

SIMATIC ET 200SP PS/1AC/24VDC/10A
 SIMATIC ET 200SP PS 24V/10A Stabilized power supply Input:
 120/230 V AC Output: 24 V DC/10 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	$2.3 \times V_{in}$ rated, 1.3 ms
Mains buffering	at $V_{in} = 93/187$ V
Mains buffering at lout rated, min.	20 ms; at $V_{in} = 93/187$ 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	4.34 A
• at rated input voltage 230 V	1.92 A

Switch-on current limiting (+25 °C), max.	60 A
I ² t, max.	6.3 A ² ·s
Built-in incoming fuse	T 6.3 A/250 V (not accessible)
Protection in the mains power input (IEC 898)	recommended LS switch: B/C 10 A/6 A

Output

Output	Controlled, isolated DC voltage
Rated voltage V _{out} 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 V _{out} < 3 %
Startup delay, max.	0.3 s
Voltage rise, typ.	30 ms
Rated current value I _{out} rated	10 A
Current range	0 ... 12 A
• Note	10 A up to +60°C; +60 ... +70 °C: Derating 3%/K
supplied active power typical	240 W
short-term overload current	
• on short-circuiting during the start-up typical	30 A
• at short-circuit during operation typical	30 A
duration of overloading capability for excess current	
• on short-circuiting during the start-up	750 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.	90 %
Power loss at V _{out} rated, I _{out} rated, approx.	26 W
power loss [W] during no-load operation maximum	2.8 W

Closed-loop control

Dynamic mains compensation (V _{in} rated ±15 %), max.	0.3 %
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Dynamic load smoothing (I _{out} : 10/90/10 %), U _{out} ± 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 V
Current limitation	14 ... 15 A
property of the output short-circuit proof	Yes
Short-circuit protection	Constant current characteristic
enduring short circuit current RMS value <ul style="list-style-type: none"> • typical 	14.1 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 <ul style="list-style-type: none"> • maximum • typical 	3.5 mA 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 <ul style="list-style-type: none"> • during operation — 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 	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"> • Output 	+, -: 2 push-in terminals each for 0.2 ... 2.5 mm ²
<ul style="list-style-type: none"> • Auxiliary 	Signaling contact: 2 push-in terminals for 0.2 ... 2.5 mm ²
<ul style="list-style-type: none"> • signaling contact 	2 push-in terminals for 0.2 ... 2.5 mm ²
product function	
<ul style="list-style-type: none"> • removable terminal at input 	Yes
<ul style="list-style-type: none"> • 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	
<ul style="list-style-type: none"> • top 	50 mm
<ul style="list-style-type: none"> • bottom 	50 mm
<ul style="list-style-type: none"> • left 	0 mm
<ul style="list-style-type: none"> • right 	0 mm
Weight, approx.	0.7 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	1 114 510 h
other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)