

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
Switch-on current limiting (+25 °C), max.	45 A
I _{pt} , 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	
Output	Controlled, isolated DC voltage
Rated voltage Vout DC	24 V
• output voltage at output 1 at DC rated value	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 $V_{out} < 3 \%$
Startup delay, max.	0.3 s
Voltage rise, typ.	30 ms
Rated current value $I_{out\ rated}$	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 $V_{out\ rated}$, $I_{out\ rated}$, approx.	88 %
Power loss at $V_{out\ rated}$, $I_{out\ rated}$, approx.	17 W
power loss [W] during no-load operation maximum	2.7 W
Closed-loop control	
Dynamic mains compensation ($V_{in\ rated} \pm 15 \%$), max.	0.3 %
Dynamic load smoothing ($I_{out}: 10/90/10 \%$), $U_{out} \pm \text{typ.}$	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 $V_{out} < 31.8 \text{ V}$
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 % $I_{out\ rated}$ up to 5 s/min
Overload/short-circuit indicator	-
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
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
certificate of suitability EAC 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	

<ul style="list-style-type: none"> during operation <ul style="list-style-type: none"> Note during transport during storage 	-30 ... +70 °C with natural convection -40 ... +85 °C -40 ... +85 °C
Humidity class according to EN 60721	Climate class 3K3, 5 ... 95% no condensation
Mechanics	
Connection technology	Push-in terminals
Connections <ul style="list-style-type: none"> Supply input Output Auxiliary signaling contact 	L, N, PE: 1 push-in terminal each for 0.2 ... 2.5 mm ² single-core/finely stranded +, -: 2 push-in terminals each for 0.2 ... 2.5 mm ² Signaling contact: 2 push-in terminals for 0.2 ... 2.5 mm ² 2 push-in terminals for 0.2 ... 2.5 mm ²
product function <ul style="list-style-type: none"> removable terminal at input removable terminal at output 	Yes Yes
width of the enclosure	160 mm
height of the enclosure	117 mm
depth of the enclosure	74 mm
required spacing <ul style="list-style-type: none"> top bottom left right 	50 mm 50 mm 0 mm 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)

