

### SIPLUS PS PSU100M



Figure similar

SIPLUS PS modular 40 A -  
40...+70°C with conformal  
coating based on 6EP1337-  
3BA00 . Stabilized power  
supplies Input: 120/230 V AC  
Output: 24 V DC/40 A

Input	
Input	1-phase AC
• Note	Set by means of wire jumper on the device; starting from $V_{in} > 95/190\text{ V}$
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	$2.3 \times V_{in}$ rated, 1.3 ms
Mains buffering	at $V_{in} = 230\text{ V}$
Mains buffering at $I_{out}$ rated, min.	20 ms; at $V_{in} = 230\text{ V}$
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
$I^2t$ , max.	26 A <sup>2</sup> ·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 $V_{out}$ DC	24 V
• output voltage at output 1 at DC rated value	24 V
Total tolerance, static $\pm$	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 Iout 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
<b>Efficiency</b>	
Efficiency at Vout rated, Iout rated, approx.	88 %
Power loss at Vout rated, Iout rated, approx.	131 W
<b>Closed-loop control</b>	
Dynamic mains compensation (Vin rated $\pm 15$ %), max.	1 %
Dynamic load smoothing (Iout: 50/100/50 %), Uout $\pm$ typ.	2 %
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.	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"
<b>Safety</b>	
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
<b>Approvals</b>	
CE mark	Yes
<b>EMC</b>	
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	-40 ... +70; 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 60068-2-38 maximum	100 %; RH incl. condensation/frost (no commissioning if condensation is present), horizontal installation
chemical resistance to commercially available cooling lubricants	Yes; incl. diesel and oil droplets in the air
resistance to biologically active substances conformity acc. to EN 60721-3-3	Yes; Class 3B2 mold, fungal, sponge spores (except fauna); class 3B3 upon request
resistance to chemically active substances conformity acc. to EN 60721-3-3	Yes; Class 3C4 (RH < 75%) incl. salt spray acc. to EN 60068-2-52 (severity level 3)
resistance to mechanically active substances conformity acc. to EN 60721-3-3	Yes; Class 3S4 incl. sand, dust
resistance to biologically active substances conformity acc. to EN 60721-3-6	Yes; Class 6B2 mold, fungal, sponge spores (except fauna)
resistance to chemically active substances conformity acc. to EN 60721-3-6	Yes; Class 6C3 (RH < 75%) incl. salt spray acc. to EN 60068-2-52 (severity level 3)
resistance to mechanically active substances conformity acc. to EN 60721-3-6	Yes; Class 6S3 incl. sand, dust
coating for equipped printed circuit board acc. to EN 61086	Yes; Class 2 for high availability
type of coating protection against pollution according to EN 60664-3	Yes; Type 1 protection
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 Performance of Electrical Insulating Compound for Printed Board Assemblies acc. to IPC-CC-830A	Yes; Conformal Coating, Class A
Mechanics	
Connection technology	screw-type terminals
Connections <ul style="list-style-type: none"> <li>• Supply input</li> <li>• Output</li> </ul>	L, N, PE: 1 screw terminal each for 0.2 ... 4 mm <sup>2</sup> single-core/finely stranded +, -: 2 screw terminals each for 0.5 ... 10 mm <sup>2</sup>
width of the enclosure	240 mm
height of the enclosure	125 mm
depth of the enclosure	125 mm
required spacing <ul style="list-style-type: none"> <li>• top</li> <li>• bottom</li> <li>• left</li> <li>• right</li> </ul>	50 mm 50 mm 0 mm 0 mm
Weight, approx.	2.9 kg
product feature of the enclosure housing can be lined up	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)

