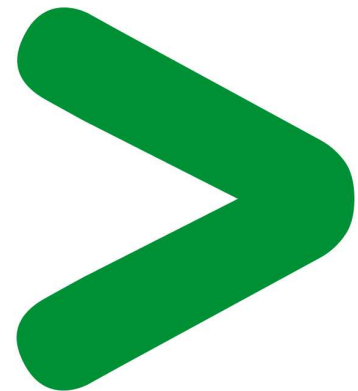
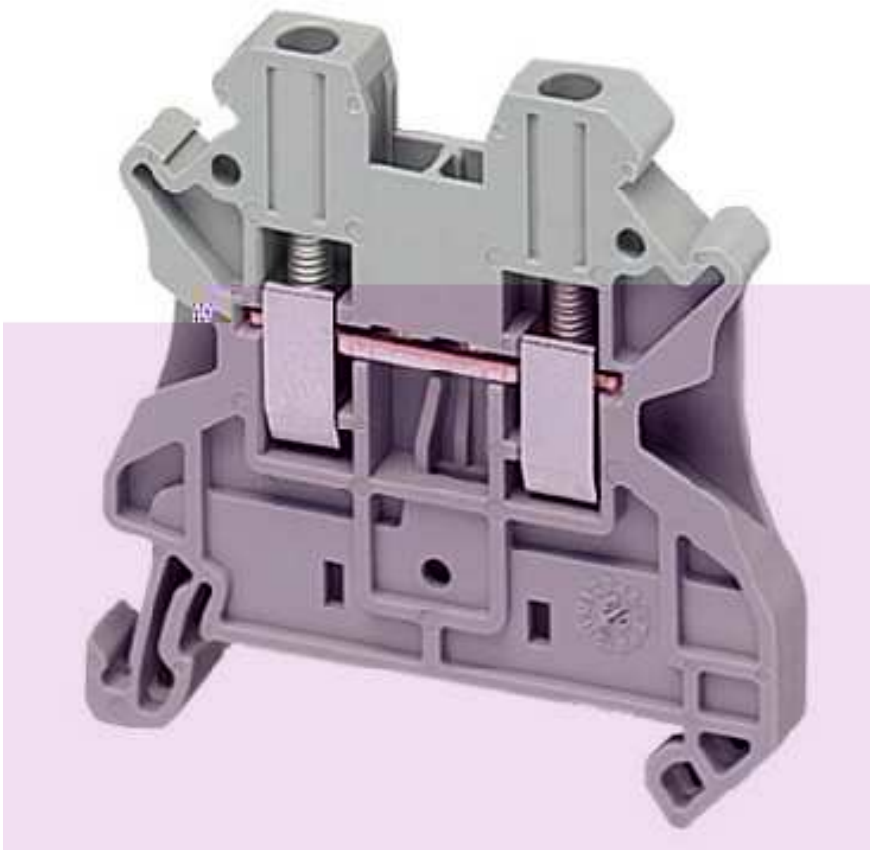


Product Environmental Profile

SCREW TERMINAL BLOCKS
NSYTRV



Product Environmental Profile – PEP

Product overview

The main purpose of the Screw Terminal Block NSYTRV is to connect copper conductors and define logical domains inside an enclosure for 20 years.

This range consists of Screw Terminal Blocks with a cross section area 2.5mm² up to 150mm².

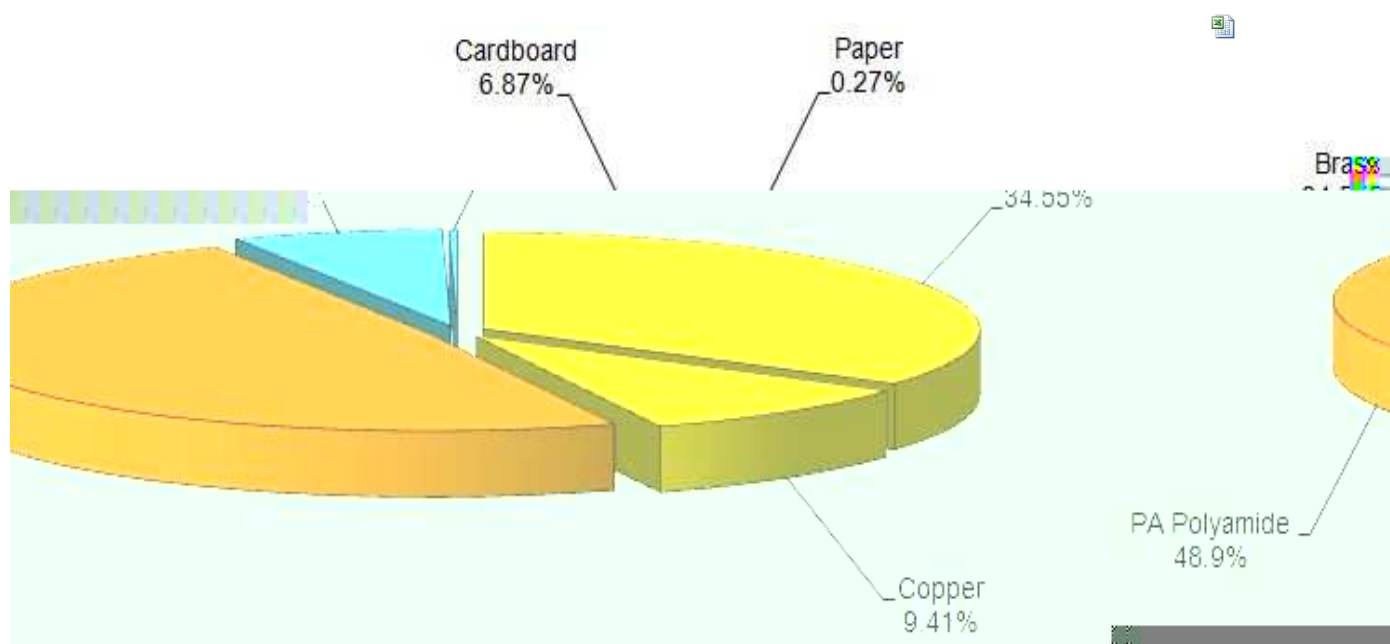
The representative product used for the analysis is NSYTRV22 Screw Terminal Block 2.5 mm².

