



SITOP PSU8200/1ACDC/24VDC/20A

SITOP PSU8200 20 A Stabilized power supply input: 120-230 V AC 110-220 V DC output: 24 V DC/20 A

| Input | |
|------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input | 1-phase and 2-phase AC or DC |
| Rated voltage value V_{in} rated | 120 ... 230 V |
| Voltage range AC | 85 ... 275 V |
| • Note | Derating of temperature necessary down to 50 °C at $V_{in} < 100$ V AC or DC |
| supply voltage | |
| • at DC | 110 ... 220 V |
| input voltage | |
| • at DC | 88 ... 350 V |
| Wide-range input | Yes |
| 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 | 45 ... 65 Hz |
| input current | |
| • at rated input voltage 120 V | 4.6 A |
| • at rated input voltage 230 V | 2.5 A |
| Switch-on current limiting (+25 °C), max. | 20 A |
| I^2t , max. | 5 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 3RV2711-1HD10 (UL 489) at 120 V or 3RV2711-1ED10 (UL 489) at 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 ± | 3 % |
| Static mains compensation, approx. | 0.1 % |
| Static load balancing, approx. | 0.3 % |
| Residual ripple peak-peak, max. | 100 mV |
| Residual ripple peak-peak, typ. | 80 mV |
| Spikes peak-peak, max. (bandwidth: 20 MHz) | 200 mV |
| Spikes peak-peak, typ. (bandwidth: 20 MHz) | 100 mV |
| Adjustment range | 24 ... 28.8 V |

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| product function output voltage adjustable | Yes |
| Output voltage setting | via potentiometer |
| 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 | No overshoot of Vout (soft start) |
| Startup delay, max. | 1.5 s |
| Voltage rise, typ. | 50 ms |
| Rated current value Iout rated | 20 A |
| Current range | 0 ... 20 A |
| • Note | +60 ... +70 °C: Derating 3%/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 | 30 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. | 93 % |
| Power loss at Vout rated, Iout rated, approx. | 42 W |
| Closed-loop control | |
| Dynamic mains compensation (Vin rated ± 15 %), max. | 0.5 % |
| Dynamic load smoothing (Iout: 50/100/50 %), Uout \pm typ. | 1 % |
| Load step setting time 50 to 100%, typ. | 1 ms |
| Load step setting time 100 to 50%, typ. | 1 ms |
| setting time maximum | 5 ms |
| Protection and monitoring | |
| Output overvoltage protection | < 33 V |
| Current limitation, typ. | 21.5 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 |
| overcurrent overload capability in normal operation | overload capability 150 % Iout rated up to 5 s/min |
| 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 | 1 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; cCSAus (CSA C22.2 No. 60950-1, UL 60950-1) |
| 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 | Yes |
| certificate of suitability EAC 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 | |
| ambient temperature | -25 ... +70 °C With natural convection; startup tested starting from -40 °C nominal voltage -40 ... +85 °C -40 ... +85 °C |
| <ul style="list-style-type: none"> during operation — Note | |
| <ul style="list-style-type: none"> during transport | |
| <ul style="list-style-type: none"> during storage | |
| Humidity class according to EN 60721 | Climate class 3K3, 5 ... 95% no condensation |
| Mechanics | |
| Connection technology | screw-type terminals |
| Connections | L, N, PE: 1 screw terminal each for 0.2 ... 4 mm ² single-core/finely stranded +, -: 2 screw terminals each for 0.2 ... 4 mm ² 13, 14 (alarm signal): 1 screw terminal each for 0.14 ... 1.5 mm ² |
| <ul style="list-style-type: none"> Supply input | |
| <ul style="list-style-type: none"> Output | |
| <ul style="list-style-type: none"> Auxiliary | |
| width of the enclosure | 90 mm |
| height of the enclosure | 125 mm |
| depth of the enclosure | 125 mm |
| required spacing | 50 mm 50 mm 0 mm 0 mm |
| <ul style="list-style-type: none"> top | |
| <ul style="list-style-type: none"> bottom | |
| <ul style="list-style-type: none"> left | |
| <ul style="list-style-type: none"> right | |
| Weight, approx. | 1.2 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 |
| mechanical accessories | Device identification label 20 mm × 7 mm, TI-grey 3RT2900-1SB20 |
| MTBF at 40 °C | 667 048 h |
| other information | Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified) |

