

Primary switch mode power supply

CP-S.1 range



CP-S.1 power supplies: high efficiency and reliability delivered in a compact footprint. Designed for a huge variety of applications, including machine building segments, this advanced range boosts an integrated 150 % power reserve for five seconds and operates at an efficiency of up to 94 %.

The new family of CP-S.1 power supplies offer a complete 24 V DC range from 72 W up to 960W and come with metal enclosure. ABB's CP-S.1 range achieves an outstanding power to space ratio and is the right fit for applications where size matters. Power reserve functionality of 150 % for 5 s provides additional power to start heavy loads. A certified AC and DC input voltage range as well as a variety of approvals, inc. marine, giving you the confidence that this range could be used in multiple installations in the world.

Product conformity & compliance

REACH (Regulation EC 1907/2006)

ABBs CP-S.1 range power supplies and related accessories were classified as articles and, during normal and reasonably foreseeable conditions of use, do not intentionally release any substance or preparation.

ABB continuously undertakes communications throughout its supply chain in order to collect information about suppliers' compliance with REACH regulation.

SVHC (Regulation EC 1907/2006 REACH)

ABB continuously assesses its products for content of Substances of Very High Concern (SVHC), as included in the "Candidate List" by the European Chemicals Agency (ECHA). ABB publishes the data about the products that are having a part with SVHC in the SCIP database.

RoHS II

ABBs CP-S.1 range power supplies and related accessories are within the scope of directive 2011/65/EU (RoHS II) and amendment 2015/863, starting from July 22 2019.

WEEE

The Waste Electrical and Electronic Equipment Directive (WEEE Directive) is the European Community directive on waste electrical and electronic equipment (WEEE) which, together with the RoHS directive, became European law in February 2003.

Product safety

Compliance with essential health and safety requirements has been assured by compliance with the applicable product and safety standards.

The validation according to the product and safety standards is carried out by third party tests laboratory (STIEE / TL030) in respect of the EN ISO/IEC 17025 European standard, according to IECCE CB scheme. CB certificate has been issued.

Standards:

- EN/IEC 61010-1
- EN/IEC 61010-2-201
- EN/IEC 61204
- UL 61010-1
- UL 61010-2-201
- CAN/CSA C22.2 NO 61010-1-12

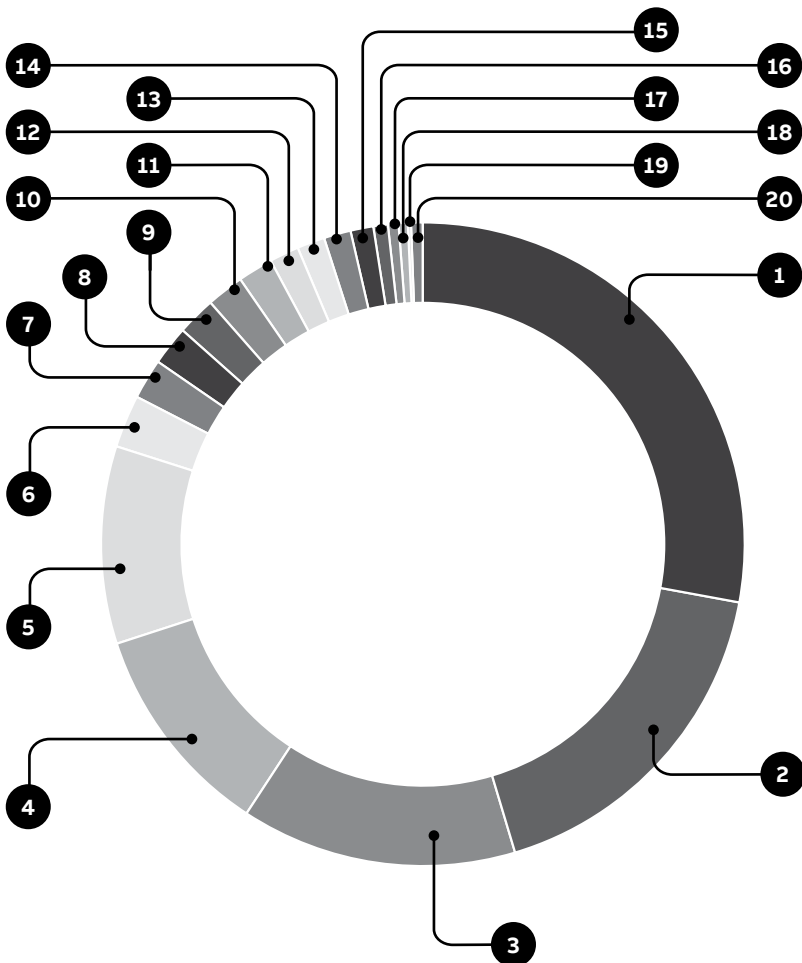
Directives:

