



SIMATIC PM 1507 24 V/3 A STABILIZED POWER SUPPLY FOR SIMATIC S7-1500 INPUT: 120/230 V AC OUTPUT: 24 V/3 A DC

Technical specifications

Product	S7-1500 PM1507
Power supply, type	24 V/3 A
Input	
Input	1-phase AC
Supply voltage / 1 / at AC / nominal value	120 V
Supply voltage / 2 / at AC / nominal value	230 V
Voltage range	
• Note	Automatic range selection
Input voltage / 1 / at AC	85 ... 132 V
Input voltage / 2 / at AC	170 ... 264 V
Wide-range input	No
Overvoltage resistance	2.3 × Vin rated, 1.3 ms
Mains buffering at lout rated, min.	20 ms
Mains buffering	at Vin = 93/187 V
Rated line frequency	50 / 60 Hz
Rated line range	45 ... 65 Hz
Input current / at nominal level of the input voltage 120 V	1.4 A
Input current / at nominal level of the input voltage 230 V	0.8 A
Switch-on current limiting (+25 °C), max.	23 A
Duration of current limiting / at 25 °C / maximum	3 ms

I ² t, max.	1.3 A ² ·s
Built-in incoming fuse	T 3,15 A/250 V (not accessible)
Protection in the mains power input (IEC 898)	Recommended miniature circuit breaker: 10 A characteristic B or 6 A characteristic C
Output	
Output	Controlled, isolated DC voltage
Rated voltage V _{out} DC	24 V
Total tolerance, static ±	1 %
Static mains compensation, approx.	0.1 %
Static load balancing, approx.	0.1 %
Residual ripple peak-peak, max.	50 mV
Spikes peak-peak, max. (bandwidth: 20 MHz)	150 mV
Product feature / output voltage adjustable	No
Status display	LED green for 24 V OK; LED red for error; LED yellow for stand-by
On/off behavior	No overshoot of V _{out} (soft start)
Startup delay, max.	1.5 s
Voltage rise, typ.	10 ms
Rated current value I _{out} rated	3 A
Current range	0 ... 3 A
delivered active power / typ.	72 W
short-term overload current / at short-circuit during run-up / typical	12 A
Duration of overloading ability for excess current / on short-circuiting during the start-up	70 ms
short-term overload current / at short-circuit during operation / typical	12 A
Duration of overloading ability for excess current / on short-circuiting during the operational phase	70 ms
Parallel switching for enhanced performance	Yes
• Note	Parallel switching of 3 A and 8 A possible, devices must be switched on at the same time, max. 75% per device with I-load
Numbers of parallel switchable units for enhanced performance	2
Efficiency	
Efficiency at V _{out} rated, I _{out} rated, approx.	87 %
Power loss at V _{out} rated, I _{out} rated, approx.	11 W
Closed-loop control	
Dynamic mains compensation (V _{in} rated ±15 %), max.	0.1 %
Dynamic load smoothing (I _{out} : 50/100/50 %), U _{out} ± typ.	1 %
Dynamic load smoothing (I _{out} : 10/90/10 %), U _{out} ± typ.	3 %
Load step setting time 10 to 90%, typ.	5 ms
Load step setting time 90 to 10%, typ.	5 ms
Setting time / maximum	5 ms

Protection and monitoring	
Output overvoltage protection	Additional control loop, limitation (closed loop control) at < 28.8 V
Current limitation	3.15 ... 3.6 A
Current limitation, typ.	3.4 A
Characteristic feature of the output / short-circuit protected	Yes
Short-circuit protection	Electronic shutdown, automatic restart
Overload/short-circuit indicator	-
Safety	
Primary/secondary isolation	Yes
Potential separation	Safety extra-low output voltage U _{out} acc. to EN 60950-1 and EN 50178 and EN 61131-2
Protection class	Class I
stray current / maximum	3.5 mA
stray current / typical	0.4 mA
CE mark	Yes
UL/CSA approval	Yes
UL/cUL (CSA) approval	cULus-Listed (UL 508, CSA C22.2 No. 142), File E143289
Explosion protection	ATEX (EX) II 3G Ex nA nC IIC T4 Gc; cULus (ISA 12.12.01, CSA C22.2 No.213) Class I, Div. 2, Group ABCD, T4, File E330455
FM approval	Class I, Div. 2, Group ABCD, T4
CB approval	Yes
Marine approval	DNV
Degree of protection (EN 60529)	IP20
EMC	
Emitted interference	EN 55022 Class B
Supply harmonics limitation	EN 61000-3-2
Noise immunity	EN 61000-6-2
Operating data	
Ambient temperature / in operation	0 ... 60 °C
• Note	with natural convection
Ambient temperature / on transport	-40 ... +85 °C
Ambient temperature / in storage	-40 ... +85 °C
Humidity class according to EN 60721	Climate class 3K3, no condensation
Mechanics	
Connection technology	Screw-/spring clamp connection
Connections / Supply input	L, N, PE: 1 screw terminal each for 0.5 ... 2.5 mm ²
Connections / Output	L+, M: 2 spring-loaded terminals each for 0.5 to 2.5 mm ²
Width / of the housing	50 mm
Height / of the housing	147 mm
Depth / of the housing	129 mm

Installation width	50 mm
Mounting height	205 mm
Weight, approx.	0.45 kg
Product feature / of the housing / housing for side-by-side mounting	Yes
Mounting type / wall mounting	No
Type of mounting / standard rail mounting	No
Mounting type / S7 rail mounting	Yes
Installation	Can be mounted onto S7-1500 rail
Other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)

letzte Änderung:

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