



SITOP PSU100L/1AC/24VDC/20A

SITOP PSU100L 24 V/20 A Stabilized power supply input: 100-240 V AC  
output: 24 V DC/20 A

| Input  |   |
|--|---|
| type of the power supply network   | 1-phase AC or DC  |
| supply voltage at AC   |   |
| • minimum rated value  | 100 V   |
| • maximum rated value  | 240 V   |
| supply voltage   |   |
| • at DC  | 100 ... 240 V   |
| input voltage  |   |
| • 1 at AC  | 85 ... 264 V  |
| • at DC  | 88 ... 370 V  |
| design of input wide range input   | Yes   |
| operating condition of the mains buffering   | at $V_{in} = 93/187$ 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 $V_{in} = 93/187$ 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   | 5.55 A  |
| • at rated input voltage 230 V   | 2.35 A  |
| current limitation of inrush current at 25 °C maximum                                      | 45 A  |
| duration of inrush current limiting at 25 °C   |   |
| • typical  | 15 ms   |
| I <sup>2</sup> t value maximum   | 3.3 A <sup>2</sup> ·s   |
| fuse protection type   | T 10 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  | 50 mV   |

|   |  |
|---|--|
| voltage peak  |  |
| • maximum   | 240 mV   |
| • typical   | 100 mV   |
| adjustable output voltage   | 22.8 ... 26.4 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  |
| behavior of the output voltage when switching on  | No overshoot of Vout (soft start)                                    |
| response delay maximum  | 1.5 s  |
| voltage increase time of the output voltage   |  |
| • typical   | 20 ms  |
| output current  |  |
| • rated value   | 20 A   |
| • rated range   | 0 ... 20 A; +45 ... +70 °C: Derating 2.5%/K                          |
| supplied active power typical   | 480 W  |
| product feature   |  |
| • bridging of equipment   | Yes  |
| number of parallel-switched equipment resources for increasing the power  | 2  |
| <b>Efficiency</b>   |  |
| efficiency in percent   | 92 %   |
| power loss [W]  |  |
| • at rated output voltage for rated value of the output current typical   | 45 W   |
| <b>Closed-loop control</b>  |  |
| relative control precision of the output voltage with rapid fluctuation of the input voltage by +/- 15% typical | 0.5 %  |
| relative control precision of the output voltage at load step of resistive load 10/90/10 % typical              | 3 %  |
| setting time  |  |
| • load step 10 to 90% typical   | 0.7 ms   |
| • load step 90 to 10% typical   | 6 ms   |
| <b>Protection and monitoring</b>  |  |
| design of the overvoltage protection  | < 33 V   |
| response value current limitation typical   | 24 A   |
| property of the output short-circuit proof  | Yes  |
| design of short-circuit protection  | Constant current characteristic                                      |
| enduring short circuit current RMS value  |  |
| • typical   | 24 A   |
| display version for overload and short circuit  | -  |
| <b>Safety</b>   |  |
| 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   |  |
| • maximum   | 3.5 mA   |
| • typical   | 0.8 mA   |
| protection class IP   | IP20   |
| <b>Approvals</b>  |  |
| certificate of suitability  |  |
| • CE marking  | Yes  |
| • UL approval   | Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259        |
| • CSA approval  | Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259        |
| • cCSAus, Class 1, Division 2   | No   |
| • ATEX  | No   |
| certificate of suitability  |  |
| • IECEX   | No   |
| • NEC Class 2   | No   |
| • ULhazloc approval   | No   |
| • FM registration   | No   |

|  |   |
|--|---|
| type of certification CB-certificate                     | Yes   |
| certificate of suitability                               |   |
| • EAC approval   | Yes   |
| certificate of suitability shipbuilding approval         | No  |
| shipbuilding approval                                    | -   |
| Marine classification association                        |   |
| • American Bureau of Shipping Europe Ltd. (ABS)          | No  |
| • French marine classification society (BV)              | No  |
| • DNV GL   | No  |
| • Lloyds Register of Shipping (LRS)                      | No  |
| • Nippon Kaiji Kyokai (NK)                               | No  |
| <b>EMC</b>   |   |
| standard   |   |
| • for emitted interference                               | EN 55022 Class B  |
| • for mains harmonics limitation                         | EN 61000-3-2  |
| • for interference immunity                              | EN 61000-6-2  |
| <b>environmental conditions</b>                          |   |
| ambient temperature                                      |   |
| • during operation                                       | -25 ... +70 °C; with natural convection   |
| • during transport                                       | -40 ... +85 °C  |
| • during storage   | -40 ... +85 °C  |
| environmental category acc. to IEC 60721                 | Climate class 3K3, 5 ... 95% no condensation  |
| <b>Mechanics</b>   |   |
| type of electrical connection                            | screw-type terminals  |
| • at input   | L, N, PE: 1 screw terminal each for 0.5 ... 2.5 mm <sup>2</sup> single-core/finely stranded       |
| • at output  | +, -: 2 screw terminals each for 0.5 ... 2.5 mm <sup>2</sup>                                      |
| • for auxiliary contacts                                 | -   |
| width of the enclosure                                   | 110 mm  |
| height of the enclosure                                  | 125 mm  |
| depth of the enclosure                                   | 125 mm  |
| required spacing   |   |
| • top  | 50 mm   |
| • bottom   | 50 mm   |
| • left   | 0 mm  |
| • right  | 0 mm  |
| net weight   | 1.8 kg  |
| product feature of the enclosure housing can be lined up | Yes   |
| fastening method   | Snaps onto DIN rail EN 60715 35x7.5/15  |
| other information  | Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified) |

