SIEMENS

Data sheet



SIMATIC PS305/DC24-110V/24V/2A/Outdoor

SIMATIC S7-300 with Regulated power supply PS305 input: 24-110 V DC output: 24 V DC/2 A

Figure similar

nput	
type of the power supply network	DC voltage
supply voltage at DC	24 110 V
input voltage at DC	16.8 138 V
wide range input	Yes
overvoltage overload capability	154 V; 0.1 s
buffering time for rated value of the output current in the event of power failure minimum	10 ms
operating condition of the mains buffering	at Vin rated
input current	
 at rated input voltage 24 V 	2.4 A
at rated input voltage 110 V	0.6 A
current limitation of inrush current at 25 °C maximum	20 A
duration of inrush current limiting at 25 °C	
• maximum	10 ms
I2t value maximum	5 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, suitable for DC
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 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
- husiaal	20\/
• typical	30 mV
• typical voltage peak	30 mv
	240 mV
voltage peak	
voltage peak • maximum	240 mV
voltage peak • maximum • typical	240 mV 150 mV
voltage peak • maximum • typical display version for normal operation	240 mV 150 mV Green LED for 24 V OK
voltage peak • maximum • typical display version for normal operation behavior of the output voltage when switching on	240 mV 150 mV Green LED for 24 V OK No overshoot of Vout (soft start)
voltage peak • maximum • typical display version for normal operation behavior of the output voltage when switching on response delay maximum	240 mV 150 mV Green LED for 24 V OK No overshoot of Vout (soft start)

output current		
rated value	2 A	
rated range	0 3 A; 3 A up to +60°C at Vin > 24 V	
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	VA	
on short-circuiting during the start-up	270 ms	
at short-circuit during operation	270 ms	
bridging of equipment	Yes	
number of parallel-switched equipment resources for increasing	2	
the power		
efficiency		
efficiency in percent	75 %	
power loss [W]		
 at rated output voltage for rated value of the output 	16 W	
current typical		
closed-loop control		
relative control precision of the output voltage with rapid	0.3 %	
fluctuation of the input voltage by +/- 15% typical	0.5.0/	
relative control precision of the output voltage load step of resistive load 50/100/50 % typical	2.5 %	
setting time		
load step 50 to 100% typical	2.5 ms	
• load step 100 to 50% typical	2.5 ms	
setting time	2.0 110	
maximum	5 ms	
protection and monitoring	O III O	
design of the overvoltage protection	Additional control loop, shutdown at approx. 30 V, automatic restart	
property of the output short-circuit proof	Yes	
	Electronic shutdown, automatic restart	
design of short-circuit protection	3.3 3.9 A	
response value current limitation	5.5 5.9 A	
enduring short circuit current RMS value • maximum	2 A	
	ZA	
safety	N/	
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	
protection class IP	IP20	
standard		
for emitted interference	EN 55011 Class A	
for mains harmonics limitation	not applicable	
for interference immunity	EN 61000-6-2	
standards, specifications, approvals	2.1.0.000 0.2	
certificate of suitability		
CE marking	Yes	
UL approval	Yes; UL-Listed (UL 508), File E143289; CSA (CSA C22.2 No. 142)	
CSA approval FAC approval	Yes; UL-Listed (UL 508), File E143289, CSA (CSA C22.2 No. 142)	
EAC approval NEC Class 3	Yes	
NEC Class 2 tupo of partification	No	
type of certification	No	
CB-certificate ATTP = 4.40 °C	No	
MTBF at 40 °C	964 506 h	
standards, specifications, approvals hazardous environments		
certificate of suitability		
• IECEx	No	
• ATEX	No	
ULhazloc approval	No	
 cCSAus, Class 1, Division 2 	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 De		
Environmental Product Declaration	Yes	
Global Warming Potential [CO2 eq]		
• total	512.2 kg	
during manufacturing	11.2 kg	
during operation	500.5 kg	
after end of life	0.36 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+1, M1, PE: 1 screw terminal each for 0.5 2.5 mm² 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 × 120	
installation width × mounting height	80 mm	
required spacing		
• top	50 mm	
• bottom	50 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	0.57 kg	
accessories	0.07 kg	
mechanical accessories	Mounting adapter for standard mounting rail (6ES7390-6BA00-0AA0)	
	intourning adapter for standard infounting rail (0E3/390-0DA00-0AA0)	
further information internet links		
internet link	https://orall.industry.cianage	
to website: Industry Mall	https://mall.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)

