



SIMATIC PS307/1AC/24VDC/10A

SIMATIC S7-300 Regulated power supply PS307 input: 120/230 V AC, output: 24 V / 10 A DC

Technical Product Detail Page

<https://i.siemens.com/1P6ES7307-1KA02-0AA0>

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	4.2 A
• at rated input voltage 230 V	1.9 A
current limitation of inrush current at 25 °C maximum	55 A
duration of inrush current limiting at 25 °C	
• maximum	3 ms
I ² t value maximum	3.3 A ² ·s
fuse protection type	T 6.3 A/250 V (not accessible)
fuse protection type in the feeder	Recommended miniature circuit breaker: from 10 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	0.5 %
residual ripple	
• maximum	50 mV
• typical	15 mV
voltage peak	
• maximum	150 mV
• typical	60 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 <ul style="list-style-type: none"> • typical 	10 ms
output current <ul style="list-style-type: none"> • rated value • rated range 	10 A 0 ... 10 A
supplied active power typical	240 W
short-term overload current <ul style="list-style-type: none"> • on short-circuiting during the start-up typical • at short-circuit during operation typical 	38 A 38 A
duration of overloading capability for excess current <ul style="list-style-type: none"> • on short-circuiting during the start-up • at short-circuit during operation 	80 ms 80 ms
bridging of equipment	Yes
efficiency	
efficiency in percent	90 %
power loss [W] <ul style="list-style-type: none"> • at rated output voltage for rated value of the output current typical 	27 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	2 %
setting time <ul style="list-style-type: none"> • maximum 	0.1 ms
protection and monitoring	
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	11 ... 12 A
enduring short circuit current RMS value <ul style="list-style-type: none"> • maximum 	12 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 • typical 	3.5 mA 0.6 mA
protection class IP	IP20
EMC	
standard <ul style="list-style-type: none"> • for emitted interference • for mains harmonics limitation • for interference immunity 	EN 55022 Class B EN 61000-3-2 EN 61000-6-2
standards, specifications, approvals	
certificate of suitability <ul style="list-style-type: none"> • CE marking • UL approval • UKCA marking • EAC approval • NEC Class 2 	Yes Yes; cULus-Listed (UL 508, CSA C22.2 No. 142), File E143289 Yes Yes No
type of certification <ul style="list-style-type: none"> • BIS • CB-certificate 	Yes; R-41183539 Yes
MTBF at 40 °C	1 504 280 h

standards, specifications, approvals hazardous environments

certificate of suitability	
<ul style="list-style-type: none"> • IECEx • ATEX • ULhazloc approval • UKEX • CCC for hazardous zone according to GB standard • FM registration 	<p>Yes; IECEx Ex nA nC IIC T3 Gc</p> <p>Yes; ATEX (EX) II 3G Ex nA nC IIC T3 Gc</p> <p>Yes</p> <p>Yes</p> <p>Yes</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"> • American Bureau of Shipping Europe Ltd. (ABS) • French marine classification society (BV) • Det Norske Veritas (DNV) • Lloyds Register of Shipping (LRS) 	<p>No</p> <p>No</p> <p>Yes</p> <p>Yes</p>

standards, specifications, approvals Environmental Product Declaration

Environmental Product Declaration	Yes
global warming potential [CO2 eq]	
<ul style="list-style-type: none"> • total • during manufacturing • during operation • after end of life 	<p>754.4 kg</p> <p>15.1 kg</p> <p>738.5 kg</p> <p>0.55 kg</p>

ambient conditions

ambient temperature	
<ul style="list-style-type: none"> • during operation • during transport • during storage 	<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 terminal
<ul style="list-style-type: none"> • at input • at output • for auxiliary contacts 	<p>L, N, PE: 1 screw terminal each for 0.5 ... 2.5 mm² single-core/finely stranded</p> <p>L+, M: 4 screw terminals each for 0.5 ... 2.5 mm²</p> <p>-</p>

mechanical data

width × height × depth of the enclosure	80 × 125 × 120 mm
installation width × mounting height	80 mm × 205 mm
required spacing	
<ul style="list-style-type: none"> • top • bottom • left • right 	<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"> • DIN-rail mounting • S7 rail mounting • wall mounting 	<p>No</p> <p>Yes</p> <p>No</p>
housing can be lined up	Yes
net weight	0.8 kg

accessories

mechanical accessories	Mounting adapter for standard mounting rail (6EP1971-1BA00)
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further information internet links

internet link	
<ul style="list-style-type: none"> • to website: Industry Mall • to web page: selection aid TIA Selection Tool • to website: CAx-Download-Manager • to website: Industry Online Support 	<p>https://mall.industry.siemens.com</p> <p>https://www.siemens.com/tstcloud</p> <p>https://siemens.com/cax</p> <p>https://support.industry.siemens.com</p>

additional information

other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)
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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	15.1 kg
• global warming potential [CO2 eq] / during operation	738.5 kg
• global warming potential [CO2 eq] / after end of life	0.55 kg
• global warming potential [CO2 eq] / total	754.4 kg

Environment

General Product Approval



[Manufacturer Declaration](#)

[Declaration of Conformity](#)

General Product Approval

EMV

For use in hazardous locations

[China RoHS](#)



[BIS CRS](#)



For use in hazardous locations

Maritime application



[Miscellaneous](#)

[FM](#)

[CCC-Ex](#)



Maritime application



[NK / Nippon Kaiji Kyokai](#)



Maritime application

[CCS \(China Classification Society\)](#)

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