

SITOP UPS1600 24 V DC/10 A, USB
SITOP UPS1600 10A USB UNINTERRUPTIBLE POWER SUPPLY
WITH USB INTERFACE INPUT: 24 V DC OUTPUT: 24 V DC/10 A



Input	
Supply voltage at DC Rated value	24 V
Voltage curve at input	DC
input voltage range	22 ... 29 V DC
Mains buffering	
Type of energy storage	with batteries
Charging current	
• 1	0.1 A
• 2	3 A
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	$V_{in} - \text{approx. } 0.01 \times I$
ON-delay time typical	60 s
Voltage increase time of the output voltage typical	60 ms
Output current Rated value	10 A
Property of the output Short-circuit proof	Yes

Design of short-circuit protection	Limitation to $3 \times I$ rated for 30 ms; through-conductivity for $1.5 \times I$ rated for 5 sec/min
Active power supplied typical	240 W
Efficiency	
Efficiency in percent	
at rated output current at rated output current typical	97.7 %
in case of accumulator operation typical	97.7 %
Active power loss	
at rated output current at rated output current typical	5.6 W
in case of accumulator operation typical	5.6 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
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
Interface	
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

• UL approval • as approval for USA • relating to ATEX • C-Tick	Yes cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259 IECEX Ex nA nC IIC T4 Gc; cCSAus (CSA C22.2 No. 213-M1987, ANSI/ISA-12.12.01-2013) Class I, Div. 2, Group ABCD, T4
Type of certification CB-certificate	Yes
Shipbuilding approval	GL
Protection class IP	IP20

EMC

Standard	
• for emitted interference • for interference immunity	EN 55022 Class B EN 61000-6-2

Operating data

Ambient temperature	
• during operation • during transport • during storage	-25 ... +70 °C -40 ... +85 °C -40 ... +85 °C
Environmental category acc. to IEC 60721	Climate class 3K3, no condensation

Mechanics

Type of electrical connection	screw-type terminals
• at input • at output • for battery module • for control circuit and status message	24 V DC: 2 screw terminals for 0.2 ... 6 mm ² /24 ... 13 AWG 24 V DC: 2 screw terminals for 0.2 ... 6 mm ² /24 ... 13 AWG 24 V DC: 2 screw terminals for 0.2 ... 6 mm ² /24 ... 13 AWG 14 screw terminals for 0.2 ... 1.5 mm ² /24 ... 16 AWG
Width of the enclosure	50 mm
Height of the enclosure	125 mm
Depth of the enclosure	125 mm
Required spacing	
• top • bottom • left • right	50 mm 50 mm 0 mm 0 mm
Net weight	0.4 kg
Product property 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	364 153 h
Other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)