SIEMENS

Data sheet

6ES7307-1KA02-0AA0



SIMATIC PS307/1AC/24VDC/10A

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

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			
l2t 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 8 • voltage increases from of the output voltage 10 ns. • voltage increases 10 ns. • voltage increases 0	response delay maximum	
• spaal 0 rong output current 0 rong • rated range 0 - in 0 A • rated range 0 - in 0 A • rated range 0 - in 0 A • rated range a 0 - in 0 A • on thord-circuing during the start-up bypical 38 A • on thord-circuing during the start-up bypical 38 A • on thord-circuing during the start-up bypical 90 rms • on thord-circuing during the start-up bypical 90 rms • on thord-circuing during the start-up bypical 90 rms • on thord-circuing during the start-up bypical 90 rms • on thord-circuing during the start-up bypical 90 rms • on thord-circuing during the start-up bypical 90 rms • on thord-circuing during the start-up bypical 27 W • on thord-circuing during the start-up bypical 27 W • on thord-circuing during the start-up bypical 90 rms • on thord-circuing during the start-up bypical 21 restart-up bypical • ontage during the occur bypical bypical bas etc.pd 21 restart-up bypical • ontage during the occur bypical bas etc.pd 21 restart-up bypical • ontage during		2 s
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• at both-first during paration hybrids 38 A duration of overloading capability for excess current 80 ms • at a both-circuit during operation 80 ms • at a both-circuit during operation 80 ms • at a both-circuit during operation 90 % prover loss (M) 90 % • at a both-circuit during operation 90 % power loss (M) 27 W • at at a both-circuit during operation 90 % power loss (M) 27 W • at at at a both voltage for rated value of the output 27 W • finations 01 % full during operation of the output voltage with rapid full during operation of the output voltage power loss (M) 2.% • maximum 0.1 ms protection aff on control loop, shutdown at <28.8 V, automatic restart	short-term overload current	
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• on altor-circuling operation 60 ms • et altor-circuling operation 60 ms • or altor-circuling operation 60 ms • efficiency 90 % • prover loss [W] 90 % • at atted output voltage for rated value of the output ourset typical 27 W • at atted output voltage for rated value of the output ourset typical 0.1 % • for addition of the input voltage with rapid fluctuation of the input voltage by +1 15% typical 0.1 % • reastive control precision of the output voltage output voltage to date pd reastive control precision of the output voltage to date pd reastive control control control 2 % • maximum 0.1 ms • • output short-circuit proof Y es • design of the overvoltage protection Additional control loop, shutdown at < 28 8 V, automatic restart	 at short-circuit during operation typical 	38 A
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• for mains harmonics limitation EN 61000-3-2 • for interference immunity EN 61000-6-2 standards, specifications, approvals EN 61000-6-2 certificate of suitability Yes • CE marking 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 • CSA approval Yes; cULus-Listed (UL 508, CSA C22.2 No. 142), File E143289 • EAC approval Yes; cULus-Listed (UL 508, CSA C22.2 No. 142), File E143289 • EAC approval Yes; cULus-Listed (UL 508, CSA C22.2 No. 142), File E143289 • EAC approval Yes; cULus-Listed (UL 508, CSA C22.2 No. 142), File E143289 • EAC approval Yes; cULus-Listed (UL 508, CSA C22.2 No. 142), File E143289 • EAC approval Yes; • NEC Class 2 No type of certification Yes; R-41183539 • CB-certificate Yes MTBF at 40 °C 1 504 280 h standards, specifications, approvals hazardous environments Yes; IECEx Ex nA nC IIC T3 Gc certificate of suitability Yes; ATEX (EX) II 3G Ex nA nC IIC T3 Gc	operating resource protection class leakage current • maximum • typical	3.5 mA 0.6 mA
• for interference immunityEN 61000-6-2standards, specifications, approvalscertificate of suitability• CE marking• UL approval• UL approval• CSA approval• CSA approval• EAC approval• NEC Class 2• NEC Class 2• CB-certificate• BIS• CB-certificate• CB-certificate• CB-certificate• CB-certificate• CB-certificate• CB-certificate• CB-certificate• CB-certificate• CB-certificate• CB-certification• CB-certificate• CB-certificate• CB-certificate• CB-certificate• CB-certificate• CB-certificate• CB-certificate• CB-certificate• CB-certifications, approvals hazardous environments• CE-certificate• CB-certifications, approvals hazardous environments• CE-certificate of suitability• IECEx• ATEX• ATEX• CB-certificate• ATEX	operating resource protection class leakage current • maximum • typical protection class IP	3.5 mA 0.6 mA
standards, specifications, approvals certificate of suitability • CE marking • UL approval • UL approval • CSA approval • CSA approval • EAC approval • NEC Class 2 • NEC Class 2 • CB-certification • BIS • CB-certificate Yes MTBF at 40 °C standards, specifications, approvals hazardous environments certificate of suitability • IECEx • ATEX	operating resource protection class leakage current • maximum • typical protection class IP standard	3.5 mA 0.6 mA IP20
