# **Product Environmental Profile**

Regulated Power Supply, 100-240V AC, 24V 3.8 A, single phase, Optimized

**Modicon ABLS Optimized Compact Regulated power supply** 





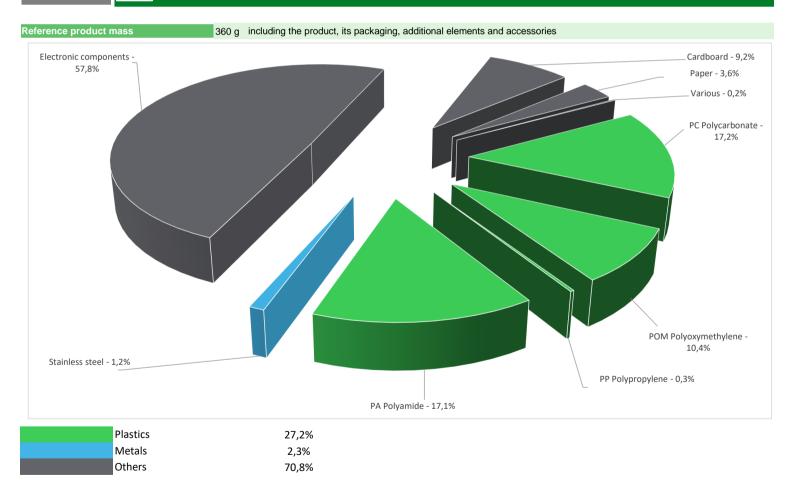


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## General information

Reference product	Regulated Power Supply, 100-240V AC, 24V 3.8 A, single phase, Optimized - ABLS1A24038
Description of the product	This product is a regulated switching power supply . It has a nominal input of 100V to 240VAC, a nominal output current of 3.8A at 24V DC, and a nominal output power of 91.2W. It supplies control circuits in industrial applications. This power supply has overload and short-circuit protection. It operates from -25°C to +70°C, and from 0 to 2,000 meters or 5,000 meters with derating.
Description of the range	The environmental impacts of this reference product are representative of the impacts of the other products of the range which are developed with a similar technology. The Modicon ABLS Optimized Compact Regulated Power Supply range delivers reliable 24 V DC power for industrial control systems, offering wide AC/DC input (100–240 V AC / 140–340 V DC), compact DIN-rail mounting, and protection features like overload, short-circuit, and overvoltage. Models range from 50 W to 480 W with high efficiency and low ripple. This range supplies control circuits in industrial applications. This power supply has overload and short-circuit protection.
Functional unit	To supply control circuits in industrial atmosphere up to 480W at 100% for 10 years.
Specifications are:	Nominal input voltage : 100 to 240 V AC single phase and phase to phase Rating power: 91.2 W Output voltage : 24 V DC Power supply output current : 3.8 A Nominal network frequency : 50 to 60 Hz Maximum leakage current : 1 mA 240 V AC

# Constituent materials



## **Substance assessment**

Details of ROHS and REACH substances information are available on the Schneider-Electric website <a href="https://www.se.com">https://www.se.com</a>

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### (19) Additional environmental information

End Of Life

Recyclability potential:

4%

The recyclability rate was calculated from the recycling rates of each material making up the product based on REEECY'LAB tool developed by Ecosystem, for components/materials not covered by the tool, data from the EIME database and the related PSR was taken. If no data was found a conservative assumption was used (0% recyclability).

