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Data sheet 6EP7133-6AB00-0BN0

SIMATIC ET 200SP PS/1AC/24VDC/5A
SIMATIC ET 200SP PS 24V/5A Stabilized power supply Input: 120/230 V AC Output: 24 V DC/5 A



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 Iout 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	2.16 A
• at rated input voltage 230 V	1.22 A

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Switch-on current limiting (+25 °C), max.	45 A
I²t, max.	3.15 A²·s
Built-in incoming fuse	T 3,15 A/250 V (not accessible)
Protection in the mains power input (IEC 898)	recommended LS switch: B/C 6 A/3 A

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.	50 mV
Spikes peak-peak, max. (bandwidth: 20 MHz)	240 mV
Spikes peak-peak, typ. (bandwidth: 20 MHz)	150 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.	30 ms
Rated current value Iout rated	5 A
Current range	0 ... 6 A
• Note	5 A up to +60°C; +60 ... +70 °C: Derating 3%/K
supplied active power typical	120 W
short-term overload current	
• on short-circuiting during the start-up typical	15 A
• at short-circuit during operation typical	15 A
duration of overloading capability for excess current	
• on short-circuiting during the start-up	800 ms
• 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.	88 %
Power loss at Vout rated, Iout rated, approx.	17 W
power loss [W] during no-load operation maximum	2.7 W

Closed-loop control

Dynamic mains compensation (Vin rated ±15 %), max.	0.3 %

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Dynamic load smoothing (Iout: 10/90/10 %), Uout ± 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 Vout < 31.8 V
Current limitation	7 ... 7.5 A
property of the output short-circuit proof	Yes
Short-circuit protection	Constant current characteristic
enduring short circuit current RMS value	
• typical	7 A
overcurrent overload capability in normal operation	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
• typical	1 mA
Degree of protection (EN 60529)	IP20

Approvals	
CE mark	Yes
UL/cUL (CSA) approval	cULus-Listed (UL61010-2-201, CSA C22.2 No.142), cCSAus (CSA C22.2 No. 60950-1, UL 60950-1)
certificate of suitability NEC Class 2	No
CB approval	Yes
Marine approval	BV, DNV GL

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

environmental conditions	
ambient temperature	
• during operation	-30 ... +70 °C
— Note	with natural convection
• during transport	-40 ... +85 °C
• during storage	-40 ... +85 °C
Humidity class according to EN 60721	Climate class 3K3, 5 … 95% no condensation

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Mechanics	
Connection technology	Push-in terminals
Connections	
• Supply input	L, N, PE: 1 push-in terminal each for 0.2 ... 2.5 mm² single-core/finely stranded
• Output	+, -: 2 push-in terminals each for 0.2 ... 2.5 mm²
• Auxiliary	Signaling contact: 2 push-in terminals for 0.2 ... 2.5 mm²
• signaling contact	2 push-in terminals for 0.2 ... 2.5 mm²
product function	
• removable terminal at input	Yes
• removable terminal at output	Yes
width of the enclosure	160 mm
height of the enclosure	117 mm
depth of the enclosure	74 mm
required spacing	
• top	50 mm
• bottom	50 mm
• left	0 mm
• right	0 mm
Weight, approx.	0.5 kg
product feature of the enclosure housing can be lined up	Yes
Installation	Snaps onto DIN rail EN 60715 35x7.5/15
electrical accessories	Redundancy module, buffer module, selectivity module, DC UPS
MTBF at 40 °C	1 598 441 h
other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)

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