

Automation Technology > Power supplies > Power supply SITOP > SITOP in SIMATIC design

6ES7307-1KA02-0AA0 POWER SUPPLY PS307 24 V/10 A

Technical / CAx data

 Technical Data CAx dataSIMATIC S7-300 STABILIZED POWER
SUPPLY PS307 INPUT: 120/230 V AC
OUTPUT: DC 24 V DC/10 A**Technical specifications**

Product	PS 307
Power supply, type	24 V/10 A
Input	
Input	1-phase AC
Supply voltage / 1 / at AC / nominal value	120 V
Supply voltage / 2 / at AC / nominal value	230 V
Voltage range	
• Note	Automatic range selection
Input voltage / 1 / at AC	85...132 V
Input voltage / 2 / at AC	170...264 V
Wide-range input	No
Overvoltage resistance	2.3 × Vin rated, 1.3 ms
Mains buffering at lout rated, min.	20 ms
Mains buffering	at Vin = 93/187 V
Rated line frequency	50/60 Hz
Rated line range	47...63 Hz
Input current / at nominal level of the input voltage 120 V	4.2 A
Input current / at nominal level of the input voltage 230 V	1.9 A
Switch-on current limiting (+25 °C), max.	55 A
Duration of current limiting / at 25 °C / maximum	3 ms
I _Δ , max.	3.3 A ₂ s
Built-in incoming fuse	T 6.3 A/250 V (not accessible)
Protection in the mains power input (IEC 898)	Recommended miniature circuit breaker: from 10 A, characteristic C
Output	
Output	Controlled, isolated DC voltage
Rated voltage Vout DC	24 V
Total tolerance, static ±	3 %
Static mains compensation, approx.	0.1 %
Static load balancing, approx.	0.5 %
Residual ripple peak-peak, max.	50 mV
Residual ripple peak-peak, typ.	15 mV
Spikes peak-peak, max. (bandwidth: 20 MHz)	150 mV
Spikes peak-peak, typ. (bandwidth: 20 MHz)	60 mV
Product feature / output voltage adjustable	No
Output voltage setting	-
Status display	Green LED for 24 V OK
On/off behavior	No overshoot of Vout (soft start)
Startup delay, max.	2 s
Voltage rise, typ.	10 ms

Rated current value I _{out} rated	10 A
Current range	0...10 A
delivered active power / typ.	240 W
short-term overload current / at short-circuit during run-up / typical	38 A
Duration of overloading ability for excess current / on short-circuiting during the start-up	80 ms
short-term overload current / at short-circuit during operation / typical	38 A
Duration of overloading ability for excess current / on short-circuiting during the operational phase	80 ms
Parallel switching for enhanced performance	Yes
Efficiency	
Efficiency at V _{out} rated, I _{out} rated, approx.	90 %
Power loss at V _{out} rated, I _{out} rated, approx.	27 W
Closed-loop control	
Dynamic mains compensation (V _{in} rated ±15 %), max.	0.1 %
Dynamic load smoothing (I _{out} : 50/100/50 %), U _{out} ± typ.	2 %
Setting time / maximum	0.1 ms
Protection and monitoring	
Output overvoltage protection	Additional control loop, shutdown at < 28.8 V, automatic restart
Current limitation	11...12 A
Characteristic feature of the output / short-circuit protected	Yes
Short-circuit protection	Electronic shutdown, automatic restart
Enduring short circuit current / Effective level / maximum	12 A
Overload/short-circuit indicator	-
Safety	
Primary/secondary isolation	Yes
Potential separation	Safety extra-low output voltage U _{out} acc. to EN 60950-1 and EN 50178
Protection class	Class I
stray current / maximum	3.5 mA
stray current / typical	0.6 mA
CE mark	Yes
UL/CSA approval	Yes
UL/cUL (CSA) approval	cULus-Listed (UL 508, CSA C22.2 No. 142), File E143289, UL 1604 Class I Div. 2 Group A, B, C, D, File E330455
Explosion protection	ATEX (EX) II 3G Ex nA II T4; UL 1604 Class I, Div. 2, Group ABCD
FM approval	Class I, Div. 2, Group ABCD, T4
CB approval	No
Marine approval	In S7-300 system
Degree of protection (EN 60529)	IP20
EMC	
Emitted interference	EN 55022 Class B
Supply harmonics limitation	EN 61000-3-2
Noise immunity	EN 61000-6-2
Operating data	
Ambient temperature / in operation	0...60 °C
● Note	with natural convection

Ambient temperature / on transport	-40...+85 °C
Ambient temperature / in storage	-40...+85 °C
Humidity class according to EN 60721	Climate class 3K3, no condensation
Mechanics	
Connection technology	screw-type terminals
Connections / Supply input	L, N, PE: 1 screw terminal each for 0.5 ... 2.5 mm ² single-core/finely stranded
Connections / Output	L+, M: 4 screw terminals each for 0.5 ... 2.5 mm ²
Connections / Auxiliary	-
Width / of the housing	80 mm
Height / of the housing	125 mm
Depth / of the housing	120 mm
Installation width	80 mm
Mounting height	205 mm
Weight, approx.	0.8 kg
Product feature / of the housing / housing for side-by-side mounting	Yes
Type of mounting / wall mounting	No
Type of fixing / cap rail mounting	No
Type of mounting / S7-300 rail mounting	Yes
Installation	Can be mounted onto S7 rail
Mechanical accessories	Mounting adapter for standard mounting rail (6EP1971-1BA00)
Other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)
letzte Änderung:	Jun 20, 2012