SIEMENS

Data sheet 6EP1933-2EC51-8AA0

SITOP UPS500S/DC/DC24V/15A/5KWS/EX

SITOP UPS500S EX maintenance-free uninterruptible power supply with USB interface basic device 5 kWs input: 24 V DC output: 24 V DC/15 A degree of protection IP20

input	
supply voltage at DC rated value	24 V
input voltage at DC	22 ... 29 V
adjustable response value voltage for buffer connection preset	22.5 V
adjustable response value voltage for buffer connection	22 ... 25.5 V; Adjustable in 0.5 V increments
input current at rated input voltage 24 V rated value	15.2 A; + approx. 2.3 A with empty energy storage (capacitor)
memory	
type of energy storage	with capacitors
design of the mains power cut bridging-connection	15 A for 9 s or 10 A for 15 s or 5 A for 31 s or 2 A for 76 s; longer buffering times with expansion modules
buffering time in the event of power failure	0.15 min
energy content of energy storage	5 kW.s
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	24 V ± 3 %
startup delay time typical	0.6 s
voltage increase time of the output voltage typical	25 ms
output voltage in buffering mode at DC	24 ... 24.7 V
output current	
● rated value	15 A
● in normal operation	0 ... 15 A
● in buffering mode	0 ... 15 A
peak current	25 A
property of the output short-circuit proof	Yes
charging current	1 A, 2 A
efficiency	
efficiency in percent	
● at rated output voltage for rated value of the output current typical	97.5 %
power loss [W]	
● at rated output voltage for rated value of the output current typical	9 W
supplied active power typical	360 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 "OK/Bat" 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"; 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 buffer end after expiry of 80% of the available buffer time: 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	No
design of the interface	USB
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
● CSA approval	Yes
● UKCA marking	Yes
MTBF at 40 °C	459 137 h
standards, specifications, approvals hazardous environments	
certificate of suitability	
● IECEx	Yes
● ATEX	Yes
● cCSAus, Class 1, Division 2	Yes
● 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	328.8 kg
● during manufacturing	46.4 kg
● during operation	281.6 kg
● after end of life	0.74 kg
ambient conditions	
ambient temperature	
● during operation	0 ... 60 °C; with natural convection
● during transport	-40 ... +70 °C
● during storage	-40 ... +70 °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 1 ... 4 mm²/17 ... 11 AWG
● at output	24 V DC: 4 screw terminals for 1 ... 4 mm²/17 ... 11 AWG
● for control circuit and status message	10 screw terminals for 0.5 ... 2.5 mm²/20 ... 13 AWG
mechanical data	
width × height × depth of the enclosure	120 × 125 × 125 mm
installation width × mounting height	120 × 225 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
● standard rail mounting	Yes
● S7 rail mounting	No
● wall mounting	No
housing can be lined up	Yes
net weight	1 kg

accessories

electrical accessories	Extension module SITOP UPS501S

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 website: Industrial communication	https://siemens.com/industrial-communication
● 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

Approvals Certificates

General Product Approval		For use in hazardous locations			
Manufacturer Declaration	CE EG-Konf.	IECEx IECEx	Ex ATEX	BUREAU VERITAS	CCC-Ex

For use in hazard-	Environment

ous locations	

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