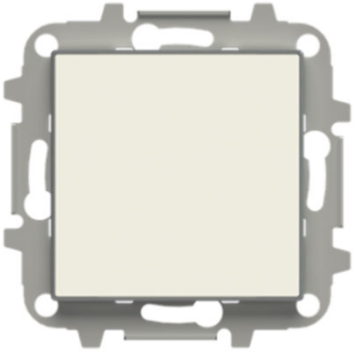
R60 BLANK COVER PLATE

# PEP ecopassport®

# Environmental Product Declaration



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

| ORGANIZATION | | CONTACT INFORMATION | | | |
|---|---|---|---|---|---|
| ABB Niessen | | email | | | |
| ADDRESS | | WEBSITE | | | |
| Aranguren Pol., 6, 20180 Oiartzun, Gipuzkoa | | https://new.abb.com/es | | | |
| STATUS | SECURITY LEVEL | REGISTRATION NUMBER | REV. | LANG. | PAGE |
| Please choose... | Public | ABBG-00349-V01.01-EN | 1 | en | 1/12 |

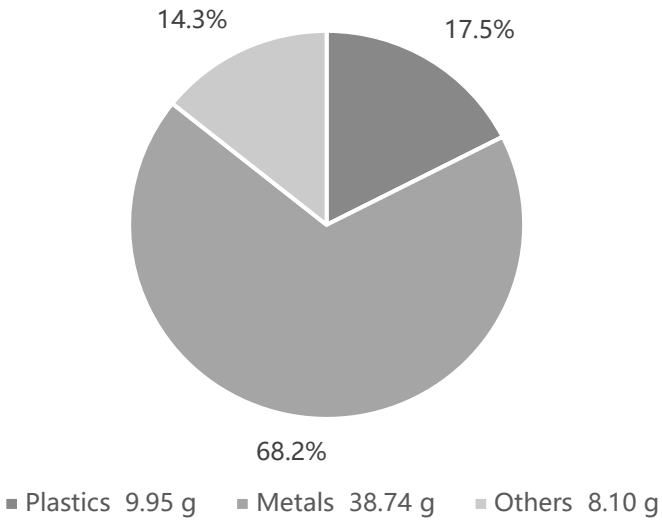
# ABB Purpose & Embedding Sustainability

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.

# General Information

| | |
|---|---|
| Reference product | R60 Blank cover for plates 2CLA850000A1101 |
| Description of the product | R60 Blank cover plates family products application is a blind plate. There are 3 subfamilies of products: Alba, Sky essence and Sky. All product references from this family are covered by the PEP. As a reference product, it has been chosen the R60 Blank cover plate 2CLA850000A1101, based on sales. The product is described as 8500 BL Blank cover plate-Soft White Blind plate Central cover plate None White-Sky Niessen. Rated voltage of 220-240 Vca, rated current of 10 AX. |
| Functional unit | The functional unit is switch on and off during 20 years electrical power supply of a downstream installation with an electrical and/or mechanical control. |
| Other products covered | See list of covered references in page 10,11,12. |

# Constituent Materials




| | | |
|---|---|---|
| **Total weight of Reference product** | 56.81 | 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% |
| Polycarbonate | 11.2 | Chromium | 0.5 | Cartoon | 14.3 |
| ABS | 5.0 | Stainless Steel | 1.1 | – | – |
| Film PP | 1.3 | Galvanised Iron | 66.6 | – | – |