### **Tenvironmental impacts**

Reference service life time	10 years										
Product category	Other equipments - Active product										
Life cycle of the product	The manufacturing, the distribution, the installation, the use and the end of life were taken into consideration in this study.										
Electricity consumption	The electricity consumed during manufacturing processes is considered for each part of the product individually, the final assembly generates a negligible consumption.										
Installation elements	Modicon ABLS Regulated power supply does not red	quire any installation operations									
Use scenario	This dissipated power is 13 W for the ABLS1A24038	3 product during 100 % uptime	over a 10-year service life.								
Time representativeness	The collected data are representative of the year 202	The collected data are representative of the year 2025.									
Technological representativeness	The Modules of Technologies such as material production, manufacturing processes and transport technology used in the PEP analysis (LCA EIME in the case) are similar and representative of the actual type of technologies used to make the product.										
Geographical	Final assembly site Use phase End-of-life										
representativeness	Cavite (Philippines)	China US	China US Europe								
Energy model used	[A1 - A3] Electricity Mix; Low voltage; 2020; China, CN	[A5] No energy used	[C1 - C4] Global, European and French datasets are used.								

Detailed results of the optional indicators mentioned in PCRed4 are available in the LCA report and on demand in a digital format - Country Customer Care Center - http://www.se.com/contact

Mandatory Indicators		Regulated Power Supply, 100-240V AC, 24V 3.8 A, single phase, Optimized - ABLS1A24							
Impact indicators	Unit	Total (without Module D)	[A1 - A3] - Manufacturing	[A4] - Distribution	[A5] - Installation	[B1 - B7] - Use	[C1 - C4] - End of life	[D] - Benefits and loads	
Contribution to climate change	kg CO2 eq	6,58E+02	1,05E+01	1,48E-01	0*	6,46E+02	9,36E-01	-1,18E-02	
Contribution to climate change-fossil	kg CO2 eq	6,54E+02	1,05E+01	1,48E-01	0*	6,43E+02	9,19E-01	-7,62E-03	
Contribution to climate change-biogenic	kg CO2 eq	3,62E+00	0*	0*	2,58E-03	3,65E+00	1,65E-02	-4,16E-03	
Contribution to climate change-land use and land use change	kg CO2 eq	9,07E-05	9,07E-05	0*	0*	0*	0*	0,00E+00	
Contribution to ozone depletion	kg CFC-11 eq	4,90E-06	1,48E-06	1,18E-07	0*	3,30E-06	3,13E-09	3,22E-10	
Contribution to acidification	mol H+ eq	4,17E+00	6,40E-02	6,97E-04	0*	4,10E+00	7,40E-04	-5,01E-05	
Contribution to eutrophication, freshwater	kg P eq	9,12E-04	4,47E-05	0*	0*	8,63E-04	4,74E-06	-5,38E-08	
Contribution to eutrophication, marine	kg N eq	4,69E-01	8,00E-03	3,23E-04	0*	4,60E-01	3,31E-04	-5,24E-06	
Contribution to eutrophication, terrestrial	mol N eq	5,67E+00	8,86E-02	3,51E-03	0*	5,58E+00	3,41E-03	-1,69E-05	
Contribution to photochemical ozone formation - human health	kg COVNM eq	1,55E+00	2,62E-02	1,10E-03	0*	1,52E+00	8,33E-04	9,24E-07	
Contribution to resource use, minerals and metals	kg Sb eq	5,38E-03	5,28E-03	0*	0*	1,03E-04	0*	-5,24E-06	
Contribution to resource use, fossils	MJ	1,33E+04	1,29E+02	1,86E+00	0*	1,32E+04	1,34E+00	-1,05E-01	
Contribution to water use	m3 eq	4,24E+01	3,56E+00	6,84E-03	0*	3,88E+01	4,92E-02	8,53E-03	

