ABB S802PV-M-H & S800PV-SD Switch Disconnectors

PEP ecopassport®

Product Environmental Profile

Registration number:	**ABBG-00661-V01.01-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:	**VH45**	Information and reference documents:	**www.pep-ecopassport.org**
Date of issue:	**September-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 og 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"

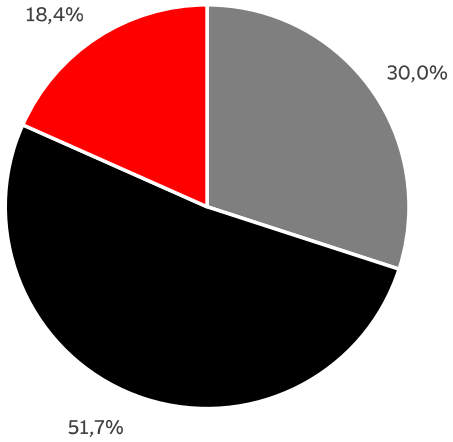
ABB Purpose & Embedding Sustainability

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 contect of this PEP cannot be compared with the content based on another program/database.
Scan QR code for more information

General information

Reference product	S802PV-M32-H - 2CCP247204R0001
Description of the product	The S802PV-M32-H is a 2-pole polarized switch disconnector for photovoltaics systems. It can be used for currents up to 32A and has a rated operational voltage of 1000V DC by only 54mm width. The rated short-term withstand current Icw is 1.5Ka.
Functional unit	Turn off all or part of a low voltage photovoltaic installation by separating it of all electrical energy, for safety reasons with a rated voltage (U) of 1000 DC, and a rat-ed current of 32A ensuring isolation characterised by a rated insulation voltage (Ui) of 1500 DC and with 2 poles, during the reference service life of 20 years.
Other products covered	S800 Switch Disconnectors homogeneous family: S802PV-M-H & S800PV-SD Series. 2, 3 & 4 poles. Ranges from 32 A to 125 A.
Manufacturing address	ABB Schweiz AG – ELSB (Fulachstrasse 150, 8200 Schaffhausen, Switzerland)

Constituent Materials



Total weight of reference product and packaging	**446,1**	**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%
PA	29,1	**Stainless steel**	6,0	**Glass fiber**	12,1
PC	0,5	**Steel**	22,3	**Adhesive polyester**	< 0,1
Polyester	0,3	**Brass**	2,2	**CARDBOARD**	5,1
PTFE	< 0,1	**Copper**	20,9	**PAPER**	1,1
PPE	0,1	**Silver alloys**	0,3		

RoHS and REACH compatability and other information about the products materials (i.e. halogen free, recyclability)

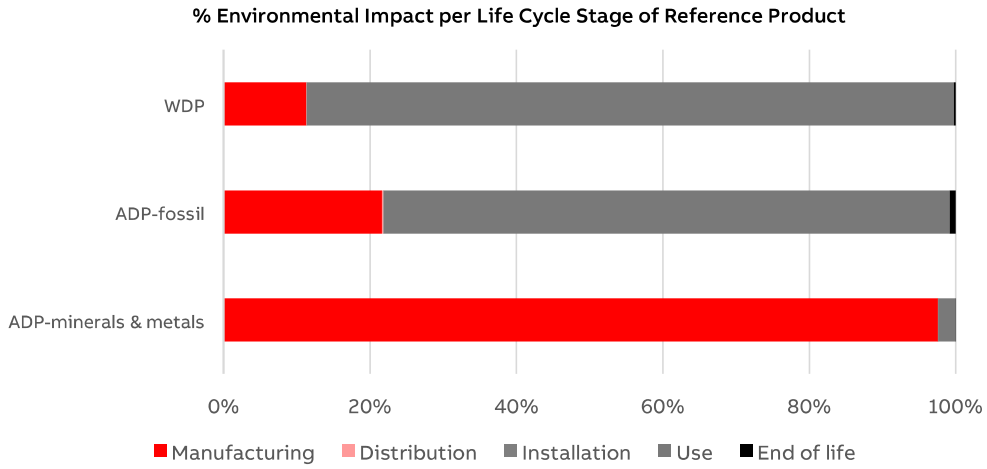
Additional Information

Manufacturing	Includes the environmental impacts associated with extraction and processing of the raw materials used to produce the product and its packaging, transport to the manufacturing site and assembly.
Distribution	Includes the transportation of the packaged product from the manufacturer's last logistic platform to the distributor.
Installation	Includes the manual installation of the products and the end-of-life of packaging.
Use	The energy mix of the main sales countries has been considered.
End of life	Includes the transportation of the product to the final end-of-life treatment site and treatment processes. A value of 100 km transport by lorry is used for the transportation.
Benefits and loads beyond the system boundaries	Prevented impacts of recycling materials.

