



Figure similar

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

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

Technical Product Detail Page

<https://i.siemens.com/1P6ES7305-1BA80-0AA0>

input	
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 $V_{in}$ 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
I <sup>2</sup> t value maximum	5 A <sup>2</sup> ·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 overall tolerance of the voltage	3 %
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	30 mV
voltage peak	
• maximum	240 mV
• typical	150 mV
display version for normal operation	Green LED for 24 V OK
behavior of the output voltage when switching on	No overshoot of $V_{out}$ (soft start)

response delay maximum	3 s
voltage increase time of the output voltage	
• typical	5 ms
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	
• 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 the power	2
<b>efficiency</b>	
efficiency in percent	75 %
power loss [W]	
• at rated output voltage for rated value of the output current typical	16 W
<b>closed-loop control</b>	
relative control precision of the output voltage with rapid fluctuation of the input voltage by +/- 15% typical	0.3 %
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	
• maximum	5 ms
<b>protection and monitoring</b>	
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	3.3 ... 3.9 A
enduring short circuit current RMS value	
• maximum	2 A
<b>safety</b>	
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
<b>EMC</b>	
standard	
• for emitted interference	EN 55011 Class A
• for mains harmonics limitation	not applicable
• for interference immunity	EN 61000-6-2
<b>standards, specifications, approvals</b>	
certificate of suitability	
• CE marking	Yes
• UL approval	Yes
• EAC approval	Yes
• NEC Class 2	No
type of certification	
• CB-certificate	No
MTBF at 40 °C	964 506 h
<b>standards, specifications, approvals hazardous environments</b>	
certificate of suitability	

<ul style="list-style-type: none"> <li>• IECEx</li> <li>• ATEX</li> <li>• ULhazloc approval</li> <li>• FM registration</li> </ul>	No
<b>standards, specifications, approvals marine classification</b>	
shipbuilding approval	No
Marine classification association	
<ul style="list-style-type: none"> <li>• American Bureau of Shipping Europe Ltd. (ABS)</li> <li>• French marine classification society (BV)</li> <li>• Det Norske Veritas (DNV)</li> <li>• Lloyds Register of Shipping (LRS)</li> </ul>	No
<b>standards, specifications, approvals Environmental Product Declaration</b>	
Environmental Product Declaration	Yes
global warming potential [CO2 eq]	
<ul style="list-style-type: none"> <li>• total</li> <li>• during manufacturing</li> <li>• during operation</li> <li>• after end of life</li> </ul>	448.9 kg 10.8 kg 437.6 kg 0.39 kg
<b>ambient conditions</b>	
ambient temperature	
<ul style="list-style-type: none"> <li>• during operation</li> <li>• during transport</li> <li>• during storage</li> </ul>	-25 ... +70 °C; with natural convection -40 ... +85 °C -40 ... +85 °C
environmental category according to IEC 60721	Climate class 3K5, transient condensation permitted
<b>connection method</b>	
type of electrical connection	screw terminal
<ul style="list-style-type: none"> <li>• at input</li> <li>• at output</li> <li>• for auxiliary contacts</li> </ul>	L+, M1, PE: 1 screw terminal each for 0.5 ... 2.5 mm <sup>2</sup> single-core/finely stranded L+, M: 3 screw terminals each for 0.5 ... 2.5 mm <sup>2</sup> -
<b>mechanical data</b>	
width × height × depth of the enclosure	80 × 125 × 120 mm
installation width × mounting height	80 mm × 225 mm
required spacing	
<ul style="list-style-type: none"> <li>• top</li> <li>• bottom</li> <li>• left</li> <li>• right</li> </ul>	50 mm 50 mm 0 mm 0 mm
fastening method	Can be mounted onto S7 rail
<ul style="list-style-type: none"> <li>• DIN-rail mounting</li> <li>• S7 rail mounting</li> <li>• wall mounting</li> </ul>	No Yes No
housing can be lined up	Yes
net weight	0.57 kg
<b>accessories</b>	
mechanical accessories	Mounting adapter for standard mounting rail (6ES7390-6BA00-0AA0)
<b>further information internet links</b>	
internet link	
<ul style="list-style-type: none"> <li>• to website: Industry Mall</li> <li>• to web page: selection aid TIA Selection Tool</li> <li>• to website: CAX-Download-Manager</li> <li>• to website: Industry Online Support</li> </ul>	<a href="https://mall.industry.siemens.com">https://mall.industry.siemens.com</a> <a href="https://www.siemens.com/tstcloud">https://www.siemens.com/tstcloud</a> <a href="https://siemens.com/cax">https://siemens.com/cax</a> <a href="https://support.industry.siemens.com">https://support.industry.siemens.com</a>
<b>additional information</b>	
other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)
<b>security information</b>	
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](http://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	10	EC002540
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](#)



[China RoHS](#)



### Environment



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