Carlo Gavazzi Automation (Kunshan) Co. Ltd

ENVIRONMENTAL PRODUCT DECLARATION

PRODUCT NAME

ICB12L50F06POM1

Inductive proximity sensor

SITE

Building 10, No.276 Xiongying Road, Development Zone Kunshan City, JiangsuProvince, China

In accordance with ISO 14025 and EN 50693:2019

Program Operator	EPDItaly
Publisher	EPDItaly

Declaration Number	*EPDCH2025ICB_2024_rev.1.0*
Registration Number	EPDITALY1096

Issue date	29 / 10 / 2025
Valid to	29 / 10 /2030

www.epditaly.it

Carlo Gavazzi Automation (Kunshan) Co. Ltd
Development Zone, Kunshan City,
Jiangsu Province
(China)
http://www.gavazzi-automation.com/

ENVIRONMENTAL PRODUCT DECLARATION
ICB12L50F06POM1

GENERAL INFORMATION

EPD OWNER	
Name of the company	Carlo Gavazzi Automation (Kunshan) Co. Ltd
Registered office	Building 10, No.276 Xiongying Road, Development Zone Kunshan City, JiangsuProvince, China
Contacts for information on the EPD	www.gavazzi-automation.com

PROGRAM OPERATOR	
EPDItaly	Via Gaetano De Castillia n° 10 - 20124 Milano, Italy

INFORMATION ON THE EPD	
Product name (s)	ICB12L50F06POM1
Site (s)	Building 10, No.276 Xiongying Road, Development Zone Kunshan City, JiangsuProvince, China
Short description and technical information of the product (s)	A family of inductive proximity switches in industrial standard nickel-plated brass housings. They are able to handle applications where very long operating distance is requested. Output is open collector NPN or PNP transistors. Less machine downtime thanks to lower risk of mechanical damage.
Field of application of the product (s)	Machine Tool,Agriculture,Material handling systems,Heavy mobile equiment,Packing and food&beverage,Renewable energy, etc
Type of EPD	Specific product EPD based on a qualified LCA TOOL
CPC Code (number) https://unstats.un.org/unsd/classifications/Econ	46

VERIFICATION INFORMATION	
PCR (title, version, date of publication or update)	PCR "007 Electronic and electrical products and systems" rev 3.1 of 12/11/2024
EPDItaly Regulation (version, date of publication or update)	Rev. 7.1 of 05/09/2025
Project Report LCA	GAV_LCA Tool General Study Report_2024 data_rev1 of 04/10/2025
Independent Verification Statement	EN 50693:2019 is the framework reference for PCRs. The PCR review was carried out by Luca Giacomello, Michele Paleari, and Balazs Sarà. – info@epditaly.it. Independent verification of the declaration and data, carried out according to ISO 14025: 2010. ☐ Internal ☑ External Third party verification carried out by: ICMQ S.p.A., via Gaetano De Castillia n ° 10 - 20124 Milan, Italy. Accredited by Accredia.
Comparability Statement	Environmental statements published within the same product category, but from different programs, may not be comparable.

ENVIRONMENTAL PRODUCT DECLARATION
ICB12L50F06POM1

	In particular, EPDs of construction products may not be comparable if they do not comply with EN 15804: 2012 + A2: 2019.
Liability Statement	The EPD Owner releases EPDItaly from any non-compliance with environmental legislation. The holder of the declaration will be responsible for the information and supporting evidence. EPDItaly disclaims any responsibility for the information, data and results provided by the EPD Owner for life cycle assessment.

OTHER INFORMATION	
Company contact	Jill Dai, Quality Engineer
Technical support	**Aequilibria Srl - SB** P.le della Stazione, 8 35131 – Padova (PD) - ITALIA

Carlo Gavazzi Automation (Kunshan) Co. Ltd
Development Zone, Kunshan City,
Jiangsu Province
(China)
http://www.gavazzi-automation.com/

ENVIRONMENTAL PRODUCT DECLARATION
ICB12L50F06POM1

Foreword

This document represents the EPD study conducted for the ICB12L50F06POM1 device manufactured by Carlo Gavazzi Automation (Kunshan) Co. Ltd, in accordance with the EPDItaly Program and its Regulations, developed in accordance with ISO 14025 and aimed at providing a tool for the development, verification and publication of Environmental Product Declarations.

