ENVIRONMENTAL PRODUCT DECLARATION

as per ISO 14025 and EN 15804

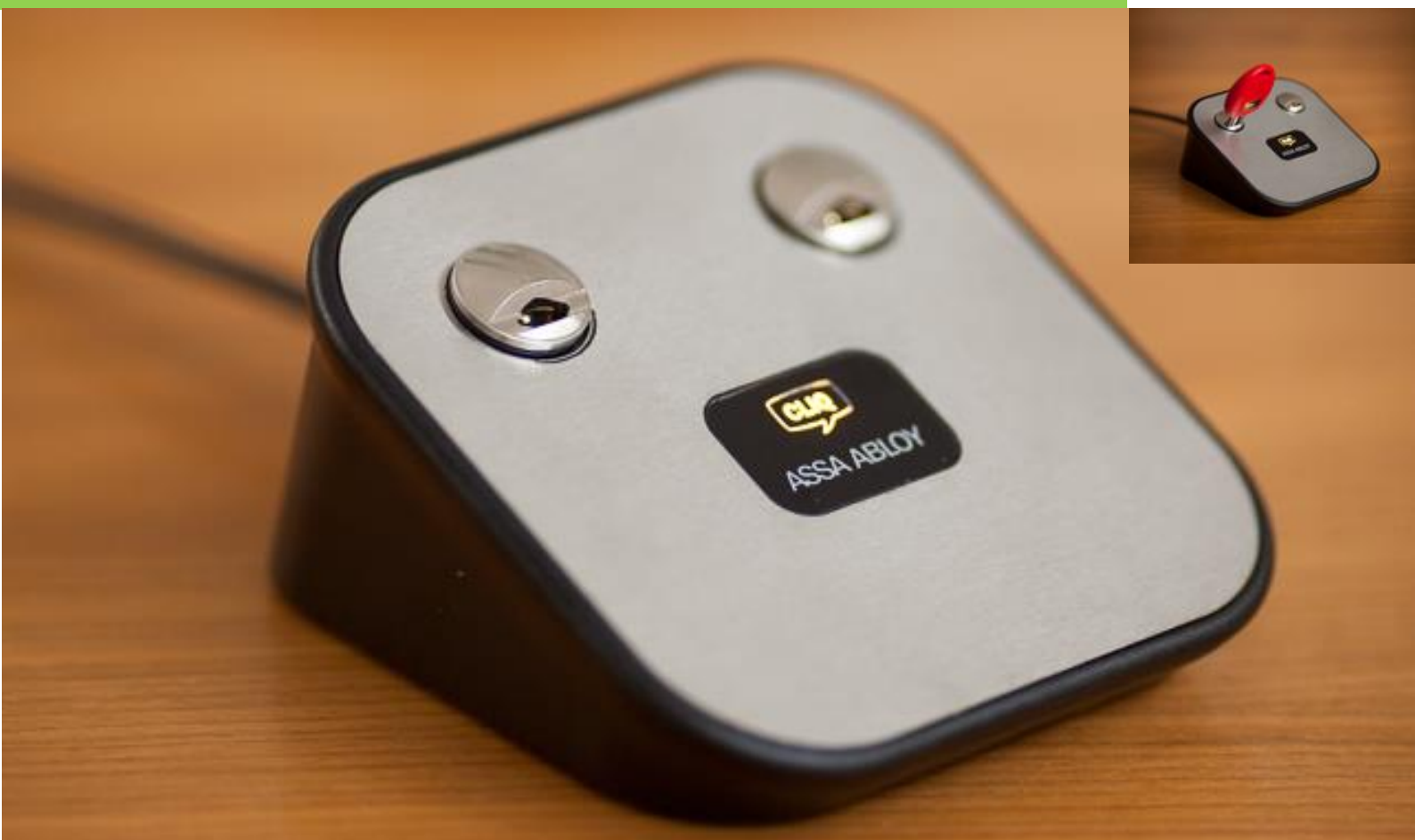
Owner of the Declaration	**ASSA ABLOY AB**
Programme holder	Institut Bauen und Umwelt e.V. (IBU)
Publisher	Institut Bauen und Umwelt e.V. (IBU)
Declaration number	EPD-ASA-20160106-IBA1-EN
Issue date	24.05.2016
Valid to	23.05.2021

