



SITOP UPS1600/DC/24VDC/10A/IE/PN

SITOP UPS1600 10 A Ethernet/ PROFINET uninterruptible power supply with Ethernet/ PROFINET interface / OPC UA server / web server input: 24 V DC output: 24 V DC/10 A

Technical Product Detail Page

<https://i.siemens.com/1P6EP4134-3AB00-2AY0>

input	
supply voltage at DC rated value	24 V
supply voltage at DC	<kein Wert>
supply voltage 1 at DC	<kein Wert>
supply voltage 2 at DC	<kein Wert>
input voltage at DC	21 ... 29 V
input voltage 1 at DC	<kein Wert>
input voltage 2 at DC	<kein Wert>
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 or via software
input current at rated input voltage 24 V rated value	14 A; for max. charging current (3 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 or via software
buffering time for rated value of the output current in the event of power failure	<kein Wert>
buffering time in the event of power failure	<kein Wert>
load time typical	<kein Wert>; <kein Wert>
energy content of energy storage	<kein Wert>
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	10 A
• in normal operation	0 ... 30 A
• in buffering mode	0 ... 30 A
peak current	30 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, 3 A
type of signal at output	<kein Wert>

efficiency	
efficiency in percent	
<ul style="list-style-type: none"> at rated output voltage for rated value of the output current typical 	97.3 %
<ul style="list-style-type: none"> in case of operation on rechargeable battery typical 	97.3 %
power loss [W]	
<ul style="list-style-type: none"> at rated output voltage for rated value of the output current typical 	7 W
<ul style="list-style-type: none"> in case of operation on rechargeable battery typical 	7 W
supplied active power typical	240 W
protection and monitoring	
product function	
<ul style="list-style-type: none"> reverse polarity protection against energy storage unit polarity reversal 	Yes
<ul style="list-style-type: none"> reverse polarity protection against input voltage polarity reversal 	Yes
display version	<kein Wert>
<ul style="list-style-type: none"> for normal operation 	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"> in buffering mode 	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
interfaces	
product component PC interface	Yes
product function communication function	Yes
design of the interface	Ethernet/PROFINET
number of interfaces according to PROFINET	2
safety	
galvanic isolation between input and output	No
operating resource protection class	Class III
protection class IP	IP20
degree of protection NEMA rating	<kein Wert>
Safety Integrity Level (SIL) according to IEC 61508	<kein Wert>
standard	
<ul style="list-style-type: none"> for emitted interference 	EN 55022 Class B
<ul style="list-style-type: none"> for interference immunity 	EN 61000-6-2
standards, specifications, approvals	
certificate of suitability	
<ul style="list-style-type: none"> CE marking 	Yes
<ul style="list-style-type: none"> UL approval 	Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259
<ul style="list-style-type: none"> CSA approval 	<kein Wert>; <kein Wert>
<ul style="list-style-type: none"> UKCA marking 	Yes
<ul style="list-style-type: none"> EAC approval 	Yes
<ul style="list-style-type: none"> Regulatory Compliance Mark (RCM) 	<kein Wert>
<ul style="list-style-type: none"> SEMI F47 	<kein Wert>
type of certification CB-certificate	Yes
MTBF at 40 °C	349 874 h
standards, specifications, approvals hazardous environments	
certificate of suitability	
<ul style="list-style-type: none"> IECEX 	<kein Wert>; <kein Wert>
<ul style="list-style-type: none"> ATEX 	No; <kein Wert>
<ul style="list-style-type: none"> ULhazloc approval 	<kein Wert>; <kein Wert>
<ul style="list-style-type: none"> cCSAus, Class 1, Division 2 	<kein Wert>; <kein Wert>
<ul style="list-style-type: none"> UKEX 	<kein Wert>
<ul style="list-style-type: none"> CCC for hazardous zone according to GB standard 	<kein Wert>; <kein Wert>
<ul style="list-style-type: none"> FM registration 	<kein Wert>; <kein Wert>

standards, specifications, approvals marine classification

shipbuilding approval	Yes
Marine classification association	
<ul style="list-style-type: none"> American Bureau of Shipping Europe Ltd. (ABS) 	Yes; <kein Wert>
<ul style="list-style-type: none"> French marine classification society (BV) 	<kein Wert>; <kein Wert>
<ul style="list-style-type: none"> Det Norske Veritas (DNV) 	Yes; <kein Wert>
<ul style="list-style-type: none"> Lloyds Register of Shipping (LRS) 	<kein Wert>; <kein Wert>
<ul style="list-style-type: none"> Nippon Kaiji Kyokai (NK) 	<kein Wert>; <kein Wert>

standards, specifications, approvals other

certificate of suitability	
<ul style="list-style-type: none"> railway application in accordance with EN 50121-3-2 	<kein Wert>; <kein Wert>
<ul style="list-style-type: none"> railway application in accordance with EN 50124-1 	<kein Wert>; <kein Wert>
<ul style="list-style-type: none"> railway application in accordance with EN 50125-1 	<kein Wert>; <kein Wert>
<ul style="list-style-type: none"> railway application in accordance with EN 50155 	<kein Wert>; <kein Wert>
<ul style="list-style-type: none"> railway application in accordance with EN 61373 	<kein Wert>; <kein Wert>
<ul style="list-style-type: none"> fire protection in accordance with EN 45545-2 	<kein Wert>; <kein Wert>

