SIEMENS

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 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 	2.16 A
 at rated input voltage 230 V 	1.22 A

Switch-on current limiting (+25 °C), max.	45 A
l²t, max.	3.15 A ² ·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 Controlled, isolated DC voltage Rated voltage Vout DC 24 V Total tolerance, static ± 3 % Static mains compensation, 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 Signalling 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 lout rated 5 A Current range	Output	
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, typ. (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 lout rated 5 A Current range 0 6 A Current range 0 6 A Current range 1.0 6 A Short-circuiting during the start-up typical 15 A Duration of overloading capability for excess current • on short-circuiting during the start-up 4 at short-circuit during operation 4 900 ms Parallel switchable units for enhanced 5 Parallel switchable units for enhanced 2 Numbers of parallel switchable units for enhanced 2	Output	Controlled, isolated DC voltage
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Spikes peak-peak, max. (bandwidth: 20 MHz) Spikes peak-peak, typ. (bandwidth: 20 MHz) Adjustment range 22.8 28 V Product function output voltage adjustable Output voltage setting Status display 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 lout rated 5 A Current range Note Note Short-term overload current on short-circuiting during the start-up typical at short-circuit during operation Parallel switching for enhanced performance Ves Numbers of parallel switchable units for enhanced 2 2.40 mV 2 40 mV 150 mV 2 22.8 28 V Ves 2 22.8 28 V Ves Value 150 mV 2 22.8 28 V Ves Value 150 mV 2 2.8 28 V Ves Via potentiometer Ves 150 mV 2 2.8 28 V Ves 150 mV 2 2.8 28 V Ves 150 mV 2 2.8 28 V Ves 2 2.9 26 .	Residual ripple peak-peak, max.	150 mV
Spikes peak-peak, typ. (bandwidth: 20 MHz) Adjustment range Product function output voltage adjustable Ves Output voltage setting Status display Green LED for 24 V OK Signaling Novershoot of Vout < 3 % Startup delay, max. Voltage rise, typ. Rated current value lout rated Ourrent range Note Supplied active power typical Short-term overload current on short-circuiting during the start-up typical at short-circuit during operation Value on short-circuit during operation Parallel switching for enhanced performance Numbers of parallel switchable units for enhanced 150 mV 160 mV	Residual ripple peak-peak, typ.	50 mV
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Product function output voltage adjustable Output voltage setting Status display Signaling On/off behavior On/off behavior Startup delay, max. Voltage rise, typ. Rated current value lout rated Ourent range Note Note Short-term overload current on short-circuiting during the start-up typical Duration of overloading capability for excess current on short-circuiting during the start-up at short-circuit during operation Parallel switching for enhanced performance Numbers of parallel switchable units for enhanced Via potentiometer Via potentiometer Via potentiometer Via potentiometer Via potentiometer Ves Via potentioneter Ves Via potentiometer Ve	Spikes peak-peak, typ. (bandwidth: 20 MHz)	150 mV
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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. Rated current value lout rated 5 A Current range • Note Note Short-term overload current • on short-circuiting during the start-up typical • at short-circuit during operation typical Duration of overloading capability for excess current • on short-circuit during operation • at short-circuit during operation • at short-circuit during operation Parallel switching for enhanced performance Numbers of parallel switchable units for enhanced 2	Product function output voltage adjustable	Yes
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Startup delay, max. Voltage rise, typ. Rated current value lout rated 5 A Current range Note Note Short-term overload current on short-circuit during operation typical Duration of overloading capability for excess current on short-circuit during operation at short-circuit during opera	Signaling	Relay contact (NO contact, rating 60 V DC/ 0.3 A) for "24 V OK"
Voltage rise, typ. Rated current value lout rated 5 A Current range • 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 • at short-circuit during operation typical 15 A Duration of overloading capability for excess current • on short-circuiting during the start-up • 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	On/off behavior	Overshoot of Vout < 3 %
Rated current value lout rated 5 A Current range Note 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 at short-circuit during operation typical Duration of overloading capability for excess current on short-circuiting during the start-up at 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	Startup delay, max.	0.3 s
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• at short-circuit during operation 800 ms Parallel switching for enhanced performance Yes Numbers of parallel switchable units for enhanced 2	 on short-circuiting during the start-up 	800 ms
Parallel switching for enhanced performance Yes Numbers of parallel switchable units for enhanced 2	at short-circuit during operation	800 ms
Numbers of parallel switchable units for enhanced 2		Yes
performance		2
	performance	

Efficiency	
Efficiency at Vout rated, lout rated, approx.	88 %
Power loss at Vout rated, lout rated, approx.	17 W
Power loss [W] during no-load operation maximum	2.7 W

Closed-loop control	
Dynamic mains compensation (Vin rated ±15 %),	0.3 %
max.	

Dynamic load smoothing (lout: 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 % lout 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)
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
Mechanics	

Connection technology	Push-in terminals
Connections	
Supply input	L, N, PE: 1 push-in terminal each for 0.2 2.5 mm ² 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 for side-by- side mounting	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)