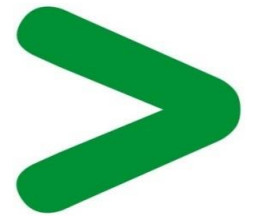


# Product Environmental Profile

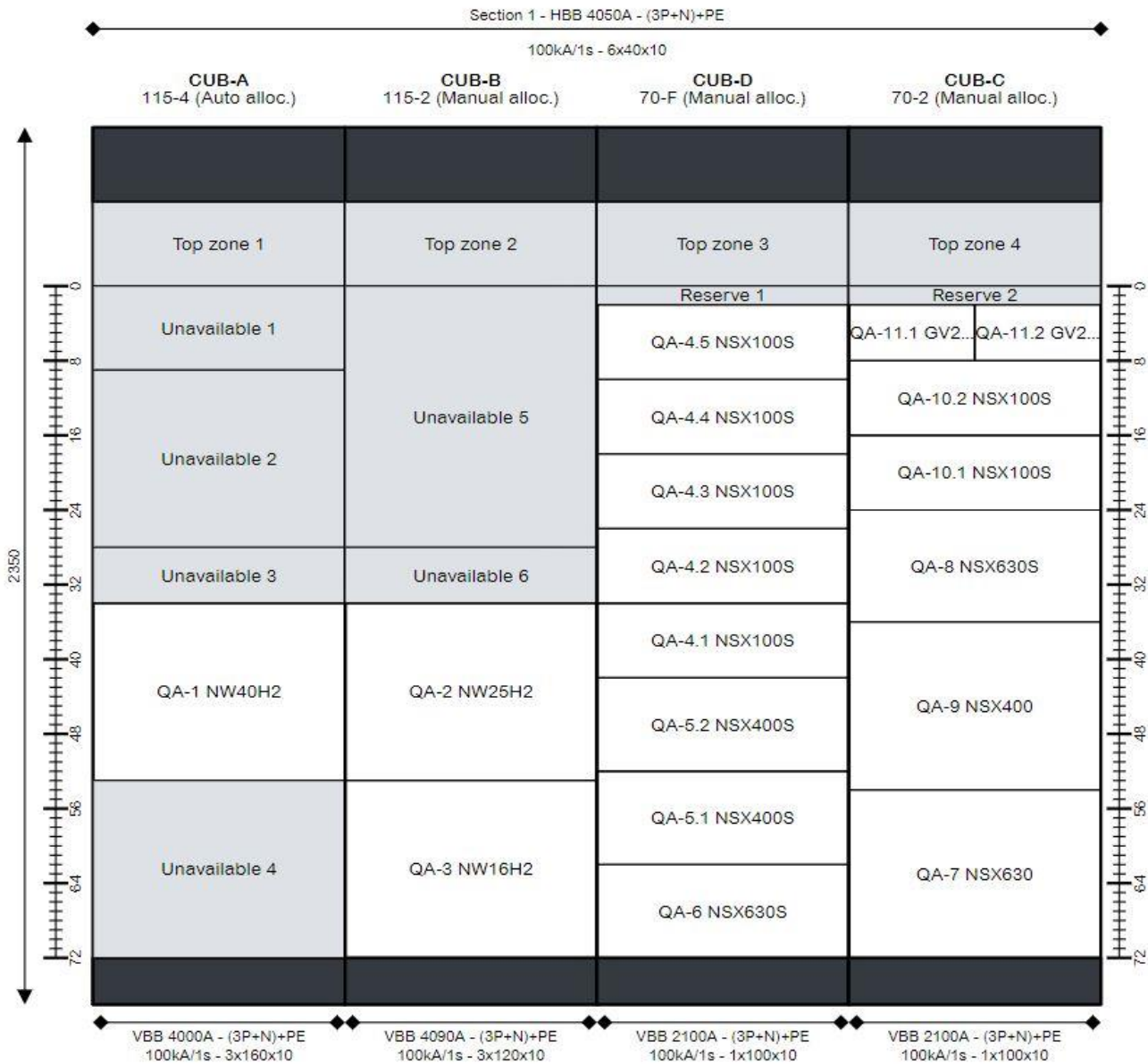
## Okken 115, 70-F and 70-2 PCC and MCC low voltage switchboard





## General information

<b>Representative product</b>	Okken 115, 70-F and 70-2 PCC&MCC low voltage switchboard
<b>Description of the product</b>	Okken is an assembled enclosures with busbars. It is designed to integrate and allow the installation of electric devices such as Circuit breakers (ACB & MCCB & MCB), Switch disconnectors, Fuse, Busbars for connection as per the customer requirement for a maximum current value of up to 4000A.
<b>Functional unit</b>	It is an assembled enclosures with busbars for a maximum current value of up to 4000A. It is to protect persons during 20 years against direct contact with live parts and allow monitoring, control and protection devices in a single enclosure or a cabinet having the following dimensions 2350 x 2600 x 1200 mm. Continuous current pass through the busbars for the devices to be connected. It can withstand mechanical impacts (IK10 - IEC62262) and the penetration of solid objects and liquids (IP41 - IEC 60529) in accordance with IEC 61439-1 and 2 standards.