The study was carried out in accordance with PCR EPDItaly007 (PCR for electronic and electrical products and systems), which identifies and documents the objective and scope of LCA-based information for the product category, the rules for producing additional environmental information, the life cycle stages to be included, the parameters to be addressed, and the manner in which the parameters are to be collected and communicated in a report.

Producer information and environmental policy

Carlo Gavazzi Automation (Kunshan) Co. Ltd stays at the forefront in Solid State Relay, Energy meters, other controls devices and Sensor manufacturing in China.

It belongs to the international CARLO GAVAZZI ACBU GROUP, one of the leading companies in the world, active in designing, manufacturing, and marketing electronic equipment such as solid-state relays, motor controllers, sensors, energy meters, monitoring relays, timers, safety devices and fieldbus systems, all of which provide automation solutions for the industrial and building automation markets.

To ensure the leading role, prosperity, and growth of Carlo Gavazzi Automation (Kunshan) Co. Ltd, it is necessary to follow this integrated policy for Quality, Environment, Health and Safety, which underpin future activities of the company and to manufacture and supply products to the market that fully satisfy customer demands.

This policy shall be followed to achieve the objectives and in accordance with the principles:

- to create a quality, environmental and health and safety management system complying with the requirements of international standards ISO 9001, ISO 14001, ISO 45001 and to continuously improve it
- careful analysis of the business environment and risks, aimed at seeking continuous opportunities for improvement
- continuous attention to customers' satisfaction with prompt detection of their expectation
- commitment to environmental protection, including pollution prevention

- compliance with the requirements of the product to be delivered and guarantees on the punctuality of service
- compliance with environmental and worker safety mandatory requirements
- commitment to continuous improvement in environmental and safety performance
- pursuit of assiduous and constant collaboration with materials and service suppliers to activate relationships marked by continuous growth
- accurate control of the product realization stages as well as the performance of services offered, including attention to technological innovation and technical development of its resources
- care for the professional growth of all company employees
- increase the awareness in the working personnel about their contribution to the efficiency of the ISO Integrated Management System for quality, environment, health and safety
- constant improvement of the integrated management system to achieve higher levels of excellence
- development of new services/products that can better meet customers' needs and can ensure continued compliance with mandatory requirements
- effective and efficient review of the integrated management system by reducing costs associated with products and processes
- assure safe and healthy working conditions to avoid injuries and work-related illnesses
- commitment to consulting and participating workers

Management is aware that the above goals require constant commitment by all the personnel and that they can be successfully achieved, only through full participation.

Product Information

The product under analysis is the Inductive proximity sensor with part number ICB12L50F06POM1, making part of the SENSORS product line. The product has a nominal consumption of 0,54 W and weight 34,9 g (0,0349 kg) including packaging.

The adopted functional unit was defined, based on the reference PCR, as a **device characterized by its own 'maximum' operating power at 0,54 W for a lifetime (RSL - Reference Service Life) of 10 years, including its packaging, and operating throughout its useful life.**

A family of inductive proximity switches in industrial standard nickel-plated brass housings. They are able to handle applications where very long operating distance is requested.

Output is open collector NPN or PNP transistors. Less machine downtime thanks to lower risk of mechanical damage.

ENVIRONMENTAL PRODUCT DECLARATION

ICB12L50F06POM1

Product assembly and testing are entirely carried out at the Carlo Gavazzi Automation (Kunshan) manufacturing site. After manufacturing, the finished device is then sent to the various Carlo Gavazzi distribution centers (warehouses), and eventually to the specific customer.

Regarding the use phase, the product does not require periodic maintenance and is considered to be active throughout its estimated useful life.

Product family	INDUCTIVE PROXIMITY SENSOR	
Product identification number	ICB12L50F06POM1	
Technical Data	Power: 0,54 W Weight: 0,0349kg (including packaging) Service Life Time (RLS): 10 years	
Packaging	Weight: 0,0032kg (3,20 g) Material: Paper and plastic	

Table 2. Product related information *ICB12L50F06POM1*

ENVIRONMENTAL PRODUCT DECLARATION

ICB12L50F06POM1

The following image shows the product flow chart:

