ENVIRONMENTAL PRODUCT DECLARATION

as per ISO 14025 and EN 15804+A2

Owner of the Declaration dormakaba International Holding GmbH

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Access manager 92 30 dormakaba



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General Information Access manager 92 30 dormakaba Programme holder Owner of the declaration dormakaba International Holding GmbH IBU - Institut Bauen und Umwelt e.V. Hegelplatz 1 DORMA Platz 1 10117 Berlin 58256 Ennepetal Germany Germany **Declaration number** Declared product / declared unit EPD-DOR-20210181-CBA2-EN 1 piece of the product: Access manager 92 30 This declaration is based on the product category rules: Electronic and physical Access Control Systems, 01.08.2021 This EPD refers to a specific product manufactured by dormakaba. The production site is located in Villingen-Schwenningen (Germany). (PCR checked and approved by the SVR) The data represents the year 2020. The owner of the declaration shall be liable for the underlying information and evidence; the IBU shall not be liable with respect to manufacturer Issue date information, life cycle assessment data and evidences. 07.10.2021 The EPD was created according to the specifications of EN 15804+A2. In the following, the standard will be simplified as EN 15804. Valid to 06.10.2026 Verification The standard EN 15804 serves as the core PCR Independent verification of the declaration and data according to ISO 14025:2011 internally X externally Dipl.-Ing. Hans Peters (Chairman of Institut Bauen und Umwelt e.V.)

(Managing Director Institut Bauen und Umwelt e.V.)

Dr.-Ing. Wolfram Trinius, (Independent verifier)



Product

Product description/Product definition

The dormakaba access manager 92 30 is a high-performance access control system, optimised for single access points. Thanks to its intelligent decision logic and ability to be freely parametrised, the access manager can control simple types of access as well as more complex entrance and exit door configurations. Based on the latest operating system and TLS encryption between the controller and host system, the IT security is state-of-the-art. With integrated mobile access, the access system allows access via smartphone. The control electronics integrate everything that is required to enable a connection to cloud services via IoT. Power supply via PoE allows easy integration and the compact and discreet design allows installation in full view. Up to two registration units can be connected directly and further access readers via the RS-485 sub-bus. Optionally, a version with two Wiegand interfaces offers maximum flexibility and connectivity. For the placing on the market in the European Union/European Free Trade Association (EU/EFTA) (with the exception of Switzerland) the following legal provisions apply:

- Electromagnetic Compatibility Directive (EMC)
- Low Voltage Directive (LVD)
- Restriction of Hazardous Substances (RoHS)
- Radio Equipment Directive (RED)
- EN 50581:2012

The CE-marking takes into account the proof of conformity with the respective harmonized standards based on the legal provisions above. For the application and use the respective national provisions apply.

Application

Flexible access control

An access manager is installed in a protected environment and uses local or online decision logic to check whether an access request via connected card readers is granted or rejected.

Door management

- Personnel interlock control
- Door activation
- Monitoring of door opening
- · Monitoring of door opening time
- · Access monitoring

Alarm Management

The access manager reports irregularities in access control or door management to the host computer. Tampering and burglary attempts are reliably identified.

Technical Data

The access manager 92 30 has the following technical properties:

Name	Value	Unit
Operating Temperature	0 - 50	°C
Operating Humidity	5 - 85	%
Width Dimension	208	mm
Height Dimension	208	mm
Depth Dimension	48	mm
Weight (without packaging)	0,675	kg
Weight (with packaging)	0,923	kg
Power consumption "idle mode"	5	W
Power consumption "on mode"	12	W

Host Interface

• Ethernet 10/100 Mbit/s

Peripherals Interface

Variant MRD

- 2x coaxial for registration units (LEGIC / MIFARE) 1x RS-485 1x RS-232
- 3x potential-free relays, 30 V AC/DC; max. 2 A 4x digital inputs
- 1x tamper contact

Variant Wiegand • 2x Wiegand • 1x RS232 • 3x potential-free relays, 30 V AC/DC; max. 2 A • 4x digital inputs • 1x tamper contact

Power supply

- PoE, as per IEEE 802.3af
- PoE+, as per IEEE 802.3at

Output voltage

• Reader: 5/12 V DC • Elec. door opener: 12/24 V DC

Class of protection as per EN 60529:IP40.

