



SITOP PSU200M 10 A STABILIZED POWER SUPPLY INPUT:
120/230-500 V AC OUTPUT: 24 V/10 A DC

Technical specifications

Product	SITOP PSU200M
Power supply, type	24 V/10 A

Input

Input	1-phase and 2-phase AC
Supply voltage 1 with AC	120 ... 230 V
Supply voltage 2 with AC	230 ... 500 V
• Note	Set by means of selector switch on the device
Input voltage 1 with AC	85 ... 264 V
Input voltage 2 with AC	176 ... 550 V
Wide-range input	Yes
Overvoltage resistance	1300 V _{peak} , 1.3 ms
Mains buffering at I _{out} rated, min.	25 ms; at V _{in} = 120/230 V, typ. 150 ms at V _{in} = 400 V
Rated line frequency	50 ... 60 Hz
Rated line range	47 ... 63 Hz
Input current at rated input voltage 120 V Rated value	4.4 A
Input current at rated input voltage 230 V Rated value	2.4 A
Input current at rated input voltage 500 V Rated value	1.1 A
Switch-on current limiting (+25 °C), max.	35 A
I ² t, max.	4 A ² ·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
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Output

Output	Controlled, isolated DC voltage
Rated voltage V_{out} DC	24 V
Total tolerance, static \pm	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_{out} approx. 3 %
Startup delay, max.	1 s
Voltage rise, typ.	50 ms
Rated current value I_{out} 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)
Active power supplied typical	240 W
Constant overload current on short-circuiting during the start-up typical	12 A
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
Parallel switching for enhanced performance	Yes; switchable characteristic
Numbers of parallel switchable units for enhanced performance	2

Efficiency

Efficiency at V_{out} rated, I_{out} rated, approx.	91 %
Power loss at V_{out} rated, I_{out} rated, approx.	24 W
Active power loss during no-load operation maximum	6 W

Closed-loop control

Dynamic mains compensation (V_{in} rated ± 15 %), max.	0.1 %
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Dynamic load smoothing (I _{out} : 50/100/50 %), U _{out} ± 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.	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"

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 maximum	3.5 mA
Leakage current typical	0.32 mA
CE mark	Yes
UL/CSA approval	Yes
UL/cUL (CSA) approval	cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259
Explosion protection	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 IECEx	No
Certificate of suitability NEC Class 2	No
CB approval	Yes
Marine approval	GL, ABS
Degree of protection (EN 60529)	IP20

EMC

Emitted interference	EN 55022 Class B
Supply harmonics limitation	EN 61000-3-2
Noise immunity	EN 61000-6-2

Operating data

Ambient temperature during operation	-25 ... +70 °C
• Note	with natural convection
Ambient temperature during transport	-40 ... +85 °C
Ambient temperature during storage	-40 ... +85 °C
Humidity class according to EN 60721	Climate class 3K3, no condensation

Mechanics

Connection technology	screw-type terminals
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Connections Supply input	L, N, PE: 1 screw terminal each for 0.2 ... 2.5 mm ² single-core/finely stranded
Connections Output	+, -: 2 screw terminals each for 0.2 ... 2.5 mm ²
Connections Auxiliary	13, 14 (alarm signal): 1 screw terminal each for 0.14 ... 1.5 mm ²
Width of the enclosure	70 mm
Height of the enclosure	125 mm
Depth of the enclosure	121 mm
Weight, approx.	0.8 kg
Product property of the enclosure housing for side-by-side mounting	Yes
Installation	Snaps onto DIN rail EN 60715 35x7.5/15
Electrical accessories	Buffer module
Other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)