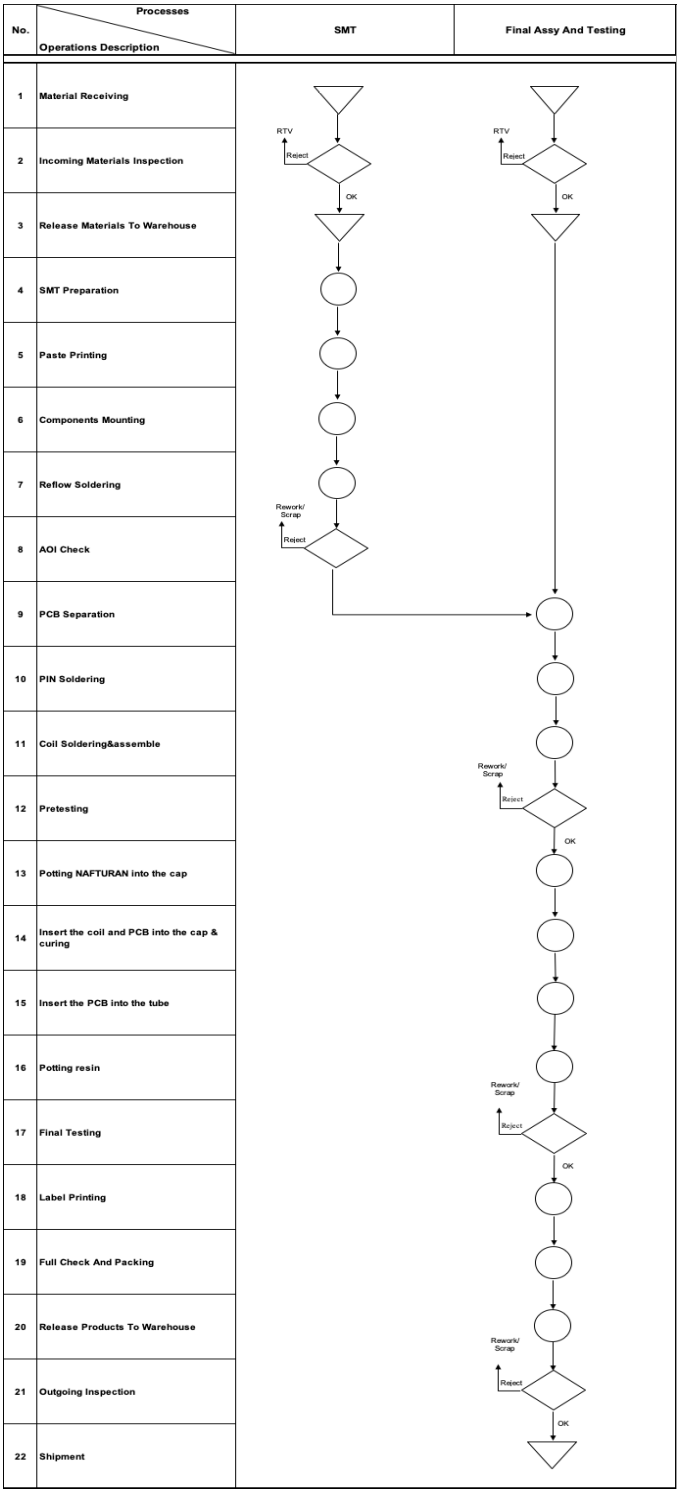

Figure 1. Flow chart of the product *ICB12L50506POM1*

ENVIRONMENTAL PRODUCT DECLARATION
ICB12L50F06POM1

System boundaries

The system boundaries represent the basis to determine the unitary processes included in the study.

The system in this study is structured as "cradle-to-grave", therefore from the cradle, e.g. from the extraction of raw materials to the grave, therefore until the final disposal of the product.

