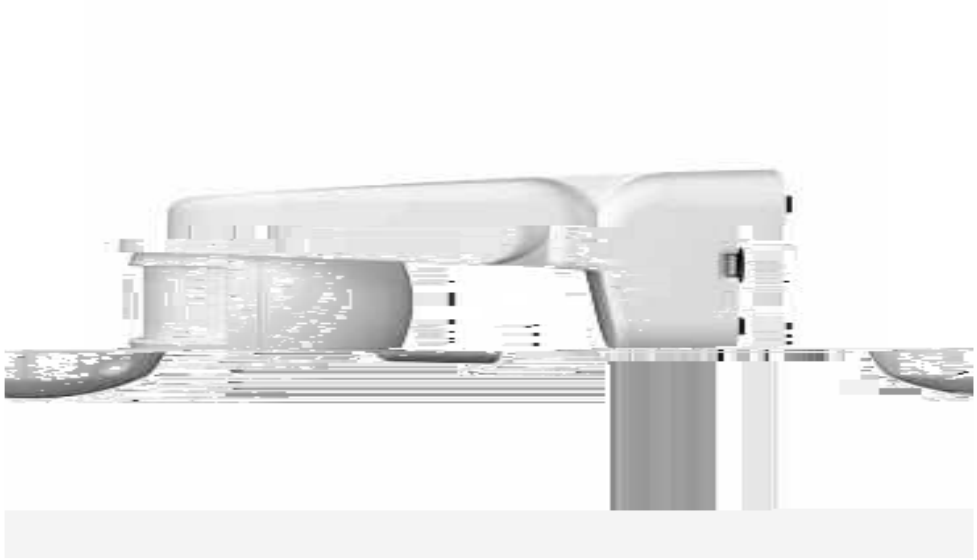
Product Environmental Profile

Outdoor PIR Sensors



Product Environmental Profile - PEP

Product overview

The main purpose of the Outdoor PIR Sensor is to detect movements in a certain area and to switch on electrical devices (normally lamps) for a certain period of time.

ARGUS outdoor PIR sensor can be installed on walls and ceilings without additional accessories and can be mounted on inner/outer corners and stationary pipes using a mounting bracket. ARGUS switches lights, if a movement is detected, and leaves it switched on until e configured time has run out.

This range consists of: Outdoor PIR Sensors.

The representative product used for the analysis is Outdoor Movement Detector 120° Ref: CCT56P004.

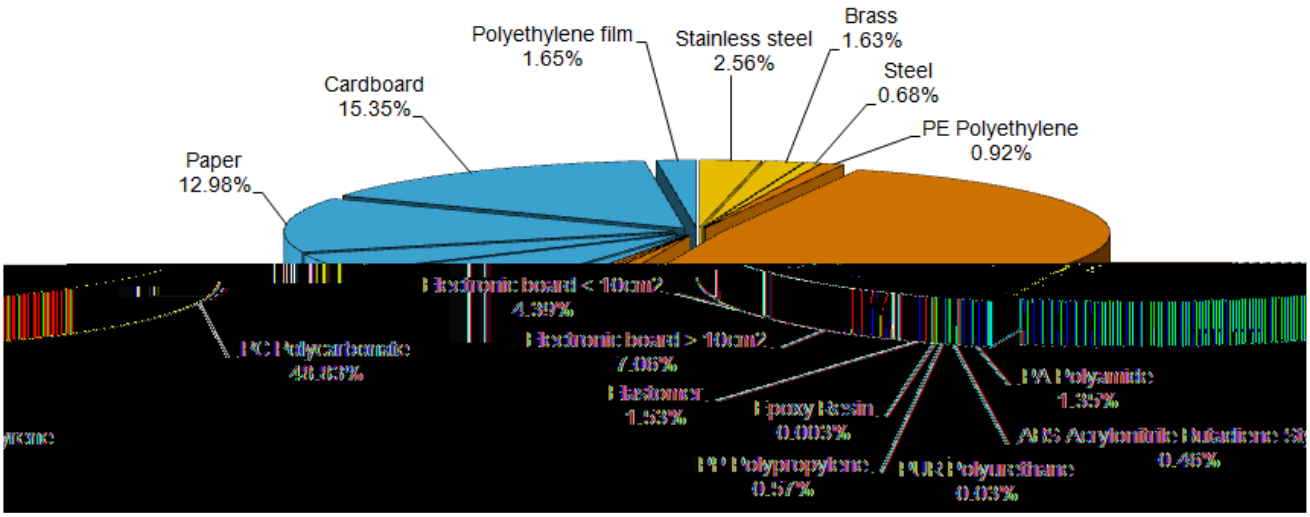
The environmental impacts of this referenced product are representative of the impacts of the other products of the range which are developed with a similar technology.

The environmental analysis was performed in conformity with ISO 14040.

Constituent materials

The mass of the product range is from 315 g to 330 g including packaging. It is 325.64 g for the Outdoor Movement Detector 120°, Ref: CCT56P004

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 only contain in the authorised proportions, lead, mercury, cadmium, hexavalent chromium or flame retardants (polybrominated biphenyls - PBB, polybrominated diphenyl ethers - PBDE) as mentioned in the Directive.

Manufacturing

The Outdoor PIR Sensors product range is manufactured at a production site which complies with the regulations governing industrial sites.

