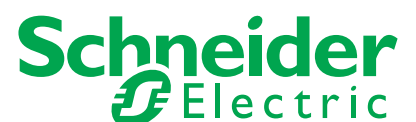
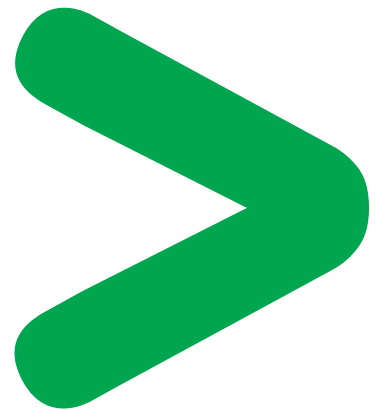


Product Environmental Profile

Movement and presence detector



Product Environmental Profile - PEP

Product Overview

The main function of the new CEE60 - PIR180 range is the building of electrical installations, flush-mounted using CC60 boxes.

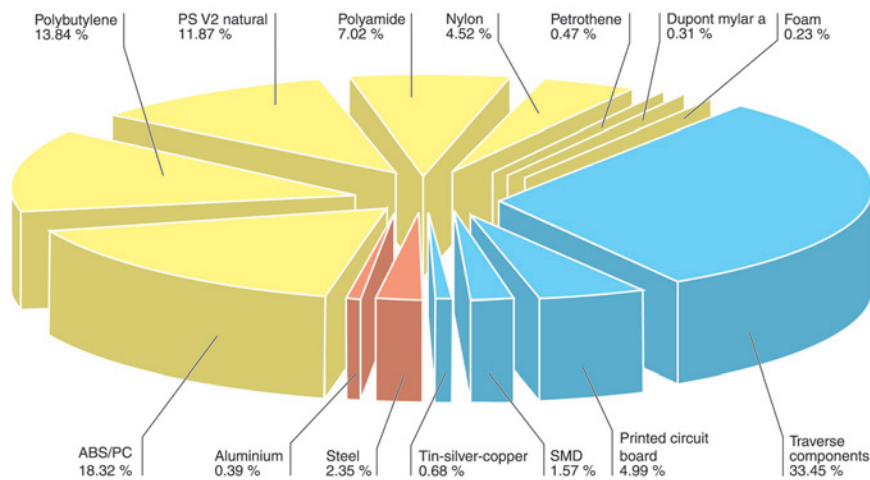
The range consists of: 7 different movement detectors.

The representative product used for the analysis is the movement detector =S= / Eljo Trend Rørelsev. Multi 2300W P-v (reference 190439200) flush-mounted using the standard accessories for the range (Eljo flush-mounted box - ref. 1420560).

The environmental impacts of the product used as a reference are representative of the impacts of the other products in the range which are made using the same technology. The environmental analysis was performed in conformity with ISO 14040 "Environmental management: Life cycle assessment – Principle and framework". This analysis takes the stages in the product life cycle into account.

Constituent materials

The weight of the flush-mounted movement detector analyzed is 128.3 g. The constituent materials are distributed as follows:



Substance assessment

Products of this range are designed in conformity with the requirements of the RoHS directive (European Directive 2002/95/EC of 27 January 2003) and do not contain, or in the authorised proportions, lead, mercury, cadmium, chromium hexavalent, flame retardant (polybromobiphenyles PBB, polybromodiphenylthethers PBDE) as mentioned in the Directive.

Manufacturing

The CEE60 - PIR180 range is manufactured on a Schneider Electric production site on which an ISO 14001 certified environmental management system has been established.

Distribution

The weight and volume of the packaging have been reduced, in compliance with the European Union's packaging directive. The movement detector packaging weighs 63.5 g. It consists of 57.7 g of cardboard, 5.4 g of paper and 0.4 g of polyethylene.

The product distribution flows have been optimized by setting up local distribution centres near the market areas.

Product Environmental Profile - PEP

Utilization

The products in the CEE60 - PIR180 range do not generate any environmental pollution requiring special precautionary measures (noise, emissions...).

The power consumed by the electronics of the movement detector Eljo (reference 190439200) is 0.3 W in active mode and 0.2 W in standby mode.

The power consumed represents less than 0.4 % of the total power through the product. The dissipated power depends on the product implementation and operating conditions.

End of life

At the end of their lives, the products in the CEE60 - PIR180 range can be either dismantled or crushed for better reuse of the different constituent materials.

The recycling potential is more than 75 %.

This percentage includes metals and marked plastics. It also includes two electronic boards weighing a total of 6.4 g which require specialized end-of-life treatment.

