



SIMATIC ET 200SP PS/1AC/24VDC/10A

SIMATIC ET 200SP PS 24V/10A Stabilized power supply Input: 120/230 V AC Output: 24 V DC/10 A

| Input | |
|--|-------------------------------------|
| type of the power supply network | 1-phase AC |
| supply voltage at AC | Automatic range selection |
| <ul style="list-style-type: none"> initial value | |
| supply voltage | |
| <ul style="list-style-type: none"> 1 at AC rated value 2 at AC rated value | 120 V 230 V |
| input voltage | |
| <ul style="list-style-type: none"> 1 at AC 2 at AC | 85 ... 132 V 170 ... 264 V |
| design of input wide range input | No |
| overvoltage overload capability | $2.3 \times V_{in}$ rated, 1.3 ms |
| operating condition of the mains buffering | at $V_{in} = 93/187$ V |
| buffering time for rated value of the output current in the event of power failure minimum | 20 ms |
| operating condition of the mains buffering | at $V_{in} = 93/187$ V |
| line frequency | |
| <ul style="list-style-type: none"> 1 rated value 2 rated value | 50 Hz 60 Hz |
| line frequency | 47 ... 63 Hz |
| input current | |
| <ul style="list-style-type: none"> at rated input voltage 120 V at rated input voltage 230 V | 4.34 A 1.92 A |
| current limitation of inrush current at 25 °C maximum | 60 A |
| I ² t value maximum | 6.3 A ² ·s |
| fuse protection type | T 6.3 A/250 V (not accessible) |
| <ul style="list-style-type: none"> in the feeder | recommended LS switch: B/C 10 A/6 A |
| 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 |
| 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 | 0.1 % 1 % |
| residual ripple | |
| <ul style="list-style-type: none"> maximum typical | 150 mV 50 mV |
| voltage peak | |
| <ul style="list-style-type: none"> maximum typical | 240 mV 150 mV |

| | |
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| adjustable output voltage | 22.8 ... 28 V |
| product function output voltage adjustable | Yes |
| type of output voltage setting | via potentiometer |
| display version for normal operation | Green LED for 24 V OK |
| type of signal at output | Relay contact (NO contact, rating 60 V DC/ 0.3 A) for "24 V OK" |
| behavior of the output voltage when switching on | Overshoot of $V_{out} < 3 \%$ |
| response delay maximum | 0.3 s |
| voltage increase time of the output voltage | |
| • typical | 30 ms |
| output current | |
| • rated value | 10 A |
| • rated range | 0 ... 12 A; 10 A up to +60°C; +60 ... +70 °C: Derating 3%/K |
| supplied active power typical | 240 W |
| short-term overload current | |
| • on short-circuiting during the start-up typical | 30 A |
| • at short-circuit during operation typical | 30 A |
| duration of overloading capability for excess current | |
| • on short-circuiting during the start-up | 750 ms |
| • at short-circuit during operation | 800 ms |
| product feature | |
| • bridging of equipment | Yes |
| number of parallel-switched equipment resources for increasing the power | 2 |

Efficiency

| | |
|---|-------|
| efficiency in percent | 90 % |
| power loss [W] | |
| • at rated output voltage for rated value of the output current typical | 26 W |
| • during no-load operation maximum | 2.8 W |

Closed-loop control

| | |
|---|-------|
| relative control precision of the output voltage with rapid fluctuation of the input voltage by +/- 15% typical | 0.3 % |
| relative control precision of the output voltage at load step of resistive load 10/90/10 % typical | 3 % |
| setting time | |
| • load step 10 to 90% typical | 1 ms |
| • load step 90 to 10% typical | 1 ms |

Protection and monitoring

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|---|---|
| design of the overvoltage protection | protection against overvoltage in case of internal fault $V_{out} < 31.8 \text{ V}$ |
| response value current limitation | 14 ... 15 A |
| property of the output short-circuit proof | Yes |
| design of short-circuit protection | Constant current characteristic |
| enduring short circuit current RMS value | |
| • typical | 14.1 A |
| overcurrent overload capability in normal operation | overload capability 150 % I _{out} rated up to 5 s/min |
| display version for overload and short circuit | - |

Safety

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|---|---|
| galvanic isolation between input and output | Yes |
| galvanic isolation | Safety extra-low output voltage U_{out} acc. to EN 60950-1 and EN 50178 |
| operating resource protection class | Class I |
| leakage current | |
| • maximum | 3.5 mA |
| • typical | 1 mA |
| protection class IP | IP20 |

Approvals

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|-------------------------------|---|
| certificate of suitability | |
| • CE marking | Yes |
| • UL approval | Yes; cULus-Listed (UL61010-2-201, CSA C22.2 No.142); cCSAus (CSA C22.2 No. 60950-1, UL 60950-1) |
| • CSA approval | Yes; cULus-Listed (UL61010-2-201, CSA C22.2 No.142), cCSAus (CSA C22.2 No. 60950-1, UL 60950-1) |
| • cCSAus, Class 1, Division 2 | No |
| • ATEX | Yes; ATEX (EX) II 3G Ex ec nC IIC T3 Gc |
| certificate of suitability | |

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| <ul style="list-style-type: none"> relating to ATEX IECEX NEC Class 2 ULhazloc approval | IECEX Ex ec nC IIC T3 Gc; ATEX (EX) II 3G Ex ec nC IIC T3 Gc |
| type of certification CB-certificate | Yes; IECEX Ex ec nC IIC T3 Gc |
| certificate of suitability | No |
| <ul style="list-style-type: none"> EAC approval C-Tick | No |
| certificate of suitability shipbuilding approval | Yes |
| shipbuilding approval | Yes |
| Marine classification association | BV, DNV GL |
| <ul style="list-style-type: none"> American Bureau of Shipping Europe Ltd. (ABS) French marine classification society (BV) DNV GL Lloyds Register of Shipping (LRS) Nippon Kaiji Kyokai (NK) | No |
| | Yes |
| | Yes |
| | No |
| | No |

EMC

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|---|--|
| standard | |
| <ul style="list-style-type: none"> for emitted interference for mains harmonics limitation for interference immunity | EN 61000-6-3 Class B EN 61000-3-2 EN 61000-6-2 |

environmental conditions

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|--|---|
| ambient temperature | |
| <ul style="list-style-type: none"> during operation during transport during storage | -30 ... +70 °C; with natural convection -40 ... +85 °C -40 ... +85 °C |
| environmental category according to IEC 60721 | Climate class 3K3, 5 ... 95% no condensation |

Mechanics

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|--|---|
| type of electrical connection | Push-in terminals |
| <ul style="list-style-type: none"> at input | L, N, PE: 1 push-in terminal each for 0.2 ... 2.5 mm ² single-core/finely stranded |
| <ul style="list-style-type: none"> at output for auxiliary contacts for signaling contact | +, -: 2 push-in terminals each for 0.2 ... 2.5 mm ² Signaling contact: 2 push-in terminals for 0.2 ... 2.5 mm ² 2 push-in terminals for 0.2 ... 2.5 mm ² |
| product function | |
| <ul style="list-style-type: none"> removable terminal at input removable terminal at output | Yes Yes |
| width of the enclosure | 160 mm |
| height of the enclosure | 117 mm |
| depth of the enclosure | 74 mm |
| required spacing | |
| <ul style="list-style-type: none"> top bottom left right | 50 mm 50 mm 0 mm 0 mm |
| net weight | 0.7 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 | Redundancy module, buffer module, selectivity module, DC UPS |
| MTBF at 40 °C | 1 114 510 h |
| other information | Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified) |

