

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	
type of the power supply network	1-phase AC
supply voltage at AC	Automatic range selection
<ul style="list-style-type: none"> initial value 	
supply voltage	
<ul style="list-style-type: none"> 1 at AC rated value 2 at AC rated value 	120 V 230 V
input voltage	
<ul style="list-style-type: none"> 1 at AC 2 at AC 	85 ... 132 V 170 ... 264 V
design of input wide range input	No
overvoltage overload capability	2.3 × Vin rated, 1.3 ms
operating condition of the mains buffering	at Vin = 93/187 V
buffering time for rated value of the output current in the event of power failure minimum	20 ms
operating condition of the mains buffering	at Vin = 93/187 V
line frequency	
<ul style="list-style-type: none"> 1 rated value 2 rated value 	50 Hz 60 Hz
line frequency	47 ... 63 Hz
input current	
<ul style="list-style-type: none"> at rated input voltage 120 V at rated input voltage 230 V 	2.16 A 1.22 A
current limitation of inrush current at 25 °C maximum	45 A
I2t value maximum	3.15 A²·s
fuse protection type	T 3,15 A/250 V (not accessible)
<ul style="list-style-type: none"> in the feeder 	recommended LS switch: B/C 6 A/3 A
Output	
voltage curve at output	Controlled, isolated DC voltage
output voltage at DC rated value	24 V
output voltage	
<ul style="list-style-type: none"> at output 1 at DC rated value 	24 V
relative overall tolerance of the voltage	3 %
relative control precision of the output voltage	
<ul style="list-style-type: none"> on slow fluctuation of input voltage on slow fluctuation of ohm loading 	0.1 % 1 %
residual ripple	
<ul style="list-style-type: none"> maximum typical 	150 mV 50 mV
voltage peak	
<ul style="list-style-type: none"> maximum typical 	240 mV 150 mV

adjustable output voltage	22.8 ... 28 V
product function output voltage adjustable	Yes
type of output voltage setting	via potentiometer
display version for normal operation	Green LED for 24 V OK
type of signal at output	Relay contact (NO contact, rating 60 V DC/ 0.3 A) for "24 V OK"
behavior of the output voltage when switching on	Overshoot of $V_{out} < 3 \%$
response delay maximum	0.3 s
voltage increase time of the output voltage	
• typical	30 ms
output current	
• rated value	5 A
• rated range	0 ... 6 A; 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
product feature	
• bridging of equipment	Yes
number of parallel-switched equipment resources for increasing the power	2

Efficiency

efficiency in percent	88 %
power loss [W]	
• at rated output voltage for rated value of the output current typical	17 W
• during no-load operation maximum	2.7 W

Closed-loop control

relative control precision of the output voltage with rapid fluctuation of the input voltage by +/- 15% typical	0.3 %
relative control precision of the output voltage at load step of resistive load 10/90/10 % typical	3 %
setting time	
• load step 10 to 90% typical	1 ms
• load step 90 to 10% typical	1 ms

Protection and monitoring

design of the overvoltage protection	protection against overvoltage in case of internal fault $V_{out} < 31.8 \text{ V}$
response value current limitation	7 ... 7.5 A
property of the output short-circuit proof	Yes
design of 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
display version for overload and short circuit	-

Safety

galvanic isolation between input and output	Yes
galvanic isolation	Safety extra-low output voltage U_{out} acc. to EN 60950-1 and EN 50178
operating resource protection class	Class I
leakage current	
• maximum	3.5 mA
• typical	1 mA
protection class IP	IP20

Approvals

certificate of suitability	
• CE marking	Yes
• UL approval	Yes; cULus-Listed (UL61010-2-201, CSA C22.2 No.142); cCSAus (CSA C22.2 No. 60950-1, UL 60950-1)
• CSA approval	Yes; cULus-Listed (UL61010-2-201, CSA C22.2 No.142), cCSAus (CSA C22.2 No. 60950-1, UL 60950-1)
• cCSAus, Class 1, Division 2	No
• ATEX	Yes; ATEX (EX) II 3G Ex ec nC IIC T3 Gc
certificate of suitability	

<ul style="list-style-type: none"> relating to ATEX IECEX NEC Class 2 ULhazloc approval 	IECEX Ex ec nC IIC T3 Gc; ATEX (EX) II 3G Ex ec nC IIC T3 Gc
type of certification CB-certificate	Yes; IECEX Ex ec nC IIC T3 Gc
certificate of suitability	No
<ul style="list-style-type: none"> EAC approval C-Tick 	No
certificate of suitability shipbuilding approval	Yes
shipbuilding approval	Yes
Marine classification association	BV, DNV GL
<ul style="list-style-type: none"> American Bureau of Shipping Europe Ltd. (ABS) French marine classification society (BV) DNV GL Lloyds Register of Shipping (LRS) Nippon Kaiji Kyokai (NK) 	No
	Yes
	Yes
	No
	No

EMC

standard	
<ul style="list-style-type: none"> for emitted interference for mains harmonics limitation for interference immunity 	EN 61000-6-3 Class B EN 61000-3-2 EN 61000-6-2

environmental conditions

ambient temperature	
<ul style="list-style-type: none"> during operation during transport during storage 	-30 ... +70 °C; with natural convection -40 ... +85 °C -40 ... +85 °C
environmental category according to IEC 60721	Climate class 3K3, 5 ... 95% no condensation

Mechanics

type of electrical connection	Push-in terminals
<ul style="list-style-type: none"> at input 	L, N, PE: 1 push-in terminal each for 0.2 ... 2.5 mm ² single-core/finely stranded
<ul style="list-style-type: none"> at output for auxiliary contacts for signaling contact 	+, -: 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
net weight	0.5 kg
product feature of the enclosure housing can be lined up	Yes
fastening method	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)

