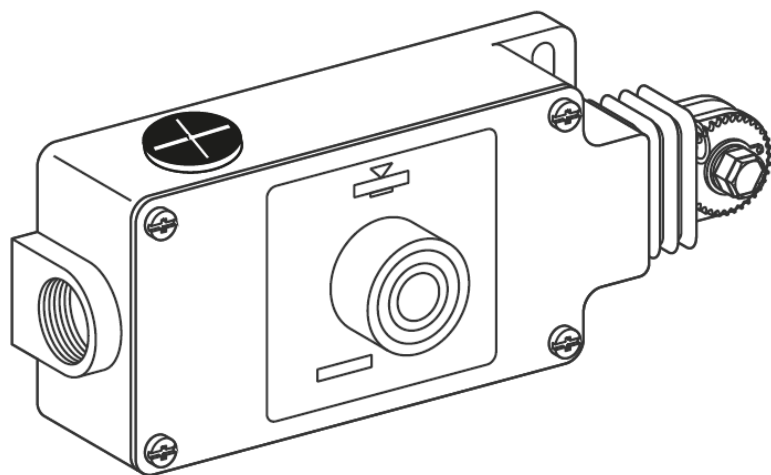


Product Environmental Profile

**XY2CH13250 Emergency stop rope pull
switch**



Product Environmental Profile - PEP

Product overview

The main purpose of XY2CH13250 and more generally of any emergency stop rope pull switch XY2C is to protect people and installations. They enable the operator to order a stop anywhere in the working area. The functional unit is to establish, support and break the assigned currents (power supply of programmable logic controllers, relays typically estimated between 2 and 10 mA) under the normal conditions during 20 years with IP65 protection degree.

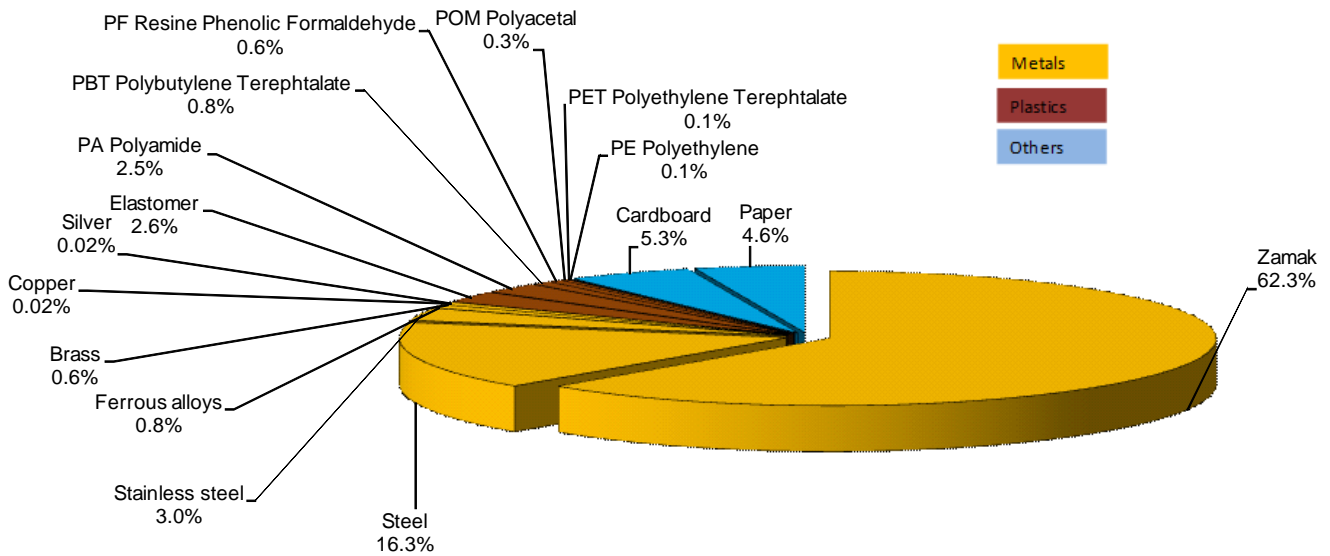
The representative product used for the analysis is XY2CH13250 emergency stop rope pull switch.

The environmental analysis was performed in conformity with ISO 14040. To know the accurate environmental impacts of other products in the range, complementary calculation has to be done, please contact us at: global-green-sensors@schneider-electric.com

Constituent materials

The mass of XY2CH13250 is 1.04 kg.

The constituent materials are distributed as follows:



Substance assessment

The representative product of this range XY2CH13250 is designed in conformity with the requirements of the European RoHS directive 2011/65/EU 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.

Details of ROHS and REACH substances information are available on the Schneider-Electric [Green Premium website](http://www2.schneider-electric.com/sites/corporate/en/products-services/green-premium/green-premium.page) .
(<http://www2.schneider-electric.com/sites/corporate/en/products-services/green-premium/green-premium.page>)

Manufacturing

XY2CH13250 product 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. XY2CH13250 packaging weight is 103 g. It consists of cardboard and paper. The product distribution flows have been optimised by setting up local distribution centres close to the market areas.

