Data sheet



CONFORMAL COATING BASED ON 6ES7307-1KA02-0AA0 . STABILIZED POWER SUPPLY PS307 INPUT: 120/230 V AC OUTPUT: 24 V DC/10 A

SIPLUS S7-300 PS 307 10A -25 ... +70 DEGREES C WITH

Figure similar

Supply voltage	
Rated value (AC)	
• 120 V AC	Yes; 85 to 132 V AC
• 230 V AC	Yes; 170 to 264 V AC
Overvoltage strength	2.3x Ue rated, 1.3 ms
Line frequency	
• permissible range, lower limit	47 Hz
 permissible range, upper limit 	63 Hz
Mains buffering	
 Mains/voltage failure stored energy time 	20 ms; min., for la rated and Ue = 93 / 187 V
• Repeat rate, min.	1 s
1t	
Input current	
Rated value at 120 V AC	4.2 A
Rated value at 230 V AC	1.9 A
Inrush current, max.	55 A; max. at 25 °C, duration max. 3 ms
l²t	3.3 A²·s
Leakage current, typ.	0.6 mA

Rated value (DC) Permissible range, lower limit (DC) 23.27 V Permissible range, upper limit (DC) 24.72 V Power up time, max. Voltage rise time, typ. 10 ms Overvoltage protection Additional control circuit, cutoff at < 28.8 V, automatic restart electronic trip, automatic restart Residual ripple, typ. 15 mV; Peak - peak Residual ripple, max. 50 mV; Peak - peak Output current Current output (rated value) Short-circuit protection Yes; Electronic Continuous short-circuit current, max. 12 A Power Active power input, typ. 240 W Efficiency 90 %; approx., at Ua rated, la rated Power loss Power loss, typ. 27 W; approx., at Ua rated, la rated Interrupts/diagnostics/status information Diagnostics indication LED Output voltage 24 V DC (green) Position Primary/secondary Yes; SELV output voltage Ua according to EN 60950-1 and EN 50178 SELV Yes Isolation Rated insulation voltage (24 V against L1) 250 V AC, tested with 4 200 V DC EMC EMC interference emission EN 55022 Class B	Leakage current, max.	3.5 mA
Rated value (DC) 24 V; stable at no-load max. 2.5 s permissible range, lower limit (DC) 23.27 V permissible range, upper limit (DC) 24.72 V Power up time, max. 2 s Voltage rise time, typ. 10 ms Vorevoltage protection Additional control circuit, cutoff at < 28.8 V, automatic restart electronic trip, automatic restart electronic	Overcurrent overload capability	80 ms on short circuit during startup and operation
permissible range, lower limit (DC) 23.27 V permissible range, upper limit (DC) 24.72 V Power up time, max. 2s Voltage rise time, typ. 10 ms Overvoltage protection Additional control circuit, cutoff at < 28.8 V, automatic restart electronic trip, automatic rest	Output voltage	
permissible range, upper limit (DC) Power up time, max. 2 s Voltage rise time, typ. 10 ms Overvoltage protection Additional control circuit, cutoff at < 28.8 V, automatic restart electronic trip, automatic restart electronic trip, automatic restart Residual ripple, typ. 15 mV; Peak - peak Current output (rated value) Short-circuit protection Current output (rated value) Short-circuit current, max. 10 A; 7 A @ > 60 °C, can be switched in parallel Short-circuit protection Continuous short-circuit current, max. 12 A Power Active power input, typ. Efficiency 90 %; approx., at Ua rated, la rated Power loss Power loss, typ. 27 W; approx., at Ua rated, la rated Interrupts/diagnostics/status information Diagnostics indication LED • Output voltage 24 V DC (green) Posis SELV Potential separation primary/secondary Yes; SELV output voltage Ua according to EN 60950-1 and EN 50178 SELV Yes Isolation Isolation tested with Rated insulation voltage (24 V against L1) 250 V AC, tested with 4 200 V DC EMC EMC interference emission EN 61000-6-2 EMC interference emission Degree and class of protection Degree and class of protection Degree of protection acc. to EN 60529 Equipment protection class I, with protective conductor	Rated value (DC)	24 V; stable at no-load max. 2.5 s
Power up time, max. Voltage rise time, typ. Overvoltage protection Additional control circuit, cutoff at < 28.8 V, automatic restart Additional control circuit, cutoff at < 28.8 V, automatic restart electronic trip, automatic restart Residual ripple, typ. 15 mV; Peak - peak Residual ripple, max. 50 mV; Peak - peak Output current Current output (rated value) 10 A; 7 A @ > 60 °C, can be switched in parallel Yes; Electronic Continuous short-circuit current, max. 12 A Power Active power input, typ. Efficiency 90 %; approx., at Ua rated, la rated Power loss, typ. 27 W; approx., at Ua rated, la rated Interrupts/diagnostics/status information Diagnostics indication LED • Output voltage 24 V DC (green) Potential separation primary/secondary Yes; SELV output voltage Ua according to EN 60950-1 and EN 50178 SELV Yes Isolation Isolation tested with Rated insulation voltage (24 V against L1) 250 V AC, tested with 4 200 V DC EMC EMC interference emission Degree and class of protection Degree and class of protection Degree of protection acc. to EN 60529 Equipment protection class I, with protective conductor Standards, approvals, certificates	permissible range, lower limit (DC)	23.27 V