Access Control Systems – CLIQ Local Programming Device

ASSA ABLOY AB

Institut Bauen und Umwelt e.V.

www.bau-umwelt.com / https://epd-online.com



ASSA ABLOY

1. General Information

ASSA ABLOY AB

Programme holder

IBU - Institut Bauen und Umwelt e.V.
Panoramastr. 1
10178 Berlin
Germany

Declaration number

EPD-ASA-20160106-IBA1-EN

This Declaration is based on the Product Category Rules (PCR):

Electronic Access Control Systems, 11-2013
(PCR tested and approved by the independent expert committee (SVR))

Issue date

24.05.2016

Valid to

23.05.2021

Prof. Dr.-Ing. Horst J. Bossenmayer
(President of Institut Bauen und Umwelt e.V.)

Dr.-Ing. Burkhart Lehmann
(Managing Director IBU)

CLIQ Local PD

Owner of the Declaration

ASSA ABLOY AB
Förmansvägen 11
117 43 Stockholm
Sweden

Declared product / Declared unit

This Declaration represents one ASSA ABLOY CLIQ Local Programming Device (PD), including all custom configurations.

Scope:

The Life Cycle Assessment is based on data collected from the Flextronic production facility in Linköping, Sweden.

The owner of the declaration shall be liable for the underlying information and evidence; the IBU shall not be liable with respect to manufacturer information, life cycle assessment data and evidences.

Verification

The CEN Standard EN 15804 serves as the core PCR
Independent verification of the declaration and data according to ISO 14025
☐ internally ☒ externally

Dr. Wolfram Trinius
(Independent tester appointed by SVR)

2. Product

2.1 Product description

The CLIQ Local PD, also known as the CLIQ Desktop PD, produced by ASSA ABLOY, is a programming device communicating via USB to a computer or mobile device. The CLIQ system allows administrators the ability to manage CLIQ keys and cylinders. CLIQ keys can be updated and/or reauthorized with timely expirations for enhanced security, while retrieving audit data simultaneously locally with this Local PD. The CLIQ Local PD is also used when logging in to the CLIQ administration program.

The programming device can be configured to support several different CLIQ key types.

2.2 Application

The CLIQ Local PD is suitable for indoor use only standing on a table. Common applications include: Commercial buildings, Industrial buildings, Government buildings, Education establishments, Healthcare buildings.

2.3 Technical Data

The table presents the technical properties of CLIQ Local PD:

Technical data

Name	Value	Unit
Mounting	Indoor table mounting	-
Power supply	USB 5V standard method of supplying	VDC
Operating Temperature	-40 – 80	°C
Operating Humidity	10 – 95	% (non-condensing)
Power consumption	0.15	W

2.4 Placing on the market / Application rules

The following directives apply:
- EMC Directive 2004/108/EC
- LVD Directive 2006/95EC
- ROHS Directive 2011/65/EU

Conformity is established through tests performed against a set of standards at a certified body testing laboratory:

- EN 61000-6-2:2005 Information technology equipment - EMC
- EN 61000-6-3:2007/A1:2011 Information technology equipment - EMC

- IEC 60950-1:2005+A1 Information technology equipment - Safety
- EN60950-1: 2006 + A11 + A1 + A12 Information technology equipment – Safety.

RoHS Conformity:
EN50581:2012 Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances.

2.5 Delivery status
Each programming device is delivered with the USB-cable individually packaged. Package dimensions: 13.5cm x 12.4cm x 7.3cm.

2.6 Base materials / Ancillary materials
The average composition of CLIQ Local PD is as following:

Component	Percentage in mass (%)
Plastics	22.84
Stainless steel	15.10
Electronics	4.42
Brass	17.68
Steel	2.03
Electro-mechanics	37.93
Total	**100.0**

2.7 Manufacture
The CLIQ Local PD is assembled at the production facility at Flextronics International Sweden AB, Linköping, Sweden. The injection moulded parts are purchased from Plastep Oy, Finland. The electronic components, including PCB, are purchased externally and assembled at Flextronics. The assembled programming device is then packaged with the USB-cable for shipment.

2.8 Environment and health during manufacturing
The Management System of Flextronics International has assessed and certified as meeting the requirements of /ISO 14001:2004/.

2.9 Product processing / Installation
CLIQ programming devices can be installed by fastening it with screws on a table/desk.

