



LOGO!Power/1AC/12VDC/4.5A

LOGO!Power 12 V / 4.5 A stabilized power supply input: 100-240 V AC output: 12 V DC / 4.5 A \*Ex approval no longer available\*

| Input                                                                                      |                                                                                                |
|--------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| type of the power supply network                                                           | 1-phase AC or DC                                                                               |
| supply voltage at AC                                                                       |                                                                                                |
| • minimum rated value                                                                      | 100 V                                                                                          |
| • maximum rated value                                                                      | 240 V                                                                                          |
| • initial value                                                                            | 85 V                                                                                           |
| • full-scale value                                                                         | 264 V                                                                                          |
| input voltage                                                                              |                                                                                                |
| • at DC                                                                                    | 110 ... 300 V                                                                                  |
| design of input wide range input                                                           | Yes                                                                                            |
| overvoltage overload capability                                                            | 300 V AC for 1 s                                                                               |
| operating condition of the mains buffering                                                 | at $V_{in} = 187$ V                                                                            |
| buffering time for rated value of the output current in the event of power failure minimum | 40 ms                                                                                          |
| operating condition of the mains buffering                                                 | at $V_{in} = 187$ 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                                                             | 1.13 A                                                                                         |
| • at rated input voltage 230 V                                                             | 0.61 A                                                                                         |
| current limitation of inrush current at 25 °C maximum                                      | 50 A                                                                                           |
| I <sup>2</sup> t value maximum                                                             | 3 A <sup>2</sup> ·s                                                                            |
| fuse protection type                                                                       | internal                                                                                       |
| • in the feeder                                                                            | Recommended miniature circuit breaker: from 10 A characteristic B or from 6 A characteristic C |
| Output                                                                                     |                                                                                                |
| voltage curve at output                                                                    | Controlled, isolated DC voltage                                                                |
| output voltage at DC rated value                                                           | 12 V                                                                                           |
| output voltage                                                                             |                                                                                                |
| • at output 1 at DC rated value                                                            | 12 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                                                       | 0.1 %                                                                                          |
| residual ripple                                                                            |                                                                                                |
| • maximum                                                                                  | 200 mV                                                                                         |
| • typical                                                                                  | 30 mV                                                                                          |
| voltage peak                                                                               |                                                                                                |
| • maximum                                                                                  | 300 mV                                                                                         |

|                                                                                                                 |                                                                                                                                                              |
|-----------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| • typical                                                                                                       | 50 mV                                                                                                                                                        |
| adjustable output voltage                                                                                       | 10.5 ... 16.1 V                                                                                                                                              |
| product function output voltage adjustable                                                                      | Yes                                                                                                                                                          |
| type of output voltage setting                                                                                  | via potentiometer                                                                                                                                            |
| display version for normal operation                                                                            | Green LED for output voltage OK                                                                                                                              |
| behavior of the output voltage when switching on                                                                | No overshoot of Vout (soft start)                                                                                                                            |
| response delay maximum                                                                                          | 0.5 s                                                                                                                                                        |
| voltage increase time of the output voltage                                                                     |                                                                                                                                                              |
| • typical                                                                                                       | 100 ms                                                                                                                                                       |
| output current                                                                                                  |                                                                                                                                                              |
| • rated value                                                                                                   | 4.5 A                                                                                                                                                        |
| • rated range                                                                                                   | 0 ... 4.5 A; +55 ... +70 °C: Derating 2%/K                                                                                                                   |
| supplied active power typical                                                                                   | 54 W                                                                                                                                                         |
| product feature                                                                                                 |                                                                                                                                                              |
| • bridging of equipment                                                                                         | Yes                                                                                                                                                          |
| number of parallel-switched equipment resources for increasing the power                                        | 2                                                                                                                                                            |
| <b>Efficiency</b>                                                                                               |                                                                                                                                                              |
| efficiency in percent                                                                                           | 87.1 %                                                                                                                                                       |
| power loss [W]                                                                                                  |                                                                                                                                                              |
| • at rated output voltage for rated value of the output current typical                                         | 8 W                                                                                                                                                          |
| • during no-load operation maximum                                                                              | 0.3 W                                                                                                                                                        |
| <b>Closed-loop control</b>                                                                                      |                                                                                                                                                              |
| relative control precision of the output voltage with rapid fluctuation of the input voltage by +/- 15% typical | 0.2 %                                                                                                                                                        |
| relative control precision of the output voltage at load step of resistive load 10/90/10 % typical              | 4 %                                                                                                                                                          |
| setting time                                                                                                    |                                                                                                                                                              |
| • load step 10 to 90% typical                                                                                   | 1 ms                                                                                                                                                         |
| • load step 90 to 10% typical                                                                                   | 1 ms                                                                                                                                                         |
| <b>Protection and monitoring</b>                                                                                |                                                                                                                                                              |
| design of the overvoltage protection                                                                            | Yes, according to EN 60950-1                                                                                                                                 |
| • typical                                                                                                       | 5 A                                                                                                                                                          |
| property of the output short-circuit proof                                                                      | Yes                                                                                                                                                          |
| design of short-circuit protection                                                                              | Constant current characteristic                                                                                                                              |
| enduring short circuit current RMS value                                                                        |                                                                                                                                                              |
| • maximum                                                                                                       | 5 A                                                                                                                                                          |
| overcurrent overload capability in normal operation                                                             | overload capability 150% Iout rated typ. 200 ms                                                                                                              |
| display version for overload and short circuit                                                                  | -                                                                                                                                                            |
| measuring point for output current                                                                              | 50 mV $\Rightarrow$ 4.5 A                                                                                                                                    |
| overcurrent overload capability when switching on                                                               | 150% Iout rated typ. 200 ms                                                                                                                                  |
| <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 II (without protective conductor)                                                                                                                      |
| protection class IP                                                                                             | IP20                                                                                                                                                         |
| <b>Approvals</b>                                                                                                |                                                                                                                                                              |
| certificate of suitability                                                                                      |                                                                                                                                                              |
| • CE marking                                                                                                    | Yes                                                                                                                                                          |
| • UL approval                                                                                                   | Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cURus-Recognized (UL 60950, CSA C22.2 No. 60950), File E151273, NEC class 2 (acc. to UL 1310) |
| • CSA approval                                                                                                  | Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cURus-Recognized (UL 60950, CSA C22.2 No. 60950), File E151273, NEC class 2 (acc. to UL 1310) |
| • NEC Class 2                                                                                                   | Yes; according to UL1310, File E151273                                                                                                                       |
| • EAC approval                                                                                                  | Yes                                                                                                                                                          |
| type of certification                                                                                           |                                                                                                                                                              |
| • CB-certificate                                                                                                | Yes                                                                                                                                                          |
| certificate of suitability                                                                                      |                                                                                                                                                              |
| • IECEx                                                                                                         | No                                                                                                                                                           |
| • ATEX                                                                                                          | No                                                                                                                                                           |

