

SIPLUS PS PSU100M  
 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



Figure similar

Input	
Input	1-phase AC
<ul style="list-style-type: none"> <li>Note</li> </ul>	Set by means of wire jumper on the device; starting from $V_{in} > 95/190$ V
supply voltage	
<ul style="list-style-type: none"> <li>1 at AC rated value</li> <li>2 at AC rated value</li> </ul>	120 V 230 V
input voltage	
<ul style="list-style-type: none"> <li>1 at AC</li> <li>2 at AC</li> </ul>	85 ... 132 V 176 ... 264 V
Wide-range input	No
Overvoltage resistance	$2.3 \times V_{in}$ rated, 1.3 ms
Mains buffering	at $V_{in} = 230$ V
Mains buffering at I <sub>out</sub> rated, min.	20 ms; at $V_{in} = 230$ V
Rated line frequency 1	50 Hz
Rated line frequency 2	60 Hz
Rated line range	47 ... 63 Hz

input current	
<ul style="list-style-type: none"> <li>at rated input voltage 120 V</li> <li>at rated input voltage 230 V</li> </ul>	15 A 8 A
Switch-on current limiting (+25 °C), max.	125 A
I <sup>2</sup> t, 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 <sub>out</sub> 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 V <sub>out</sub> approx. 3 %
Startup delay, max.	0.1 s
Voltage rise, typ.	50 ms
Rated current value I <sub>out</sub> rated	40 A
Current range	0 ... 40 A
<ul style="list-style-type: none"> <li>Note</li> </ul>	+60 ... +70 °C: Derating 2.5%/K
supplied active power typical	960 W
short-term overload current	
<ul style="list-style-type: none"> <li>at short-circuit during operation typical</li> </ul>	120 A
duration of overloading capability for excess current	
<ul style="list-style-type: none"> <li>at short-circuit during operation</li> </ul>	25 ms
constant overload current	
<ul style="list-style-type: none"> <li>on short-circuiting during the start-up typical</li> </ul>	46 A
Parallel switching for enhanced performance	Yes; switchable characteristic
Numbers of parallel switchable units for enhanced performance	2

Efficiency	
Efficiency at V <sub>out</sub> rated, I <sub>out</sub> rated, approx.	88 %

Power loss at $V_{out}$ rated, $I_{out}$ rated, approx.	131 W
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### Closed-loop control

Dynamic mains compensation ( $V_{in}$ rated $\pm 15\%$ ), max.	1 %
Dynamic load smoothing ( $I_{out}$ : 50/100/50 %), $U_{out} \pm$ 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

### 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 <ul style="list-style-type: none"> <li>• typical</li> </ul>	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 $U_{out}$ acc. to EN 60950-1 and EN 50178
Protection class	Class I
leakage current <ul style="list-style-type: none"> <li>• maximum</li> <li>• typical</li> </ul>	3.5 mA 0.4 mA
Degree of protection (EN 60529)	IP20

### Approvals

CE mark	Yes
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### 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	-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	
• Supply input	L, N, PE: 1 screw terminal each for 0.2 ... 4 mm <sup>2</sup> single-core/finely stranded
• Output	+, -: 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	
• 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