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

Environment

Manufacturer Declaration Declaration of Conformity







last modified:

Data sheet

6ES7307-1BA01-0AA0



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
12t value maximum	1 A ² ·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 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
r	

voltage increase time of the output voltage	
• typical	10 ms
output current	2 A
rated valuerated 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	00
on short-circuiting during the start-up ot short circuit during apparation.	90 ms 90 ms
at short-circuit during operation bridging of equipment	Yes
number of parallel-switched equipment resources for increasing	2
the power	2
efficiency	
efficiency in percent	84 %
power loss [W]	
 at rated output voltage for rated value of the output current typical 	9 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	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
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
property of the output short-circuit proof design of short-circuit protection	Electronic shutdown, automatic restart
property of the output short-circuit proof design of short-circuit protection response value current limitation	
property of the output short-circuit proof design of short-circuit protection response value current limitation enduring short circuit current RMS value	Electronic shutdown, automatic restart 2.2 2.6 A
property of the output short-circuit proof design of short-circuit protection response value current limitation enduring short circuit current RMS value • maximum	Electronic shutdown, automatic restart
property of the output short-circuit proof design of short-circuit protection response value current limitation enduring short circuit current RMS value • maximum safety	Electronic shutdown, automatic restart 2.2 2.6 A 2 A
property of the output short-circuit proof design of short-circuit protection response value current limitation enduring short circuit current RMS value • maximum safety galvanic isolation between input and output	Electronic shutdown, automatic restart 2.2 2.6 A 2 A Yes
property of the output short-circuit proof design of short-circuit protection response value current limitation enduring short circuit current RMS value • maximum safety galvanic isolation between input and output galvanic isolation	Electronic shutdown, automatic restart 2.2 2.6 A 2 A
property of the output short-circuit proof design of short-circuit protection response value current limitation enduring short circuit current RMS value • maximum safety galvanic isolation between input and output galvanic resource protection class	Electronic shutdown, automatic restart 2.2 2.6 A 2 A Yes Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178
property of the output short-circuit proof design of short-circuit protection response value current limitation enduring short circuit current RMS value • maximum safety galvanic isolation between input and output galvanic isolation	Electronic shutdown, automatic restart 2.2 2.6 A 2 A Yes Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178
property of the output short-circuit proof design of short-circuit protection response value current limitation enduring short circuit current RMS value	Electronic shutdown, automatic restart 2.2 2.6 A 2 A Yes Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I
property of the output short-circuit proof design of short-circuit protection response value current limitation enduring short circuit current RMS value • maximum safety galvanic isolation between input and output galvanic isolation operating resource protection class leakage current • maximum	Electronic shutdown, automatic restart 2.2 2.6 A 2 A Yes Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA
property of the output short-circuit proof design of short-circuit protection response value current limitation enduring short circuit current RMS value • maximum safety galvanic isolation between input and output galvanic isolation operating resource protection class leakage current • maximum • typical	Electronic shutdown, automatic restart 2.2 2.6 A 2 A Yes Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA 0.5 mA
property of the output short-circuit proof design of short-circuit protection response value current limitation enduring short circuit current RMS value • maximum safety galvanic isolation between input and output galvanic isolation operating resource protection class leakage current • maximum • typical protection class IP	Electronic shutdown, automatic restart 2.2 2.6 A 2 A Yes Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA 0.5 mA
property of the output short-circuit proof design of short-circuit protection response value current limitation enduring short circuit current RMS value • maximum safety galvanic isolation between input and output galvanic isolation operating resource protection class leakage current • maximum • typical protection class IP standard	Electronic shutdown, automatic restart 2.2 2.6 A 2 A Yes Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA 0.5 mA IP20
property of the output short-circuit proof design of short-circuit protection response value current limitation enduring short circuit current RMS value • maximum safety galvanic isolation between input and output galvanic isolation operating resource protection class leakage current • maximum • typical protection class IP standard • for emitted interference	Electronic shutdown, automatic restart 2.2 2.6 A 2 A Yes Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA 0.5 mA IP20 EN 55022 Class B
