

Product Environmental Profile

Solar radio motor for rolling shutters

Oximo® solar io & Sunea® 40 solar io



Reference product



> Reference product

Oximo 40 IO 10/12

Ref **2009562**

> Functional unit

Ensure the closing and opening action by performing 14 000 operating cycles, and a reference service life of 15 years, with a torque of 10 Nm, on a length of 2 meters, corresponding to 16 winding turns per half-cycle, with a tube diameter of 40 mm. This product is a motor + battery + autonomous photovoltaic panel kit intended for the motorization of outdoor roller shutters.

> References covered

OXIMO SOLAR io 3/23 KIT, ref 1241047	OXIMO BATT W/O CASING X20 10L, ref 9026432
OXIMO SOLAR io 6/18 KIT, ref 1241048	OXIMO SOLAR PANEL X20 10L, ref 9026433
OXIMO SOLAR io 10/12 KIT, ref 1241049	SUNEA 40 SOLAR io 6/18 1M BAR, ref 1241882
OXIMO SOLAR io 3/23+AD KIT, ref 1241050	SUNEA 40 SOLAR io 10/12 1M BAR, ref 1241883
OXIMO SOLAR io 6/18+AD KIT, ref 1241051	SUNEA 40 SOLAR io 6/18 1MP100, ref 1241884
OXIMO SOLAR io 10/12+AD KIT, ref 1241052	SUNEA 40 SOLAR io 10/12 1MP100, ref 1241885
OXIMO SOLAR io 6/18 KIT 10L, ref 1241058	SUNEA 40 SOLAR io 6/18 BAR, ref 1241886
OXIMO SOLAR io 10/12 KIT 10L, ref 1241059	SUNEA 40 SOLAR io 10/12 BAR, ref 1241887
OXIMO WIREFREE BATT W/O CASING, ref 9019795	SUNEA 40 SOLAR io 6/18 P50, ref 1241888
OXIMO WF BATT W/O CASING X20, ref 9019793	SUNEA 40 SOLAR io 10/12 P50, ref 1241889
OXIMO WIREFREE BATTERY STICK, ref 9021207	SUNEA 40 SOLAR io 6/18 KIT, ref 1241890
OXIMO WIREFREE RESIN SOLAR PANEL, ref 9019219	SUNEA 40 SOLAR io 10/12 KIT, ref 1241891
OXIMO WIREFREE RESIN SOLAR PANEL, ref 9019334	SUNEA 40 SOLAR io 3/23 ACC BKT, ref 1242002
OXIMO WF SOLAR PAN TAPE, ref 9019335	SUNEA 40 SOLAR io 6/18 ACC BKT, ref 1242008
OXIMO WF SOLAR PAN TA X10, ref 9019336	SUNEA 40 SOLAR io 10/12ACC BAR, ref 1242009



Materials and substances

All useful measures have been adopted to ensure that the materials used in the composition of the product do not contain any substances banned by the legislation in force at the time of marketing.

Plastics			Metals			Other		
	g	%		g	%		g	%
Polyester resin	156.0	6.8%	Steel	406.2	17.8%	Nickel hydroxide	88.1	3.9%
PET	88.1	3.9%	Nickel	179.0	7.9%	Glass fibre	27.6	1.2%
PA66	84.5	3.7%	Aluminium	144.3	6.3%	Other	94.4	4.1%
PU	66.4	2.9%	Zamak	96.4	4.2%			
POM	32.5	1.4%	Copper	41.6	1.8%			
Other	99.5	4.4%	Ferrite Magnet	38.3	1.7%			
			Other	31.3	1.4%			
						Packaging		
						Cardboard	496.0	21.8%
						Paper	109.8	4.8%
Total mass of reference flow: 2279.0g								
Estimated recyclable content: 62.1%								

> CHEMICAL SUBSTANCES

The products covered by this PEP comply with REACH regulation and RoHS directive.



— Manufacturing

The devices covered in this PEP are manufactured in a production that has adopted an environmental management approach.

> Energy model

French Mix



— Distribution

> Packaging is continuously improved by reducing the amount and using a maximum of recycled materials.

> The unit pack has been modeled here. It is made up of :

- 100% recycled fiber paper instructions
- cardboard with a minimum of 50% recycled fibers



— Installation

Installation processes

There is no installation process.

