



SITOP UPS1600/DC/24VDC/40A

SITOP UPS1600 40 A uninterruptible power supply input: 24 V DC output: 24 V DC/40 A

Technical Product Detail Page

<https://i.siemens.com/1P6EP4137-3AB00-0AY0>

input	
supply voltage at DC rated value	24 V
input voltage at DC	21 ... 29 V
adjustable response value voltage for buffer connection preset	21.5 V
adjustable response value voltage for buffer connection	21 ... 25 V; Adjustable: 21 V, 21.5 V, 22 V, 22.5 V, 23 V, 24 V, 25 V DC
input current at rated input voltage 24 V rated value	46 A; for max. charging current (5 A)
memory	
type of energy storage	with batteries
design of the mains power cut bridging-connection	Adjustable range using rotary coding switch: 0.5 min, 1 min, 2 min, 5 min, 10 min, 20 min, max. buffering time
output	
output voltage	
• in normal operation at DC rated value	24 V
• in buffering mode at DC rated value	24 V
formula for output voltage	$V_{in} - \text{approx. } 0.2 \text{ V}$
startup delay time typical	60 ms
voltage increase time of the output voltage typical	60 ms
output voltage in buffering mode at DC	18.5 ... 27 V
output current	
• rated value	40 A
• in normal operation	0 ... 120 A
• in buffering mode	0 ... 120 A
peak current	120 A
property of the output short-circuit proof	Yes
design of short-circuit protection	Limitation to $3 \times I$ rated for 30 ms/min; through-conductivity for $1.5 \times I$ rated for 5 sec/min
charging current	0.1 A, 5 A
efficiency	
efficiency in percent	
• at rated output voltage for rated value of the output current typical	98.5 %
• in case of operation on rechargeable battery typical	98.5 %
power loss [W]	
• at rated output voltage for rated value of the output current typical	15 W
• in case of operation on rechargeable battery typical	15 W
supplied active power typical	960 W
protection and monitoring	
product function	

<ul style="list-style-type: none"> <li>reverse polarity protection against energy storage unit polarity reversal</li> </ul>	Yes
<ul style="list-style-type: none"> <li>reverse polarity protection against input voltage polarity reversal</li> </ul>	Yes
display version	
<ul style="list-style-type: none"> <li>for normal operation</li> </ul>	Normal operation: LED green (OK), floating changeover contact "Bat/OK" to setting "OK" ("OK" means: Voltage of the supplying power supply unit is greater than cut-in threshold set at the DC UPS module); Lack of buffer standby: LED red (alarm), floating changeover contact "Alarm/Bat" to setting "Alarm"; Battery replacement required: LED red (alarm) flashing with approx. 0.25 Hz, floating changeover contact "Alarm/Bat" switching with approx. 0.25 Hz; Energy storage > 85%: LED green (Bat > 85%), floating NOcontact "Bat > 85" closed; Permissible contact current capacity: DC 60 V/1 A or AC 30 V /1 A
<ul style="list-style-type: none"> <li>in buffering mode</li> </ul>	Buffered mode: LED yellow (Bat), floating changeover contact "OK/Bat" to setting "Bat"; Prewarning battery voltage < 20.4 VDC: LED red (alarm), floating changeover contact "Alarm/Bat" to setting "Alarm"; Energy storage > 85%: LED green (Bat > 85%), floating NO contact "Bat > 85" closed
<b>interfaces</b>	
product component PC interface	No
product function communication function	Yes
design of the interface	without
<b>safety</b>	
galvanic isolation between input and output	No
operating resource protection class	Class III
protection class IP	IP20
standard	
<ul style="list-style-type: none"> <li>for emitted interference</li> </ul>	EN 55022 Class B
<ul style="list-style-type: none"> <li>for interference immunity</li> </ul>	EN 61000-6-2
<b>standards, specifications, approvals</b>	
certificate of suitability	
<ul style="list-style-type: none"> <li>CE marking</li> </ul>	Yes
<ul style="list-style-type: none"> <li>UL approval</li> </ul>	Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259
<ul style="list-style-type: none"> <li>UKCA marking</li> </ul>	Yes
<ul style="list-style-type: none"> <li>EAC approval</li> </ul>	Yes
type of certification CB-certificate	Yes
MTBF at 40 °C	372 738 h
<b>standards, specifications, approvals hazardous environments</b>	
certificate of suitability	
<ul style="list-style-type: none"> <li>ATEX</li> </ul>	No
<b>standards, specifications, approvals marine classification</b>	
shipbuilding approval	Yes
Marine classification association	
<ul style="list-style-type: none"> <li>American Bureau of Shipping Europe Ltd. (ABS)</li> </ul>	Yes
<ul style="list-style-type: none"> <li>Det Norske Veritas (DNV)</li> </ul>	Yes
<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> </ul>	407.7 kg
<ul style="list-style-type: none"> <li>during manufacturing</li> </ul>	26.7 kg
<ul style="list-style-type: none"> <li>during operation</li> </ul>	380.3 kg
<ul style="list-style-type: none"> <li>after end of life</li> </ul>	0.49 kg
<b>ambient conditions</b>	
ambient temperature	
<ul style="list-style-type: none"> <li>during operation</li> </ul>	-25 ... +70 °C; with natural convection
<ul style="list-style-type: none"> <li>during transport</li> </ul>	-40 ... +85 °C
<ul style="list-style-type: none"> <li>during storage</li> </ul>	-40 ... +85 °C
environmental category according to IEC 60721	Climate class 3K3, 5 ... 95% no condensation
<b>connection method</b>	
type of electrical connection	screw terminal
<ul style="list-style-type: none"> <li>at input</li> </ul>	24 V DC: 2 screw terminals for 0.5 ... 16 mm <sup>2</sup> /20 ... 6 AWG
<ul style="list-style-type: none"> <li>at output</li> </ul>	24 V DC: 2 screw terminals for 0.5 ... 16 mm <sup>2</sup> /20 ... 6 AWG
<ul style="list-style-type: none"> <li>for rechargeable battery module</li> </ul>	24 V DC: 2 screw terminals for 0.5 ... 16 mm <sup>2</sup> /20 ... 6 AWG

