

SITOP MODULAR/1AC/24VDC/20A

SITOP modular 20 A Stabilized power supply input: 120/230 V AC, output: 24 V DC/20 A



Figure similar

| Input | |
|--|--|
| Input | 1-phase AC |
| • Note | Set by means of wire jumper on the device; starting from $V_{in} > 93/183$ V |
| supply voltage | |
| • 1 at AC rated value | 120 V |
| • 2 at AC rated value | 230 V |
| input voltage | |
| • 1 at AC | 85 ... 132 V |
| • 2 at AC | 176 ... 264 V |
| Wide-range input | No |
| Overvoltage resistance | $2.3 \times V_{in}$ rated, 1.3 ms |
| Mains buffering | at $V_{in} = 230$ V |
| Mains buffering at I_{out} rated, min. | 20 ms; at $V_{in} = 230$ 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 | 7.7 A |
| • at rated input voltage 230 V | 3.5 A |
| Switch-on current limiting (+25 °C), max. | 60 A |
| I^2t , max. | 9.9 A ² ·s |
| Built-in incoming fuse | Yes |
| Protection in the mains power input (IEC 898) | Recommended miniature circuit breaker at 1-phase operation: 10 A characteristic C; required at 2-phase operation: circuit breaker 2-pole connected or circuit breaker 3RV2411-1JA10 (120 V) or 3RV2411-1FA10 (230 V) |
| Output | |
| Output | Controlled, isolated DC voltage |
| Rated voltage V_{out} DC | 24 V |
| • output voltage at output 1 at DC rated value | 24 V |
| Total tolerance, static \pm | 3 % |
| Static mains compensation, approx. | 0.1 % |
| Static load balancing, approx. | 0.1 % |
| Residual ripple peak-peak, max. | 100 mV |
| Residual ripple peak-peak, typ. | 30 mV |
| Spikes peak-peak, max. (bandwidth: 20 MHz) | 200 mV |
| Spikes peak-peak, typ. (bandwidth: 20 MHz) | 60 mV |

| | |
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| Adjustment range | 24 ... 28.8 V |
| product function output voltage adjustable | Yes |
| Output voltage setting | via potentiometer |
| Status display | Green LED for 24 V OK |
| Signaling | via signaling module (6EP1961-3BA10) |
| On/off behavior | Overshoot of Vout approx. 3 % |
| Startup delay, max. | 0.1 s |
| Voltage rise, typ. | 50 ms |
| Rated current value Iout rated | 20 A |
| Current range | 0 ... 20 A |
| • Note | +60 ... +70 °C: Derating 3.5%/K |
| supplied active power typical | 480 W |
| short-term overload current | |
| • at short-circuit during operation typical | 60 A |
| duration of overloading capability for excess current | |
| • at short-circuit during operation | 25 ms |
| constant overload current | |
| • on short-circuiting during the start-up typical | 23 A |
| Parallel switching for enhanced performance | Yes; switchable characteristic |
| Numbers of parallel switchable units for enhanced performance | 2 |
| Efficiency | |
| Efficiency at Vout rated, Iout rated, approx. | 89 % |
| Power loss at Vout rated, Iout rated, approx. | 59 W |
| Closed-loop control | |
| Dynamic mains compensation (Vin rated ±15 %), max. | 1 % |
| Dynamic load smoothing (Iout: 50/100/50 %), Uout ± typ. | 2 % |
| Load step setting time 50 to 100%, typ. | 2 ms |
| Load step setting time 100 to 50%, typ. | 2 ms |
| setting time maximum | 5 ms |
| Protection and monitoring | |
| Output overvoltage protection | < 35 V |
| Current limitation, typ. | 23 A |
| property of the output short-circuit proof | Yes |
| Short-circuit protection | Alternatively, constant current characteristic approx. 23 A or latching shutdown |
| enduring short circuit current RMS value | |
| • typical | 23 A |
| Overload/short-circuit indicator | LED yellow for "overload", LED red for "latching shutdown" |
| 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 |
| • typical | 0.4 mA |
| Degree of protection (EN 60529) | IP20 |
| Approvals | |
| CE mark | Yes |
| UL/cUL (CSA) approval | cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259 |
| Explosion protection | IECEx Ex nA nC IIC T3 Gc; ATEX (EX) II 3G Ex nA nC IIC T3 Gc; cCSAus (CSA C22.2 No. 213, ANSI/ISA-12.12.01) Class I, Div. 2, Group ABCD, T3 |
| certificate of suitability NEC Class 2 | No |
| FM approval | - |
| CB approval | No |
| certificate of suitability EAC approval | Yes |
| Marine approval | ABS, GL |

| EMC | |
|--|---|
| Emitted interference | EN 55022 Class B |
| Supply harmonics limitation | EN 61000-3-2 |
| Noise immunity | EN 61000-6-2 |
| environmental conditions | |
| ambient temperature | |
| <ul style="list-style-type: none"> • during operation — Note • during transport • during storage | 0 ... 70 °C with natural convection -40 ... +85 °C -40 ... +85 °C |
| Humidity class according to EN 60721 | Climate class 3K3, 5 ... 95% no condensation |
| Mechanics | |
| Connection technology | screw-type terminals |
| Connections | |
| <ul style="list-style-type: none"> • Supply input | L, N, PE: 1 screw terminal each for 0.2 ... 4 mm ² single-core/finely stranded |
| <ul style="list-style-type: none"> • Output • Auxiliary | + , - : 2 screw terminals each for 0.5 ... 4 mm ² - |
| width of the enclosure | 160 mm |
| height of the enclosure | 125 mm |
| depth of the enclosure | 125 mm |
| required spacing | |
| <ul style="list-style-type: none"> • top • bottom • left • right | 50 mm 50 mm 0 mm 0 mm |
| Weight, approx. | 2.2 kg |
| product feature of the enclosure housing can be lined up | Yes |
| Installation | Snaps onto DIN rail EN 60715 35x7.5/15 |
| electrical accessories | Buffer module, signaling module |
| MTBF at 40 °C | 786 164 h |
| other information | Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified) |