|                                                                                                   |                                                                                                   |
|---------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• ULhazloc approval</li> </ul>                             | No                                                                                                |
| <ul style="list-style-type: none"> <li>• cCSAus, Class 1, Division 2</li> </ul>                   | No                                                                                                |
| <ul style="list-style-type: none"> <li>• FM registration</li> </ul>                               | No                                                                                                |
| certificate of suitability shipbuilding approval                                                  | Yes                                                                                               |
| Marine classification association                                                                 |                                                                                                   |
| <ul style="list-style-type: none"> <li>• American Bureau of Shipping Europe Ltd. (ABS)</li> </ul> | Yes                                                                                               |
| <ul style="list-style-type: none"> <li>• French marine classification society (BV)</li> </ul>     | Yes                                                                                               |
| <ul style="list-style-type: none"> <li>• Lloyds Register of Shipping (LRS)</li> </ul>             | Yes                                                                                               |
| <b>EMC</b>                                                                                        |                                                                                                   |
| standard                                                                                          |                                                                                                   |
| <ul style="list-style-type: none"> <li>• for emitted interference</li> </ul>                      | EN 55022 Class B                                                                                  |
| <ul style="list-style-type: none"> <li>• for mains harmonics limitation</li> </ul>                | not applicable                                                                                    |
| <ul style="list-style-type: none"> <li>• for interference immunity</li> </ul>                     | EN 61000-6-2                                                                                      |
| <b>environmental conditions</b>                                                                   |                                                                                                   |
| ambient temperature                                                                               |                                                                                                   |
| <ul style="list-style-type: none"> <li>• during operation</li> </ul>                              | -25 ... +70 °C; with natural convection                                                           |
| <ul style="list-style-type: none"> <li>• during transport</li> </ul>                              | -40 ... +85 °C                                                                                    |
| <ul style="list-style-type: none"> <li>• during storage</li> </ul>                                | -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                                                                              |
| <ul style="list-style-type: none"> <li>• at input</li> </ul>                                      | L, N: 1 screw terminal each for 0.5 ... 2.5 mm <sup>2</sup> single-core/finely stranded           |
| <ul style="list-style-type: none"> <li>• at output</li> </ul>                                     | +, -: 1 screw terminal each for 0.5 ... 2.5 mm <sup>2</sup>                                       |
| <ul style="list-style-type: none"> <li>• for auxiliary contacts</li> </ul>                        | -                                                                                                 |
| width of the enclosure                                                                            | 54 mm                                                                                             |
| height of the enclosure                                                                           | 90 mm                                                                                             |
| depth of the enclosure                                                                            | 53 mm                                                                                             |
| required spacing                                                                                  |                                                                                                   |
| <ul style="list-style-type: none"> <li>• top</li> </ul>                                           | 20 mm                                                                                             |
| <ul style="list-style-type: none"> <li>• bottom</li> </ul>                                        | 20 mm                                                                                             |
| <ul style="list-style-type: none"> <li>• left</li> </ul>                                          | 0 mm                                                                                              |
| <ul style="list-style-type: none"> <li>• right</li> </ul>                                         | 0 mm                                                                                              |
| net weight                                                                                        | 0.2 kg                                                                                            |
| product feature of the enclosure housing can be lined up                                          | Yes                                                                                               |
| fastening method                                                                                  | Snaps onto DIN rail EN 60715 35x7.5/15, direct mounting in different mounting positions           |
| MTBF at 40 °C                                                                                     | 2 566 680 h                                                                                       |
| other information                                                                                 | Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified) |

