

Product Environmental Profile

Harmony XAL Control Stations

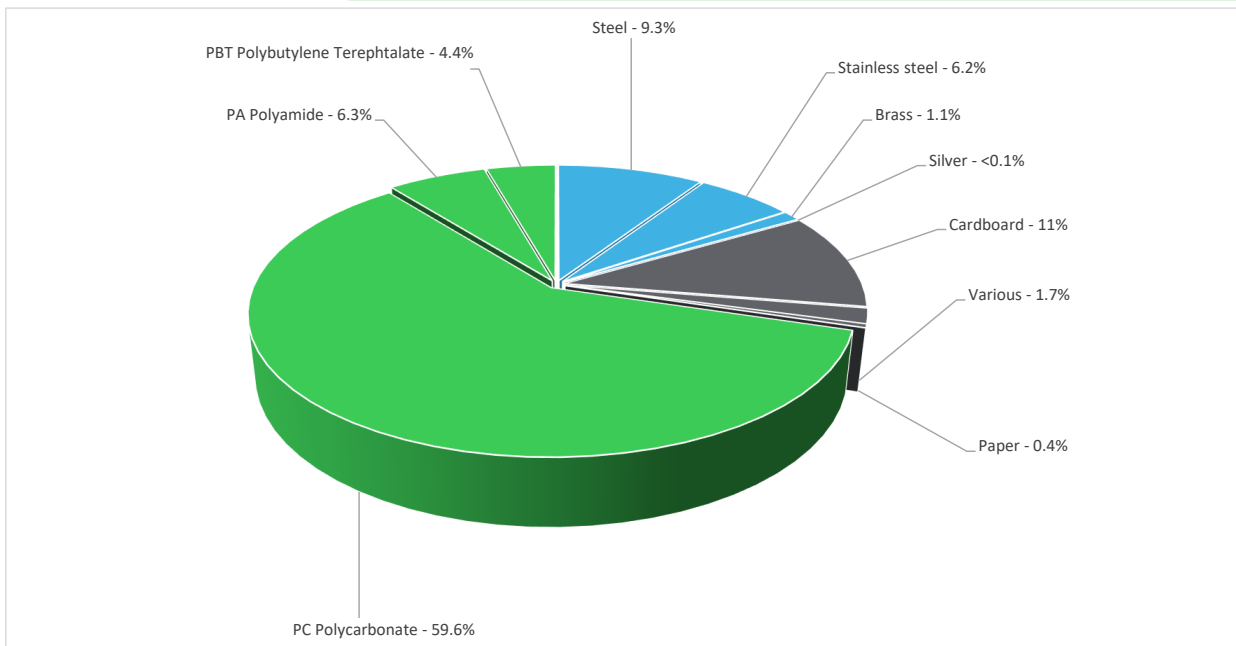


General information

Reference product	Harmony XAL Control Stations - XALD112
Description of the product	Harmony XAL control stations use 1 to 3 plastic bezel pushbuttons, switches and pilot lights of Harmony XB5 range which offers a wide choice of circular and square types of heads to cater most commonly encountered functions of start,stop or combined functions.
Description of the range	Single product
Functional unit	Harmony XALD dark grey control station is ideal to control stop operation in machines. This dark grey control station enables the machine builders to easily add the control and signalling functionality on their machines with the permanent modifications or damage to their machine body. It is designed for the simple and mass production machines, textiles, packaging, handling small lifting systems, control of garage doors, rolling shutters, smoke extraction vents. It is compatible with Harmony XB5 range push buttons, switches and pilot lights and product is adhering to international standards with lifetime of 20 years.
Specifications are:	<p>Mechanical durability : 10000000 cycles</p> <p>IP degree of protection : IP66, IP67, IP69, IP69K</p> <p>NEMA degree of protection : NEMA 13, NEMA 4X</p> <p>IK degree of protection : IK03 conforming to IEC 62262</p> <p>Standards :</p> <p>IEC 60947-5-1 IEC 60947-1 CSA C22.2 No 14 UL 508 JIS C8201-5-1 IEC 60947-5-5 IEC 60947-5-4 JIS C8201-1</p> <p>Vibration resistance : 5 gn (f= 12...500 Hz) conforming to IEC 60068-2-6</p> <p>Shock resistance :</p> <p>30 gn (duration = 18 ms) for half sine wave acceleration conforming to IEC 60068-2-27 50 gn (duration = 11 ms) for half sine wave acceleration conforming to IEC 60068-2-27</p>

Constituent materials

Reference product mass 147.25 g including the product, its packaging, additional elements and accessories



Plastics	70.3%
Metals	16.6%
Others	13.1%



Substance assessment

Details of ROHS and REACH substances information are available on the Schneider-Electric website

<https://www.se.com>



Additional environmental information

End Of Life	Recyclability potential:	18%	The recyclability rate was calculated from the recycling rates of each material making up the product based on REEECYLAB 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).
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Environmental impacts

