



SITOP PSU300M 48V/10A STABILIZED POWER SUPPLY  
INPUT: 400-500 V 3 AC OUTPUT: 48 V/10 A DC

### Technical specifications

|                                                             |                                                                                                                                                           |
|-------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product                                                     | SITOP PSU300M                                                                                                                                             |
| Power supply, type                                          | 48 V/10 A                                                                                                                                                 |
| <b>Input</b>                                                |                                                                                                                                                           |
| Input                                                       | 3-phase AC                                                                                                                                                |
| Rated voltage value $V_{in}$ rated                          | 400 ... 500 V                                                                                                                                             |
| Voltage range                                               | 320 ... 575 V                                                                                                                                             |
| Wide-range input                                            | Yes                                                                                                                                                       |
| Overvoltage resistance                                      | $2.3 \times V_{in}$ rated, 1.3 ms                                                                                                                         |
| Mains buffering at $I_{out}$ rated, min.                    | 15 ms                                                                                                                                                     |
| Mains buffering                                             | at $V_{in} = 400$ V                                                                                                                                       |
| Rated line frequency                                        | 50 / 60 Hz                                                                                                                                                |
| Rated line range                                            | 47 ... 63 Hz                                                                                                                                              |
| Input current / at nominal level of the input voltage 400 V | 1.2 A                                                                                                                                                     |
| Input current / at nominal level of the input voltage 500 V | 1 A                                                                                                                                                       |
| Switch-on current limiting (+25 °C), max.                   | 18 A                                                                                                                                                      |
| $I^2t$ , max.                                               | 0.8 A <sup>2</sup> ·s                                                                                                                                     |
| Built-in incoming fuse                                      | none                                                                                                                                                      |
| Protection in the mains power input (IEC 898)               | Required: 3-pole connected miniature circuit breaker 6 ... 16 A characteristic C or circuit breaker 3RV2011-1DA10 (setting 3 A) or 3RV2711-1DD10 (UL 489) |

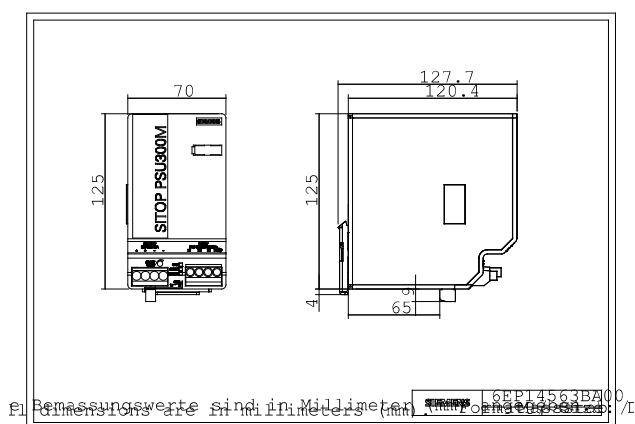
| Output                                                                                                |                                                               |
|-------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|
| Output                                                                                                | Controlled, isolated DC voltage                               |
| Rated voltage Vout DC                                                                                 | 48 V                                                          |
| Total tolerance, static $\pm$                                                                         | 3 %                                                           |
| Static mains compensation, approx.                                                                    | 0.1 %                                                         |
| Static load balancing, approx.                                                                        | 0.2 %                                                         |
| Residual ripple peak-peak, max.                                                                       | 100 mV                                                        |
| Spikes peak-peak, max. (bandwidth: 20 MHz)                                                            | 200 mV                                                        |
| Adjustment range                                                                                      | 42 ... 56 V                                                   |
| Product feature / output voltage adjustable                                                           | Yes                                                           |
| Output voltage setting                                                                                | via potentiometer                                             |
| • Note                                                                                                | max. 480 W                                                    |
| Status display                                                                                        | Green LED for 48 V OK                                         |
| Signaling                                                                                             | Relay contact (NO contact, rating 60 V DC/ 0.3 A) for 48 V OK |
| On/off behavior                                                                                       | No overshoot of Vout (soft start)                             |
| Startup delay, max.                                                                                   | 2.5 s                                                         |
| Voltage rise, typ.                                                                                    | 150 ms                                                        |
| Voltage increase time / of the output voltage / maximum                                               | 500 ms                                                        |
| Rated current value Iout rated                                                                        | 10 A                                                          |
| Current range                                                                                         | 0 ... 10 A                                                    |
| • Note                                                                                                | 7 A up to +70 °C                                              |
| delivered active power / typ.                                                                         | 480 W                                                         |
| constant overload current / at short-circuit during run-up / typical                                  | 11 A                                                          |
| short-term overload current / at short-circuit during operation / typical                             | 23 A                                                          |
| Duration of overloading ability for excess current / on short-circuiting during the operational phase | 25 ms                                                         |
| Parallel switching for enhanced performance                                                           | Yes                                                           |
| • Note                                                                                                | switchable characteristic                                     |
| Numbers of parallel switchable units for enhanced performance                                         | 2                                                             |
| Efficiency                                                                                            |                                                               |
| Efficiency at Vout rated, Iout rated, approx.                                                         | 93 %                                                          |
| Power loss at Vout rated, Iout rated, approx.                                                         | 36 W                                                          |
| Closed-loop control                                                                                   |                                                               |
| Dynamic mains compensation (Vin rated $\pm 15$ %), max.                                               | 1 %                                                           |
| Dynamic load smoothing (Iout: 50/100/50 %), Uout $\pm$ typ.                                           | 2 %                                                           |
| Load step setting time 50 to 100%, typ.                                                               | 2 ms                                                          |
| Load step setting time 100 to 50%, typ.                                                               | 2 ms                                                          |
| Setting time / maximum                                                                                | 10 ms                                                         |
| Protection and monitoring                                                                             |                                                               |

