

SITOP PSU100L 24 V/20 A

SITOP PSU100L 24 V/20 A stabilized power supply input: 100-240 V

AC output: 24 V DC/20 A



| Input  |                               |
|--|-------------------------------|
| Input  | 1-phase AC                    |
| Supply voltage                               |                               |
| • 1 at AC Rated value                        | 100 V                         |
| • 2 at AC Rated value                        | 240 V                         |
| Input voltage                                |                               |
| • 1 at AC                                    | 93 ... 264 V                  |
| • at DC                                      | 85 ... 370 V                  |
| Wide-range input                             | Yes                           |
| Mains buffering at lout rated, min.          | 20 ms; at $V_{in} = 93/187$ 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 120 V               | 5.55 A                        |
| • at rated input voltage 230 V               | 2.35 A                        |
| Switch-on current limiting (+25 °C), max.    | 45 A                          |
| Duration of inrush current limiting at 25 °C |                               |
| • typical                                    | 15 ms                         |

|   |   |
|---|---|
| I <sup>2</sup> t, max.                        | 3.3 A <sup>2</sup> ·s   |
| Built-in incoming fuse                        | T 10 A/250 V (not accessible)                                     |
| Protection in the mains power input (IEC 898) | Recommended miniature circuit breaker: from 10 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.                                | 1 %   |
| 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)                    | 100 mV  |
| Adjustment range  | 22.8 ... 28 V                                 |
| Product function Output voltage adjustable                    | Yes   |
| Output voltage setting  | via potentiometer                             |
| Status display  | Green LED for 24 V OK                         |
| On/off behavior   | No overshoot of V <sub>out</sub> (soft start) |
| Startup delay, max.   | 1.5 s   |
| Voltage rise, typ.  | 20 ms   |
| Rated current value I <sub>out</sub> rated                    | 20 A  |
| Current range   | 0 ... 20 A                                    |
| • Note  | +45 ... +70 °C: Derating 2.5%/K               |
| Supplied active power typical                                 | 480 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. | 92 % |
| Power loss at V <sub>out</sub> rated, I <sub>out</sub> rated, approx. | 45 W |

### Closed-loop control

|   |        |
|---|--------|
| Dynamic mains compensation (V <sub>in</sub> rated ±15 %), max.                  | 0.5 %  |
| Dynamic load smoothing (I <sub>out</sub> : 10/90/10 %), U <sub>out</sub> ± typ. | 3 %    |
| Load step setting time 10 to 90%, typ.  | 0.7 ms |
| Load step setting time 90 to 10%, typ.  | 6 ms   |

### Protection and monitoring

|  |        |
|--|--------|
| Output overvoltage protection              | < 33 V |
| Current limitation, typ.                   | 24 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> | 24 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>0.8 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 B |
| 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> | -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> | 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  | 110 mm   |
| Height of the enclosure   | 125 mm   |
| Depth of the enclosure  | 125 mm   |
| Weight, approx.   | 1.8 kg   |

|  |   |
|--|---|
| Product feature of the enclosure housing for side-by-side mounting | Yes   |
| Installation   | Snaps onto DIN rail EN 60715 35x7.5/15  |
| Other information  | Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified) |