- Low Voltage Directive No. 2014/35/EU
- EMC Directive No. 2014/30/EU
- RoHS Directive No. 2011/65/EU incl. 2015/863/EU

Material declaration

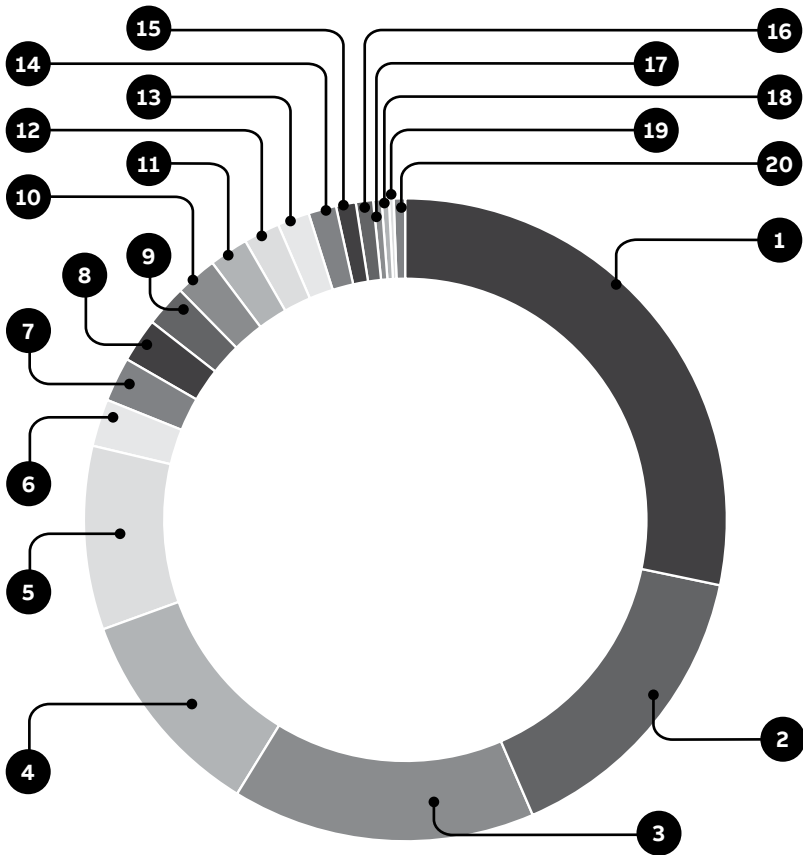
The charts below show the constituents of CP-S.1 range power supplies. The constituent materials are distributed as follows.

CP-S.1 24/3.0 - 1SVR320361R1000. The total weight of the product is 550 gr.