Reference service life time	20 years		
Product category	Other equipments - Passive product - non-continuous operation		
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	The product does not require any installation operations		
Use scenario	The product operates in active mode for 30% of its lifetime and consuming 0.002 watts of power during this period with a 30% load rate over a lifespan of 20 years		
Time representativeness	The collected data are representative of the year 2024		
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 representativeness	Final assembly site	Use phase	
	France, Europe	Global	
Energy model used	[A1 - A3]	[A5]	[B6]
	Electricity Mix; High voltage; 2020; France, FR	No energy used	Electricity Mix; Low voltage; 2020; Global, GLO
			[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		Harmony XAL Control Stations - XALD112						
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	1.19E+00	7.74E-01	1.04E-01	6.13E-04	4.59E-03	3.05E-01	-2.77E-04
Contribution to climate change-fossil	kg CO2 eq	1.20E+00	7.87E-01	1.04E-01	6.13E-04	4.54E-03	3.04E-01	-2.77E-04
Contribution to climate change-biogenic	kg CO2 eq	-1.26E-02	-1.28E-02	0*	0*	0*	0*	-6.29E-07
Contribution to climate change-land use and land use change	kg CO2 eq	1.29E-04	1.29E-04	0*	0*	0*	0*	0.00E+00
Contribution to ozone depletion	kg CFC-11 eq	2.08E-07	1.15E-07	9.17E-08	2.50E-11	0*	1.51E-09	-5.59E-11
Contribution to acidification	mol H+ eq	4.17E-03	3.32E-03	4.45E-04	8.47E-06	2.35E-05	3.73E-04	-1.59E-06
Contribution to eutrophication, freshwater	kg P eq	4.95E-06	4.82E-06	1.22E-08	3.11E-09	7.08E-09	1.05E-07	-5.64E-10
Contribution to eutrophication, marine	kg N eq	1.03E-03	7.10E-04	2.04E-04	4.00E-06	2.82E-06	1.10E-04	-1.57E-07
Contribution to eutrophication, terrestrial	mol N eq	1.11E-02	7.58E-03	2.21E-03	4.07E-05	3.64E-05	1.27E-03	-1.81E-06
Contribution to photochemical ozone formation - human health	kg COVNM eq	3.60E-03	2.53E-03	7.28E-04	9.78E-06	9.22E-06	3.18E-04	-6.52E-07
Contribution to resource use, minerals and metals	kg Sb eq	5.27E-05	5.27E-05	0*	0*	0*	0*	-7.28E-08
Contribution to resource use, fossils	MJ	1.94E+01	1.71E+01	1.29E+00	7.20E-03	9.67E-02	8.88E-01	-5.62E-03
Contribution to water use	m3 eq	2.34E-01	1.99E-01	5.27E-03	1.49E-03	2.80E-04	2.77E-02	-1.21E-04

Inventory flows Indicators		Harmony XAL Control Stations - XALD112						
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	9.17E-01	8.74E-01	0*	0*	1.57E-02	2.78E-02	-4.31E-05
Contribution to renewable primary energy used as raw material	MJ	5.71E-02	5.71E-02	0*	0*	0*	0*	0.00E+00
Contribution to total renewable primary energy	MJ	9.75E-01	9.31E-01	0*	0*	1.57E-02	2.78E-02	-4.31E-05
Contribution to non renewable primary energy used as energy	MJ	1.59E+01	1.37E+01	1.29E+00	7.20E-03	9.67E-02	8.88E-01	-5.62E-03
Contribution to non renewable primary energy used as raw material	MJ	3.45E+00	3.45E+00	0*	0*	0*	0*	0.00E+00
Contribution to total non renewable primary energy	MJ	1.94E+01	1.71E+01	1.29E+00	7.20E-03	9.67E-02	8.88E-01	-5.62E-03
Contribution to use of secondary material	kg	1.51E-02	1.51E-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	5.48E-03	4.63E-03	1.23E-04	3.47E-05	6.53E-06	6.84E-04	-2.82E-06
Contribution to hazardous waste disposed	kg	1.30E+00	1.30E+00	0*	0*	0*	3.04E-04	-5.66E-03
Contribution to non hazardous waste disposed	kg	9.83E-01	8.27E-01	1.06E-04	1.63E-02	7.25E-04	1.39E-01	-1.85E-04
Contribution to radioactive waste disposed	kg	4.44E-04	4.18E-04	2.07E-05	0*	1.44E-07	5.43E-06	-8.43E-08
Contribution to components for reuse	kg	0.00E+00	0*	0*	0*	0*	0*	0.00E+00
Contribution to materials for recycling	kg	2.58E-02	2.67E-03	0*	0*	0*	2.32E-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	2.58E-04	2.89E-05	0*	0*	0*	2.29E-04	0.00E+00
* 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	4.60E-03						

