

Product Environmental Profile

Lexium SCARA

Lexium SCARA RS-P6 Portfolio





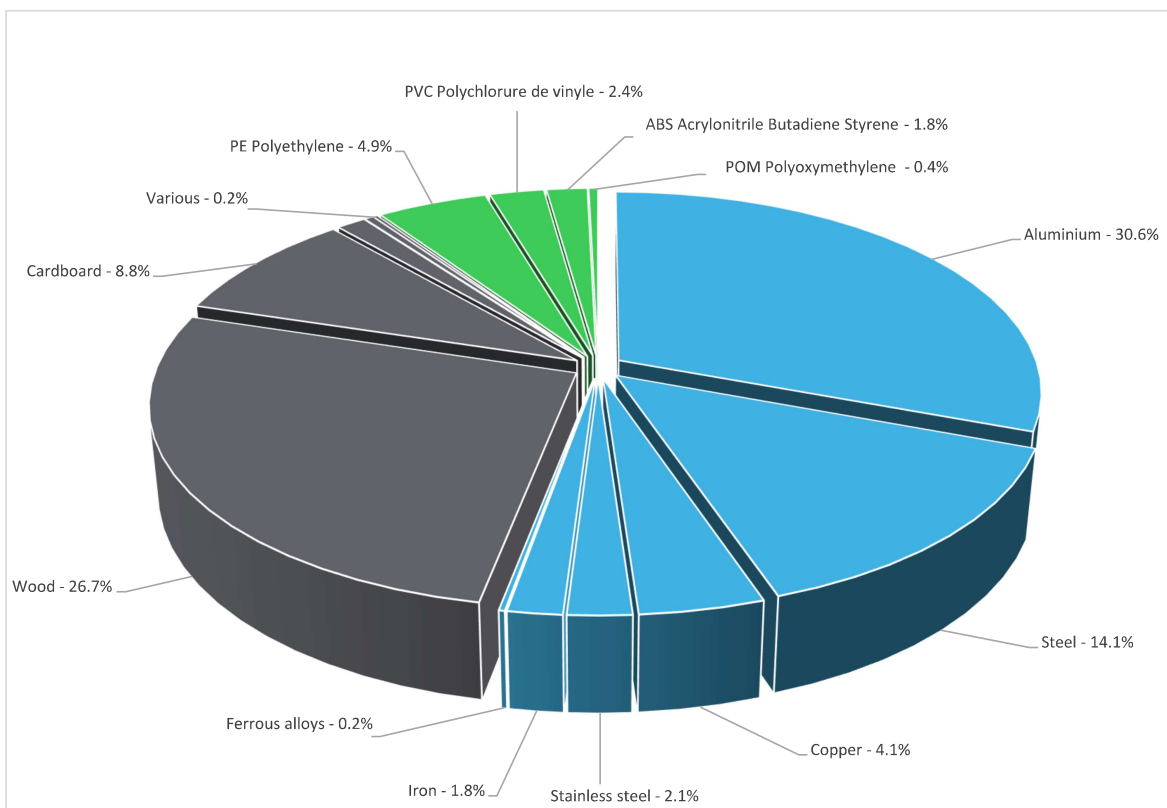
General information

Reference product	Lexium SCARA - LXMRSPO660300
Description of the product	<p>The Lexium SCARA is designed as a next generation compact, and fully distributed robot control system. It is designed to be used together with Schneider Electric motion controllers from the Lexium Pro2 range. It provides integrated drives compliant with sercos automation bus. Integrated air tubes and IO wiring simplifies the installation of end of arm tools.</p> <p>Typically, this type of robot is used for mounting and pick and place operations in material handling, parts loading/unloading in 3C, food, electronics, and packaging industries. Available in 500 mm, 600 mm, and 700 mm arm reach for easy adaptation to different user applications.</p> <ul style="list-style-type: none"> • The robot is IP20 qualified. With the installation of the additional Z axis bellows and using the IP65 cable kit, it becomes IP65 qualified
Description of the range	<p>The products of the range are: The Lexium SCARA is mainly composed of a base, a mechanical arm 1 (inner link), a mechanical arm 2 (outer link), an upper control cabinet, a spline shaft, a tool flange, and a corrugated pipe (including cables).</p> <p>The interface panel, which is located at the back of the Lexium SCARA base, has connectors for power supply, sercos communication ports, and status display light. Six through-holes are provided for robot mounting, and two dial-pin holes are provided to position the robot accurately</p> <p>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.</p>
Functional unit	To pick and place operations in material handling, parts loading/unloading with an active mode 50% of the time with the power use of 200 W and in stand-by mode 30% of the time with the power use of 25 W and off mode 20% of the time with power use 0 W for 10 years.
Specifications are:	<p>Technical Data:</p> <p>Max. pay load: 6 Kg</p> <p>Max speed: 7750mm/s</p> <p>Communication: Sercos</p> <p>IP65 Qualified</p>