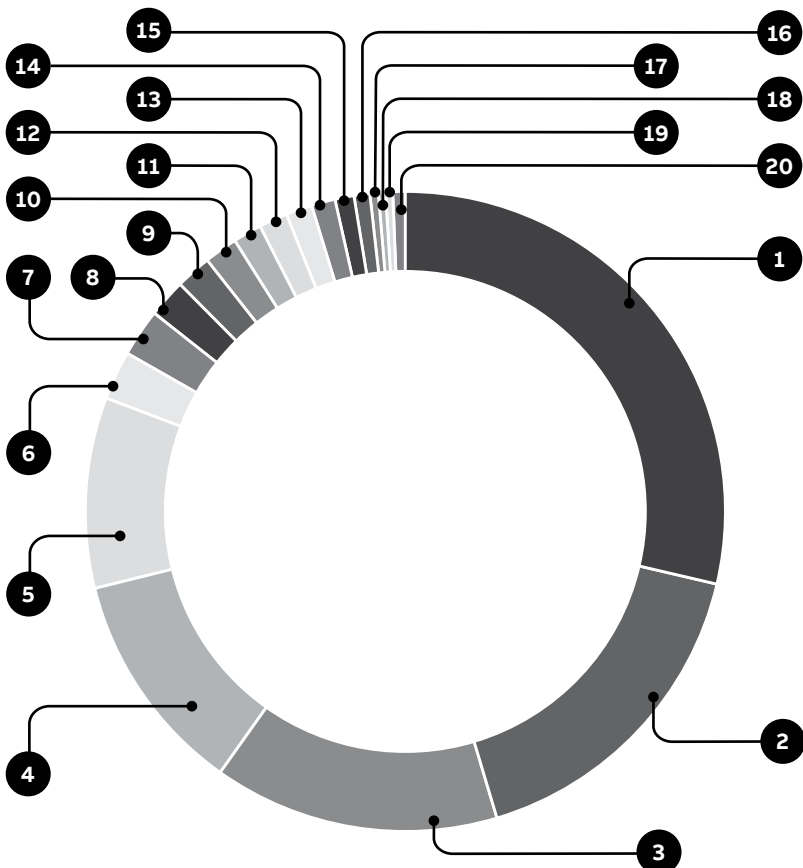
| Material | % wt |
|---|--------|
| 1 Aluminium alloy | 27.9 % |
| 2 Stainless steel | 17.5 % |
| 3 Iron oxide and ferric oxide (Magnetic core) | 13.9 % |
| 4 PCB | 10.8 % |
| 5 Copper alloys | 9.9 % |
| 6 PC | 2.6 % |
| 7 BMC/SMC | 2.0 % |
| 8 Steel | 2.0 % |
| 9 Epoxy resin | 1.9 % |
| 10 FRP | 1.9 % |
| 11 PA | 1.8 % |
| 12 Electrolytic paper | 1.5 % |
| 13 Organosilicon compound | 1.4 % |
| 14 Coating resin | 1.4 % |
| 15 Ceramic | 1.1 % |
| 16 PEI | 0.7 % |
| 17 PP | 0.5 % |
| 18 PBT | 0.5 % |
| 19 PET | 0.2 % |
| 20 Other | 0.6 % |
| TOTAL | 100 % |

CP-S.1 24/5.0 - 1SVR320561R1000. The total weight of the product is 690 gr.



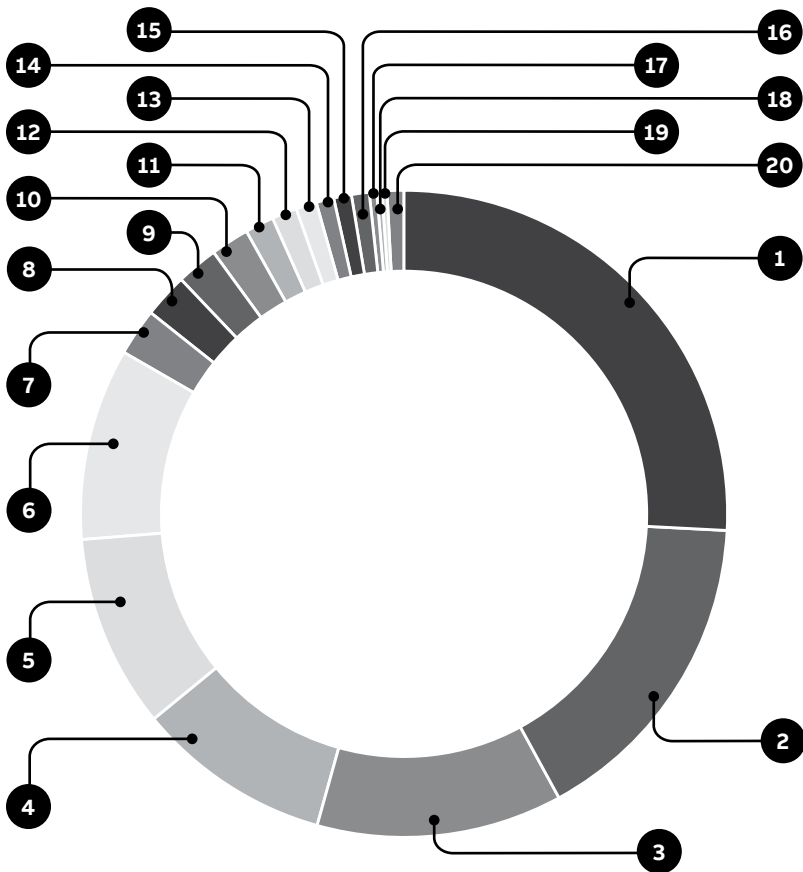
| Material | % wt |
|---|--------|
| 1 Aluminium alloy | 28.3 % |
| 2 Stainless steel | 15.3 % |
| 3 Iron oxide and ferric oxide (Magnetic core) | 15.3 % |
| 4 Copper alloys | 10.7 % |
| 5 PCB | 9.2 % |
| 6 Organosilicon compound | 2.4 % |
| 7 Ceramic | 2.2 % |
| 8 FRP | 2.2 % |
| 9 PC | 2.1 % |
| 10 Epoxy resin | 2.1 % |
| 11 Steel | 2.0 % |
| 12 BMC/SMC | 1.8 % |
| 13 Coating resin | 1.6 % |
| 14 PA | 1.4 % |
| 15 Electrolytic paper | 1.0 % |
| 16 PEI | 0.9 % |
| 17 PP | 0.4 % |
| 18 PBT | 0.4 % |
| 19 PET | 0.2 % |
| 20 Other | 0.6 % |
| TOTAL | 100% |