Voltage rise time, typ. Overvoltage protection Additional control circuit, cutoff at < 28.8 V, automatic restart electronic trip, automatic restart electronic trip, automatic restart 8	permissible range, upper limit (DC)	24.72 V
Overvoltage protection Additional control circuit, cutoff at < 28.8 V, automatic restart Short-circuit strength Residual ripple, typ. Residual ripple, max. Output current Current output (rated value) Short-circuit protection Continuous short-circuit current, max. 12 A Power Active power input, typ. 240 W Efficiency 90 %; approx., at Ua rated, la rated Power loss, typ. 27 W; approx., at Ua rated, la rated Interrupts/diagnostics/status information Diagnostics indication LED • Output voltage 24 V DC (green) Potential separation primary/secondary Yes: SELV output voltage Ua according to EN 60950-1 and EN 50178 SELV Yes Isolation Isolation tested with Rated insulation voltage (24 V against L1) 250 V AC, tested with 4 200 V DC EMC EMC EMC interference emission Degree and class of protection Degree of protection acc. to EN 60529 Equipment protection class I, with protective conductor Standards, approvals, certificates	Power up time, max.	2 s
Short-circuit strength electronic trip, automatic restart Residual ripple, typ. 15 mV; Peak - peak Residual ripple, max. 50 mV; Peak - peak Output current Current output (rated value) 10 A; 7 A @ > 60 °C, can be switched in parallel Short-circuit protection Yes; Electronic Continuous short-circuit current, max. 12 A Power Active power input, typ. 240 W Efficiency 90 %; approx., at Ua rated, la rated Power loss Power loss, typ. 27 W; approx., at Ua rated, la rated Interrupts/diagnostics/status information Diagnostics indication LED • Output voltage 24 V DC (green) Yes; OK for 24 V Potential separation primary/secondary Yes; SELV output voltage Ua according to EN 60950-1 and EN 50178 SELV Yes Isolation Isolation tested with Rated insulation voltage (24 V against L1) 250 V AC, tested with 4 200 V DC EMC EMC interference emission EN 55022 Class B Degree and class of protection Degree of protection acc. to EN 60529 IP20 Equipment protection class I, with protective conductor	Voltage rise time, typ.	10 ms
Residual ripple, typ. Residual ripple, max. 50 mV; Peak - peak Current output (rated value) Short-circuit protection Continuous short-circuit current, max. 12 A Power Active power input, typ. Efficiency 90 %; approx., at Ua rated, la rated Power loss, typ. 27 W; approx., at Ua rated, la rated Interrupts/diagnostics/status information Diagnostics indication LED • Output voltage 24 V DC (green) Yes; SELV output voltage Ua according to EN 60950-1 and EN 50178 SELV Yes Solation Isolation tested with Rated insulation voltage (24 V against L1) 250 V AC, tested with 4 200 V DC EMC EMC EMC interference emission Degree and class of protection Degree of protection acc. to EN 60529 Equipment protection class I, with protective conductor Standards, approvals, certificates	Overvoltage protection	Additional control circuit, cutoff at < 28.8 V, automatic restart
Residual ripple, max. 50 mV; Peak - peak Output current Current output (rated value) Short-circuit protection Continuous short-circuit current, max. 12 A Power Active power input, typ. Efficiency Power loss Power loss Power loss, typ. 27 W; approx., at Ua rated, la rated Interrupts/diagnostics/status information Diagnostics indication LED Output voltage 24 V DC (green) Potential separation primary/secondary SELV Yes Isolation Isolation tested with Rated insulation voltage (24 V against L1) 250 V AC, tested with 4 200 V DC EMC EMC interference emission Degree and class of protection Degree of protection acc. to EN 60529 Equipment protection class I, with protective conductor Standards, approvals, certificates	Short-circuit strength	electronic trip, automatic restart
