

SITOP modular/3AC/24VDC/20A

SITOP modular 20 A stabilized power supply input: 400-500 V 3 AC output: 24 V DC/20 A



General information

Technical Product Detail Page

<https://i.siemens.com/1P6EP1436-3BA00>

input

| | |
|---|---|
| type of the power supply network | 3-phase AC |
| supply voltage at AC | |
| <ul style="list-style-type: none"> • minimum rated value • maximum rated value • initial value • full-scale value | <p>400 V</p> <p>500 V</p> <p>320 V</p> <p>550 V</p> |
| supply voltage at AC | Starting from $V_{in} > 340$ V |
| wide range input | Yes |
| overvoltage overload capability | $2.3 \times V_{in}$ rated, 1.3 ms |
| buffering time for rated value of the output current in the event of power failure minimum | 6 ms |
| operating condition of the mains buffering | at $V_{in} = 400$ V |
| line frequency | 50/60 Hz |
| line frequency | 47 ... 63 Hz |
| input current | |
| <ul style="list-style-type: none"> • at rated input voltage 400 V • at rated input voltage 500 V | <p>1.1 A</p> <p>0.9 A</p> |
| current limitation of inrush current at 25 °C maximum | 35 A |
| I ² t value maximum | 0.7 A ² ·s |
| fuse protection type | none |
| fuse protection type in the feeder | Required: 3-pole connected miniature circuit breaker 6 ... 16 A characteristic C or circuit breaker 3RV2011-1DA10 (setting 3 A) or 3RV2711-1DD10 (UL 489) |

output

| | |
|--|---------------------------------|
| voltage curve at output | Controlled, isolated DC voltage |
| output voltage at DC rated value | 24 V |
| output voltage | |
| <ul style="list-style-type: none"> • at output 1 at DC rated value | 24 V |
| output voltage adjustable | Yes; via potentiometer |
| adjustable output voltage | 24 ... 28.8 V; max. 480 W |
| relative overall tolerance of the voltage | 3 % |
| relative control precision of the output voltage | |
| <ul style="list-style-type: none"> • on slow fluctuation of input voltage • on slow fluctuation of ohm loading | <p>0.1 %</p> <p>0.2 %</p> |
| residual ripple | |
| <ul style="list-style-type: none"> • maximum | 100 mV |
| voltage peak | |

| | |
|--|---|
| <ul style="list-style-type: none"> • maximum | 200 mV |
| display version for normal operation | Green LED for 24 V OK |
| type of signal at output | via signaling module (6EP1961-3BA10) |
| behavior of the output voltage when switching on | No overshoot of Vout (soft start) |
| response delay maximum | 2.5 s |
| voltage increase time of the output voltage <ul style="list-style-type: none"> • maximum | 500 ms |
| output current <ul style="list-style-type: none"> • rated value • rated range | 20 A 0 ... 20 A; +60 ... +70 °C: Derating 2%/K |
| supplied active power typical | 480 W |
| short-term overload current <ul style="list-style-type: none"> • at short-circuit during operation typical | 60 A |
| duration of overloading capability for excess current <ul style="list-style-type: none"> • at short-circuit during operation | 25 ms |
| constant overload current <ul style="list-style-type: none"> • on short-circuiting during the start-up typical | 23 A |
| bridging of equipment | Yes; switchable characteristic |
| number of parallel-switched equipment resources for increasing the power | 2 |
| efficiency | |
| efficiency in percent | 90 % |
| power loss [W] <ul style="list-style-type: none"> • at rated output voltage for rated value of the output current typical | 53 W |
| closed-loop control | |
| relative control precision of the output voltage with rapid fluctuation of the input voltage by +/- 15% typical | 1 % |
| relative control precision of the output voltage load step of resistive load 50/100/50 % typical | 2 % |
| setting time <ul style="list-style-type: none"> • load step 50 to 100% typical • load step 100 to 50% typical | 4 ms 4 ms |
| setting time <ul style="list-style-type: none"> • maximum | 10 ms |
| protection and monitoring | |
| design of the overvoltage protection | < 35 V |
| property of the output short-circuit proof | Yes |
| design of short-circuit protection <ul style="list-style-type: none"> • typical | Alternatively, constant current characteristic approx. 23 A or latching shutdown 23 A |
| enduring short circuit current RMS value <ul style="list-style-type: none"> • typical | 23 A |
| display version for overload and short circuit | LED yellow for "overload", LED red for "latching shutdown" |
| safety | |
| galvanic isolation between input and output | Yes |
| galvanic isolation | Output voltage: SELV, ES1 (IEC 62368-1), DVC As (IEC 61204-7) |
| operating resource protection class | Class I |
| leakage current <ul style="list-style-type: none"> • maximum | 3.5 mA |
| protection class IP | IP20 |
| EMC | |
| standard <ul style="list-style-type: none"> • for emitted interference • for mains harmonics limitation • for interference immunity | EN 55022 Class B EN 61000-3-2 EN 61000-6-2 |
| standards, specifications, approvals | |
| certificate of suitability <ul style="list-style-type: none"> • CE marking • UL approval | Yes Yes; UL-Listed (UL 508), File E197259 |