- for control circuit and status message

14 screw terminals for 0.2 ... 1.5 mm<sup>2</sup>/24 ... 16 AWG

#### mechanical data

width × height × depth of the enclosure	70 × 139 × 150 mm
installation width × mounting height	70 mm × 239 mm
required spacing	
• top	50 mm
• bottom	50 mm
• left	0 mm
• right	0 mm
fastening method	Snaps onto DIN rail EN 60715 35x7.5/15
• DIN-rail mounting	Yes
• S7 rail mounting	No
• wall mounting	No
housing can be lined up	Yes
net weight	0.65 kg

#### accessories

electrical accessories	Battery module
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#### further information internet links

internet link	
• to website: Industry Mall	<a href="https://mall.industry.siemens.com">https://mall.industry.siemens.com</a>
• to web page: selection aid TIA Selection Tool	<a href="https://www.siemens.com/tstcloud">https://www.siemens.com/tstcloud</a>
• to web page: power supplies	<a href="https://siemens.com/sitop">https://siemens.com/sitop</a>
• to website: CAx-Download-Manager	<a href="https://siemens.com/cax">https://siemens.com/cax</a>
• to website: Industry Online Support	<a href="https://support.industry.siemens.com">https://support.industry.siemens.com</a>

#### additional information

other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)
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#### security information

security information	<p>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 <a href="https://www.siemens.com/cybersecurity-industry">www.siemens.com/cybersecurity-industry</a>. 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 <a href="https://www.siemens.com/cert">https://www.siemens.com/cert</a>. (V4.7)</p>
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#### Classifications

	Version	Classification
eClass	14	27-04-07-05
eClass	12	27-04-07-05
eClass	9.1	27-04-07-05
eClass	9	27-04-07-05
eClass	8	27-04-06-90
eClass	7.1	27-04-06-90
eClass	6	27-04-06-90
ETIM	10	EC000382
ETIM	9	EC000382
ETIM	8	EC000382
ETIM	7	EC000382
IDEA	4	4149

Approvals Certificates

General Product Approval



[Manufacturer Declaration](#)

[Declaration of Conformity](#)



General Product Approval

Maritime application

Environment

[China RoHS](#)



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