

ABB JUNCTION AND MOUNTING BOX ACCESSORIES

## **Product Environmental Profile**

## **Environmental Product Declaration**





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

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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.

Scan QR code for more information



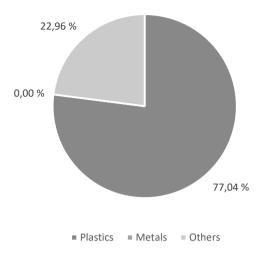


## **General Information**

Reference product	2TKA00003876 - AS9.10
Description of the product	Different types of accessories for ABB WA's junction and mounting boxes made from recycled polypropylene, to provide variabilty and support how the products are used and installed. The accessories can be for example strain relifes or box supports.
Functional unit	Provide installation support and use variability for different junction and mounting boxes during 20 years.
Other products covered	2TKA001714G1 - AS27 2TKA001715G1 - AS27.12 2TKA00004251 - AS101 2TKA00005777 - AS4.2

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#### Total weight of Reference product

3,77 g including the product and its main packaging

Plastics as % of weight		Metals as % of weight		Others as % of weight		
Description	Weight- %	Description	Weight- %	Description	Weight-%	
Recycled Polypropylene	71,87	-	-	Carton	22,96	
PE-based red color	1,33	-	-	-	-	
Plastic film	3,84	-	-	-	-	

The reference product and other products in this range comply with the RoHS Directive 2011/65/EU (covering 2015/863(EU)) and national legislation. The recycled plastic used in the product is from post-consumer plastic waste, which is collected from Finnish households

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# Additional Environmental Information

Manufacturing	Manufactured at an ISO 14001 certified production site
Distribution	Product distribution optimised by setting up local distribution centres.
Installation	The product does not require special installation procedure and requires little to no energy to install. The disposal of the packaging materials is accounted during the installation phase.
Use	The product does not require special maintanence operations
End of life	No special end-of-life treatment required. This product can enter the usual end-of-life treatment process according to countries' best practices.
Benefits and loads beyond the system boundaries	Net benefits and loads calculated according to PCR ed 4 and formulas given in Annex G of the EN 50693

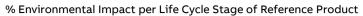


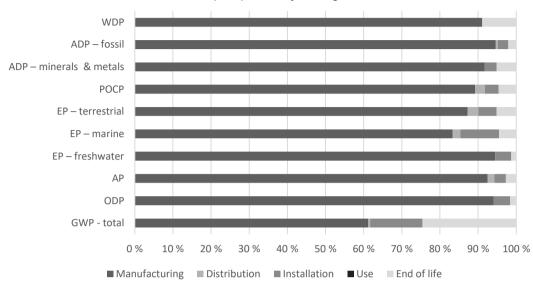
## **Environmental impacts**

Reference lifetime	20 years
Product category	Other equipments
Installation elements	No additional installation elements needed
Use scenario	Non applicable
Geographical representativeness	Europe, with great emphasis on Nordic countries
Technological representativeness	The manufactruing processes considered are representative of the products production
Software and database used	Software: SimaPro version 9.4.0.2 Database: ecoinvent 3.8, Industry data 2.0, and ELCD
Energy model used	
Manufacturing	Electricity, low voltage {LT}  market for   Cut-off, S
Installation	Electricity, low voltage {SE}  market for   Cut-off, S
Use	-
End of life	Electricity, low voltage {SE}  market for   Cut-off, S

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## Common base of mandatory indicators