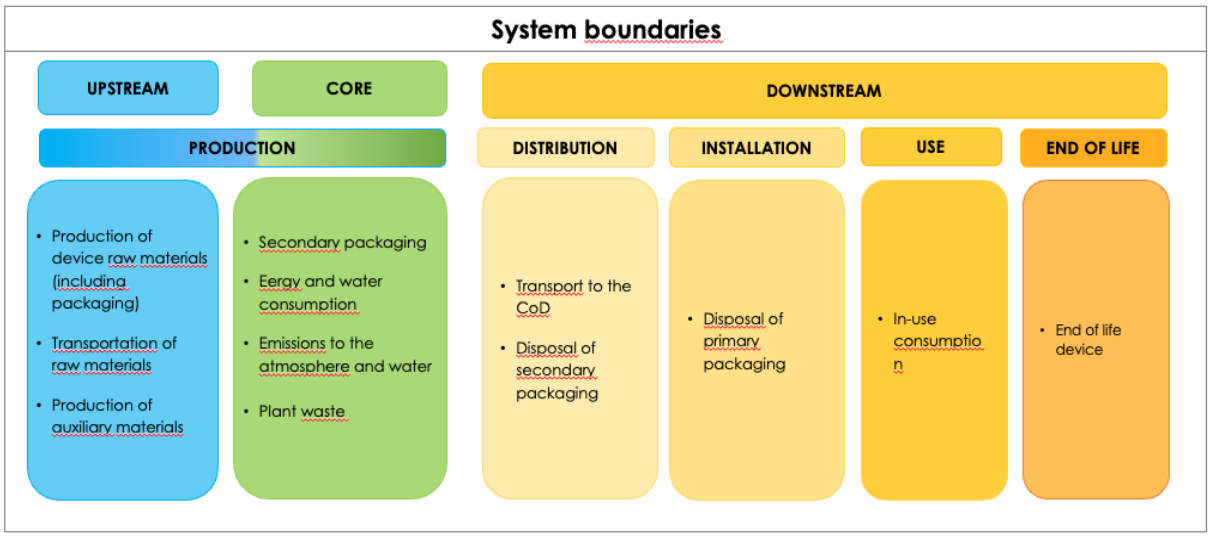

Figure 2. System boundaries

The stages included in the life cycle are thus:

Upstream module

- raw materials extraction and production (including those for packaging and auxiliaries) (phase: PRODUCTION);
- transport of raw materials (phase: PRODUCTION);
- auxiliary material production (phase: PRODUCTION).

Core module

- emissions in atmosphere and water (phase: PRODUCTION);
- transport and disposal of plant waste (phase: PRODUCTION).

Downstream module

- transport to the distribution center (CoD) (phase: DISTRIBUTION);
- disposal of secondary packaging (phase: DISTRIBUTION);
- disposal of primary packaging (phase: INSTALLATION);
- consumption during use phase (phase: USE PHASE);
- end of life of the device (phase: END OF LIFE).

ENVIRONMENTAL PRODUCT DECLARATION
ICB12L50F06POM1

In addition to the inclusion of the listed inputs and outputs, the following assumptions apply to the core part: the processing of production equipment, construction and other capital goods are not included in the system boundaries.

Business travel by personnel with leased cars, personnel travel to the workplace by company vehicle or research and development activities were not included.

Production of manufacturing machinery, buildings and other corporate infrastructure are not included.

When there is an outflow of material to be recycled, the transport of the material to the point where recycling takes place is included. The material destined for recycling is therefore an outflow from the product system and all the impacts related to the recycling process, transformation and subsequent use are part of the subsequent life cycle and are therefore excluded from the system boundaries.

Phase	**Manufacturing stage**	**Distribution stage**	**Installation stage**	**Use stage**	**End of life stage**
Phase declared	X	X	X	X	X

Table 3. Phase declared according to EN 50693:2019

Materials and constituents of the products

The declaration of materials is made in accordance with EN IEC 62474.

The products comply with substance restrictions in the EU RoHS directive (2011/65/EU).

The product does not contain batteries and any recycled material content in the device is unknown.

Below is the total mass of the product (including packaging) and the weight percentages of each individual raw material to the total product.

Total mass of the device	**0,0349 kg** (including packaging)

Carlo Gavazzi Automation (Kunshan) Co. Ltd
Development Zone, Kunshan City,
Jiangsu Province
(China)
http://www.gavazzi-automation.com/