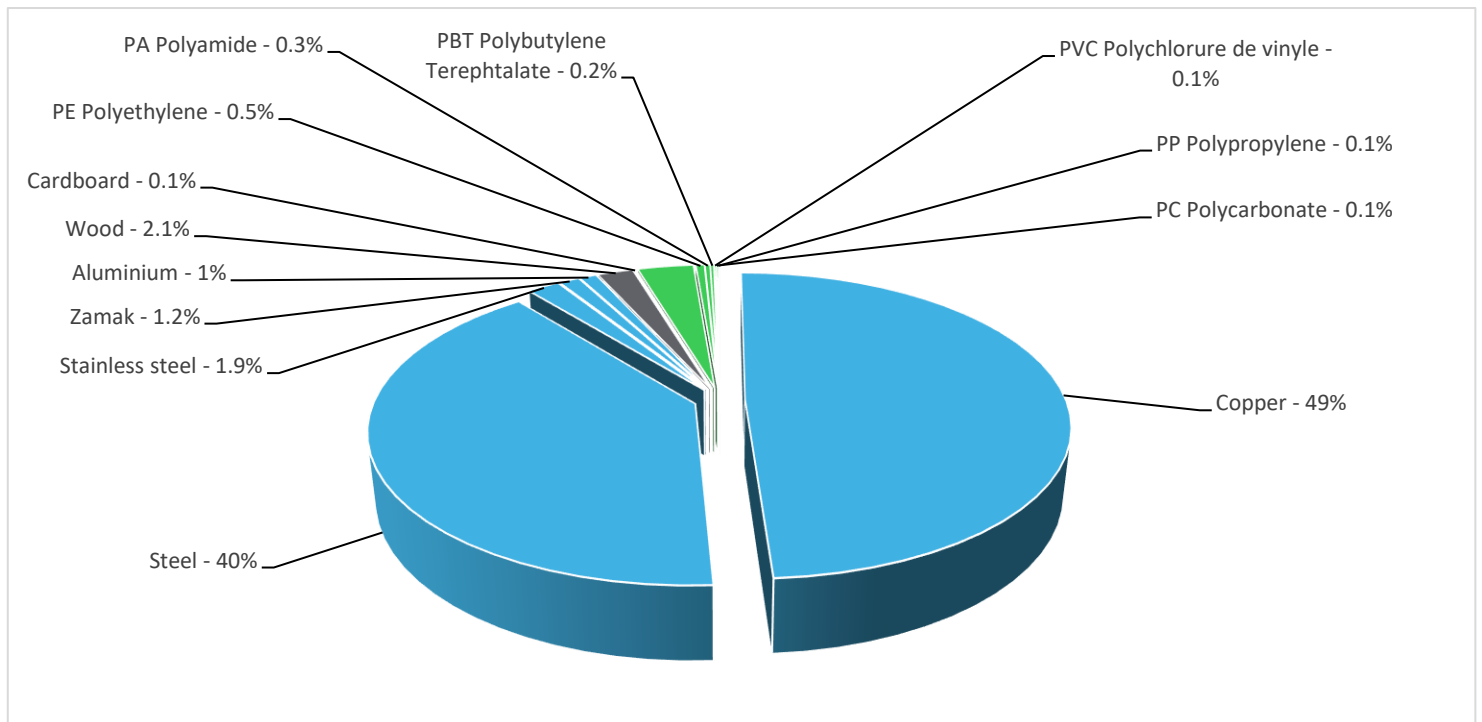


Device	Device Commercial Reference	Device function	Module	Quantity	Conclusion
QA-1 MTZ2-NW40H2	48328+48499+48408+48603	INCOMER 4000A 4P	19/72	1	<p>The environmental impacts have been calculated for elements of Okken enclosure. Impacts of the circuit breakers, contactors and relays to be assembled have not been integrated in the calculation. Cables used inside the Okken enclosure have not been integrated in the calculation.</p>
QA-2 MTZ2-NW25H2	48306+48358+48406+48603	FEEDER PCC 2430A 4P	19/72	1	
QA-2 MTZ2-NW16H2	48280+48358+48404+48603	FEEDER PCC 1530A 4P	19/72	1	
QA-4 NSX100S	C10N4+C1045E100	FEEDER PCC 90A 4P	8/72	5	
QA-5 NSX400S	C40N4+C4045E400	FEEDER PCC 370A 4P	10/72	2	
QA-6 NSX630S	C63N4+C6345E630	FEEDER PCC 570A 4P	10/72	1	
QA-7 250kW	C63N31M500+LC1F500FE7+LRD05+LAD7B106	FEEDER MCC DOL 250kW	18/72	1	
QA-9 132 kW	C40N31M320+LC1F500FE7+LRD05+LAD7B106	FEEDER MCC DOL 132kW	18/72	1	
QA-8 NSX630S	C63N4+C6345E630	FEEDER PCC 505A 4P	12/72	1	
QA-10 NSX100S	C10N4+C1045E100	FEEDER PCC 100A 4P	8/72	2	
QA-11 3 kW	GV2L14+LC1D09FE7+LRD12+LAD7305	FEEDER MCC DOL 3kW	6/72	2	

