

Product Environmental Profile

30-60A Light Duty and General Duty E-series Safety Switches

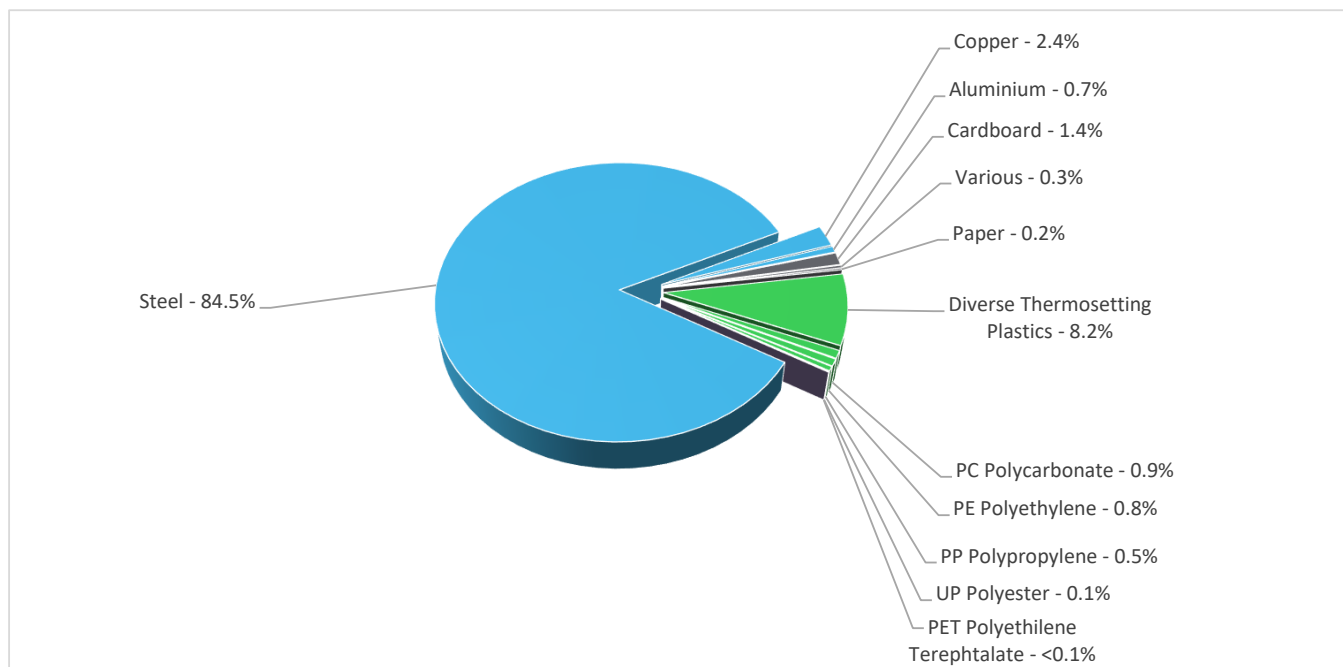


General information

Representative product	30–60A Light Duty and General Duty E-series Safety Switches - DU221RB
Description of the product	The E-Series Light and General Duty safety switches are designed for residential and commercial applications where durability and economy are prime considerations. Typical loads are lighting, air conditioning and appliances. When equipped with fuses, over-current and short circuit protection is also available. The switches are also suitable as service equipment when equipped with a factory-installed neutral assembly or a field-installed equipment grounding kit.
Functional unit	Turn off all or part of an installation by separating the installation or part of the installation of all electrical energy or earth, for safety reasons with a rated voltage 240V AC and rated current 30A ensuring isolation characterized by rated voltage 240V AC. This function is provided for 20 years.