certificate of suitability Yes • CE marking 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 • EAC approval Yes • NEC Class 2 No type of certification Yes; R-41183539 • CB-certificate Yes MTBF at 40 °C 1 504 280 h standards, specifications, approvals hazardous environments Yes; IECEx Ex nA nC IIC T3 Gc certificate of suitability Yes; ATEX (EX) II 3G Ex nA nC IIC T3 Gc	operating resource protection class leakage current • maximum • typical protection class IP standard • for emitted interference	3.5 mA 0.6 mA IP20 EN 55022 Class B
• CE markingYes• UL approvalYes; cULus-Listed (UL 508, CSA C22.2 No. 142), File E143289• CSA approvalYes; cULus-Listed (UL 508, CSA C22.2 No. 142), File E143289• EAC approvalYes; cULus-Listed (UL 508, CSA C22.2 No. 142), File E143289• EAC approvalYes• NEC Class 2No• NEC Class 2No• BISYes; R-41183539• CB-certificateYes• CB-certificateYes• MTBF at 40 °C1 504 280 hstandards, specifications, approvals hazardous environmentscertificate of suitabilityYes; IECEx Ex nA nC IIC T3 Gc• IECExYes; ATEX (EX) II 3G Ex nA nC IIC T3 Gc	operating resource protection class leakage current • maximum • typical protection class IP standard • for emitted interference • for mains harmonics limitation	3.5 mA 0.6 mA IP20 EN 55022 Class B EN 61000-3-2
• UL approvalYes; cULus-Listed (UL 508, CSA C22.2 No. 142), File E143289• CSA approvalYes; cULus-Listed (UL 508, CSA C22.2 No. 142), File E143289• EAC approvalYes• NEC Class 2No• NEC Class 2No• BISYes; R-41183539• CB-certificateYesMTBF at 40 °C1 504 280 hstandards, specifications, approvals hazardous environmentscertificate of suitabilityYes; IECEx Ex nA nC IIC T3 GC• ATEXYes; ATEX (EX) II 3G Ex nA nC IIC T3 GC	operating resource protection class leakage current • maximum • typical protection class IP standard • for emitted interference • for mains harmonics limitation • for interference immunity	3.5 mA 0.6 mA IP20 EN 55022 Class B EN 61000-3-2
• CSA approvalYes; CULus-Listed (UL 508, CSA C22.2 No. 142), File E143289• EAC approvalYes• NEC Class 2Notype of certificationYes; R-41183539• CB-certificateYesMTBF at 40 °C1 504 280 hstandards, specifications, approvals hazardous environmentscertificate of suitabilityYes; IECEx Ex nA nC IIC T3 Gc• ATEXYes; ATEX (EX) II 3G Ex nA nC IIC T3 Gc	operating resource protection class leakage current • maximum • typical protection class IP standard • for emitted interference • for mains harmonics limitation • for interference immunity standards, specifications, approvals	3.5 mA 0.6 mA IP20 EN 55022 Class B EN 61000-3-2
• EAC approvalYes• NEC Class 2Notype of certification• BISYes; R-41183539• CB-certificateYesMTBF at 40 °C1 504 280 hstandards, specifications, approvals hazardous environmentscertificate of suitabilityYes; IECEx Ex nA nC IIC T3 Gc• ATEXYes; ATEX (EX) II 3G Ex nA nC IIC T3 Gc	operating resource protection class leakage current • maximum • typical protection class IP standard • for emitted interference • for mains harmonics limitation • for interference immunity standards, specifications, approvals certificate of suitability	3.5 mA 0.6 mA IP20 EN 55022 Class B EN 61000-3-2 EN 61000-6-2
• NEC Class 2Notype of certification• BISYes; R-41183539• CB-certificateYesMTBF at 40 °C1 504 280 hstandards, specifications, approvals hazardous environments1 504 280 hcertificate of suitability• IECExYes; IECEx Ex nA nC IIC T3 Gc• ATEXYes; ATEX (EX) II 3G Ex nA nC IIC T3 Gc	operating resource protection class leakage current • maximum • typical protection class IP standard • for emitted interference • for mains harmonics limitation • for interference immunity standards, specifications, approvals certificate of suitability • CE marking	3.5 mA 0.6 mA IP20 EN 55022 Class B EN 61000-3-2 EN 61000-6-2
type of certification • BIS Yes; R-41183539 • CB-certificate Yes MTBF at 40 °C 1 504 280 h standards, specifications, approvals hazardous environments certificate of suitability • IECEx Yes; IECEx Ex nA nC IIC T3 Gc • ATEX Yes; ATEX (EX) II 3G Ex nA nC IIC T3 Gc	operating resource protection class leakage current • maximum • typical protection class IP standard • for emitted interference • for mains harmonics limitation • for interference immunity standards, specifications, approvals certificate of suitability • CE marking • UL approval	3.5 mA 0.6 mA IP20 EN 55022 Class B EN 61000-3-2 EN 61000-6-2 Yes Yes; cULus-Listed (UL 508, CSA C22.2 No. 142), File E143289
• BISYes; R-41183539• CB-certificateYesMTBF at 40 °C1 504 280 hstandards, specifications, approvals hazardous environmentscertificate of suitability• IECExYes; IECEx Ex nA nC IIC T3 Gc• ATEXYes; ATEX (EX) II 3G Ex nA nC IIC T3 Gc	operating resource protection class leakage current • maximum • typical protection class IP standard • for emitted interference • for mains harmonics limitation • for interference immunity standards, specifications, approvals certificate of suitability • CE marking • UL approval • CSA approval	3.5 mA 0.6 mA IP20 EN 55022 Class B EN 61000-3-2 EN 61000-6-2 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
