

ELKO Plus

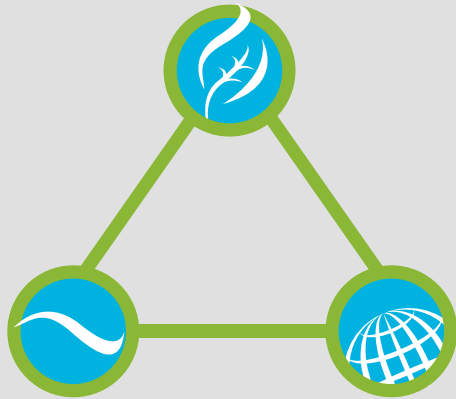
Rocker switches, flush
Environmental Profile



www.elko.se
www.elko.no



Environmental considerations



Hydropower

Locally Sourced

We at ELKO take environmental considerations by combining innovation and ongoing improvements in the development, manufacturing and distribution of our products

Products for the environment and the future

ELKO is a Nordic leader in manufacturing of electrical installation equipment. We have always strived to have as clean and efficient production as possible. Reduced environmental impact is achieved through environmentally friendly design, optimized manufacturing, and through high longevity of installed products. One of the reasons for ELKO's success has been our reputation for rugged designs and high reliability.

ELKO has a manufacturing plant in a scenic location not far from Oslo, close to suppliers of clean hydroelectric power. Products manufactured outside this plant are produced within, or close to, the Nordic region. This ensures a minimum of transport when supplying the Nordic market. We pursue a high environmental standard in our activities. We use environmentally conscious suppliers. We have a continuous focus on achieving a minimum resource and material consumption. Training of personnel is a part of this effort.

ELKO has ISO 9001 (quality management) and ISO 14001 (environment) certifications, and is a member of El-Retur (Norway and Sweden), and REPA-registered (Sweden).

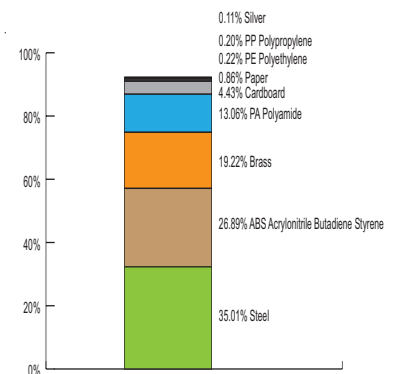
Product Environmental Profile - PEP

Product overview

The ELKO Plus rocker switches are products that are designed for flush wall mounting in homes and buildings.

This range consists of the following ELKO Plus products: rocker switches with 1, 2 and 3 poles, and key card switches, all rated at 10 A or 16 A, 250 V. These products are all in unpainted or painted versions.

A representative product in terms of complexity and manufactured volumes has been used for the analysis. This is the ELKO Plus switch with screwless terminals. The switch is double pole, single throw, with common L terminal, ELKO reference number 3890.



Constituent materials



The mass of the products in this product range is from 73 g to 99 g, packaging not included.

The mass is 91.20 g for the ELKO Plus rocker switches, reference 3890.

PEP for ELKO Plus flush mounted rocker switches



Manufacturing



The ELKO Plus rocker switch range is manufactured on a site with ISO14001 certified environmental management system.

Distribution



The mass and volume of the packaging have been optimized, based on the European Union's packaging directive.

The mass of ELKO Plus rocker switch packaging materials is 7.631 g. It consists of 6.132 g cardboard, 1.196 g paper and 0.303 g crimp foil.

Use



The products in the ELKO Plus rocker switch range do not generate environmental emissions during normal use.

End of life



The products in the ELKO Plus rocker switch range have been optimized to decrease waste and allow recovery of components and materials at the end of life. Most parts are marked according to ISO 11469 and ISO 1043 series for easy recycling.

The products in this range do not need any special end-of-life treat-

ment. These products can enter the usual end-of-life treatment process according to each country's normal practice.

The recycling potential of the products has been evaluated using ADEME (version V1, September 20, 2008).

As described in the recyclability calculation method this ratio includes only metals and plastics which have proven industrial recycling processes.

Environmental indicators	Unit	For one ELKO Plus rocker switch, reference 3890					
		S = M + D + I + U + E	M	D	I	U	E
Raw Material Depletion	10 ⁻¹⁸ /year	1105.5	1105.0	0.2	0.0	0.0	0.3
Energy Depletion	MJ	14.54	14.17	0.17	0.00	0.00	0.21
Water depletion	dm ³	4.75	4.72	0.02	0.00	0.00	0.02
Global Warming	g CO ₂	895.36	865.95	13.04	0.00	0.00	16.38
Ozone Depletion	µg CFC-11	173.10	152.25	9.26	0.00	0.00	11.58
Air Toxicity	10 ³ .m ³	518.73	513.17	2.47	0.00	0.00	3.09
Photochemical Ozone Creation	mg C ₂ H ₄	371.44	346.24	11.20	0.00	0.00	14.00
Air acidification	mg H ⁺	456.75	452.99	1.67	0.00	0.00	2.09
Water Toxicity	dm ³	281.32	277.63	1.64	0.00	0.00	2.05
Water Eutrophication	mg PO ₄	83.48	82.99	0.22	0.00	0.00	0.27
Hazardous waste production	g	12.65	12.64	0.00	0.00	0.00	0.01

Environmental impacts



Life cycle assessment is typically split into the following phases: Materials and Manufacturing [M], Distribution [D], Installation [I], Use [U], and End-of-life [E]. Products in this range do not have

any environmental impact during the Installation [I] and Use [U] phases.

Modelling hypothesis and method:

- The calculation was performed on the ELKO Plus rocker switch, reference 3890.
- Product packaging is included.
- Installation components: no additional components are included.
- Scenario for the Use phase: this

product range is included in the category Energy passing products. (Assumed service life is 20 years.)

The electrical power model used for calculation is the European model.

End-of-life impacts are based on a worst case transport distance to the recycling plant (1000 km).



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