Output current Current output (rated value) Short-circuit protection Continuous short-circuit current, max. 12 A Power Active power input, typ. Efficiency 90 %; approx., at Ua rated, la rated Power loss Power loss, typ. 27 W; approx., at Ua rated, la rated Interrupts/diagnostics/status information Diagnostics indication LED Output voltage 24 V DC (green) Potential separation primary/secondary Yes; SELV output voltage Ua according to EN 60950-1 and EN 50178 SELV Isolation Isolation tested with Rated insulation voltage (24 V against L1) 250 V AC, tested with 4 200 V DC EMC EMC EMC interference emission Degree and class of protection Degree of protection acc. to EN 60529 Equipment protection class I, with protective conductor Standards, approvals, certificates	Residual ripple, typ.	15 mV; Peak - peak
Current output (rated value) Short-circuit protection Yes; Electronic Continuous short-circuit current, max. 12 A Power Active power input, typ. Efficiency 90 %; approx., at Ua rated, la rated Power loss Power loss Power loss, typ. 27 W; approx., at Ua rated, la rated Interrupts/diagnostics/status information Diagnostics indication LED • Output voltage 24 V DC (green) Potential separation primary/secondary Yes; SELV output voltage Ua according to EN 60950-1 and EN 50178 SELV Yes Isolation Isolation tested with Rated insulation voltage (24 V against L1) 250 V AC, tested with 4 200 V DC EMC EMC interference immunity EN 61000-6-2 EMC interference emission Degree and class of protection Degree of protection acc. to EN 60529 Equipment protection class I, with protective conductor Standards, approvals, certificates	Residual ripple, max.	50 mV; Peak - peak
Short-circuit protection Continuous short-circuit current, max. 12 A Power Active power input, typ. Efficiency 90 %; approx., at Ua rated, la rated Power loss Power loss, typ. 27 W; approx., at Ua rated, la rated Interrupts/diagnostics/status information Diagnostics indication LED • Output voltage 24 V DC (green) Yes; OK for 24 V Potential separation primary/secondary Yes; SELV output voltage Ua according to EN 60950-1 and EN 50178 SELV Yes Isolation Isolation tested with Rated insulation voltage (24 V against L1) 250 V AC, tested with 4 200 V DC EMC EMC interference immunity EN 61000-6-2 EMC interference emission Degree and class of protection Degree of protection acc. to EN 60529 Equipment protection class I, with protective conductor Standards, approvals, certificates	Output current	
Continuous short-circuit current, max. 12 A Power Active power input, typ. Efficiency 90 %; approx., at Ua rated, Ia rated Power loss Power loss, typ. 27 W; approx., at Ua rated, Ia rated Interrupts/diagnostics/status information Diagnostics indication LED • Output voltage 24 V DC (green) Potential separation primary/secondary Yes; SELV output voltage Ua according to EN 60950-1 and EN 50178 SELV Yes Isolation Isolation tested with Rated insulation voltage (24 V against L1) 250 V AC, tested with 4 200 V DC EMC EMC interference immunity EN 61000-6-2 EMC interference emission Degree and class of protection Degree of protection acc. to EN 60529 Equipment protection class I, with protective conductor Standards, approvals, certificates	Current output (rated value)	10 A; 7 A @ > 60 °C, can be switched in parallel
Active power input, typ. 240 W Efficiency 90 %; approx., at Ua rated, Ia rated Power loss Power loss, typ. 27 W; approx., at Ua rated, Ia rated Interrupts/diagnostics/status information Diagnostics indication LED • Output voltage 24 V DC (green) Yes; OK for 24 V Potential separation primary/secondary Yes; SELV output voltage Ua according to EN 60950-1 and EN 50178 SELV Yes Isolation Isolation Ested with Rated insulation voltage (24 V against L1) 250 V AC, tested with 4 200 V DC EMC EMC interference emission EN 55022 Class B Degree and class of protection Degree of protection acc. to EN 60529 IP20 Equipment protection class I, with protective conductor Standards, approvals, certificates	Short-circuit protection	Yes; Electronic
Active power input, typ. Efficiency 90 %; approx., at Ua rated, la rated Power loss Power loss, typ. 27 W; approx., at Ua rated, la rated Interrupts/diagnostics/status information Diagnostics indication LED • Output voltage 24 V DC (green) Potential separation primary/secondary Yes; SELV output voltage Ua according to EN 60950-1 and EN 50178 SELV Yes Isolation Isolation tested with Rated insulation voltage (24 V against L1) 250 V AC, tested with 4 200 V DC EMC EMC interference immunity EN 61000-6-2 EMC interference emission Degree and class of protection Degree of protection acc. to EN 60529 Equipment protection class I, with protective conductor Standards, approvals, certificates	Continuous short-circuit current, max.	12 A
