



SITOP PSU300S/3AC/24VDC/20A

SITOP PSU300S 20 A stabilized power supply input: 400-500 V 3 AC output: 24 V DC/20 A \*Ex approval no longer available\*

| Input  |  |
|--|--|
| type of the power supply network   | 3-phase AC   |
| supply voltage at AC   |  |
| • minimum rated value  | 400 V  |
| • maximum rated value  | 500 V  |
| • initial value  | 340 V  |
| • full-scale value   | 550 V  |
| design of input wide range input   | Yes  |
| operating condition of the mains buffering   | at $V_{in} = 400\text{ V}$   |
| buffering time for rated value of the output current in the event of power failure minimum | 6 ms   |
| operating condition of the mains buffering   | at $V_{in} = 400\text{ V}$   |
| line frequency   |  |
| • 1 rated value  | 50 Hz  |
| • 2 rated value  | 60 Hz  |
| line frequency   | 47 ... 63 Hz   |
| input current  |  |
| • at rated input voltage 400 V   | 1.2 A  |
| • at rated input voltage 500 V   | 1 A  |
| current limitation of inrush current at 25 °C maximum                                      | 36 A   |
| I <sup>2</sup> t value maximum   | 0.9 A <sup>2</sup> ·s  |
| fuse protection type   | none   |
| • in the feeder  | Required: 3-pole connected miniature circuit breaker 6 ... 16 A characteristic C or circuit breaker 3RV2011-1DA10 (setting 3 A) or 3RV2711-1DD10 (UL 489-listed, DIVQ) |
| 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   | 0.5 %  |
| • on slow fluctuation of ohm loading   | 1 %  |
| residual ripple  |  |
| • maximum  | 150 mV   |
| voltage peak   |  |
| • maximum  | 240 mV   |
| adjustable output voltage  | 24 ... 28 V  |
| product function output voltage adjustable   | Yes  |
| type of output voltage setting   | via potentiometer; max. 480 W  |

|   |   |
|---|---|
| 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  | No overshoot of Vout (soft start)   |
| response delay maximum  | 1.5 s   |
| voltage increase time of the output voltage   |   |
| • typical   | 30 ms   |
| • maximum   | 500 ms  |
| output current  |   |
| • rated value   | 20 A  |
| • rated range   | 0 ... 20 A  |
| supplied active power typical   | 480 W   |
| short-term overload current   |   |
| • on short-circuiting during the start-up typical   | 35 A  |
| • at short-circuit during operation typical   | 35 A  |
| duration of overloading capability for excess current   |   |
| • on short-circuiting during the start-up   | 100 ms  |
| • at short-circuit during operation   | 100 ms  |
| product feature   |   |
| • bridging of equipment   | Yes   |
| number of parallel-switched equipment resources for increasing the power  | 2   |
| <b>Efficiency</b>   |   |
| efficiency in percent   | 91 %  |
| power loss [W]  |   |
| • at rated output voltage for rated value of the output current typical   | 47 W  |
| <b>Closed-loop control</b>  |   |
| relative control precision of the output voltage with rapid fluctuation of the input voltage by +/- 15% typical | 3 %   |
| relative control precision of the output voltage load step of resistive load 50/100/50 % typical                | 3 %   |
| setting time  |   |
| • load step 50 to 100% typical  | 2 ms  |
| • load step 100 to 50% typical  | 2 ms  |
| 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   | 2 ms  |
| • load step 90 to 10% typical   | 2 ms  |
| • maximum   | 10 ms   |
| <b>Protection and monitoring</b>  |   |
| design of the overvoltage protection  | protection against overvoltage in case of internal fault Vout < 35 V                                      |
| • typical   | 25.5 A  |
| property of the output short-circuit proof  | Yes   |
| design of short-circuit protection  | Electronic shutdown, automatic restart  |
| enduring short circuit current RMS value  |   |
| • maximum   | 7 A   |
| overcurrent overload capability in normal operation   | overload capability 150 % Iout rated up to 5 s/min  |
| <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, transformer acc. to EN 61558-2-16   |
| operating resource protection class   | Class I   |
| leakage current   |   |
| • maximum   | 3.5 mA  |
| • typical   | 1 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; cCSAus (CSA C22.2 No. 60950-1, UL 60950-1) |

