

SITOP PSU300S 24 V/5 A  
 SITOP PSU300S 24 V/5 A STABILIZED POWER SUPPLY INPUT: 3  
 400-500 V AC OUTPUT: 24 V/5 A DC



| 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 $I_{out}$ 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                | 0.45 A  |
| • at rated input voltage 500 V                | 0.4 A   |
| Switch-on current limiting (+25 °C), max.     | 20 A  |
| $I^2t$ , max.                                 | 0.5 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 3 ... 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.                            | 0.1 %   |
| Static load balancing, approx.                                | 0.1 %   |
| Residual ripple peak-peak, max.                               | 200 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. 120 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   | Overshoot of Vout < 5 %   |
| Startup delay, max.   | 1.5 s   |
| Voltage rise, typ.  | 60 ms   |
| Voltage increase time of the output voltage maximum           | 500 ms  |
| Rated current value Iout rated                                | 5 A   |
| Current range   | 0 ... 5 A   |
| • Note  | 6 A up to +45 °C  |
| Supplied active power typical                                 | 120 W   |
| Parallel switching for enhanced performance                   | Yes   |
| Numbers of parallel switchable units for enhanced performance | 2   |

### Efficiency

|   |      |
|---|------|
| Efficiency at Vout rated, Iout rated, approx. | 89 % |
| Power loss at Vout rated, Iout rated, approx. | 14 W |

### Closed-loop control

|   |       |
|---|-------|
| Dynamic mains compensation (Vin rated ±15 %), max.      | 1 %   |
| Dynamic load smoothing (Iout: 50/100/50 %), Uout ± typ. | 1 %   |
| Load step setting time 50 to 100%, typ.                 | 3 ms  |
| Load step setting time 100 to 50%, typ.                 | 3 ms  |
| Dynamic load smoothing (Iout: 10/90/10 %), Uout ± typ.  | 3 %   |
| Load step setting time 10 to 90%, typ.                  | 4 ms  |
| Load step setting time 90 to 10%, typ.                  | 4 ms  |
| Setting time maximum                                    | 10 ms |

### Protection and monitoring

|  |  |
|--|--|
| Output overvoltage protection              | protection against overvoltage in case of internal fault Vout < 35 V |
| Current limitation, typ.                   | 6.6 A  |
| Property of the output Short-circuit proof | Yes  |
| Short-circuit protection                   | Constant current characteristic                                      |

|   |  |
|---|--|
| Enduring short circuit current RMS value            |  |
| • maximum   | 8 A  |
| Overcurrent overload capability in normal operation | overload capability 150 % I <sub>out</sub> rated up to 5 s/min |

### Safety

|                                 |   |
|---------------------------------|---|
| Primary/secondary isolation     | Yes   |
| Galvanic isolation              | 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/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            | IECEx Ex nA nC IIC T4 Gc; ATEX (EX) II 3G Ex nA nC IIC T4 Gc;<br>cCSAus (CSA C22.2 No. 213, ANSI/ISA-12.12.01) Class I, Div. 2,<br>Group ABCD, T4 |
| FM approval                     | -   |
| CB approval                     | Yes   |
| Marine approval                 | GL and ABS in process   |
| Degree of protection (EN 60529) | IP20  |

### EMC

|                             |                  |
|-----------------------------|------------------|
| Emitted interference        | EN 55022 Class B |
| Supply harmonics limitation | EN 61000-3-2     |
| Noise immunity              | EN 61000-6-2     |

### Operating data

|                                      |                                    |
|--------------------------------------|------------------------------------|
| Ambient temperature                  |                                    |
| • during operation                   | -25 ... +70 °C                     |
| — Note                               | with natural convection            |
| • during transport                   | -40 ... +85 °C                     |
| • during storage                     | -40 ... +85 °C                     |
| Humidity class according to EN 60721 | Climate class 3K3, no condensation |

### Mechanics

|  |   |
|--|---|
| 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 |
| • Output   | +, -: 2 screw terminals each for 0.2 ... 4 mm <sup>2</sup>                                      |
| • Auxiliary  | 13, 14 (alarm signal): 1 screw terminal each for 0.14 ... 1.5 mm <sup>2</sup>                   |
| Width of the enclosure   | 50 mm   |
| Height of the enclosure  | 125 mm  |
| Depth of the enclosure   | 120 mm  |
| Weight, approx.  | 0.5 kg  |
| Product feature of the enclosure housing for side-by-side mounting | Yes   |

|                        |   |
|------------------------|---|
| Installation           | Snaps onto DIN rail EN 60715 35x7.5/15  |
| Electrical accessories | Buffer module   |
| Mechanical accessories | Device identification label 20 mm × 7 mm, pale turquoise<br>3RT1900-1SB20                         |
| MTBF at 40 °C          | 1 506 720 h   |
| Other information      | Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified) |