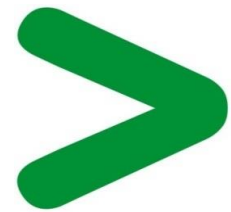


# Product Environmental Profile

## I-Line Circuit Breaker Panelboards (Copper Bus)



## General information

### Representative product

I-Line Circuit Breaker Panelboards (Copper Bus) - HCP50868, HC4286DB, HCW86TSD, HCW8SN, HCW4SN, PK32DGTA

### Description of the product

The main purpose of the I-Line Circuit Breaker panelboards are used as service entrance equipment or as downstream distribution panel in the electrical system of a large commercial or industrial facility.

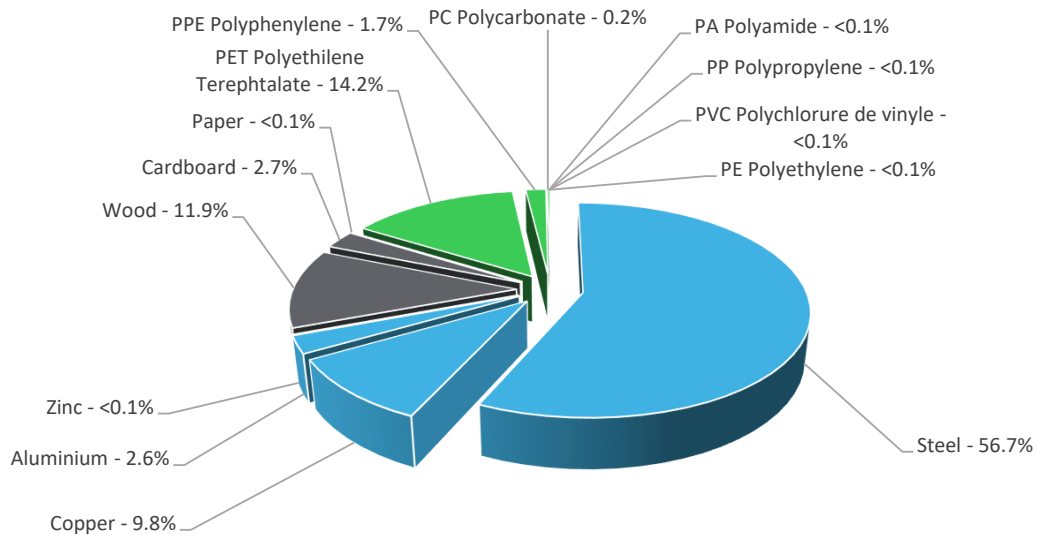
### Functional unit

Square D™-brand I-Line™ circuit breaker power distribution panelboards are for use on AC or DC systems for 20 years. I-Line circuit breaker panelboards are available as 400–1200 A main lugs only and 100–1200 A main circuit breakers.

## Constituent materials

### Reference product mass

255050 g including the product, its packaging and additional elements and accessories



Plastics	16.1%
Metals	69.1%
Others	14.6%

## 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 I-Line Circuit Breaker Panelboards (Copper Bus) presents the following relevant environmental aspects