Constituent materials

Reference product mass 2114 g including the product, its packaging and additional elements and accessories



Plastics	10.5%
Metals	87.6%
Others	1.9%

Substance assessment

Products of this range are designed in conformity with the requirements of the RoHS directive (European Directive 2011/65/EU of 8 June 2011) 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

Additional environmental information

The 30–60A Light Duty and General Duty E-series Safety Switches presents the following relevant environmental aspects

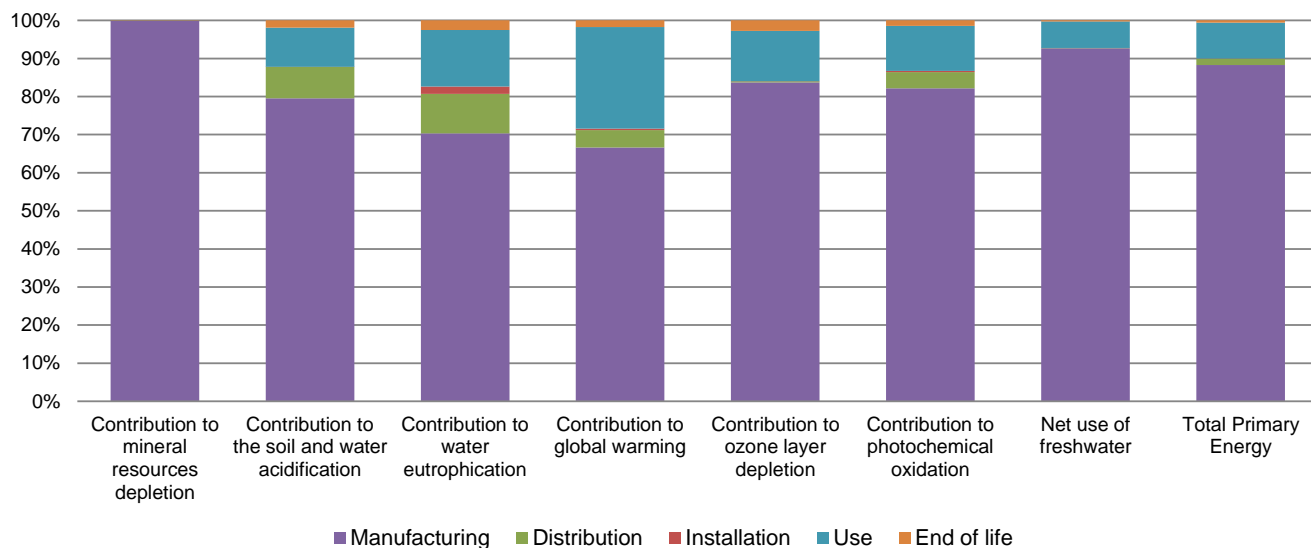
Manufacturing	Manufactured at a Schneider Electric production site ISO14001 certified
Distribution	Weight and volume of the packaging optimized, based on the European Union's packaging directive Packaging weight is 55 g, consisting of Cardboard (53.1%), Plastic (41.4%), Paper (5.5%) Product distribution optimised by setting up local distribution centres
Installation	The product does not require special installation procedure and requires little to no energy to install. The disposal of the packaging materials are accounted for during the installation phase (including transport to disposal).
Use	For recommended maintenance instructions refer to instruction bulletin 40273-829-02, available on the Schneider-Electric website: (http://www.downloads.schneider-electric.com/sites/oreo/us/document-detail.page?p_docId=25657056&p_Conf=i#http://www.schneider-electric.us).
End of life	End of life optimized to decrease the amount of waste and allow recovery of the product components and materials No special end-of-life treatment required. According to countries' practices this product can enter the usual end-of-life treatment process. Recyclability potential: 85% Based on "ECO'DEEE recyclability and recoverability calculation method" (version V1, 20 Sep. 2008 presented to the French Agency for Environment and Energy Management: ADEME).

Environmental impacts

Reference life time	20 years			
Product category	Disconnectors - Low voltage			
Installation elements	No special components needed			
Use scenario	Product dissipation is 0.37 W at 100% Load rate and 0.0925 Load rate: 50% Use time rate (closed unit): 30% of RLT			
Geographical representativeness	USA			
Technological representativeness	The Modules of Technologies such as material production, manufacturing process and transport technology used in this PEP analysis (LCA-EIME in this case) are Similar and representative of the actual type of technologies used to make the product in production.			
Energy model used	Manufacturing	Installation	Use	End of life
	Energy model used: Mexico	Electricity mix; AC; consumption mix, at consumer; 120V; US	Electricity mix; AC; consumption mix, at consumer; 120V; US	Electricity mix; AC; consumption mix, at consumer; 120V; US