standards, specifications, approvals Environmental Product Declaration

Environmental Product Declaration	Yes
global warming potential [CO2 eq]	
<ul style="list-style-type: none"> total 	196 kg
<ul style="list-style-type: none"> during manufacturing 	18 kg
<ul style="list-style-type: none"> during operation 	177.5 kg
<ul style="list-style-type: none"> after end of life 	0.33 kg

ambient conditions

ambient temperature	
<ul style="list-style-type: none"> during operation 	-25 ... +70 °C; with natural convection
<ul style="list-style-type: none"> in horizontal mounting position during operation 	<kein Wert>; <kein Wert>
<ul style="list-style-type: none"> during transport 	-40 ... +85 °C
<ul style="list-style-type: none"> during storage 	-40 ... +85 °C
installation altitude at height above sea level maximum	<kein Wert>
ambient condition relating to ambient temperature - air pressure - installation altitude	<kein Wert>
relative humidity with condensation according to IEC 60068-2-38 maximum	<kein Wert>; <kein Wert>
environmental category according to IEC 60721	Climate class 3K3, 5 ... 95% no condensation; <kein Wert>
chemical resistance to commercially available cooling lubricants	<kein Wert>; <kein Wert>
resistance to biologically active substances conformity according to EN 60721-3-3	<kein Wert>; <kein Wert>
resistance to chemically active substances conformity according to EN 60721-3-3	<kein Wert>; <kein Wert>
resistance to mechanically active substances conformity according to EN 60721-3-3	<kein Wert>; <kein Wert>
resistance to biologically active substances conformity according to EN 60721-3-6	<kein Wert>; <kein Wert>
resistance to chemically active substances conformity according to EN 60721-3-6	<kein Wert>; <kein Wert>
resistance to mechanically active substances conformity according to EN 60721-3-6	<kein Wert>; <kein Wert>
coating for equipped printed circuit board according to EN 61086	<kein Wert>; <kein Wert>
type of coating protection against pollution according to EN 60664-3	<kein Wert>; <kein Wert>
type of test of the coating according to MIL-I-46058C	<kein Wert>; <kein Wert>
product conformity of the coating Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A	<kein Wert>; <kein Wert>

connection method

type of electrical connection	screw terminal
<ul style="list-style-type: none"> at input 	24 V DC: 2 screw terminals for 0.2 ... 6 mm ² /24 ... 13 AWG
<ul style="list-style-type: none"> at output 	24 V DC: 2 screw terminals for 0.2 ... 6 mm ² /24 ... 13 AWG
<ul style="list-style-type: none"> for rechargeable battery module 	24 V DC: 2 screw terminals for 0.2 ... 6 mm ² /24 ... 13 AWG
<ul style="list-style-type: none"> for data cable 	<kein Wert>

<ul style="list-style-type: none"> • for auxiliary contacts 	<kein Wert>
<ul style="list-style-type: none"> • for signaling contact 	<kein Wert>
<ul style="list-style-type: none"> • for control circuit and status message 	14 screw terminals for 0.2 ... 1.5 mm ² /24 ... 16 AWG
suitability for interaction modular system	<kein Wert>
type of connection to system components	<kein Wert>
number of expansion modules maximum	<kein Wert>

mechanical data

width × height × depth of the enclosure	50 × 139 × 125 mm
installation width × mounting height	50 mm × 239 mm
required spacing	
<ul style="list-style-type: none"> • top 	50 mm
<ul style="list-style-type: none"> • bottom 	50 mm
<ul style="list-style-type: none"> • left 	0 mm
<ul style="list-style-type: none"> • right 	0 mm
fastening method	Snaps onto DIN rail EN 60715 35x7.5/15
<ul style="list-style-type: none"> • DIN-rail mounting 	Yes
<ul style="list-style-type: none"> • S7 rail mounting 	No
<ul style="list-style-type: none"> • wall mounting 	No
housing can be lined up	Yes
net weight	0.44 kg

accessories

electrical accessories	Battery module
mechanical accessories	<kein Wert>

further information internet links

internet link	
<ul style="list-style-type: none"> • to website: Industry Mall 	https://mall.industry.siemens.com
<ul style="list-style-type: none"> • to web page: selection aid TIA Selection Tool 	https://www.siemens.com/tstcloud
<ul style="list-style-type: none"> • to web page: power supplies 	https://siemens.com/sitop
<ul style="list-style-type: none"> • to website: CAx-Download-Manager 	https://siemens.com/cax
<ul style="list-style-type: none"> • to website: Industry Online Support 	https://support.industry.siemens.com
identification link	<kein Wert>; <kein Wert>

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 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)</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
UNSPSC	15	39-12-10-11

Approvals Certificates

General Product Approval



[Manufacturer Declaration](#)

[Declaration of Conformity](#)



General Product Approval Maritime application other

[China RoHS](#)



[Miscellaneous](#)

Environment Industrial Communication



[PROFINET](#)

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