Powering Business Worldwide	**Product Environmental Profile**	PEP ecopassport®

	**Systeem 55 compact distribution board pre-wired (Single Phase) with S-64 Enclosure**

Representative product	I-93V1400-HS-64 (1968213) Product Category: Other Equipment(Passive product - continuous operation)
Description of the product	The Eaton I-93V1400-HS-64 is a pre-wired compact distribution board from the Systeem 55 series. It features 9 groups of 16A with B-characteristic MCB, 3 x 40A, 30mA, 2-pole RCDs, and a 40A, 4-pole main switch. This board is designed for easy installation and is suitable for residential and small commercial electrical installations.
Homogeneous Environmental Families Covered	The PEP concerns following product offerings from Eaton Systeem 55 as mentioned below: 1968213 I-93V1400-HS-64 (Reference); 1978262 I-62G1400-HS-64; 1978260 I-42G1400-HS-64; 1968215 I-63V1400-HS-64; 1968217 I-62V1400-HS-64; 1978261 I-52G1400-HS-64;
Functional unit	**To provide electrical power distribution with rated current 40 A and rated voltage 230 V and rated conditional short-circuit current (*Icc*) 6 kA to a facility, while protecting people and premises from direct contact with live active parts and risk of fire or explosion against insulation defect with 4 poles, sensitivity 30 mA , differential protection type A and protect the installation from overloads and short circuits with rated current 16 A and rated voltage 230 V, rated breaking capacity 6 kA and tripping curve B ensuring the grouping of control, command and protection devices in a single enclosure or cabinet having the following dimensions 330 mm x 220 mm x 95 mm while protecting them against mechanical impacts IK06 and the penetration of solid objects and liquids IP30, with ability to establish, support and interrupt the rated current of 40A and voltage 230V according to the appropriate use scenario, and for the reference service life of the product of 20 years.**
Company information	Eaton Cooper Industries Romania SRL Zona Industriala Vest, Str III, Nr 12,310510, Arad, Romania (ISO 14001 standards.) Email: productstewardship-es@eaton.com

Constituent materials			
Reference product mass	3.67E+00kg (with packaging)		
Category pep material	**Material constituent**	**Mass (kg)**	**% contribution**
Metals	Steel	7.50E-01	20.4%
Plastics	Acrylonitrile Butadiene Styrene	7.08E-01	19.3%
Plastics	Polyamide 66	5.93E-01	16.1%
Metals	Copper	4.91E-01	13.4%
Others	Corrugated cardboard	3.71E-01	10.1%
Plastics	Polyamide 6	3.36E-01	9.2%
Others	Wood	1.00E-01	2.7%
Metals	Stainless Steel	9.65E-02	2.6%
Plastics	Polyether Sulfone	3.49E-02	1.0%
Metals	Zinc	3.14E-02	0.9%
Plastics	Polyphenylene Sulfide	3.00E-02	0.8%
Metals	Nickel	2.47E-02	0.7%
Plastics	Polybuthylene Terephtahalate	1.93E-02	0.5%
Plastics	Polyethylene low density granulate (PE-LD)	9.71E-03	0.3%
Plastics	Polyphenylene Ether (PPE)	1.67E-02	0.5%
Others	Miscellaneous	6.01E-02	1.6%
Total		3.67E+00	100.0%

Substance Assessment
The representative product is compliant with the EU-RoHS Directive (2011/65/EU) with exemption and the product contains Lead as Substance-of-Very-High-Concern (SVHC) on the Candidate List of the EU-REACH Regulation (1907/2006/EC).

Additional Environmental Information	
Manufacturing	The reference product is assembled at an Eaton plant in Arad, Romania holding management system certifications according to ISO 14001 standards.
Distribution	Eaton is committed to minimizing weight and volume of product and packaging with focus to optimize transport efficiency.
Installation	The installation process does not require any energy consumption and there is no waste other than the obsolete product packaging generated during this step.
Use	The product requires energy consumption during operation. Final Distribution Board is not maintenance-free during operation. At least once a year, all RCCBs must be tested by the building operator pressing the test button and switching the device back on.
End of life	The recyclability rate of the overall product is 40.82% if it is properly dismantled prior to shredding. The rate is calculated based on “WEEE recyclability and recoverability calculation method” (version V1, 20 Sep. 2008 presented to the French Agency for Environment and Energy Management: ADEME).