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Inventory flows Indicators	Regulated Power Supply, 100-240V AC, 24V 3.8 A, single phase, Optimized - ABLS1A24038									
Inventory flows		Unit	Total (without Module D)	[A1 - A3] - Manufacturing	[A4] - Distribution	[A5] - Installation	[B1 - B7] - Use	[C1 - C4] - End of life	[D] - Benefits and loads	
Contribution to renewable primary energy used as energy	MJ		1,70E+03	1,01E+01	0*	0*	1,69E+03	0*	3,54E-02	
Contribution to renewable primary energy used as raw material	MJ		9,37E-01	9,37E-01	0*	0*	0*	0*	1,25E-02	
Contribution to total renewable primary energy	MJ		1,71E+03	1,10E+01	0*	0*	1,69E+03	0*	4,78E-02	
Contribution to non renewable primary energy used as energy	MJ		1,33E+04	1,25E+02	1,86E+00	0*	1,32E+04	1,34E+00	-1,05E-01	
Contribution to non renewable primary energy used as raw material	MJ		4,32E+00	4,32E+00	0*	0*	0*	0*	0,00E+00	
Contribution to total non renewable primary energy	MJ		1,33E+04	1,29E+02	1,86E+00	0*	1,32E+04	1,34E+00	-1,05E-01	
Contribution to use of secondary material	kg		1,19E-02	1,19E-02	0*	0*	0*	0*	0,00E+00	
Contribution to use of renewable secondary fuels	MJ		0,00E+00	0*	0*	0*	0*	0*	0,00E+00	
Contribution to use of non renewable secondary fuels	MJ		0,00E+00	0*	0*	0*	0*	0*	0,00E+00	
Contribution to net use of fresh water	m³		9,87E-01	8,21E-02	1,59E-04	0*	9,04E-01	1,15E-03	1,99E-04	
Contribution to hazardous waste disposed	kg		3,73E+01	1,95E+01	0*	0*	1,76E+01	2,06E-01	-4,05E-01	
Contribution to non hazardous waste disposed	kg		1,13E+02	2,57E+00	0*	3,53E-02	1,10E+02	1,19E-01	-1,74E-02	
Contribution to radioactive waste disposed	kg		1,40E-02	1,30E-03	2,69E-05	0*	1,26E-02	5,51E-06	-7,00E-06	
Contribution to components for reuse	kg		0,00E+00	0*	0*	0*	0*	0*	0,00E+00	
Contribution to materials for recycling	kg		1,47E-02	2,11E-03	0*	0*	0*	1,26E-02	0,00E+00	
Contribution to materials for energy recovery	kg		0,00E+00	0*	0*	0*	0*	0*	0,00E+00	
Contribution to exported energy	MJ		5,71E-04	1,03E-05	0*	0*	0*	5,61E-04	0,00E+00	

<sup>\*</sup> represents less than 0.01% of the total life cycle of the reference flow

Contribution to biogenic carbon content of the product kg of C 0,00E+00

Contribution to biogenic carbon content of the associated packaging kg of C 1,00E-02

\* The calculation of the biogenic carbon is based on the Ademe for the Cardboard (28%), EN16485 for Wood (39,52%), and APESA/RECORD for Paper (37,8%)

Mandatory Indicators		Regu	ated Pov	wer Supply, 100	0-240V AC	, 24V 3.8	A, singl	le phase, Opt	imized -
Impact indicators	Unit	[B1 - B7] - Use	[B1]	[B2]	[B3]	[B4]	[B5]	[B6]	[B7]
Contribution to climate change	kg CO2 eq	6,46E+02	0*	0*	0*	0*	0*	6,46E+02	0*
Contribution to climate change-fossil	kg CO2 eq	6,43E+02	0*	0*	0*	0*	0*	6,43E+02	0*
Contribution to climate change-biogenic	kg CO2 eq	3,65E+00	0*	0*	0*	0*	0*	3,65E+00	0*
ontribution to climate change-land use and land use nange	kg CO2 eq	0*	0*	0*	0*	0*	0*	0*	0*
ontribution to ozone depletion	kg CFC-11 eq	3,30E-06	0*	0*	0*	0*	0*	3,30E-06	0*
ntribution to acidification	mol H+ eq	4,10E+00	0*	0*	0*	0*	0*	4,10E+00	0*
ntribution to eutrophication, freshwater	kg P eq	8,63E-04	0*	0*	0*	0*	0*	8,63E-04	0*
ntribution to eutrophication marine	kg N eq	4,60E-01	0*	0*	0*	0*	0*	4,60E-01	0*
ontribution to eutrophication, terrestrial	mol N eq	5,58E+00	0*	0*	0*	0*	0*	5,58E+00	0*
ntribution to photochemical ozone formation - human alth	kg COVNM eq	1,52E+00	0*	0*	0*	0*	0*	1,52E+00	0*
ontribution to resource use, minerals and metals	kg Sb eq	1,03E-04	0*	0*	0*	0*	0*	1,03E-04	0*
entribution to resource use, fossils	MJ	1,32E+04	0*	0*	0*	0*	0*	1,32E+04	0*
ontribution to water use	m3 eq	3,88E+01	0*	0*	0*	0*	0*	3,88E+01	0*

