

SIPLUS PS PSU300S 24 V/5 A
 SIPLUS PS PSU300S 5A -25 ... +70 Degree C with conformal coating BasedOn 6EP1433-2BA20 . STABILIZED POWER SUPPLY
 INPUT: 3 400-500 V 3AC OUTPUT: 24 V DC/5 A

Input	
Input	3-phase AC
Rated voltage value V_{in} rated	400 ... 500 V
Voltage range AC	340 ... 550 V
Wide-range input	Yes
Mains buffering at I_{out} rated, min.	6 ms; at $V_{in} = 400$ 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 400 V at rated input voltage 500 V 	0.45 A 0.4 A
Switch-on current limiting (+25 °C), max.	20 A
I^2t , max.	0.5 A ² ·s
Built-in incoming fuse	none
Protection in the mains power input (IEC 898)	Required: 3-pole connected miniature circuit breaker 3 ... 16 A characteristic C or circuit breaker 3RV2011-1DA10 (setting 3 A) or 3RV2711-1DD10 (UL 489)

Output	
Output	Controlled, isolated DC voltage
Rated voltage V_{out} DC	24 V
Total tolerance, static \pm	3 %
Static mains compensation, approx.	0.1 %
Static load balancing, approx.	0.1 %
Residual ripple peak-peak, max.	200 mV
Spikes peak-peak, max. (bandwidth: 20 MHz)	240 mV
Adjustment range	24 ... 28 V
Product function Output voltage adjustable	Yes
Output voltage setting	via potentiometer; max. 120 W
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 $V_{out} < 5$ %
Startup delay, max.	1.5 s
Voltage rise, typ.	60 ms
Voltage increase time of the output voltage maximum	500 ms

Rated current value I _{out} rated	5 A
Current range	0 ... 5 A
• Note	6 A up to +45 °C
Supplied active power typical	120 W
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.	89 %
Power loss at V _{out} rated, I _{out} rated, approx.	14 W

Closed-loop control

Dynamic mains compensation (V _{in} rated ±15 %), max.	1 %
Dynamic load smoothing (I _{out} : 50/100/50 %), U _{out} ± typ.	1 %
Load step setting time 50 to 100%, typ.	3 ms
Load step setting time 100 to 50%, typ.	3 ms
Dynamic load smoothing (I _{out} : 10/90/10 %), U _{out} ± typ.	3 %
Load step setting time 10 to 90%, typ.	4 ms
Load step setting time 90 to 10%, typ.	4 ms
Setting time maximum	10 ms

Protection and monitoring

Output overvoltage protection	protection against overvoltage in case of internal fault V _{out} < 35 V
Current limitation, typ.	6.6 A
Property of the output Short-circuit proof	Yes
Short-circuit protection	Constant current characteristic
Enduring short circuit current RMS value	
• maximum	8 A
Overcurrent overload capability in normal operation	overload capability 150 % I _{out} rated up to 5 s/min

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
CE mark	Yes
UL/cUL (CSA) approval	cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 60950-1, UL 60950-1)
Explosion protection	IECEX Ex nA nC IIC T4 Gc; ATEX (EX) II 3G Ex nA nC IIC T4 Gc; cULus Class I Div. 2 (ANSI/ISA-12.12.01-2007, CSA C22.2 No. 213-M1987) Group ABCD, T4
FM approval	-
CB approval	Yes

Marine approval	ABS, DNV GL
Degree of protection (EN 60529)	IP20
EMC	
Emitted interference	EN 55022 Class B
Supply harmonics limitation	EN 61000-3-2
Noise immunity	EN 61000-6-2
Operating data	
Ambient temperature	
<ul style="list-style-type: none"> • during operation — Note • during transport • during storage 	<p>-25 ... +70 °C with natural convection</p> <p>-40 ... +85 °C</p> <p>-40 ... +85 °C</p>
Humidity class according to EN 60721	Climate class 3K3, with condensation
Ambient condition relating to ambient temperature - air pressure - installation altitude	Tmin ... Tmax at 1140 hPa ... 795 hPa (-1000 m ... +2000 m)
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 • Output • Auxiliary 	<p>L1, L2, L3, PE: 1 screw terminal each for 0.05 ... 2.5 mm² single-core/finely stranded</p> <p>+, -: 2 screw terminals each for 0.2 ... 2.5 mm²</p> <p>13, 14 (alarm signal): 1 screw terminal each for 0.2 ... 2.5 mm²</p>
Width of the enclosure	50 mm
Height of the enclosure	125 mm
Depth of the enclosure	120 mm
Weight, approx.	0.5 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
Mechanical accessories	Device identification label 20 mm × 7 mm, pale turquoise 3RT1900-1SB20

MTBF at 40 °C	1 506 720 h
Other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)