The product is not harmonised in accordance with the Construction Product Regulations (CPR) but in accordance with other provisions for harmonisation of the EU. Compliance with the European Union Directive and technical specifications:

- EN 55032:2015
- EN 55024:2010 + A1:2015
- EN 50364:2010
- EN 62368-1:2014 + A11:2017
- EN 60529:2014
- EN 301489-1 V2.2.1 Draft
- EN 301489-3 V2.1.1
- EN 300330 V2.1.1

The product is subject to CE marking according to the relevant harmonization legislation.

In addition, the product also conforms to the following standards:

- UL 294:2013
- UL62368-1:2014-12
- CAN/CSA-22.2 No. 62368-1:2014-12
- FCC ID NVI-DKAM9230K7

Base materials/Ancillary materials

The major material compositions of the product are listed below:

Name	Value	Unit
Plastics	48,5	%
Paper	27	%
Electronics	23,5	%
Steel	1	%

The product includes partial articles which contain substances listed in the Candidate List of REACH Regulation 1907/2006/EC (date: 08.07.2021) exceeding 0.1 percentage by mass in the alloy: yes

• Lead titanium trioxide (O3PbTi): 12060-00-03 The Candidate List can be found on the ECHA website address: https:echa.europa.eu/de/home.

Reference service life



The reference service life of the dormakaba access manager 92 30 is estimated to be 15 years. This number is based on the support and service life and is not an estimated lifetime.

LCA: Calculation rules

Declared Unit

The declared unit is 1 piece of the product: Access manager 92 30.

Declared unit

Name	Value	Unit
Declared unit	1	рсе.
Product weight including packaging	0,923	kg

System boundary

The type of EPD is: cradle to gate with options, modules C1-C4, and module D (A1-A3 + C + D and additional modules: A4 + A5 + B6)

Production - Module A1-A3

The product stage includes:

 A1, raw material extraction, processing and mechanical treatments, processing of secondary material input (e.g. recycling processes), — A2, transport to the manufacturer, - A3, manufacturing and assembly including provision of all materials, products and energy, as well as waste processing up to the end-of waste state.

Construction stage - Modules A4-A5

The construction process stage includes:

— A4, transport to the building site; — A5, installation into the building; including provision of all materials, products and energy, as well as waste processing up to the end-of-waste state or disposal of final residues during the construction process stage.

Use stage - Module B6

The use stage related to the operation of the building includes:

B6, operational energy use

End-of-life stage- Modules C1-C4 and D

The end-of-life stage includes:

- C1, de-construction, demolition:— C2, transport to waste processing;
- C3, waste processing for reuse, recovery and/or recycling;
- C4, disposal;

including provision and all transport, provision of all materials, products and related energy and water use.

Module D (Benefits and loads beyond the system boundary) includes:

- D, recycling potentials, expressed as net impacts and benefits.

Geographic Representativeness

Land or region, in which the declared product system is manufactured, used or handled at the end of the product's lifespan: Germany

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. Background database: GaBi, SP40.

LCA: Scenarios and additional technical information

Characteristic product properties of biogenic carbon Information on describing the biogenic Carbon Content at factory gate

Name	Value	Unit
Biogenic carbon content in product	0.01	kg C
Biogenic carbon content in accompanying packaging	0.1	Оã

Note: 1 kg of biogenic carbon is equivalent to 44/12 kg of CO₂.

The following technical scenario information is required for the declared modules.

Transport to the building site (A4)

Name	Value	Unit
Litres of fuel per 1 kg (truck)	0.00276	l/100km
Transport distance (truck)	750	km
Capacity utilisation (including empty runs)	51	%
Transort distance (ship)	1000	km

Installation into the building (A5)

Name	Value	Unit
Waste Packaging (paper)	0.227	kg
Waste Packaging (plastic)	0,022	kg

Reference service life

Name	Value	Unit
Life Span according to the manufacturer	15	а

Operational energy use (B6) and Operational water use (B7)

The use stage is declared for 15 years.

