

SIMATIC ET 200SP PS 24V/5A
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120/230 V AC Output: 24 V DC/5 A



Figure similar

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 ² t, 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 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	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 %), $U_{out} \pm$ 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	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 • 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)
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 — 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	
• 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 mm ²
• Auxiliary	Signaling contact: 2 push-in terminals for 0.2 ... 2.5 mm ²
• signaling contact	2 push-in terminals for 0.2 ... 2.5 mm ²
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)