



SITOP PSU100L/1AC/24VDC/5A

SITOP PSU100L 24 V/5 A 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                                                                            | Set by means of selector switch on the device                    |
| supply voltage                                                                             |                                                                  |
| • 1 at AC rated value                                                                      | 120 V                                                            |
| • 2 at AC rated value                                                                      | 230 V                                                            |
| input voltage                                                                              |                                                                  |
| • 1 at AC                                                                                  | 93 ... 132 V                                                     |
| • 2 at AC                                                                                  | 187 ... 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                                                             | 2.1 A                                                            |
| • at rated input voltage 230 V                                                             | 1.15 A                                                           |
| current limitation of inrush current at 25 °C maximum                                      | 32 A                                                             |
| duration of inrush current limiting at 25 °C                                               |                                                                  |
| • typical                                                                                  | 3 ms                                                             |
| I2t value maximum                                                                          | 0.8 A²·s                                                         |
| fuse protection type                                                                       | T 3,15 A/250 V (not accessible)                                  |
| • in the feeder                                                                            | Recommended miniature circuit breaker: from 6 A characteristic C |
| 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                                                       | 0.5 %                                                            |
| residual ripple                                                                            |                                                                  |
| • maximum                                                                                  | 150 mV                                                           |
| • typical                                                                                  | 50 mV                                                            |
| voltage peak                                                                               |                                                                  |

|                                                                                                                                                                      |                                                                      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• maximum</li> <li>• typical</li> </ul>                                                                                       | 240 mV                                                               |
| adjustable output voltage                                                                                                                                            | 150 mV                                                               |
| product function output voltage adjustable                                                                                                                           | 22.8 ... 26.4 V                                                      |
| type of output voltage setting                                                                                                                                       | Yes                                                                  |
| display version for normal operation                                                                                                                                 | via potentiometer                                                    |
| behavior of the output voltage when switching on                                                                                                                     | Green LED for 24 V OK                                                |
| response delay maximum                                                                                                                                               | Overshoot of Vout approx. 4 %                                        |
| voltage increase time of the output voltage                                                                                                                          | 1.5 s                                                                |
| <ul style="list-style-type: none"> <li>• typical</li> </ul>                                                                                                          | 130 ms                                                               |
| output current                                                                                                                                                       |                                                                      |
| <ul style="list-style-type: none"> <li>• rated value</li> <li>• rated range</li> </ul>                                                                               | 5 A                                                                  |
| supplied active power typical                                                                                                                                        | 0 ... 5 A; +45 ... +60 °C: Derating 2%/K                             |
| product feature                                                                                                                                                      | 120 W                                                                |
| <ul style="list-style-type: none"> <li>• bridging of equipment</li> </ul>                                                                                            | Yes                                                                  |
| number of parallel-switched equipment resources for increasing the power                                                                                             | 2                                                                    |
| <b>Efficiency</b>                                                                                                                                                    |                                                                      |
| efficiency in percent                                                                                                                                                | 86 %                                                                 |
| power loss [W]                                                                                                                                                       |                                                                      |
| <ul style="list-style-type: none"> <li>• at rated output voltage for rated value of the output current typical</li> </ul>                                            | 17 W                                                                 |
| <b>Closed-loop control</b>                                                                                                                                           |                                                                      |
| 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                                                                   | 2 %                                                                  |
| setting time                                                                                                                                                         |                                                                      |
| <ul style="list-style-type: none"> <li>• load step 10 to 90% typical</li> <li>• load step 90 to 10% typical</li> </ul>                                               | 0.4 ms                                                               |
|                                                                                                                                                                      | 0.4 ms                                                               |
| <b>Protection and monitoring</b>                                                                                                                                     |                                                                      |
| design of the overvoltage protection                                                                                                                                 | < 33 V                                                               |
| response value current limitation typical                                                                                                                            | 5.25 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"> <li>• typical</li> </ul>                                                                                                          | 8 A                                                                  |
| display version for overload and short circuit                                                                                                                       | -                                                                    |
| <b>Safety</b>                                                                                                                                                        |                                                                      |
| 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"> <li>• maximum</li> <li>• typical</li> </ul>                                                                                       | 3.5 mA                                                               |
|                                                                                                                                                                      | 0.4 mA                                                               |
| protection class IP                                                                                                                                                  | IP20                                                                 |
| <b>Approvals</b>                                                                                                                                                     |                                                                      |
| certificate of suitability                                                                                                                                           |                                                                      |
| <ul style="list-style-type: none"> <li>• CE marking</li> <li>• UL approval</li> <li>• CSA approval</li> <li>• cCSAus, Class 1, Division 2</li> <li>• ATEX</li> </ul> | Yes                                                                  |
|                                                                                                                                                                      | Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259        |
|                                                                                                                                                                      | Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259        |
|                                                                                                                                                                      | No                                                                   |
|                                                                                                                                                                      | No                                                                   |
| certificate of suitability                                                                                                                                           |                                                                      |
| <ul style="list-style-type: none"> <li>• IECEx</li> <li>• NEC Class 2</li> <li>• ULhazloc approval</li> <li>• FM registration</li> </ul>                             | No                                                                   |
|                                                                                                                                                                      | No                                                                   |
|                                                                                                                                                                      | No                                                                   |
|                                                                                                                                                                      | No                                                                   |
| type of certification CB-certificate                                                                                                                                 | Yes                                                                  |
| certificate of suitability                                                                                                                                           |                                                                      |
| <ul style="list-style-type: none"> <li>• EAC approval</li> </ul>                                                                                                     | Yes                                                                  |
| certificate of suitability shipbuilding approval                                                                                                                     | No                                                                   |

