# Data sheet

SITOP UPS1600 24 V DC/20 A, USB SITOP UPS1600 20 A USB Uninterrupted Power supply with USB interface input: 24 V DC output: 24 V DC/20 A



Input	
supply voltage at DC rated value	24 V
voltage curve at input	DC
input voltage range	21 29 V DC
adjustable response value voltage for buffer connection preset	21.5 V
adjustable response value voltage for buffer	21 25 V; Adjustable: 21 V, 21.5 V, 22 V, 22.5 V, 23 V, 24 V, 25
connection	V DC or via software
input current at rated input voltage 24 V rated value	25 A; for max. charging current (4 A)

Mains buffering		
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	
charging current	0.1 A, 4 A	
adjustable charging current maximum note	Automatically depending on battery module	

Output	
output voltage	
<ul> <li>in normal operation at DC rated value</li> </ul>	24 V
• in buffering mode at DC rated value	24 V

**PNAP** 

formula for output voltage	Vin - approx. 0.2 V
ON-delay time typical	60 s
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
supplied active power typical	480 W

Efficiency	
efficiency in percent	
<ul> <li>at rated output current for rated value of the output current typical</li> </ul>	97.7 %
• in case of accumulator operation typical	97.7 %
power loss [W]	
<ul> <li>at rated output current for rated value of the output current typical</li> </ul>	10 W
<ul> <li>in case of accumulator operation typical</li> </ul>	10 W

## Protection and monitoring

### product function

• reverse polarity protection against energy storage unit polarity reversal

• reverse polarity protection against input voltage polarity reversal

Yes

Yes

### Signaling

#### display version

• for normal operation

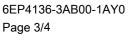
Normal operation: LED green (OK), floating changeover contact "Bat/OK" to setting "OK" ("OK" means: Voltage of the supplying power supply unit is greater than cut-in threshold set at the DC UPS module); Lack of buffer standby: LED red (alarm), floating changeover contact "Alarm/Bat" to setting "Alarm"; 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

mieriaee	
product component PC interface	Yes
design of the interface	USB
Safety	
galvanic isolation between entrance and outlet	No
operating resource protection class	Class III
certificate of suitability	
CE marking	Yes
as approval for USA	cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259
● relating to ATEX	IECEx Ex nA nC IIC T4 Gc; ATEX (EX) II 3G Ex nA nC IIC T4 Gc; cULus Class I, Div. 2 (ANSI/ISA-12.12.01-2015, CSA C22.2 No. 213-15) Group ABCD, T4; cCSAus (CSA C22.2 No. 213, ANSI/ISA-12.12.01) Class I, Div. 2, Group ABCD, T4
• C-Tick	Yes
type of certification CB-certificate	Yes
shipbuilding approval	ABS, DNV GL
protection class IP	IP20
EMC	
standard	
<ul> <li>for emitted interference</li> </ul>	EN 55022 Class B
• for interference immunity	EN 61000-6-2
environmental conditions	
ambient temperature	
<ul><li>during operation</li></ul>	-25 +70 °C; with natural convection
<ul> <li>during transport</li> </ul>	-40 +85 °C
during storage	-40 +85 °C
environmental category acc. to IEC 60721	Climate class 3K3, 5 95% no condensation
Mechanics	
type of electrical connection	screw-type terminals
• 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
<ul> <li>for battery module</li> </ul>	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

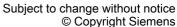


required spacing

width of the enclosure

height of the enclosure

depth of the enclosure



50 mm

139 mm

125 mm

**PNAP** 

• top	50 mm
• bottom	50 mm
• left	0 mm
• right	0 mm
net weight	0.41 kg
product feature of the enclosure housing for side-by- side mounting	Yes
mounting type	Snaps onto DIN rail EN 60715 35x7.5/15
electrical accessories	Battery module
MTBF at 40 °C	358 897 h
reference code acc. to DIN EN 81346-2	T
other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)