ENVIRONMENTAL PRODUCT DECLARATION

ICB12L50F06POM1

Raw Material Category SCLAM	SCLAM	SCLAM description	% of total weight	% of category to total weight
PCB	PCB_SMD	PCB_SMD - Printed Circuit Board FR4 SMD	3,74%	3,74%
AXIAL FANS	-	-	-	-
Electronic Components	CCERS_SMD	CCERS_SMD - Capacitors Ceramic SMD	0,070%	2,24%
	CCERS_SMD	CCERS_SMD - Capacitors Ceramic SMD	0,110%	
	CCERS_SMD	CCERS_SMD - Capacitors Ceramic SMD	0,251%	
	CCERS_SMD	CCERS_SMD - Capacitors Ceramic SMD	0,110%	
	CCERS_SMD	CCERS_SMD - Capacitors Ceramic SMD	0,176%	
	CCERS_SMD	CCERS_SMD - Capacitors Ceramic SMD	0,018%	
	DDSMD_SMD	DDSMD_SMD - Diodes SMD	0,321%	
	DDSMD_SMD	DDSMD_SMD - Diodes SMD	0,028%	
	ICSMD_SMD	ICSMD_SMD - IC integrated circuit SMD	0,039%	
	MICRO_SMD		0,195%	
	RESMD_SMD	RESMD_SMD - Resistors SMD	0,035%	
	RESMD_SMD	RESMD_SMD - Resistors SMD	0,017%	
	RESMD_SMD	RESMD_SMD - Resistors SMD	0,017%	
	RESMD_SMD	RESMD_SMD - Resistors SMD	0,061%	
	RESMD_SMD	RESMD_SMD - Resistors SMD	0,052%	
	RESMD_SMD	RESMD_SMD - Resistors SMD	0,017%	
	RESMD_SMD	RESMD_SMD - Resistors SMD	0,017%	
	RESMD_SMD	RESMD_SMD - Resistors SMD	0,017%	
	RESMD_SMD	RESMD_SMD - Resistors SMD	0,017%	
	RESMD_SMD	RESMD_SMD - Resistors SMD	0,017%	

ENVIRONMENTAL PRODUCT DECLARATION

ICB12L50F06POM1

	RESMD_SMD	RESMD_SMD - Resistors SMD	0,069%	
	RESMD_SMD	RESMD_SMD - Resistors SMD	0,017%	
	RESMD_SMD	RESMD_SMD - Resistors SMD	0,121%	
	RESMD_SMD	RESMD_SMD - Resistors SMD	0,017%	
	RESMD_SMD	RESMD_SMD - Resistors SMD	0,061%	
	TRPTH_PTH	TRPTH_PTH - Transistors, Mosfets & IGBTs PTH	0,039%	
	TRSMD_SMD	TRSMD_SMD - Transistors, Mosfets & IGBTs PTH	0,039%	
	TRSMD_SMD	TRSMD_SMD - Transistors, Mosfets & IGBTs PTH	0,037%	
	TRSMD_SMD	TRSMD_SMD - Transistors, Mosfets & IGBTs PTH	0,037%	
	TRSMD_SMD	TRSMD_SMD - Transistors, Mosfets & IGBTs PTH	0,114%	
	TRSMD_SMD	TRSMD_SMD - Transistors, Mosfets & IGBTs PTH	0,039%	
	LEDXX_SMD	LEDXX_SMD - LED light emitting diode SMD	0,056%	
Sclam product specifications	COILS_PTH	COILS_PTH-Coils, ferrites	0,06%	10,11%
	PTTCP_CHEM	PTTCP_CHEM - Potting Compounds & Chemicals General	9,21%	
	PTTCP_CHEM_POT	PTTCP_CHEM_POT - Potting Compounds & Chemicals Potting, Silicones,	0,63%	
	PTTCP_CHEM_POT	PTTCP_CHEM_POT - Potting Compounds & Chemicals Potting, Silicones,	0,21%	
Cables	CABLE_PVC	-	-	-
Small metallic parts	MESTD_CUZN	MECUS_CUZN - Metal parts customised Brass	38,950%	71,54%
	MESTD_CUZN	MECUS_CUZN - Metal parts customised Brass	24,553%	
	MESTD_CUZN	MECUS_CUZN - Metal parts customised Brass	0,781%	

ENVIRONMENTAL PRODUCT DECLARATION
ICB12L50F06POM1

	MESTD_STEEL	MESTD_STEEL-Metal parts Standard Steel	7,254%	
Plastics	PLCUS_INJ_PA6	PLCUS_INJ_PA6 - Plastic parts customised Injected with PA6	0,753%	9,85%
	PLGRA_PBT	PLGRA_PBT - Plastic Granules raw PBT	0,558%	
	PLSTD_PKG	PLSTD_PKG - Plastic parts standard bags and sheets for Primary Packaging	5,580%	
	LAPAC_PKG	LAPAC_PKG - Product & Box Labels	2,957%	
Paper primary packaging	BOXES_PKG	BOXES_PKG - Carton Boxes, inserts, grids for finished products Packaging	0,40%	0,40%

