



SIMATIC ET 200SP PS/1AC/24VDC/5A

SIMATIC ET 200SP PS 24V/5A Stabilized power supply Input: 120/230 V AC
Output: 24 V DC/5 A

| Input | |
|--|------------------------------------|
| type of the power supply network | 1-phase AC |
| supply voltage at AC | |
| • initial value | Automatic range selection |
| supply voltage | |
| • 1 at AC rated value | 120 V |
| • 2 at AC rated value | 230 V |
| input voltage | |
| • 1 at AC | 85 ... 132 V |
| • 2 at AC | 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 | |
| • 1 rated value | 50 Hz |
| • 2 rated value | 60 Hz |
| line frequency | 47 ... 63 Hz |
| input current | |
| • at rated input voltage 120 V | 2.16 A |
| • at rated input voltage 230 V | 1.22 A |
| current limitation of inrush current at 25 °C maximum | 45 A |
| I ² t value maximum | 3.15 A ² ·s |
| fuse protection type | T 3,15 A/250 V (not accessible) |
| • in the feeder | recommended LS switch: B/C 6 A/3 A |
| Output | |
| voltage curve at output | Controlled, isolated DC voltage |
| output voltage at DC rated value | 24 V |
| output voltage | |
| • at output 1 at DC rated value | 24 V |
| relative overall tolerance of the voltage | 3 % |
| relative control precision of the output voltage | |
| • on slow fluctuation of input voltage | 0.1 % |
| • on slow fluctuation of ohm loading | 1 % |
| residual ripple | |
| • maximum | 150 mV |
| • typical | 50 mV |
| voltage peak | |

| | |
|---|---|
| <ul style="list-style-type: none"> • maximum | 240 mV |
| <ul style="list-style-type: none"> • typical | 150 mV |
| 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 Vout < 3 % |
| response delay maximum | 0.3 s |
| voltage increase time of the output voltage | |
| <ul style="list-style-type: none"> • typical | 30 ms |
| output current | |
| <ul style="list-style-type: none"> • rated value | 5 A |
| <ul style="list-style-type: none"> • rated range | 0 ... 6 A; 5 A up to +60°C; +60 ... +70 °C: Derating 3%/K |
| supplied active power typical | 120 W |
| short-term overload current | |
| <ul style="list-style-type: none"> • on short-circuiting during the start-up typical | 15 A |
| <ul style="list-style-type: none"> • at short-circuit during operation typical | 15 A |
| duration of overloading capability for excess current | |
| <ul style="list-style-type: none"> • on short-circuiting during the start-up | 800 ms |
| <ul style="list-style-type: none"> • at short-circuit during operation | 800 ms |
| product feature | |
| <ul style="list-style-type: none"> • bridging of equipment | Yes |
| number of parallel-switched equipment resources for increasing the power | 2 |
| Efficiency | |
| efficiency in percent | 88 % |
| power loss [W] | |
| <ul style="list-style-type: none"> • at rated output voltage for rated value of the output current typical | 17 W |
| <ul style="list-style-type: none"> • during no-load operation maximum | 2.7 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 | |
| <ul style="list-style-type: none"> • load step 10 to 90% typical | 1 ms |
| <ul style="list-style-type: none"> • load step 90 to 10% typical | 1 ms |
| Protection and monitoring | |
| design of the overvoltage protection | protection against overvoltage in case of internal fault Vout < 31.8 V |
| response value current limitation | 7 ... 7.5 A |
| property of the output short-circuit proof | Yes |
| design of short-circuit protection | Constant current characteristic |
| enduring short circuit current RMS value | |
| <ul style="list-style-type: none"> • typical | 7 A |
| overcurrent overload capability in normal operation | overload capability 150 % Iout rated up to 5 s/min |
| display version for overload and short circuit | - |
| Safety | |
| galvanic isolation between input and output | Yes |
| galvanic isolation | Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 |
| operating resource protection class | Class I |
| leakage current | |
| <ul style="list-style-type: none"> • maximum | 3.5 mA |
| <ul style="list-style-type: none"> • typical | 1 mA |
| protection class IP | IP20 |
| Approvals | |
| certificate of suitability | |
| <ul style="list-style-type: none"> • CE marking | Yes |
| <ul style="list-style-type: none"> • UL approval | Yes; cULus-Listed (UL61010-2-201, CSA C22.2 No.142); cCSAus (CSA C22.2 No. 60950-1, UL 60950-1) |
| <ul style="list-style-type: none"> • CSA approval | Yes; cULus-Listed (UL61010-2-201, CSA C22.2 No.142), cCSAus (CSA C22.2 |

| | |
|---|---|
| <ul style="list-style-type: none"> • cCSAus, Class 1, Division 2 • ATEX | No. 60950-1, UL 60950-1) No Yes; ATEX (EX) II 3G Ex ec nC IIC T3 Gc |
| certificate of suitability <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 Yes; IECEx Ex ec nC IIC T3 Gc No No |
| type of certification CB-certificate | Yes |
| certificate of suitability <ul style="list-style-type: none"> • EAC approval • C-Tick | Yes Yes |
| certificate of suitability shipbuilding approval | Yes |
| shipbuilding approval | BV, DNV GL |
| Marine classification association <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 | |
| 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 | |
| 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 | |
| type of electrical connection <ul style="list-style-type: none"> • at input • at output • for auxiliary contacts • for signaling contact | push-in terminals L, N, PE: 1 push-in terminal each for 0.2 ... 2.5 mm ² single-core/finely stranded +, -: 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 | 0.5 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 | 1 598 441 h |
| other information | Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified) |



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