2.10 Packaging
The programming device is packed in a cardboard box to avoid damage. Packaging materials shall be collected separately for recycling.

Material	Value (%)
Cardboard/ Paper	100.0
Total	**100.0**

Packaging components incurred during installation are directed to energy recovery circuits.
EWC/ 15 01 01 Paper and cardboard packaging.

2.11 Condition of use
No auxiliary or consumable materials are incurred for maintenance and usage of the programming device. Cleaning is not required.

2.12 Environment and health during use
There are no interactions between products, the environment and health.

2.13 Reference service life
The service life of the CLIQ Local PD is estimated to be 10 years. This number is based on the most conservative Mean Time Between Failure (MTBF) data available for the programming device components at elevated operation temperatures.

2.14 Extraordinary effects
Fire
The external housing of the CLIQ Local PD, is constructed from polycarbonate resin thermoplastic. The housing material, and thus the programming device as a whole unit, has been classified as having a UL94 V0 Flame Rating. A UL94 Flame Rating of V0 specifies; burning stops within 10 seconds on a vertical specimen; drips of particles allowed as long as they are not inflamed.

Water
No substances are used which have a negative impact on ecological water quality on contact by the device with water.

Mechanical destruction
No danger to the environment can be anticipated during mechanical destruction.

2.15 Re-use stage
The following possibilities arise with reference to the material composition of the programming device.

Re-use
During the reference service life, the programming device can be disconnected and dismounted, then remounted and attached elsewhere.

Material Recycling
EU Recycling:
ASSA ABLOY distributors act as the importer of the equipment into their member state. Thus, the distributor has the legal responsibility to:

- Register as the WEEE producer in their member state.
- Finance arrangements for collection and recycling of WEEE arising from ASSA ABLOY products that the distributor sells in their member state.

For specific recycling information, your local distributor should be contacted.

For all other regions, ASSA ABLOY distributors act as the importer of the equipment and provides arrangements for the collection, treatment, recycling and recovery of the programming device.

Waste codes according to European Waste Catalogue and Hazardous Waste List - Valid from 1 January 2002.

- EWC/ 16 02 13* discarded equipment containing hazardous components other than those mentioned in 16 02 09 to 16 02 12

- EWC/ 16 02 14 Discarded equipment other than those mentioned in 16 02 09 to 16 02 13.
- EWC/ 16 02 16 Components removed from discarded equipment other than those mentioned in 16 02 15
- EWC/ 17 02 03 plastic
- EWC/ 17 04 05 iron and steel
- EWC/ 17 04 11 Cables with the exception of those outlined in 17 04 10
- Disposal of the product is subject to the WEEE Directive within Europe, Directive 2012/19/EU.

2.16 Disposal

No disposal is foreseen for the product nor for the corresponding packaging.

2.17 Further information

More information on ASSA ABLOY CLIQ Local PD is available at:

ASSA ABLOY AB
Förmansvägen 11
SE-117 43 Stockholm
Sweden
Tel: +46-8-506 485 00
Internet: www.assaabloy.com

3. LCA: Calculation rules

3.1 Declared Unit

The declaration refers to the functional unit of 1 piece of CLIQ Local Programming Device as specified in Part B requirements on the EPD for Electronic Access Control Systems /IBU PCR Part B/.

Declared unit

Name	Value	Unit
Declared unit	1	piece of CLIQ Local PD
Mass (without packaging)	0.272	kg
Conversion factor to 1 kg	3.68	-

3.2 System boundary

Type of the EPD: cradle to gate - with options
The following life cycle stages were considered for programming device:

A1-A3 Production stage:

- A1 – Raw material extraction and processing
- A2 – Transport to the manufacturer and
- A3 – Manufacturing.

Construction stage:

- A4 –Transport from the gate to the site
- A5 – Packaging waste processing

Use stage related to the operation of the device includes:

- B6 – Operational energy use (Energy consumption for device operation)

End-of-life stage:

- C2 – Transport to waste processing,
- C3 – Waste processing for recycling and
- C4 – Disposal (landfill).

These information modules include provision and transport of all materials, products, as well as energy and water provisions, waste processing up to the end-of-waste state or disposal of final residues.

Module D:

- Declaration of all benefits or recycling potential from EoL and A5.

3.3 Estimates and assumptions

EoL:
In the End-of-Life stage, for all the materials, which can be recycled, a recycling scenario with 100% collection rate was assumed.