Environmental Impacts	
The calculation of the environmental impacts is the result of the Product's Life Cycle Analysis in accordance with ISO 14040/44, covering the entire lifecycle, i.e., "Cradle-to-Grave" including the following life cycle phases: production, distribution, installation, use and end of life. System modelling was carried out using the commercial LCA software EIME v6.2.5-6 with database version CODDE-2024-04 Updated on 2024-06-04 Indicators Set: PEF EF 3.1 (Compliance: PEP ed.4, EN15804+A2) v2.0	
Manufacturing Phase	The product is assembled as well as packed in Cooper Industries Romania SRL Zona Industriala Vest, Str III, Nr 12,310510, Arad, Romania. Energy model used: Romania, Europe
Distribution Phase	Distribution of the product in its packaging from the Eaton's last logistics platform to the installation place in Netherlands is considered as per PCR rules.
Installation Phase	Product is installed in Netherlands. Installation of product and treatment of packaging waste are considered in this phase. There is no energy consumption for reference product. Energy model used: Europe
Use Phase	Reference lifetime: 20 Years Usage profile: The product has power loss of 6.27 W at Use Scenario specified below as per PSR category – Other Equipment (Passive product - continuous operation) • Load rate: 30% of rated current • Use rate: 100% of reference lifetime. The Total losses are 819.19 kWh over the 20 years. Energy Model Used: Netherlands There is no replacement required for any component during reference service life time.
End of life Phase	Product disposed with WEEE guidelines. Energy model used: Europe
Module-D	Module D is calculated according to PCR-ed4-EN-2021 09 06 based on the materials recycled and the modelled end-of-life scenario. It expresses the net benefits and loads beyond the boundaries of the system and are not to be included in the life cycle totals.

Environmental Impact Indicators: Mandatory

Mandatory environmental impact indicators	Units	Sum	A1-A3 - Manufacturing	A4 - Distribution	A5 - Installation	B6 - Operational energy use	C1-C4 - End of life	D - Benefits and loads beyond the system boundaries
Climate change – total (GWP)	kg CO2 eq.	3.62E+02	2.59E+01	8.75E-01	1.28E+00	3.30E+02	3.54E+00	-5.41E+00
Climate change - fossil fuels (GWP-f)	kg CO2 eq.	3.61E+02	2.63E+01	8.75E-01	5.28E-01	3.29E+02	3.47E+00	-5.77E+00
Climate change – biogenics (GWP-b)	kg CO2 eq.	1.10E+00	-4.18E-01	0.00E+00	7.56E-01	7.06E-01	6.13E-02	3.60E-01
Climate change - land use and land use transformation (GWP-lu)	kg CO2 eq.	1.50E-05	1.37E-05	0.00E+00	0.00E+00	0.00E+00	1.27E-06	-1.10E-05
Ozone depletion (ODP)	kg eq. CFC-11	2.84E-05	2.69E-05	1.34E-09	6.95E-09	1.42E-06	1.00E-07	-4.97E-07
Acidification (AP)	mole of H+ eq.	1.48E+00	2.73E-01	5.55E-03	1.48E-03	1.18E+00	2.08E-02	-7.42E-02
Freshwater eutrophication (EP-fw)	kg P eq.	3.44E-03	1.22E-03	3.29E-07	6.50E-06	1.34E-04	2.09E-03	-7.64E-05
Marine aquatic eutrophication (EP-m)	kg of N eq.	2.02E-01	2.38E-02	2.60E-03	5.99E-04	1.72E-01	3.41E-03	-4.46E-03
Terrestrial eutrophication (EP-t)	mole of N eq.	3.15E+00	2.28E-01	2.85E-02	4.69E-03	2.85E+00	4.20E-02	-4.66E-02

Mandatory environmental impact indicators	Units	Sum	A1-A3 - Manufacturing	A4 - Distribution	A5 - Installation	B6 - Operational energy use	C1-C4 - End of life	D - Benefits and loads beyond the system boundaries
Photochemical ozone formation (POCP)	kg of NMVOC eq.	6.33E-01	7.98E-02	7.19E-03	1.09E-03	5.33E-01	1.15E-02	-1.79E-02
Depletion of abiotic resources – elements (ADPe)	kg eq. Sb	1.66E-02	1.65E-02	3.45E-08	1.98E-08	8.09E-05	6.68E-05	-6.10E-03
Depletion of abiotic resources - fossil fuels (ADP-f)	MJ	6.51E+03	6.84E+02	1.22E+01	4.67E+00	5.64E+03	1.74E+02	-1.83E+02
Water scarcity (WDP)	m3 of eq.. deprivation worldwide	4.08E+01	1.79E+01	3.33E-03	3.65E-02	2.04E+01	2.44E+00	-3.82E+00