property of the output short-circuit proof design of short-circuit protection response value current limitation enduring short circuit current RMS value • maximum safety galvanic isolation between input and output galvanic isolation operating resource protection class leakage current • maximum • typical protection class IP standard • for emitted interference • for mains harmonics limitation	Electronic shutdown, automatic restart 2.2 2.6 A 2 A Yes Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA 0.5 mA IP20 EN 55022 Class B not applicable
property of the output short-circuit proof design of short-circuit protection response value current limitation enduring short circuit current RMS value • maximum safety galvanic isolation between input and output galvanic isolation 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	Electronic shutdown, automatic restart 2.2 2.6 A 2 A Yes Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA 0.5 mA IP20 EN 55022 Class B not applicable EN 61000-6-2
property of the output short-circuit proof design of short-circuit protection response value current limitation enduring short circuit current RMS value • maximum safety galvanic isolation between input and output galvanic isolation 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	Electronic shutdown, automatic restart 2.2 2.6 A 2 A Yes Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA 0.5 mA IP20 EN 55022 Class B not applicable EN 61000-6-2 Yes
property of the output short-circuit proof design of short-circuit protection response value current limitation enduring short circuit current RMS value • maximum safety galvanic isolation between input and output galvanic isolation 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	Electronic shutdown, automatic restart 2.2 2.6 A 2 A Yes Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA 0.5 mA IP20 EN 55022 Class B not applicable EN 61000-6-2 Yes Yes; cULus-Listed (UL 508, CSA C22.2 No. 142), File E143289
property of the output short-circuit proof design of short-circuit protection response value current limitation enduring short circuit current RMS value • maximum safety galvanic isolation between input and output galvanic isolation 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	Electronic shutdown, automatic restart 2.2 2.6 A Yes Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA 0.5 mA IP20 EN 55022 Class B not applicable 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
property of the output short-circuit proof design of short-circuit protection response value current limitation enduring short circuit current RMS value • maximum safety galvanic isolation between input and output galvanic isolation 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	Electronic shutdown, automatic restart 2.2 2.6 A 2 A Yes Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA 0.5 mA IP20 EN 55022 Class B not applicable 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
property of the output short-circuit proof design of short-circuit protection response value current limitation enduring short circuit current RMS value • maximum safety galvanic isolation between input and output galvanic isolation 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	Electronic shutdown, automatic restart 2.2 2.6 A Yes Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA 0.5 mA IP20 EN 55022 Class B not applicable 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
property of the output short-circuit proof design of short-circuit protection response value current limitation enduring short circuit current RMS value • maximum safety galvanic isolation between input and output galvanic isolation 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 • EAC approval • NEC Class 2 type of certification	Electronic shutdown, automatic restart 2.2 2.6 A Yes Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA 0.5 mA IP20 EN 55022 Class B not applicable 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
property of the output short-circuit proof design of short-circuit protection response value current limitation enduring short circuit current RMS value • maximum safety galvanic isolation between input and output galvanic isolation 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 • REC Class 2 type of certification • CB-certificate	Electronic shutdown, automatic restart 2.2 2.6 A 2 A Yes Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA 0.5 mA IP20 EN 55022 Class B not applicable 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
property of the output short-circuit proof design of short-circuit protection response value current limitation enduring short circuit current RMS value • maximum safety galvanic isolation between input and output galvanic isolation 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 • EAC approval • NEC Class 2 type of certification • CB-certificate MTBF at 40 °C	Electronic shutdown, automatic restart 2.2 2.6 A Yes Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA 0.5 mA IP20 EN 55022 Class B not applicable 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
property of the output short-circuit proof design of short-circuit protection response value current limitation enduring short circuit current RMS value • maximum safety galvanic isolation between input and output galvanic isolation 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 • REC Class 2 type of certification • CB-certificate	Electronic shutdown, automatic restart 2.2 2.6 A 2 A Yes Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA 0.5 mA IP20 EN 55022 Class B not applicable 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