Product Environmental Profile - PEP

Use

The emergency stop rope pull switches do not generate environmental pollution (noise, emissions) requiring special precautionary measures in standard use.

The dissipated power depends on the conditions under which the product is implemented and used. For the purpose of this modelling the dissipated power is estimated to 0.002 mW for the XY2CH13250.

The product range does not require special maintenance.

End of life

At end of life, the emergency stop rope pull switches 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 "ECO DEEE 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 without packaging is: 63%.

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 XY2CH13250

- product packaging: is included

- installation components: no special components included

- scenario for the Use phase: this product range is included in the category 1 (passive product) with assumed service life is 20 years. For the purpose of this modelling product dissipation is assumed to be 0.002 mW (R=5 mohms and I=20 mA in a worst case) and service uptime 30%.

- the geographical representative area for the assessment is Europe.

End of life impacts are based on a worst case transport distance to the recycling plant (1,000km).

Presentation of the product environmental impacts

Environmental indicators	Unit	For XY2CH13250					
		Total = M + D + I + U + E	Manufacturing (M)	Distribution (D)	Installation (I)	Use (U)	End-of-Life (E)
Air Acidification (AA)	kg H+ eq	2.3E+00	2.2E+00	8.9E-02	0*	1.3E-05	1.3E-02
Air toxicity (AT)	m ³	3.2E+06	3.0E+06	1.3E+05	0*	1.6E+01	2.0E+04
Energy Depletion (ED)	MJ	1.5E+02	1.5E+02	6.4E+00	0*	1.3E-03	9.7E-01
Global Warming Potential (GWP)	kg CO ₂ eq.	1.1E+04	1.0E+04	4.6E+02	0*	6.2E-02	6.9E+01
Hazardous Waste Production (HWP)	kg	8.4E+02	8.4E+02	5.6E-04	0*	1.1E-05	8.5E-05
Ozone Depletion Potential (ODP)	kg CFC-11 eq.	4.1E-04	4.1E-04	8.6E-07	0*	1.4E-08	1.3E-07
Photochemical Ozone Creation Potential (POCP)	kg C ₂ H ₄ eq.	4.1E+00	4.0E+00	1.1E-01	0*	3.8E-06	1.7E-02
Raw Material Depletion (RMD)	Y-1	1.2E-14	1.2E-14	9.3E-18	0*	8.4E-22	1.4E-18
Water Depletion(WD)	dm ³	2.2E+01	2.2E+01	4.7E-02	0*	1.6E-04	7.1E-03
Water Eutrophication (WE)	kg PO ₄ ³⁻ eq.	3.2E-01	3.2E-01	8.5E-04	0*	5.9E-07	1.3E-04
Water Toxicity (WT)	m ³	1.4E+00	1.2E+00	1.9E-01	0*	2.8E-05	2.9E-02

*: represents less than 0.01% of the total life cycle of the reference flow

Life cycle assessment has been performed with the EIME software (Environmental Impact and Management Explorer), version 5, and with its database version 2013-02.

The manufacturing phase is the life cycle phase which has the greatest impact on the majority of environmental indicators.

System approach

As almost all products of the range and particularly XY2CH13250 are designed in accordance with the European RoHS Directive 2011/65/EU, 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

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 ⁺ .
Air Toxicity (AT)	This indicator represents the air toxicity in a human environment. It takes into account the usually accepted concentrations for several gases in the air and the quantity of gas released over the life cycle. The indication given corresponds to the air volume needed to dilute these gases down to acceptable concentrations.
Energy Depletion (ED)	This indicator gives the quantity of energy consumed, whether it is from fossil, hydroelectric, nuclear or other sources. It takes into account the energy from the material produced during combustion. It is expressed in MJ.
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 CO ₂ .
Hazardous Waste Production (HWP)	This indicator quantifies 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.
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 (C ₂ H ₄).
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.
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 .
Water Eutrophication (WE)	Eutrophication is a natural process defined as the enrichment in mineral salts of marine or lake waters or a process accelerated by human intervention, defined as the enrichment in nutritive elements (phosphorous compounds, nitrogen compounds and organic matter). This indicator represents the water eutrophication of lakes and marine waters by the release of specific substances in the effluents. It is expressed in grams equivalency of PO43-(phosphate).
Water Toxicity (WT)	This indicator represents the water toxicity. It takes into account the usually accepted concentrations for several substances in water and the quantity of substances released over the life cycle. The indication given corresponds to the water volume needed to dilute these substances down to acceptable concentrations.

PEP achieved with Schneider-Electric TT01 V4.9 and TT02 V18 procedures in compliance with ISO14040 series standards

Registration N° : SCHN-2014-079-V1-EN		Applicable PCR : PEP-PCR-ed 2.1-EN-2012 12 11	
Verifier accreditation N° : VH15		Applicable PSR : PSR-0005-ed1-FR-2012 12 11	
Date of issue: 08-2014		Program information: www.pep-ecopassport.org	
		Period of validity: 4 years	
Independent verification of the declaration and data, according to ISO 14025:2006			
Internal		External	X
In compliance with ISO 14025:2006 type III environmental declarations			
PCR review was conducted by an expert panel chaired by J. Chevalier (CSTB).			
The elements of the actual PEP cannot be compared with elements from another program.			



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