Name	Value	Unit
Energy consumption for 1 year	54.02	kWh
on mode per day	4	h
idle mode	20	h
on mode power	12	W
idle mode	5	W
Days per year in use	365	days

End of life (C1-C4)

C1: The product dismantling from the building is done manually without environmental burden.

Name	Value	Unit
Recycling (Steel)	0.01	kg
Energy recovery (Plastic)	0.43	kg
Energy recovery (Paper)	0,02	kg
Recycling and landfilling (Electronics)	0,21	kg
Transportation to Waste	50	km

Region for end of life: Global



Reuse, recovery and/or recycling potentials (D), relevant scenario information $% \left(\frac{1}{2}\right) =\frac{1}{2}\left(\frac{1}{2}\right) +\frac{1}{2}\left(\frac{1}{2}$

Collection rate is 100%.



LCA: Results

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

	Product stage Construction process stage												End of life stage			Benefits and loads beyond the system boundaries	
	Raw material supply	Transport	Manufacturing	Transport from the gate to the site	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse- Recovery- Recycling- potential
Ī	A1	A2	A3	A4	A5	B1	B2	В3	B4	B5	В6	B7	C1	C2	C3	C4	D
	Х	Х	Х	Х	Х	MND	MND	MNR	MNR	MNR	Х	MND	MND	Х	Х	Х	Х

RESULTS OF THE LCA - ENVIRONMENTAL IMPACT according to EN 15804+A2: 1 piece Access manager 92 30												
Parameter	Unit	A1-A3	A4	A5	В6	C2	C3	C4	D			
GWP-total	kg CO ₂ eq	1.59E+01	6.36E-02	3.75E-01	4.13E+02	2.98E-03	1.08E+00	4.05E-04	-1.24E+00			
GWP-fossil	kg CO ₂ eq	1.61E+01	6.09E-02	6.16E-02	4.11E+02	2.85E-03	1.08E+00	4.02E-04	-1.24E+00			
GWP-biogenic	kg CO ₂ eq	-2.4E-01	2.68E-03	3.14E-01	8.16E-01	1.32E-04	2.53E-05	1.37E-06	1.69E-04			
GWP-luluc	kg CO ₂ eq	2.31E-02	1.44E-06	8.32E-06	5.78E-01	6.78E-08	6.13E-05	1.16E-06	-1.45E-03			
ODP	kg CFC11 eq	1.75E-09	6.39E-18	8.5E-17	6.2E-12	3.01E-19	5.47E-16	1.49E-18	-8.26E-15			
AP	mol H ⁺ eq	8.57E-02	1.69E-04	9.97E-05	1.83E+00	2.85E-06	1.93E-04	2.88E-06	-1.14E-02			
EP-freshwater	kg P eq	1.14E-04	1.31E-08	1.56E-08	7.83E-04	6.1E-10	8.73E-08	6.9E-10	-1.18E-06			
EP-marine	kg N eq	1.52E-02	4.78E-05	3.47E-05	3E-01	9.07E-07	4.35E-05	7.42E-07	-9.75E-04			
EP-terrestrial	mol N eq	1.62E-01	5.26E-04	4.49E-04	3.23E+00	1.01E-05	8.8E-04	8.16E-06	-1.05E-02			
POCP	kg NMVOC eq	4.47E-02	1.34E-04	9.22E-05	8.67E-01	2.56E-06	1.21E-04	2.25E-06	-3.19E-03			
ADPE	kg Sb eq	1.31E-01	1.81E-09	1.29E-09	8.48E-05	8.54E-11	7.5E-09	3.61E-11	-4.92E-04			
ADPF	MJ	2.07E+02	8.57E-01	1.26E-01	6.19E+03	4.04E-02	5.03E-01	5.27E-03	-1.79E+01			
WDP	m ³ world eq deprived	3.51E+00	1.19E-04	4.54E-02	8.74E+01	5.58E-06	1.11E-01	4.21E-05	-3.54E-01			

GWP = Global warming potential; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential of land and water; EP = Eutrophication potential; POCP = Formation potential of tropospheric ozone photochemical oxidants; ADPE = Abiotic depletion potential for non-fossil resources; ADPF = Abiotic depletion potential for fossil resources; WDP = Water (user) deprivation potential)

