

SITOP PSA100E STABILIZED POWER SUPPLY 300 W INPUT: 230 V AC OUTPUT: 24 V DC/12 A



Technical specifications

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|--------------------|---------------|
| Product | SITOP PSA100E |
| Power supply, type | 24 V/12 A |

Input

| | |
|--|---|
| Input | 1-phase AC |
| Supply voltage 1 with AC Rated value | 230 V |
| Voltage range AC | 187 ... 264 V |
| Wide-range input | No |
| Overvoltage resistance | - |
| Mains buffering at I _{out} rated, min. | 10 ms |
| Rated line frequency | 50 ... 60 Hz |
| Rated line range | 47 ... 63 Hz |
| Input current at rated input voltage 230 V Rated value | 2.5 A |
| Switch-on current limiting (+25 °C), max. | 50 A |
| I ² t, max. | 3.3 A ² ·s |
| Built-in incoming fuse | internal |
| Protection in the mains power input (IEC 898) | Recommended miniature circuit breaker: from 10 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 % |

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| Residual ripple peak-peak, max. | 150 mV |
| Spikes peak-peak, max. (bandwidth: 20 MHz) | 250 mV |
| Adjustment range | 23 ... 26 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 Vout < 5 % |
| Startup delay, max. | 0.3 s |
| Voltage increase time of the output voltage maximum | 500 ms |
| Rated current value Iout rated | 12 A |
| Current range | 0 ... 12 A |
| • Note | 12 A up to +45 °C, 6 A up to +70 °C |
| Active power supplied typical | 288 W |
| Parallel switching for enhanced performance | Yes |
| Numbers of parallel switchable units for enhanced performance | 2 |

| Efficiency | |
|---|------|
| Efficiency at Vout rated, Iout rated, approx. | 88 % |
| Power loss at Vout rated, Iout rated, approx. | 39 W |

| Closed-loop control | |
|---|--------|
| Dynamic mains compensation (Vin rated ±15 %), max. | 0.3 % |
| Dynamic load smoothing (Iout: 50/100/50 %), Uout ± typ. | 3.5 % |
| Load step setting time 50 to 100%, typ. | 0.1 ms |
| Load step setting time 100 to 50%, typ. | 0.1 ms |

| Protection and monitoring | |
|--|--|
| Output overvoltage protection | < 35 V |
| Current limitation, typ. | 13.2 A |
| Property of the output Short-circuit proof | Yes |
| Short-circuit protection | Electronic shutdown, automatic restart |
| Enduring short circuit current RMS value maximum | 7.5 A |
| Overload/short-circuit indicator | - |

| Safety | |
|-----------------------------|--|
| Primary/secondary isolation | Yes |
| Galvanic isolation | Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 |
| Protection class | Class I |
| Leakage current maximum | 3.5 mA |
| Leakage current typical | 0.8 mA |
| CE mark | Yes |
| UL/CSA approval | Yes |

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| UL/cUL (CSA) approval | cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259 |
| Explosion protection | - |
| Certificate of suitability IECEx | No |
| Certificate of suitability NEC Class 2 | No |
| FM approval | - |
| CB approval | Yes |
| Marine approval | - |
| Degree of protection (EN 60529) | IP20 |

EMC

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|-----------------------------|------------------|
| Emitted interference | EN 55022 Class B |
| Supply harmonics limitation | - |
| Noise immunity | EN 61000-6-2 |

Operating data

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|--|------------------------------------|
| Ambient temperature during operation | -10 ... +70 °C |
| <ul style="list-style-type: none"> Note | with natural convection |
| Ambient temperature during transport | -40 ... +85 °C |
| Ambient temperature during storage | -40 ... +85 °C |
| Humidity class according to EN 60721 | Climate class 3K3, no condensation |

Mechanics

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|---|---|
| Connection technology | screw-type terminals |
| Connections Supply input | L, N, PE: Removable screw terminal, each for 1 x 0.5 ... 2.5 mm ² |
| Connections Output | +, -: Removable screw terminal each for 1 x 0.5 ... 2.5 mm ² |
| Connections Auxiliary | - |
| Width of the enclosure | 52 mm |
| Height of the enclosure | 170 mm |
| Depth of the enclosure | 110 mm |
| Weight, approx. | 0.9 kg |
| Product property of the enclosure housing for side-by-side mounting | Yes |
| Installation | Snaps onto DIN rail EN 60715 35x7.5/15, wall mounting |
| Other information | Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified) |