



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   |  |
|---|--|
| Input   | 3-phase AC   |
| Rated voltage value $V_{in}$ rated                  | 400 ... 500 V  |
| Voltage range AC                                    | 340 ... 550 V  |
| Wide-range input                                    | Yes  |
| Mains buffering                                     | at $V_{in} = 400$ V  |
| Mains buffering at $I_{out}$ rated, min.            | 6 ms; at $V_{in} = 400$ V  |
| Rated line frequency 1                              | 50 Hz  |
| Rated line frequency 2                              | 60 Hz  |
| Rated line range                                    | 47 ... 63 Hz   |
| input current                                       |  |
| • at rated input voltage 400 V                      | 1.2 A  |
| • at rated input voltage 500 V                      | 1 A  |
| Switch-on current limiting (+25 °C), max.           | 36 A   |
| $I^2t$ , max.                                       | 0.9 A <sup>2</sup> ·s  |
| Built-in incoming fuse                              | none   |
| Protection in the mains power input (IEC 898)       | 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  |  |
| Output  | Controlled, isolated DC voltage  |
| Rated voltage $V_{out}$ DC                          | 24 V   |
| • output voltage at output 1 at DC rated value      | 24 V   |
| Total tolerance, static $\pm$                       | 3 %  |
| Static mains compensation, approx.                  | 0.5 %  |
| Static load balancing, approx.                      | 1 %  |
| Residual ripple peak-peak, max.                     | 150 mV   |
| Spikes peak-peak, max. (bandwidth: 20 MHz)          | 240 mV   |
| Adjustment range                                    | 24 ... 28 V  |
| product function output voltage adjustable          | Yes  |
| Output voltage setting                              | via potentiometer; max. 480 W  |
| Status display                                      | Green LED for 24 V OK  |
| Signaling   | Relay contact (NO contact, rating 60 V DC/ 0.3 A) for "24 V OK"  |
| On/off behavior                                     | No overshoot of $V_{out}$ (soft start)   |
| Startup delay, max.                                 | 1.5 s  |
| Voltage rise, typ.                                  | 30 ms  |
| voltage increase time of the output voltage maximum | 500 ms   |
| Rated current value $I_{out}$ rated                 | 20 A   |
| Current range                                       | 0 ... 20 A   |
| supplied active power typical                       | 480 W  |

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| 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   |
| Parallel switching for enhanced performance                           | Yes  |
| Numbers of parallel switchable units for enhanced performance         | 2  |
| <b>Efficiency</b>   |  |
| Efficiency at $V_{out}$ rated, $I_{out}$ rated, approx.               | 91 %   |
| Power loss at $V_{out}$ rated, $I_{out}$ rated, approx.               | 47 W   |
| <b>Closed-loop control</b>  |  |
| Dynamic mains compensation ( $V_{in}$ rated $\pm 15$ %), max.         | 3 %  |
| Dynamic load smoothing ( $I_{out}$ : 50/100/50 %), $U_{out} \pm$ typ. | 3 %  |
| Load step setting time 50 to 100%, typ.                               | 2 ms   |
| Load step setting time 100 to 50%, typ.                               | 2 ms   |
| Dynamic load smoothing ( $I_{out}$ : 10/90/10 %), $U_{out} \pm$ typ.  | 3 %  |
| Load step setting time 10 to 90%, typ.                                | 2 ms   |
| Load step setting time 90 to 10%, typ.                                | 2 ms   |
| setting time maximum  | 10 ms  |
| <b>Protection and monitoring</b>                                      |  |
| Output overvoltage protection   | protection against overvoltage in case of internal fault $V_{out} < 35$ V                                    |
| Current limitation, typ.  | 25.5 A   |
| property of the output short-circuit proof                            | Yes  |
| 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 % $I_{out}$ rated up to 5 s/min  |
| <b>Safety</b>   |  |
| Primary/secondary isolation   | Yes  |
| galvanic isolation  | Safety extra-low output voltage $U_{out}$ acc. to EN 60950-1 and EN 50178, transformer acc. to EN 61558-2-16 |
| Protection class  | Class I  |
| leakage current   |  |
| • maximum   | 3.5 mA   |
| • typical   | 1 mA   |
| Degree of protection (EN 60529)                                       | IP20   |
| <b>Approvals</b>  |  |
| CE mark   | Yes  |
| UL/cUL (CSA) approval   | cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 60950-1, UL 60950-1)         |
| certificate of suitability NEC Class 2                                | No   |
| CB approval   | Yes  |
| certificate of suitability EAC approval                               | Yes  |
| Marine approval   | ABS, DNV GL  |
| <b>EMC</b>  |  |
| Emitted interference  | EN 55022 Class B   |
| Supply harmonics limitation   | EN 61000-3-2   |
| Noise immunity  | EN 61000-6-2   |
| <b>environmental conditions</b>                                       |  |
| ambient temperature   |  |
| • during operation  | -25 ... +60 °C   |
| — Note  | with natural convection  |
| • during transport  | -40 ... +85 °C   |
| • during storage  | -40 ... +85 °C   |
| Humidity class according to EN 60721                                  | Climate class 3K3, 5 ... 95% no condensation   |
| <b>Mechanics</b>  |  |
| Connection technology   | screw-type terminals   |
| Connections   |  |

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|--|---|
| <ul style="list-style-type: none"> <li>• Supply 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>• Output</li> </ul>       | + , - : 2 screw terminals each for 0.2 ... 4 mm <sup>2</sup>                                      |
| <ul style="list-style-type: none"> <li>• Auxiliary</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  |
| Weight, approx.  | 1.6 kg  |
| product feature of the enclosure housing can be lined up         | Yes   |
| Installation   | 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) |

