

# Product Environmental Profile

## QO® Whole Home Surge Protection Device





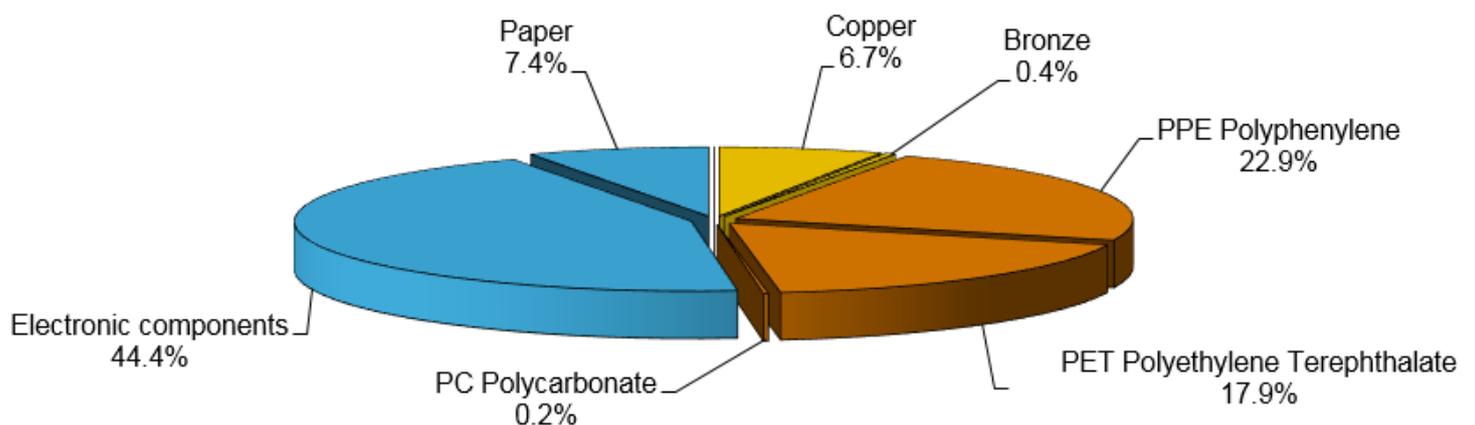
## General information

<b>Representative product</b>	QO® Whole Home Surge Protection Device - QO250PSPD
<b>Description of the product</b>	The plug-on neutral surge protective device provides whole house surge protection for all 120/240 V loads fed by the Square D™ brand QO™ plug-on neutral load centers and CSED where it is installed.
<b>Functional unit</b>	Protect during 20 years against direct or indirect effects of lightning or against transient overvoltages electrical equipments connected to electrical networks with a rated operational voltage up to 1000 V AC or 1500 V DC.



## Constituent materials

<b>Reference product mass</b>	215.04 g including the product, its packaging and additional elements and accessories
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## 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

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.

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 QO® Whole Home Surge Protection Device presents the following relevant environmental aspects

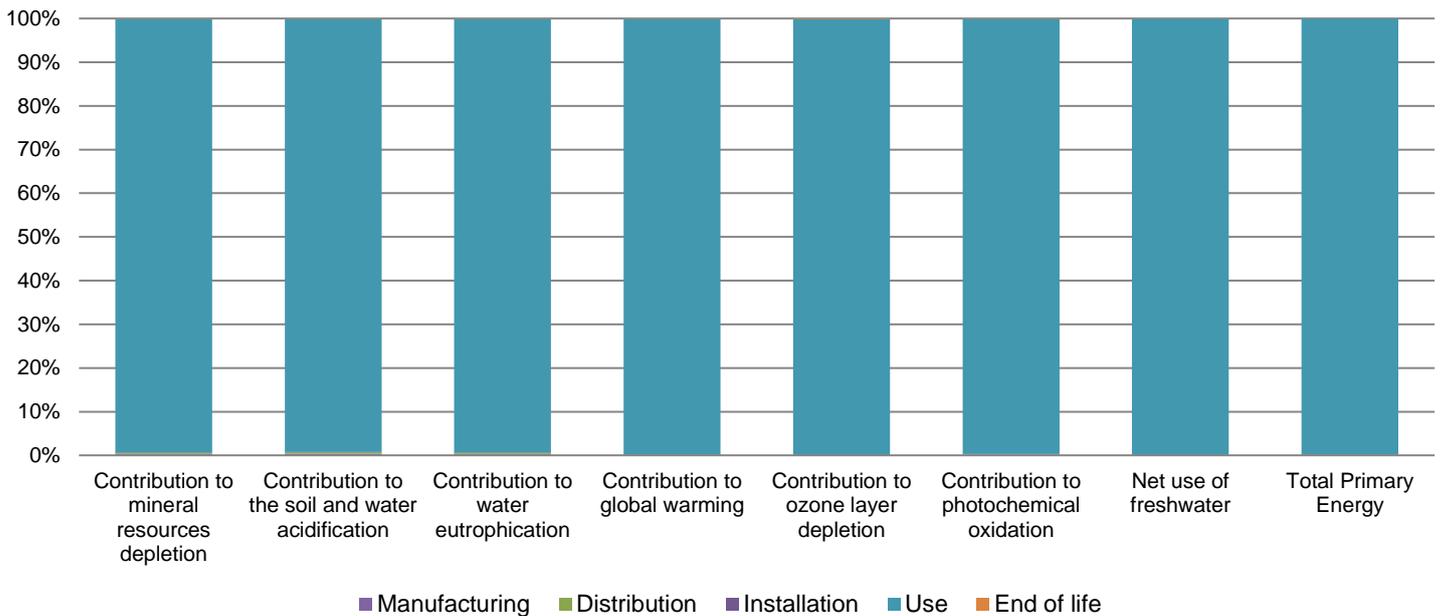
<b>Manufacturing</b>	Manufactured at a Schneider Electric production site ISO14001 certified
<b>Distribution</b>	Weight and volume of the packaging have been optimized. Packaging weight is 53.8 g, consisting of paper (14.5g) and PET Polyethylene Terephthalate (39.3g). Product distribution optimised by setting up local distribution centres
<b>Installation</b>	The QO™ Surge Protection Device does not require any installation operations.
<b>Use</b>	The product does not require special maintenance operations.
<b>End of life</b>	End of life optimized to decrease the amount of waste and allow recovery of the product components and materials  This product contains electronic cards (97g) that should be separated from the stream of waste so as to optimize end-of-life treatment.  The location of these components and other recommendations are given in the End of Life Instruction document which is available on the Schneider-Electric Green Premium website  <a href="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</a>  Recyclability potential: <b>39%</b> 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

