



SIMATIC PM1507/1AC/24VDC/3A

SIMATIC PM 1507 24 V/3 A Stabilized power supply for SIMATIC S7-1500 input:
120/230 V AC, output: 24 V DC/3 A

Input	
type of the power supply network	1-phase AC
supply voltage at AC	
• initial value	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
design of input wide range input	No
overvoltage overload capability	$2.3 \times V_{in}$ rated, 1.3 ms
operating condition of the mains buffering	at $V_{in} = 93/187$ 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 $V_{in} = 93/187$ V
line frequency	
• 1 rated value	50 Hz
• 2 rated value	60 Hz
line frequency	45 ... 65 Hz
input current	
• at rated input voltage 120 V	1.4 A
• at rated input voltage 230 V	0.8 A
current limitation of inrush current at 25 °C maximum	23 A
duration of inrush current limiting at 25 °C	
• maximum	3 ms
I ² t value maximum	1.3 A ² ·s
fuse protection type	T 3, 15 A/250 V (not accessible)
• in the feeder	Recommended miniature circuit breaker: 10 A characteristic B or 6 A characteristic C
Output	
voltage curve at output	Controlled, isolated DC voltage
output voltage at DC rated value	24 V
output voltage	
• at output 1 at DC rated value	24 V
relative overall tolerance of the voltage	1 %
relative control precision of the output voltage	
• on slow fluctuation of input voltage	0.1 %
• on slow fluctuation of ohm loading	0.1 %
residual ripple	
• maximum	50 mV

voltage peak	
• maximum	150 mV
product function output voltage adjustable	No
display version for normal operation	LED green for 24 V OK; LED red for error; LED yellow for stand-by
behavior of the output voltage when switching on	No overshoot of Vout (soft start)
response delay maximum	1.5 s
voltage increase time of the output voltage	
• typical	10 ms
output current	
• rated value	3 A
• rated range	0 ... 3 A
supplied active power typical	72 W
short-term overload current	
• on short-circuiting during the start-up typical	12 A
• at short-circuit during operation typical	12 A
duration of overloading capability for excess current	
• on short-circuiting during the start-up	70 ms
• at short-circuit during operation	70 ms
product feature	
• bridging of equipment	Yes
number of parallel-switched equipment resources for increasing the power	2
Efficiency	
efficiency in percent	87 %
power loss [W]	
• at rated output voltage for rated value of the output current typical	11 W
Closed-loop control	
relative control precision of the output voltage with rapid fluctuation of the input voltage by +/- 15% typical	0.1 %
relative control precision of the output voltage load step of resistive load 50/100/50 % typical	1 %
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	5 ms
• load step 90 to 10% typical	5 ms
• maximum	5 ms
Protection and monitoring	
design of the overvoltage protection	Additional control loop, limitation (closed loop control) at < 28.8 V
response value current limitation	3.15 ... 3.6 A
• typical	3.4 A
property of the output short-circuit proof	Yes
design of short-circuit protection	Electronic shutdown, automatic restart
display version for overload and short circuit	-
Safety	
galvanic isolation between input and output	Yes
galvanic isolation	Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 and EN 61131-2
operating resource protection class	Class I
leakage current	
• maximum	3.5 mA
• typical	0.4 mA
protection class IP	IP20
Approvals	
certificate of suitability	
• CE marking	Yes
• UL approval	Yes; cULus-Listed (UL 508, CSA C22.2 No. 142), File E143289
• CSA approval	Yes; cULus-Listed (UL 508, CSA C22.2 No. 142), File E143289
• cCSAus, Class 1, Division 2	No
• ATEX	Yes; ATEX (EX) II 3G Ex nA nC IIC T4 Gc
certificate of suitability	

relating to ATEX	IECEX Ex nA nC IIC T4 Gc; ATEX (EX) II 3G Ex nA nC IIC T4 Gc; cULus (ANSI/ISA 12.12.01, CSA C22.2 No.213) Class I, Div. 2, Group ABCD, T4, File E330455
IECEX	Yes; IECEX Ex nA nC IIC T4 Gc
NEC Class 2	No
ULhazloc approval	Yes
FM registration	Yes; Class I, Div. 2, Group ABCD, T4
type of certification CB-certificate	Yes
certificate of suitability	
EAC approval	Yes
certificate of suitability shipbuilding approval	Yes
shipbuilding approval	ABS, BV, DNV GL
Marine classification association	
American Bureau of Shipping Europe Ltd. (ABS)	Yes
French marine classification society (BV)	Yes
DNV GL	Yes
Lloyds Register of Shipping (LRS)	No
Nippon Kaiji Kyokai (NK)	No
EMC	
standard	
for emitted interference	EN 55022 Class B
for mains harmonics limitation	EN 61000-3-2
for interference immunity	EN 61000-6-2
environmental conditions	
ambient temperature	
during operation	0 ... 60 °C; with natural convection
during transport	-40 ... +85 °C
during storage	-40 ... +85 °C
environmental category according to IEC 60721	Climate class 3K3, 5 ... 95% no condensation
Mechanics	
type of electrical connection	Screw-/spring clamp connection
at input	L, N, PE: 1 screw terminal each for 0.5 ... 2.5 mm ²
at output	L+, M: 2 spring-loaded terminals each for 0.5 to 2.5 mm ²
product function	
removable terminal at input	Yes
removable terminal at output	Yes
width of the enclosure	50 mm
height of the enclosure	147 mm
depth of the enclosure	129 mm
required spacing	
top	40 mm
bottom	40 mm
left	0 mm
right	0 mm
net weight	0.45 kg
product feature of the enclosure housing can be lined up	Yes
fastening method	Can be mounted onto S7-1500 rail
MTBF at 40 °C	1 611 993 h
other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)

