



SIMATIC PS307/1AC/24VDC/2A

SIMATIC S7-300 Regulated power supply PS307 input: 120/230 V AC, output: 24 V DC/2 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	47 ... 63 Hz
input current	
• at rated input voltage 120 V	0.9 A
• at rated input voltage 230 V	0.5 A
current limitation of inrush current at 25 °C maximum	22 A
duration of inrush current limiting at 25 °C	
• maximum	3 ms
I2t value maximum	1 A²·s
fuse protection type	T 1.6 A/250 V (not accessible)
fuse protection type in the feeder	Recommended miniature circuit breaker: 3 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	3 %
relative control precision of the output voltage	
• on slow fluctuation of input voltage	0.1 %
• on slow fluctuation of ohm loading	0.2 %
residual ripple	
• maximum	50 mV
• typical	5 mV
voltage peak	
• maximum	150 mV
• typical	20 mV
display version for normal operation	Green LED for 24 V OK
behavior of the output voltage when switching on	No overshoot of Vout (soft start)

response delay maximum	2 s
voltage increase time of the output voltage	
• typical	10 ms
output current	
• rated value	2 A
• rated range	0 ... 2 A
supplied active power typical	48 W
short-term overload current	
• on short-circuiting during the start-up typical	9 A
• at short-circuit during operation typical	9 A
duration of overloading capability for excess current	
• on short-circuiting during the start-up	90 ms
• at short-circuit during operation	90 ms
bridging of equipment	Yes
number of parallel-switched equipment resources for increasing the power	2
<b>efficiency</b>	
efficiency in percent	84 %
power loss [W]	
• at rated output voltage for rated value of the output current typical	9 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	0.8 %
setting time	
• load step 50 to 100% typical	0.5 ms
• load step 100 to 50% typical	0.5 ms
setting time	
• maximum	1 ms
<b>protection and monitoring</b>	
design of the overvoltage protection	Additional control loop, shutdown at < 28.8 V, automatic restart
property of the output short-circuit proof	Yes
design of short-circuit protection	Electronic shutdown, automatic restart
response value current limitation	2.2 ... 2.6 A
enduring short circuit current RMS value	
• maximum	2 A
<b>safety</b>	
galvanic isolation between input and output	Yes
galvanic isolation	Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178
operating resource protection class	Class I
leakage current	
• maximum	3.5 mA
• typical	0.5 mA
protection class IP	IP20
<b>EMC</b>	
standard	
• for emitted interference	EN 55022 Class B
• for mains harmonics limitation	not applicable
• for interference immunity	EN 61000-6-2
<b>standards, specifications, approvals</b>	
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
• UKCA marking	Yes
• EAC approval	Yes
• NEC Class 2	No
type of certification	
• CB-certificate	Yes

MTBF at 40 °C	2 320 078 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>• UKEX</li> <li>• CCC for hazardous zone according to GB standard</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</p> <p>Yes</p> <p>Yes; Class I, Div. 2, Group ABCD, T4</p>
<b>standards, specifications, approvals marine classification</b>	
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>No</p> <p>No</p> <p>Yes</p> <p>Yes</p>
<b>standards, specifications, approvals Environmental Product Declaration</b>	
Environmental Product Declaration	Yes
Global Warming Potential [CO2 eq]	
<ul style="list-style-type: none"> <li>• total</li> <li>• during manufacturing</li> <li>• during operation</li> <li>• after end of life</li> </ul>	<p>289.8 kg</p> <p>7.9 kg</p> <p>281.5 kg</p> <p>0.25 kg</p>
<b>ambient conditions</b>	
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
<b>connection method</b>	
type of electrical connection	screw terminal
<ul style="list-style-type: none"> <li>• at input</li> <li>• at output</li> <li>• for auxiliary contacts</li> </ul>	<p>L, N, PE: 1 screw terminal each for 0.5 ... 2.5 mm<sup>2</sup> single-core/finely stranded</p> <p>L+, M: 2 screw terminals each for 0.5 ... 2.5 mm<sup>2</sup></p> <p>-</p>
<b>mechanical data</b>	
width × height × depth of the enclosure	40 × 125 × 120 mm
installation width × mounting height	40 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 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	0.4 kg
<b>accessories</b>	
mechanical accessories	Mounting adapter for standard mounting rail (6EP1971-1BA00)
<b>further information internet links</b>	
internet link	
<ul style="list-style-type: none"> <li>• to website: Industry Mall</li> <li>• to website: Industrial communication</li> <li>• to website: CAx-Download-Manager</li> <li>• to website: Industry Online Support</li> </ul>	<p><a href="https://mall.industry.siemens.com">https://mall.industry.siemens.com</a></p> <p><a href="https://siemens.com/industrial-communication">https://siemens.com/industrial-communication</a></p> <p><a href="https://siemens.com/cax">https://siemens.com/cax</a></p> <p><a href="https://support.industry.siemens.com">https://support.industry.siemens.com</a></p>
<b>additional information</b>	
other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)

security information

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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



EG-Konf.



CCC

[Confirmation](#)



UL

[KC](#)

General Product Approval

EMV

Functional Safety

Test Certificates

Marine / Shipping



RCM

[Type Examination Certificate](#)

[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



ABS

Marine / Shipping

other



DNV



RINA



RMRS

[Miscellaneous](#)

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other

Railway

Environment

[Confirmation](#)

[Special Test Certificate](#)



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