

SITOP PSU200M 24 V/5 A  
 SITOP PSU200M 5 A stabilized power supply input: 120/230-500 V  
 AC output: 24 V DC/5 A



| Input  |  |
|--|--|
| Input  | 1-phase and 2-phase AC   |
| Supply voltage   |  |
| <ul style="list-style-type: none"> <li>• 1 at AC</li> <li>• 2 at AC</li> <li>• Note</li> </ul>                           | 120 ... 230 V<br>230 ... 500 V<br>Set by means of selector switch on the device; starting from $V_{in} > 90/180$ V |
| Input voltage  |  |
| <ul style="list-style-type: none"> <li>• 1 at AC</li> <li>• 2 at AC</li> </ul>   | 85 ... 264 V<br>176 ... 550 V  |
| Wide-range input   | Yes  |
| Overvoltage resistance   | 1300 V <sub>peak</sub> , 1.3 ms  |
| Mains buffering at I <sub>out</sub> rated, min.  | 25 ms; at $V_{in} = 120/230$ V, typ. 150 ms at $V_{in} = 400$ V  |
| Rated line frequency 1   | 50 Hz  |
| Rated line frequency 2   | 60 Hz  |
| Rated line range   | 47 ... 63 Hz   |
| Input current  |  |
| <ul style="list-style-type: none"> <li>• at rated input voltage 120 V</li> <li>• at rated input voltage 230 V</li> </ul> | 2.2 A<br>1.2 A   |

|   |   |
|---|---|
| • at rated input voltage 500 V                | 0.61 A  |
| Switch-on current limiting (+25 °C), max.     | 35 A  |
| I <sup>2</sup> t, max.                        | 1.7 A <sup>2</sup> ·s   |
| Built-in incoming fuse                        | T 3.15 A (not accessible)   |
| Protection in the mains power input (IEC 898) | Recommended miniature circuit breaker at 1-phase operation: from 6 A (10 A) characteristic C (B); required at 2-phase operation: circuit breaker 2-pole connected or circuit breaker 3RV2011-1EA10 (setting 3.8 A) or 3RV2711-1ED10 (UL 489) at 230 V; 3RV2011-1DA10 (setting 3 A) or 3RV2711-1DD10 (UL 489) at 400/500 V |

## Output

|   |   |
|---|---|
| Output  | Controlled, isolated DC voltage                                 |
| Rated voltage V <sub>out</sub> DC                             | 24 V  |
| Total tolerance, static ±                                     | 3 %   |
| Static mains compensation, approx.                            | 0.1 %   |
| Static load balancing, approx.                                | 0.1 %   |
| Residual ripple peak-peak, max.                               | 50 mV   |
| Spikes peak-peak, max. (bandwidth: 20 MHz)                    | 200 mV  |
| Adjustment range  | 24 ... 28.8 V   |
| Product function Output voltage adjustable                    | Yes   |
| Output voltage setting  | via potentiometer   |
| Status display  | Green LED for 24 V OK   |
| Signaling   | Relay contact (NO contact, rating 60 V DC/ 0.3 A) for "24 V OK" |
| On/off behavior   | Overshoot of V <sub>out</sub> approx. 3 %                       |
| Startup delay, max.   | 1 s   |
| Voltage rise, typ.  | 50 ms   |
| Rated current value I <sub>out</sub> rated                    | 5 A   |
| Current range   | 0 ... 5 A   |
| Supplied active power typical                                 | 120 W   |
| Short-term overload current                                   |   |
| • at short-circuit during operation typical                   | 15 A  |
| Duration of overloading capability for excess current         |   |
| • at short-circuit during operation                           | 25 ms   |
| Constant overload current                                     |   |
| • on short-circuiting during the start-up typical             | 6 A   |
| Parallel switching for enhanced performance                   | Yes; switchable characteristic                                  |
| Numbers of parallel switchable units for enhanced performance | 2   |

## Efficiency

|   |      |
|---|------|
| Efficiency at V <sub>out</sub> rated, I <sub>out</sub> rated, approx. | 88 % |
| Power loss at V <sub>out</sub> rated, I <sub>out</sub> rated, approx. | 17 W |
| Power loss [W] during no-load operation maximum                       | 4 W  |