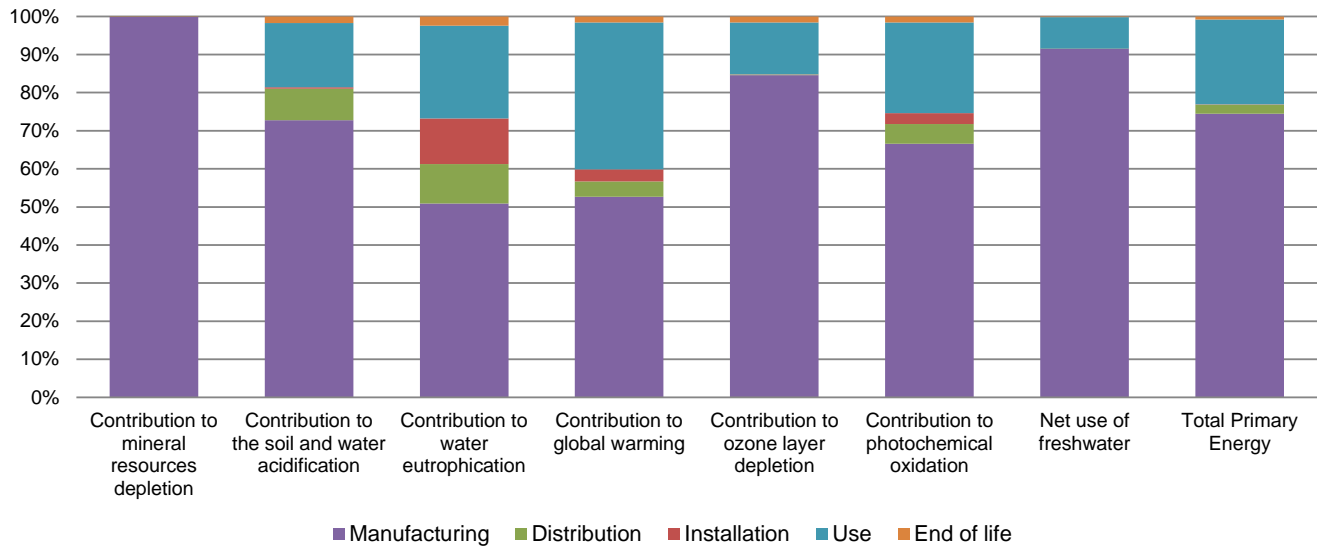
<b>Manufacturing</b>	Manufactured at a Schneider Electric production site ISO14001 certified
<b>Distribution</b>	Weight and volume of the packaging optimized, based on the European Union's packaging directive Packaging weight is 38990.7 g, consisting of Cardboard (18.34%), Paper (0.19%), Plastics (0.04%), Wood (81.43%)  Product distribution optimised by setting up local distribution centres
<b>Installation</b>	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).
<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  No special end-of-life treatment required. According to countries' practices this product can enter the usual end-of-life treatment process.  Recyclability potential: <b>75%</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>	Other equipments - Passive product - continuous operation			
<b>Installation elements</b>	No special components needed			
<b>Use scenario</b>	load rate / rated current (In): 30 % of In percentage of utilization time: 100%			
<b>Geographical representativeness</b>	US			
<b>Technological representativeness</b>	The main purpose of the I-Line Circuit Breaker panelboards are used as service entrance equipment or as downstream distribution panel in the electrical system of a large commercial or industrial facility.			
<b>Energy model used</b>	<b>Manufacturing</b>	<b>Installation</b>	<b>Use</b>	<b>End of life</b>
	Manufacturing Plant Location: Peru, USA	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		I-Line Circuit Breaker Panelboards (Copper Bus) - HCP50868, HC4286DB, HCW86TSD, HCW8SN, HCW4SN, PK32DGTA					
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to mineral resources depletion	kg Sb eq	1.09E-01	1.09E-01	0*	0*	0*	0*
Contribution to the soil and water acidification	kg SO <sub>2</sub> eq	3.91E+00	2.84E+00	3.22E-01	1.57E-02	6.59E-01	6.66E-02
Contribution to water eutrophication	kg PO <sub>4</sub> <sup>3-</sup> eq	7.12E-01	3.62E-01	7.40E-02	8.52E-02	1.74E-01	1.70E-02
Contribution to global warming	kg CO <sub>2</sub> eq	1.78E+03	9.39E+02	7.15E+01	5.62E+01	6.88E+02	2.77E+01
Contribution to ozone layer depletion	kg CFC11 eq	9.19E-05	7.77E-05	1.45E-07	1.19E-07	1.25E-05	1.44E-06
Contribution to photochemical oxidation	kg C <sub>2</sub> H <sub>4</sub> eq	4.44E-01	2.95E-01	2.29E-02	1.28E-02	1.06E-01	7.09E-03
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Net use of freshwater	m <sup>3</sup>	1.48E+01	1.35E+01	6.39E-03	1.29E-02	1.22E+00	2.82E-02
Total Primary Energy	MJ	4.16E+04	3.09E+04	1.01E+03	2.34E+01	9.26E+03	3.31E+02

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Optional indicators		I-Line Circuit Breaker Panelboards (Copper Bus) - HCP50868, HC4286DB, HCW86TSD, HCW8SN, HCW4SN, PK32DGTA						
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life	
Contribution to fossil resources depletion	MJ	1.91E+04	9.45E+03	1.00E+03	1.86E+01	8.38E+03	2.65E+02	
Contribution to air pollution	m³	3.54E+05	2.90E+05	2.99E+03	1.08E+03	5.84E+04	2.36E+03	
Contribution to water pollution	m³	8.03E+04	3.12E+04	1.18E+04	6.97E+02	3.39E+04	2.66E+03	
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life	
Use of secondary material	kg	4.25E+01	4.25E+01	0*	0*	0*	0*	
Total use of renewable primary energy resources	MJ	1.64E+03	1.09E+03	1.35E+00	1.02E+00	5.56E+02	3.69E-01	
Total use of non-renewable primary energy resources	MJ	3.99E+04	2.99E+04	1.01E+03	2.24E+01	8.71E+03	3.30E+02	
Use of renewable primary energy excluding renewable primary energy used as raw material	MJ	8.36E+02	2.77E+02	1.35E+00	1.02E+00	5.56E+02	3.69E-01	
Use of renewable primary energy resources used as raw material	MJ	8.08E+02	8.08E+02	0*	0*	0*	0*	
Use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	3.87E+04	2.86E+04	1.01E+03	2.24E+01	8.71E+03	3.30E+02	
Use of non renewable primary energy resources used as raw material	MJ	1.27E+03	1.27E+03	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	8.97E+03	8.67E+03	0*	0*	1.84E+01	2.84E+02	
Non hazardous waste disposed	kg	7.43E+02	5.92E+02	2.54E+00	4.27E+01	1.05E+02	1.02E+00	
Radioactive waste disposed	kg	3.89E-01	3.74E-01	1.81E-03	1.20E-03	1.08E-02	1.58E-03	
Other environmental information	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life	
Materials for recycling	kg	1.94E+02	2.40E+01	0*	0*	0*	1.70E+02	
Components for reuse	kg	0.00E+00	0*	0*	0*	0*	0*	
Materials for energy recovery	kg	2.15E+00	0*	0*	0*	0*	2.15E+00	
Exported Energy	MJ	3.02E+01	2.05E+00	0*	2.82E+01	0*	0*	

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

Life cycle assessment performed with EIME version EIME v5.8.0, 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.

Registration number :	SCHN-00430-V01.01-EN	Drafting rules	PCR-ed3-EN-2015 04 02
Verifier accreditation N°	VH33	Supplemented by	PSR-0005-ed2-EN-2016 03 29
Date of issue	01/2019	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)			
PEP are compliant with XP C08-100-1 :2014			
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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Published by Schneider Electric

SCHN-00430-V01.01-EN

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01/2019