3.4 Cut-off criteria

In the assessment, all available data from the production process are considered, i.e. all raw materials used, auxiliary materials (e.g. lubricants), thermal energy consumption and electric power consumption - including material and energy flows contributing less than 1% of mass or energy (if available). In case a specific flow contributing less than 1% in mass or energy is not available, worst-case assumption proxies are selected to represent the respective environmental impacts.
Impacts relating to the production of machines and facilities required during production are out of the scope of this assessment.

3.5 Background data

For life cycle modelling of the considered products, the GaBi ts Software System for Life Cycle Engineering, developed by thinkstep AG, is used /GaBi ts 2016/. The GaBi-database contains consistent and documented datasets which are documented in the online GaBi-documentation /GaBi 6 2013D/.
To ensure comparability of results in the LCA, the basic data of GaBi database were used for energy, transportation and auxiliary materials.

3.6 Data quality

The requirements for data quality and background data correspond to the specifications of the /IBU PCR Part A/.
thinkstep AG performed a variety of tests and checks during the entire project to ensure high quality of the completed project. This obviously includes an extensive review of project-specific LCA models as well as the background data used.
The technological background of the collected data reflects the physical reality of the declared products. The datasets are complete and conform to the system boundaries and the criteria for the exclusion of inputs and outputs.
All relevant background datasets are taken from the /GaBi ts software database/ The last revision of the used background data has taken place not longer than 10 years ago.

3.7 Period under review

The period under review is 2015 (12-month average).

3.8 Allocation

Regarding incineration, the software model for the waste incineration plant (WIP) is adapted according to the material composition and heating value of the combusted material. Following specific life cycle inventories for the WIP are considered:

- Waste incineration of plastic
- Waste incineration of paper
- Waste incineration of electronic scraps (PWB).

Regarding the recycling material of metals, the metal parts in the EoL are declared as end-of-waste status. Thus, these materials are considered in module D. Specific information on allocation within the background data is given in the GaBi dataset documentation.

3.9 Comparability

Basically, a comparison or an evaluation of EPD data is only possible if all the data sets to be compared were created according to /EN 15804/ and the building context, respectively the product-specific characteristics of performance, are taken into account.

4. LCA: Scenarios and additional technical information

The following technical information is a basis for the declared modules or can be used for developing specific scenarios in the context of a building assessment if modules are not declared (MND).

Transport to the building site (A4)

Name	Value	Unit
Truck transport		
Litres of fuel diesel with maximum load (27 t payload)	39.40	l/100 km
Transport distance truck	500	km
Capacity utilization (incl. empty runs) of truck	85	%
Air transport		
Payload	113	t
Transport distance ship	1500	km
Capacity utilization	66	%

Installation into the building (A5)

For the life cycle module A5 only packaging waste processing was considered:

Name	Value	Unit
Output substances following waste treatment on site Packaging (paper)	0.05	kg

Reference service life

Name	Value	Unit
Reference service life	10	a

Operational energy use (B6)

Name	Value	Unit
Electricity consumption	2.4	kWh
Days per year in use	200	d
Hours per day in on modes	8	h
Power consumption in on mode in W	0.15	W

End of life (C2-C4)

Name	Value	Unit
Collected separately steel, brass, zinc, electronic, electro mechanics, plastic parts	0.27	kg
Collected as mixed construction waste construction waste for landfilling	0.00	kg
Reuse plastic	0.06	kg
Recycling steel, brass, zinc, electronic, electro mechanics	0.21	kg
Landfilling construction waste for landfill	0.00	kg

Reuse, recovery and/or recycling potentials (D), relevant scenario information

Name	Value	Unit
Collected separately waste type (incl. packaging)	0.32	kg
Recycling Steel	1.70	%
Recycling Stainless Steel	12.67	%
Recycling Brass	14.84	%
Recycling Electronic	3.71	%
Recycling Electro-mechanics	31.84	%
Reuse Plastic parts	19.17	%
Reuse packaging (paper) (from Module A5)	16.07	%

5. LCA: Results

Results shown below were calculated using CML 2000 – Apr. 2013 Methodology.

