SIEMENS

Data sheet 6EP4136-3AC00-2AY0



SITOP UPS1600/DC/24VDC/20A/IE/PN/EX

SITOP UPS1600 EX 20 A Ethernet PROFINET uninterruptible power supply with Ethernet / PROFINET interface / OPC UA Server / Web server input: 24 V DC output: 24 V DC/20 A

General information	
Technical Product Detail Page	https://i.siemens.com/1P6EP4136-3AC00-2AY0
product brand name	SITOP
product type designation	UPS1600
type of current supply	DC UPS 24 V/20 A
input	
voltage curve at input	DC
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 or via software
input current at rated input voltage 24 V rated value	25 A; for max. charging current (4 A)
memory	
type of energy storage	with batteries
product function DC-UPS modularly expandable	Yes
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
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	Vin - approx. 0.2 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	20 A
● in normal operation	0 ... 60 A
● in buffering mode	0 ... 60 A
peak current	60 A
property of the output short-circuit proof	Yes
design of short-circuit protection	Limitation to 3 x I rated for 30 ms/min; through-conductivity for 1.5 x I rated for 5 sec/min
charging current	0.1 A, 4 A
efficiency	
efficiency in percent	
● at rated output voltage for rated value of the output current typical	97.5 %
● in case of operation on rechargeable battery typical	97.5 %

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power loss [W]	
● at rated output voltage for rated value of the output current typical	11 W
● in case of operation on rechargeable battery typical	11 W
supplied active power typical	480 W
protection and monitoring	
product function	
● reverse polarity protection against energy storage unit polarity reversal	Yes
● reverse polarity protection against input voltage polarity reversal	Yes
display version	
● 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
● 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
standard	
● for emitted interference	EN 55022 Class B
● for interference immunity	EN 61000-6-2
standards, specifications, approvals	
certificate of suitability	
● CE marking	Yes
● UL approval	Yes
● UKCA marking	Yes
type of certification CB-certificate	Yes
MTBF at 40 °C	345 056 h
standards, specifications, approvals hazardous environments	
certificate of suitability	
● IECEx	Yes
● ATEX	Yes; ATEX (Ex) II 3G Ex ec nC IIC T4 Gc
● CCC for hazardous zone according to GB standard	Yes
standards, specifications, approvals marine classification	
shipbuilding approval	No
Marine classification association	
● American Bureau of Shipping Europe Ltd. (ABS)	No
● Det Norske Veritas (DNV)	No; in preparation
standards, specifications, approvals Environmental Product Declaration	
Environmental Product Declaration	Yes
global warming potential [CO2 eq]	
● total	297.8 kg
● during manufacturing	18.5 kg
● during operation	278.9 kg
● after end of life	0.34 kg
ambient conditions	
ambient temperature	

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● during operation	-25 ... +70 °C; with natural convection
● during transport	-40 ... +85 °C
● during storage	-40 ... +85 °C
environmental category according to IEC 60721	Climate class 3K3, 5 ... 95% no condensation
connection method	
type of electrical connection	screw terminal
● at input	24 V DC: 2 screw terminals for 0.2 ... 6 mm²/24 ... 13 AWG
● at output	24 V DC: 2 screw terminals for 0.2 ... 6 mm²/24 ... 13 AWG
● for rechargeable battery module	24 V DC: 2 screw terminals for 0.2 ... 6 mm²/24 ... 13 AWG
● for control circuit and status message	14 screw terminals for 0.2 ... 1.5 mm²/24 ... 16 AWG
mechanical data	
width × height × depth of the enclosure	50 × 139 × 125 mm
installation width × mounting height	50 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	0.45 kg
accessories	
electrical accessories	Battery module
further information internet links	
internet link	
● to website: Industry Mall	https://mall.industry.siemens.com
● to web page: selection aid TIA Selection Tool	https://www.siemens.com/tstcloud
● to web page: power supplies	https://siemens.com/sitop
● to website: CAx-Download-Manager	https://siemens.com/cax
● to website: Industry Online Support	https://support.industry.siemens.com
additional information	
other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)
security information	
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. 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	16	27-04-07-05
eClass	14	27-04-07-05
eClass	12	27-04-07-05
eClass	9.1	27-04-07-05

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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

Approvals Certificates

General Product Approval

For use in hazardous locations

Manufacturer Declaration

China RoHS

For use in hazardous locations

Miscellaneous

CCC-Ex

Maritime application

Environment

Industrial Communication

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last modified: 8/29/2026

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