

SITOP PSU200M 24 V/10 A, VARNISHED PCB  
 SITOP PSU200M plus 10 A Stabilized power supply input: AC 120-230/230-500 V output: DC 24 V/10 A Option for with protective varnish



Figure similar

| Input  |   |
|--|---|
| Input  | 1-phase and 2-phase AC  |
| Supply voltage   |   |
| <ul style="list-style-type: none"> <li>• 1 at AC</li> <li>• 2 at AC</li> <li>• Note</li> </ul> | 120 ... 230 V<br>230 ... 500 V<br>Set by means of selector switch on the device |
| Input voltage  |   |
| <ul style="list-style-type: none"> <li>• 1 at AC</li> <li>• 2 at AC</li> </ul>                 | 85 ... 264 V<br>176 ... 550 V   |
| Wide-range input   | Yes   |
| Overvoltage resistance   | 1300 V <sub>peak</sub> , 1.3 ms   |
| Mains buffering at I <sub>out</sub> rated, min.  | 25 ms; at V <sub>in</sub> = 120/230 V, typ. 150 ms at V <sub>in</sub> = 400 V   |
| Rated line frequency 1   | 50 Hz   |
| Rated line frequency 2   | 60 Hz   |
| Rated line range   | 47 ... 63 Hz  |
| Input current  |   |
| <ul style="list-style-type: none"> <li>• at rated input voltage 120 V</li> </ul>               | 4.4 A   |

|  |   |
|--|---|
| <ul style="list-style-type: none"> <li>• at rated input voltage 230 V</li> <li>• at rated input voltage 500 V</li> </ul> | 2.4 A<br>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   |
| 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  |
| 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 V <sub>out</sub> approx. 3 %                            |
| Startup delay, max.   | 1 s  |
| Voltage rise, typ.  | 50 ms  |
| Rated current value I <sub>out</sub> rated  | 10 A   |
| Current range   | 0 ... 10 A   |
| <ul style="list-style-type: none"> <li>• Note</li> </ul>  | +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   |  |
| <ul style="list-style-type: none"> <li>• at short-circuit during operation typical</li> </ul>       | 30 A   |
| Duration of overloading capability for excess current   |  |
| <ul style="list-style-type: none"> <li>• at short-circuit during operation</li> </ul>               | 25 ms  |
| Constant overload current   |  |
| <ul style="list-style-type: none"> <li>• on short-circuiting during the start-up typical</li> </ul> | 12 A   |
| Parallel switching for enhanced performance   | Yes; switchable characteristic                                       |
| Numbers of parallel switchable units for enhanced performance                                       | 2  |

## Efficiency

|   |      |
|---|------|
| Efficiency at V <sub>out</sub> rated, I <sub>out</sub> rated, approx. | 91 % |
|---|------|

|  |   |
|--|---|
| Power loss at $V_{out}$ rated, $I_{out}$ rated, approx.  | 24 W  |
| Power loss [W] during no-load operation maximum  | 6 W   |
| <b>Closed-loop control</b>   |   |
| Dynamic mains compensation ( $V_{in}$ rated $\pm 15\%$ ), max.                                       | 0.1 %   |
| Dynamic load smoothing ( $I_{out}$ : 50/100/50 %), $U_{out} \pm$ 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 <ul style="list-style-type: none"> <li>• typical</li> </ul> | 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 $U_{out}$ acc. to EN 60950-1 and EN 50178   |
| Protection class   | Class I   |
| Leakage current <ul style="list-style-type: none"> <li>• maximum</li> <li>• typical</li> </ul>       | 3.5 mA<br>0.32 mA   |
| 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 T4 Gc; ATEX (EX) II 3G Ex nA nC IIC T4 Gc; cCSAus (CSA C22.2 No. 213, ANSI/ISA-12.12.01) Class I, Div. 2, Group ABCD, T3 |
| CB approval  | No  |
| Marine approval  | ABS, DNV GL   |
| Degree of protection (EN 60529)  | IP20  |
| <b>EMC</b>   |   |
| Emitted interference   | EN 55022 Class B  |
| Supply harmonics limitation  | EN 61000-3-2  |
| Noise immunity   | EN 61000-6-2  |
| <b>Operating data</b>  |   |
| Ambient temperature <ul style="list-style-type: none"> <li>• during operation</li> </ul>             | -25 ... +70 °C  |

|                                      |                                    |
|--------------------------------------|------------------------------------|
| — Note                               | with natural convection            |
| • during transport                   | -40 ... +85 °C                     |
| • during storage                     | -40 ... +85 °C                     |
| Humidity class according to EN 60721 | Climate class 3K3, no condensation |

## Mechanics

|  |   |
|--|---|
| Connection technology  | screw-type terminals  |
| Connections  |   |
| • Supply input   | L, N, PE: 1 screw terminal each for 0.2 ... 2.5 mm <sup>2</sup> single-core/finely stranded       |
| • Output   | +, -: 2 screw terminals each for 0.2 ... 2.5 mm <sup>2</sup>                                      |
| • Auxiliary  | 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   |   |
| • top  | 50 mm   |
| • bottom   | 50 mm   |
| • left   | 0 mm  |
| • right  | 0 mm  |
| Weight, approx.  | 0.8 kg  |
| Product feature of the enclosure housing for side-by-side mounting | 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) |