RESULTS OF THE LCA - INDICATORS TO DESCRIBE RESOURCE USE according to EN 15804+A2: 1 piece Access manager 92 30

Parameter	Unit	A1-A3	A4	A5	B6	C2	C3	C4	D
PERE	MJ	4.5E+01	2.71E-03	2.75E+00	2.32E+03	1.27E-04	3.95E-01	6.91E-04	-3.05E+00
PERM	MJ	4.8E+01	0	-2.72E+00	0	0	-2.64E-01	0	0
PERT	MJ	2.36E+02	2.71E-03	2.49E-02	2.32E+03	1.27E-04	1.31E-01	6.91E-04	-3.05E+00
PENRE	MJ	2.07E+02	8.58E-01	1.03E+00	6.2E+03	4.04E-02	1.59E+01	5.28E-03	-1.79E+01
PENRM	MJ	2.24E+02	0	-9.05E-01	0	0	-1.54E+01	0	0
PENRT	MJ	2.08E+02	8.58E-01	1.26E-01	6.2E+03	4.04E-02	5.03E-01	5.28E-03	-1.79E+01
SM	kg	7.1E-03	0	0	0	0	0	0	0
RSF	MJ	0	0	0	0	0	0	0	0
NRSF	MJ	9.51E-02	0	0	0	0	0	0	0
FW	m ³	9.51E-02	4.86E-06	1.07E-03	3.16E+00	2.28E-07	2.65E-03	1.33E-06	-7.79E-03

PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-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; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water

RESULTS OF THE LCA – WASTE CATEGORIES AND OUTPUT FLOWS according to EN 15804+A2: 1 piece Access manager 92 30

Parameter	Unit	A1-A3	A4	A5	В6	C2	C3	C4	D		
HWD	kg	1.39E-05	8.33E-11	2.44E-10	2.87E-06	3.92E-12	1.92E-09	8.04E-11	-3.1E-08		
NHWD	kg	5.21E-01	8.77E-05	1.56E-02	3.87E+00	4.13E-06	1.13E-01	2.65E-02	-1.4E-01		
RWD	kg	4.8E-03	9.22E-07	6.26E-06	7.18E-01	4.34E-08	1.87E-05	6E-08	-7.74E-04		
CRU	kg	0	0	0	0	0	0	0	0		
MFR	kg	0	0	0	0	0	2.28E-01	0	0		
MER	kg	0	0	0	0	0	0	0	0		
EEE	MJ	1.07E-01	0	5.86E-01	0	0	0	0	0		
EET	MJ	1.95E-01	0	1.11E+00	0	0	0	0	0		



HWD = Hazardous waste disposed; NHWD = Non-hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy

RESULTS OF THE LCA – additional impact categories according to EN 15804+A2-optional:

Parameter	Unit	A1-A3	A4	A5	В6	C2	C3	C4	D
РМ	Disease incidence	8.63E-07	2.2E-09	6.21E-10	2.56E-05	1.5E-11	2.46E-09	3.57E-11	-9.35E-08
IR	kBq U235 eq	4.65E-01	1.32E-04	9.09E-04	1.16E+02	6.2E-06	1.68E-03	6.18E-06	-1.24E-01
ETP-fw	CTUe	1.35E+02	6.08E-01	5.75E-02	2.28E+03	2.86E-02	1.89E-01	3.01E-03	-6.86E+00
HTP-c	CTUh	1.91E-08	1.14E-11	3.36E-12	8.34E-08	5.39E-13	1.63E-11	4.47E-13	-4.78E-10
HTP-nc	CTUh	2.96E-07	4.91E-10	1.92E-10	3.32E-06	2.3E-11	1.65E-09	4.92E-11	-3.26E-08
SQP	SQP	7.6E+01	2.21E-03	3.44E-02	1.71E+03	1.04E-04	1.51E-01	1.1E-03	-6.06E+00

PM = Potential incidence of disease due to PM emissions; IR = Potential Human exposure efficiency relative to U235; ETP-fw = Potential comparative Toxic Unit for ecosystems; HTP-c = Potential comparative Toxic Unit for humans (cancerogenic); HTP-nc = Potential comparative Toxic Unit for humans (not cancerogenic); SQP = Potential soil quality index

Disclaimer 1 - for the indicator IRP

This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.