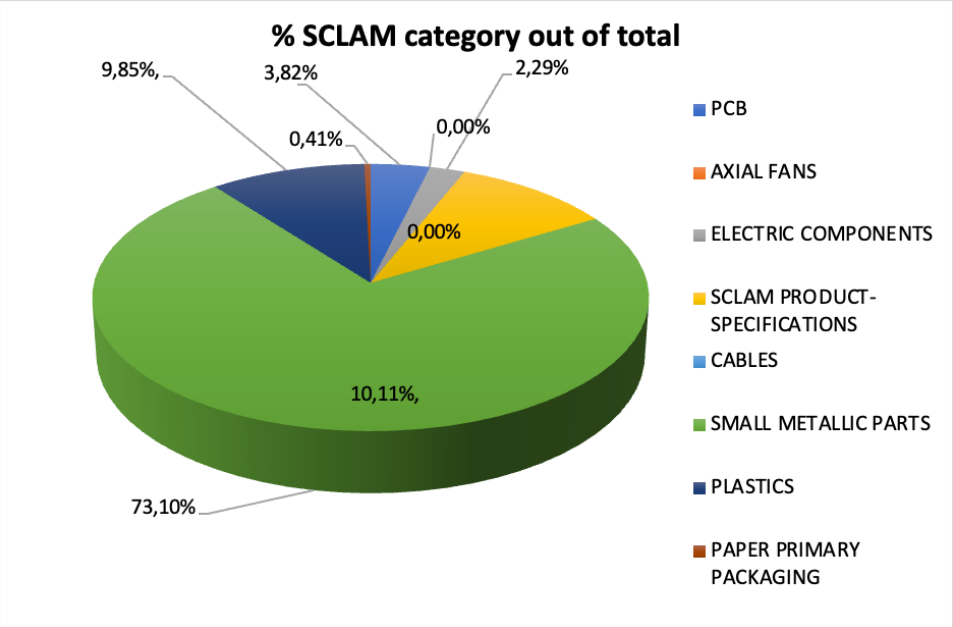

Figure 1. Material breakdown of the **ICB12L50F06POM1** device

ENVIRONMENTAL PRODUCT DECLARATION
ICB12L50F06POM1

Information related to the study

System boundaries	The boundaries of the study system are "**cradle-to-grave"**.
Geographical validity	Global
Reference year data	2024
Reference tool	This EPD was generated using the results automatically generated by the Excel tool "LCA tool_data 2024_GAV Kunshan_2025 10 04 rev.1"

Table 4. Information related to the study

The assessment of all potential environmental impacts above is based on the entire life cycle of the product under analysis: production, distribution, installation, use and end of life.

The elements and processes considered for the assessment of impacts related to each phase are described below:

Production	• Product and packaging raw materials (primary and secondary), auxiliary materials and related transportation • production and processing processes (involving energy and water consumption, air emissions, waste generated by production) - Electricity Dataset electricity: *Electricity, medium voltage {CN}| market group for electricity, medium voltage | Cut-off, U (Ecoinvent 3.11)*
Distribution	• transportation from the Gavazzi plant to the latest distribution logistics platforms

FINISHED PRODUCT DISTRIBUTION (CoD)

Distribution center finished product	% distributed to the CoD	Further distribution at the continental level?
CG Kunshan- Shenzhen	68,5%	Yes
CG Kunshan- Brazil	0%	No
CG Kunshan-Singapore	0%	No
CG Kunshan-Canada	0%	No
CG Kunshan-USA	2,8%	No

ENVIRONMENTAL PRODUCT DECLARATION
ICB12L50F06POM1

	<table><tr><td>CG Kunshan-ILCE</td><td>28,7%</td><td>Yes</td></tr></table> • transportation from Gavazzi's CdD to the specific customer (Company Name, Country) • disposal of secondary packaging
Installation	• End of life of primary packaging.
Use and maintenance phase	• Product Category: Sensors • usage scenario: 10-year service life, continuous operation at 100% rated load, rated power 0,54 W. The dataset chosen is the low voltage energy dataset; the dataset reference country is directly linked to the country that will be selected as the country of use of the device. In the case where the device is not used in the country where the Gavazzi China distribution center is located, but has a continental distribution, the basin emission factor is calculated, which can be European (and in this case the FE is the one linked to the dataset "*Electricity, low voltage* {*RER*} | *market group for electricity, low voltage* | *Cut-off, U*" which makes a weighted average of the various countries) or American, Canadian and Asian. In this case, the FE is the arithmetic average of the emission factors of individual nations belonging to those continents and thus does not consider the "weight" of individual nations.
End of life	• Device End of Life Scenario (WEEE).

