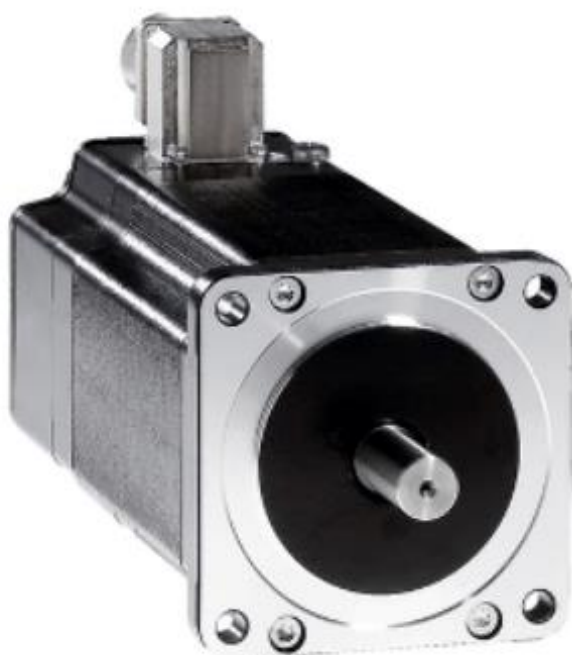


# Product Environmental Profile

## Lexium BRS Stepper Motor





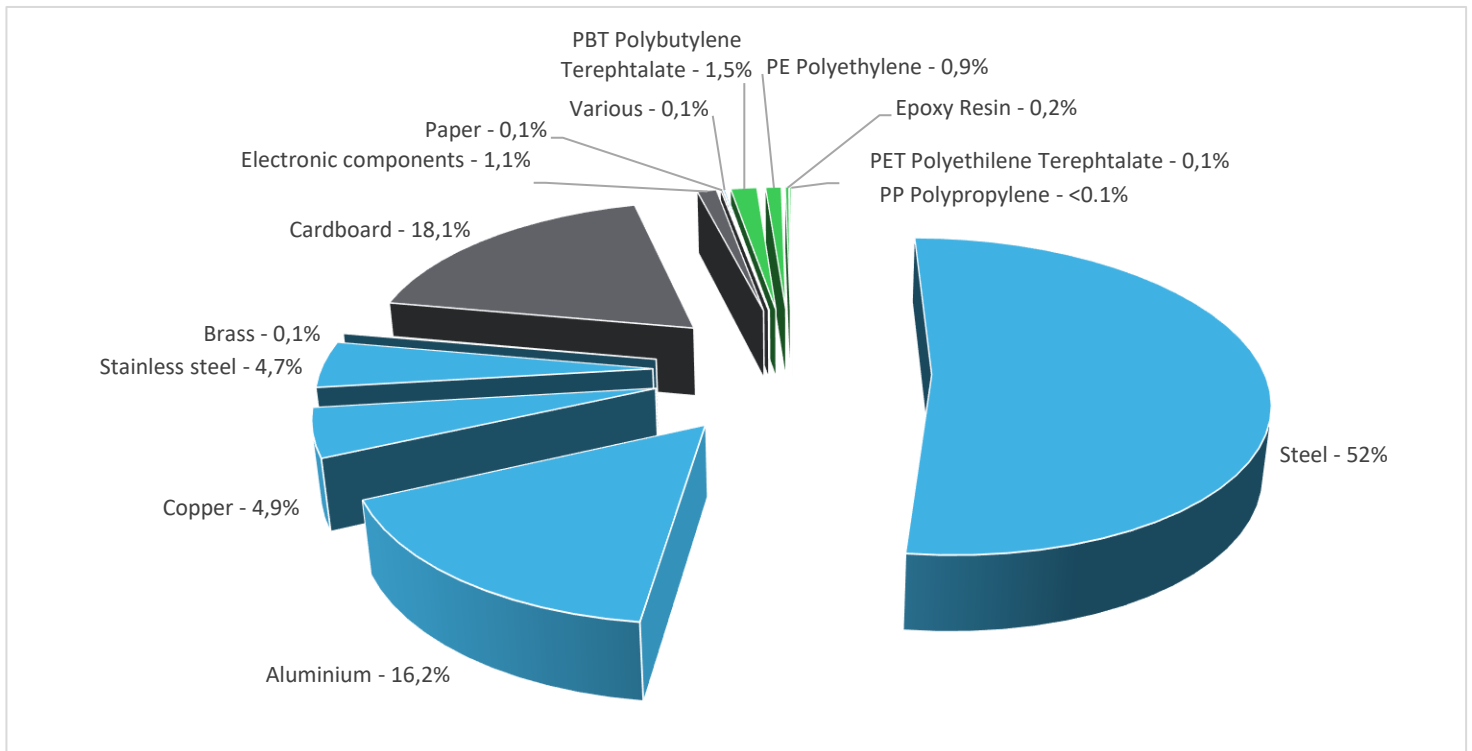
## General information

<b>Representative product</b>	Lexium BRS Stepper Motor - BRS39BW460ABA
<b>Description of the product</b>	The Lexium BRS Stepper Motor offer provides, in combination with the stepper drive offer SD3, to our customer a 3-phase stepper motor product range starting from holding torque 1,5 Nm to 16,5 Nm. One important feature is the synchronism movement of the motor.
<b>Description of the range</b>	This range consists of: BRS368, BRS369, BRS39A, BRS39B, BRS397, BRS3AC, BRS3AD from 1,5 Nm to 16,5 Nm, from 2540 g and 12650 g and from 51 W up to 130 W.  The environmental impacts of this referenced product are representative of the impacts of the other products of the range which are developed with a similar technology.
<b>Functional unit</b>	Coordinate and synchronize motion control up to 80W during 10 years and a 70% use rate.



