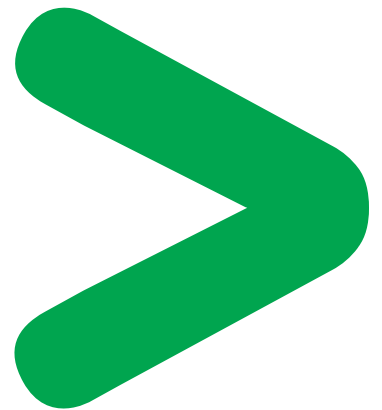


# Product Environmental Profile

Easergy Flair 200C



# Product Environmental Profile - PEP

## Product overview

The FLAIR 200C is a Medium Voltage Substation Remote Monitoring Unit.

It monitors current (MV & LV), Voltage, Active and reactive Power, Power factor and it detects earth and phase to phase fault current.

The representative product used for the analysis is F201A-AM2GZZAZZ-EN.

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

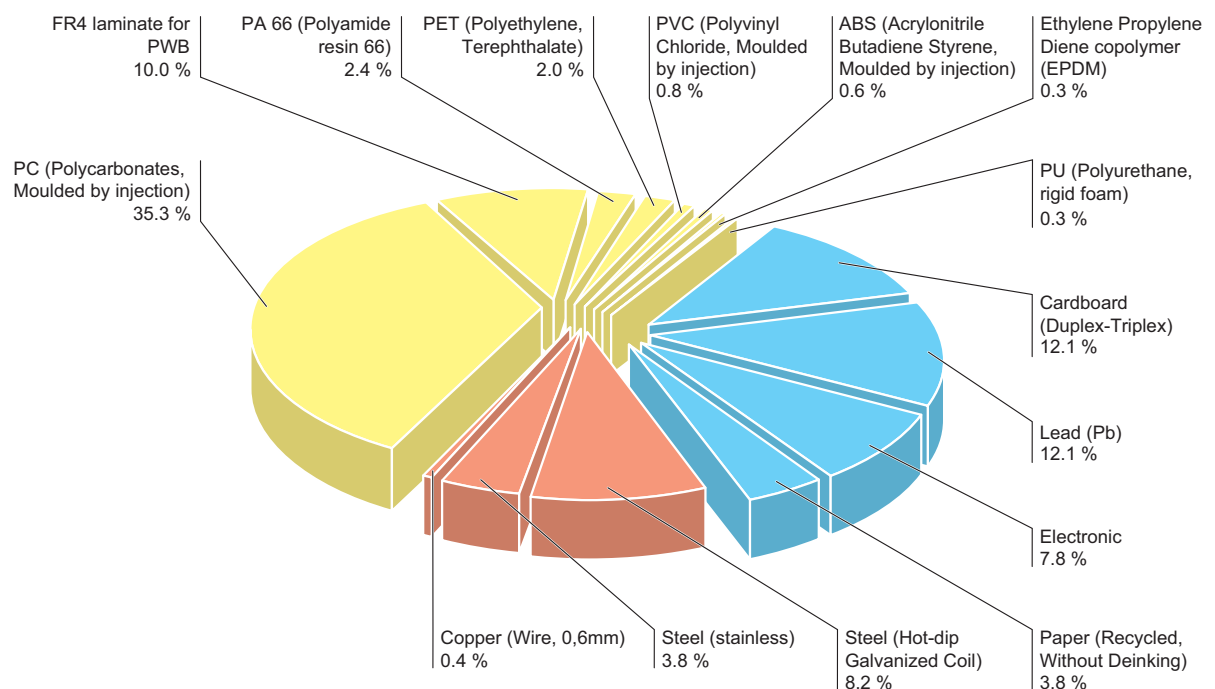
The environmental analysis was performed in conformity with ISO 14040 “Environmental management: Life cycle assessment – Principle and framework”.

This analysis takes the stages in the life cycle of the product into account.

