SIEMENS

Datasheet 6EP1332-2BA20

SITOP PSU100S 24 V/2.5 A STABILIZED POWER SUPPLY INPUT: 120/230 V AC OUTPUT: 24 V/2.5 A DC

Technical specifications	
Product	SITOP PSU100S
Power supply, type	24 V/2.5 A

Input	
Input	1-phase AC
Supply voltage 1 with AC Rated value	120 V
Supply voltage 2 with AC Rated value	230 V
• Note	Automatic range selection
Input voltage 1 with AC	85 ... 132 V
Input voltage 2 with AC	170 ... 264 V
Wide-range input	No
Overvoltage resistance	2.3 × Vin rated, 1.3 ms
Mains buffering at Iout rated, min.	20 ms
Mains buffering	at Vin = 93/187 V
Rated line frequency	50 ... 60 Hz
Rated line range	47 ... 63 Hz
Input current at rated input voltage 120 V Rated value	1.25 A
Input current at rated input voltage 230 V Rated value	0.74 A

Switch-on current limiting (+25 °C), max.	33 A
I^2t, max.	0.4 $A^2 \cdot s$
Built-in incoming fuse	T 3,15 A/250 V (not accessible)
Protection in the mains power input (IEC 898)	Recommended miniature circuit breaker: from 3 A characteristic C

Output

Output	Controlled, isolated DC voltage
Rated voltage Vout 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.	30 mV
Spikes peak-peak, max. (bandwidth: 20 MHz)	240 mV
Spikes peak-peak, typ. (bandwidth: 20 MHz)	70 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 Vout < 3 %
Startup delay, max.	0.3 s
Voltage rise, typ.	15 ms
Rated current value Iout rated	2.5 A
Current range	0 ... 3 A
• Note	3 A up to +45°C; +60 ... +70 °C: Derating 3%/K
Active power supplied typical	60 W
Short-term overload current on short-circuiting during the start-up typical	9 A
Duration of overloading capability for excess current on short-circuiting during the start-up	100 ms
Short-term overload current at short-circuit during operation typical	9 A
Duration of overloading capability for excess current at short-circuit during operation	800 ms
Parallel switching for enhanced performance	Yes
Numbers of parallel switchable units for enhanced performance	2

Efficiency

Efficiency at Vout rated, Iout rated, approx.	85 %
Power loss at Vout rated, Iout rated, approx.	10 W

Closed-loop control

Dynamic mains compensation (Vin rated ±15 %), max.	0.3 %
Dynamic load smoothing (Iout: 10/90/10 %), Uout ± typ.	5 %

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 Vout < 33 V
Current limitation	3 ... 3.4 A
Property of the output Short-circuit proof	Yes
Short-circuit protection	Constant current characteristic
Enduring short circuit current RMS value typical	3.4 A; overload capability 150 % Iout rated up to 5 s/min
Overload/short-circuit indicator	-

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	3.5 mA
Leakage current typical	0.4 mA
CE mark	Yes
UL/CSA approval	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, UL 1604)
Explosion protection	ATEX (EX) II 3G Ex nA nC IIC T4 Gc; cCSAus (CSA C22.2 No. 213-M1987, ANSI/ISA-12.12.01-2007) Class I, Div. 2, Group ABCD, T4
Certificate of suitability IECEx	No
Certificate of suitability NEC Class 2	No
FM approval	-
CB approval	Yes
Marine approval	GL, BV
Degree of protection (EN 60529)	IP20

EMC	
Emitted interference	EN 55022 Class B
Supply harmonics limitation	not applicable
Noise immunity	EN 61000-6-2

Operating data	
Ambient temperature during operation	-25 ... +70 °C
• Note	with natural convection
Ambient temperature during transport	-40 ... +85 °C
Ambient temperature during storage	-40 ... +85 °C
Humidity class according to EN 60721	Climate class 3K3, no condensation

Mechanics	
Connection technology	screw-type terminals
Connections Supply input	L, N, PE: 1 screw terminal each for 0.5 ... 2.5 mm² single-core/finely stranded
Connections Output	+, -: 2 screw terminals each for 0.5 ... 2.5 mm²

Connections Auxiliary	Alarm signals: 2 screw terminals for 0.5 ... 2.5 mm²
Width of the enclosure	32.5 mm
Height of the enclosure	125 mm
Depth of the enclosure	120 mm
Installation width	32.5 mm
Installation height	225 mm
Weight, approx.	0.32 kg
Product property of the enclosure housing for side-by-side mounting	Yes
Mounting type wall mounting	No
Mounting type Standard rail mounting	Yes
Mounting type S7 rail mounting	No
Installation	Snaps 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)