

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
Supply voltage	
<ul style="list-style-type: none"> • 1 at AC Rated value • 2 at AC Rated value • Note 	120 V 230 V Set by means of wire jumper on the device; starting from $V_{in} > 95/190$ V
Input voltage	
<ul style="list-style-type: none"> • 1 at AC • 2 at AC 	85 ... 132 V 176 ... 264 V
Wide-range input	No
Overvoltage resistance	$2.3 \times V_{in}$ rated, 1.3 ms
Mains buffering at I _{out} 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"> • at rated input voltage 120 V • at rated input voltage 230 V 	15 A 8 A
Switch-on current limiting (+25 °C), max.	125 A
I ² t, max.	26 A ² ·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
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 _{out} approx. 3 %
Startup delay, max.	0.1 s
Voltage rise, typ.	50 ms
Rated current value I _{out} rated	40 A
Current range	0 ... 40 A
<ul style="list-style-type: none"> • Note 	+60 ... +70 °C: Derating 2.5%/K
Supplied active power typical	960 W
Short-term overload current	
<ul style="list-style-type: none"> • at short-circuit during operation typical 	120 A
Duration of overloading capability for excess current	
<ul style="list-style-type: none"> • at short-circuit during operation 	25 ms
Constant overload current	
<ul style="list-style-type: none"> • 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 V _{out} rated, I _{out} rated, approx.	88 %
Power loss at V _{out} rated, I _{out} rated, approx.	131 W

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"> • 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 U_{out} acc. to EN 60950-1 and EN 50178
Protection class	Class I
Leakage current <ul style="list-style-type: none"> • maximum • typical 	3.5 mA 0.4 mA
CE mark	Yes
UL/cUL (CSA) approval	cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259
Explosion protection	IECEx Ex nA IIC T3 Gc; ATEX (EX) II 3G Ex nA IIC T3 Gc; cCSAus (CSA C22.2 No. 213, ANSI/ISA-12.12.01) Class I, Div. 2, Group ABCD, T3
FM approval	-
CB approval	No
Marine approval	-
Degree of protection (EN 60529)	IP20

EMC	
Emitted interference	EN 55022 Class B
Supply harmonics limitation	-
Noise immunity	EN 61000-6-2

Operating data	
Ambient temperature <ul style="list-style-type: none"> • during operation — Note 	0 ... 70 °C with natural convection

<ul style="list-style-type: none"> • during transport • during storage 	-40 ... +85 °C -40 ... +85 °C
Humidity class according to EN 60721	Climate class 3K8H
Relative humidity with condensation maximum	100 %; Relative humidity, incl. condensation/frost permitted (no commissioning under condensation conditions)
Resistance to biologically active substances conformity acc. to EN 60721-3-3	Yes; Compliant with EN 60721-3-3, Class 3B2 mold and fungal spores (except fauna); the supplied plug covers must remain in place on the unused interfaces during operation.
Resistance to chemically active substances conformity acc. to EN 60721-3-3	Yes; Compliant with EN 60721-3-3, Class 3C4 incl. salt spray in accordance with EN 60068-2-52 (severity 3); the supplied plug covers must remain in place on the unused interfaces during operation.
Resistance to mechanically active substances conformity acc. to EN 60721-3-3	Yes; Conformity with EN 60721-3-3, Class 3S4 incl. Sand, dust. The supplied connector covers must remain on the unused interfaces during operation!

Mechanics

Connection technology	screw-type terminals
Connections	
<ul style="list-style-type: none"> • Supply input 	L, N, PE: 1 screw terminal each for 0.2 ... 4 mm ² single-core/finely stranded
<ul style="list-style-type: none"> • Output 	+, -: 2 screw terminals each for 0.5 ... 10 mm ²
<ul style="list-style-type: none"> • Auxiliary 	-
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"> • top 	50 mm
<ul style="list-style-type: none"> • bottom 	50 mm
<ul style="list-style-type: none"> • left 	0 mm
<ul style="list-style-type: none"> • 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)