



SIMATIC PS307/1AC/24VDC/5A/OUTDOOR

SIMATIC S7-300 Outdoor Regulated power supply PS307 input: 120/230 V AC, output: 24 V/5 A DC

Input	
type of the power supply network	1-phase AC
supply voltage at AC	
• initial value	Set by means of selector switch on the device
supply voltage	
• 1 at AC rated value	120 V
• 2 at AC rated value	230 V
input voltage	
• 1 at AC	93 ... 132 V
• 2 at AC	187 ... 264 V
design of input wide range input	No
overvoltage overload capability	2.3 × Vin rated, 1.3 ms
operating condition of the mains buffering	at Vin = 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 Vin = 93/187 V
line frequency	
• 1 rated value	50 Hz
• 2 rated value	60 Hz
line frequency	47 ... 63 Hz
input current	
• at rated input voltage 120 V	2.1 A
• at rated input voltage 230 V	1.2 A
current limitation of inrush current at 25 °C maximum	45 A
duration of inrush current limiting at 25 °C	
• maximum	3 ms
I2t value maximum	1.8 A ² ·s
fuse protection type	T 3,15 A/250 V (not accessible)
• in the feeder	Recommended miniature circuit breaker: from 10 A characteristic C or from 6 A characteristic D
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	3 %
relative control precision of the output voltage	
• on slow fluctuation of input voltage	0.2 %
• on slow fluctuation of ohm loading	0.4 %
residual ripple	

<ul style="list-style-type: none"> • maximum 	150 mV
<ul style="list-style-type: none"> • typical 	40 mV
voltage peak	
<ul style="list-style-type: none"> • maximum 	240 mV
<ul style="list-style-type: none"> • typical 	90 mV
product function output voltage adjustable	No
type of output voltage setting	-
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	3 s
voltage increase time of the output voltage	
<ul style="list-style-type: none"> • typical 	100 ms
output current	
<ul style="list-style-type: none"> • rated value 	5 A
<ul style="list-style-type: none"> • rated range 	0 ... 5 A
supplied active power typical	120 W
short-term overload current	
<ul style="list-style-type: none"> • on short-circuiting during the start-up typical 	20 A
<ul style="list-style-type: none"> • at short-circuit during operation typical 	20 A
duration of overloading capability for excess current	
<ul style="list-style-type: none"> • on short-circuiting during the start-up 	180 ms
<ul style="list-style-type: none"> • at short-circuit during operation 	80 ms
product feature	
<ul style="list-style-type: none"> • bridging of equipment 	No
Efficiency	
efficiency in percent	84 %
power loss [W]	
<ul style="list-style-type: none"> • at rated output voltage for rated value of the output current typical 	23 W
Closed-loop control	
relative control precision of the output voltage with rapid fluctuation of the input voltage by +/- 15% typical	0.3 %
relative control precision of the output voltage load step of resistive load 50/100/50 % typical	3 %
setting time	
<ul style="list-style-type: none"> • load step 50 to 100% typical 	0.2 ms
<ul style="list-style-type: none"> • load step 100 to 50% typical 	0.2 ms
setting time	
<ul style="list-style-type: none"> • maximum 	5 ms
Protection and monitoring	
design of the overvoltage protection	Additional control loop, shutdown at approx. 30 V, automatic restart
response value current limitation	5.5 ... 6.5 A
property of the output short-circuit proof	Yes
design of short-circuit protection	Electronic shutdown, automatic restart
enduring short circuit current RMS value	
<ul style="list-style-type: none"> • maximum 	5 A
Safety	
galvanic isolation between input and output	Yes
galvanic isolation	Safety extra low output voltage Vout according to EN 60950-1 and EN 50178, creepage distances and clearances > 5 mm
operating resource protection class	Class I
leakage current	
<ul style="list-style-type: none"> • maximum 	3.5 mA
<ul style="list-style-type: none"> • typical 	0.3 mA
protection class IP	IP20
Approvals	
certificate of suitability	
<ul style="list-style-type: none"> • CE marking 	Yes
<ul style="list-style-type: none"> • UL approval 	Yes; UL-Listed (UL 508), File E143289; CSA (CSA C22.2 No. 142)
<ul style="list-style-type: none"> • CSA approval 	Yes; UL-Listed (UL 508), File E143289, CSA (CSA C22.2 No. 142)

