



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 | |
| • in normal operation at DC rated value | 24 V |
| • in buffering mode at DC rated value | 24 V |
| formula for output voltage | $V_{in} - \text{approx. } 0.2 \text{ V}$ |
| 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 | |
| • 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 | |
| • at rated output voltage for rated value of the output current typical | 97.7 % |
| • in case of operation on rechargeable battery typical | 97.7 % |
| power loss [W] | |
| • at rated output voltage for rated value of the output current typical | 10 W |
| • in case of operation on rechargeable battery typical | 10 W |

| Protection and monitoring | |
|-----------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| product function | |
| <ul style="list-style-type: none"> reverse polarity protection against energy storage unit polarity reversal | Yes |
| <ul style="list-style-type: none"> reverse polarity protection against input voltage polarity reversal | Yes |
| Signaling | |
| display version | |
| <ul style="list-style-type: none"> 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 |
| <ul style="list-style-type: none"> 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 | |
| <ul style="list-style-type: none"> CE marking | Yes |
| <ul style="list-style-type: none"> as approval for USA | cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259 |
| <ul style="list-style-type: none"> C-Tick | Yes |
| type of certification CB-certificate | Yes |
| shipbuilding approval | ABS, DNV GL |
| EMC | |
| standard | |
| <ul style="list-style-type: none"> for emitted interference | EN 55022 Class B |
| <ul style="list-style-type: none"> for interference immunity | EN 61000-6-2 |
| environmental conditions | |
| ambient temperature | |
| <ul style="list-style-type: none"> during operation | -25 ... +70 °C; with natural convection |
| <ul style="list-style-type: none"> during transport | -40 ... +85 °C |
| <ul style="list-style-type: none"> 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 |
| <ul style="list-style-type: none"> at input | 24 V DC: 2 screw terminals for 0.2 ... 6 mm ² /24 ... 13 AWG |
| <ul style="list-style-type: none"> at output | 24 V DC: 2 screw terminals for 0.2 ... 6 mm ² /24 ... 13 AWG |
| <ul style="list-style-type: none"> for rechargeable battery module | 24 V DC: 2 screw terminals for 0.2 ... 6 mm ² /24 ... 13 AWG |
| <ul style="list-style-type: none"> 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 | |
| <ul style="list-style-type: none"> top | 50 mm |
| <ul style="list-style-type: none"> bottom | 50 mm |
| <ul style="list-style-type: none"> left | 0 mm |
| <ul style="list-style-type: none"> right | 0 mm |
| net weight | 0.39 kg |
| product feature of the enclosure housing can be lined up | Yes |

| | |
|------------------------------------|---------------------------------------------------------------------------------------------------|
| fastening method | Snaps onto DIN rail EN 60715 35x7.5/15 |
| electrical accessories | Battery module |
| MTBF at 40 °C | 408 654 h |
| reference code acc. to IEC 81346-2 | T |
| other information | Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified) |

