



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

General information	
Technical Product Detail Page	https://l.siemens.com/1P6ES7307-1EA80-0AA0
input	
type of the power supply network	1-phase AC
supply voltage at AC	Set by means of selector switch on the device
supply voltage	120 V/230 V
input voltage 1 at AC	93 ... 132 V
input voltage 2 at AC	187 ... 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	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
I ² t value maximum	1.8 A ² ·s
fuse protection type	T 3, 15 A/250 V (not accessible)
fuse protection type 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
output voltage adjustable	No; -
relative overall tolerance of the voltage	3 %
relative control precision of the output voltage	
• on slow fluctuation of input voltage	0.2 %
• on slow fluctuation of ohm loading	0.4 %
residual ripple	
• maximum	150 mV
• typical	40 mV
voltage peak	

<ul style="list-style-type: none"> • maximum 	240 mV
<ul style="list-style-type: none"> • typical 	90 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	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
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
property of the output short-circuit proof	Yes
design of short-circuit protection	Electronic shutdown, automatic restart
response value current limitation	5.5 ... 6.5 A
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	Output voltage: SELV, ES1 (IEC 62368-1), DVC As (IEC 61204-7)
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
EMC	
standard	
<ul style="list-style-type: none"> • for emitted interference 	EN 55011 Class A
<ul style="list-style-type: none"> • for mains harmonics limitation 	-
<ul style="list-style-type: none"> • for interference immunity 	EN 61000-6-2
standards, specifications, 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
<ul style="list-style-type: none"> • EAC approval 	Yes
<ul style="list-style-type: none"> • NEC Class 2 	No

type of certification	
• CB-certificate	No
MTBF at 40 °C	2 231 610 h
standards, specifications, approvals hazardous environments	
certificate of suitability	
• IECEx	No
• ATEX	No
• ULhazloc approval	No
• FM registration	No
standards, specifications, approvals marine classification	
shipbuilding approval	No
Marine classification association	
• American Bureau of Shipping Europe Ltd. (ABS)	No
• French marine classification society (BV)	No
• Det Norske Veritas (DNV)	No
• Lloyds Register of Shipping (LRS)	No
standards, specifications, approvals Environmental Product Declaration	
Environmental Product Declaration	Yes
global warming potential [CO2 eq]	
• total	640.3 kg
• during manufacturing	10.8 kg
• during operation	629.1 kg
• after end of life	0.39 kg
ambient conditions	
ambient temperature	
• during operation	-25 ... +70 °C; with natural convection
• during transport	-40 ... +85 °C
• during storage	-40 ... +85 °C
environmental category according to IEC 60721	Climate class 3K5, transient condensation permitted
connection method	
type of electrical connection	screw terminal
• at input	L, N, PE: 1 screw terminal each for 0.5 ... 2.5 mm ² single-core/finely stranded
• at output	L+, M: 3 screw terminals each for 0.5 ... 2.5 mm ²
• for auxiliary contacts	-
mechanical data	
width × height × depth of the enclosure	80 × 125 × 120 mm
installation width × mounting height	80 mm × 225 mm
required spacing	
• top	50 mm
• bottom	50 mm
• left	0 mm
• right	0 mm
fastening method	Can be mounted onto S7 rail
• DIN-rail mounting	No
• S7 rail mounting	Yes
• wall mounting	No
housing can be lined up	Yes
net weight	0.57 kg
accessories	
mechanical accessories	Mounting adapter for standard mounting rail (6ES7390-6BA00-0AA0)
further information internet links	
internet link	
• to website: Industry Mall	https://mall.industry.siemens.com
• to web page: selection aid TIA Selection Tool	https://www.siemens.com/tstcloud
• to website: CAx-Download-Manager	https://siemens.com/cax
• to website: Industry Online Support	https://support.industry.siemens.com
additional information	
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	10	EC002540
ETIM	9	EC002540
ETIM	8	EC002540
ETIM	7	EC002540
IDEA	4	4130
UNSPSC	15	39-12-10-04

Approvals Certificates

Environmental Product Declaration

- global warming potential [CO2 eq] / during manufacturing 10.8 kg
- global warming potential [CO2 eq] / during operation 629.1 kg
- global warming potential [CO2 eq] / after end of life 0.39 kg
- global warming potential [CO2 eq] / total 640.3 kg

Environment

General Product Approval



[Manufacturer Declaration](#)

[Declaration of Conformity](#)

[China RoHS](#)

General Product Approval

Maritime application



[NK / Nippon Kaiji Kyokai](#)



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