Efficiency 90 %; approx., at Ua rated, la rated Power loss Power loss, typ. 27 W; approx., at Ua rated, la rated Interrupts/diagnostics/status information Diagnostics indication LED • Output voltage 24 V DC (green) Potential separation primary/secondary Yes; SELV output voltage Ua according to EN 60950-1 and EN 50178 SELV Yes Isolation Isolation Isolation tested with Rated insulation voltage (24 V against L1) 250 V AC, tested with 4 200 V DC EMC EMC interference emission EN 55022 Class B Degree and class of protection Degree of protection acc. to EN 60529 Equipment protection class I, with protective conductor Standards, approvals, certificates	Power	
Power loss Power loss, typ. 27 W; approx., at Ua rated, Ia rated Interrupts/diagnostics/status information Diagnostics indication LED • Output voltage 24 V DC (green) Yes; OK for 24 V Potential separation primary/secondary Yes; SELV output voltage Ua according to EN 60950-1 and EN 50178 SELV Yes Isolation Isolation tested with Rated insulation voltage (24 V against L1) 250 V AC, tested with 4 200 V DC EMC EMC interference emission EN 55022 Class B Degree and class of protection Degree of protection acc. to EN 60529 IP20 Equipment protection class I, with protective conductor Standards, approvals, certificates	Active power input, typ.	240 W
Power loss, typ. 27 W; approx., at Ua rated, la rated Interrupts/diagnostics/status information Diagnostics indication LED Output voltage 24 V DC (green) Yes; OK for 24 V Potential separation primary/secondary Yes; SELV output voltage Ua according to EN 60950-1 and EN 50178 SELV Yes Isolation Isolation Rated insulation voltage (24 V against L1) 250 V AC, tested with 4 200 V DC EMC EMC interference immunity EN 61000-6-2 EMC interference emission Degree and class of protection Degree of protection acc. to EN 60529 Equipment protection class I, with protective conductor Standards, approvals, certificates	Efficiency	90 %; approx., at Ua rated, la rated
Interrupts/diagnostics/status information Diagnostics indication LED Output voltage 24 V DC (green) Yes; OK for 24 V Potential separation primary/secondary Yes; SELV output voltage Ua according to EN 60950-1 and EN 50178 SELV Yes Isolation Isolation tested with Rated insulation voltage (24 V against L1) 250 V AC, tested with 4 200 V DC EMC EMC EMC interference emission EN 61000-6-2 EMC interference emission Degree and class of protection Degree of protection acc. to EN 60529 Equipment protection class I, with protective conductor Standards, approvals, certificates	Power loss	
Diagnostics indication LED Output voltage 24 V DC (green) Yes; OK for 24 V Potential separation primary/secondary Yes; SELV output voltage Ua according to EN 60950-1 and EN 50178 SELV Yes Isolation Isolation tested with Rated insulation voltage (24 V against L1) 250 V AC, tested with 4 200 V DC EMC EMC EMC interference immunity EN 61000-6-2 EMC interference emission EN 55022 Class B Degree and class of protection Degree of protection acc. to EN 60529 Equipment protection class I, with protective conductor Standards, approvals, certificates	Power loss, typ.	27 W; approx., at Ua rated, la rated
Output voltage 24 V DC (green) Potential separation primary/secondary Yes; SELV output voltage Ua according to EN 60950-1 and EN 50178 SELV Yes Isolation Isolation tested with Rated insulation voltage (24 V against L1) 250 V AC, tested with 4 200 V DC EMC EMC EMC interference immunity EN 61000-6-2 EMC interference emission EN 55022 Class B Degree and class of protection Degree of protection acc. to EN 60529 Equipment protection class I, with protective conductor Standards, approvals, certificates	Interrupts/diagnostics/status information	
Potential separation primary/secondary Yes; SELV output voltage Ua according to EN 60950-1 and EN 50178 SELV Yes Isolation Isolation tested with Rated insulation voltage (24 V against L1) 250 V AC, tested with 4 200 V DC EMC EMC interference immunity EN 61000-6-2 EMC interference emission Degree and class of protection Degree of protection acc. to EN 60529 Equipment protection class I, with protective conductor Standards, approvals, certificates	Diagnostics indication LED	