> Energy model

No



— Use

> **Consumables and maintenance: 1 battery replacement during life cycle**

> **The product is autonomous, requiring only the energy provided by the included solar panel.**



— End of life

> Typical transport conditions

Considering the complexity of the electric and electronic recycling channel and our lack of knowledge about the end of life processes implemented all around the world, we considered:

- 1000 km of transport
- A specific treatment for the Ni-MH battery and a landfill treatment for other constitutive materials

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Environmental impacts

Evaluation of the environmental impact covers the following life cycle stages: manufacturing, distribution, installation, use and end of life.
All calculations are done with EIME software version EIME© v5.8.1

Indicators	Unit	Global	Manufacturing	Distribution	Installation	Use	End of life
Global warming	kg.equivalent. CO ₂	4.96E+01	3.12E+01	6.97E-01	8.79E-01	1.66E+01	2.65E-01
Ozone depletion	kg.equivalent. CFC-11	2.28E-05	1.20E-05	1.19E-09	2.27E-09	1.08E-05	3.07E-08
Acidification of soil and water	kg.equivalent. SO ₂	4.20E-01	2.12E-01	1.98E-02	2.13E-04	1.87E-01	7.99E-04
Water eutrophication	kg.equivalent. P04 3-	4.04E-02	2.05E-02	1.95E-03	1.57E-03	1.58E-02	6.59E-04
Photochemical Ozone formation	kg.equivalent. C ₂ H ₄	9.68E-04	8.57E-04	2.52E-08	2.08E-09	1.10E-04	9.20E-09
Depletion of abiotic resources - elements	kg.equivalent.Sb	2.90E-02	1.51E-02	9.80E-04	2.11E-04	1.26E-02	7.85E-05
Depletion of abiotic resources fossil fuels	MJ	4.62E+02	3.03E+02	8.86E+00	5.84E-01	1.47E+02	2.82E+00
Water pollution	m ³	4.19E+03	2.75E+03	1.04E+02	4.61E+01	1.26E+03	2.52E+01
Air pollution	m ³	7.70E+03	4.54E+03	9.55E+01	6.43E+00	3.02E+03	3.68E+01
Use of renewable primary energy, excluding renewable primary energy resources used as raw materials	MJ	6.68E+02	4.50E+02	8.91E+00	6.42E-01	2.05E+02	3.75E+00
Use of renewable primary energy resources used as raw materials	MJ	3.09E+01	2.16E+01	1.14E-02	4.26E-03	9.27E+00	2.09E-02
Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)	MJ	6.37E+02	4.28E+02	8.90E+00	6.37E-01	1.95E+02	3.73E+00
Use of non-renewable primary energy, excluding non-renewable primary energy resources used as raw materials	MJ	2.87E+01	2.01E+01	1.14E-02	4.26E-03	8.53E+00	2.09E-02
Use of non-renewable primary energy resources used as raw materials	MJ	2.22E+00	1.49E+00	0.00E+00	0.00E+00	7.32E-01	0.00E+00
Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials)	MJ	6.16E+02	4.13E+02	8.90E+00	6.37E-01	1.90E+02	3.73E+00
Use of secondary materials	kg	2.10E+01	1.56E+01	0.00E+00	0.00E+00	5.36E+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
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
Net use of fresh water	m ³	9.69E-01	7.25E-01	0.00E+00	0.00E+00	2.44E-01	0.00E+00
Hazardous waste disposed of	kg	1.07E+01	1.01E+01	5.39E-05	5.32E-05	6.72E-01	4.73E-04
Non-hazardous waste disposed of	kg	2.34E+02	1.21E+02	0.00E+00	6.31E-04	1.12E+02	5.28E-01
Radioactive waste disposed of	kg	7.40E+01	4.15E+01	2.15E-02	6.74E-01	3.05E+01	1.31E+00
Components for re-use	kg	3.94E-02	2.79E-02	1.49E-05	5.92E-06	1.15E-02	4.01E-05
Materials for recycling	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy	MJ by energy vector	6.00E-09	6.00E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of primary energy during the life cycle	MJ	7.40E-02	5.71E-03	0.00E+00	6.28E-02	5.50E-03	0.00E+00

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Accreditation number: VH18	Programme information: www.pep-ecopassport.org
Date of issue: 12-2020	Validity period: 5 years
Independent verification of the declaration and data, in compliance with ISO 14025 : 2010 Internal ☐ External ☒ Bureau Veritas LCIE	
The PCR review was conducted by a panel of experts chaired by Philippe Osset (SOLINNEN)	
PEP are compliant with XP C08-100-1: 2016 The elements of the present PEP cannot be compared with elements from another programme.	
Document in compliance with ISO 14025: 2010 "Environmental labels and declarations. Type III environmental declarations	
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