CP-S.1 24/10.0 - 1SVR320661R1000. The total weight of the product is 830 gr.



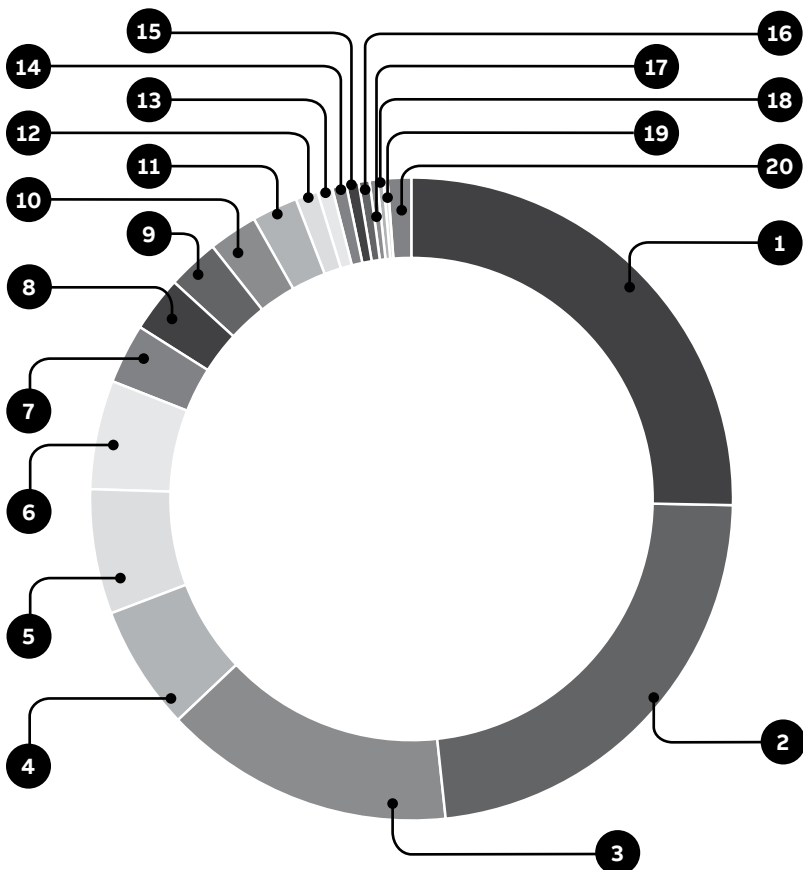
| Material | % wt |
|---|--------|
| 1 Aluminium alloy | 28.7 % |
| 2 Iron oxide and ferric oxide (Magnetic core) | 16.7 % |
| 3 Stainless steel | 14.5 % |
| 4 Copper alloys | 11.3 % |
| 5 PCB | 9.6 % |
| 6 FRP | 2.5 % |
| 7 Epoxy resin | 2.4 % |
| 8 Coating resin | 1.9 % |
| 9 Steel | 1.8 % |
| 10 PC | 1.7 % |
| 11 Ceramic | 1.4 % |
| 12 BMC/SMC | 1.4 % |
| 13 PA | 1.3 % |
| 14 Organosilicon compound | 1.2 % |
| 15 PEI | 1.0 % |
| 16 Electrolytic paper | 0.8 % |
| 17 PP | 0.4 % |
| 18 PET | 0.4 % |
| 19 PBT | 0.4 % |
| 20 Other | 0.6 % |
| TOTAL | 100 % |