The environmental impacts of this referenced product are representative of the impacts of the other products of the range which are developed with a similar technology.

The environmental analysis was performed in conformity with ISO 14040.

Constituent materials

The mass of the product range is from 4.41 g and 326.1 g including packaging. It is 8.2 g for the **Screw Terminal Block 2.5 mm², Commercial Reference NSYTRV22**. The constituent materials are distributed as follows:



Substance assessment

Products of this range are 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

The Screw Terminal Block NSYTRV product range is manufactured at a Schneider Electric production site on which an ISO14001 certified environmental management system has been established.

Product Environmental Profile – PEP

Distribution

The weight and volume of the packaging have been optimized, based on the European Union's packaging directive.

The Screw Terminal Block NSYTRV packaging weight is *0.584 g*. It consists of Cardboard (0.562 g) and paper (0.022 g)

The product distribution flows have been optimised by setting up local distribution centres close to the market areas.

Use

The products of the Screw Terminal Block NSYTRV range do not generate environmental pollution (noise, emissions) requiring special precautionary measures in standard use.

The electrical power consumption depends on the conditions under which the product is implemented and used. The electrical power consumed by the Screw Terminal Block range is between 0.1 W and 0.3 W. It is 0.219 W load at 80% in active mode and 20% in standby mode for the referenced **Screw Terminal Block 2.5 mm², Commercial Reference NSYTRV22**

The product range does not require special maintenance operations.

End of life

At end of life, the products in the Screw Terminal Block NSYTRV 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: **33%**.

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 **Screw Terminal Block 2.5 mm², Comm. Ref.: NSYTRV22**.
- Product packaging is included.
- Installation components: No special components included.
- Scenario for the Use phase: This product range is included in the category "**Energy passing product**". Assumed service lifetime is **20 years** and use scenario: The consumed power is **0.219W** and **30%** service uptime (based on the real using data).
- The geographical representative area for the assessment is "**European**", and the electrical power model used for calculation is "**Europe model**".
- End of life impacts are based on a worst case transport distance to the recycling plant (1000km)

Product Environmental Profile – PEP

Presentation of the product environmental impacts

Environmental indicators	Unit	For Screw Terminal Block Commercial Reference NSYTRV22.					
		S = M + D + I + U + E	M	D	I	U	E
Air Acidification (AA)	kg H+ eq	2.99E-03	1.60E-05	2.64E-07	0.00E+00	2.97E-03	1.14E-06
Air toxicity (AT)	m³	3.72E+06	4.38E+04	3.92E+02	0.00E+00	3.68E+06	1.70E+03
Energy Depletion (ED)	MJ	4.40E+02	8.72E-01	1.98E-02	0.00E+00	4.39E+02	8.18E-02
Global Warming Potential (GWP)	kg CO ₂ eq.	2.22E+01	4.94E-02	1.41E-03	0.00E+00	2.22E+01	5.80E-03
Hazardous Waste Production (HWP)	kg	3.70E-01	1.74E-03	1.74E-09	0.00E+00	3.68E-01	7.18E-09
Ozone Depletion Potential (ODP)	kg CFC-11 eq.	1.21E-06	4.32E-09	2.66E-12	0.00E+00	1.20E-06	1.10E-11
Photochemical Ozone Creation Potential (POCP)	kg C ₂ H ₄ eq.	7.77E-03	1.62E-05	3.62E-07	0.00E+00	7.75E-03	1.44E-06
Raw Material Depletion (RMD)	Y-1	1.90E-15	1.40E-15	2.87E-20	0.00E+00	4.99E-16	1.19E-19
Water Depletion (WD)	dm ³	6.44E+01	8.66E-01	1.46E-04	0.00E+00	6.35E+01	6.02E-04
Water Eutrophication (WE)	kg PO ₄ ³⁻ eq.	7.05E-05	1.84E-05	2.61E-09	0.00E+00	5.21E-05	1.08E-08
Water Toxicity (WT)	m³	6.39E+00	2.48E-02	6.00E-04	0.00E+00	6.36E+00	2.48E-03

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 **Use (U)** phase is the life cycle phase which has the greatest impact on the majority of environmental indicators.

According to this environmental analysis, proportionality rules may be used to evaluate the impacts of other products of this range: The environmental indicators for manufacturing and distribution of others products in this family are proportional extrapolated by product mass.

System approach

As the products of the range 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 mole 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 elec

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