## Constituent materials

Reference product mass

2850000 g including the product, its packaging and additional elements and accessories



Plastics	4.6%
Metals	93.2%
Others	2.2%

## 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 EU 2015/863) and do not contain, or only contain in the authorised proportions, lead, mercury, cadmium, hexavalent chromium, flame retardants (polybrominated biphenyls - PBB, polybrominated diphenyl ethers – PBDE), or phthalates (Bis(2-ethylhexyl) phthalate DEHP, Butyl benzyl phthalate -BBP, Dibutyl phthalate – DBP, Diisobutyl phthalate - DIBP) 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

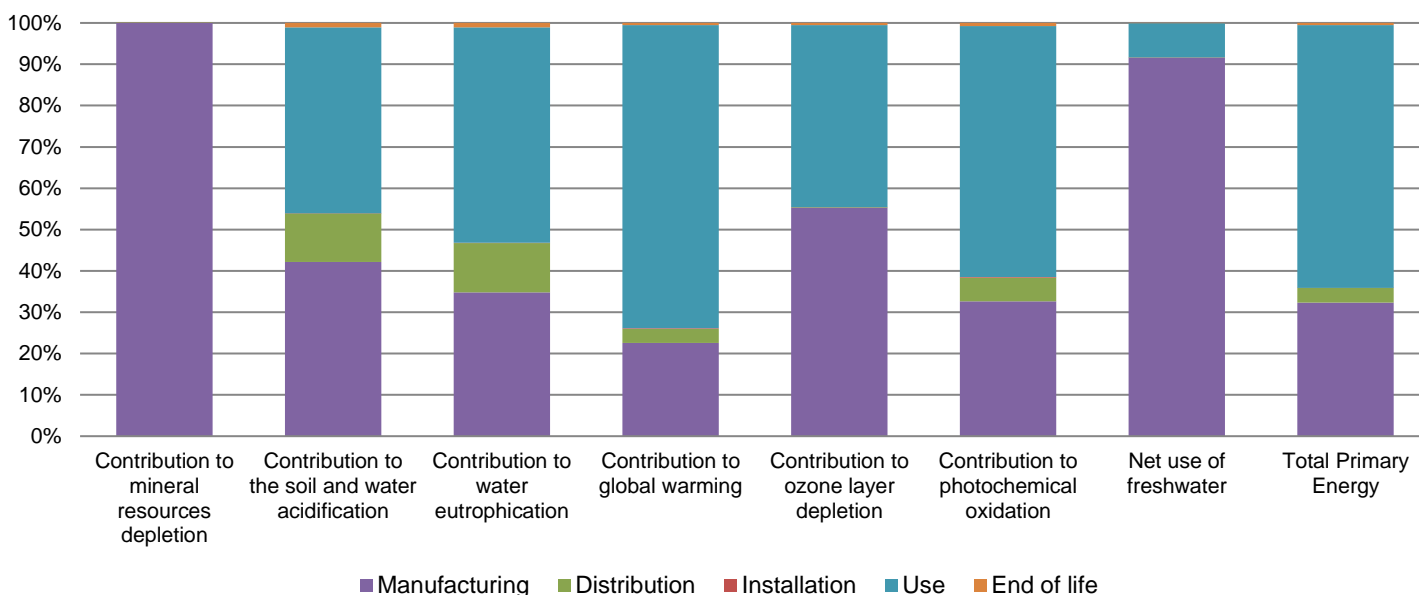
The Okken 115, 70-F and 70-2 PCC and MCC low voltage switchboard presents the following relevant environmental aspects

<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 67606.9 g, consisting of Wood (88.75%), LDPE (5.47%), Cardboard (2.66%), Paper (3.12%). 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>	Simple routine maintenance (checking the torque of busbar fasteners, thermal monitor, etc) is required for the product which does not include any complicated activity.
<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 Plastic parts with brominated FR (5171g). 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>91%</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>	Middle East			
<b>Technological representativeness</b>	Okken is an assembled enclosures with busbars. It is designed to integrate and allow the installation of electric devices such as Circuit breakers (ACB & MCCB & MCB), Switch disconnectors, Fuse, Busbars for connection as per the customer requirement for a maximum current value of up to 4000A.			
<b>Energy model used</b>	<b>Manufacturing</b>	<b>Installation</b>	<b>Use</b>	<b>End of life</b>
	Energy model used: SET, Manisa, Turkey	Electricity mix; AC; consumption mix, at consumer; 230V; TR	Electricity mix; AC; consumption mix, at consumer; 230V; TR	Electricity mix; AC; consumption mix, at consumer; 230V; TR