|                                                                |                                                                                                   |
|----------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| Output overvoltage protection                                  | Yes, according to EN 60950                                                                        |
| Current limitation, typ.                                       | 11 A                                                                                              |
| Characteristic feature of the output / short-circuit protected | Yes                                                                                               |
| Short-circuit protection                                       | Alternatively, constant current characteristic approx. 11 A or latching shutdown                  |
| Enduring short circuit current / Effective level / typical     | 11 A                                                                                              |
| • Note                                                         | overload capability 150 % I <sub>out</sub> rated up to 5 s/min                                    |
| Overload/short-circuit indicator                               | LED yellow for "overload", LED red for "latching shutdown"                                        |
| <b>Safety</b>                                                  |                                                                                                   |
| Primary/secondary isolation                                    | Yes                                                                                               |
| Potential separation                                           | Safety extra-low output voltage U <sub>out</sub> acc. to EN 60950-1 and EN 50178                  |
| Protection class                                               | Class I                                                                                           |
| stray current / maximum                                        | 3.5 mA                                                                                            |
| CE mark                                                        | Yes                                                                                               |
| UL/CSA approval                                                | Yes                                                                                               |
| UL/cUL (CSA) approval                                          | cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259                                          |
| Explosion protection                                           | in preparation                                                                                    |
| FM approval                                                    | -                                                                                                 |
| CB approval                                                    | No                                                                                                |
| Marine approval                                                | GL, ABS                                                                                           |
| 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 / in operation                             | -10 ... +70 °C                                                                                    |
| • Note                                                         | with natural convection                                                                           |
| Ambient temperature / on transport                             | -40 ... +85 °C                                                                                    |
| Ambient temperature / in 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                                     | L1, L2, L3, PE: 1 screw terminal each for 0.5 ... 2.5 mm <sup>2</sup> single-core/finely stranded |
| Connections / Output                                           | +, -: 2 screw terminals each for 0.2 ... 4 mm <sup>2</sup>                                        |
| Connections / Auxiliary                                        | 13, 14 (alarm signal): 1 screw terminal each for 0.14 ... 1.5 mm <sup>2</sup>                     |
| Width / of the housing                                         | 70 mm                                                                                             |
| Height / of the housing                                        | 125 mm                                                                                            |

|                                                                      |                                                                          |
|----------------------------------------------------------------------|--------------------------------------------------------------------------|
| Depth / of the housing                                               | 125 mm                                                                   |
| Installation width                                                   | 70 mm                                                                    |
| Mounting height                                                      | 225 mm                                                                   |
| Weight, approx.                                                      | 1.2 kg                                                                   |
| Product feature / of the housing / housing for side-by-side mounting | Yes                                                                      |
| Type of mounting / wall mounting                                     | No                                                                       |
| Type of fixing / cap rail mounting                                   | Yes                                                                      |
| Type of mounting / S7-300 rail mounting                              | No                                                                       |
| Installation                                                         | Snaps onto DIN rail EN 60715 35x7.5/15                                   |
| Mechanical accessories                                               | Device identification label 20 mm × 7 mm, pastel-turquoise 3RT1900-1SB20 |

#### Other information

Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)



letzte Änderung:

Oct 19, 2012