Distribution

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

The Outdoor PIR Sensors packaging weight is 97.65 g. It consists of paper (42.27 g), cardboard (50 g), polyethylene film (5.38 g).

Product Environmental Profile - PEP

Use

The products of the Outdoor PIR Sensors do not generate environmental pollution (noise, emissions) requiring special precautionary measures in standard use.
The electrical power consumption depends on the conditions under which the product is implemented and used. The electrical power consumed by the Outdoor PIR Sensors is between 0.7 W and 1.2 W. It is 1.2W in active mode and 0.8W in standby mode and 0.7 W in sleep mode for the referenced Outdoor PIR Sensors Ref: CCT56P004.

End of life

At end of life, the products in the referenced Outdoor PIR Sensors have been optimized to decrease the amount of waste and allow recovery of the product components and materials.
This product range doesn't need any special end-of-life treatment. According to countries' practices this product can enter the usual end-of-life treatment process.
The recyclability potential of the products has been evaluated using the "Code- BV recyclability and recoverability calculation method" (version V1, 20 Sep. 2008 presented to the French Agency for Environment and Energy Management: ADEME).
According to this method, the potential recyclability ratio is: 73.94%.
As described in the recyclability calculation method this ratio includes only metals and plastics which have proven industrial recycling processes.

Environmental impacts

Life cycle assessment has been performed on the following life cycle phases: Materials and Manufacturing (M), Distribution (D), Installation (I) Use (U), and End of life (E).
Modeling hypothesis and method:
- The calculation was performed on the referenced Outdoor PIR Sensors Ref: CCT56P004.
- Product packaging: Is included.
- Installation components: No special components included.
- Scenario for the Use phase: This product range is included in the category "**Energy consuming**" (assumed service life is 10 years and use scenario is: 1.2 W and a service uptime percentage is 100 %).
- The geographical representative area for the assessment is European and the electrical power model used for calculation is European model.
End of life impacts are based on a worst case transport distance to the recycling plant (1000km).

Presentation of the product environmental impacts

Environmental indicators	Unit	For ARGUS Outdoor Movement Detector 120° Ref: CCT56P004					
		S = M + D + I + U + E	M	D	I	U	E
Air Acidification (AA for PEP)	kg H+ eq	5.71E-03	4.53E-04	1.11E-05	0.00E+00	5.23E-03	1.51E-05
Air toxicity (AT for PEP)	m^3	7.12E+06	6.19E+05	1.65E+04	0.00E+00	6.46E+06	2.25E+04
Energy Depletion (ED for PEP)	MJ	8.22E+02	4.78E+01	8.34E-01	0.00E+00	7.72E+02	1.15E+00
Global Warming Potential (GWP for PEP)	kg CO_2 eq.	4.19E+01	2.80E+00	5.91E-02	0.00E+00	3.90E+01	8.12E-02
Hazardous Waste Production (HWP for PEP)	kg	6.84E-01	3.69E-02	7.33E-08	0.00E+00	6.47E-01	1.01E-07
Ozone Depletion Potential (ODP for PEP)	kg CFC-11 eq.	2.44E-06	3.20E-07	1.12E-10	0.00E+00	2.12E-06	1.54E-10
Photochemical Ozone Creation Potential (POCP for PEP)	kg C_2H_4 eq.	1.45E-02	8.68E-04	1.34E-05	0.00E+00	1.36E-02	1.81E-05
Raw Material Depletion (RMD for PEP)	Y-1	3.06E-14	2.98E-14	1.21E-18	0.00E+00	8.77E-16	1.66E-18
Water Depletion (WD for PEP)	dm3	1.29E+02	1.71E+01	6.15E-03	0.00E+00	1.12E+02	8.44E-03
Water Eutrophication (WE for PEP)	kg PO_4^3 eq.	5.06E-04	4.14E-04	1.10E-07	0.00E+00	9.16E-05	1.51E-07
Water Toxicity (WT for PEP)	m^3	1.25E+01	1.24E+00	2.53E-02	0.00E+00	1.12E+01	3.48E-02

Life cycle assessment has been performed with the EIME software (Environmental Impact and Management Explorer), version 5.1and with its database version 2013-02.
The Use phase is the life cycle phase which has the greatest impact on the majority of environmental indicators.
Extrapolation rules for product range "Depending on the impact analysis, the environmental indicators (without RMD) of other products in this family may be proportional extrapolated by energy consumption values". For RMD, impact may be proportional extrapolated by mass of the product.

System approach

As the products 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 in an assembly or an installation subject to this Directive.
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.

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 dm^3.

Global Warming (GW)

The global warming of the planet is the result of the increase in
the greenhouse effe3.43819(a)3.43819(s)43819(d)3y4381e9(n)7s4381a9( )9.18794(0.1005(a)3.4381
absorbed by certain gases k.43h wn as "greenhouse e(a)4g4s1es43819( )9.189.18795(f)-5.74612(e3]
quantity of gas released over the 5.74612(e)181.92156(f)-5.74612(e)3.43819( )9.18795(c)-7.7587
air volume nee3819( )9.143819( )9.d 1047 612(h)3.4381957343819(3.438194381943819(l)-2.0126
(the photochM mical oxidation of c
expressed in gram equivalent of ethylene (C_2H_4).

Air Acidification (AA)

The acid substances present in the atmosphere are carried by rain.3819(d)4( )]TJ ET Q q 2059 38

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