DESCRIPTION OF THE SYSTEM BOUNDARY (X = INCLUDED IN LCA; MND = MODULE NOT DECLARED)

PRODUCT STAGE			CONSTRUCTION PROCESS STAGE		USE STAGE							END OF LIFE STAGE				BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARYS
Raw material supply	Transport	Manufacturing	Transport from the gate to the site	Assembly	Use	Maintenance	Repair	Replacement[1)]	Refurbishment[1)]	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling-potential
A1	**A2**	**A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
X	X	X	X	X	MND	MND	MND	MND	MND	X	MND	MND	X	X	X	X

RESULTS OF THE LCA - ENVIRONMENTAL IMPACT: One piece of CLIQ Local PD

Parameter	Parameter	Unit	A1-3	A4	A5	B6	C2	C3	C4	D
GWP	Global warming potential	[kg CO_2-Eq.]	3.66E+00	2.63E-01	7.36E-02	1.14E+00	7.69E-04	1.95E-03	1.59E-01	-6.96E-01
ODP	Depletion potential of the stratospheric ozone layer	[kg CFC11-Eq.]	5.65E-10	1.90E-13	3.37E-13	7.80E-10	3.68E-15	1.33E-12	4.78E-13	-5.07E-11
AP	Acidification potential of land and water	[kg SO_2-Eq.]	2.41E-02	8.18E-04	1.68E-05	5.37E-03	3.52E-06	9.18E-06	4.15E-05	-6.53E-03
EP	Eutrophication potential	[kg $(PO_4)^{3-}$- Eq.]	1.85E-03	1.61E-04	2.93E-06	3.03E-04	8.04E-07	5.17E-07	3.47E-06	-4.00E-04
POCP	Formation potential of tropospheric ozone photochemical oxidants	[kg Ethen Eq.]	1.63E-03	6.19E-05	1.19E-06	3.19E-04	-1.14E-06	5.46E-07	2.08E-06	-3.78E-04
ADPE	Abiotic depletion potential for non-fossil resources	[kg Sb Eq.]	5.10E-04	8.98E-09	1.33E-09	1.58E-07	2.90E-11	2.70E-10	1.15E-08	-4.45E-04
ADPF	Abiotic depletion potential for fossil resources	[MJ]	4.94E+01	3.66E+00	2.06E-02	1.29E+01	1.06E-02	2.21E-02	6.90E-02	-7.51E+00

RESULTS OF THE LCA - RESOURCE USE: One piece of CLIQ Local PD

Parameter	Parameter	Unit	A1-3	A4	A5	B6	C2	C3	C4	D
PERE	Renewable primary energy as energy carrier	[MJ]	4.27E+00	-	-	-	-	-	-	-
PERM	Renewable primary energy resources as material utilization	[MJ]	0.00E+00	-	-	-	-	-	-	-
PERT	Total use of renewable primary energy resources	[MJ]	4.27E+00	1.05E-02	1.92E-03	3.71E+00	4.18E-04	6.33E-03	5.26E-03	-3.12E-01
PENRE	Non-renewable primary energy as energy carrier	[MJ]	5.50E+01	-	-	-	-	-	-	-
PENRM	Non-renewable primary energy as material utilization	[MJ]	0.00E+00	-	-	-	-	-	-	-
PENRT	Total use of non-renewable primary energy resources	[MJ]	5.50E+01	3.67E+00	2.42E-02	2.03E+01	1.06E-02	3.46E-02	7.70E-02	-7.97E+00
SM	Use of secondary material	[kg]	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	Use of renewable secondary fuels	[MJ]	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	Use of non-renewable secondary fuels	[MJ]	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	Use of net fresh water	[m^3]	2.01E-02	3.07E-05	2.14E-04	9.15E-03	2.95E-07	1.56E-05	3.98E-04	-3.98E-03

RESULTS OF THE LCA – OUTPUT FLOWS AND WASTE CATEGORIES: One piece of CLIQ Local PD