Constituent materials

Reference product mass	49,3 Kg	including the product, its packaging and additional elements and accessories
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Plastics	9.50%
Metals	52.90%
Others	37.60%



Substance assessment

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

<https://www.se.com/ww/en/work/support/green-premium/>



Additional environmental information

End Of Life	Recyclability potential:	88%	The recyclability rate was calculated from the recycling rates of each material making up the product with the exception of data using the ESR database. For materials or components using the ESR database or the absence of data the conservative hypothesis "0% recyclability" was used.
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Environmental impacts

Reference service life time	10 years			
Product category	Other equipments - Active product			
Installation elements	The product does not require any installation operations			
Use scenario	The product is in active mode 50% of the time with the power use of 200 W and in stand-by mode 30% of the time with the power use of 25 W and off mode 20% of the time with the power use of 0 W for 10 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 manufacture the product and provide it to the customers.			
Geographical representativeness	Europe			
Energy model used	[A1 - A3]	[A5]	[B6]	[C1 - C4]
	Electricity Mix; High voltage; 2018; China, CN	Electricity Mix; Low voltage; 2018; Europe, EU-27	Electricity Mix; Low voltage; 2018; Europe, EU-27	Electricity Mix; Low voltage; 2018; Europe, EU-27

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.schneider-electric.com/contact>

Mandatory Indicators		Lexium SCARA - LXMRSPP0660300						
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	4.40E+03	3.96E+02	7.29E+01	2.41E+01	3.86E+03	4.80E+01	-2.18E+02
Contribution to climate change-fossil	kg CO2 eq	4.38E+03	3.87E+02	7.29E+01	1.74E+01	3.85E+03	4.76E+01	-2.28E+02
Contribution to climate change-biogenic	kg CO2 eq	2.08E+01	8.49E+00	0*	6.72E+00	5.15E+00	4.08E-01	1.03E+01
Contribution to climate change-land use and land use change	kg CO2 eq	2.66E-05	2.05E-05	0*	0*	0*	6.88E-06	0.00E+00
Contribution to ozone depletion	kg CFC-11 eq	1.33E-04	5.13E-05	6.40E-05	1.30E-07	1.65E-05	7.38E-07	-3.20E-05
Contribution to acidification	mol H+ eq	2.59E+01	3.35E+00	2.99E-01	2.15E-02	2.20E+01	1.88E-01	-1.78E+00
Contribution to eutrophication, freshwater	kg (PO4) ³⁻ eq	3.04E-02	6.57E-03	8.49E-06	1.91E-04	1.06E-02	1.30E-02	-8.42E-04
Contribution to eutrophication marine	kg N eq	3.12E+00	4.30E-01	1.36E-01	8.88E-03	2.50E+00	4.05E-02	-1.18E-01
Contribution to eutrophication, terrestrial	mol N eq	4.42E+01	4.62E+00	1.48E+00	7.23E-02	3.76E+01	4.57E-01	-1.33E+00
Contribution to photochemical ozone formation - human health	kg COVNM eq	1.01E+01	1.40E+00	4.93E-01	1.92E-02	8.03E+00	1.37E-01	-4.24E-01
Contribution to resource use, minerals and metals	kg Sb eq	1.76E-02	1.69E-02	0*	0*	2.80E-04	4.12E-04	-1.29E-02
Contribution to resource use, fossils	MJ	1.08E+05	6.90E+03	9.03E+02	6.09E+01	9.83E+04	2.08E+03	-3.35E+03
Contribution to water use	m3 eq	4.06E+02	2.41E+02	3.68E+00	3.59E+00	1.37E+02	2.12E+01	-6.45E+01

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 use of renewable primary energy excluding renewable primary energy used as raw material	MJ	1.93E+04	3.24E+02	0*	6.52E+01	1.89E+04	1.02E+01	-3.42E+02
Contribution to use of renewable primary energy resources used as raw material	MJ	4.08E+01	4.08E+01	0*	0*	0*	0*	2.05E+02
Contribution to total use of renewable primary energy resources	MJ	1.93E+04	3.65E+02	0*	6.52E+01	1.89E+04	1.02E+01	-1.37E+02
Contribution to use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	1.08E+05	6.70E+03	9.03E+02	6.09E+01	9.83E+04	2.08E+03	-3.34E+03
Contribution to use of non renewable primary energy resources used as raw material	MJ	1.99E+02	1.99E+02	0*	0*	0*	0*	-1.13E+01
Contribution to total use of non-renewable primary energy resources	MJ	1.08E+05	6.90E+03	9.03E+02	6.09E+01	9.83E+04	2.08E+03	-3.35E+03
Contribution to use of secondary material	kg	2.34E+01	2.34E+01	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 freshwater	m³	9.46E+00	5.62E+00	8.57E-02	8.36E-02	3.18E+00	4.93E-01	-1.50E+00
Contribution to hazardous waste disposed	kg	2.20E+02	1.47E+02	6.01E-02	1.23E-01	7.21E+01	8.32E-01	-1.06E+03
Contribution to non hazardous waste disposed	kg	1.06E+03	4.82E+02	0*	1.36E+01	5.55E+02	7.00E+00	-3.73E+02
Contribution to radioactive waste disposed	kg	5.01E-01	3.68E-01	1.44E-02	7.56E-04	1.16E-01	1.14E-03	-2.87E-01
Contribution to components for reuse	kg	0.00E+00	0*	0*	0*	0*	0*	0.00E+00
Contribution to materials for recycling	kg	3.67E+01	6.23E+00	0*	5.04E+00	0*	2.54E+01	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	6.13E+00	1.36E+00	0*	4.52E+00	0*	2.51E-01	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 de C	0.00E+00						
Contribution to biogenic carbon content of the associated packaging	kg de C	6.44E+00						