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Indicator	Unit	Total	Manu- facturing	Distri- bution	Instal- lation	Use	End of life	Bene- fits
GWP-total	kg CO₂ eq.	2,01E-02	1,23E-02	9,19E-05	2,77E-03	0,00E+00	4,95E-03	2,94E-0
GWP-fossil	kg CO₂ eq.	1,97E-02	1,41E-02	9,19E-05	5,41E-04	0,00E+00	4,95E-03	2,96E-0
GWP-biogenic	kg CO₂ eq.	3,56E-04	-1,87E-03	-1,21E-08	2,22E-03	0,00E+00	7,77E-07	-1,46E-0
GWP-luluc	kg CO₂ eq.	7,32E-05	6,83E-05	0,00E+00	3,01E-06	0,00E+00	1,88E-06	-9,55E-0
GWP-fossil = Global GWP-biogenic = Glo GWP-luluc = Global	bal Warming Po	tential biog	enic	ange				
ODP	kg CFC-11 eq.	1,23E-09	1,16E-09	1,35E-13	5,27E-11	0,00E+00	1,94E-11	6,77E-1
ODP = Depletion po	tential of the st	ratospheric	ozone layer					
AP	H+ eq.	7,01E-05	6,48E-05	1,25E-06	2,11E-06	0,00E+00	1,92E-06	8,42E-0
AP = Acidification p	otential, Accum	ulated Excee	dance					
EP-freshwater	kg P eq.	5,05E-06	4,77E-06	3,37E-11	2,14E-07	0,00E+00	6,50E-08	-3,49E-0
EP-marine	kg N eq.	1,91E-05	1,59E-05	3,96E-07	1,94E-06	0,00E+00	8,56E-07	1,80E-0
EP-terrestrial	mol N eq.	1,50E-04	1,31E-04	4,34E-06	7,09E-06	0,00E+00	7,71E-06	2,07E-0
EP-freshwater = Eut EP-marine = Eutrop EP-terrestrial = Eutr	hication potent	ial, fraction o	of nutrients read	hing marine end				
POCP	kg NMVOC eq.	4,36E-05	3,89E-05	1,10E-06	1,59E-06	0,00E+00	2,00E-06	9,77E-0
POCP = Formation	potential of trop	oospheric oz	one					
ADP-minerals & metals	kg Sb eq.	9,11E-08	8,36E-08	3,52E-12	2,83E-09	0,00E+00	4,65E-09	-9,67E-0
ADP-fossil	МЈ	2,41E-01	2,28E-01	1,25E-03	6,59E-03	0,00E+00	5,06E-03	1,18E-0
ADP-minerals & met ADP-fossil = Abiotic				sil resources				
WDP	m³ e depr.	3,37E-03	3,07E-03	3,36E-07	3,36E-07	0,00E+00	3,00E-04	2,62E-0
WDP = Water Depriv	vation potential							
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### Common base of mandatory indicators

#### Inventory flows indicator - Resource use indicators

Indicator	Unit	Total	Manu- facturing	Distri- bution	Instal- lation	Use	End of life	Bene- fits
PERE	MJ	5,48E-02	5,24E-02	1,40E-06	1,09E-03	0,00E+00	1,39E-03	-5,98E-03
PERM	MJ	2,97E-02	2,97E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	8,46E-02	8,21E-02	1,40E-06	1,09E-03	0,00E+00	1,39E-03	-5,98E-03
PENRE	MJ	3,25E-02	1,96E-02	1,25E-03	6,60E-03	0,00E+00	5,06E-03	1,18E-01
PENRM	MJ	2,09E-01	2,09E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	МЈ	2,41E-01	2,28E-01	1,25E-03	6,60E-03	0,00E+00	5,06E-03	1,18E-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	Instal- lation	Use	End of life	Bene- fits
SM	kg	5,62E-03	5,62E-03	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	1,10E-04	9,65E-05	1,09E-08	3,67E-06	0,00E+00	9,92E-06	6,31E-06

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	Instal- lation	Use	End of life	Bene- fits
Hazardous waste disposed	kg	2,29E-07	2,11E-07	0,00E+00	9,34E-09	0,00E+00	8,47E-09	4,39E-08
Non-hazardous waste disposed	kg	1,70E-04	1,30E-04	3,11E-06	2,07E-05	0,00E+00	1,53E-05	-5,47E-06
Radioactive waste disposed	kg	1,05E-06	9,77E-07	2,19E-09	1,76E-08	0,00E+00	5,24E-08	-2,66E-07