The LCA study was carried out according to UNI EN ISO 14040/14044 standards, following the guidelines of EN 50693:2019.

The software used for impact assessment is SimaPro 10.2.0.0; Ecoinvent 3.11 database.

The methods used to calculate impacts refer to the CML baseline and IPCC method for the climate change impact category.

Site-specific data were used for all of the following processes:

- production and transportation of device raw materials, auxiliary materials and packaging materials;
- manufacturing processes, plant energy consumption, air emissions and waste;
- weight, power of the device;
- transportation to the distribution center (last logistics platform).

Generic data were used for:

- recycling, energy recovery and disposal rates for primary and secondary packaging materials and WEEE (global data).

Default scenarios described in PCR 007 were used for:

- transportation to the point of sale: intercontinental and local transportation scenario;
- Lifetime (RLS) of the device: 10 years.

ENVIRONMENTAL PRODUCT DECLARATION
ICB12L50F06POM1

Environment impact assessment

The potential environmental impacts assessed through an LCA of the **ICB12L50F06POM1** device are given in Table 6 below.

Impacts were calculated using SimaPro Developer 10.2.0.0 software and the Ecoinvent 3.11 database.

ENVIRONMENTAL IMPACT								
Impact category	**Unit of measurement**	**PRODUCTION phase**		**DISTRIBUTION phase**	**INSTALLATION Phase**	**Use and Maintenance Phase**	**END OF LIFE phase**	**TOTAL**
		UPSTREAM module	**CORE module**	**DOWNSTREAM module**				
GWP - fossil	kg CO_2 eq	5,64E-01	2,86E-01	8,49E-02	1,48E-03	3,06E+01	1,30E-02	**3,16E+01**
GWP - biogenic	kg CO_2 eq	6,14E-03	-1,32E-03	5,95E-05	9,94E-05	3,15E-01	1,72E-02	**3,38E-01**
GWP Luluc (GWP land use and land use change)	kg CO_2 eq	1,06E-03	1,20E-04	1,38E-05	4,86E-08	3,05E-02	4,54E-06	**3,17E-02**
GWP TOT (Global Warming Potential)	kg CO_2 eq	5,71E-01	2,85E-01	8,50E-02	1,58E-03	3,10E+01	3,01E-02	**3,19E+01**
Ozone layer depletion	kg CFC_{11} eq	1,01E-07	7,12E-10	1,27E-09	1,69E-12	4,62E-07	3,16E-11	**5,65E-07**
Acidification	mol H^+eq	1,75E-02	1,67E-03	4,10E-04	7,00E-07	1,52E-01	1,86E-05	**1,72E-01**
Eutrophication, freshwater	kg P eq	1,23E-03	5,30E-05	2,70E-06	1,30E-08	1,53E-02	2,81E-06	**1,65E-02**
Eutrophication, marine	Kg N eq	1,20E-03	3,53E-04	1,58E-04	4,65E-06	2,57E-02	2,72E-05	**2,74E-02**
Eutrophication, terrestrial	mol N eq	1,48E-02	3,77E-03	1,72E-03	3,04E-06	2,53E-01	5,54E-05	**2,73E-01**
Photochemical oxidation	kg NMVOC eq	4,58E-03	9,99E-04	5,50E-04	9,88E-07	9,40E-02	2,11E-05	**1,00E-01**
Resource use, minerals and metals*	kg Sb eq	2,72E-04	2,17E-07	6,65E-08	2,70E-10	2,11E-04	1,91E-08	**4,84E-04**
Resource use, fossils*	MJ	7,59E+00	3,06E+00	1,12E+00	1,49E-03	4,54E+02	4,09E-02	**4,66E+02**
Water use*	m^3 depriv.	2,67E-01	3,61E-02	2,13E-03	-3,03E-04	2,82E+00	-3,59E-03	**3,12E+00**

