



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 | |
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| type of the power supply network | 1-phase AC |
| supply voltage at AC | |
| • initial value | 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 |
| design of input wide range input | No |
| overvoltage overload capability | 2.3 × Vin rated, 1.3 ms |
| operating condition of the mains buffering | at Vin = 93/187 V |
| 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 | |
| • 1 rated value | 50 Hz |
| • 2 rated value | 60 Hz |
| line frequency | 47 ... 63 Hz |
| 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 |
| I2t value maximum | 5.6 A ² ·s |
| fuse protection type | T 6.3 A/250 V (not accessible) |
| • 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 |
| 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 | |

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| <ul style="list-style-type: none"> • maximum | 240 mV |
| <ul style="list-style-type: none"> • typical | 160 mV |
| adjustable output voltage | 22.8 ... 28 V |
| product function output voltage adjustable | Yes |
| type of output voltage setting | via potentiometer |
| 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 Vout < 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 |
| product feature <ul style="list-style-type: none"> • bridging of equipment | Yes |
| number of parallel-switched equipment resources for increasing the power | 2 |
| Efficiency | |
| 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 Vout < 33 V |
| response value current limitation | 12 ... 14.6 A |
| property of the output short-circuit proof | Yes |
| design of short-circuit protection | Constant current characteristic |
| enduring short circuit current RMS value <ul style="list-style-type: none"> • typical | 14.6 A |
| overcurrent overload capability in normal operation | overload capability 150 % Iout rated up to 5 s/min |
| display version for overload and short circuit | - |
| Safety | |
| galvanic isolation between input and output | Yes |
| galvanic isolation | Safety extra-low output voltage Uout 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 |
| Approvals | |
| certificate of suitability <ul style="list-style-type: none"> • CE marking • UL approval • CSA approval | 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. |

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| <ul style="list-style-type: none"> • cCSAus, Class 1, Division 2 • ATEX | cCSAus (CSA C22.2 No. 60950-1, UL 60950-1) No No |
| certificate of suitability <ul style="list-style-type: none"> • IECEx • NEC Class 2 • ULhazloc approval • FM registration | No No No No |
| type of certification CB-certificate | Yes |
| certificate of suitability <ul style="list-style-type: none"> • EAC approval | Yes |
| certificate of suitability shipbuilding approval | Yes |
| shipbuilding approval | BV, DNV GL |
| Marine classification association <ul style="list-style-type: none"> • American Bureau of Shipping Europe Ltd. (ABS) • French marine classification society (BV) • DNV GL • Lloyds Register of Shipping (LRS) • Nippon Kaiji Kyokai (NK) | No Yes Yes No No |
| EMC | |
| 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 |
| environmental conditions | |
| ambient temperature <ul style="list-style-type: none"> • during operation • during transport • during storage | -25 ... +70 °C; with natural convection -40 ... +85 °C -40 ... +85 °C |
| environmental category according to IEC 60721 | Climate class 3K3, 5 ... 95% no condensation |
| Mechanics | |
| type of electrical connection <ul style="list-style-type: none"> • at input • at output • for auxiliary contacts • for signaling contact | screw-type terminals L, N, PE: 1 screw terminal each for 0.5 ... 2.5 mm ² single-core/finely stranded +, -: 2 screw terminals each for 0.5 ... 2.5 mm ² Alarm signals: 2 screw terminals for 0.5 ... 2.5 mm ² 2 screw terminals for 0.5 ... 2.5 mm ² |
| width of the enclosure | 70 mm |
| height of the enclosure | 125 mm |
| depth of the enclosure | 120 mm |
| required spacing <ul style="list-style-type: none"> • top • bottom • left • right | 50 mm 50 mm 0 mm 0 mm |
| net weight | 0.8 kg |
| product feature of the enclosure housing can be lined up | Yes |
| fastening method | Snaps onto DIN rail EN 60715 35x7.5/15 |
| electrical accessories | Buffer module |
| mechanical accessories | Device identification label 20 mm × 7 mm, pale turquoise 3RT1900-1SB20 |
| MTBF at 40 °C | 1 614 510 h |
| other information | Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified) |