Parameter	Parameter	Unit	A1-3	A4	A5	B6	C2	C3	C4	D
HWD	Hazardous waste disposed	[kg]	2.36E-03	7.32E-06	1.66E-06	2.81E-03	2.43E-08	4.80E-06	5.77E-06	-7.08E-05
NHWD	Non-hazardous waste disposed	[kg]	1.61E-01	2.77E-05	1.85E-03	6.55E-03	1.34E-06	1.12E-05	1.73E-02	1.46E-02
RWD	Radioactive waste disposed	[kg]	2.17E-03	3.45E-06	1.41E-06	2.92E-03	1.39E-08	4.99E-06	3.16E-06	-1.80E-04
CRU	Components for re-use	[kg]	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	Materials for recycling	[kg]	0.00E+00	0.00E+00	5.20E-02	0.00E+00	0.00E+00	9.45E-02	0.00E+00	0.00E+00
MER	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	0.00E+00
EEE	Exported electrical energy	[MJ]	0.00E+00	0.00E+00	9.32E-02	0.00E+00	0.00E+00	0.00E+00	2.96E-01	0.00E+00
EET	Exported thermal energy	[MJ]	0.00E+00	0.00E+00	2.63E-01	0.00E+00	0.00E+00	0.00E+00	8.13E-01	0.00E+00

6. LCA: Interpretation

This chapter contains an interpretation of the Life Cycle Impact Assessment categories. Stated percentages in the whole interpretation are related to the overall life cycle, excluding credits (module D).

The production stage (modules A1-A3) contributes between 69% and 100% to the overall results for all the environmental impact assessment categories hereby considered, except for the Ozone Depletion Potential (42%).

Within the production stage, the main contribution for all the impact categories is the production of electronics with approx. 88%, mainly due to the energy consumption on this process. Electronics account with approx. 42% to the overall mass of the product.

The environmental impacts for the transport (A2) have a negligible impact within this stage.

To reflect the use stage (module B6), the energy consumption was included and it has a major contribution for all the impact assessment categories considered - between 13% and 58%, with the exception of ADPE (0.03%).

In the end-of-life stage, there are loads and benefits (module D, negative values) considered. The benefits are considered beyond the system boundaries and are declared for the recycling potential of the metals and for the credits from the incineration process (energy substitution).

7. Requisite evidence

Not applicable in this EPD.

8. References

Institut Bauen und Umwelt
Institut Bauen und Umwelt e.V., Berlin (pub.): Generation of Environmental Product Declarations (EPDs);

General principles
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PCR Part A
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IBU PCR Part B
IBU PCR Part B: PCR Guidance-Texts for Building-Related Products and Services. From the range of Environmental Product Declarations of Institute Construction and Environment e.V. (IBU). Part B: Requirements on the EPD for Electronic Access Control Systems. November 2013
www.bau-umwelt.com

EN 15804
EN 15804:2012-04: Sustainability of construction works — Environmental Product Declarations — Core rules for the product category of construction products

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GaBi 6 2013D
GaBi 6 2013D: Documentation of GaBi 6: Software-System and Database for Life Cycle Engineering. Copyright, TM. Stuttgart, thinkstep AG, Leinfelden-Echterdingen, 1992-2013. http://documentation.gabi-software.com/

ISO 14025
DIN EN ISO 14025:2011-10: Environmental labels and declarations — Type III environmental declarations — Principles and procedures

EMC Directive 2004/108/EC
Electro Magnetic Compatibility Directive

LVD Directive 2006/95/EC
Low Voltage Directive

RoHS Directive 2011/65/EU
Restriction of the use of certain hazardous substances Directive

EN 61000-6-2:2005
Information technology equipment - EMC standards

EN 61000-6-3:2007/A1:2011
Information technology equipment - EMC standards

IEC 60950-1:2005+A1
Information technology equipment - Safety -- Part 1: General requirements, Amendment 1 (International)

EN 60950-1: 2006 + A11 + A1 + A12
Information technology equipment - Safety (CENELEC countries)

UL94 V0
Standard for Safety of Flammability of Plastic Materials

EWC
European Waste Catalog

ISO 14001:2004
Environmental management systems - Requirements with guidance for use (ISO 14001:2004 + Cor. 1:2009)

WEEE
Waste Electrical and Electronic Equipment Directive (WEEE Directive), 2012/19/EU

9. Annex

Results shown below were calculated using TRACI Methodology.

