

SIPLUS PS PSU100S 24 V/10 A
SIPLUS PSU100S 24 V/10 A FOR medial stress based on 6EP1334-2BA20 . STABILIZED POWER SUPPLY INPUT: OUTPUT: 24 V/10 A DC



Figure similar

Input	
Input	1-phase AC
• Note	Automatic range selection
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	170 ... 264 V
Wide-range input	No
Overvoltage resistance	2.3 × Vin rated, 1.3 ms
Mains buffering	at Vin = 93/187 V
Mains buffering at lout rated, min.	20 ms; at Vin = 93/187 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	4.49 A
• at rated input voltage 230 V	1.91 A
Switch-on current limiting (+25 °C), max.	60 A
I ² t, max.	5.6 A ² ·s
Built-in incoming fuse	T 6.3 A/250 V (not accessible)
Protection in the mains power input (IEC 898)	Recommended miniature circuit breaker: from 10 A characteristic C

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.	1 %
Residual ripple peak-peak, max.	150 mV
Residual ripple peak-peak, typ.	20 mV
Spikes peak-peak, max. (bandwidth: 20 MHz)	240 mV
Spikes peak-peak, typ. (bandwidth: 20 MHz)	160 mV
Adjustment range	22.8 ... 28 V
Product function Output voltage adjustable	Yes
Output voltage setting	via potentiometer
Status display	Green LED for 24 V OK
Signaling	Relay contact (NO contact, rating 60 V DC/ 0.3 A) for "24 V OK"
On/off behavior	Overshoot of V _{out} < 3 %
Startup delay, max.	0.3 s
Voltage rise, typ.	20 ms
Rated current value I _{out} rated	10 A
Current range	0 ... 12 A
• Note	12 A up to +45°C; +60 ... +70 °C: Derating 3%/K
Supplied active power typical	288 W
Short-term overload current	
• on short-circuiting during the start-up typical	32 A
• at short-circuit during operation typical	32 A
Duration of overloading capability for excess current	
• on short-circuiting during the start-up	1 000 ms
• at short-circuit during operation	1 000 ms
Parallel switching for enhanced performance	Yes
Numbers of parallel switchable units for enhanced performance	2

Efficiency

Efficiency at V _{out} rated, I _{out} rated, approx.	90 %
Power loss at V _{out} rated, I _{out} rated, approx.	25 W

Closed-loop control

Dynamic mains compensation (V_{in} rated $\pm 15\%$), max.	0.3 %
Dynamic load smoothing (I_{out} : 10/90/10 %), $U_{out} \pm$ typ.	3 %
Load step setting time 10 to 90%, typ.	1 ms
Load step setting time 90 to 10%, typ.	1 ms

Protection and monitoring

Output overvoltage protection	protection against overvoltage in case of internal fault $V_{out} < 33\text{ V}$
Current limitation	12 ... 14.6 A
Property of the output Short-circuit proof	Yes
Short-circuit protection	Constant current characteristic
Enduring short circuit current RMS value • typical	14.6 A
Overcurrent overload capability in normal operation	overload capability 150 % I_{out} rated up to 5 s/min
Overload/short-circuit indicator	-

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 • maximum • typical	3.5 mA 0.8 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	EN 61000-3-2
Noise immunity	EN 61000-6-2

environmental conditions

Ambient temperature • during operation — Note • during transport • during storage	-25 ... +70 °C with natural convection -40 ... +85 °C -40 ... +85 °C
Humidity class according to EN 60721	Climate class 3K8H
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 maximum	100 %; Relative humidity, incl. condensation/frost permitted (no commissioning under condensation conditions)

Ambient temperature in horizontal mounting position during operation minimum	-25 °C
Ambient temperature in horizontal mounting position during operation maximum	70 °C; 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; Class 3B2 mold, fungal, sponge spores (except fauna); class 3B3 upon request
Resistance to biologically active substances conformity acc. to EN 60721-3-3	Yes
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 0.5 ... 2.5 mm ² single-core/finely stranded
• Output	+, -: 2 screw terminals each for 0.5 ... 2.5 mm ²
• Auxiliary	Alarm signals: 2 screw terminals for 0.5 ... 2.5 mm ²
Width of the enclosure	70 mm
Height of the enclosure	125 mm
Depth of the enclosure	120 mm
Required spacing	

• top • bottom • left • right	50 mm 50 mm 0 mm 0 mm
Weight, approx.	0.8 kg
Product feature of the enclosure housing for side-by-side mounting	Yes
Installation	Snaps onto DIN rail EN 60715 35x7.5/15
Electrical accessories	Buffer module
MTBF at 40 °C	1 614 510 h
Other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)