# Additional Environmental Information

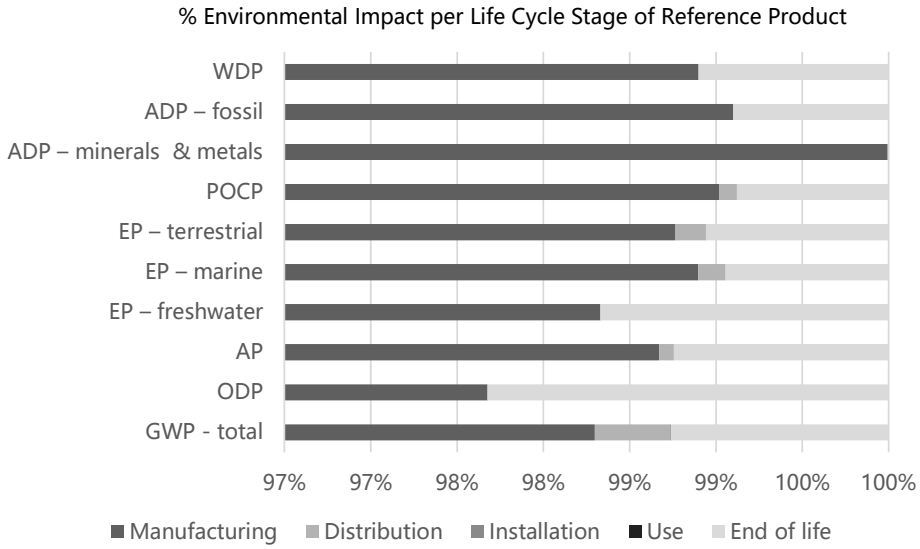
| | |
|---|---|
| Manufacturing | The product is produced in ABB Niessen. ISO 14001. Using renewable energy: 8% wind and 92% solar thermoelectric. The energy supplier has gauarantees of origin |
| Distribution | From ABB Niessen manufacturing plant in Gipuzkoa to Spain (90%), Portugal (10%), other European regions (1%). The packaging are one carton box (92% recycled) and PP film. |
| Installation | The dismantling is done manually therefore there isn't energy consumption associat-ed.<br>It is inculded the packaging end-of-life. |
| Use | The product has no connection, therefore the energy consumption for the usage, is zero. The product does not require special maintanence operations. |
| End of life | The product falls within the scope of the WEEE directive (2012/19/EU). Therefore it must be processed through local WEEE recycling/recovey channels. |
| Benefits and loads beyond the system boundaries | Net benefits and loads from the recycling operations of the product calculated according to PCR ed 4 and formulas given in Annex G of the EN 50693. |

# Environmental Impacts

| | |
|---|---|
| Reference lifetime | 20 years |
| Product category | 3.6. Contactors, remote control switch, combinations, starters |
| Installation elements | No installation additional elements are required |
| Use scenario | Load rate: Not applicable<br>Used time rate 30% of RLT |
| Geographical representativeness | Region covered: Europe |
| Technological representativeness | Specific data reflect the physical reality of the de-clared product since they have been provided by the manufacturer itself. |
| Software and database used | Software: Simapro 9.5.0.0<br>Database: Ecoinvent 3.9.1; Indsutry data 2.0. |

| **Energy model used** | |
|---|---|
| Manufacturing | Spanish electricity medium voltage adapted to ABB Niessen renrewable energy mix. |
| Installation | Not applicable |
| Use | Not applicable |
| End of life | Different datasets depending on waste process: natural gas CH or Europe; Electricity medium voltage GLO or Europe. |