primary/secondary Yes; SELV output voltage Ua according to EN 60950-1 and EN 50178 Yes Yes Isolation Isolation tested with Rated insulation voltage (24 V against L1) 250 V AC, tested with 4 200 V DC EMC EMC interference immunity EN 61000-6-2 EMC interference emission EN 55022 Class B Degree and class of protection Degree of protection acc. to EN 60529 Equipment protection class I, with protective conductor Standards, approvals, certificates	 Output voltage 24 V DC (green) 	Yes; OK for 24 V
SELV Yes Isolation Isolation tested with Rated insulation voltage (24 V against L1) 250 V AC, tested with 4 200 V DC EMC EMC EMC interference immunity EN 61000-6-2 EMC interference emission EN 55022 Class B Degree and class of protection Degree of protection acc. to EN 60529 Equipment protection class I, with protective conductor Standards, approvals, certificates	Potential separation	
Isolation Isolation tested with Rated insulation voltage (24 V against L1) 250 V AC, tested with 4 200 V DC EMC EMC interference immunity EN 61000-6-2 EMC interference emission EN 55022 Class B Degree and class of protection Degree of protection acc. to EN 60529 Equipment protection class I, with protective conductor Standards, approvals, certificates	primary/secondary	
Isolation tested with Rated insulation voltage (24 V against L1) 250 V AC, tested with 4 200 V DC EMC EMC interference immunity EN 61000-6-2 EMC interference emission EN 55022 Class B Degree and class of protection Degree of protection acc. to EN 60529 Equipment protection class I, with protective conductor Standards, approvals, certificates	SELV	Yes
EMC EMC interference immunity EN 61000-6-2 EMC interference emission EN 55022 Class B Degree and class of protection Degree of protection acc. to EN 60529 Equipment protection class I, with protective conductor Standards, approvals, certificates	Isolation	
EMC interference immunity EN 61000-6-2 EMC interference emission EN 55022 Class B Degree and class of protection Degree of protection acc. to EN 60529 Equipment protection class I, with protective conductor Standards, approvals, certificates	Isolation tested with	
EMC interference emission EN 55022 Class B Degree and class of protection Degree of protection acc. to EN 60529 Equipment protection class I, with protective conductor Standards, approvals, certificates	EMC	
Degree and class of protection Degree of protection acc. to EN 60529 Equipment protection class I, with protective conductor Standards, approvals, certificates	EMC interference immunity	EN 61000-6-2
Degree of protection acc. to EN 60529 Equipment protection class I, with protective conductor Standards, approvals, certificates	EMC interference emission	EN 55022 Class B
Equipment protection class I, with protective conductor Standards, approvals, certificates	Degree and class of protection	
Standards, approvals, certificates	Degree of protection acc. to EN 60529	IP20
	Equipment protection class	I, with protective conductor
CE mark Yes	Standards, approvals, certificates	
	CE mark	Yes

Standard for line harmonics limit	EN 61000-3-2	
Ambient conditions		
Ambient temperature during operation		
• min.	-25 °C; = Tmin	
• max.	70 °C; = Tmax; 60 °C @ UL/cUL, ATEX and FM use	
Extended ambient conditions		
 relative to ambient temperature-atmospheric pressure-installation altitude 	Tmin Tmax at 1080 hPa 795 hPa (-1000 m +2000 m)	
Relative humidity		
 With condensation, tested in accordance with IEC 60068-2-38, max. 	100 %; RH incl. condensation/frost (no commissioning under condensation conditions)	
Resistance		
 against biologically active substances / conformity with EN 60721-3-3 	Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request	
 against chemically active substances / conformity with EN 60721-3-3 	Yes; Class 3C4 (RH < 75%) incl. salt spray according to EN 60068-2-52 (degree of severity 3). The supplied connector covers must remain on the unused interfaces during operation!	
 against mechanically active substances / conformity with EN 60721-3-3 	Yes; Class 3S4 incl. sand, dust. The supplied connector covers must remain on the unused interfaces during operation!	
Dimensions		
Width	80 mm	
Height	125 mm	
Depth	120 mm	
Weights		
Weight, approx.	0.8 kg	
last modified:	08/12/2017	