

SIPLUS S7-1500 PM 1507 24V/8A
 SIPLUS S7-1500 PM 1507 24 V/8 A -40 ... +70°C with conformal coating based on 6EP1333-4BA00 . STABILIZED POWER SUPPLY FOR SIMATIC S7-1500 INPUT: 120/230 V AC OUTPUT: 24 V/8 A DC



Figure similar

| Input | |
|-------------------------------------|---------------------------|
| Input | 1-phase AC |
| • Note | Automatic range selection |
| Supply voltage | |
| • 1 at AC Rated value | 120 V |
| • 2 at AC Rated value | 230 V |
| Input voltage | |
| • 1 at AC | 85 ... 132 V |
| • 2 at AC | 170 ... 264 V |
| Wide-range input | No |
| Overvoltage resistance | 2.3 × Vin rated, 1.3 ms |
| Mains buffering | at Vin = 93/187 V |
| Mains buffering at lout rated, min. | 20 ms; at Vin = 93/187 V |
| Rated line frequency 1 | 50 Hz |
| Rated line frequency 2 | 60 Hz |
| Rated line range | 45 ... 65 Hz |
| Input current | |

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| <ul style="list-style-type: none"> • at rated input voltage 120 V | 3.7 A |
| <ul style="list-style-type: none"> • at rated input voltage 230 V | 1.7 A |
| Switch-on current limiting (+25 °C), max. | 62 A |
| Duration of inrush current limiting at 25 °C <ul style="list-style-type: none"> • maximum | 3 ms |
| I ² t, max. | 12 A ² ·s |
| Built-in incoming fuse | T 6.3 A/250 V (not accessible) |
| Protection in the mains power input (IEC 898) | Recommended miniature circuit breaker: 16 A characteristic B or 10 A characteristic C |

Output

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| Output | Controlled, isolated DC voltage |
| Rated voltage V _{out} DC | 24 V |
| Total tolerance, static ± | 1 % |
| Static mains compensation, approx. | 0.1 % |
| Static load balancing, approx. | 0.1 % |
| Residual ripple peak-peak, max. | 50 mV |
| Spikes peak-peak, max. (bandwidth: 20 MHz) | 150 mV |
| Product function Output voltage adjustable | No |
| Status display | LED green for 24 V OK; LED red for error; LED yellow for stand-by |
| On/off behavior | No overshoot of V _{out} (soft start) |
| Startup delay, max. | 1.5 s |
| Voltage rise, typ. | 10 ms |
| Rated current value I _{out} rated | 8 A |
| Current range | 0 ... 8 A |
| Supplied active power typical | 192 W |
| Short-term overload current <ul style="list-style-type: none"> • on short-circuiting during the start-up typical • at short-circuit during operation typical | 35 A 35 A |
| Duration of overloading capability for excess current <ul style="list-style-type: none"> • on short-circuiting during the start-up • at short-circuit during operation | 70 ms 70 ms |
| Parallel switching for enhanced performance | No |

Efficiency

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| Efficiency at V _{out} rated, I _{out} rated, approx. | 90 % |
| Power loss at V _{out} rated, I _{out} rated, approx. | 21 W |

Closed-loop control

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| Dynamic mains compensation (V _{in} rated ±15 %), max. | 0.1 % |
| Dynamic load smoothing (I _{out} : 50/100/50 %), U _{out} ± typ. | 2 % |
| Dynamic load smoothing (I _{out} : 10/90/10 %), U _{out} ± typ. | 3 % |

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| Load step setting time 10 to 90%, typ. | 5 ms |
| Load step setting time 90 to 10%, typ. | 5 ms |
| Setting time maximum | 5 ms |

Protection and monitoring

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| Output overvoltage protection | Additional control loop, limitation (closed loop control) at < 28.8 V |
| Current limitation | 8.4 ... 9.6 A |
| Current limitation, typ. | 9 A |
| Property of the output Short-circuit proof | Yes |
| Short-circuit protection | Electronic shutdown, automatic restart |
| Overload/short-circuit indicator | - |

Safety

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| Primary/secondary isolation | Yes |
| Galvanic isolation | Safety extra-low output voltage U _{out} acc. to EN 60950-1 and EN 50178 and EN 61131-2 |
| Protection class | Class I |
| Leakage current | |
| • maximum | 3.5 mA |
| • typical | 1.3 mA |
| Degree of protection (EN 60529) | IP20 |

