SIEMENS

Data sheet   **6EP4137-3AB00-2AY0**

SITOP UPS1600/DC/24VDC/40A/IE/PN

SITOP UPS1600 40 A Ethernet/ PROFINET uninterruptible power supply with Ethernet/ PROFINET interface / OPC UA server / web server input: 24 V DC output: 24 V DC/40 A

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 or via software
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 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	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 x I rated for 30 ms/min; through-conductivity for 1.5 x 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	98.3 %
● in case of operation on rechargeable battery typical	98.3 %
power loss [W]	
● at rated output voltage for rated value of the output current typical	17 W
● in case of operation on rechargeable battery typical	17 W
supplied active power typical	960 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 NO contact "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; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259
● CSA approval	Yes; cCSAus (CSA C22.2 No. 62368-1, UL 62368-1)
● UKCA marking	Yes
● EAC approval	Yes
type of certification CB-certificate	Yes
MTBF at 40 °C	318 776 h

standards, specifications, approvals hazardous environments

certificate of suitability	
● ATEX	No
● cCSAus, Class 1, Division 2	No

standards, specifications, approvals marine classification

shipbuilding approval	Yes
Marine classification association	
● American Bureau of Shipping Europe Ltd. (ABS)	Yes
● Det Norske Veritas (DNV)	Yes

standards, specifications, approvals Environmental Product Declaration

Environmental Product Declaration	Yes
global warming potential [CO2 eq]	
● total	565 kg
● during manufacturing	32.5 kg
● during operation	532 kg
● after end of life	0.52 kg

ambient conditions

ambient temperature	
● during operation	-25 ... +70; with natural convection
● during transport	-40 ... +85
● during storage	-40 ... +85
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 0.5 ... 16 mm²/20 ... 6 AWG
● at output	24 V DC: 2 screw terminals for 0.5 ... 16 mm²/20 ... 6 AWG
● for rechargeable battery module	24 V DC: 2 screw terminals for 0.5 ... 16 mm²/20 ... 6 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	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	0.7 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	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	9	EC000382
	ETIM	8	EC000382
	ETIM	7	EC000382
	IDEA	4	4149
	UNSPSC	15	39-12-10-11

Approvals Certificates	
General Product Approval	

| CB | CB | CSA | Manufacturer Declaration | Declaration of Conformity | UK CA |

General Product Approval			Maritime application		other
CE EG-Konf.	UL	RCM	ABS	DNV	Miscellaneous

Environment	Industrial Communication
EPD	PROFINET

| **last modified:** | 4/9/2025 |

5/26/2025