Mandatory Indicators		Lexium SCARA - LXMRSPO660300							
Impact indicators	Unit	[B1 - B7] - Use	[B1]	[B2]	[B3]	[B4]	[B5]	[B6]	[B7]
Contribution to climate change	kg CO2 eq	3.86E+03	0*	0*	0*	0*	0*	3.86E+03	0*
Contribution to climate change-fossil	kg CO2 eq	3.85E+03	0*	0*	0*	0*	0*	3.85E+03	0*
Contribution to climate change-biogenic	kg CO2 eq	5.15E+00	0*	0*	0*	0*	0*	5.15E+00	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	1.65E-05	0*	0*	0*	0*	0*	1.65E-05	0*
Contribution to acidification	mol H+ eq	2.20E+01	0*	0*	0*	0*	0*	2.20E+01	0*
Contribution to eutrophication, freshwater	kg (PO4) ³⁻ eq	1.06E-02	0*	0*	0*	0*	0*	1.06E-02	0*
Contribution to eutrophication marine	kg N eq	2.50E+00	0*	0*	0*	0*	0*	2.50E+00	0*
Contribution to eutrophication, terrestrial	mol N eq	3.76E+01	0*	0*	0*	0*	0*	3.76E+01	0*
Contribution to photochemical ozone formation - human health	kg COVNM eq	8.03E+00	0*	0*	0*	0*	0*	8.03E+00	0*
Contribution to resource use, minerals and metals	kg Sb eq	2.80E-04	0*	0*	0*	0*	0*	2.80E-04	0*
Contribution to resource use, fossils	MJ	9.83E+04	0*	0*	0*	0*	0*	9.83E+04	0*
Contribution to water use	m3 eq	1.37E+02	0*	0*	0*	0*	0*	1.37E+02	0*

Inventory flows Indicators		Lexium SCARA - LXMSP0660300							
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	1.89E+04	0*	0*	0*	0*	0*	1.89E+04	0*
Contribution to use of renewable primary energy resources used as raw material	MJ	0*	0*	0*	0*	0*	0*	0*	0*
Contribution to total use of renewable primary energy resources	MJ	1.89E+04	0*	0*	0*	0*	0*	1.89E+04	0*
Contribution to use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	9.83E+04	0*	0*	0*	0*	0*	9.83E+04	0*
Contribution to use of non renewable primary energy resources used as raw material	MJ	0*	0*	0*	0*	0*	0*	0*	0*
Contribution to total use of non-renewable primary energy resources	MJ	9.83E+04	0*	0*	0*	0*	0*	9.83E+04	0*
Contribution to use of secondary material	kg	0*	0*	0*	0*	0*	0*	0*	0*
Contribution to use of renewable secondary fuels	MJ	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*
Contribution to net use of freshwater	m³	3.18E+00	0*	0*	0*	0*	0*	3.18E+00	0*
Contribution to hazardous waste disposed	kg	7.21E+01	0*	0*	0*	0*	0*	7.21E+01	0*
Contribution to non hazardous waste disposed	kg	5.55E+02	0*	0*	0*	0*	0*	5.55E+02	0*
Contribution to radioactive waste disposed	kg	1.16E-01	0*	0*	0*	0*	0*	1.16E-01	0*
Contribution to components for reuse	kg	0*	0*	0*	0*	0*	0*	0*	0*
Contribution to materials for recycling	kg	0*	0*	0*	0*	0*	0*	0*	0*
Contribution to materials for energy recovery	kg	0*	0*	0*	0*	0*	0*	0*	0*
Contribution to exported energy	MJ	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 v6.1, database version 2023-02 in compliance with ISO14044, EF 3.0 method is applied, for biogenic carbon storage, assessment methodology 0/0 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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Date of issue	07-2024	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 <input checked="" type="checkbox"/> External <input type="checkbox"/>			
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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