204 AC-80 / 0.3-L	428	0.36
2CSF204101R2800	F204 A-80 / 0.1	428	0.36
2CSF204023R3900	F204 AC-100 / 0.3-L	428	0.36
2CSF204101R2900	F204 A-100 / 0.1	428	0.55
2CSF204101R3800	F204 A-80 / 0.3	428	0.36
2CSF204101R3900	F204 A-100 / 0.3	428	0.55
2CSF204101R4800	F204 A-80 / 0.5	428	0.36
2CSF204101R4900	F204 A-100 / 0.5	428	0.55
2CSF204201R5900	F204 A S-100 / 1	428	0.55
2CSF204201R2900	F204 A S-100 / 0.1	428	0.55

Extrapolation Factors

2CSF204401R1800	F204 A-80 / 0.03 AP-R	428	0.36
2CSF204201R3900	F204 A S-100 / 0.3	428	0.55
2CSF204401R1900	F204 A-100 / 0.03 AP-R	428	0.55
2CSF204201R4900	F204 A S-100 / 0.5	428	0.55
2CSF204123R1800	F204 A-80 / 0.03-L	428	0.36
2CSF204123R1900	F204 A-100 / 0.03-L	428	0.55
2CSF204123R3800	F204 A-80 / 0.3-L	428	0.36
2CSF204123R3900	F204 A-100 / 0.3-L	428	0.55
2CSF204199R1800	F204 A-80 / 0.03 110V	428	0.36
2CSF204199R1100	F204 A-100 / 0.03 110V	428	0.55

Environmental Impact Indicator Glossary

Impact indicators

Indicator	Description	Distri-bution
Global warming potential (GWP) - total	Indicator of potential global warming caused by emissions to air contributing to the greenhouse effect. The total global warming potential (GWP-total) is the sum of three sub-categories of climate change. GWP-total = GWP-fossil + GWP-biogenic + GWP- land use and land use change	kg CO_2 eq.
Ozone depletion (ODP)	Emissions to air that contribute to the destruction of the stratospheric ozone layer	kg CFC-11 eq.
Acidification of soil and water (A)	Acidification of soils and water caused by the release of certain gases to the atmosphere, such as nitrogen oxides and sulphur oxides	H+ eq.
Eutrophication (E)	Indicator of the contribution to eutrophication of water by the enrichment of the aquatic ecosystem with nutritional elements, e.g. industrial or domestic effluents, agriculture, etc. This indicator is divided to three: freshwater, marine and terrestrial.	kg P eq., kg N eq., mole N eq.
Photochemical ozone creation (POCP)	Indicator of emissions of gases that affect the creation of photochemical ozone in the lower atmosphere (smog) because of the rays of the sun.	kg NMVOC eq.
Depletion of abiotic resources – elements (ADPe)	Indicator of the depletion of natural non-fossil resources	kg Sb eq.
Depletion of abiotic resources – fossil fuels (ADPf)	The use of non-renewable fossil resources in an unsustainable way (e.g. from material to waste)	MJ (lower heating value)
Water Deprivation potential (WDP)	Deprivation-weighted water consumption. Assesses the potential of water deprivation, to either humans or ecosystems, building on the assumption that the less water remaining available per area, the more likely another user will be deprived.	m^3 eq. depr.

Resource use indicators

Indicator	Description	Distri-bution
Total use of primary energy	Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials) + Total use of renewable primary energy re-sources (primary energy and primary energy resources used as raw materials)	MJ (lower heating value)

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Unified text safety assessment, LHV MJ/kg

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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 (DDemain)

PEP are compliant with XP C08-100-1 :2016 or EN 50693:2019
The components of the present PEP may not be compared with components from any other program.

Document in compliance with ISO 14025: 2006 "Environmental labels and declarations. Type III environmental declarations"