IFOF	V 1505 5 4 0 10 74 0
• IECEX	Yes; IECEX Ex nA nC IIC T4 Gc
• ATEX	Yes; ATEX (EX) II 3G Ex nA nC IIC T4 Gc
ULhazloc approval	Yes
• cCSAus, Class 1, Division 2	No
FM registration	Yes; Class I, Div. 2, Group ABCD, T4
standards, specifications, approvals marine classification	V.
shipbuilding approval	Yes
Marine classification association	No.
American Bureau of Shipping Europe Ltd. (ABS) For all graning along if action positive (D) ()	No No
French marine classification society (BV) Det Nerske Verites (DNV)	No No
Det Norske Veritas (DNV) Lloyde Pegister of Shipping (LDS)	No Yes
 Lloyds Register of Shipping (LRS) standards, specifications, approvals Environmental Product Dec 	- 1
Environmental Product Declaration	Yes
Global Warming Potential [CO2 eq]	165
• total	289.8 kg
during manufacturing	7.9 kg
during manufacturing during operation	281.5 kg
after end of life	0.25 kg
ambient conditions	0.20 1.5
ambient temperature	
during operation	0 60 °C; with natural convection
during operation 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 mm² single-core/finely stranded
at output	L+, M: 2 screw terminals each for 0.5 2.5 mm ²
for auxiliary contacts	
mechanical data	
width × height × depth of the enclosure	40 × 120
installation width × mounting height	40 mm
required spacing	
• 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	0.4 kg
accessories	Mounting adapter for atendary and the will (AFD4074 4D400)
mechanical accessories	Mounting adapter for standard mounting rail (6EP1971-1BA00)
further information internet links	
internet link	https://mall.industry.giomono.com
to website: Industry Mall additional information	https://mall.industry.siemens.com
other information	Specifications at rated input voltage and ambient temperature +25 °C (unless
Sales information	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)

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



Manufacturer Declaration

Declaration of Conformity







EMV

For use in hazardous locations





IECEx





<u>FM</u>

CCC-Ex

For use in hazardous locations

Marine / Shipping















last modified:



6ES7307-1EA01-0AA0

Data sheet



SIMATIC PS307/1AC/24VDC/5A

SIMATIC S7-300 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	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 	2.3 A
 at rated input voltage 230 V 	1.2 A
current limitation of inrush current at 25 °C maximum	20 A
duration of inrush current limiting at 25 °C	
• maximum	3 ms
I2t value maximum	1.2 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 6 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 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	10 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	5 A	
rated range	0 5 A	
supplied active power typical	120 W	
short-term overload current	120 17	
on short-circuiting during the start-up typical	20 A	
at short-circuit during operation typical	20 A	
duration of overloading capability for excess current	20 A	
on short-circuiting during the start-up	100 ms	
	100 ms	
at short-circuit during operation bridging of equipment	Yes	
efficiency	165	
	07.0/	
efficiency in percent	87 %	
power loss [W]	40 10	
 at rated output voltage for rated value of the output current typical 	18 W	
closed-loop control		
relative control precision of the output voltage with rapid	0.1 %	
fluctuation of the input voltage by +/- 15% typical	•·······	
relative control precision of the output voltage load step of resistive load 50/100/50 % typical	1 %	
setting time		
load step 50 to 100% typical	0.3 ms	
• load step 100 to 50% typical	0.3 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	5.5 6.5 A	
enduring short circuit current RMS value	0.0 0.0 A	
maximum	7 A	
safety		
	Vec	
galvanic isolation between input and output	Yes	
galvanic isolation between input and output galvanic isolation	Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178	
galvanic isolation between input and output galvanic isolation operating resource protection class		
galvanic isolation between input and output galvanic isolation operating resource protection class leakage current	Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I	
galvanic isolation between input and output galvanic isolation operating resource protection class leakage current • maximum	Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA	
galvanic isolation between input and output galvanic isolation operating resource protection class leakage current • maximum • typical	Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA 0.5 mA	
galvanic isolation between input and output galvanic isolation operating resource protection class leakage current	Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA	
galvanic isolation between input and output galvanic isolation operating resource protection class leakage current	Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA 0.5 mA IP20	
galvanic isolation between input and output galvanic isolation operating resource protection class leakage current	Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA 0.5 mA IP20 EN 55022 Class B	
galvanic isolation between input and output galvanic isolation operating resource protection class leakage current	Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA 0.5 mA IP20 EN 55022 Class B EN 61000-3-2	
galvanic isolation between input and output galvanic isolation operating resource protection class leakage current	Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA 0.5 mA IP20 EN 55022 Class B	
galvanic isolation between input and output galvanic isolation operating resource protection class leakage current	Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA 0.5 mA IP20 EN 55022 Class B EN 61000-3-2	
galvanic isolation between input and output galvanic isolation operating resource protection class leakage current	Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA 0.5 mA IP20 EN 55022 Class B EN 61000-3-2	
galvanic isolation between input and output galvanic isolation operating resource protection class leakage current	Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA 0.5 mA IP20 EN 55022 Class B EN 61000-3-2	
galvanic isolation between input and output galvanic isolation operating resource protection class leakage current	Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA 0.5 mA IP20 EN 55022 Class B EN 61000-3-2 EN 61000-6-2	
galvanic isolation between input and output galvanic isolation operating resource protection class leakage current	Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA 0.5 mA IP20 EN 55022 Class B EN 61000-3-2 EN 61000-6-2	
galvanic isolation between input and output galvanic isolation operating resource protection class leakage current	Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA 0.5 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	
galvanic isolation between input and output galvanic isolation operating resource protection class leakage current	Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA 0.5 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	
galvanic isolation between input and output galvanic isolation operating resource protection class leakage current	Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA 0.5 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	
galvanic isolation between input and output galvanic isolation operating resource protection class leakage current	Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA 0.5 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	
galvanic isolation between input and output galvanic isolation operating resource protection class leakage current	Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA 0.5 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	
galvanic isolation between input and output galvanic isolation operating resource protection class leakage current	Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA 0.5 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	
galvanic isolation between input and output galvanic isolation operating resource protection class leakage current	Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA 0.5 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	
galvanic isolation between input and output galvanic isolation operating resource protection class leakage current	Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA 0.5 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	
galvanic isolation between input and output galvanic isolation operating resource protection class leakage current	Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA 0.5 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	
galvanic isolation between input and output galvanic isolation operating resource protection class leakage current	Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA 0.5 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 2 480 589 h Yes; IECEx Ex nA nC IIC T3 Gc	
galvanic isolation between input and output galvanic isolation operating resource protection class leakage current	Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA 0.5 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 2 480 589 h	

 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	claration	
Environmental Product Declaration	Yes	
Global Warming Potential [CO2 eq]		
• total	575.4 kg	
during manufacturing	11.8 kg	
during operation	563.1 kg	
after end of life	0.38 kg	
ambient conditions	,	
ambient temperature		
during operation	0 60 °C; with natural convection	
during operation 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 mm² single-core/finely stranded	
• at output	L+, M: 3 screw terminals each for 0.5 2.5 mm²	
for auxiliary contacts	LT, W. S SOLOW COMMINGS CACH TO C.S 2.5 Milli	
mechanical data	•	
width × height × depth of the enclosure	60 × 120	
installation width × mounting height	60 mm	
required spacing	OO HIIII	
• 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	
	0.6 kg	
net weight accessories	o.o ng	
	Mounting adapter for standard mounting rail (CED4074 4DA00)	
mechanical accessories	Mounting adapter for standard mounting rail (6EP1971-1BA00)	
further information internet links		
internet link	https://exall.industry.cionsons.com	
to website: Industry Mall	https://mall.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)

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
	eClass eClass eClass eClass eClass eClass eClass ETIM ETIM ETIM IDEA	eClass 14 eClass 9.1 eClass 9.1 eClass 9 eClass 6 eClass 6 ETIM 9 ETIM 8 ETIM 7 IDEA 4