<b>Reference life time</b>	20 years			
<b>Product category</b>	Passive products - continuous operation			
<b>Installation elements</b>	No special components needed			
<b>Use scenario</b>	Product dissipation is 0.62 W full load, loading rate is 30% and service uptime percentage is 100%			
<b>Geographical representativeness</b>	US			
<b>Technological representativeness</b>	The plug-on neutral surge protective device provides whole house surge protection for all 120/240 V loads fed by the Square D™ brand QO™ plug-on neutral load centers and CSED where it is installed.			
<b>Energy model used</b>	<b>Manufacturing</b>	<b>Installation</b>	<b>Use</b>	<b>End of life</b>
	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		QO® Whole Home Surge Protection Device - QO250PSPD					
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to mineral resources depletion	kg Sb eq	7.47E-07	2.46E-09	2.19E-09	1.60E-10	7.41E-07	5.23E-10
Contribution to the soil and water acidification	kg SO <sub>2</sub> eq	7.28E-02	2.76E-04	2.47E-04	1.58E-05	7.22E-02	5.60E-05
Contribution to water eutrophication	kg PO <sub>4</sub> <sup>3-</sup> eq	1.92E-02	6.34E-05	5.68E-05	3.73E-06	1.90E-02	1.77E-05
Contribution to global warming	kg CO <sub>2</sub> eq	7.56E+01	6.21E-02	5.48E-02	0*	7.54E+01	3.93E-02
Contribution to ozone layer depletion	kg CFC11 eq	1.37E-06	2.36E-10	0*	3.75E-10	1.37E-06	1.86E-09
Contribution to photochemical oxidation	kg C <sub>2</sub> H <sub>4</sub> eq	1.16E-02	1.98E-05	1.76E-05	1.69E-06	1.16E-02	5.55E-06
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Net use of freshwater	m3	1.33E-01	0*	0*	0*	1.33E-01	2.88E-05
Total Primary Energy	MJ	1.02E+03	8.77E-01	7.74E-01	0*	1.02E+03	2.67E-01



Optional indicators		QO® Whole Home Surge Protection Device - QO250PSPD					
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to fossil resources depletion	MJ	1.20E+03	8.69E-01	7.69E-01	0*	1.19E+03	2.45E-01
Contribution to air pollution	m³	6.41E+03	2.65E+00	2.26E+00	0*	6.41E+03	1.90E+00
Contribution to water pollution	m³	3.74E+03	1.01E+01	9.01E+00	5.99E-01	3.72E+03	2.62E+00
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Use of secondary material	kg	0.00E+00	0*	0*	0*	0*	0*
Total use of renewable primary energy resources	MJ	6.10E+01	0*	0*	0*	6.10E+01	0*
Total use of non-renewable primary energy resources	MJ	9.56E+02	8.76E-01	7.73E-01	0*	9.54E+02	2.66E-01
Use of renewable primary energy excluding renewable primary energy used as raw material	MJ	6.10E+01	0*	0*	0*	6.10E+01	0*
Use of renewable primary energy resources used as raw material	MJ	0.00E+00	0*	0*	0*	0*	0*
Use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	9.56E+02	8.76E-01	7.73E-01	0*	9.54E+02	2.66E-01
Use of non renewable primary energy resources used as raw material	MJ	0.00E+00	0*	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	2.41E+00	2.31E-02	0*	8.41E-02	2.02E+00	2.83E-01
Non hazardous waste disposed	kg	1.15E+01	2.22E-03	1.95E-03	0*	1.15E+01	0*
Radioactive waste disposed	kg	1.19E-03	1.65E-06	1.39E-06	3.84E-07	1.19E-03	1.43E-06
Other environmental information	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Materials for recycling	kg	1.01E-01	1.25E-02	0*	2.38E-02	0*	6.51E-02
Components for reuse	kg	0.00E+00	0*	0*	0*	0*	0*
Materials for energy recovery	kg	7.38E-03	7.32E-05	0*	0*	0*	7.31E-03
Exported Energy	MJ	0.00E+00	0*	0*	0*	0*	0*

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

Life cycle assessment performed with EIME version EIME v5.5, database version 2016-11.

The USE 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.

Registration N°	SCHN-00233-V01.01-EN	Drafting rules	PCR-ed3-EN-2015 04 02
Verifier accreditation N°	VH08	Supplemented by	PSR-0005-ed2-EN-2016 03 29
Date of issue	06/2017	Information and reference documents	<a href="http://www.pep-ecopassport.org">www.pep-ecopassport.org</a>
		Validity period	5 years
Independent verification of the declaration and data, in compliance with ISO 14025 : 2010			
Internal	External	X	
The PCR review was conducted by a panel of experts chaired by Philippe Osset (SOLINNEN)			
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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