

SITOP PSU200M/1-2AC/24VDC/5A

SITOP PSU200M 5 A Stabilized power supply input: 120/230-500 V

AC output: 24 V DC/5 A



Input	
Input	1-phase and 2-phase AC
<ul style="list-style-type: none"> <li>Note</li> </ul>	Set by means of selector switch on the device; starting from $V_{in} > 90/180$ V
supply voltage	
<ul style="list-style-type: none"> <li>1 at AC</li> <li>2 at AC</li> </ul>	120 ... 230 V 230 ... 500 V
input voltage	
<ul style="list-style-type: none"> <li>1 at AC</li> <li>2 at AC</li> </ul>	85 ... 264 V 176 ... 550 V
Wide-range input	Yes
Overvoltage resistance	1300 V <sub>peak</sub> , 1.3 ms
Mains buffering	at $V_{in} = 120/230$ V, typ. 150 ms at $V_{in} = 400$ V
Mains buffering at lout rated, min.	25 ms; at $V_{in} = 120/230$ V, typ. 150 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	
<ul style="list-style-type: none"> <li>at rated input voltage 120 V</li> </ul>	2.2 A

<ul style="list-style-type: none"> <li>• at rated input voltage 230 V</li> <li>• at rated input voltage 500 V</li> </ul>	1.2 A 0.61 A
Switch-on current limiting (+25 °C), max.	35 A
I <sup>2</sup> t, max.	1.7 A <sup>2</sup> ·s
Built-in incoming fuse	T 3.15 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	5 A
Current range	0 ... 5 A
supplied active power typical	120 W
short-term overload current	
<ul style="list-style-type: none"> <li>• at short-circuit during operation typical</li> </ul>	15 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>	6 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.	88 %
Power loss at V <sub>out</sub> rated, I <sub>out</sub> rated, approx.	17 W
power loss [W] during no-load operation maximum	4 W

Closed-loop control	
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

Protection and monitoring	
Output overvoltage protection	< 35 V
Current limitation, typ.	6 A
property of the output short-circuit proof	Yes
Short-circuit protection	Alternatively, constant current characteristic approx. 5.5 A or latching shutdown
enduring short circuit current RMS value <ul style="list-style-type: none"> <li>• typical</li> </ul>	6 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 $U_{out}$ 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 0.25 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 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
certificate of suitability NEC Class 2	No
FM approval	-
CB approval	Yes
Marine approval	ABS, DNV 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"> <li>• during operation</li> <li>— Note</li> <li>• during transport</li> <li>• during storage</li> </ul>	<p>-25 ... +70 °C</p> <p>With natural convection; startup tested starting from -40 °C nominal voltage</p> <p>-40 ... +85 °C</p> <p>-40 ... +85 °C</p>
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"> <li>• Supply input</li> <li>• Output</li> <li>• Auxiliary</li> </ul>	<p>L, N, PE: 1 screw terminal each for 0.2 ... 2.5 mm<sup>2</sup> single-core/finely stranded</p> <p>+, -: 2 screw terminals each for 0.2 ... 2.5 mm<sup>2</sup></p> <p>13, 14 (alarm signal): 1 screw terminal each for 0.14 ... 1.5 mm<sup>2</sup></p>
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> <li>• bottom</li> <li>• left</li> <li>• right</li> </ul>	<p>50 mm</p> <p>50 mm</p> <p>0 mm</p> <p>0 mm</p>
Weight, approx.	0.6 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	1 123 973 h
other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)