



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           |
| • initial value                                                                            |                                     |
| 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 × Vin rated, 1.3 ms             |
| operating condition of the mains buffering                                                 | at Vin = 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 Vin = 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                                                             | 4.34 A                              |
| • at rated input voltage 230 V                                                             | 1.92 A                              |
| current limitation of inrush current at 25 °C maximum                                      | 60 A                                |
| I2t value maximum                                                                          | 6.3 A²·s                            |
| fuse protection type                                                                       | T 6.3 A/250 V (not accessible)      |
| • 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                                                                             |                                     |
| • 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                                                                               |                                     |
| • maximum                                                                                  | 240 mV                              |
| • 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                              |                                                                 |
| • 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

|                                                     |                                                                        |
|-----------------------------------------------------|------------------------------------------------------------------------|
| design of the overvoltage protection                | protection against overvoltage in case of internal fault Vout < 31.8 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 % 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                             |                                                                      |
| • maximum                                   | 3.5 mA                                                               |
| • typical                                   | 1 mA                                                                 |
| protection class IP                         | IP20                                                                 |

#### Approvals

|                               |                                                                                                 |
|-------------------------------|-------------------------------------------------------------------------------------------------|
| 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    |                                                                                                 |

|                                                                                                                                                                                                                                                           |                                                                                                   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• relating to ATEX</li> <li>• IECEx</li> <li>• NEC Class 2</li> <li>• ULhazloc approval</li> </ul>                                                                                                                 | 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"> <li>• EAC approval</li> <li>• C-Tick</li> </ul>                                                                                                                                                                        | No                                                                                                |
| certificate of suitability shipbuilding approval                                                                                                                                                                                                          | Yes                                                                                               |
| shipbuilding approval                                                                                                                                                                                                                                     | Yes                                                                                               |
| Marine classification association                                                                                                                                                                                                                         | BV, DNV GL                                                                                        |
| <ul style="list-style-type: none"> <li>• American Bureau of Shipping Europe Ltd. (ABS)</li> <li>• French marine classification society (BV)</li> <li>• DNV GL</li> <li>• Lloyds Register of Shipping (LRS)</li> <li>• Nippon Kaiji Kyokai (NK)</li> </ul> | No                                                                                                |
|                                                                                                                                                                                                                                                           | Yes                                                                                               |
|                                                                                                                                                                                                                                                           | Yes                                                                                               |
|                                                                                                                                                                                                                                                           | No                                                                                                |
|                                                                                                                                                                                                                                                           | No                                                                                                |
| <b>EMC</b>                                                                                                                                                                                                                                                |                                                                                                   |
| standard                                                                                                                                                                                                                                                  |                                                                                                   |
| <ul style="list-style-type: none"> <li>• for emitted interference</li> <li>• for mains harmonics limitation</li> <li>• for interference immunity</li> </ul>                                                                                               | EN 61000-6-3 Class B                                                                              |
|                                                                                                                                                                                                                                                           | EN 61000-3-2                                                                                      |
|                                                                                                                                                                                                                                                           | EN 61000-6-2                                                                                      |
| <b>environmental conditions</b>                                                                                                                                                                                                                           |                                                                                                   |
| ambient temperature                                                                                                                                                                                                                                       |                                                                                                   |
| <ul style="list-style-type: none"> <li>• during operation</li> <li>• during transport</li> <li>• during storage</li> </ul>                                                                                                                                | -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                                                      |
| <b>Mechanics</b>                                                                                                                                                                                                                                          |                                                                                                   |
| type of electrical connection                                                                                                                                                                                                                             | Push-in terminals                                                                                 |
| <ul style="list-style-type: none"> <li>• at input</li> </ul>                                                                                                                                                                                              | L, N, PE: 1 push-in terminal each for 0.2 ... 2.5 mm <sup>2</sup> single-core/finely stranded     |
| <ul style="list-style-type: none"> <li>• at output</li> <li>• for auxiliary contacts</li> <li>• for signaling contact</li> </ul>                                                                                                                          | +, -: 2 push-in terminals each for 0.2 ... 2.5 mm <sup>2</sup>                                    |
| product function                                                                                                                                                                                                                                          | Signaling contact: 2 push-in terminals for 0.2 ... 2.5 mm <sup>2</sup>                            |
| <ul style="list-style-type: none"> <li>• removable terminal at input</li> <li>• removable terminal at output</li> </ul>                                                                                                                                   | 2 push-in terminals for 0.2 ... 2.5 mm <sup>2</sup>                                               |
| width of the enclosure                                                                                                                                                                                                                                    | Yes                                                                                               |
| height of the enclosure                                                                                                                                                                                                                                   | Yes                                                                                               |
| depth of the enclosure                                                                                                                                                                                                                                    | 160 mm                                                                                            |
| required spacing                                                                                                                                                                                                                                          | 117 mm                                                                                            |
| <ul style="list-style-type: none"> <li>• top</li> <li>• bottom</li> <li>• left</li> <li>• right</li> </ul>                                                                                                                                                | 74 mm                                                                                             |
| net weight                                                                                                                                                                                                                                                | 50 mm                                                                                             |
| product feature of the enclosure housing can be lined up                                                                                                                                                                                                  | 50 mm                                                                                             |
| fastening method                                                                                                                                                                                                                                          | 0 mm                                                                                              |
| electrical accessories                                                                                                                                                                                                                                    | 0 mm                                                                                              |
| MTBF at 40 °C                                                                                                                                                                                                                                             | 0 mm                                                                                              |
| other information                                                                                                                                                                                                                                         | 0.7 kg                                                                                            |
|                                                                                                                                                                                                                                                           | Yes                                                                                               |
|                                                                                                                                                                                                                                                           | Snaps onto DIN rail EN 60715 35x7.5/15                                                            |
|                                                                                                                                                                                                                                                           | Redundancy module, buffer module, selectivity module, DC UPS                                      |
|                                                                                                                                                                                                                                                           | 1 114 510 h                                                                                       |
|                                                                                                                                                                                                                                                           | Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified) |

