



SITOP UPS1600/DC/24VDC/20A

SITOP UPS1600 20 A uninterruptible power supply input: 24 V DC output: 24 V DC/20 A *Ex approval no longer available*

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 connection	21 ... 25 V; Adjustable: 21 V, 21.5 V, 22 V, 22.5 V, 23 V, 24 V, 25 V DC
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
charging current	0.1 A, 4 A
adjustable charging current maximum note	Automatically depending on battery module

Output

output voltage	24 V
- in normal operation at DC rated value - in buffering mode at DC rated value	24 V
formula for output voltage	$V_{in} - \text{approx. } 0.2 \text{ V}$
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	20 A
- rated value - in normal operation - 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 $3 \times I$ rated for 30 ms/min; through-conductivity for $1.5 \times I$ rated for 5 sec/min
supplied active power typical	480 W

Efficiency

efficiency in percent	97.7 %
- at rated output voltage for rated value of the output current typical - in case of operation on rechargeable battery typical	97.7 %
power loss [W]	10 W
- at rated output voltage for rated value of the output current typical - in case of operation on rechargeable battery typical	10 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	No
design of the interface	without
Safety	
galvanic isolation between input and output	No
operating resource protection class	Class III
protection class IP	IP20
Approvals	
certificate of suitability	
CE marking	Yes
UL approval	Yes
as approval for USA	cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259
CSA approval	Yes
cCSAus, Class 1, Division 2	No
ATEX	No
type of certification CB-certificate	Yes
certificate of suitability	
EAC approval	Yes
C-Tick	Yes
shipbuilding approval	Yes
shipbuilding approval	ABS, DNV GL
Marine classification association	
American Bureau of Shipping Europe Ltd. (ABS)	Yes
DNV GL	Yes
EMC	
standard	
for emitted interference	EN 55022 Class B
for interference immunity	EN 61000-6-2
environmental conditions	
ambient temperature	
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
Mechanics	
type of electrical connection	screw-type terminals
at input	24 V DC: 2 screw terminals for 0.2 ... 6 mm ² /24 ... 13 AWG
at output	24 V DC: 2 screw terminals for 0.2 ... 6 mm ² /24 ... 13 AWG
for rechargeable battery module	24 V DC: 2 screw terminals for 0.2 ... 6 mm ² /24 ... 13 AWG
for control circuit and status message	14 screw terminals for 0.2 ... 1.5 mm ² /24 ... 16 AWG
width of the enclosure	50 mm
height of the enclosure	139 mm
depth of the enclosure	125 mm
required spacing	
top	50 mm

- bottom
- left
- right

net weight

product feature of the enclosure housing can be lined up

fastening method

electrical accessories

MTBF at 40 °C

reference code according to IEC 81346-2

other information

50 mm

0 mm

0 mm

0.39 kg

Yes

Snaps onto DIN rail EN 60715 35x7.5/15

Battery module

408 654 h

RB

Specifications at rated input voltage and ambient temperature +25 °C
(unless otherwise specified)