# 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. | 6.11E-01 | 6.00E-01 | 2.67E-03 | 1.47E-05 | 0.00E+00 | 7.71E-03 | -1.88E-01 |
| GWP-fossil | kg $CO_2$ eq. | 5.99E-01 | 5.89E-01 | 2.67E-03 | 2.17E-07 | 0.00E+00 | 7.67E-03 | -1.79E-01 |
| GWP-biogenic | kg $CO_2$ eq. | 1.13E-02 | 1.13E-02 | 1.96E-09 | 1.45E-05 | 0.00E+00 | 3.92E-05 | -8.65E-03 |
| GWP-luluc | kg $CO_2$ eq. | 3.66E-04 | 3.61E-04 | 6.65E-11 | 1.79E-10 | 0.00E+00 | 4.91E-06 | -1.16E-04 |
| GWP-fossil = Global Warming Potential fossil fuels<br>GWP-biogenic = Global Warming Potential biogenic<br>GWP-luluc = Global Warming Potential land use and land use change | | | | | | | | |
| ODP | kg CFC-11 eq. | 1.63E-08 | 1.59E-08 | 7.33E-14 | 5.39E-14 | 0.00E+00 | 3.78E-10 | -5.33E-09 |
| ODP = Depletion potential of the stratospheric ozone layer | | | | | | | | |
| AP | H+ eq. | 1.25E-03 | 0.00E+00 | 1.07E-06 | 4.00E-09 | 0.00E+00 | 1.56E-05 | -6.80E-04 |
| AP = Acidification potential, Accumulated Exceedance | | | | | | | | |
| EP-freshwater | kg P eq. | 1.21E-05 | 3.61E-04 | 2.67E-12 | 5.24E-12 | 0.00E+00 | 2.03E-07 | -9.03E-06 |
| EP-marine | kg N eq. | 3.36E-04 | 3.33E-04 | 5.31E-07 | 1.79E-09 | 0.00E+00 | 3.18E-06 | -1.43E-04 |
| EP-terrestrial | mol N eq. | 3.27E-03 | 3.23E-03 | 5.80E-06 | 2.00E-08 | 0.00E+00 | 3.46E-05 | -1.51E-03 |
| EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment<br>EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment<br>EP-terrestrial = Eutrophication potential, Accumulated Exceedance | | | | | | | | |
| POCP | kg NMVOC eq. | 1.41E-03 | 1.39E-03 | 1.42E-06 | 5.21E-09 | 0.00E+00 | 1.24E-05 | -7.11E-04 |
| POCP = Formation potential of tropospheric ozone | | | | | | | | |
| ADP-minerals & metals | kg Sb eq. | 5.27E-06 | 5.27E-06 | 1.17E-13 | 5.39E-14 | 0.00E+00 | 3.39E-10 | -4.43E-06 |
| ADP-fossil | MJ | 5.84E+00 | 5.79E+00 | 4.51E-05 | 2.17E-06 | 0.00E+00 | 5.26E-02 | -2.43E+00 |
| ADP-minerals & metals = Abiotic depletion potential for non-fossil resources<br>ADP-fossil = Abiotic depletion for fossil resources potential | | | | | | | | |
| WDP | $m^3$ eq. depr. | 8.04E-02 | 7.95E-02 | 4.14E-08 | 9.36E-08 | 0.00E+00 | 8.85E-04 | -3.07E-02 |
| WDP = Water Deprivation potential | | | | | | | | |

# Common base of mandatory indicators

## Inventory flows indicator – Resource use indicators

| Indicator | Unit | Total | Manu-facturing | Distri-bution | Installation | Use | End of life | Bene-fits |
|---|---|---|---|---|---|---|---|---|
| PERE | MJ | 1.89E+00 | 1.88E+00 | 1.19E-07 | 1.54E-07 | 0.00E+00 | 3.85E-03 | -1.62E-01 |
| PERM | MJ | 1.94E-01 | 1.94E-01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| PERT | MJ | 2.08E+00 | 2.08E+00 | 1.19E-07 | 1.54E-07 | 0.00E+00 | 3.85E-03 | -1.62E-01 |
| PENRE | MJ | 6.28E+00 | 6.22E+00 | 4.80E-05 | 2.33E-06 | 0.00E+00 | 5.60E-02 | -2.58E+00 |
| PENRM | MJ | 3.51E-02 | 3.51E-02 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| PENRT | MJ | 6.32E+00 | 6.26E+00 | 4.80E-05 | 2.33E-06 | 0.00E+00 | 5.60E-02 | -2.58E+00 |

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 | $m^3$ | 2.45E-03 | 2.42E-03 | 1.89E-09 | 6.24E-09 | 0.00E+00 | 3.02E-05 | -1.16E-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 | 5.59E-05 | 5.57E-05 | 2.98E-10 | 8.99E-12 | 0.00E+00 | 2.14E-07 | -3.73E-05 |
| Non-hazardous waste disposed | kg | 2.97E-01 | 2.91E-01 | 2.23E-09 | 8.32E-06 | 0.00E+00 | 6.14E-03 | -1.62E-02 |
| Radioactive waste disposed | kg | 7.70E-06 | 7.61E-06 | 3.87E-12 | 3.50E-12 | 0.00E+00 | 8.83E-08 | -4.47E-06 |

