

SITOP PSU300B 24 V/30 A  
SITOP PSU300B 30 A STABILIZED POWER SUPPLY INPUT: 3 AC  
400-500 V OUTPUT: DC 24 V/30 A



| Input                                         |                                                                                                                                                            |
|-----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input                                         | 3-phase AC                                                                                                                                                 |
| Rated voltage value Vin rated                 | 400 ... 500 V                                                                                                                                              |
| Voltage range AC                              | 320 ... 575 V                                                                                                                                              |
| Wide-range input                              | Yes                                                                                                                                                        |
| Mains buffering at Iout rated, min.           | 20 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 400 V                | 1.6 A                                                                                                                                                      |
| • at rated input voltage 500 V                | 1.3 A                                                                                                                                                      |
| Switch-on current limiting (+25 °C), max.     | 56 A                                                                                                                                                       |
| I²t, max.                                     | 2.24 A²·s                                                                                                                                                  |
| Built-in incoming fuse                        | none                                                                                                                                                       |
| Protection in the mains power input (IEC 898) | Required: 3-pole connected miniature circuit breaker 10 ... 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                                         | 24 V                                                            |
| Total tolerance, static $\pm$                                 | 3 %                                                             |
| Static mains compensation, approx.                            | 0.1 %                                                           |
| Static load balancing, approx.                                | 0.1 %                                                           |
| Residual ripple peak-peak, max.                               | 100 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                                               | No overshoot of Vout (soft start)                               |
| Startup delay, max.                                           | 2.5 s                                                           |
| Voltage increase time of the output voltage maximum           | 500 ms                                                          |
| Rated current value Iout rated                                | 30 A                                                            |
| Current range                                                 | 0 ... 30 A                                                      |
| • Note                                                        | +60 ... +70 °C: Derating 1.7%/K                                 |
| Supplied active power typical                                 | 960 W                                                           |
| Constant overload current                                     |                                                                 |
| • on short-circuiting during the start-up typical             | 32 A                                                            |
| • at short-circuit during operation typical                   | 32 A                                                            |
| Parallel switching for enhanced performance                   | Yes; 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. | 50 W |

#### Closed-loop control

|                                                             |       |
|-------------------------------------------------------------|-------|
| Dynamic mains compensation (Vin rated $\pm 15$ %), max.     | 1 %   |
| Dynamic load smoothing (Iout: 50/100/50 %), Uout $\pm$ typ. | 3 %   |
| Setting time maximum                                        | 10 ms |

#### Protection and monitoring

|                                            |                                                                                  |
|--------------------------------------------|----------------------------------------------------------------------------------|
| Output overvoltage protection              | < 35 V                                                                           |
| Current limitation, typ.                   | 32 A                                                                             |
| Property of the output Short-circuit proof | Yes                                                                              |
| Short-circuit protection                   | Alternatively, constant current characteristic approx. 32 A or latching shutdown |
| Enduring short circuit current RMS value   |                                                                                  |
| • typical                                  | 32 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 <sub>out</sub> acc. to EN 60950-1 and EN 50178 |
| Protection class                                                            | Class I                                                                          |
| Leakage current <ul style="list-style-type: none"> <li>• maximum</li> </ul> | 3.5 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                                                                             |

| 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> <li>• during storage</li> </ul> | -25 ... +70 °C<br>with natural convection<br>-40 ... +85 °C<br>-40 ... +85 °C |
| Humidity class according to EN 60721                                                                                                                           | Climate class 3K3, no condensation                                            |

| Mechanics                                                                                                                   |                                                                                                                                                                                                                                                  |
|-----------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Connection technology                                                                                                       | screw-type terminals                                                                                                                                                                                                                             |
| Connections <ul style="list-style-type: none"> <li>• Supply input</li> <li>• Output</li> <li>• Auxiliary</li> </ul>         | L1, L2, L3, PE: 1 screw terminal each for 0.2 ... 4 mm <sup>2</sup> single-core/finely stranded<br>+, -: 2 screw terminals each for 0.33 ... 10 mm <sup>2</sup><br>13, 14 (alarm signal): 1 screw terminal each for 0.14 ... 1.5 mm <sup>2</sup> |
| Width of the enclosure                                                                                                      | 150 mm                                                                                                                                                                                                                                           |
| Height of the enclosure                                                                                                     | 125 mm                                                                                                                                                                                                                                           |
| Depth of the enclosure                                                                                                      | 150 mm                                                                                                                                                                                                                                           |
| Required spacing <ul style="list-style-type: none"> <li>• top</li> <li>• bottom</li> <li>• left</li> <li>• right</li> </ul> | 50 mm<br>50 mm<br>0 mm<br>0 mm                                                                                                                                                                                                                   |
| Weight, approx.                                                                                                             | 3.4 kg                                                                                                                                                                                                                                           |

|                                                                    |                                                                                                   |
|--------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| Product feature of the enclosure housing for side-by-side mounting | Yes                                                                                               |
| Installation                                                       | Snaps onto DIN rail EN 60715 35x15                                                                |
| Electrical accessories                                             | Buffer module                                                                                     |
| Mechanical accessories                                             | Device identification label 20 mm × 7 mm, pale turquoise<br>3RT1900-1SB20                         |
| MTBF at 40 °C                                                      | 885 739 h                                                                                         |
| Other information                                                  | Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified) |