



SITOP PSU100S/1AC/24VDC/10A

SITOP PSU100S 24 V/10 A Stabilized power supply input: 120/230 V AC, output: DC 24 V/10 A *Ex approval no longer available*

| input | |
|--|---|
| type of the power supply network | 1-phase AC |
| supply voltage at AC | Automatic range selection |
| supply voltage | 120 V/230 V |
| input voltage 1 at AC | 85 ... 132 V |
| input voltage 2 at AC | 170 ... 264 V |
| wide range input | No |
| overvoltage overload capability | 2.3 × Vin rated, 1.3 ms |
| buffering time for rated value of the output current in the event of power failure minimum | 20 ms |
| operating condition of the mains buffering | at Vin = 93/187 V |
| line frequency | 50/60 Hz |
| line frequency initial value | 47 ... 63 Hz |
| line frequency full-scale value | |
| input current | |
| • at rated input voltage 120 V | 4.49 A |
| • at rated input voltage 230 V | 1.91 A |
| current limitation of inrush current at 25 °C maximum | 60 A |
| I ² t value maximum | 5.6 A ² ·s |
| fuse protection type | T 6.3 A/250 V (not accessible) |
| fuse protection type in the feeder | Recommended miniature circuit breaker: from 10 A characteristic C |
| output | |
| voltage curve at output | Controlled, isolated DC voltage |
| output voltage at DC rated value | 24 V |
| output voltage | |
| • at output 1 at DC rated value | 24 V |
| output voltage adjustable | Yes; via potentiometer |
| adjustable output voltage initial value | 22.8 V |
| adjustable output voltage full-scale value | 28 V |
| relative overall tolerance of the voltage | 3 % |
| relative control precision of the output voltage | |
| • on slow fluctuation of input voltage | 0.1 % |
| • on slow fluctuation of ohm loading | 1 % |
| residual ripple | |
| • maximum | 150 mV |
| • typical | 20 mV |
| voltage peak | |
| • maximum | 240 mV |
| • typical | 160 mV |
| display version for normal operation | Green LED for 24 V OK |

| | |
|--|--|
| type of signal at output | Relay contact (NO contact, rating 60 V DC/ 0.3 A) for "24 V OK" |
| behavior of the output voltage when switching on | Overshoot of $V_{out} < 3\%$ |
| response delay maximum | 0.3 s |
| voltage increase time of the output voltage <ul style="list-style-type: none"> • typical | 20 ms |
| output current <ul style="list-style-type: none"> • rated value • rated range | 10 A 0 ... 12 A; 12 A up to +45°C; +60 ... +70 °C: Derating 3%/K |
| supplied active power typical | 288 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 | 32 A 32 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 | 1 000 ms 1 000 ms |
| bridging of equipment | Yes |
| number of parallel-switched equipment resources for increasing the power | 2 |
| efficiency in percent | 90 % |
| power loss [W] <ul style="list-style-type: none"> • at rated output voltage for rated value of the output current typical | 25 W |
| closed-loop control | |
| relative control precision of the output voltage with rapid fluctuation of the input voltage by +/- 15% typical | 0.3 % |
| relative control precision of the output voltage at load step of resistive load 10/90/10 % typical | 3 % |
| setting time <ul style="list-style-type: none"> • load step 10 to 90% typical • load step 90 to 10% typical | 1 ms 1 ms |
| protection and monitoring | |
| design of the overvoltage protection | protection against overvoltage in case of internal fault $V_{out} < 33\text{ V}$ |
| property of the output short-circuit proof | Yes |
| design of short-circuit protection <ul style="list-style-type: none"> • response value current limitation | Constant current characteristic 12 ... 14.6 A |
| overcurrent overload capability <ul style="list-style-type: none"> • in normal operation | overload capability 150 % I_{out} rated up to 5 s/min |
| enduring short circuit current RMS value <ul style="list-style-type: none"> • typical | 14.6 A |
| safety | |
| galvanic isolation between input and output | Yes |
| galvanic isolation | Safety extra-low output voltage U_{out} acc. to EN 60950-1 and EN 50178 |
| operating resource protection class | Class I |
| leakage current <ul style="list-style-type: none"> • maximum • typical | 3.5 mA 0.8 mA |
| protection class IP | IP20 |
| standard <ul style="list-style-type: none"> • for emitted interference • for mains harmonics limitation • for interference immunity | EN 55022 Class B EN 61000-3-2 EN 61000-6-2 |
| standards, specifications, approvals | |
| certificate of suitability <ul style="list-style-type: none"> • CE marking • UL approval • CSA approval • EAC approval • NEC Class 2 | Yes Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 60950-1, UL 60950-1) Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 60950-1, UL 60950-1) Yes No |
| type of certification | |

