

SIPLUS PS PSU200M 10A
SIPLUS PS PSU200M 10 A -25...+70°C with conformal coating
based on 6EP1334-3BA10 . STABILIZED Power-Supply Input:
120/230-500V AC Output: 24 V/10 A DC



Figure similar

Input	
Input	1-phase and 2-phase AC
• Note	Set by means of selector switch on the device
Supply voltage	
• 1 at AC	120 ... 230 V
• 2 at AC	230 ... 500 V
Input voltage	
• 1 at AC	85 ... 264 V
• 2 at AC	176 ... 550 V
Wide-range input	Yes
Overvoltage resistance	1300 Vpeak, 1.3 ms
Mains buffering	at Vin = 120/230 V, typ. 150 ms at Vin = 400 V
Mains buffering at lout rated, min.	25 ms; at Vin = 120/230 V, typ. 150 ms at Vin = 400 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 • at rated input voltage 230 V • at rated input voltage 500 V	4.4 A
	2.4 A
	1.1 A
Switch-on current limiting (+25 °C), max.	35 A
I ² t, max.	4 A ² ·s
Built-in incoming fuse	T 6.3 A (not accessible)
Protection in the mains power input (IEC 898)	Recommended miniature circuit breaker at 1-phase operation: from 6 A (10 A) characteristic C (B); required at 2-phase operation: circuit breaker 2-pole connected or circuit breaker 3RV2011-1EA10 (setting 3.8 A) or 3RV2711-1ED10 (UL 489) at 230 V; 3RV2011-1DA10 (setting 3 A) or 3RV2711-1DD10 (UL 489) at 400/500 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.	50 mV
Spikes peak-peak, max. (bandwidth: 20 MHz)	200 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	Relay contact (NO contact, rating 60 V DC/ 0.3 A) for "24 V OK"
On/off behavior	Overshoot of V _{out} approx. 3 %
Startup delay, max.	1 s
Voltage rise, typ.	50 ms
Rated current value I _{out} rated	10 A
Current range	0 ... 10 A
• Note	+60 ... +70 °C: Derating 2%/K (at 120 V, 230 V) or 3.5%/K (at 400 V)
Supplied active power typical	240 W
Short-term overload current	
• at short-circuit during operation typical	30 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	12 A
Parallel switching for enhanced performance	Yes; switchable characteristic
Numbers of parallel switchable units for enhanced performance	2

Efficiency

Efficiency at Vout rated, Iout rated, approx.	91 %
Power loss at Vout rated, Iout rated, approx.	24 W
Power loss [W] during no-load operation maximum	6 W

Closed-loop control

Dynamic mains compensation (Vin rated $\pm 15\%$), max.	0.1 %
Dynamic load smoothing (Iout: 50/100/50 %), Uout $\pm$ typ.	3 %
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.	12 A
Property of the output Short-circuit proof	Yes
Short-circuit protection	Alternatively, constant current characteristic approx. 12 A or latching shutdown
Enduring short circuit current RMS value • typical	12 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 • typical	3.5 mA 0.32 mA
Degree of protection (EN 60529)	IP20

Approvals

CE mark	Yes
---------	-----

EMC

Emitted interference	EN 55022 Class B
Supply harmonics limitation	EN 61000-3-2
Noise immunity	EN 61000-6-2

environmental conditions

Ambient temperature in horizontal mounting position during operation	-25 ... +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 ... 2.5 mm ² single-core/finely stranded
• Output	+, -: 2 screw terminals each for 0.2 ... 2.5 mm ²
• Auxiliary	13, 14 (alarm signal): 1 screw terminal each for 0.14 ... 1.5 mm ²
Width of the enclosure	70 mm
Height of the enclosure	125 mm
Depth of the enclosure	121 mm
Required spacing	
• top	50 mm
• bottom	50 mm
• left	0 mm
• right	0 mm
Weight, approx.	0.8 kg
Product feature of the enclosure housing for side-by-side mounting	Yes

Installation	Snap onto DIN rail EN 60715 35x7.5/15
Electrical accessories	Buffer module
Other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)