Approvals Certificates

General Product Approval

CB

Manufacturer Declaration Declaration of Conformity







General Product Approval

EMV

For use in hazardous locations

BIS CRS











For use in hazardous locations

Marine / Shipping

<u>FM</u>

CCC-Ex









Environment



last modified:

Data sheet



SIMATIC PS307/1AC/DC24V/5A/Outdoor

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

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
12t 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
utput	
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 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	
• maximum	240 mV
• typical	90 mV
display version for normal operation	Green LED for 24 V OK
diopids for ion normal operation	CIOCITEED IO. E.I. V. OIC

response delay maximum	3 s
voltage increase time of the output voltage	
• typical	100 ms
output current	
rated value	5 A
rated range	0 5 A
supplied active power typical	120 W
short-term overload current	
 on short-circuiting during the start-up typical 	20 A
at short-circuit during operation typical	20 A
duration of overloading capability for excess current	
on short-circuiting during the start-up	180 ms
at short-circuit during operation	80 ms
bridging of equipment	No
efficiency	
efficiency in percent	84 %
· ·	04 70
power loss [W]	22.14/
 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	0.3 %
fluctuation of the input voltage by +/- 15% typical	
relative control precision of the output voltage load step of resistive load 50/100/50 % typical	3 %
setting time	
load step 50 to 100% typical	0.2 ms
 load step 100 to 50% typical 	0.2 ms
setting time	
• 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	
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	
maximum	3.5 mA
• typical	0.3 mA
protection class IP	IP20
standard	11 20
	EN 55011 Class A
• for emitted interference	EN 55011 Class A
• for mains harmonics limitation	- FN 04000 6 0
for interference immunity	EN 61000-6-2
standards, specifications, approvals	
certificate of suitability	
CE marking	Yes
UL approval	Yes; UL-Listed (UL 508), File E143289; CSA (CSA C22.2 No. 142)
CSA approval	Yes; UL-Listed (UL 508), File E143289, CSA (CSA C22.2 No. 142)
• EAC approval	Yes
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
• cCSAus, Class 1, Division 2	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 De	
Environmental Product Declaration	Yes
Global Warming Potential [CO2 eq]	
• total	731.2 kg
during manufacturing	11.2 kg
during operation	719.5 kg
after end of life	0.36 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 mm² 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 × 120
installation width × mounting height	80 mm
required spacing	
• top	50 mm
• bottom	50 mm
• left	0 mm
• right	0 mm
fastening method	Can be mounted onto S7 rail
standard rail mounting S7 rail mounting	No
S7 rail mounting	Yes
wall mounting	No
housing can be lined up	Yes 0.57 kg
net weight	0.57 kg
accessories	Mounting adopter for standard and with a will (OFOTOCO OF ACC CAAC)
mechanical accessories	Mounting adapter for standard mounting rail (6ES7390-6BA00-0AA0)
further information internet links	
internet link	http://example.com
to website: Industry Mall additional information	https://mall.industry.siemens.com
additional information	Openifications at a total insurt. It is a last total insurt.
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 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)

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

Marine / Shipping

Manufacturer Declara-<u>tion</u>

Declaration of Conformity









Marine / Shipping

Environment





last modified:



