

SITOP PSU200M 24 V/10 A, VARNISHED PCB  
SITOP PSU200M PLUS 10 STABILIZED POWER SUPPLY INPUT:  
120-230/230-500 V AC OUTPUT: 24 V DC/10 A VERSION WITH  
COATED PCB



Figure similar

| Input                               |                                                       |
|-------------------------------------|-------------------------------------------------------|
| Input                               | 1-phase and 2-phase AC                                |
| Supply voltage                      |                                                       |
| • 1 at AC                           | 120 ... 230 V                                         |
| • 2 at AC                           | 230 ... 500 V                                         |
| • Note                              | Set by means of selector switch on the device         |
| Input voltage                       |                                                       |
| • 1 at AC                           | 85 ... 264 V                                          |
| • 2 at AC                           | 176 ... 550 V                                         |
| Wide-range input                    | Yes                                                   |
| Overvoltage resistance              | 1300 Vpeak, 1.3 ms                                    |
| Mains buffering at Iout rated, min. | 25 ms; at Vin = 120/230 V, typ. 150 ms at Vin = 400 V |
| Rated line frequency 1              | 50 Hz                                                 |
| Rated line frequency 2              | 60 Hz                                                 |
| Rated line range                    | 47 ... 63 Hz                                          |
| Input current                       |                                                       |
| • at rated input voltage 120 V      | 4.4 A                                                 |

|                                                                                                                          |                                                                                                                                                                                                                                                                                                                           |
|--------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• at rated input voltage 230 V</li> <li>• at rated input voltage 500 V</li> </ul> | 2.4 A                                                                                                                                                                                                                                                                                                                     |
| Switch-on current limiting (+25 °C), max.                                                                                | 1.1 A                                                                                                                                                                                                                                                                                                                     |
| I <sup>2</sup> t, max.                                                                                                   | 35 A                                                                                                                                                                                                                                                                                                                      |
| Built-in incoming fuse                                                                                                   | 4 A <sup>2</sup> ·s                                                                                                                                                                                                                                                                                                       |
| Protection in the mains power input (IEC 898)                                                                            | T 6.3 A (not accessible)                                                                                                                                                                                                                                                                                                  |
|                                                                                                                          | 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                                                                                           | via signaling module (6EP1961-3BA10)                                 |
| 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                                                          | 10 A                                                                 |
| Current range                                                                                       | 0 ... 10 A                                                           |
| <ul style="list-style-type: none"> <li>• Note</li> </ul>                                            | +60 ... +70 °C: Derating 2%/K (at 120 V, 230 V) or 3.5%/K (at 400 V) |
| Supplied active power typical                                                                       | 240 W                                                                |
| Short-term overload current                                                                         |                                                                      |
| <ul style="list-style-type: none"> <li>• at short-circuit during operation typical</li> </ul>       | 30 A                                                                 |
| Duration of overloading capability for excess current                                               |                                                                      |
| <ul style="list-style-type: none"> <li>• at short-circuit during operation</li> </ul>               | 25 ms                                                                |
| Constant overload current                                                                           |                                                                      |
| <ul style="list-style-type: none"> <li>• on short-circuiting during the start-up typical</li> </ul> | 12 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. | 87 % |

|                                                                                                                                      |                                                                                  |
|--------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| Power loss at $V_{out}$ rated, $I_{out}$ rated, approx.                                                                              | 36 W                                                                             |
| <b>Closed-loop control</b>                                                                                                           |                                                                                  |
| 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                                                                             |
| <b>Protection and monitoring</b>                                                                                                     |                                                                                  |
| Output overvoltage protection                                                                                                        | < 35 V                                                                           |
| Current limitation, typ.                                                                                                             | 12 A                                                                             |
| Property of the output Short-circuit proof                                                                                           | Yes                                                                              |
| Short-circuit protection                                                                                                             | Alternatively, constant current characteristic approx. 12 A or latching shutdown |
| Enduring short circuit current RMS value <ul style="list-style-type: none"> <li>• typical</li> </ul>                                 | 12 A                                                                             |
| Overload/short-circuit indicator                                                                                                     | LED yellow for "overload", LED red for "latching shutdown"                       |
| <b>Safety</b>                                                                                                                        |                                                                                  |
| 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>0.32 mA                                                                |
| CE mark                                                                                                                              | Yes                                                                              |
| UL/cUL (CSA) approval                                                                                                                | cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259                         |
| Explosion protection                                                                                                                 | -                                                                                |
| FM approval                                                                                                                          | -                                                                                |
| CB approval                                                                                                                          | No                                                                               |
| Marine approval                                                                                                                      | -                                                                                |
| Degree of protection (EN 60529)                                                                                                      | IP20                                                                             |
| <b>EMC</b>                                                                                                                           |                                                                                  |
| Emitted interference                                                                                                                 | EN 55022 Class B                                                                 |
| Supply harmonics limitation                                                                                                          | EN 61000-3-2                                                                     |
| Noise immunity                                                                                                                       | EN 61000-6-2                                                                     |
| <b>Operating data</b>                                                                                                                |                                                                                  |
| 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<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                                                        | -                                                                                                 |
| Width of the enclosure                                             | 90 mm                                                                                             |
| Height of the enclosure                                            | 125 mm                                                                                            |
| Depth of the enclosure                                             | 125 mm                                                                                            |
| Required spacing                                                   |                                                                                                   |
| • top                                                              | 50 mm                                                                                             |
| • bottom                                                           | 50 mm                                                                                             |
| • left                                                             | 0 mm                                                                                              |
| • right                                                            | 0 mm                                                                                              |
| Weight, approx.                                                    | 1.4 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, signaling module                                                                   |
| Other information                                                  | Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified) |