



SITOP PSU100S 24 V/5 A STABILIZED POWER SUPPLY  
 INPUT: 120/230 V AC OUTPUT: 24 V/5 A DC

### Technical specifications

|   |                           |
|---|---------------------------|
| Product   | SITOP PSU100S             |
| Power supply, type  | 24 V/5 A                  |
| <b>Input</b>  |                           |
| Input   | 1-phase AC                |
| Supply voltage / 1 / at AC / nominal value                  | 120 V                     |
| Supply voltage / 2 / at AC / nominal value                  | 230 V                     |
| Voltage range   |                           |
| • Note  | Automatic range selection |
| Input voltage / 1 / at AC                                   | 85 ... 132 V              |
| Input voltage / 2 / at AC                                   | 170 ... 264 V             |
| Wide-range input  | No                        |
| Overvoltage resistance                                      | 2.3 × Vin rated, 1.3 ms   |
| Mains buffering at lout rated, min.                         | 20 ms                     |
| Mains buffering   | at Vin = 93/187 V         |
| Rated line frequency  | 50 / 60 Hz                |
| Rated line range  | 47 ... 63 Hz              |
| Input current / at nominal level of the input voltage 120 V | 2.34 A                    |
| Input current / at nominal level of the input voltage 230 V | 1.36 A                    |
| Switch-on current limiting (+25 °C), max.                   | 40 A                      |
| I <sup>2</sup> t, max.                                      | 1 A <sup>2</sup> ·s       |

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| Built-in incoming fuse  | T 3,15 A/250 V (not accessible)                                  |
| Protection in the mains power input (IEC 898)   | Recommended miniature circuit breaker: from 6 A characteristic C |
| <b>Output</b>   |  |
| 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.  | 1 %  |
| Residual ripple peak-peak, max.   | 150 mV   |
| Residual ripple peak-peak, typ.   | 30 mV  |
| Spikes peak-peak, max. (bandwidth: 20 MHz)  | 240 mV   |
| Spikes peak-peak, typ. (bandwidth: 20 MHz)  | 140 mV   |
| Adjustment range  | 22.8 ... 28 V  |
| Product feature / output voltage adjustable   | Yes  |
| Output voltage setting  | via potentiometer  |
| 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 $V_{out} < 3$ %                                     |
| Startup delay, max.   | 0.3 s  |
| Voltage rise, typ.  | 15 ms  |
| Rated current value $I_{out}$ rated   | 5 A  |
| Current range   | 0 ... 6 A  |
| • Note  | 6 A up to +45°C; +60 ... +70 °C: Derating 1.6%/K                 |
| delivered active power / typ.   | 144 W  |
| short-term overload current / at short-circuit during run-up / typical                                | 18 A   |
| Duration of overloading ability for excess current / on short-circuiting during the start-up          | 800 ms   |
| short-term overload current / at short-circuit during operation / typical                             | 18 A   |
| Duration of overloading ability for excess current / on short-circuiting during the operational phase | 800 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.   | 88 %   |
| Power loss at $V_{out}$ rated, $I_{out}$ rated, approx.   | 16 W   |
| <b>Closed-loop control</b>  |  |
| Dynamic mains compensation ( $V_{in}$ rated $\pm 15$ %), max.   | 0.3 %  |
| Dynamic load smoothing ( $I_{out}$ : 10/90/10 %), $U_{out} \pm$ typ.                                  | 3 %  |
| Load step setting time 10 to 90%, typ.  | 1 ms   |
| Load step setting time 90 to 10%, typ.  | 1 ms   |

| <b>Protection and monitoring</b>                               |  |
|--|--|
| Output overvoltage protection                                  | protection against overvoltage in case of internal fault $V_{out} < 33 \text{ V}$  |
| Current limitation   | 6 ... 7.1 A  |
| Characteristic feature of the output / short-circuit protected | Yes  |
| Short-circuit protection                                       | Constant current characteristic  |
| Enduring short circuit current / Effective level / typical     | 7.1 A  |
| • Note   | overload capability 150 % $I_{out}$ rated up to 5 s/min  |
| Overload/short-circuit indicator                               | -  |
| <b>Safety</b>  |  |
| Primary/secondary isolation                                    | Yes  |
| Potential separation   | Safety extra-low output voltage $U_{out}$ acc. to EN 60950-1 and EN 50178  |
| Protection class   | Class I  |
| stray current / maximum  | 3.5 mA   |
| stray current / typical  | 0.4 mA   |
| CE mark  | Yes  |
| UL/CSA approval  | 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, UL 1604)                |
| Explosion protection   | ATEX (EX) II 3G Ex nA nC IIC T4 Gc; cCSAus (CSA C22.2 No. 213-M1987, ANSI/ISA-12.12.01-2007) Class I, Div. 2, Group ABCD, T4 |
| FM approval  | -  |
| CB approval  | Yes  |
| Marine approval  | GL, BV   |
| 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                             | -10 ... +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                                     | L, N, PE: 1 screw terminal each for 0.5 ... 2.5 mm <sup>2</sup> single-core/finely stranded                                  |
| Connections / Output   | +, -: 2 screw terminals each for 0.5 ... 2.5 mm <sup>2</sup>   |
| Connections / Auxiliary  | Alarm signals: 2 screw terminals for 0.5 ... 2.5 mm <sup>2</sup>   |

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| Width / of the housing   | 50 mm   |
| Height / of the housing  | 125 mm  |
| Depth / of the housing   | 120 mm  |
| Installation width   | 50 mm   |
| Mounting height  | 225 mm  |
| Weight, approx.  | 0.5 kg  |
| Product feature / of the housing / housing for side-by-side mounting | Yes   |
| Type of mounting / wall mounting                                     | No  |
| Type of mounting / standard rail mounting                            | Yes   |
| Type of mounting / S7-300 rail mounting                              | No  |
| Installation   | Snaps onto DIN rail EN 60715 35x7.5/15  |
| Electrical accessories   | Buffer module   |
| Other information  | Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified) |

**letzte Änderung:**

Mar 3, 2014