



## Environmental Product Declaration

### Product

Type of equipment / Product No.	5SY5104-7	Circuit breaker curr. sens DC 220V AC 230/400V 10 kA, 1-pole, C, 4A
	5SY5116-7	Circuit breaker curr. sens DC 220V AC 230/400V 10 kA, 1-pole, C, 16A
	5SY5132-7	Circuit breaker curr. sens DC 220V AC 230/400V 10 kA, 1-pole, C, 32A
Product line	5SY5* Miniature Circuit Breakers	

### Technical data

	5SY5104-7	5SY5116-7	5SY5132-7
Resistance [mΩ]	81.0	5.9	2.4
Nominal current [A]	4	16	32
Power loss [W]	1.3	1.5	2.5
Max. installed power [W]	920	3680	7360
Energy efficiency [%]	99,86	99,96	99,97

### Process control

Siemens AG		
Siemensstr. 10		
93055 Regensburg/ Germany		
Management System	since	by
ISO 9001 (Quality)	15.12.1993	VDE
ISO 14001 (Environment)	08.09.1999	VDE
OHSAS 18001 (OH&S)	28.06.2011	VDE

### Environmentally compatible product design

Product responsibility of Siemens covers the entire product life cycle. Siemens already assesses, avoids and minimizes the environmental impact of its products with respect to production, procurement, sales, use, services and disposal during the product and process planning phases by complying with Siemens EP Standard (former SN 36350) "Specifications on Environmentally Compatible Product and System Design".

### Product use

Typical energy consumption	variant *) see below
Fire load	0.8MJ

### Packaging

21-PAP Fiber board	One piece packaging	12.5g
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### Materials

Total weight of device	variant *) see below	
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The total weight of a device may deviate from the total of the weights of all individual components due to rounding.

### Plastics

PA6; GF 20%		1.8g
PBT; GF 10%		1.1g
PBT; GF 30%		1.3g
PES; GF 20%		0.9g
UP; GF 10% + DD 60%	Housing	62.2g

Metals	Al alloy		variant
	Bimetal		variant
	Cu		variant
	Cu; tin plated		variant
	Cu; silver plated		0.7g
	Cu; lacquered		variant
	Magnet		2.7g
	Steel		variant
	Steel; copper plated	Arcing chamber	31.4g
	Steel; galvanized		16.6g
	Steel; nickel plated		0.5g

## \*Variant parts list

Total weight of device

Al alloy

Bimetal

Cu

Cu; tin plated

Cu; lacquered

Steel

[g]	5SY5104-7	5SY5116-7	5SY5132-7
	151.5	145.1	152.3
	1.5		
	1.1	1.2	1.3
	3.9	2.2	2.8
	1.6	3.4	3.4
	6.6	2.6	8.4
	17.6	16.5	17.2

## Typical energy consumption

30% nominal current

[A]

Power loss at

[W]

30% nominal current

Energy consumption

[kWh]

for 30% of the time in 20 years

	1.2	4.8	9.6
	0.1	0.1	0.2
	6.13	7.14	11.63

Assumption for 5SY5116-7:

A current of 4,8A which corresponds to 30% of the nominal current flows through the circuit breaker during 30% of the time over a period of 20 years.

The product has a power loss of 0,1W at a current of 4,8A. It consumes 7,14W over a period of 20 years. At nominal current - i.e. a maximum installed power of 3680W - an energy efficiency of 99,96% results.

## Disposal

The device should not be disposed of as unsorted municipal waste. The special treatment for specific components may be mandated by law or ecologically sensible. Observe all local and applicable laws.

## Comments

### EU-directive 2011/65/EU (RoHS)

The device does not contain substances in concentrations and applications banned under the EU RoHS Directive.

### Regulation (EC) No. 1907/2006 (REACH)

To the best of our knowledge and according to the information of our suppliers the above mentioned device and its packaging contain no substances of the candidate list according to Article 59 (1, 10) of the regulation (EC) No. 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) in concentrations above 0.1 % w/w.

(Status according to the creation date of this document.)

### Further notes and comments:

For all products listed above the concentration of each halogen (fluorine, chlorine, bromine, iodine) is less than or equal to 0.1 %. Thus the products are considered as halogen-free according to DIN VDE V 0604-2-100.

The details in this EPD refer to unipolar equipment. For multi-pole equipment a good approximation is achieved by multiplication by the number of poles.

The values are rounded to integer numbers. Materials with a mass under 0.5 g are not considered, if they do not have a significant environmental impact.

### Legal Disclaimer: This declaration is for information purpose only.

This Environmental Product Declaration does not constitute a guarantee of the composition of a product, neither does it guarantee that the product will retain a particular composition for a particular period.

Siemens AG therefore does not assume liability for any error or for any consequences which may arise from the use of this information to the maximum extent under the law.

Please contact your local Siemens branch office to get further information on environmental aspects and disposal.