* Disclaimer: The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator

ENVIRONMENTAL PRODUCT DECLARATION

ICB12L50F06POM1

USE OF RESOURCES								
Impact category	**Unit of measurement**	**PRODUCTION phase**		**DISTRIBUTION phase**	**INSTALLATION Phase**	**Use and Maintenance Phase**	**END OF LIFE phase**	**TOTAL**
		UPSTREAM module	**CORE module**	**DOWNSTREAM module**				
PENRE	MJ	7,45E+00	3,05E+00	1,12E+00	1,49E-03	4,54E+02	4,09E-02	**4,66E+02**
PENRM	MJ	1,40E-01	4,84E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	**1,45E-01**
PENRT	MJ	7,59E+00	3,06E+00	1,12E+00	1,49E-03	4,54E+02	4,09E-02	**4,66E+02**
PERE	MJ	1,01E+00	3,33E-01	7,31E-03	2,66E-05	6,86E+01	3,38E-03	**6,99E+01**
PERM	MJ	0,00E+00	3,93E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	**3,93E-03**
PERT	MJ	1,01E+00	3,37E-01	7,31E-03	2,66E-05	6,86E+01	3,38E-03	**6,99E+01**
FW (Net use of fresh water)	m^3	7,73E-03	8,64E-04	7,10E-05	-6,55E-06	1,54E-01	-7,69E-05	**1,63E-01**
MS (use of secondary materials)	kg	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**
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**

Legend: ***PENRE*** *= Use of non-renewable primary energy resources excluding non-renewable primary energy resources used as raw materials;* ***PENRM*** *= Use of non-renewable primary energy resources as raw materials;* ***PENRT*** *= Total use of non-renewable primary energy resources;* ***PERE*** *= Use of renewable primary energy resources excluding renewable primary energy resources used as raw materials;* ***PERM*** *= Use of renewable primary energy resources as raw materials;* ***PERT*** *= Total use of renewable primary energy resources.*

Table 7. Environmental impacts related to resource consumption for the ***ICB12L50F06POM1*** device.

ENVIRONMENTAL PRODUCT DECLARATION

ICB12L50F06POM1

WASTE PRODUCTION								
Impact category	Unit of measurement	PRODUCTION phase		DISTRIBUTION phase	INSTALLATION Phase	Use and Maintenance Phase	END OF LIFE phase	TOTAL
		UPSTREAM module	CORE module	DOWNSTREAM module				
Hazardous waste disposal (HWD)	kg	9,86E-04	2,84E-04	2,01E-05	1,12E-05	1,90E-02	7,54E-04	**2,11E-02**
Non-hazardous waste disposal (NHWD)	kg	8,63E-04	2,78E-04	1,23E-05	1,12E-05	1,72E-02	7,54E-04	**1,91E-02**
Radioactive waste disposal (RWD)	kg	1,35E-05	3,32E-06	1,20E-07	3,67E-10	9,33E-04	5,83E-08	**9,50E-04**
Materials for energy recovery (MER)	kg	0,00E+00	0,00E+00	2,27E-04	5,96E-06	0,00E+00	2,49E-02	**2,51E-02**
Materials for recycling (MFR)	kg	0,00E+00	0,00E+00	5,70E-05	6,71E-05	0,00E+00	0,00E+00	**1,24E-04**
Components for reuse (CRU)	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	**0,00E+00**
ETE (exported thermal energy)	MJ	0,00E+00	0,00E+00	6,47E-04	1,70E-05	0,00E+00	0,00E+00	**6,64E-04**
EEE (exported electricity energy)	MJ	0,00E+00	0,00E+00	3,16E-04	8,28E-06	0,00E+00	0,00E+00	**3,24E-04**

Table 8. Waste-related environmental impacts for the ***ICB12L50F06POM1*** device.

ENVIRONMENTAL PRODUCT DECLARATION
ICB12L50F06POM1

References

- ISO 14040:2006 Environmental management - Life cycle assessment - Principles and framework
- ISO 14044:2018 Environmental management - Life cycle assessment - Requirements and guidelines
- ISO 14020:2000 Environmental labels and declarations - General principles
- UNI EN ISO 14025:2010, Environmental labels and declarations - Type III environmental statements - Principles and procedures
- EN 50693:2019 Product category rules for life cycle assessments of electronic and electrical products and systems
- EPDItaly Program Regulations Rev. 7.1 of 05/09/2025
- Core-PCR: EPDITALY007 " Electronic and electrical product and systems" Rev. 3.1 of 12/11/2024
- LCA tool_data 2024_Gav Kunshan_2025 10 04 Rev. 1- ICB12L50F06POM1

Published by Carlo Gavazzi