# Common base of mandatory indicators

### 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 | 1.28E-08 | 1.24E-08 | 2.31E-10 | 3.50E-14 | 0.00E+00 | 1.61E-10 | -8.27E-09 |
| Materials for recycling | kg | 1.05E-02 | 1.03E-02 | 7.18E-09 | 5.06E-09 | 0.00E+00 | 1.36E-04 | -5.91E-03 |
| Materials for energy recovery | kg | 5.22E+00 | 5.12E+00 | 3.37E-03 | 2.05E-05 | 0.00E+00 | 9.16E-02 | -2.89E+00 |
| Exported energy | MJ | 9.36E-10 | 9.33E-10 | 6.38E-14 | 2.98E-15 | 0.00E+00 | 3.46E-12 | 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 | 1.11E-08 | 1.10E-08 | 2.84E-11 | 2.03E-14 | 0.00E+00 | 9.35E-11 | -5.89E-09 |
| Biogenic carbon content of the associated packaging | kg of C | 4.84E-01 | 4.80E-01 | 8.58E-08 | 1.59E-06 | 0.00E+00 | 4.33E-03 | -2.35E-01 |

# Optional indicators

## Environmental indicators

| Indicator | Unit | Total | Manu-facturing | Distri-bution | Installation | Use | End of life | Bene-fits |
|---|---|---|---|---|---|---|---|---|
| Total use of primary energy during the life cycle | MJ | 8.40E+00 | 8.40E+00 | 8.34E+00 | 4.81E-05 | 2.48E-06 | 5.98E-02 | -2.74E+00 |
| Ionizing radiation, human health | kBq U235 eq. | 3.08E-01 | 3.08E-01 | 2.59E-01 | 0.00E+00 | 8.58E-03 | 4.05E-02 | 4.05E-02 |
| Impact related to land use/soil quality | | 7.64E-04 | 7.64E-04 | 7.64E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | | | | | | | | |
| | | | | | | | | |
| | kBq U235 eq. | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

## 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 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 | Manu-facturing | Distri-bution | Installation | Use | End of life | Benefits |
|---|---|---|---|---|---|---|
| 2CLA850000A1101 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| 2CLA850000A1901 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| 2CLA850000A6201 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| 2CLA850000A1501 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| 2CLA850000A1301 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| 2CLA850000A6301 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| 2CLA850000A1401 | 1.04 | 1.86 | 0.32 | 1.00 | 1.00 | -0.27 |
| 2CLA850000A1201 | 1.04 | 1.86 | 0.32 | 1.00 | 1.00 | -0.27 |
| 2CLA850000A2101 | 1.52 | 1.06 | 1.38 | 1.00 | 1.01 | 1.47 |
| 2CLA850000A2501 | 1.52 | 1.06 | 1.38 | 1.00 | 1.01 | 1.47 |
| 2CLA850000A5101 | 0.98 | 0.98 | 1.00 | 1.00 | 0.98 | 0.98 |
| 2CLA850000A1701 | 0.98 | 0.98 | 1.00 | 1.00 | 0.98 | 0.98 |
| 2CLA890000A1101 | 1.01 | 1.06 | 1.06 | 2.00 | 1.07 | 1.07 |
| 2CLA890000A1001 | 1.01 | 1.06 | 1.06 | 2.00 | 1.07 | 1.07 |
| 2CLA890000A1501 | 1.01 | 1.06 | 1.06 | 2.00 | 1.07 | 1.07 |
| 2CLA890000A1801 | 1.01 | 1.06 | 1.06 | 2.00 | 1.07 | 1.07 |

# 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.<br>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) |

| | | | |
|---|---|---|---|
| Registration number: | | Drafting Rules: | PCR-ed4-EN-2021 09 06 |
| ABBG-00349-V01.01-EN | | Supplemented by: | PSR-0005-ed3-EN-2023 06 06 |
| Verifier accreditation number: | | Information and reference documents: | |
| VH08 | | www.pep-ecopassport.org | |
| Date of issue: | 08-2023 | Validity period: | 5 years |
| Internal ○ | | External ◉ | |

Independent verification of the declaration and data, in compliance with ISO 14025: 2006

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 elements of the present PEP cannot be compared with elements from another program

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