

SITOP PSU300S 24 V/10 A  
 SITOP PSU300S 24 V/10 A STABILIZED POWER SUPPLY INPUT:  
 3 400-500 V AC OUTPUT: 24 V/10 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                | 0.7 A   |
| • at rated input voltage 500 V                | 0.6 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 $V_{out}$ DC                                    | 24 V  |
| Total tolerance, static $\pm$                                 | 3 %   |
| Static mains compensation, approx.                            | 0.1 %   |
| Static load balancing, approx.                                | 0.15 %  |
| 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. 240 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 $V_{out} < 5$ %                                    |
| Startup delay, max.   | 1.5 s   |
| Voltage rise, typ.  | 50 ms   |
| Voltage increase time of the output voltage maximum           | 500 ms  |
| Rated current value $I_{out}$ rated                           | 10 A  |
| Current range   | 0 ... 10 A  |
| • Note  | 12 A up to +45 °C   |
| Supplied active power typical                                 | 240 W   |
| Parallel switching for enhanced performance                   | Yes   |
| Numbers of parallel switchable units for enhanced performance | 2   |

### Efficiency

|   |      |
|---|------|
| Efficiency at $V_{out}$ rated, $I_{out}$ rated, approx. | 91 % |
| Power loss at $V_{out}$ rated, $I_{out}$ rated, approx. | 23 W |

### Closed-loop control

|   |       |
|---|-------|
| Dynamic mains compensation ( $V_{in}$ rated $\pm 15$ %), max.         | 1 %   |
| Dynamic load smoothing ( $I_{out}$ : 50/100/50 %), $U_{out} \pm$ 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 ( $I_{out}$ : 10/90/10 %), $U_{out} \pm$ 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 $V_{out} < 35$ V |
| Current limitation, typ.                   | 13 A  |
| Property of the output Short-circuit proof | Yes   |
| Short-circuit protection                   | Constant current characteristic   |

|   |  |
|---|--|
| Enduring short circuit current RMS value                    |  |
| <ul style="list-style-type: none"> <li>• maximum</li> </ul> | 16 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; 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; cCSAus (CSA C22.2 No. 213, ANSI/ISA-12.12.01) Class I, Div. 2, 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  |   |
| <ul style="list-style-type: none"> <li>• during operation</li> <li>— Note</li> <li>• during transport</li> <li>• during storage</li> </ul> | -25 ... +70 °C<br>with natural convection<br>-40 ... +85 °C<br>-40 ... +85 °C |
| Humidity class according to EN 60721   | Climate class 3K3, no condensation  |

### Mechanics

|   |  |
|---|--|
| Connection technology   | screw-type terminals   |
| Connections   |  |
| <ul style="list-style-type: none"> <li>• Supply input</li> <li>• Output</li> <li>• Auxiliary</li> </ul> | L1, L2, L3, PE: 1 screw terminal each for 0.2 ... 4 mm <sup>2</sup> single-core/finely stranded<br>+, -: 2 screw terminals each for 0.2 ... 4 mm <sup>2</sup><br>13, 14 (alarm signal): 1 screw terminal each for 0.14 ... 1.5 mm <sup>2</sup> |
| Width of the enclosure  | 70 mm  |
| Height of the enclosure   | 125 mm   |
| Depth of the enclosure  | 120 mm   |
| Weight, approx.   | 0.7 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          | 1 458 540 h   |
| Other information      | Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified) |