Environmental impacts

The IEME (Environmental Impact and Management Explorer) software, 1.6 version and its database, 5.4 version, were used for the life cycle assessment (LCA).

The assumed service life of the product is 15 years and the European electrical power model was used. The utilization scenario is operation of the movement detector during a daily time range of 30 % of the time with an average load of 200 W.

The scope of the analysis was limited to a flush-mounted movement detector, and a cover frame.

The environmental impacts were analyzed for the Manufacturing (M) phase, including the processing of raw materials, and for the Distribution (D) and Utilization (U) phases.

Presentation of the environmental impacts of the product

Environmental indicators	Unit	For =S= / Eljo Refs 190439000 + 190439100 + 190439200			
		S = M + D + U	M	D	U
Depletion of natural resources	Y-1	1.38 10 ⁻¹⁴	1.33 10 ⁻¹⁴	5.41 10 ⁻¹⁸	4.55 10 ⁻¹⁶
Energy depletion	MJ	1.47 10 ³	3.54 10 ²	6	1.11 10 ³
Water depletion	dm ³	3.52 10 ²	1.22 10 ²	3.96	2.26 10 ²
Global warming potential	g ~CO ₂	2.95 10 ⁴	2.22 10 ⁴	2.59 10 ²	7.13 10 ³
Ozone depletion potential	g ~CFC-11	4.01 10 ⁻³	3.30 10 ⁻³	1.51 10 ⁻⁴	5.59 10 ⁻⁴
Photochemical ozone creation	g ~C ₂ H ₄	14.40	10.50	2.84 10 ⁻¹	3.57
Air acidification	g ~H ⁺	5.50	4.04	7.04 10 ⁻²	1.39
Hazardous waste production	kg	4.15 10 ⁻¹	3.23 10 ⁻¹	1.71 10 ⁻⁴	9.18 10 ⁻²

The life cycle analysis has shown that the manufacturing phase (M) is the phase that has the most impact on all the environmental indicators. Schneider Electric places strong importance in the design process on the choice of materials it uses and on the power consumption of the product so as to optimize impacts on the environment.

Product Environmental Profile - PEP

System approach

As the product of the range are designed in accordance with the RoHS Directive (European Directive 2002/95/EC of 27 January 2003), they can be incorporated without any restriction within an assembly or an installation submitted to this Directive.

*N.B.: please note that the environmental impacts of the product depend on the use and installation conditions of the product.
Impacts values given above are only valid within the context specified and cannot be directly used to draw up the environmental assessment of the installation.*

Glossary

Raw Material Depletion (RMD)

This indicator quantifies the consumption of raw materials during the life cycle of the product. It is expressed as the fraction of natural resources that disappear each year, with respect to all the annual reserves of the material.

Energy Depletion (ED)

This indicator gives the quantity of energy consumed, whether it be from fossil, hydroelectric, nuclear or other sources. This indicator takes into account the energy from the material produced during combustion. It is expressed in MJ.

Water Depletion (WD)

This indicator calculates the volume of water consumed, including drinking water and water from industrial sources. It is expressed in dm³.

Global Warming (GW)

The global warming of the planet is the result of the increase in the greenhouse effect due to the sunlight reflected by the earth's surface being absorbed by certain gases known as "greenhouse-effect" gases. The effect is quantified in gram equivalent of CO₂.

Ozone Depletion (OD)

This indicator defines the contribution to the phenomenon of the disappearance of the stratospheric ozone layer due to the emission of certain specific gases. The effect is expressed in gram equivalent of CFC-11.

Photochemical Ozone Creation (POC)

This indicator quantifies the contribution to the "smog" phenomenon (the photochemical oxidation of certain gases which generates ozone) and is expressed in gram equivalent of ethylene (C₂H₄).

Air Acidification (AA)

The acid substances present in the atmosphere are carried by rain. A high level of acidity in the rain can cause damage to forests. The contribution of acidification is calculated using the acidification potentials of the substances concerned and is expressed in mode equivalent of H⁺.

Hazardous Waste Production (HWP)

This indicator calculates the quantity of specially treated waste created during all the life cycle phases (manufacturing, distribution and utilization). For example, special industrial waste in the manufacturing phase, waste associated with the production of electrical power, etc. It is expressed in kg.

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Schneider Electric Industries SAS

35, rue Joseph Monier
CS30323
F - 92506 Rueil Malmaison Cedex

RCS Nanterre 954 503 439
Capital social 896 313 776 €
www.schneider-electric.com



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