| | |
|---|---|
| <ul style="list-style-type: none"> • UKCA marking | Yes |
| <ul style="list-style-type: none"> • EAC approval | Yes |
| <ul style="list-style-type: none"> • Regulatory Compliance Mark (RCM) | Yes |
| <ul style="list-style-type: none"> • NEC Class 2 | No |
| <ul style="list-style-type: none"> • SEMI F47 | Yes |
| type of certification | |
| <ul style="list-style-type: none"> • CB-certificate | No |
| MTBF at 40 °C | 711 213 h |
| standards, specifications, approvals hazardous environments | |
| certificate of suitability | |
| <ul style="list-style-type: none"> • IECEx | No |
| <ul style="list-style-type: none"> • ATEX | No |
| <ul style="list-style-type: none"> • ULhazloc approval | No |
| <ul style="list-style-type: none"> • FM registration | No |
| standards, specifications, approvals marine classification | |
| shipbuilding approval | Yes |
| Marine classification association | |
| <ul style="list-style-type: none"> • American Bureau of Shipping Europe Ltd. (ABS) | Yes |
| <ul style="list-style-type: none"> • French marine classification society (BV) | No |
| <ul style="list-style-type: none"> • Det Norske Veritas (DNV) | Yes |
| <ul style="list-style-type: none"> • Lloyds Register of Shipping (LRS) | No |
| standards, specifications, approvals Environmental Product Declaration | |
| Environmental Product Declaration | Yes |
| global warming potential [CO2 eq] | |
| <ul style="list-style-type: none"> • total | 1 390.9 kg |
| <ul style="list-style-type: none"> • during manufacturing | 47.8 kg |
| <ul style="list-style-type: none"> • during operation | 1 342 kg |
| <ul style="list-style-type: none"> • after end of life | 0.4 kg |
| ambient conditions | |
| ambient temperature | |
| <ul style="list-style-type: none"> • during operation | 0 ... 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 according to IEC 60721 | Climate class 3K3, 5 ... 95% no condensation |
| connection method | |
| type of electrical connection | screw terminal |
| <ul style="list-style-type: none"> • at input | L1, L2, L3, PE: 1 screw terminal each for 0.2 ... 4 mm ² single-core/finely stranded |
| <ul style="list-style-type: none"> • at output | +, -: 2 screw terminals each for 0.33 ... 4 mm ² |
| <ul style="list-style-type: none"> • for auxiliary contacts | - |
| mechanical data | |
| width × height × depth of the enclosure | 160 × 125 × 125 mm |
| installation width × mounting height | 160 mm × 225 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 |
| fastening method | Snaps onto DIN rail EN 60715 35x7.5/15 |
| <ul style="list-style-type: none"> • DIN-rail mounting | Yes |
| <ul style="list-style-type: none"> • S7 rail mounting | No |
| <ul style="list-style-type: none"> • wall mounting | No |
| housing can be lined up | Yes |
| net weight | 2 kg |
| accessories | |
| electrical accessories | Buffer module, signaling module |
| further information internet links | |
| internet link | |
| <ul style="list-style-type: none"> • to website: Industry Mall | https://mall.industry.siemens.com |

- to web page: selection aid TIA Selection Tool
- to website: CAx-Download-Manager
- to website: Industry Online Support

- <https://www.siemens.com/tstcloud>
- <https://siemens.com/cax>
- <https://support.industry.siemens.com>

additional information

other information

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

security information

security information

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Classifications

| | Version | Classification |
|--------|---------|----------------|
| eClass | 14 | 27-04-07-01 |
| eClass | 12 | 27-04-07-01 |
| eClass | 9.1 | 27-04-07-01 |
| eClass | 9 | 27-04-07-01 |
| eClass | 8 | 27-04-90-02 |
| eClass | 7.1 | 27-04-90-02 |
| eClass | 6 | 27-04-90-02 |
| ETIM | 10 | EC002540 |
| ETIM | 9 | EC002540 |
| ETIM | 8 | EC002540 |
| ETIM | 7 | EC002540 |
| IDEA | 4 | 4130 |
| UNSPSC | 15 | 39-12-10-04 |

Approvals Certificates

Environmental Product Declaration

- | | |
|--|-----------|
| • global warming potential [CO2 eq] / during manufacturing | 47.8 kg |
| • global warming potential [CO2 eq] / during operation | 1342 kg |
| • global warming potential [CO2 eq] / after end of life | 0.4 kg |
| • global warming potential [CO2 eq] / total | 1390.9 kg |

Environment

General Product Approval



[Manufacturer Declaration](#)

[Declaration of Conformity](#)



[China RoHS](#)

General Product Approval

Maritime application



[Miscellaneous](#)



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