



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	Automatic range selection
supply voltage	120 V/230 V
input voltage 1 at AC	85 ... 132 V
input voltage 2 at AC	170 ... 264 V
wide range input	No
overvoltage overload capability	2.3 × Vin rated, 1.3 ms
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	50/60 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 <sup>2</sup> t value maximum	1.3 A <sup>2</sup> ·s
fuse protection type	T 3,15 A/250 V (not accessible)
fuse protection type 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
output voltage adjustable	No
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
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	

<ul style="list-style-type: none"> <li>• typical</li> </ul>	10 ms
output current	
<ul style="list-style-type: none"> <li>• rated value</li> <li>• rated range</li> </ul>	3 A 0 ... 3 A
supplied active power typical	72 W
short-term overload current	
<ul style="list-style-type: none"> <li>• on short-circuiting during the start-up typical</li> <li>• at short-circuit during operation typical</li> </ul>	12 A 12 A
duration of overloading capability for excess current	
<ul style="list-style-type: none"> <li>• on short-circuiting during the start-up</li> <li>• at short-circuit during operation</li> </ul>	70 ms 70 ms
bridging of equipment	Yes
number of parallel-switched equipment resources for increasing the power	2
<b>efficiency</b>	
efficiency in percent	87 %
power loss [W]	
<ul style="list-style-type: none"> <li>• at rated output voltage for rated value of the output current typical</li> </ul>	11 W
<b>closed-loop control</b>	
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	
<ul style="list-style-type: none"> <li>• load step 10 to 90% typical</li> <li>• load step 90 to 10% typical</li> <li>• maximum</li> </ul>	5 ms 5 ms 5 ms
<b>protection and monitoring</b>	
design of the overvoltage protection	Additional control loop, limitation (closed loop control) at < 28.8 V
property of the output short-circuit proof	Yes
design of short-circuit protection	Electronic shutdown, automatic restart
response value current limitation	3.15 ... 3.6 A
<ul style="list-style-type: none"> <li>• typical</li> </ul>	3.4 A
display version for overload and short circuit	-
<b>safety</b>	
galvanic isolation between input and output	Yes
galvanic isolation	Safety extra-low output voltage Vout acc. to EN 60950-1 and EN 50178 and EN 61131-2
operating resource protection class	Class I
leakage current	
<ul style="list-style-type: none"> <li>• maximum</li> <li>• typical</li> </ul>	3.5 mA 0.4 mA
protection class IP	IP20
standard	
<ul style="list-style-type: none"> <li>• for emitted interference</li> <li>• for mains harmonics limitation</li> <li>• for interference immunity</li> </ul>	EN 55022 Class B EN 61000-3-2 EN 61000-6-2
<b>standards, specifications, approvals</b>	
certificate of suitability	
<ul style="list-style-type: none"> <li>• CE marking</li> <li>• UL approval</li> <li>• CSA approval</li> <li>• EAC approval</li> <li>• NEC Class 2</li> </ul>	Yes Yes; cULus-Listed (UL 508, CSA C22.2 No. 142), File E143289 Yes; cULus-Listed (UL 508, CSA C22.2 No. 142), File E143289 Yes No
type of certification	
<ul style="list-style-type: none"> <li>• BIS</li> <li>• CB-certificate</li> </ul>	Yes; R-41183539 Yes
MTBF at 40 °C	1 611 993 h
<b>standards, specifications, approvals hazardous environments</b>	

certificate of suitability	
<ul style="list-style-type: none"> <li>• IECEx</li> <li>• ATEX</li> <li>• ULhazloc approval</li> <li>• cCSAus, Class 1, Division 2</li> <li>• FM registration</li> </ul>	<p>Yes; IECEx Ex nA nC IIC T4 Gc</p> <p>Yes; ATEX (EX) II 3G Ex nA nC IIC T4 Gc</p> <p>Yes</p> <p>No</p> <p>Yes; Class I, Div. 2, Group ABCD, T4</p>

#### standards, specifications, approvals marine classification

shipbuilding approval	Yes
Marine classification association	
<ul style="list-style-type: none"> <li>• American Bureau of Shipping Europe Ltd. (ABS)</li> <li>• French marine classification society (BV)</li> <li>• Det Norske Veritas (DNV)</li> <li>• Lloyds Register of Shipping (LRS)</li> </ul>	<p>Yes</p> <p>Yes</p> <p>Yes</p> <p>No</p>

#### ambient conditions

ambient temperature	
<ul style="list-style-type: none"> <li>• during operation</li> <li>• during transport</li> <li>• during storage</li> </ul>	<p>0 ... 60 °C; with natural convection</p> <p>-40 ... +85 °C</p> <p>-40 ... +85 °C</p>
environmental category according to IEC 60721	Climate class 3K3, 5 ... 95% no condensation

#### connection method

type of electrical connection	Screw-/spring clamp connection
<ul style="list-style-type: none"> <li>• at input</li> <li>• at output</li> </ul>	<p>L, N, PE: 1 screw terminal each for 0.5 ... 2.5 mm<sup>2</sup></p> <p>L+, M: 2 spring-loaded terminals each for 0.5 to 2.5 mm<sup>2</sup></p>
removable terminal at input	Yes
removable terminal at output	Yes

#### mechanical data

width × height × depth of the enclosure	50 × 147 × 129 mm
installation width × mounting height	50 mm × 205 mm
required spacing	
<ul style="list-style-type: none"> <li>• top</li> <li>• bottom</li> <li>• left</li> <li>• right</li> </ul>	<p>40 mm</p> <p>40 mm</p> <p>0 mm</p> <p>0 mm</p>
fastening method	Can be mounted onto S7-1500 rail
<ul style="list-style-type: none"> <li>• standard rail mounting</li> <li>• S7 rail mounting</li> <li>• wall mounting</li> </ul>	<p>No</p> <p>Yes</p> <p>No</p>
housing can be lined up	Yes
net weight	0.45 kg

#### additional information

other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)
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#### Classifications

	Version	Classification
eClass	14	27-04-07-01
eClass	12	27-04-07-01
eClass	9.1	27-04-07-01
eClass	9	27-04-07-01
eClass	8	27-04-90-02
eClass	7.1	27-04-90-02
eClass	6	27-04-90-02
ETIM	9	EC002540
ETIM	8	EC002540
ETIM	7	EC002540
IDEA	4	4130
UNSPSC	15	39-12-10-04

#### Approvals Certificates

General Product Approval



[Manufacturer Declaration](#)



[Miscellaneous](#)

General Product Approval

For use in hazardous locations

[BIS CRS](#)



[FM](#)

[CCC-Ex](#)

For use in hazardous locations

Marine / Shipping



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