SIEMENS

Data sheet



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
I2t value maximum	3.3 A²·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 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	
• typical	10 ms
output current	
rated value	10 A
rated range	0 10 A
supplied active power typical	240 W
short-term overload current	
on short-circuiting during the start-up typical	38 A
at short-circuit during operation typical	38 A
duration of overloading capability for excess current	
on short-circuiting during the start-up	80 ms
at short-circuit during operation	80 ms
bridging of equipment	Yes
efficiency	
efficiency in percent	90 %
power loss [W]	
at rated output voltage for rated value of the output	27 W
current typical	27 77
closed-loop control	
relative control precision of the output voltage with rapid	0.1 %
fluctuation of the input voltage by +/- 15% typical	
relative control precision of the output voltage load step of resistive load 50/100/50 % typical	2 %
setting time	
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	
enduring short circuit current RMS value • maximum	12 A
-	12 A
maximum	12 A Yes
• maximum safety	
maximum safety galvanic isolation between input and output	Yes
maximum safety galvanic isolation between input and output galvanic isolation	Yes Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178
maximum safety galvanic isolation between input and output galvanic isolation operating resource protection class	Yes Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178
maximum safety galvanic isolation between input and output galvanic isolation operating resource protection class leakage current	Yes Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I
maximum safety galvanic isolation between input and output galvanic isolation operating resource protection class leakage current maximum	Yes Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA
maximum safety galvanic isolation between input and output galvanic isolation operating resource protection class leakage current maximum typical	Yes Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA 0.6 mA
maximum safety galvanic isolation between input and output galvanic isolation operating resource protection class leakage current maximum typical protection class IP	Yes Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA 0.6 mA
maximum safety galvanic isolation between input and output galvanic isolation operating resource protection class leakage current maximum typical protection class IP standard	Yes Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA 0.6 mA IP20
maximum safety galvanic isolation between input and output galvanic isolation operating resource protection class leakage current maximum typical protection class IP standard for emitted interference	Yes Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA 0.6 mA IP20 EN 55022 Class B
maximum safety galvanic isolation between input and output galvanic isolation operating resource protection class leakage current maximum typical protection class IP standard for emitted interference for mains harmonics limitation	Yes Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA 0.6 mA IP20 EN 55022 Class B EN 61000-3-2
maximum safety galvanic isolation between input and output galvanic isolation operating resource protection class leakage current	Yes Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA 0.6 mA IP20 EN 55022 Class B EN 61000-3-2
maximum safety galvanic isolation between input and output galvanic isolation 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	Yes Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA 0.6 mA IP20 EN 55022 Class B EN 61000-3-2
maximum safety galvanic isolation between input and output galvanic isolation 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	Yes Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA 0.6 mA IP20 EN 55022 Class B EN 61000-3-2 EN 61000-6-2 Yes
maximum safety galvanic isolation between input and output galvanic isolation 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	Yes Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 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
maximum safety galvanic isolation between input and output galvanic isolation operating resource protection class leakage current	Yes Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 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
maximum safety galvanic isolation between input and output galvanic isolation 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	Yes Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 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
 ■ maximum safety galvanic isolation between input and output galvanic isolation 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 	Yes Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 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
● maximum safety galvanic isolation between input and output galvanic isolation 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	Yes Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 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
 maximum safety galvanic isolation between input and output galvanic isolation 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 	Yes Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 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
 maximum safety galvanic isolation between input and output galvanic isolation 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 CB-certificate 	Yes Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 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
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 ■ maximum safety galvanic isolation between input and output galvanic isolation 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 ● EAC approval ● NEC Class 2 type of certification ● BIS ● CB-certificate MTBF at 40 °C standards, specifications, approvals hazardous environments 	Yes Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 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
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maximum safety galvanic isolation between input and output galvanic isolation operating resource protection class leakage current	Yes Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 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 Yes; ATEX (EX) II 3G Ex nA nC IIC T3 Gc
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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	**
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	5.5 hg
ambient temperature	
during operation	0 60 °C; with natural convection
during operation during transport	-40 +85 °C
	-40 +85 °C
during storage environmental category according to IEC 60721	Climate class 3K3, 5 95% no condensation
	Climate class SK3, 5 95% no condensation
connection method	screw terminal
type of electrical connection	
• at input	L, N, PE: 1 screw terminal each for 0.5 2.5 mm² single-core/finely stranded
• at output	L+, M: 4 screw terminals each for 0.5 2.5 mm ²
for auxiliary contacts	
mechanical data	
width × height × depth of the enclosure	80 × 120
installation width × mounting height	80 mm
required spacing	
• 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
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
y	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)

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



Manufacturer Declaration Declaration of Conformity







General Product Approval

EMV

For use in hazardous locations

BIS CRS









<u>FM</u>

For use in hazardous locations

Marine / Shipping

Environment

CCC-Ex











last modified: