

SITOP UPS1600 24 V DC/10 A
 SITOP UPS1600 10 A Uninterrupted Power supply input: 24 V DC
 output: DC 24 V/10 A



| Input | |
|--|--|
| Supply voltage at DC Rated value | 24 V |
| Voltage curve at input | DC |
| input voltage range | 22 ... 29 V DC |
| Adjustable response value voltage for buffer connection preset | 22.5 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 or via software |
| Input current at rated input voltage 24 V Rated value | 14 A; for max. charging current (3 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, 3 A |
| adjustable charging current maximum Note | Automatically depending on battery module |
| Output | |
| Output voltage | |
| <ul style="list-style-type: none"> in normal operation at DC Rated value in buffering mode at DC Rated value | 24 V |
| | 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 voltage in buffering mode at DC | 19 ... 28.5 V |
| Output current | |
| • Rated value | 10 A |
| • in normal operation | 0 ... 30 A |
| • in buffering mode | 0 ... 30 A |
| Peak current | 30 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 | 240 W |

Efficiency

| | |
|---|--------|
| Efficiency in percent | |
| • at rated output current for rated value of the output current typical | 97.7 % |
| • in case of accumulator operation typical | 97.7 % |
| Power loss [W] | |
| • at rated output current for rated value of the 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 | No |
| Design of the interface | without |

| Safety | |
|--|---|
| Galvanic isolation between entrance and outlet | No |
| Operating resource protection class | Class III |
| Certificate of suitability <ul style="list-style-type: none"> • CE marking • as approval for USA • relating to ATEX | Yes cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259 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 |
| <ul style="list-style-type: none"> • C-Tick | Yes |
| Type of certification CB-certificate | Yes |
| Shipbuilding approval | ABS, DNV GL |
| Protection class IP | IP20 |

| EMC | |
|--|----------------------------------|
| Standard <ul style="list-style-type: none"> • for emitted interference • for interference immunity | EN 55022 Class B EN 61000-6-2 |

| Operating data | |
|--|---|
| Ambient temperature <ul style="list-style-type: none"> • during operation • during transport • during storage | -25 ... +70 °C; with natural convection -40 ... +85 °C -40 ... +85 °C |
| Environmental category acc. to IEC 60721 | Climate class 3K3, no condensation |

| Mechanics | |
|---|--|
| Type of electrical connection <ul style="list-style-type: none"> • at input • at output • for battery module • for control circuit and status message | screw-type terminals 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 | |

| | |
|--|---|
| <ul style="list-style-type: none"> • top • bottom • left • right | <p>50 mm</p> <p>50 mm</p> <p>0 mm</p> <p>0 mm</p> |
| Net weight | 0.38 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 | 415 574 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) |