| | |
|---|---|
| <ul style="list-style-type: none"> • BIS | Yes; R-41188271 |
| <ul style="list-style-type: none"> • CB-certificate | Yes |
| MTBF at 40 °C | 1 614 510 h |
| standards, specifications, approvals hazardous environments | |
| certificate of suitability | |
| <ul style="list-style-type: none"> • IECEx | No |
| <ul style="list-style-type: none"> • ATEX | No |
| <ul style="list-style-type: none"> • ULhazloc approval | No |
| <ul style="list-style-type: none"> • cCSAus, Class 1, Division 2 | No |
| <ul style="list-style-type: none"> • FM registration | No |
| standards, specifications, approvals marine classification | |
| shipbuilding approval | Yes |
| Marine classification association | |
| <ul style="list-style-type: none"> • American Bureau of Shipping Europe Ltd. (ABS) | No |
| <ul style="list-style-type: none"> • French marine classification society (BV) | Yes |
| <ul style="list-style-type: none"> • Det Norske Veritas (DNV) | Yes |
| <ul style="list-style-type: none"> • Lloyds Register of Shipping (LRS) | No |
| standards, specifications, approvals Environmental Product Declaration | |
| Environmental Product Declaration | Yes |
| Global Warming Potential [CO2 eq] | |
| <ul style="list-style-type: none"> • total | 803.2 kg |
| <ul style="list-style-type: none"> • during manufacturing | 20.7 kg |
| <ul style="list-style-type: none"> • during operation | 781.8 kg |
| <ul style="list-style-type: none"> • after end of life | 0.57 kg |
| ambient conditions | |
| ambient temperature | |
| <ul style="list-style-type: none"> • during operation | -25 ... +70 °C; with natural convection |
| <ul style="list-style-type: none"> • during transport | -40 ... +85 °C |
| <ul style="list-style-type: none"> • during storage | -40 ... +85 °C |
| environmental category according to IEC 60721 | Climate class 3K3, 5 ... 95% no condensation |
| connection method | |
| type of electrical connection | screw-type terminals |
| <ul style="list-style-type: none"> • at input | L, N, PE: 1 screw terminal each for 0.5 ... 2.5 mm ² single-core/finely stranded |
| <ul style="list-style-type: none"> • at output | +, -: 2 screw terminals each for 0.5 ... 2.5 mm ² |
| <ul style="list-style-type: none"> • for auxiliary contacts | Alarm signals: 2 screw terminals for 0.5 ... 2.5 mm ² |
| <ul style="list-style-type: none"> • for signaling contact | 2 screw terminals for 0.5 ... 2.5 mm ² |
| mechanical data | |
| width × height × depth of the enclosure | 70 × 125 × 120 mm |
| installation width × mounting height | 70 × 225 mm |
| required spacing | |
| <ul style="list-style-type: none"> • top | 50 mm |
| <ul style="list-style-type: none"> • bottom | 50 mm |
| <ul style="list-style-type: none"> • left | 0 mm |
| <ul style="list-style-type: none"> • right | 0 mm |
| fastening method | Snaps onto DIN rail EN 60715 35x7.5/15 |
| <ul style="list-style-type: none"> • standard rail mounting | Yes |
| <ul style="list-style-type: none"> • S7 rail mounting | No |
| <ul style="list-style-type: none"> • wall mounting | No |
| housing can be lined up | Yes |
| net weight | 0.8 kg |
| accessories | |
| electrical accessories | Buffer module |
| mechanical accessories | Device identification label 20 mm × 7 mm, pale turquoise 3RT1900-1SB20 |
| further information internet links | |
| internet link | |
| <ul style="list-style-type: none"> • to web page: selection aid TIA Selection Tool | https://siemens.com/tst |
| <ul style="list-style-type: none"> • to website: Industrial communication | http://www.siemens.com/simatic-net |
| <ul style="list-style-type: none"> • to website: CAX-Download-Manager | http://www.siemens.com/cax |
| additional information | |
| other information | Specifications at rated input voltage and ambient temperature +25 °C (unless |

otherwise specified)

security information

security information

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Classifications

| | Version | Classification |
|--------|---------|----------------|
| eClass | 12 | 27-04-07-01 |
| eClass | 9.1 | 27-04-07-01 |
| eClass | 9 | 27-04-07-01 |
| eClass | 8 | 27-04-90-02 |
| eClass | 7.1 | 27-04-90-02 |
| eClass | 6 | 27-04-90-02 |
| ETIM | 9 | EC002540 |
| ETIM | 8 | EC002540 |
| ETIM | 7 | EC002540 |
| IDEA | 4 | 4130 |
| UNSPSC | 15 | 39-12-10-04 |

Approvals Certificates

General Product Approval



[Manufacturer Declaration](#)

[Declaration of Conformity](#)



General Product Approval

For use in hazardous locations

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[Miscellaneous](#)



[CCC-Ex](#)



Marine / Shipping

Environment



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