



SITOP PSU300S 40A STABILIZED POWER SUPPLY  
INPUT: 400-500 V 3AC OUTPUT: 24 V DC/40 A

## Technical specifications

|   |  |
|---|--|
| Product   | SITOP PSU300S  |
| Power supply, type  | 24 V/40 A  |
| <b>Input</b>  |  |
| Input   | 3-phase AC   |
| Rated voltage value $V_{in}$ rated                          | 400 ... 500 V  |
| Voltage range   | 340 ... 550 V  |
| Wide-range input  | Yes  |
| Mains buffering at $I_{out}$ rated, min.                    | 6 ms   |
| Mains buffering   | at $V_{in} = 400$ V  |
| Rated line frequency  | 50 / 60 Hz   |
| Rated line range  | 47 ... 63 Hz   |
| Input current / at nominal level of the input voltage 400 V | 1.7 A  |
| Input current / at nominal level of the input voltage 500 V | 1.5 A  |
| Switch-on current limiting (+25 °C), max.                   | 60 A   |
| $I^2t$ , max.   | 3.4 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 10 ... 16 A characteristic C or circuit breaker 3RV2011-1DA10 (setting 3 A) or 3RV2711-1DD10 (UL 489) |

## Output

|   |  |
|---|--|
| Output  | Controlled, isolated DC voltage                                      |
| Rated voltage Vout DC   | 24 V   |
| Total tolerance, static ±   | 3 %  |
| Static mains compensation, approx.  | 1 %  |
| Static load balancing, approx.  | 2 %  |
| Residual ripple peak-peak, max.   | 150 mV   |
| Spikes peak-peak, max. (bandwidth: 20 MHz)  | 240 mV   |
| Adjustment range  | 24 ... 28 V  |
| Product feature / output voltage adjustable   | Yes  |
| Output voltage setting  | via potentiometer  |
| • Note  | max. 960 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 Vout (soft start)                                    |
| Startup delay, max.   | 1.5 s  |
| Voltage rise, typ.  | 15 ms  |
| Voltage increase time / of the output voltage / maximum   | 500 ms   |
| Rated current value Iout rated  | 40 A   |
| Current range   | 0 ... 40 A   |
| • Note  | 48 A up to +45°C; +60 ... +70 °C: Derating 2.5%/K                    |
| delivered active power / typ.   | 960 W  |
| short-term overload current / at short-circuit during run-up / typical                                | 65 A   |
| Duration of overloading ability for excess current / on short-circuiting during the start-up          | 120 ms   |
| short-term overload current / at short-circuit during operation / typical                             | 65 A   |
| Duration of overloading ability for excess current / on short-circuiting during the operational phase | 120 ms   |
| Parallel switching for enhanced performance   | Yes  |
| Numbers of parallel switchable units for enhanced performance   | 2  |
| <b>Efficiency</b>   |  |
| Efficiency at Vout rated, Iout rated, approx.   | 91.5 %   |
| Power loss at Vout rated, Iout rated, approx.   | 89 W   |
| <b>Closed-loop control</b>  |  |
| Dynamic mains compensation (Vin rated ±15 %), max.  | 3 %  |
| Dynamic load smoothing (Iout: 50/100/50 %), Uout ± typ.   | 1.5 %  |
| Load step setting time 50 to 100%, typ.   | 1 ms   |
| Load step setting time 100 to 50%, typ.   | 1 ms   |
| Setting time / maximum  | 10 ms  |
| <b>Protection and monitoring</b>  |  |
| Output overvoltage protection   | protection against overvoltage in case of internal fault Vout < 35 V |

|  |  |
|--|--|
| Current limitation, typ.                                       | 50 A   |
| Characteristic feature of the output / short-circuit protected | Yes  |
| Short-circuit protection                                       | Electronic shutdown, automatic restart   |
| Enduring short circuit current / Effective level / maximum     | 14 A   |
| Enduring short circuit current / Effective level / typical     | overload capability 150 % I <sub>out</sub> rated up to 5 s/min   |
| • Note   |  |
| <b>Safety</b>  |  |
| Primary/secondary isolation                                    | Yes  |
| Potential separation   | Safety extra-low output voltage U <sub>out</sub> acc. to EN 60950-1 and EN 50178                               |
| Protection class   | Class I  |
| CE mark  | Yes  |
| UL/CSA approval  | Yes  |
| UL/cUL (CSA) approval  | cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259;<br>cCSAus (CSA C22.2 No. 60950-1, UL 60950-1)        |
| Explosion protection   | ATEX (EX) II 3G Ex nA nC IIC T3; cCSAus (CSA C22.2 No. 213, ANSI/ISA-12.12.01) Class I, Div. 2, Group ABCD, T3 |
| CB approval  | Yes  |
| Marine approval  | GL, ABS  |
| Degree of protection (EN 60529)                                | IP20   |
| <b>EMC</b>   |  |
| Emitted interference   | EN 55022 Class B   |
| Supply harmonics limitation                                    | EN 61000-3-2   |
| Noise immunity   | EN 61000-6-2   |
| <b>Operating data</b>  |  |
| Ambient temperature / in operation                             | 0 ... 70 °C  |
| • Note   | with natural convection  |
| Ambient temperature / on transport                             | -40 ... +85 °C   |
| Ambient temperature / in storage                               | -40 ... +85 °C   |
| Humidity class according to EN 60721                           | Climate class 3K3, no condensation   |
| <b>Mechanics</b>   |  |
| Connection technology  | screw-type terminals   |
| Connections / Supply input                                     | L1, L2, L3, PE: 1 screw terminal each for 0.2 ... 4 mm <sup>2</sup> single-core/finely stranded                |
| Connections / Output   | +, -: 2 screw terminals each for 0.5 ... 10 mm <sup>2</sup>  |
| Connections / Auxiliary  | 13, 14 (alarm signal): 1 screw terminal each for 0.14 ... 1.5 mm <sup>2</sup>                                  |
| Width / of the housing   | 150 mm   |
| Height / of the housing  | 145 mm   |
| Depth / of the housing   | 150 mm   |
| Installation width   | 150 mm   |
| Mounting height  | 225 mm   |

|  |   |
|--|---|
| Weight, approx.  | 3.7 kg  |
| Product feature / of the housing / housing for side-by-side mounting | Yes   |
| Type of mounting / wall mounting                                     | No  |
| Type of fixing / cap rail mounting                                   | Yes   |
| Type of mounting / S7-300 rail mounting                              | No  |
| Installation   | Snaps onto DIN rail EN 60715 35x15  |
| Electrical accessories   | Buffer module   |
| Mechanical accessories   | Device identification label 20 mm x 7 mm, pastel-turquoise 3RT1900-1SB20                          |
| Other information  | Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified) |

**letzte Änderung:**

Oct 12, 2013