Environmental Impacts

Reference lifetime	20 years
Product category	Disconnectors
Installation elements	End-of-life of the packaging components
Use scenario	Power losses calculated PSR criteria (50% In)
Geographical representativeness	Europe
Technological representativeness	Materials and processes data are specific for the production of one High Performance Circuit Breaker
Software and database used	Simapro 9.3 and Ecoinvent 3.9
Energy model used	
Manufacturing	Energy mix obtained from IEA data
Installation	Non-applicable
Use	Europe
End of life	Recycling of product and packaging

Common base of mandatory indicators



Environmental impact indicators

Indicator		Unit	Total	Manufacturing	Distribution	Installation	Use	End of life	Benefits
GWP	Total	kg CO2 eq.	1,55E+01	4,12E+00	4,67E-02	5,94E-04	1,10E+01	3,68E-01	-2,10E+00
	Fossil	kg CO2 eq.	1,54E+01	4,10E+00	4,67E-02	5,93E-04	1,09E+01	3,68E-01	-2,09E+00
	Biogenic	kg CO2 eq.	1,30E-01	1,47E-02	1,49E-05	7,25E-07	1,15E-01	1,27E-04	-7,08E-03
	Luluc	kg CO2 eq.	1,32E-02	3,17E-03	2,27E-05	3,09E-07	9,79E-03	1,99E-04	-3,31E-03
ODP		kg CFC-11 eq.	1,02E-06	7,64E-07	1,02E-09	2,64E-11	2,52E-07	2,56E-09	-1,03E-07
AP		H+ eq.	1,29E-01	7,62E-02	1,52E-04	2,83E-06	5,13E-02	8,64E-04	-9,26E-02
EP	Freshwater	kg P eq.	9,88E-04	5,25E-04	3,74E-07	6,03E-09	4,60E-04	2,92E-06	-4,18E-04
	Marine	kg N eq.	1,54E-02	8,01E-03	5,17E-05	1,07E-06	7,11E-03	2,12E-04	-4,92E-03
	Terrestrial	mol N eq.	1,86E-01	9,81E-02	5,53E-04	1,16E-05	8,49E-02	2,28E-03	-6,87E-02
POPCD		kg NMVOC eq.	6,16E-02	2,69E-02	2,27E-04	4,03E-06	3,37E-02	8,65E-04	-2,10E-02
ADP	Minerals & metals	kg SB eq.	5,64E-03	5,50E-03	1,50E-07	1,96E-09	1,36E-04	9,84E-07	-1,14E-03
	Fossil	MJ	2,77E+02	5,97E+01	6,62E-01	8,32E-03	2,14E+02	2,34E+00	-3,49E+01
WDP		m³ eq. depr.	7,16E+00	8,09E-01	2,70E-03	6,02E-05	6,33E+00	1,83E-02	-1,80E+00

Resource use indicators

Indicator	Unit	Total	Manufacturing	Distribution	Installation	Use	End of life	Benefits
PERE	MJ	6,95E+01	1,12E+01	1,03E-02	1,72E-04	5,81E+01	1,27E-01	-4,87E+00
PERM	MJ	4,46E-01	4,46E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	6,99E+01	1,17E+01	1,03E-02	1,72E-04	5,81E+01	1,27E-01	-4,87E+00
PENRE	MJ	2,73E+02	5,59E+01	6,62E-01	8,32E-03	2,14E+02	2,34E+00	-3,49E+01
PENRM	MJ	3,87E+00	3,87E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	MJ	2,77E+02	5,97E+01	6,62E-01	8,32E-03	2,14E+02	2,34E+00	-3,49E+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	m^3	2,60E-01	7,03E-02	9,43E-05	3,26E-06	1,89E-01	6,96E-04	-4,58E-02

Waste category indicators

Indicator	Unit	Total	Manufacturing	Distribution	Installation	Use	End of life	Benefits
HWD	kg	2,30E+00	9,27E-01	3,23E-02	2,90E-03	9,02E-01	4,39E-01	-5,63E-01
N-HWD	kg	1,19E-03	1,41E-04	2,15E-07	3,47E-09	1,04E-03	1,66E-06	-5,33E-05
RWD	kg	6,99E+01	1,17E+01	1,03E-02	1,72E-04	5,81E+01	1,27E-01	-4,87E+00