Compulsory indicators		Okken 115, 70-F and 70-2 PCC and MCC low voltage switchboard - 87020					
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to mineral resources depletion	kg Sb eq	3.61E+00	3.61E+00	0*	0*	3.82E-04	0*
Contribution to the soil and water acidification	kg SO <sub>2</sub> eq	7.70E+01	3.25E+01	9.04E+00	3.51E-02	3.46E+01	8.02E-01
Contribution to water eutrophication	kg PO <sub>4</sub> <sup>3-</sup> eq	1.75E+01	6.10E+00	2.09E+00	1.76E-02	9.13E+00	1.92E-01
Contribution to global warming	kg CO <sub>2</sub> eq	5.62E+04	1.27E+04	1.91E+03	6.44E+01	4.12E+04	2.77E+02
Contribution to ozone layer depletion	kg CFC11 eq	3.19E-03	1.76E-03	3.87E-06	0*	1.41E-03	1.67E-05
Contribution to photochemical oxidation	kg C <sub>2</sub> H <sub>4</sub> eq	1.14E+01	3.72E+00	6.51E-01	1.49E-02	6.92E+00	8.66E-02
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Net use of freshwater	m3	3.88E+02	3.56E+02	1.71E-01	0*	3.21E+01	3.23E-01
Total Primary Energy	MJ	7.58E+05	2.45E+05	2.70E+04	0*	4.82E+05	4.04E+03



Optional indicators		Okken 115, 70-F and 70-2 PCC and MCC low voltage switchboard - 87020					
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to fossil resources depletion	MJ	5.62E+05	1.35E+05	2.68E+04	6.86E+01	3.97E+05	3.24E+03
Contribution to air pollution	m <sup>3</sup>	1.24E+07	9.31E+06	8.80E+04	1.55E+03	2.92E+06	2.85E+04
Contribution to water pollution	m <sup>3</sup>	2.59E+06	7.80E+05	3.14E+05	7.53E+02	1.46E+06	3.09E+04
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Use of secondary material	kg	2.36E+02	2.36E+02	0*	0*	0*	0*
Total use of renewable primary energy resources	MJ	7.86E+04	8.88E+03	3.60E+01	0*	6.97E+04	0*
Total use of non-renewable primary energy resources	MJ	6.79E+05	2.36E+05	2.70E+04	7.36E+01	4.12E+05	4.03E+03
Use of renewable primary energy excluding renewable primary energy used as raw material	MJ	7.73E+04	7.58E+03	3.60E+01	0*	6.97E+04	0*
Use of renewable primary energy resources used as raw material	MJ	1.30E+03	1.30E+03	0*	0*	0*	0*
Use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	6.76E+05	2.33E+05	2.70E+04	7.36E+01	4.12E+05	4.03E+03
Use of non renewable primary energy resources used as raw material	MJ	3.07E+03	3.07E+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	2.90E+05	2.86E+05	0*	0*	8.48E+02	3.05E+03
Non hazardous waste disposed	kg	1.03E+04	5.68E+03	6.79E+01	5.09E+01	4.48E+03	1.24E+01
Radioactive waste disposed	kg	3.75E+00	3.15E+00	4.83E-02	1.77E-03	5.28E-01	1.91E-02

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Other environmental information	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Materials for recycling	kg	2.83E+03	2.76E+02	0*	2.21E+01	0*	2.53E+03
Components for reuse	kg	0.00E+00	0*	0*	0*	0*	0*
Materials for energy recovery	kg	5.77E+00	0*	0*	0*	0*	5.77E+00
Exported Energy	MJ	4.12E+01	3.87E+00	0*	3.73E+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 v5.9.3, database version 2021-2 in compliance with ISO14044.

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 number	ENVPEP121219EN_V3	Drafting rules	PCR-ed3-EN-2015 04 02
Date of issue	07/2022	Supplemented by	PSR-0005-ed2-EN-2016 03 29
Validity period	5 years	Information and reference documents	<a href="http://www.pep-ecopassport.org">www.pep-ecopassport.org</a>
<b>Independent verification of the declaration and data</b>			
Internal	X	External	
The elements of the present PEP cannot be compared with elements from another program.			
Document in compliance with ISO 14021:2016 « Environmental labels and declarations - Self-declared environmental claims (Type II environmental labelling) »			

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07/2022