SIEMENS

Datasheet 6EP1333-3BA10

SITOP PSU200M 5 A STABILIZED POWER SUPPLY INPUT: 120/230-500 V AC OUTPUT: 24 V/5 A DC



Technical specifications	
Product	SITOP modular
Power supply, type	24 V/5 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; starting from Vin > 90/180 V
Input voltage 1 with AC	85 ... 264 V
Input voltage 2 with AC	176 ... 550 V
Wide-range input	Yes
Overvoltage resistance	1300 Vpeak, 1.3 ms
Mains buffering at Iout rated, min.	25 ms
Mains buffering	at Vin = 120/230 V, typ. 150 ms at Vin = 400 V
Rated line frequency	50 ... 60 Hz
Rated line range	47 ... 63 Hz
Input current at rated input voltage 120 V Rated value	2.2 A

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Input current at rated input voltage 230 V Rated value	1.2 A
Input current at rated input voltage 500 V Rated value	0.61 A
Switch-on current limiting (+25 °C), max.	35 A
I^2t, max.	1.7 $A^2 \cdot s$
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 Vout 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 Vout approx. 3 %
Startup delay, max.	1 s
Voltage rise, typ.	50 ms
Rated current value Iout rated	5 A
Current range	0 ... 5 A
Active power supplied typical	120 W
Constant overload current on short-circuiting during the start-up typical	6 A
Short-term overload current at short-circuit during operation typical	15 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 Vout rated, Iout rated, approx.	88 %
Power loss at Vout rated, Iout rated, approx.	17 W
Active power loss during no-load operation maximum	6 W

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Closed-loop control	
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

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 typical	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 Uout acc. to EN 60950-1 and EN 50178
Protection class	Class I
Leakage current maximum	3.5 mA
Leakage current typical	0.25 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	in preparation: 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

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Mechanics	
Connection technology	screw-type terminals
Connections Supply input	L, N, PE: 1 screw terminal each for 0.2 ... 2.5 mm² single-core/finely stranded
Connections Output	+, -: 2 screw terminals each for 0.2 ... 2.5 mm²
Connections Auxiliary	13, 14 (alarm signal): 1 screw terminal each for 0.14 ... 1.5 mm²
Width of the enclosure	70 mm
Height of the enclosure	125 mm
Depth of the enclosure	121 mm
Installation width	70 mm
Installation height	225 mm
Weight, approx.	0.6 kg
Product property of the enclosure housing for side-by-side mounting	Yes
Mounting type wall mounting	No
Mounting type Standard rail mounting	Yes
Mounting type S7 rail mounting	No
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)

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