|   |   |
|---|---|
| <ul style="list-style-type: none"> <li>• CSA approval</li> </ul>                                  | Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 60950-1, UL 60950-1) |
| <ul style="list-style-type: none"> <li>• cCSAus, Class 1, Division 2</li> </ul>                   | No  |
| <ul style="list-style-type: none"> <li>• ATEX</li> </ul>  | No  |
| certificate of suitability  |   |
| <ul style="list-style-type: none"> <li>• IECEx</li> </ul>   | No  |
| <ul style="list-style-type: none"> <li>• NEC Class 2</li> </ul>                                   | No  |
| <ul style="list-style-type: none"> <li>• ULhazloc approval</li> </ul>                             | No  |
| <ul style="list-style-type: none"> <li>• FM registration</li> </ul>                               | No  |
| type of certification CB-certificate  | Yes   |
| certificate of suitability  |   |
| <ul style="list-style-type: none"> <li>• EAC approval</li> </ul>                                  | Yes   |
| certificate of suitability shipbuilding approval  | Yes   |
| shipbuilding approval   | ABS, DNV GL   |
| Marine classification association   |   |
| <ul style="list-style-type: none"> <li>• American Bureau of Shipping Europe Ltd. (ABS)</li> </ul> | Yes   |
| <ul style="list-style-type: none"> <li>• French marine classification society (BV)</li> </ul>     | No  |
| <ul style="list-style-type: none"> <li>• DNV GL</li> </ul>  | Yes   |
| <ul style="list-style-type: none"> <li>• Lloyds Register of Shipping (LRS)</li> </ul>             | No  |
| <ul style="list-style-type: none"> <li>• Nippon Kaiji Kyokai (NK)</li> </ul>                      | No  |
| <b>EMC</b>  |   |
| standard  |   |
| <ul style="list-style-type: none"> <li>• for emitted interference</li> </ul>                      | EN 55022 Class B  |
| <ul style="list-style-type: none"> <li>• for mains harmonics limitation</li> </ul>                | EN 61000-3-2  |
| <ul style="list-style-type: none"> <li>• for interference immunity</li> </ul>                     | EN 61000-6-2  |
| <b>environmental conditions</b>   |   |
| ambient temperature   |   |
| <ul style="list-style-type: none"> <li>• during operation</li> </ul>                              | -25 ... +60 °C; with natural convection   |
| <ul style="list-style-type: none"> <li>• during transport</li> </ul>                              | -40 ... +85 °C  |
| <ul style="list-style-type: none"> <li>• during storage</li> </ul>                                | -40 ... +85 °C  |
| environmental category according to IEC 60721   | Climate class 3K3, 5 ... 95% no condensation  |
| <b>Mechanics</b>  |   |
| type of electrical connection   | screw-type terminals  |
| <ul style="list-style-type: none"> <li>• at input</li> </ul>                                      | L1, L2, L3, PE: 1 screw terminal each for 0.5 ... 4 mm <sup>2</sup> single-core/finely stranded           |
| <ul style="list-style-type: none"> <li>• at output</li> </ul>                                     | +, -: 2 screw terminals each for 0.2 ... 4 mm <sup>2</sup>  |
| <ul style="list-style-type: none"> <li>• for auxiliary contacts</li> </ul>                        | 13, 14 (alarm signal): 1 screw terminal each for 0.05 ... 2.5 mm <sup>2</sup>                             |
| width of the enclosure  | 90 mm   |
| height of the enclosure   | 145 mm  |
| depth of the enclosure  | 150 mm  |
| required spacing  |   |
| <ul style="list-style-type: none"> <li>• top</li> </ul>   | 40 mm   |
| <ul style="list-style-type: none"> <li>• bottom</li> </ul>  | 40 mm   |
| <ul style="list-style-type: none"> <li>• left</li> </ul>  | 0 mm  |
| <ul style="list-style-type: none"> <li>• right</li> </ul>   | 0 mm  |
| net weight  | 1.6 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  | Redundancy module, buffer module, selectivity module, DC UPS  |
| mechanical accessories  | Device identification label 20 mm × 7 mm, pale turquoise 3RT1900-1SB20                                    |
| MTBF at 40 °C   | 500 000 h   |
| other information   | Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)         |