CP-S.1 24/20.0 - 1SVR320761R100. The total weight of the product is 1.355 gr.



| Material | % wt |
|---|--------|
| 1 aluminium alloy | 25.8 % |
| 2 Iron oxide and ferric oxide (Magnetic core) | 16.2 % |
| 3 Copper alloys | 12.3 % |
| 4 Stainless steel | 9.7 % |
| 5 Steel | 9.7 % |
| 6 PCB | 9.6 % |
| 7 FRP | 2.4 % |
| 8 Epoxy resin | 2.2 % |
| 9 Organosilicon compound | 2.1 % |
| 10 Coating resin | 1.9 % |
| 11 Electrolytic paper | 1.4 % |
| 12 PC | 1.3 % |
| 13 Ceramic | 1.0 % |
| 14 PEI | 0.9 % |
| 15 PA | 0.9 % |
| 16 BMC/SMC | 0.9 % |
| 17 PP | 0.4 % |
| 18 PBT | 0.3 % |
| 19 PET | 0.3 % |
| 20 Other | 0.8 % |
| TOTAL | 100 % |

CP-S.1 24/40.0 - 1SVR320861R1000. The total weight of the product is 2.560 gr.

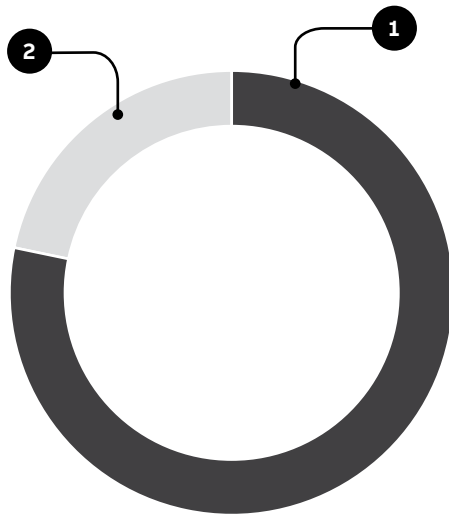


| Material | % wt |
|---|--------|
| 1 Aluminium alloy | 25.3 % |
| 2 Iron oxide and ferric oxide (Magnetic core) | 23.0 % |
| 3 Copper alloys | 14.6 % |
| 4 Steel | 6.3 % |
| 5 Stainless steel | 6.3 % |
| 6 PCB | 5.5 % |
| 7 FRP | 3.0 % |
| 8 Organosilicon compound | 2.8 % |
| 9 Epoxy resin | 2.6 % |
| 10 Coating resin | 2.5 % |
| 11 Electrolytic paper | 2.3 % |
| 12 PEI | 1.1 % |
| 13 Ceramic | 0.8 % |
| 14 PC | 0.7 % |
| 15 BMC/SMC | 0.6 % |
| 16 PA | 0.5 % |
| 17 PET | 0.4 % |
| 18 PP | 0.3 % |
| 19 PBT | 0.2 % |
| 20 Other | 1.2 % |
| TOTAL | 100 % |

Packaging

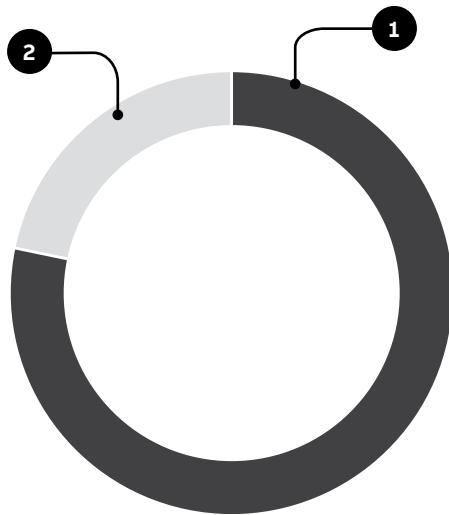
The charts below provide information for each packaging-material used. The cardbox and the paper used for the product material are made of recycled fibers and are 100 % recyclables. The polymer films used are marked with the proper identification code and are recyclable.

CP-S.1 24/3.0 Packaging material composition: total weight = 115 gr.