Inventory Flow Indicators: Mandatory

Inventory flow indicators	Units	Sum	A1-A3 - Manufacturing	A4 - Distribution	A5 - Installation	B6 - Operational energy use	C1-C4 - End of life	D - Benefits and loads beyond the system boundaries
Use of renewable primary energy, excluding renewable primary energy resources used as raw materials	MJ	1.13E+03	1.55E+01	1.63E-02	5.30E-01	1.11E+03	2.86E+00	-1.23E+00
Use of renewable primary energy resources used as raw materials	MJ	9.57E+00	9.57E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-5.47E+00
Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)	MJ	1.14E+03	2.50E+01	1.63E-02	5.30E-01	1.11E+03	2.86E+00	-6.70E+00
Use of non-renewable primary energy, excluding non-renewable primary energy resources used as raw materials	MJ	6.45E+03	6.25E+02	1.22E+01	4.67E+00	5.64E+03	1.74E+02	-1.71E+02
Use of non-renewable primary energy resources used as raw materials	MJ	5.98E+01	5.98E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-1.21E+01
Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials)	MJ	6.51E+03	6.84E+02	1.22E+01	4.67E+00	5.64E+03	1.74E+02	-1.83E+02
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
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
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
Net use of fresh water	m3	9.62E-01	4.16E-01	7.74E-05	2.78E-03	4.86E-01	5.72E-02	-8.89E-02
Hazardous waste disposed of	kg	1.79E+02	1.55E+02	0.00E+00	5.35E-02	2.04E+01	3.70E+00	-5.63E+01
Non-hazardous waste disposed of	kg	4.88E+01	7.32E+00	3.07E-02	1.90E-01	4.04E+01	9.11E-01	-1.21E+00
Radioactive waste disposed of	kg	1.94E-02	2.10E-03	2.19E-05	3.17E-05	1.71E-02	1.87E-04	-5.50E-04
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
Materials for recycling	kg	2.30E+00	5.91E-01	0.00E+00	3.10E-01	0.00E+00	1.40E+00	0.00E+00
Materials for energy recovery	kg	4.43E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.43E-03	0.00E+00
Exported energy	MJ by energy vector	4.42E-02	3.25E-03	0.00E+00	4.10E-02	0.00E+00	0.00E+00	0.00E+00
Biogenic carbon content of the product	kg of C.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic carbon content of the associated packaging	kg of C.	1.99E-01	1.99E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Environmental Impact Indicators: Optional

Optional Environmental impact indicators	Units	Sum	A1-A3 - Manufacturing	A4 - Distribution	A5 - Installation	B6 - Operational energy use	C1-C4 - End of life	D - Benefits and loads beyond the system boundaries
Emission of fine particles	Incidence of diseases	1.06E-05	2.24E-06	4.51E-08	8.70E-09	8.14E-06	1.25E-07	-5.86E-07
Ionizing radiation, human health	kBq of U235 eq.	2.81E+02	2.06E+02	2.13E-03	3.40E-02	7.44E+01	5.83E-01	-8.40E+01
Ecotoxicity, fresh water	CTUe	9.86E+03	9.10E+03	5.74E-01	6.35E+00	6.87E+02	6.82E+01	-4.67E+03
Human toxicity, cancer effects	CTUh	4.13E-06	4.04E-06	1.54E-11	4.47E-08	4.07E-08	2.86E-09	-1.68E-06
Human toxicity, non-cancer effects	CTUh	3.37E-06	2.57E-06	2.98E-10	1.42E-09	6.16E-07	1.81E-07	-9.19E-07
Impacts related to land use/soil quality	-	2.24E+01	6.96E+00	0.00E+00	2.01E-03	9.51E+00	5.88E+00	-3.06E-02
Total use of primary energy during the life cycle	MJ	7.65E+03	7.09E+02	1.22E+01	5.20E+00	6.75E+03	1.77E+02	-1.90E+02

To evaluate the environmental impact of other product covered by this PEP, multiply the impact figures by

Factors for Manufacturing, Distribution, Installation, Use,End-of-Life, and Module-D Phase:

Part Number	Product Description	Phases	GWP (kg CO_2 eq.)	GWP-f (kg CO_2 eq.)	GWP-b (kg CO_2 eq.)	GWP-lu (kg CO_2 eq.)	ODP (kg CFC-11 eq.)	AP (mol H+ eq.)	EP-fw (kg P eq.)	EP-m (kg N eq.)	EP-t (mol N eq.)	POCP (kg NMVOC eq.)	ADP-e (kg Sb eq.)	ADP-f (MJ)	WDP (m^3 eq.)
1968213 (Reference)	I-93V1400-HS-64 (Reference)	All Phases	1.00												
1978262	I-62G1400-S-64	Manufacturing	0.80	0.80	1.06	0.70	0.68	0.81	0.89	0.82	0.83	0.82	0.90	0.80	0.79
		Distribution	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
		Installation	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Use	0.80	0.80	0.84	0.87	0.84	0.82	0.86	0.82	0.83	0.81	0.85	0.76	0.81
		End of Life	0.78	0.80	1.03	0.67	0.86	0.83	0.74	0.83	0.83	0.83	0.91	0.78	0.82
		Module D	0.74	0.74	1.10	0.70	0.67	0.75	0.83	0.75	0.77	0.76	0.90	0.72	0.73
1978260	I-42G1400-S-64	Manufacturing	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
		Distribution	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Installation	0.71	0.71	0.74	0.80	0.76	0.74	0.77	0.74	0.74	0.73	0.77	0.67	0.72
		Use	0.73	0.74	1.04	0.67	0.82	0.76	0.74	0.79	0.78	0.77	0.90	0.69	0.74
		End of Life	0.91	0.91	1.06	1.00	1.00	0.91	0.91	0.89	0.91	0.91	0.99	0.88	0.90
		Module D	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
1968215	I-63V1400-S-64	Manufacturing	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Distribution	0.88	0.88	0.85	0.89	0.88	0.88	0.87	0.88	0.88	0.88	0.87	0.86	0.86
		Installation	0.91	0.92	1.02	1.00	0.94	0.89	1.00	0.94	0.94	0.92	0.99	0.87	0.89
		Use	0.80	0.80	1.06	0.70	0.68	0.81	0.89	0.82	0.83	0.82	0.90	0.80	0.79
		End of Life	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
		Module D	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1968217	I-62V1400-S-64	Manufacturing	0.80	0.80	0.84	0.87	0.84	0.82	0.86	0.82	0.83	0.81	0.85	0.76	0.81
		Distribution	0.78	0.80	1.03	0.67	0.86	0.83	0.74	0.83	0.83	0.83	0.91	0.78	0.82

Part Number	Product Description	Phases	GWP (kg CO_2 eq.)	GWP-f (kg CO_2 eq.)	GWP-b (kg CO_2 eq.)	GWP-lu (kg CO_2 eq.)	ODP (kg CFC-11 eq.)	AP (mol H+ eq.)	EP-fw (kg P eq.)	EP-m (kg N eq.)	EP-t (mol N eq.)	POCP (kg NMVOC eq.)	ADP-e (kg Sb eq.)	ADP-f (MJ)	WDP (m^3 eq.)
		Installation	0.55	0.56	1.14	0.11	0.35	0.56	0.71	0.59	0.61	0.60	0.79	0.52	0.52
		Use	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65
		End of Life	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Module D	0.51	0.51	0.58	0.67	0.60	0.56	0.62	0.56	0.57	0.55	0.62	0.43	0.53
1978261	I-52G1400-S-64	Manufacturing	0.58	0.61	1.07	0.00	0.73	0.62	0.33	0.71	0.69	0.67	0.81	0.50	0.57
		Distribution	0.80	0.80	1.06	0.70	0.68	0.81	0.89	0.82	0.83	0.82	0.90	0.80	0.79
		Installation	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
		Use	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		End of Life	0.80	0.80	0.84	0.87	0.84	0.82	0.86	0.82	0.83	0.81	0.85	0.76	0.81
		Module D	0.78	0.80	1.03	0.67	0.86	0.83	0.74	0.83	0.83	0.83	0.91	0.78	0.82

Disclaimer

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Registration Number	EATO-00329-V01.01-EN	*Drafting rules*	PCR-ed4-EN-2021 09 06
Verifier accreditation Number	VH53	Supplemented by	PSR-0005-ed3.1-EN-2023 12 08
Date of issue	07-2025	*Information and reference documents*	www.pep-ecopassport.org
		Validity period	5 years
Independent verification of the declaration and data, in compliance with ISO 14025: 2006			
Internal	X	External	
The PCR review was conducted by a panel of experts chaired by Julie Orgelet (DDemain)			
PEPs are compliant with XP C08-100-1:2016 and EN 50693:2019 *The components of the present PEP may not be compared with components from any other program.*			
Document complies with ISO 14025: 2006 « Environmental labels and declarations. Type III environmental declarations »			