## Closed-loop control

|   |       |
|---|-------|
| Dynamic mains compensation ( $V_{in}$ rated $\pm 15\%$ ), max.        | 0.1 % |
| Dynamic load smoothing ( $I_{out}$ : 50/100/50 %), $U_{out} \pm$ typ. | 3 %   |
| Load step setting time 50 to 100%, typ.                               | 2 ms  |
| Load step setting time 100 to 50%, typ.                               | 2 ms  |
| Setting time maximum  | 5 ms  |

### Protection and monitoring

|  |   |
|--|---|
| Output overvoltage protection  | < 35 V  |
| Current limitation, typ.   | 6 A   |
| Property of the output Short-circuit proof   | Yes   |
| Short-circuit protection   | Alternatively, constant current characteristic approx. 5.5 A or latching shutdown |
| Enduring short circuit current RMS value <ul style="list-style-type: none"> <li>• typical</li> </ul> | 6 A   |
| Overload/short-circuit indicator   | LED yellow for "overload", LED red for "latching shutdown"                        |

### Safety

|  |  |
|--|--|
| Primary/secondary isolation  | Yes  |
| Galvanic isolation   | Safety extra-low output voltage $U_{out}$ acc. to EN 60950-1 and EN 50178  |
| Protection class   | Class I  |
| Leakage current <ul style="list-style-type: none"> <li>• maximum</li> <li>• typical</li> </ul> | 3.5 mA<br>0.25 mA  |
| CE mark  | Yes  |
| UL/cUL (CSA) approval  | cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259   |
| Explosion protection   | IECEx Ex nA nC IIC T4 Gc; ATEX (EX) II 3G Ex nA nC IIC T4 Gc (für AC 120-230/230-400 V); cCSAus (CSA C22.2 No. 213, ANSI/ISA-12.12.01) Class I, Div. 2, Group ABCD, T3 |
| CB approval  | Yes  |
| Marine approval  | GL, ABS  |
| Degree of protection (EN 60529)  | IP20   |

### EMC

|                             |                  |
|-----------------------------|------------------|
| Emitted interference        | EN 55022 Class B |
| Supply harmonics limitation | EN 61000-3-2     |
| Noise immunity              | EN 61000-6-2     |

### Operating data

|  |  |
|--|--|
| Ambient temperature <ul style="list-style-type: none"> <li>• during operation</li> <li>— Note</li> <li>• during transport</li> </ul> | -25 ... +70 °C<br>With natural convection; startup tested starting from -40 °C nominal voltage<br>-40 ... +85 °C |
|--|--|

|  |   |
|--|---|
| • during storage   | -40 ... +85 °C  |
| Humidity class according to EN 60721                               | Climate class 3K3, no condensation  |
| <b>Mechanics</b>   |   |
| Connection technology  | screw-type terminals  |
| Connections  |   |
| • Supply input   | L, N, PE: 1 screw terminal each for 0.2 ... 2.5 mm <sup>2</sup> single-core/finely stranded       |
| • Output   | +, -: 2 screw terminals each for 0.2 ... 2.5 mm <sup>2</sup>                                      |
| • Auxiliary  | 13, 14 (alarm signal): 1 screw terminal each for 0.14 ... 1.5 mm <sup>2</sup>                     |
| Width of the enclosure   | 70 mm   |
| Height of the enclosure  | 125 mm  |
| Depth of the enclosure   | 121 mm  |
| Required spacing   |   |
| • top  | 50 mm   |
| • bottom   | 50 mm   |
| • left   | 0 mm  |
| • right  | 0 mm  |
| Weight, approx.  | 0.6 kg  |
| Product feature of the enclosure housing for side-by-side mounting | Yes   |
| Installation   | Snaps onto DIN rail EN 60715 35x7.5/15  |
| Electrical accessories   | Buffer module   |
| MTBF at 40 °C  | 1 123 973 h   |
| Other information  | Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified) |