



SIMATIC S7-300 STABILIZED POWER SUPPLY PS307  
INPUT: 120/230 V AC OUTPUT: DC 24 V DC/2 A

### Technical specifications

Product	PS 307
Power supply, type	24 V/2 A
<b>Input</b>	
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	0.9 A
Input current / at nominal level of the input voltage 230 V	0.5 A
Switch-on current limiting (+25 °C), max.	22 A
Duration of current limiting / at 25 °C / maximum	3 ms

I <sup>2</sup> t, max.	1 A <sup>2</sup> ·s
Built-in incoming fuse	T 1.6 A/250 V (not accessible)
Protection in the mains power input (IEC 898)	Recommended miniature circuit breaker: 3 A, characteristic C
<b>Output</b>	
Output	Controlled, isolated DC voltage
Rated voltage V <sub>out</sub> DC	24 V
Total tolerance, static ±	3 %
Static mains compensation, approx.	0.1 %
Static load balancing, approx.	0.2 %
Residual ripple peak-peak, max.	50 mV
Residual ripple peak-peak, typ.	5 mV
Spikes peak-peak, max. (bandwidth: 20 MHz)	150 mV
Spikes peak-peak, typ. (bandwidth: 20 MHz)	20 mV
Product feature / output voltage adjustable	No
Output voltage setting	-
Status display	Green LED for 24 V OK
On/off behavior	No overshoot of V <sub>out</sub> (soft start)
Startup delay, max.	2 s
Voltage rise, typ.	10 ms
Rated current value I <sub>out</sub> rated	2 A
Current range	0 ... 2 A
delivered active power / typ.	48 W
short-term overload current / at short-circuit during run-up / typical	9 A
Duration of overloading ability for excess current / on short-circuiting during the start-up	90 ms
short-term overload current / at short-circuit during operation / typical	9 A
Duration of overloading ability for excess current / on short-circuiting during the operational phase	90 ms
Parallel switching for enhanced performance	Yes
<b>Efficiency</b>	
Efficiency at V <sub>out</sub> rated, I <sub>out</sub> rated, approx.	84 %
Power loss at V <sub>out</sub> rated, I <sub>out</sub> rated, approx.	9 W
<b>Closed-loop control</b>	
Dynamic mains compensation (V <sub>in</sub> rated ±15 %), max.	0.1 %
Dynamic load smoothing (I <sub>out</sub> : 50/100/50 %), U <sub>out</sub> ± typ.	0.8 %
Load step setting time 50 to 100%, typ.	0.5 ms
Load step setting time 100 to 50%, typ.	0.5 ms
Setting time / maximum	1 ms
<b>Protection and monitoring</b>	
Output overvoltage protection	Additional control loop, shutdown at < 28.8 V, automatic restart

Current limitation	2.2 ... 2.6 A
Characteristic feature of the output / short-circuit protected	Yes
Short-circuit protection	Electronic shutdown, automatic restart
Enduring short circuit current / Effective level / maximum	2 A
Overload/short-circuit indicator	-
<b>Safety</b>	
Primary/secondary isolation	Yes
Potential separation	Safety extra-low output voltage U <sub>out</sub> acc. to EN 60950-1 and EN 50178
Protection class	Class I
stray current / maximum	3.5 mA
stray current / typical	0.5 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
<b>EMC</b>	
Emitted interference	EN 55022 Class B
Supply harmonics limitation	not applicable
Noise immunity	EN 61000-6-2
<b>Operating data</b>	
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
<b>Mechanics</b>	
Connection technology	screw-type terminals
Connections / Supply input	L, N, PE: 1 screw terminal each for 0.5 ... 2.5 mm <sup>2</sup> single-core/finely stranded
Connections / Output	L+, M: 2 screw terminals each for 0.5 ... 2.5 mm <sup>2</sup>
Connections / Auxiliary	-
Width / of the housing	40 mm
Height / of the housing	125 mm
Depth / of the housing	120 mm

Installation width	40 mm
Mounting height	205 mm
Weight, approx.	0.4 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:**

Aug 20, 2013