* 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		Harmony XAL Control Stations - XALD112							
Impact indicators	Unit	[B1 - B7] - Use	[B1]	[B2]	[B3]	[B4]	[B5]	[B6]	[B7]
Contribution to climate change	kg CO2 eq	4.59E-03	0*	0*	0*	0*	0*	4.59E-03	0*
Contribution to climate change-fossil	kg CO2 eq	4.54E-03	0*	0*	0*	0*	0*	4.54E-03	0*
Contribution to climate change-biogenic	kg CO2 eq	0*	0*	0*	0*	0*	0*	0*	0*
Contribution to climate change-land use and land use change	kg CO2 eq	0*	0*	0*	0*	0*	0*	0*	0*
Contribution to ozone depletion	kg CFC-11 eq	0*	0*	0*	0*	0*	0*	0*	0*
Contribution to acidification	mol H+ eq	2.35E-05	0*	0*	0*	0*	0*	2.35E-05	0*
Contribution to eutrophication, freshwater	kg P eq	7.08E-09	0*	0*	0*	0*	0*	7.08E-09	0*
Contribution to eutrophication marine	kg N eq	2.82E-06	0*	0*	0*	0*	0*	2.82E-06	0*
Contribution to eutrophication, terrestrial	mol N eq	3.64E-05	0*	0*	0*	0*	0*	3.64E-05	0*
Contribution to photochemical ozone formation - human health	kg COVNM eq	9.22E-06	0*	0*	0*	0*	0*	9.22E-06	0*
Contribution to resource use, minerals and metals	kg Sb eq	0*	0*	0*	0*	0*	0*	0*	0*
Contribution to resource use, fossils	MJ	9.67E-02	0*	0*	0*	0*	0*	9.67E-02	0*
Contribution to water use	m3 eq	2.80E-04	0*	0*	0*	0*	0*	2.80E-04	0*

Inventory flows Indicators	Harmony XAL Control Stations - XALD112									
	Inventory flows	Unit	[B1 - B7] - Use	[B1]	[B2]	[B3]	[B4]	[B5]	[B6]	[B7]
Contribution to use of renewable primary energy excluding renewable primary energy used as raw material	MJ	1.57E-02	0*	0*	0*	0*	0*	0*	1.57E-02	0*
Contribution to use of renewable primary energy resources used as raw material	MJ	0*	0*	0*	0*	0*	0*	0*	0*	0*
Contribution to total use of renewable primary energy resources	MJ	1.57E-02	0*	0*	0*	0*	0*	0*	1.57E-02	0*
Contribution to use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	9.67E-02	0*	0*	0*	0*	0*	0*	9.67E-02	0*
Contribution to use of non renewable primary energy resources used as raw material	MJ	0*	0*	0*	0*	0*	0*	0*	0*	0*
Contribution to total use of non-renewable primary energy resources	MJ	9.67E-02	0*	0*	0*	0*	0*	0*	9.67E-02	0*
Contribution to use of secondary material	kg	0*	0*	0*	0*	0*	0*	0*	0*	0*
Contribution to use of renewable secondary fuels	MJ	0*	0*	0*	0*	0*	0*	0*	0*	0*
Contribution to use of non renewable secondary fuels	MJ	0*	0*	0*	0*	0*	0*	0*	0*	0*
Contribution to net use of freshwater	m³	6.53E-06	0*	0*	0*	0*	0*	0*	6.53E-06	0*
Contribution to hazardous waste disposed	kg	0*	0*	0*	0*	0*	0*	0*	0*	0*
Contribution to non hazardous waste disposed	kg	7.25E-04	0*	0*	0*	0*	0*	0*	7.25E-04	0*
Contribution to radioactive waste disposed	kg	1.44E-07	0*	0*	0*	0*	0*	0*	1.44E-07	0*
Contribution to components for reuse	kg	0*	0*	0*	0*	0*	0*	0*	0*	0*
Contribution to materials for recycling	kg	0*	0*	0*	0*	0*	0*	0*	0*	0*
Contribution to materials for energy recovery	kg	0*	0*	0*	0*	0*	0*	0*	0*	0*
Contribution to exported energy	MJ	0*	0*	0*	0*	0*	0*	0*	0*	0*

* represents less than 0.01% of the total life cycle of the reference flow

Life cycle assessment performed with EIME version v6.3.0.1-4, database version 2024-01 in compliance with ISO14044, EF3.1 method is applied, for biogenic carbon storage, assessment methodology -1/1 is used

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.

Registration number :	ENVPEP2506022_V1	Drafting rules	PEP-PCR-ed4-2021 09 06
Date of issue	06-2025	Supplemented by	PSR-0005-ed3.1-EN-2023 12 08
		Information and reference documents	www.pep-ecopassport.org
		Validity period	5 years
Independent verification of the declaration and data, in compliance with ISO 14021 : 2016			
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 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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