## Constituent materials

**Reference product mass** 5277 g including the product, its packaging and additional elements and accessories



Plastics	2,7%
Metals	77,9%
Others	19,4%



## Substance assessment

Products of this range are designed in conformity with the requirements of the RoHS directive (European Directive 2011/65/EU of 2 January 2013, amended in March 2015, 2015/863/EU and in November 2017, 2017/2102/EU) and do not contain, or only contain in the authorised proportions, lead, mercury, cadmium, hexavalent chromium or flame retardants (polybrominated biphenyls - PBB, polybrominated diphenyl ethers – PBDE), Bis (2-ethylhexyl)phthalate - DEHP, Benzyl butyl phthalate– BBP, Dibutyl phthalate - DBP, Diisobutyl phthalate - DIBP) as mentioned in the Directive.

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

<http://www2.schneider-electric.com/sites/corporate/en/products-services/green-premium/green-premium.page>

## Additional environmental information

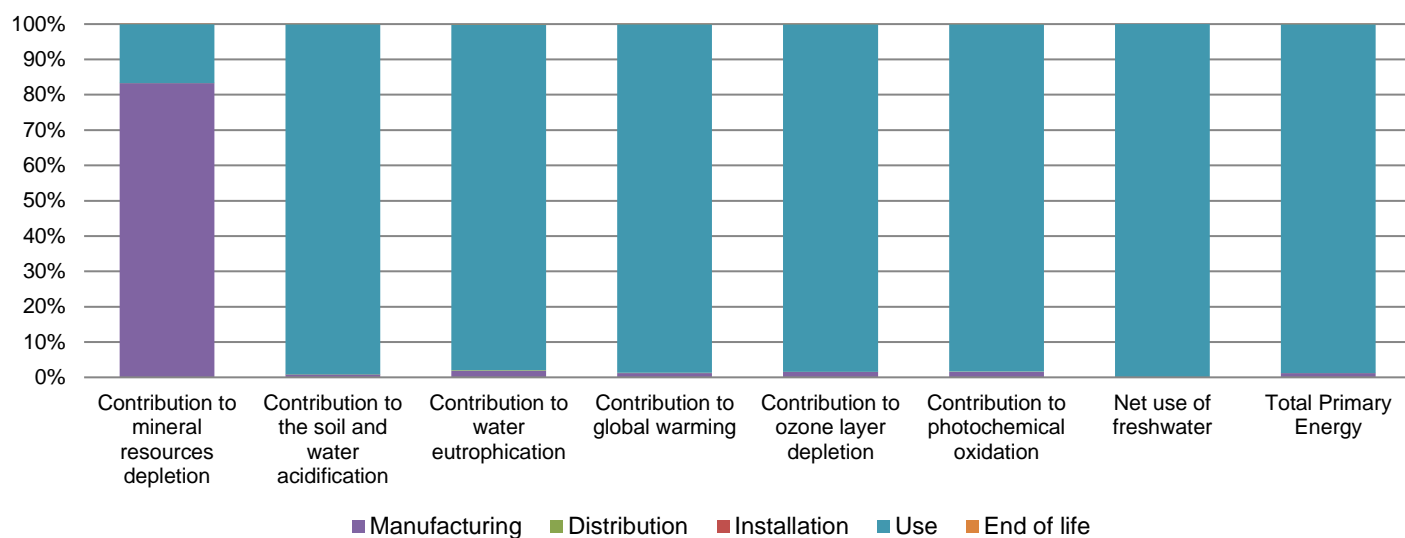
The Lexium BRS Stepper Motor presents the following relevant environmental aspects

