

SITOP PSU100L 24 V/5 A  
 SITOP PSU100L 24 V/5 A STABILIZED POWER SUPPLY INPUT:  
 120/230 V AC OUTPUT: 24 V/5 A DC



| Input  |   |
|--|---|
| Input  | 1-phase AC  |
| Supply voltage   |   |
| <ul style="list-style-type: none"> <li>• 1 at AC Rated value</li> <li>• 2 at AC Rated value</li> <li>• Note</li> </ul>   | 120 V<br>230 V<br>Set by means of selector switch on the device |
| Input voltage  |   |
| <ul style="list-style-type: none"> <li>• 1 at AC</li> <li>• 2 at AC</li> </ul>   | 93 ... 132 V<br>187 ... 264 V                                   |
| Wide-range input   | No  |
| Overvoltage resistance   | 2.3 × Vin rated, 1.3 ms   |
| Mains buffering at Iout rated, min.  | 20 ms; at Vin = 93/187 V  |
| Rated line frequency 1   | 50 Hz   |
| Rated line frequency 2   | 60 Hz   |
| Rated line range   | 47 ... 63 Hz  |
| Input current  |   |
| <ul style="list-style-type: none"> <li>• at rated input voltage 120 V</li> <li>• at rated input voltage 230 V</li> </ul> | 2.1 A<br>1.15 A   |
| Switch-on current limiting (+25 °C), max.  | 32 A  |

|   |  |
|---|--|
| Duration of inrush current limiting at 25 °C  |  |
| • typical                                     | 3 ms   |
| I <sup>2</sup> t, max.                        | 0.8 A <sup>2</sup> ·s  |
| 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 |

### Output

|   |   |
|---|---|
| Output  | Controlled, isolated DC voltage           |
| Rated voltage V <sub>out</sub> DC                             | 24 V                                      |
| Total tolerance, static ±                                     | 3 %                                       |
| Static mains compensation, approx.                            | 0.1 %                                     |
| Static load balancing, approx.                                | 0.5 %                                     |
| Residual ripple peak-peak, max.                               | 150 mV                                    |
| Residual ripple peak-peak, typ.                               | 50 mV                                     |
| Spikes peak-peak, max. (bandwidth: 20 MHz)                    | 240 mV                                    |
| Spikes peak-peak, typ. (bandwidth: 20 MHz)                    | 150 mV                                    |
| Adjustment range  | 22.8 ... 26.4 V                           |
| Product function Output voltage adjustable                    | Yes                                       |
| Output voltage setting  | via potentiometer                         |
| Status display  | Green LED for 24 V OK                     |
| On/off behavior   | Overshoot of V <sub>out</sub> approx. 4 % |
| Startup delay, max.   | 1.5 s                                     |
| Voltage rise, typ.  | 130 ms                                    |
| Rated current value I <sub>out</sub> rated                    | 5 A                                       |
| Current range   | 0 ... 5 A                                 |
| • Note  | +45 ... +60 °C: Derating 2%/K             |
| Supplied active power typical                                 | 120 W                                     |
| Parallel switching for enhanced performance                   | Yes                                       |
| Numbers of parallel switchable units for enhanced performance | 2   |

### Efficiency

|   |      |
|---|------|
| Efficiency at V <sub>out</sub> rated, I <sub>out</sub> rated, approx. | 86 % |
| Power loss at V <sub>out</sub> rated, I <sub>out</sub> rated, approx. | 17 W |

### Closed-loop control

|   |        |
|---|--------|
| Dynamic mains compensation (V <sub>in</sub> rated ±15 %), max.                  | 0.3 %  |
| Dynamic load smoothing (I <sub>out</sub> : 10/90/10 %), U <sub>out</sub> ± typ. | 2 %    |
| Load step setting time 10 to 90%, typ.  | 0.4 ms |
| Load step setting time 90 to 10%, typ.  | 0.4 ms |

### Protection and monitoring

|                               |        |
|-------------------------------|--------|
| Output overvoltage protection | < 33 V |
| Current limitation, typ.      | 5.25 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>• typical</li> </ul> | 8 A                             |
| Overload/short-circuit indicator   | -                               |

### Safety

|  |   |
|--|---|
| Primary/secondary isolation  | Yes   |
| Galvanic isolation   | Safety extra-low output voltage $U_{out}$ acc. to EN 60950-1 and EN 50178 |
| Protection class   | Class I   |
| Leakage current <ul style="list-style-type: none"> <li>• maximum</li> <li>• typical</li> </ul> | 3.5 mA<br>0.4 mA  |
| CE mark  | Yes   |
| UL/cUL (CSA) approval  | cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259                  |
| Explosion protection   | -   |
| FM approval  | -   |
| CB approval  | Yes   |
| Marine approval  | -   |
| Degree of protection (EN 60529)  | IP20  |

### EMC

|                             |                  |
|-----------------------------|------------------|
| Emitted interference        | EN 55022 Class A |
| Supply harmonics limitation | -                |
| 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> | 0 ... 60 °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> | L, N, PE: 1 screw terminal each for 0.5 ... 2.5 mm <sup>2</sup> single-core/finely stranded<br>+, -: 2 screw terminals each for 0.5 ... 2.5 mm <sup>2</sup><br>- |
| Width of the enclosure  | 50 mm  |
| Height of the enclosure   | 125 mm   |
| Depth of the enclosure  | 120 mm   |
| Required spacing  |  |

|  |   |
|--|---|
| <ul style="list-style-type: none"> <li>• top</li> <li>• bottom</li> <li>• left</li> <li>• right</li> </ul> | <p>50 mm</p> <p>50 mm</p> <p>0 mm</p> <p>0 mm</p>   |
| 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  |
| MTBF at 40 °C  | 3 076 166 h   |
| Other information  | Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified) |