



SITOP MODULAR PLUS 5 STABILIZED POWER SUPPLY  
 INPUT: 120-230/230-500 V AC OUTPUT: 24 V DC/5 A  
 VERSION WITH COATED PCB

### Technical specifications

Product	SITOP modular plus
Power supply, type	24 V/5 A
<b>Input</b>	
Input	1-phase and 2-phase AC
Supply voltage / 1 / at AC	120 ... 230 V
Supply voltage / 2 / at AC	230 ... 500 V
Voltage range	
• Note	Set by means of selector switch on the device; starting from $V_{in} > 90/180$ V
Input voltage / 1 / at AC	85 ... 264 V
Input voltage / 2 / at AC	176 ... 550 V
Wide-range input	Yes
Overvoltage resistance	1300 V <sub>peak</sub> , 1.3 ms
Mains buffering at lout rated, min.	25 ms
Mains buffering	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 nominal level of the input voltage 120 V	2.2 A
Input current / at nominal level of the input voltage 230 V	1.2 A
Input current / at nominal level of the input voltage 500 V	0.61 A

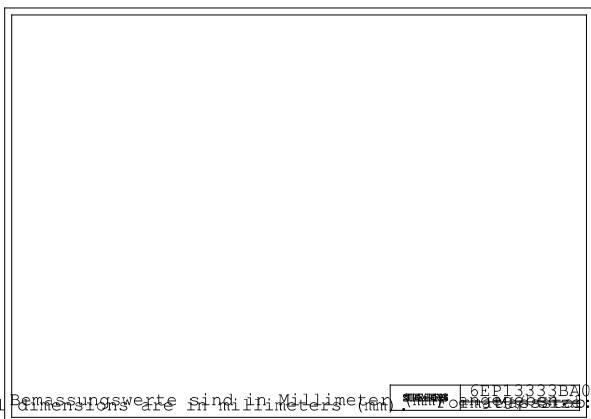
Switch-on current limiting (+25 °C), max.	35 A
$I^2t$ , max.	1.7 A <sup>2</sup> s
Built-in incoming fuse	T 3.15 A (not accessible)
Protection in the mains power input (IEC 898)	Recommended miniature circuit breaker at 1-phase operation: from 6 A (10 A), characteristic C (B); required at 2-phase operation: 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
<b>Output</b>	
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 feature / output voltage adjustable	Yes
Output voltage setting	via potentiometer
Status display	Green LED for 24 V OK
Signaling	via signaling module (6EP1961-3BA10)
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	5 A
Current range	0 ... 5 A
• Note	> 60 °C Derating
delivered active power / typ.	120 W
constant overload current / at short-circuit during run-up / typical	5.5 A
short-term overload current / at short-circuit during operation / typical	15 A
Duration of overloading ability for excess current / on short-circuiting during the operational phase	25 ms
Parallel switching for enhanced performance	Yes
• Note	switchable characteristic
Numbers of parallel switchable units for enhanced performance	2
<b>Efficiency</b>	
Efficiency at $V_{out}$ rated, $I_{out}$ rated, approx.	87 %
Power loss at $V_{out}$ rated, $I_{out}$ rated, approx.	18 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.	5.5 A
Characteristic feature of the output / short-circuit protected	Yes
Short-circuit protection	Alternatively, constant current characteristic approx. 5.5 A or latching shutdown
Enduring short circuit current / Effective level / typical	5.5 A
Overload/short-circuit indicator	LED yellow for "overload", LED red for "latching shutdown"
<b>Safety</b>	
Primary/secondary isolation	Yes
Potential separation	Safety extra-low output voltage U <sub>out</sub> acc. to EN 60950-1 and EN 50178
Protection class	Class I
stray current / maximum	3.5 mA
stray 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	-
FM approval	-
CB approval	No
Marine approval	-
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 / in operation	-25 ... +70 °C
• Note	with natural convection
Ambient temperature / on transport	-40 ... +85 °C
Ambient temperature / in storage	-40 ... +85 °C
Humidity class according to EN 60721	Climate class 3K3, no condensation
<b>Mechanics</b>	
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

Connections / Output	L+, M: 2 screw terminals each for 0.2 ... 2.5 mm <sup>2</sup>
Connections / Auxiliary	-
Width / of the housing	70 mm
Height / of the housing	125 mm
Depth / of the housing	125 mm
Installation width	70 mm
Mounting height	225 mm
Weight, approx.	1.2 kg
Product feature / of the housing / housing for side-by-side mounting	Yes
Type of mounting / wall mounting	No
Type of fixing / cap rail mounting	Yes
Type of mounting / S7-300 rail mounting	No
Installation	Snaps onto DIN rail EN 60715 35x7.5/15
Electrical accessories	Buffer module, signaling module

Other information

Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)



Abmessungen sind in Millimetern angegeben. Dimensions are in millimeters. 6EP1333-3BA00-8AC0

letzte Änderung:

Oct 19, 2012