Output flow indicators

Indicator	Unit	Total	Manufacturing	Distribution	Installation	Use	End of life	Benefits
CfRu	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MfR	kg	3,78E-01	3,97E-03	0,00E+00	2,27E-02	0,00E+00	3,51E-01	0,00E+00
MfER	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EE	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Other indicators

Indicator		Unit	Total
Biogenic Carbon	Product	kg of C	0,00E+00
	Packaging	kg of C	1,39E-02
Environmental Cost		€	0,00E+00

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 multiplying the values of the Reference product by the following coefficients:

* 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

Product name	Manufacturing	Distribution	Installation	Use	End of life	Benefits
2CCF019635R0001	1,00	1,00	1,00	1,00	1,00	1,00
2CCF019634R0001	1,00	1,00	1,00	3,10	1,00	1,00
2CCF019636R0001	1,00	1,00	1,00	9,73	1,00	1,00
2CCF019637R0001	1,50	1,50	1,50	1,50	1,50	1,50
2CCF019638R0001	1,50	1,50	1,50	4,65	1,50	1,50
2CCF019639R0001	1,50	1,50	1,50	14,59	1,50	1,50
2CCF019640R0001	2,00	2,00	2,00	2,00	2,00	2,00
2CCF019641R0001	2,00	2,00	2,00	6,20	2,00	2,00
2CCF019642R0001	2,00	2,00	2,00	19,46	2,00	2,00
2CCP247204R0001	1,00	1,00	1,00	1,00	1,00	1,00
2CCP247205R0001	1,00	1,00	1,00	3,10	1,00	1,00
2CCP247212R0001	1,00	1,00	1,00	6,70	1,00	1,00

Glossary

Environmental impact Indicators	
GWP-total	Global Warming Potential total (Climate hange)
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
POCP	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 material
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	
SM	Use of secundary materials
RSF	Use of renewable secondary fuels
NRSF	Use of non-renewable secondary fuels
FW	Net use of fresh water

Waste category indicators	
HWD	Hazardous waste disposed
N-HWD	Non-hazardous waste disposed
RWD	Radioactive waste disposed

Output flow indicators	
CfRu	Components for re-use
MfR	Materials for recycling
MfER	Materials for energy recovery
EE	Exported Energy

Optional indicators	
Tot PE	Total use of primary energy during the life cycle
Efp	Emissions of Fine particles
IrHH	Ionizing radiation, human health
ETX FW	Ecotoxicity, freshwater
HTX CE	Human toxicity, carcinogenic effects
HTX N-CE	Human toxicity, non-carcinogenic effects
IrLS	Impact related to Land use / soil quality

References

[1] PCR “PEP-PCR-ed4-EN-2022_09_06” - Product Category Rules for Electrical, Electronic and HVAC-R Products (published: 6th September 2022)

[2] PSR “PSR-0005-ed2-EN-2016 03 29” - SPECIFIC RULES FOR Electrical switchgear and control gear Solutions (Circuit breakers)

[3] EN 50693:2019 - Product category rules for life cycle assessments of electronic and electrical products and systems

[4] ISO 14040:2006 - Environmental management -Life cycle assessment - Principles and framework

[5] ISO 14044:2006 - Environmental management - Life cycle assessment - Requirements and guidelines

[6] ecoinvent v3.8 (2022). ecoinvent database version 3.8 - (https://ecoinvent.org/)

[7] SimaPro Software version 9.3.0.3 - PRé Sustainability

[8] UNI EN 15804:2012+A2:2019: Sustainability of constructions - Environmental product declarations (September 2019)

[9] IEC/TR 62635 - Guidelines for end-of-life information provided by manufacturers and recyclers and for recyclability rate calculation of electrical and electronic equipment - Edition 1.0 2012-10

[10] https://www.ecosystemspa.com/

[11] LB-DT 17-21D - RoHS II (MCCBs and ACBs)

[12] LB-DT 18-21D - REACH (MCCBs and ACBs)

[13] 1SDL000571R0 Ver 01 - RoHS Exemptions (MCCBs and ACBs)

[14] 1SDL000572R0 Ver 01 - SVHC present in excess of 0.1% (MCCBs and ACBs)