

SITOP PSU100L 24 V/2.5 A
 SITOP PSU100L 24 V/2.5 A Stabilized power supply input: 120/230 V AC, output: DC 24 V/2,5 A



| Input | |
|-------------------------------------|---|
| Input | 1-phase AC |
| • Note | Set by means of selector switch on the device |
| Supply voltage | |
| • 1 at AC Rated value | 120 V |
| • 2 at AC Rated value | 230 V |
| Input voltage | |
| • 1 at AC | 93 ... 132 V |
| • 2 at AC | 187 ... 264 V |
| Wide-range input | No |
| Overvoltage resistance | 2.3 × Vin rated, 1.3 ms |
| Mains buffering | at Vin = 93/187 V |
| Mains buffering at lout 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 | |
| • at rated input voltage 120 V | 1.1 A |
| • at rated input voltage 230 V | 0.65 A |

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| Switch-on current limiting (+25 °C), max. | 27 A |
| Duration of inrush current limiting at 25 °C | |
| • typical | 3 ms |
| I ² t, max. | 0.3 A ² ·s |
| Built-in incoming fuse | T 2 A/250 V (not accessible) |
| Protection in the mains power input (IEC 898) | Recommended miniature circuit breaker: from 3 A characteristic C |

Output

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| Output | Controlled, isolated DC voltage |
| Rated voltage V _{out} 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. | 10 mV |
| Spikes peak-peak, max. (bandwidth: 20 MHz) | 240 mV |
| Spikes peak-peak, typ. (bandwidth: 20 MHz) | 50 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 _{out} approx. 4 % |
| Startup delay, max. | 1.5 s |
| Voltage rise, typ. | 150 ms |
| Rated current value I _{out} rated | 2.5 A |
| Current range | 0 ... 2.5 A |
| • Note | +45 ... +60 °C: Derating 2%/K |
| Supplied active power typical | 60 W |
| Parallel switching for enhanced performance | Yes |
| Numbers of parallel switchable units for enhanced performance | 2 |

Efficiency

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| Efficiency at V _{out} rated, I _{out} rated, approx. | 85 % |
| Power loss at V _{out} rated, I _{out} rated, approx. | 9 W |

Closed-loop control

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| Dynamic mains compensation (V _{in} rated ±15 %), max. | 0.3 % |
| Dynamic load smoothing (I _{out} : 10/90/10 %), U _{out} ± typ. | 2 % |
| Load step setting time 10 to 90%, typ. | 0.5 ms |
| Load step setting time 90 to 10%, typ. | 0.7 ms |

Protection and monitoring

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| Output overvoltage protection | < 33 V |
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| Current limitation, typ. | 2.6 A |
| Property of the output Short-circuit proof | Yes |
| Short-circuit protection | Constant current characteristic |
| Enduring short circuit current RMS value | |
| • typical | 4 A |
| Overload/short-circuit indicator | - |

Safety

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| 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 | |
| • maximum | 3.5 mA |
| • typical | 0.4 mA |
| Degree of protection (EN 60529) | IP20 |

Approvals

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| 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 | - |

EMC

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|-----------------------------|------------------|
| Emitted interference | EN 55022 Class A |
| Supply harmonics limitation | not applicable |
| Noise immunity | EN 61000-6-2 |

environmental conditions

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| Ambient temperature | |
| • during operation | 0 ... 60 °C |
| — Note | with natural convection |
| • during transport | -40 ... +85 °C |
| • during storage | -40 ... +85 °C |
| Humidity class according to EN 60721 | Climate class 3K3, 5 ... 95% no condensation |

Mechanics

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|------------------------|---|
| Connection technology | screw-type terminals |
| Connections | |
| • Supply input | L, N, PE: 1 screw terminal each for 0.5 ... 2.5 mm ² single-core/finely stranded |
| • Output | +, -: 2 screw terminals each for 0.5 ... 2.5 mm ² |
| • Auxiliary | - |
| Width of the enclosure | 32.5 mm |

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| Height of the enclosure | 125 mm |
| Depth of the enclosure | 120 mm |
| Required spacing | |
| • top | 50 mm |
| • bottom | 50 mm |
| • left | 0 mm |
| • right | 0 mm |
| Weight, approx. | 0.3 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 | 3 153 082 h |
| Other information | Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified) |