## Constituent materials

The mass of the range products spreads out is 2960 g packing included.

The constituent materials are distributed as follows:



All necessary steps have been taken with our services, suppliers and subcontractors to ensure that the materials used in the composition of the Flair 200C range do not contain any substances prohibited by the legislation that was in force <sup>(1)</sup> when the product or range was put on the market.

RoHS compliant :

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

*(1) according to the list available on request.*

## Manufacturing

The Flair 200C range is manufactured at a Schneider Electric production site on which an ISO 14001 certified environmental management system has been established.

# Product Environmental Profile - PEP

## Distribution

The weight and volume of the packaging have been reduced, in compliance with the European Union's packaging directive.

The Flair 200C packaging is 495 g. It consists of carton (355 g), Paper (111 g) and PET (29 g).

The product distribution flows have been optimised by setting up local distribution centres close to the market areas.

## Utilization

The products of the Flair 200C do not generate environmental pollution requiring special precautionary measures (noise, and so on).

For consuming products, indicate following mention:

The dissipated power depends on the conditions under which the product is implemented and used.

The electrical power consumed by the Flair 200C range spreads out is 1,25 W average.

## End of life

At end of life, the products of the Flair 200C must be dismantled to facilitate the recovery of the various constituent materials.

If weight of the material (individually) is more than 15 % of total function's weight that is considered as recyclable material.

The proportion of recyclable material is higher than 85 %.

This percentage includes the following materials: plastic and electronic.

## Environmental impacts

The EIME (Environmental Impact and Management Explorer) software, version V3, and its database, version 10.1 were used for the life cycle assessment (LCA).

The assumed service life of the product is 15 years with an utilisation rate of the installation of 100 % and the electrical power model used is European.

The scope of the analysis was limited to a F201A-AM2GZZAZZ-EN

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

### Presentation of product environmental impacts:

Environmental indicators	Unit	F201A-AM2GZZAZZ-EN			
		S = M + D + U	M	D	U
Raw Material Depletion	Y-1	8.02 10 <sup>-13</sup>	8.00 10 <sup>-13</sup>	2.00 10 <sup>-17</sup>	1.87 10 <sup>-15</sup>
Energy Depletion	MJ	4.10 10 <sup>3</sup>	2.41 10 <sup>3</sup>	14.639	1.67 10 <sup>3</sup>
Water Depletion	dm <sup>3</sup>	1.53 10 <sup>3</sup>	1.27 10 <sup>3</sup>	1.391	2.59 10 <sup>2</sup>
Global Warming	g≈CO <sub>2</sub>	1.84 10 <sup>5</sup>	9.71 10 <sup>4</sup>	1.52 10 <sup>3</sup>	8.55 10 <sup>4</sup>
Ozone Depletion	g≈CFC-11	2.54 10 <sup>-2</sup>	1.72 10 <sup>-2</sup>	8.20 10 <sup>-4</sup>	7.35 10 <sup>-3</sup>
Photochemical Ozone Creation	g≈C <sub>2</sub> H <sub>4</sub>	67.429	36.772	9.94 10 <sup>-1</sup>	29.663
Air Acidification	g≈H <sup>+</sup>	31.385	17.389	4.69 10 <sup>-1</sup>	13.528
Hazardous Waste Production	kg	2.887	1.525	4.36 10 <sup>-4</sup>	1.362

The life cycle analysis shows that the 3 stages (M, D or U stages) is the life cycle phase which has the greatest impact on the majority of environmental indicators.

# 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.

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 dm<sup>3</sup>.

### Global Warming Potential (GWP)

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 CO<sub>2</sub>.

### 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 ethene (C<sub>2</sub>H<sub>4</sub>).

### 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<sup>+</sup>.

### 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.



We are committed to safeguarding our planet by "Combining innovation and continuous improvement to meet the new environmental challenges".

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It was produced according to the instructions in the PEP drafting guide, version 4.

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