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Inventory flows Indicators			Regul	ated Pov	ver Supply, 100	)-240V AC	, 24V 3.8	A, singl	le phase, Opt	timized
Inventory flows		Unit	[B1 - B7] - Use	[B1]	[B2]	[B3]	[B4]	[B5]	[B6]	[B7]
ontribution to use of renewable primary energy excluding enewable primary energy used as raw material	MJ		1,69E+03	0*	0*	0*	0*	0*	1,69E+03	0*
ntribution to use of renewable primary energy resources d as raw material	MJ		0*	0*	0*	0*	0*	0*	0*	0*
ribution to total use of renewable primary energy urces	MJ		1,69E+03	0*	0*	0*	0*	0*	1,69E+03	0*
ribution to use of non renewable primary energy Iding non renewable primary energy used as raw Irial	MJ		1,32E+04	0*	0*	0*	0*	0*	1,32E+04	0*
ibution to use of non renewable primary energy rces used as raw material	MJ		0*	0*	0*	0*	0*	0*	0*	0*
oution to total use of non-renewable primary energy ces	MJ		1,32E+04	0*	0*	0*	0*	0*	1,32E+04	0*
ution to use of secondary material	kg		0*	0*	0*	0*	0*	0*	0*	0*
ition to use of renewable secondary fuels	MJ		0*	0*	0*	0*	0*	0*	0*	0*
ution to use of non renewable secondary fuels	MJ		0*	0*	0*	0*	0*	0*	0*	0*
ution to net use of freshwater	m³		9,04E-01	0*	0*	0*	0*	0*	9,04E-01	0*
oution to hazardous waste disposed	kg		1,76E+01	0*	0*	0*	0*	0*	1,76E+01	0*
ibution to non hazardous waste disposed	kg		1,10E+02	0*	0*	0*	0*	0*	1,10E+02	0*
bution to radioactive waste disposed	kg		1,26E-02	0*	0*	0*	0*	0*	1,26E-02	0*
oution to components for reuse	kg		0*	0*	0*	0*	0*	0*	0*	0*
ution to materials for recycling	kg		0*	0*	0*	0*	0*	0*	0*	0*
bution to materials for energy recovery	kg		0*	0*	0*	0*	0*	0*	0*	0*
ribution to exported energy	MJ		0*	0*	0*	0*	0*	0*	0*	0*

<sup>\*</sup> represents less than 0.01% of the total life cycle of the reference flow

Life cycle assessment performed with EIME version v6.2.5-6, database version 2024-01 in compliance with ISO14044, EF3.1 method is applied, for biogenic carbon storage, assessment methodology -1/1 is used

According to this environmental analysis, proportionality rules may be used to evaluate the impacts of other products of this range, ratios to apply can be provided upon request

Please note that the values given above are only valid within the context specified and cannot be used directly to draw up the environmental assessment of an installation.

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		Supplemented by	PSR-0005-ed3.1-EN-2023 12 08
Date of issue	23/10/2025	Information and reference documents Validity period	www.pep-ecopassport.org 5 years
Independent verification of the	declaration and data, in compliance with ISO 14021 : 2016		
Internal X	External		
The DOD was decreased and all	d have a small of a marke about a built Outslet (DDamain)		

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 or NF E38-500 :2022

The components of the present PEP may not be compared with components from any other program.

Document complies with ISO 14021:2016 "Environmental labels and declarations. Type II environmental declarations"

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