Data sheet

SIPLUS PS PSU100M

SIPLUS PS modular 40 A in 120/230 V AC out 24 V DC/40 A with conformal coating for medial exposure based on 6EP1337-3BA00

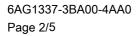


Figure similar

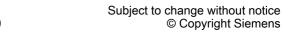
Input	
Input	1-phase AC
• Note	Set by means of wire jumper on the device; starting from Vin > 95/190 V
supply voltage	
• 1 at AC rated value	120 V
• 2 at AC rated value	230 V
input voltage	
● 1 at AC	85 132 V
• 2 at AC	176 264 V
Wide-range input	No
Overvoltage resistance	2.3 × Vin rated, 1.3 ms
Mains buffering	at Vin = 230 V
Mains buffering at lout rated, min.	20 ms; at Vin = 230 V
Rated line frequency 1	50 Hz
Rated line frequency 2	60 Hz
Rated line range	47 63 Hz

input current	
 at rated input voltage 120 V 	15 A
 at rated input voltage 230 V 	8 A
Switch-on current limiting (+25 °C), max.	125 A
l²t, max.	26 A²-s
Built-in incoming fuse	Yes
Protection in the mains power input (IEC 898)	Recommended miniature circuit breaker at 1-phase operation: 20 A characteristic C; required at 2-phase operation: circuit breaker 2-pole connected or circuit breaker 3RV2421-4BA10 (120 V) or 3RV2411-1JA10 (230 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.	100 mV
Residual ripple peak-peak, typ.	60 mV
Spikes peak-peak, max. (bandwidth: 20 MHz)	200 mV
Spikes peak-peak, typ. (bandwidth: 20 MHz)	120 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	via signaling module (6EP1961-3BA10)
On/off behavior	Overshoot of Vout approx. 3 %
Startup delay, max.	0.1 s
Voltage rise, typ.	50 ms
Rated current value lout rated	40 A
Current range	0 40 A
• Note	+60 +70 °C: Derating 2.5%/K
supplied active power typical	960 W
short-term overload current	
 at short-circuit during operation typical 	120 A
duration of overloading capability for excess current	
 at short-circuit during operation 	25 ms
constant overload current	
 on short-circuiting during the start-up typical 	46 A
Parallel switching for enhanced performance	Yes; switchable characteristic
Numbers of parallel switchable units for enhanced performance	2
Efficiency	



Efficiency at Vout rated, lout rated, approx.



88 %

Power loss at Vout rated, lout rated, approx.	131 W
Closed-loop control	
Dynamic mains compensation (Vin rated ±15 %),	1 %
max.	. "
Dynamic load smoothing (lout: 50/100/50 %), Uout ±	2 %
typ.	
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.	46 A
property of the output short-circuit proof	Yes
Short-circuit protection	Alternatively, constant current characteristic approx. 46 A or latching shutdown
enduring short circuit current RMS value	
• typical	46 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
• typical	0.4 mA
Degree of protection (EN 60529)	IP20
Approvals	
CE mark	Yes
EMC	
Emitted interference	EN 55022 Class B
Supply harmonics limitation	
Noise immunity	EN 61000-6-2
environmental conditions	
ambient temperature in horizontal mounting position during operation	0 60; with natural convection
ambient temperature during storage and transport	-40 +85
installation altitude at height above sea level maximum	6 000 m
ambient condition relating to ambient temperature - air pressure - installation altitude	In case of operation at altitudes of 2000 - 6000 m above sea level: Output power derating of -7.5 %/1000 m or reduction of the ambient temperature by 5 K/1000 m



relative humidity with condensation acc. to IEC	100 %; RH incl. condensation/frost (no commissioning if
60068-2-38 maximum	condensation is present), horizontal installation
chemical resistance to commercially available cooling	Yes; incl. diesel and oil droplets in the air
lubricants	
resistance to biologically active substances	Yes; Class 3B2 mold, fungal, sponge spores (except fauna); class
conformity acc. to EN 60721-3-3	3B3 upon request
resistance to chemically active substances	Yes; Class 3C4 (RH < 75%) incl. salt spray acc. to EN 60068-2-52
conformity acc. to EN 60721-3-3	(severity level 3)
resistance to mechanically active substances	Yes; Class 3S4 incl. sand, dust
conformity acc. to EN 60721-3-3	
resistance to biologically active substances	Yes; Class 6B2 mold, fungal, sponge spores (except fauna)
conformity acc. to EN 60721-3-6	
resistance to chemically active substances	Yes; Class 6C3 (RH < 75%) incl. salt spray acc. to EN 60068-2-52
conformity acc. to EN 60721-3-6	(severity level 3)
resistance to mechanically active substances	Yes; Class 6S3 incl. sand, dust
conformity acc. to EN 60721-3-6	
coating for equipped printed circuit board acc. to EN	Yes; Class 2 for high availability
61086	
type of coating protection against pollution according	Yes; Type 1 protection
to EN 60664-3	
type of test of the coating acc. to MIL-I-46058C	Yes; Discoloration of the coating during service life possible
product conformity of the coating Qualification and	Yes; Conformal Coating, Class A
Performance of Electrical Insulating Compound for	
Printed Board Assemblies acc. to IPC-CC-830A	

Mechanics	
Connection technology	screw-type terminals
Connections	
Supply input	L, N, PE: 1 screw terminal each for 0.2 4 mm² single-core/finely stranded
Output	+, -: 2 screw terminals each for 0.5 10 mm²
Auxiliary	4
width of the enclosure	240 mm
height of the enclosure	125 mm
depth of the enclosure	125 mm
required spacing	
 • top 	50 mm
• bottom	50 mm
• left	0 mm
● right	0 mm
Weight, approx.	2.9 kg
product feature of the enclosure housing for side-by- side mounting	Yes
Installation	Snaps onto DIN rail EN 60715 35x15
electrical accessories	Buffer module, signaling module
MTBF at 40 °C	540 249 h



other information

Specifications at rated input voltage and ambient temperature +25

°C (unless otherwise specified)