• CB-certificate Yes MTBF at 40 °C 1 504 280 h standards, specifications, approvals hazardous environments standards, specifications, approvals hazardous environments certificate of suitability IECEx ATEX <lu> </lu> Yes; IECEx Ex nA nC IIC T3 Gc Yes; ATEX (EX) II 3G Ex nA nC IIC T3 Gc	operating resource protection class leakage current • maximum • typical protection class IP standard • for emitted interference • for mains harmonics limitation • for interference immunity standards, specifications, approvals certificate of suitability • CE marking • UL approval • CSA approval • EAC approval • NEC Class 2	3.5 mA 0.6 mA IP20 EN 55022 Class B EN 61000-3-2 EN 61000-6-2 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
MTBF at 40 °C 1 504 280 h standards, specifications, approvals hazardous environments certificate of suitability IECEx ATEX Yes; IECEx Ex nA nC IIC T3 Gc Yes; ATEX (EX) II 3G Ex nA nC IIC T3 Gc	operating resource protection class leakage current • maximum • typical protection class IP standard • for emitted interference • for mains harmonics limitation • for interference immunity standards, specifications, approvals certificate of suitability • CE marking • UL approval • CSA approval • EAC approval • NEC Class 2	3.5 mA 0.6 mA IP20 EN 55022 Class B EN 61000-3-2 EN 61000-6-2 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
standards, specifications, approvals hazardous environments certificate of suitability IECEx ATEX Yes; IECEx Ex nA nC IIC T3 Gc Yes; ATEX (EX) II 3G Ex nA nC IIC T3 Gc	operating resource protection class leakage current • maximum • typical protection class IP standard • for emitted interference • for mains harmonics limitation • for interference immunity standards, specifications, approvals certificate of suitability • CE marking • UL approval • CSA approval • EAC approval • NEC Class 2 type of certification	3.5 mA 0.6 mA IP20 EN 55022 Class B EN 61000-3-2 EN 61000-6-2 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
certificate of suitability • • IECEx Yes; IECEx Ex nA nC IIC T3 Gc • ATEX Yes; ATEX (EX) II 3G Ex nA nC IIC T3 Gc	operating resource protection class leakage current • maximum • typical protection class IP standard • for emitted interference • for mains harmonics limitation • for interference immunity standards, specifications, approvals certificate of suitability • CE marking • UL approval • CSA approval • EAC approval • NEC Class 2 type of certification • BIS	3.5 mA 0.6 mA IP20 EN 55022 Class B EN 61000-3-2 EN 61000-6-2 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 Yes; R-41183539
ECEx Yes; IECEx Ex nA nC IIC T3 Gc ATEX Yes; ATEX (EX) II 3G Ex nA nC IIC T3 Gc	operating resource protection class leakage current • maximum • typical protection class IP standard • for emitted interference • for mains harmonics limitation • for interference immunity standards, specifications, approvals certificate of suitability • CE marking • UL approval • CSA approval • NEC Class 2 type of certification • BIS • CB-certificate MTBF at 40 °C	3.5 mA 0.6 mA IP20 EN 55022 Class B EN 61000-3-2 EN 61000-6-2 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 Yes; R-41183539 Yes
ATEX Yes; ATEX (EX) II 3G Ex nA nC IIC T3 Gc	operating resource protection class leakage current • maximum • typical protection class IP standard • for emitted interference • for mains harmonics limitation • for interference immunity standards, specifications, approvals certificate of suitability • CE marking • UL approval • CSA approval • NEC Class 2 type of certification • BIS • CB-certificate MTBF at 40 °C	3.5 mA 0.6 mA IP20 EN 55022 Class B EN 61000-3-2 EN 61000-6-2 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 Yes; R-41183539 Yes
	operating resource protection class leakage current • maximum • typical protection class IP standard • for emitted interference • for mains harmonics limitation • for interference immunity standards, specifications, approvals certificate of suitability • CE marking • UL approval • CSA approval • CSA approval • EAC approval • NEC Class 2 type of certification • BIS • CB-certificate MTBF at 40 °C standards, specifications, approvals hazardous environments	3.5 mA 0.6 mA IP20 EN 55022 Class B EN 61000-3-2 EN 61000-6-2 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 Yes; R-41183539 Yes
	operating resource protection class leakage current • maximum • typical protection class IP standard • for emitted interference • for mains harmonics limitation • for interference immunity standards, specifications, approvals certificate of suitability • CE marking • UL approval • CSA approval • REC Class 2 type of certification • BIS • CB-certificate MTBF at 40 °C standards, specifications, approvals hazardous environments	3.5 mA 0.6 mA IP20 EN 55022 Class B EN 61000-3-2 EN 61000-6-2 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 Yes; R-41183539 Yes 1 504 280 h
ULhazloc approval Yes	operating resource protection class leakage current • maximum • typical protection class IP standard • for emitted interference • for mains harmonics limitation • for interference immunity standards, specifications, approvals certificate of suitability • CE marking • UL approval • CSA approval • CSA approval • EAC approval • NEC Class 2 type of certification • BIS • CB-certificate MTBF at 40 °C standards, specifications, approvals hazardous environments certificate of suitability • IECEx	3.5 mA 0.6 mA IP20 EN 55022 Class B EN 61000-3-2 EN 61000-6-2 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 Yes; R-41183539 Yes 1 504 280 h Yes; IECEx Ex nA nC IIC T3 Gc