<b>Manufacturing</b>	Manufactured at a Schneider Electric production site ISO14001 certified
<b>Distribution</b>	Weight and volume of the packaging optimized, based on the European Union's packaging directive Packaging weight is 994,4 g, consisting of cardboard (96%), PE film (3,5%) and paper (0,5%)
<b>Installation</b>	BRS39BW460ABA does not require any installation operations.
<b>Use</b>	The product does not require special maintenance operations.
<b>End of life</b>	End of life optimized to decrease the amount of waste and allow recovery of the product components and materials  No special end-of-life treatment required. According to countries' practices this product can enter the usual end-of-life treatment process.  Recyclability potential: <b>91%</b> Based on "ECO'DEEE recyclability and recoverability calculation method" (version V1, 20 Sep. 2008 presented to the French Agency for Environment and Energy Management: ADEME).

## Environmental impacts

<b>Reference life time</b>	10 years			
<b>Installation elements</b>	No special components needed			
<b>Use scenario</b>	The electrical power consumed by the Lexium BRS Stepper Motor range is between 51 W and 130 W. It is 80 W in active mode 40% of the time and 15 W in standby mode 30% of the time for the referenced BRS39BW460ABA.			
<b>Geographical representativeness</b>	Europe			
<b>Technological representativeness</b>	The Lexium BRS Stepper Motor offer provides, in combination with the stepper drive offer SD3, to our customer a 3-phase stepper motor product range starting from holding torque 1,5 Nm to 16,5 Nm. One important feature is the synchronism movement of the motor.			
<b>Energy model used</b>	<b>Manufacturing</b>	<b>Installation</b>	<b>Use</b>	<b>End of life</b>
	Energy model used: Germany	Electricity grid mix; AC; consumption mix, at consumer; < 1kV; EU-27	Electricity grid mix; AC; consumption mix, at consumer; < 1kV; EU-27	Electricity grid mix; AC; consumption mix, at consumer; < 1kV; EU-27

Compulsory indicators		Lexium BRS Stepper Motor - BRS39BW460ABA					
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to mineral resources depletion	kg Sb eq	8,15E-04	6,78E-04	0*	0*	1,36E-04	0*
Contribution to the soil and water acidification	kg SO <sub>2</sub> eq	6,59E+00	5,53E-02	3,11E-03	0*	6,53E+00	1,52E-03
Contribution to water eutrophication	kg PO <sub>4</sub> <sup>3-</sup> eq	4,03E-01	7,50E-03	7,16E-04	0*	3,95E-01	3,60E-04
Contribution to global warming	kg CO <sub>2</sub> eq	1,59E+03	1,93E+01	6,81E-01	0*	1,57E+03	5,04E-01
Contribution to ozone layer depletion	kg CFC11 eq	1,04E-04	1,67E-06	0*	0*	1,02E-04	3,17E-08
Contribution to photochemical oxidation	kg C <sub>2</sub> H <sub>4</sub> eq	3,65E-01	5,82E-03	2,22E-04	0*	3,59E-01	1,64E-04
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Net use of freshwater	m3	5,68E+03	0*	0*	0*	5,68E+03	0*
Total Primary Energy	MJ	3,17E+04	3,73E+02	9,63E+00	0*	3,13E+04	7,65E+00