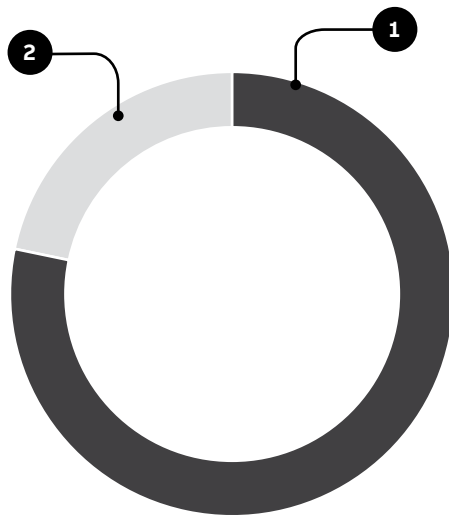
| Material | % wt |
|------------|-------|
| 1 Cardbox | 78 % |
| 2 Paper | 22 % |
| 3 Plastics | 0 % |
| TOTAL | 100 % |

CP-S.1 24/5.0 Packaging material composition: total weight = 115 gr.



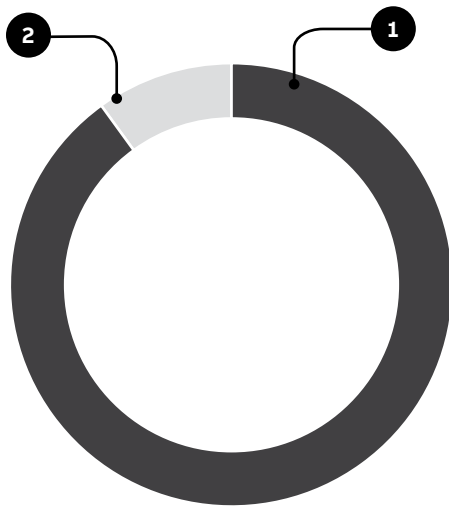
| Material | % wt |
|------------|-------|
| 1 Cardbox | 78 % |
| 2 Paper | 22 % |
| 3 Plastics | 0 % |
| TOTAL | 100 % |

CP-S.1 24/10.0 Packaging material composition: total weight = 120 gr.



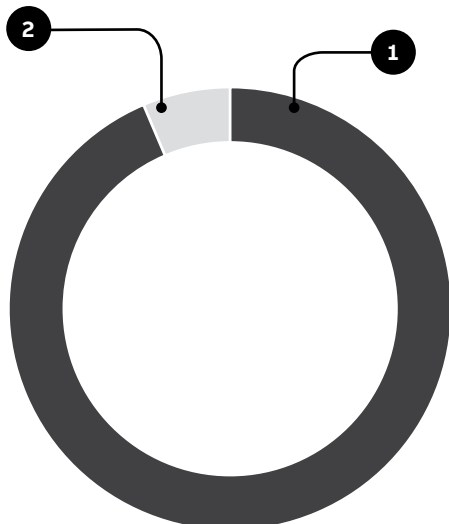
| Material | % wt |
|------------|-------|
| ① Cardbox | 79 % |
| ② Paper | 21 % |
| ③ Plastics | 0 % |
| TOTAL | 100 % |

CP-S.1 24/20.0 Packaging material composition: total weight = 250 gr.



| Material | % wt |
|------------|-------|
| ① Cardbox | 90 % |
| ② Paper | 10 % |
| ③ Plastics | 0 % |
| TOTAL | 100 % |

CP-S.1 24/40.0 Packaging material composition: total weight = 390 gr.



| Material | % wt |
|------------|-------|
| ① Cardbox | 94 % |
| ② Paper | 6 % |
| ③ Plastics | 0 % |
| TOTAL | 100 % |

Product use



Energy

Power losses for power supplies CP-S.1 are indicated in the following table

| Type | Power loss (W/device) |
|----------------|--------------------------|
| CP-S.1 24/3.0 | I_{th} <10 |
| CP-S.1 24/5.0 | I_{th} <12 |
| CP-S.1 24/10.0 | I_{th} <18 |
| CP-S.1 24/20.0 | I_{th} <37 |
| CP-S.1 24/40.0 | I_{th} <62 |

End-of-life

At the end of operating life, constituent components of CP-S.1 range power supplies have been optimized in order to reduce waste amount and increase recovery of the material. Metals and polymers contained into CP-S.1 range power supplies are characterized by high recycling rates. Most plastic parts are marked for easy sorting.

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