|                                                          |                                                                                                   |
|----------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| shipbuilding approval                                    | -                                                                                                 |
| Marine classification association                        |                                                                                                   |
| • American Bureau of Shipping Europe Ltd. (ABS)          | No                                                                                                |
| • French marine classification society (BV)              | No                                                                                                |
| • DNV GL                                                 | No                                                                                                |
| • Lloyds Register of Shipping (LRS)                      | No                                                                                                |
| • Nippon Kaiji Kyokai (NK)                               | No                                                                                                |
| <b>EMC</b>                                               |                                                                                                   |
| standard                                                 |                                                                                                   |
| • for emitted interference                               | EN 55022 Class A                                                                                  |
| • for mains harmonics limitation                         | -                                                                                                 |
| • for interference immunity                              | EN 61000-6-2                                                                                      |
| <b>environmental conditions</b>                          |                                                                                                   |
| ambient temperature                                      |                                                                                                   |
| • during operation                                       | 0 ... 60 °C; with natural convection                                                              |
| • during transport                                       | -40 ... +85 °C                                                                                    |
| • during storage                                         | -40 ... +85 °C                                                                                    |
| environmental category according to IEC 60721            | Climate class 3K3, 5 ... 95% no condensation                                                      |
| <b>Mechanics</b>                                         |                                                                                                   |
| type of electrical connection                            | screw-type terminals                                                                              |
| • at input                                               | L, N, PE: 1 screw terminal each for 0.5 ... 2.5 mm <sup>2</sup> single-core/finely stranded       |
| • at output                                              | +, -: 2 screw terminals each for 0.5 ... 2.5 mm <sup>2</sup>                                      |
| • for auxiliary contacts                                 | -                                                                                                 |
| width of the enclosure                                   | 50 mm                                                                                             |
| height of the enclosure                                  | 125 mm                                                                                            |
| depth of the enclosure                                   | 120 mm                                                                                            |
| required spacing                                         |                                                                                                   |
| • top                                                    | 50 mm                                                                                             |
| • bottom                                                 | 50 mm                                                                                             |
| • left                                                   | 0 mm                                                                                              |
| • right                                                  | 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                                                            |
| MTBF at 40 °C                                            | 3 076 166 h                                                                                       |
| other information                                        | Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified) |