Optional indicators		Lexium BRS Stepper Motor - BRS39BW460ABA					
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to fossil resources depletion	MJ	1,80E+04	1,81E+02	9,57E+00	0*	1,78E+04	6,14E+00
Contribution to air pollution	m <sup>3</sup>	7,16E+04	4,10E+03	2,90E+01	0*	6,74E+04	5,40E+01
Contribution to water pollution	m <sup>3</sup>	6,59E+04	1,04E+03	1,12E+02	0*	6,46E+04	5,80E+01
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Use of secondary material	kg	1,68E+00	1,68E+00	0*	0*	0*	0*
Total use of renewable primary energy resources	MJ	4,00E+03	2,48E+01	0*	0*	3,98E+03	0*
Total use of non-renewable primary energy resources	MJ	2,77E+04	3,48E+02	9,61E+00	0*	2,73E+04	7,64E+00
Use of renewable primary energy excluding renewable primary energy used as raw material	MJ	3,98E+03	5,89E+00	0*	0*	3,98E+03	0*
Use of renewable primary energy resources used as raw material	MJ	1,90E+01	1,90E+01	0*	0*	0*	0*
Use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	2,77E+04	3,42E+02	9,61E+00	0*	2,73E+04	7,64E+00
Use of non renewable primary energy resources used as raw material	MJ	6,59E+00	6,59E+00	0*	0*	0*	0*
Use of non renewable secondary fuels	MJ	0,00E+00	0*	0*	0*	0*	0*
Use of renewable secondary fuels	MJ	0,00E+00	0*	0*	0*	0*	0*
Waste categories	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Hazardous waste disposed	kg	5,81E+01	5,15E+01	0*	0*	8,17E-01	5,78E+00
Non hazardous waste disposed	kg	5,86E+03	1,61E+01	0*	0*	5,84E+03	0*
Radioactive waste disposed	kg	3,91E+00	8,38E-03	0*	0*	3,90E+00	0*
Other environmental information	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Materials for recycling	kg	5,31E+00	5,15E-01	0*	0*	0*	4,79E+00
Components for reuse	kg	0,00E+00	0*	0*	0*	0*	0*
Materials for energy recovery	kg	4,30E-03	0*	0*	0*	0*	4,30E-03
Exported Energy	MJ	2,85E-04	2,85E-04	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 EIME v5.8.1, database version 2016-11 in compliance with ISO14044.

The use phase is the life cycle phase which has the greatest impact on the majority of environmental indicators (based on compulsory indicators).

According to this environmental analysis, proportionality rules may be used to evaluate the impacts of other products of this range.

Depending on the impact analysis, the environmental indicators (without "contribution to Mineral Resources Depletion") of other products in this family may be proportional extrapolated by energy consumption values. For mineral Resources Depletion, 80% is caused by manufacturing and 20% is caused by the use phase therefore 80% of the impact may be proportional extrapolated by mass of the product and 20% may be proportional extrapolated by energy consumption values.

*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.*

<i>Registration number</i>	ENVPEP111101EN_V2	<i>Drafting rules</i>	PCR-ed3-EN-2015 04 02
<i>Date of issue</i>	07/2020		
<i>Validity period</i>	5 years	<i>Information and reference documents</i>	<a href="http://www.pep-ecopassport.org">www.pep-ecopassport.org</a>
<i>Independent verification of the declaration and data</i>			
Internal	X	External	
<i>The elements of the present PEP cannot be compared with elements from another program.</i>			
<i>Document in compliance with ISO 14021:2016 « Environmental labels and declarations - Self-declared environmental claims (Type II environmental labelling) »</i>			

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ENVPEP111101EN\_V2

Published by Schneider Electric

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07/2020