



SITOP PSU200M/1-2AC/24VDC/10A

SITOP PSU200M 10 A stabilized power supply input: 120/230-500 V AC  
output: 24 V DC/ 10 A \*Ex approval no longer available\*

| Input   |   |
|---|---|
| Input   | 1-phase and 2-phase AC  |
| • Note  | Set by means of selector switch on the device   |
| supply voltage                                  |   |
| • 1 at AC                                       | 120 ... 230 V   |
| • 2 at AC                                       | 230 ... 500 V   |
| input voltage                                   |   |
| • 1 at AC                                       | 85 ... 264 V  |
| • 2 at AC                                       | 176 ... 550 V   |
| Wide-range input                                | Yes   |
| Overvoltage resistance                          | 1300 V <sub>peak</sub> , 1.3 ms   |
| Mains buffering                                 | at Vin = 120/230 V, typ. 150 ms at Vin = 400 V  |
| Mains buffering at I <sub>out</sub> rated, min. | 25 ms; at Vin = 120/230 V, typ. 150 ms at Vin = 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 120 V                  | 4.4 A   |
| • at rated input voltage 230 V                  | 2.4 A   |
| • at rated input voltage 500 V                  | 1.1 A   |
| Switch-on current limiting (+25 °C), max.       | 35 A  |
| I <sup>2</sup> t, max.                          | 4 A <sup>2</sup> ·s   |
| Built-in incoming fuse                          | T 6.3 A (not accessible)  |
| Protection in the mains power input (IEC 898)   | Recommended miniature circuit breaker at 1-phase operation: from 6 A (10 A) characteristic C (B); required at 2-phase operation: circuit breaker 2-pole connected or circuit breaker 3RV2011-1EA10 (setting 3.8 A) or 3RV2711-1ED10 (UL 489) at 230 V; 3RV2011-1DA10 (setting 3 A) or 3RV2711-1DD10 (UL 489) at 400/500 V |
| Output  |   |
| Output  | Controlled, isolated DC voltage   |
| Rated voltage V <sub>out</sub> 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.                  | 0.1 %   |
| Residual ripple peak-peak, max.                 | 50 mV   |
| Spikes peak-peak, max. (bandwidth: 20 MHz)      | 200 mV  |
| Adjustment range                                | 24 ... 28.8 V   |
| product function output voltage adjustable      | Yes   |
| Output voltage setting                          | via potentiometer   |

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| 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 approx. 3 %  |
| Startup delay, max.   | 1 s  |
| Voltage rise, typ.  | 50 ms  |
| Rated current value Iout rated                                | 10 A   |
| Current range   | 0 ... 10 A   |
| • Note  | +60 ... +70 °C: Derating 2%/K (at 120 V, 230 V) or 3.5%/K (at 400 V)                                 |
| supplied active power typical                                 | 240 W  |
| short-term overload current                                   |  |
| • at short-circuit during operation typical                   | 30 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             | 12 A   |
| Parallel switching for enhanced performance                   | Yes; switchable characteristic   |
| Numbers of parallel switchable units for enhanced performance | 2  |
| <b>Efficiency</b>   |  |
| Efficiency at Vout rated, Iout rated, approx.                 | 91 %   |
| Power loss at Vout rated, Iout rated, approx.                 | 24 W   |
| power loss [W] during no-load operation maximum               | 6 W  |
| <b>Closed-loop control</b>                                    |  |
| Dynamic mains compensation (Vin rated ±15 %), max.            | 0.1 %  |
| Dynamic load smoothing (Iout: 50/100/50 %), Uout ± typ.       | 3 %  |
| 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   |
| <b>Protection and monitoring</b>                              |  |
| Output overvoltage protection                                 | < 35 V   |
| Current limitation, typ.                                      | 12 A   |
| property of the output short-circuit proof                    | Yes  |
| Short-circuit protection                                      | Alternatively, constant current characteristic approx. 12 A or latching shutdown                     |
| enduring short circuit current RMS value                      |  |
| • typical   | 12 A   |
| Overload/short-circuit indicator                              | LED yellow for "overload", LED red for "latching shutdown"   |
| <b>Safety</b>   |  |
| 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   | 0.32 mA  |
| Degree of protection (EN 60529)                               | IP20   |
| <b>Approvals</b>  |  |
| 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) |
| certificate of suitability NEC Class 2                        | No   |
| CB approval   | Yes  |
| certificate of suitability EAC approval                       | Yes  |
| Marine approval   | ABS, DNV GL  |
| <b>EMC</b>  |  |
| Emitted interference  | EN 55022 Class B   |
| Supply harmonics limitation                                   | EN 61000-3-2   |
| Noise immunity  | EN 61000-6-2   |
| <b>environmental conditions</b>                               |  |
| ambient temperature   |  |
| • during operation  | -25 ... +70 °C   |

|  |   |
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| — Note   | With natural convection; startup tested starting from -40 °C nominal voltage                      |
| <ul style="list-style-type: none"> <li>• during transport</li> <li>• during storage</li> </ul> | -40 ... +85 °C  |
| Humidity class according to EN 60721   | Climate class 3K3, 5 ... 95% no condensation  |
| <b>Mechanics</b>   |   |
| Connection technology  | screw-type terminals  |
| Connections  |   |
| <ul style="list-style-type: none"> <li>• Supply input</li> </ul>                               | L, N, PE: 1 screw terminal each for 0.2 ... 2.5 mm <sup>2</sup> single-core/finely stranded       |
| <ul style="list-style-type: none"> <li>• Output</li> </ul>                                     | +, -: 2 screw terminals each for 0.2 ... 2.5 mm <sup>2</sup>                                      |
| <ul style="list-style-type: none"> <li>• Auxiliary</li> </ul>                                  | 13, 14 (alarm signal): 1 screw terminal each for 0.14 ... 1.5 mm <sup>2</sup>                     |
| width of the enclosure   | 70 mm   |
| height of the enclosure  | 125 mm  |
| depth of the enclosure   | 121 mm  |
| required spacing   |   |
| <ul style="list-style-type: none"> <li>• top</li> </ul>  | 50 mm   |
| <ul style="list-style-type: none"> <li>• bottom</li> </ul>                                     | 50 mm   |
| <ul style="list-style-type: none"> <li>• left</li> </ul>                                       | 0 mm  |
| <ul style="list-style-type: none"> <li>• right</li> </ul>                                      | 0 mm  |
| Weight, approx.  | 0.8 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   |
| MTBF at 40 °C  | 1 055 408 h   |
| other information  | Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified) |