DESCRIPTION OF THE SYSTEM BOUNDARY (X = INCLUDED IN LCA; MND = MODULE NOT DECLARED)

PRODUCT STAGE			CONSTRUCTION PROCESS STAGE		USE STAGE							END OF LIFE STAGE				BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARYS
Raw material supply	Transport	Manufacturing	Transport from the gate to the site	Assembly	Use	Maintenance	Repair	Replacement[1)]	Refurbishment[1)]	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling-potential
A1	**A2**	**A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
X	X	X	X	X	MND	MND	MND	MND	MND	X	MND	MND	X	X	X	X

RESULTS OF THE LCA - ENVIRONMENTAL IMPACT: One piece of CLIQ Local PD

Parameter	Parameter	Unit	A1-3	A4	A5	B6	C2	C3	C4	D
GWP	Global warming potential	[kg CO_2-Eq.]	3.66E+00	2.63E-01	7.36E-02	1.14E+00	7.69E-04	1.95E-03	1.59E-01	-6.96E-01
ODP	Depletion potential of the stratospheric ozone layer	[kg CFC11-Eq.]	6.10E-10	2.02E-13	3.58E-13	8.30E-10	3.92E-15	1.42E-12	5.08E-13	-6.83E-11
AP	Acidification potential of land and water	[kg SO_2-Eq.]	2.39E-02	1.02E-03	2.03E-05	5.09E-03	4.60E-06	8.69E-06	4.89E-05	-6.30E-03
EP	Eutrophication potential	[kg N-eq.]	1.58E-03	5.60E-05	1.17E-06	2.17E-04	3.25E-07	3.70E-07	1.63E-06	-1.79E-04
Smog	Ground-level smog formation potential	[kg O_3-eq.]	3.01E-01	2.95E-02	4.75E-04	4.61E-02	9.47E-05	7.87E-05	4.46E-04	-7.33E-02
Resources	Resources – resources fossil	[MJ]	4.52E+00	5.26E-01	2.42E-03	9.22E-01	1.53E-03	1.57E-03	7.09E-03	-3.81E-01

RESULTS OF THE LCA - RESOURCE USE: One piece of CLIQ Local PD

Parameter	Parameter	Unit	A1-3	A4	A5	B6	C2	C3	C4	D
PERE	Renewable primary energy as energy carrier	[MJ]	4.27E+00	-	-	-	-	-	-	-
PERM	Renewable primary energy resources as material utilization	[MJ]	0.00E+00	-	-	-	-	-	-	-
PERT	Total use of renewable primary energy resources	[MJ]	4.27E+00	1.05E-02	1.92E-03	3.71E+00	4.18E-04	6.33E-03	5.26E-03	-3.12E-01
PENRE	Non-renewable primary energy as energy carrier	[MJ]	5.50E+01	-	-	-	-	-	-	-
PENRM	Non-renewable primary energy as material utilization	[MJ]	0.00E+00	-	-	-	-	-	-	-
PENRT	Total use of non-renewable primary energy resources	[MJ]	5.50E+01	3.67E+00	2.42E-02	2.03E+01	1.06E-02	3.46E-02	8E-02	-7.97E+00
SM	Use of secondary material	[kg]	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	Use of renewable secondary fuels	[MJ]	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	Use of non-renewable secondary fuels	[MJ]	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	Use of net fresh water	[m^3]	2.01E-02	3.07E-05	2.14E-04	9.15E-03	2.95E-07	1.56E-05	3.98E-04	-3.98E-03

RESULTS OF THE LCA – OUTPUT FLOWS AND WASTE CATEGORIES: One piece of CLIQ Local PD

Parameter	Parameter	Unit	A1-3	A4	A5	B6	C2	C3	C4	D
HWD	Hazardous waste disposed	[kg]	2.36E-03	7.32E-06	1.66E-06	2.81E-03	2.43E-08	4.80E-06	5.77E-06	-7.08E-05
NHWD	Non-hazardous waste disposed	[kg]	1.61E-01	2.77E-05	1.85E-03	6.55E-03	1.34E-06	1.12E-05	1.73E-02	1.46E-02
RWD	Radioactive waste disposed	[kg]	2.17E-03	3.45E-06	1.41E-06	2.92E-03	1.39E-08	4.99E-06	3.16E-06	-1.80E-04
CRU	Components for re-use	[kg]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-
MFR	Materials for recycling	[kg]	0.00E+00	0.00E+00	5.20E-02	0.00E+00	0.00E+00	9.45E-02	0.00E+00	-
MER	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	-
EEE	Exported electrical energy	[MJ]	0.00E+00	0.00E+00	9.32E-02	0.00E+00	0.00E+00	0.00E+00	2.96E-01	-
EET	Exported thermal energy	[MJ]	0.00E+00	0.00E+00	2.63E-01	0.00E+00	0.00E+00	0.00E+00	8.13E-01	-

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