



SITOP PSU100M 20A STABILIZED POWER SUPPLY  
 INPUT: 120-230 V AC 110-220 V DC OUTPUT: 24 V/20 A  
 DC

| Technical specifications                                    |  |
|---|--|
| Product   | SITOP PSU100M  |
| Power supply, type  | 24 V/20 A  |
| Input   |  |
| Input   | 1-phase and 2-phase AC or DC   |
| Supply voltage / at DC                                      | 110 ... 300 V  |
| Rated voltage value $V_{in}$ rated                          | 120 ... 230 V  |
| Voltage range   | 85 ... 275 V   |
| • Note  | Derating of temperature necessary down to 50 °C at $V_{in} < 100$ V AC or DC |
| Input voltage / at DC                                       | 88 ... 350 V   |
| Wide-range input  | Yes  |
| Overvoltage resistance                                      | Implemented internally with varistors  |
| Mains buffering at $I_{out}$ rated, min.                    | 20 ms  |
| Mains buffering   | at $V_{in} = 230$ V  |
| Rated line frequency  | 50 / 60 Hz   |
| Rated line range  | 45 ... 65 Hz   |
| Input current / at nominal level of the input voltage 120 V | 4.6 A  |
| Input current / at nominal level of the input voltage 230 V | 2.5 A  |
| Switch-on current limiting (+25 °C), max.                   | 20 A   |
| $I^2t$ , max.   | 5 A <sup>2</sup> ·s  |

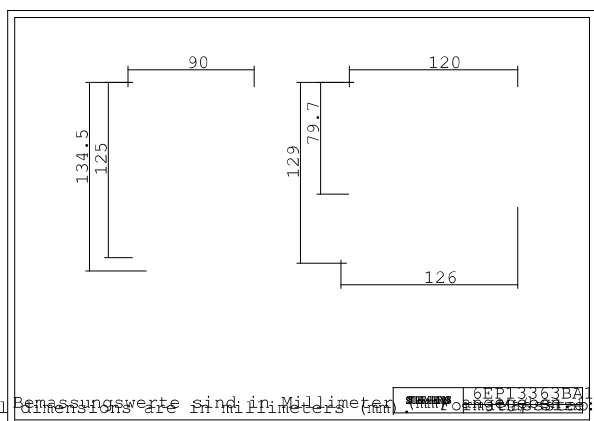
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| Built-in incoming fuse  | Yes   |
| Protection in the mains power input (IEC 898)   | Recommended miniature circuit breaker at 1-phase operation: 10 A , characteristic C; required at 2-phase operation: circuit breaker 2-pole connected or circuit breaker (8 or 4 A) acc. to UL 489: 3RV2711-1HD10 (120 V) or 3RV2711-1ED10 (230 V) |
| <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.  | 0.3 %   |
| Residual ripple peak-peak, max.   | 100 mV  |
| Residual ripple peak-peak, typ.   | 80 mV   |
| Spikes peak-peak, max. (bandwidth: 20 MHz)  | 200 mV  |
| Spikes peak-peak, typ. (bandwidth: 20 MHz)  | 100 mV  |
| Adjustment range  | 24 ... 28.8 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   | No overshoot of $V_{out}$ (soft start)  |
| Startup delay, max.   | 0.25 s  |
| Voltage rise, typ.  | 50 ms   |
| Rated current value $I_{out}$ rated   | 20 A  |
| Current range   | 0 ... 20 A  |
| • Note  | > 60 °C Derating  |
| delivered active power / typ.   | 480 W   |
| constant overload current / at short-circuit during run-up / typical                                  | 30 A  |
| short-term overload current / at short-circuit during operation / typical                             | 60 A  |
| Duration of overloading ability for excess current / on short-circuiting during the operational phase | 25 ms   |
| Parallel switching for enhanced performance   | Yes   |
| • Note  | switchable characteristic   |
| Numbers of parallel switchable units for enhanced performance   | 2   |
| <b>Efficiency</b>   |   |
| Efficiency at $V_{out}$ rated, $I_{out}$ rated, approx.   | 93 %  |
| Power loss at $V_{out}$ rated, $I_{out}$ rated, approx.   | 42 W  |
| <b>Closed-loop control</b>  |   |
| Dynamic mains compensation ( $V_{in}$ rated $\pm 15$ %), max.   | 0.5 %   |
| Dynamic load smoothing ( $I_{out}$ : 50/100/50 %), $U_{out} \pm$ typ.                                 | 1 %   |
| Load step setting time 50 to 100%, typ.   | 1 ms  |

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| Load step setting time 100 to 50%, typ.                        | 1 ms  |
| Setting time / maximum   | 5 ms  |
| <b>Protection and monitoring</b>                               |   |
| Output overvoltage protection                                  | < 33 V  |
| Current limitation, typ.                                       | 21.5 A  |
| Characteristic feature of the output / short-circuit protected | Yes   |
| Short-circuit protection                                       | Alternatively, constant current characteristic approx. 23 A or latching shutdown          |
| Enduring short circuit current / Effective level / typical     | 23 A  |
| • Note   | overload capability 150 % I <sub>out</sub> rated up to 5 s/min                            |
| Overload/short-circuit indicator                               | LED yellow for "overload", LED red for "latching shutdown"                                |
| <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   |
| stray current / maximum  | 3.5 mA  |
| stray current / typical  | 1 mA  |
| CE mark  | Yes   |
| UL/CSA approval  | Yes   |
| UL/cUL (CSA) approval  | cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259                                  |
| Explosion protection   | in preparation  |
| FM approval  | -   |
| CB approval  | No  |
| 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                             | -25 ... +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 0.2 ... 4 mm <sup>2</sup> single-core/finely stranded |

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| Connections / Output   | + , - : 2 screw terminals each for 0.2 ... 4 mm <sup>2</sup>             |
| Connections / Auxiliary  | Alarm signals: 2 screw terminals for 0.14 ... 1.5 mm <sup>2</sup>        |
| Width / of the housing   | 90 mm  |
| Height / of the housing  | 125 mm   |
| Depth / of the housing   | 125 mm   |
| Installation width   | 90 mm  |
| Mounting height  | 225 mm   |
| Weight, approx.  | 1.2 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 35x7.5/15                                   |
| 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:

Sep 10, 2012