Approvals

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| CE mark | Yes |
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EMC

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| Emitted interference | EN 55022 Class B |
| Supply harmonics limitation | EN 61000-3-2 |
| Noise immunity | EN 61000-6-2 |

environmental conditions

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| Ambient temperature | |
| • during operation | -40 ... +70 °C |
| — Note | with natural convection |
| • during transport | -40 ... +85 °C |
| • during storage | -40 ... +85 °C |
| Ambient condition relating to ambient temperature - air pressure - installation altitude | In case of operation at altitudes of 2000 - 6000 m above sea level: Output power derating of -7.5 %/1000 m or reduction of the ambient temperature by 5 K/1000 m |
| Relative humidity with condensation maximum | 100 %; Relative humidity, incl. condensation/frost permitted (no commissioning under condensation conditions) |
| Ambient temperature in horizontal mounting position during operation minimum | -40 °C |
| Ambient temperature in horizontal mounting position during operation maximum | 70 °C; with natural convection |
| Ambient temperature during storage and transport | -40 ... +85 |

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| Installation altitude at height above sea level maximum | 6 000 m |
| Ambient condition relating to ambient temperature - air pressure - installation altitude | In case of operation at altitudes of 2000 - 6000 m above sea level: Output power derating of -7.5 %/1000 m or reduction of the ambient temperature by 5 K/1000 m |
| Relative humidity with condensation acc. to IEC 60068-2-38 maximum | 100 %; RH incl. condensation/frost (no commissioning if condensation is present), horizontal installation |
| Chemical resistance to commercially available cooling lubricants | Yes; incl. diesel and oil droplets in the air; Class 3B2 mold, fungal, sponge spores (except fauna); class 3B3 upon request |
| Resistance to biologically active substances conformity acc. to EN 60721-3-3 | Yes |
| Resistance to chemically active substances conformity acc. to EN 60721-3-3 | Yes; Class 3C4 (RH < 75%) incl. salt spray acc. to EN 60068-2-52 (severity level 3) |
| Resistance to mechanically active substances conformity acc. to EN 60721-3-3 | Yes; Class 3S4 incl. sand, dust |
| Resistance to biologically active substances conformity acc. to EN 60721-3-6 | Yes; Class 6B2 mold, fungal, sponge spores (except fauna) |
| Resistance to chemically active substances conformity acc. to EN 60721-3-6 | Yes; Class 6C3 (RH < 75%) incl. salt spray acc. to EN 60068-2-52 (severity level 3) |
| Resistance to mechanically active substances conformity acc. to EN 60721-3-6 | Yes; Class 6S3 incl. sand, dust |
| Coating for equipped printed circuit board acc. to EN 61086 | Yes; Class 2 for high availability |
| Type of coating protection against pollution according to EN 60664-3 | Yes; Type 1 protection |
| Type of test of the coating acc. to MIL-I-46058C | Yes; Discoloration of the coating during service life possible |
| Product conformity of the coating Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies acc. to IPC-CC-830A | Yes; Conformal Coating, Class A |

Mechanics

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| Connection technology | Screw-/spring clamp connection |
| Connections | |
| <ul style="list-style-type: none"> • Supply input • Output | <p>L, N, PE: 1 screw terminal each for 0.5 ... 2.5 mm²</p> <p>L+, M: 2 spring-loaded terminals each for 0.5 to 2.5 mm²</p> |
| Product function | |
| <ul style="list-style-type: none"> • removable terminal at input • removable terminal at output | <p>Yes</p> <p>Yes</p> |
| Width of the enclosure | 75 mm |
| Height of the enclosure | 147 mm |
| Depth of the enclosure | 129 mm |
| Required spacing | |
| <ul style="list-style-type: none"> • top • bottom • left • right | <p>40 mm</p> <p>40 mm</p> <p>0 mm</p> <p>0 mm</p> |

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| Weight, approx. | 0.74 kg |
| Product feature of the enclosure housing for side-by-side mounting | Yes |
| Installation | Can be mounted onto S7-1500 rail |
| MTBF at 40 °C | 1 362 918 h |
| Other information | Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified) |