

SITOP PSU300S 24 V/10 A
 SITOP PSU300S 24 V/10 A Stabilized power supply input: 3 AC 400-500 V output: DC 24 V/10 A



| Input | |
|---|--|
| Input | 3-phase AC |
| Rated voltage value V_{in} rated | 400 ... 500 V |
| Voltage range AC | 340 ... 550 V |
| Wide-range input | Yes |
| Mains buffering | at $V_{in} = 400$ V |
| Mains buffering at I_{out} rated, min. | 7 ms; at $V_{in} = 400$ 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 400 V | 0.7 A |
| • at rated input voltage 500 V | 0.6 A |
| Switch-on current limiting (+25 °C), max. | 20 A |
| I^2t , max. | 0.5 A ² ·s |
| Built-in incoming fuse | none |
| Protection in the mains power input (IEC 898) | Required: 3-pole connected miniature circuit breaker 3 ... 16 A characteristic C or circuit breaker 3RV2011-1DA10 (setting 3 A) or 3RV2711-1DD10 (UL 489-listed, DIVQ) |

| Output | |
|---|---|
| Output | Controlled, isolated DC voltage |
| Rated voltage Vout DC | 24 V |
| Total tolerance, static ± | 3 % |
| Static mains compensation, approx. | 0.1 % |
| Static load balancing, approx. | 0.15 % |
| Residual ripple peak-peak, max. | 200 mV |
| Spikes peak-peak, max. (bandwidth: 20 MHz) | 240 mV |
| Adjustment range | 24 ... 28 V |
| Product function Output voltage adjustable | Yes |
| Output voltage setting | via potentiometer; max. 240 W |
| 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 | Overshoot of Vout < 5 % |
| Startup delay, max. | 1.5 s |
| Voltage rise, typ. | 50 ms |
| Voltage increase time of the output voltage maximum | 500 ms |
| Rated current value Iout rated | 10 A |
| Current range | 0 ... 10 A |
| • Note | 12 A up to +45°C; +60 ... +70 °C: Derating 5%/K |
| Supplied active power typical | 240 W |
| Parallel switching for enhanced performance | Yes |
| Numbers of parallel switchable units for enhanced performance | 2 |

| Efficiency | |
|---|------|
| Efficiency at Vout rated, Iout rated, approx. | 91 % |
| Power loss at Vout rated, Iout rated, approx. | 23 W |

| Closed-loop control | |
|---|-------|
| Dynamic mains compensation (Vin rated ±15 %), max. | 1 % |
| Dynamic load smoothing (Iout: 50/100/50 %), Uout ± typ. | 1 % |
| Load step setting time 50 to 100%, typ. | 3 ms |
| Load step setting time 100 to 50%, typ. | 3 ms |
| Dynamic load smoothing (Iout: 10/90/10 %), Uout ± typ. | 3 % |
| Load step setting time 10 to 90%, typ. | 4 ms |
| Load step setting time 90 to 10%, typ. | 4 ms |
| Setting time maximum | 10 ms |

| Protection and monitoring | |
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| Output overvoltage protection | protection against overvoltage in case of internal fault Vout < 35 V |
| Current limitation, typ. | 13 A |
| Property of the output Short-circuit proof | Yes |

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| Short-circuit protection | Constant current characteristic |
| Enduring short circuit current RMS value <ul style="list-style-type: none"> • maximum | 16 A |
| Overcurrent overload capability in normal operation | overload capability 150 % I _{out} rated up to 5 s/min |

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, transformer acc. to EN 61558-2-16 |
| Protection class | Class I |
| 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; cCSAus (CSA C22.2 No. 60950-1, UL 60950-1) |
| Explosion protection | IECEx Ex nA nC IIC T4 Gc; ATEX (EX) II 3G Ex nA nC IIC T4 Gc; cULus Class I Div. 2 (ANSI/ISA-12.12.01-2007, CSA C22.2 No. 213-M1987) Group ABCD, T4 |
| FM approval | - |
| CB approval | Yes |
| Marine approval | ABS, DNV GL |

EMC

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|-----------------------------|------------------|
| Emitted interference | EN 55022 Class B |
| Supply harmonics limitation | EN 61000-3-2 |
| Noise immunity | EN 61000-6-2 |

environmental conditions

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| Ambient temperature <ul style="list-style-type: none"> • during operation — Note • during transport • during storage | -25 ... +70 °C with natural convection -40 ... +85 °C -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 <ul style="list-style-type: none"> • Supply input • Output • Auxiliary | L1, L2, L3, PE: 1 screw terminal each for 0.05 ... 2.5 mm ² single-core/finely stranded +, -: 2 screw terminals each for 0.2 ... 2.5 mm ² 13, 14 (alarm signal): 1 screw terminal each for 0.2 ... 2.5 mm ² |
| Width of the enclosure | 70 mm |
| Height of the enclosure | 125 mm |
| Depth of the enclosure | 120 mm |
| Weight, approx. | 0.7 kg |

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| Product feature of the enclosure housing for side-by-side mounting | Yes |
| Installation | Snaps onto DIN rail EN 60715 35x7.5/15 |
| Electrical accessories | Redundancy module, buffer module, selectivity module, DC UPS |
| Mechanical accessories | Device identification label 20 mm × 7 mm, pale turquoise 3RT1900-1SB20 |
| MTBF at 40 °C | 500 000 h |
| Other information | Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified) |