 cCSAus, Class 1, Division 2 	No
FM registration	Yes; Class I, Div. 2, Group ABCD, T4
standards, specifications, approvals marine classification	
shipbuilding approval	Yes
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)	Yes
standards, specifications, approvals Environmental Product Dec	slaration
Environmental Product Declaration	Yes
Global Warming Potential [CO2 eq]	
• total	861.1 kg
 during manufacturing 	15.8 kg
during operation	844.6 kg
after end of life	0.5 kg
ambient conditions	
ambient temperature	
during operation	0 60 °C; with natural convection
during transport	-40 +85 °C
• during storage	-40 +85 °C
environmental category according to IEC 60721	Climate class 3K3, 5 95% no condensation
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: 4 screw terminals each for 0.5 2.5 mm ²
for auxiliary contacts	•
mechanical data	00 · · 405 · · 400 · · · ·
width × height × depth of the enclosure	80 × 125 × 120 mm 80 mm × 205 mm
installation width × mounting height required spacing	00 11111 × 205 11111
• top	40 mm
• bottom	40 mm
• left	0 mm
• right	0 mm
fastening method	Can be mounted onto S7 rail
standard rail mounting	No
• S7 rail mounting	Yes
wall mounting	No
housing can be lined up	Yes
net weight	0.8 kg
accessories	
mechanical accessories	Mounting adapter for standard mounting rail (6EP1971-1BA00)
further information internet links	
internet link	
• to website: Industry Mall	https://mall.industry.siemens.com
to website: Industrial communication	https://siemens.com/industrial-communication
 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	
security information	Siemens provides products and solutions with industrial cybersecurity functions that support the secure operation of plants, systems, machines and networks. In order to protect plants, systems, machines and networks against cyber threats, it is necessary to implement – and continuously maintain – a holistic, state-of-the-art industrial cybersecurity concept. Siemens' products and solutions constitute one element of such a concept. Customers are responsible for preventing unauthorized access to their plants, systems, machines and networks. Such systems, machines and components should only be connected to an enterprise network or the internet if and to the extent such a connection is necessary and only when appropriate security measures (e.g. firewalls and/or

network segmentation) are in place. For additional information on industrial cybersecurity measures that may be implemented, please visit www.siemens.com/cybersecurity-industry. Siemens' products and solutions undergo continuous development to make them more secure. Siemens strongly recommends that product updates are applied as soon as they are available and that the latest product versions are used. Use of product versions that are no longer supported, and failure to apply the latest updates may increase customer's exposure to cyber threats. To stay informed about product updates, subscribe to the Siemens Industrial Cybersecurity RSS Feed under https://www.siemens.com/cert. (V4.7)

assifications					
				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
provals Certificates					
General Product App	roval		For use in hazardous	locations	
СВ	SP CSA	<u>Manufacturer Declara</u> tion	IECEx	X ATEX	BUREAU VERITAS
For use in hazard- ous locations	Marine / Shipping	Environment			
		EPD			

last modified:

6/26/2024 🖸