Disclaimer 2 - for the indicators ADPE, ADPF, WDP, ETP-fw, HTP-c, HTP-nc, SQP

The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experience with the indicator. This EPD was created using a software tool.

References

Standards

CAN/CSA-22.2 No. 62368-1

CAN/CSA-22.2 No. 62368-1:2014, Audio/video, information and communication technologyequipment — Part 1: Safety requirements.

Electromagnetic Compatibility Directive (EMC)

Directive 2014/30/EU of the European Parliamant and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to electromagnetic compatibility.

EN 15804+A2

EN 15804:2019+A2 (in press), Sustainability of construction works — Environmental Product Declarations — Core rules for the product category of construction products.

EN 300330 V2.1.1

Short Range Devices (SRD) - Radio equipment in the frequencyrange 9 kHz to 25 MHz and inductive loop systems in the frequency range 9 kHz to 30 MHz - Harmonised Standard covering the essential requirements of article 3.2 of the Directive 2014/53/EU.

EN 301489-1 V2.2.1

ElectroMagnetic Compatibility (EMC) standard for radio equipment and services - Part 1: Common technical requirements - Harmonised Standard covering the essential requirements of article 3.1(b) of Directive 2014/53/EU and the essential requirements of article 6 of Directive 2014/30/EU.

EN 301489-3 V2.1.1

ElectroMagnetic Compatibility (EMC) standard for radio equipment and services - Part 3: Specific conditions for Short-Range Devices (SRD) operating on frequencies between 9 kHz and 246 GHz - Harmonised standard covering the essential requirements of article 3.1(b) of Directive 2014/53/EU.

EN 50364

EN 50364:2010, Limitation of human exposure to electromagnetic fields from devices operating in the frequency range 0 Hz to 300 GHz, used in Electronic Article Surveillance

(EAS), Radio Frequency Identification (RFID) and similar applications.

EN 55024+A1

EN 55024:2010+A1:2015, Information technology equipment - Immunity characteristics - Limits and methods of measurement.

EN 55032

EN 55032:2015, Electromagnetic compatibility of multimedia equipment - Emission Requirements.

EN 60529

EN 60529:2014, Degrees of protection provided by enclosures (IP 20).

EN 62368-1+A11

EN 62368-1:2014+A11:2017, Audio/video, information and communication technology equipment - Part 1: Safety requirements.

ISO 14025

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

Low Voltage Directive (LVD)

Directive 2014/35/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of electrical equipment designed for use within certain voltage limits.

Radio Equipment Directive (RED)

Directive 2014/53/EU of the European Parliament and of the Council of 16 April 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of radio equipment and repealing Directive 1999/5/EC.

Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation



and Restriction of Chemicals (REACH).

Restriction of Hazardous Substances (RoHS)

Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS), Directive (EU) No 2011/65.

UL 294

UL 294:2013, Standard for Safety Access Control System Unit.

UL 62368-1

UL 62368-1:2014, Standard for Audio/video, information and communication technology equipment - Part 1: Safety requirements.

Further References

IBU 2016

Institut Bauen und Umwelt e.V.: General Instructions for the EPD programme of Institut Bauen und Umwelt e.V. Version 2.0., Berlin: Institut Bauen und Umwelt e.V., 2021. www.ibu-epd.com

GaBi ts software

Sphera Solutions GmbH

Gabi Software System and Database for Life Cycle Engineering 1992-2020 Version 10.0.0.71 University of Stuttgart Leinfelden-Echterdingen

GaBi ts documentation

GaBi life cycle inventory data documentation (https://www.gabi-software.com/support/gabi/gabi-database-2020-lci-documentation/).

LCA-tool dormakaba

LCA tool, version 1.0. Developed by Sphera Solutions GmbH.

PCR Part A

PCR - Part A:

Calculation Rules for the Life Cycle As-sessment and Requirements on the Project Re-port according to EN 15804+A2:2019, Version 1.0, Institut Bauen und Umwelt e.V., www.ibu-epd.com.

PCR Part B

PCR – Part B: Requirements on the EPD for Building Hardware product, version 1.3, Institut Bauen und Umwelt e.V., www.ibu-epd.com, 2019.





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