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## Common base of mandatory indicators

#### Inventory flows indicator – Output flow indicators

Indicator	Unit	Total	Manu- facturing	Distri- bution	Instal- lation	Use	End of life	Bene- fits
Components for re- use	kg	2,12E-05	0,00E+00	0,00E+00	2,12E-05	0,00E+00	0,00E+00	0,00E+00
Materials for recycling	kg	1,45E-03	0,00E+00	0,00E+00	7,22E-04	0,00E+00	7,29E-04	0,00E+00
Materials for energy recovery	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy	MJ	3,00E-02	0,00E+00	0,00E+00	6,55E-03	0,00E+00	2,35E-02	0,00E+00

#### Inventory flow indicator – other indicators

Indicator	Unit	Total
Biogenic carbon content of the product	kg of C	0,00E+00
Biogenic carbon content of the associated packaging	kg of C	3,90E-04

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## **Optional indicators**

#### **Environmental indicators**

Indicator	Unit	Total	Manu- facturing	Distri- bution	Instal- lation	Use	End of life	Bene- fits
Total use of primary energy during the life cycle	МЈ	3,26E-01	3,10E-01	1,25E-03	7,69E-03	0,00E+00	6,46E-03	-3,43E+00
Emissions of fine particles	inci- dence of dis- eases	6,07E-10	5,58E-10	7,85E-12	2,25E-11	0,00E+00	1,87E-11	9,28E-11
Ionizing radiation, human health	kBq U235 eq.	3,94E-03	3,66E-03	2,15E-07	5,29E-05	0,00E+00	2,25E-04	-1,94E-02
Ecotoxicity (fresh water)	CTUe	1,79E-01	1,54E-01	6,03E-05	1,04E-02	0,00E+00	1,43E-02	-6,58E+01
Human toxicity, car- cinogenic effects	CTUh	1,25E-11	1,12E-11	1,55E-15	3,44E-13	0,00E+00	9,67E-13	7,79E-10
Human toxicity, non- carcinogenic effects	CTUh	1,63E-10	1,34E-10	3,89E-14	8,22E-12	0,00E+00	2,08E-11	-1,06E-07
Impact related to land use/soil quality		2,63E-01	2,56E-01	0,00E+00	3,19E-03	0,00E+00	3,74E-03	-2,43E+00

#### Other indicators

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

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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:

\* The manufacturing stages coefficient values take into account the different manufacturing location of the products, which for the three products listed below is ABB WA's factory in Porvoo, Finland

Product name	Manufacturing	Distribution	Instal- lation	Use	End of life	Benefits
AS27	0,55	9,17	7,12	1,00	10,69	11,29
AS27.12	0,83	6,66	7,10	1,00	6,09	5,51
AS101	0,85	15,08	9,71	1,00	13,26	13,80
AS4.2	0,24	2,58	3,89	1	2,31	2,01
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
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Verifier accreditation number:	Information and refer	ence documents:
VH32	www.pep-ecopasspor	t.org
Date of issue: 05-2023	Validity period:	5 years
Independent verification of the declaration and data, in	compliance with ISO 14	025: 2006
Internal O	External •	
The PCR review was conducted by a panel of experts cha (DDemain)	aired by Julie Orgelet	PEP
PEPs are compliant with XP C08-100-1:2016 or EN 50693 The components of the present PEP may not be compar from any other program.		PASS

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## **Environmental Impact Indicator Glossary**

#### Impact indicators

Indicator	Description	Unit
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 subcategories of climate change.  GWP-total = GWP-fossil + GWP-biogenic + GWP- land use and land use change	kg CO₂ 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.	m³ e depr.

#### Resource use indicators

Indicator	Description	Unit
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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