Compulsory indicators		30–60A Light Duty and General Duty E-series Safety Switches - DU221RB					
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to mineral resources depletion	kg Sb eq	2.97E-04	2.97E-04	0*	0*	3.31E-08	0*
Contribution to the soil and water acidification	kg SO ₂ eq	3.14E-02	2.50E-02	2.59E-03	1.78E-05	3.22E-03	5.94E-04
Contribution to water eutrophication	kg PO ₄ ³⁻ eq	5.74E-03	4.04E-03	5.95E-04	1.14E-04	8.49E-04	1.46E-04
Contribution to global warming	kg CO ₂ eq	1.26E+01	8.42E+00	5.74E-01	5.71E-02	3.37E+00	2.20E-01
Contribution to ozone layer depletion	kg CFC11 eq	4.61E-07	3.86E-07	1.16E-09	1.86E-10	6.11E-08	1.25E-08
Contribution to photochemical oxidation	kg C ₂ H ₄ eq	4.37E-03	3.59E-03	1.84E-04	1.39E-05	5.16E-04	6.38E-05

Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Net use of freshwater	m3	8.57E-02	7.95E-02	5.14E-05	0*	5.95E-03	2.43E-04
Total Primary Energy	MJ	4.82E+02	4.26E+02	8.11E+00	5.63E-02	4.53E+01	2.97E+00




Optional indicators	30–60A Light Duty and General Duty E-series Safety Switches - DU221RB						
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to fossil resources depletion	MJ	1.39E+02	8.76E+01	8.06E+00	5.10E-02	4.10E+01	2.39E+00
Contribution to air pollution	m³	1.90E+03	1.57E+03	2.40E+01	4.86E-01	2.86E+02	2.11E+01
Contribution to water pollution	m³	7.09E+02	4.22E+02	9.44E+01	3.38E+00	1.66E+02	2.32E+01
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Use of secondary material	kg	6.56E-01	6.56E-01	0*	0*	0*	0*
Total use of renewable primary energy resources	MJ	3.93E+00	1.20E+00	1.08E-02	5.75E-04	2.72E+00	3.33E-03
Total use of non-renewable primary energy resources	MJ	4.78E+02	4.25E+02	8.10E+00	5.57E-02	4.26E+01	2.97E+00
Use of renewable primary energy excluding renewable primary energy used as raw material	MJ	3.35E+00	6.17E-01	1.08E-02	5.75E-04	2.72E+00	3.33E-03
Use of renewable primary energy resources used as raw material	MJ	5.80E-01	5.80E-01	0*	0*	0*	0*
Use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	4.72E+02	4.18E+02	8.10E+00	5.57E-02	4.26E+01	2.97E+00
Use of non renewable primary energy resources used as raw material	MJ	6.84E+00	6.84E+00	0*	0*	0*	0*
Use of non renewable secondary fuels	MJ	0.00E+00	0*	0*	0*	0*	0*
Use of renewable secondary fuels	MJ	0.00E+00	0*	0*	0*	0*	0*
Waste categories	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Hazardous waste disposed	kg	2.31E+01	2.07E+01	0*	0*	9.00E-02	2.36E+00
Non hazardous waste disposed	kg	3.52E+00	2.92E+00	2.04E-02	5.70E-02	5.15E-01	9.16E-03
Radioactive waste disposed	kg	1.44E-03	1.36E-03	1.45E-05	7.37E-07	5.30E-05	1.41E-05
Other environmental information	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Materials for recycling	kg	1.95E+00	2.05E-01	0*	0*	0*	1.74E+00
Components for reuse	kg	0.00E+00	0*	0*	0*	0*	0*
Materials for energy recovery	kg	9.72E-03	0*	0*	0*	0*	9.72E-03
Exported Energy	MJ	1.02E-04	9.57E-06	0*	9.22E-05	0*	0*

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

Life cycle assessment performed with EIME version EIME v5.8.1, database version 2016-11 in compliance with ISO14044.

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

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.

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		Validity period	5 years
Independent verification of the declaration and data, in compliance with ISO 14025 : 2010			
Internal	X	External	
The PCR review was conducted by a panel of experts chaired by Philippe Osset (SOLINNEN)			
PEP are compliant with XP C08-100-1 :2016			
The elements of the present PEP cannot be compared with elements from another program.			
Document in compliance with ISO 14025 : 2010 « Environmental labels and declarations. Type III environmental declarations »			
			

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