

SITOP POWER 24 V/10 A, FLAT DESIGN  
SITOP POWER 10, SPECIAL LINE STABILIZED POWER SUPPLY  
INPUT: 120/230 V AC OUTPUT: 24 V DC/10 A



| Input                                     |                                               |
|-------------------------------------------|-----------------------------------------------|
| Input                                     | 1-phase AC                                    |
| Supply voltage                            |                                               |
| • 1 at AC Rated value                     | 120 V                                         |
| • 2 at AC Rated value                     | 230 V                                         |
| • Note                                    | Set by means of selector switch on the device |
| Input voltage                             |                                               |
| • 1 at AC                                 | 85 ... 132 V                                  |
| • 2 at AC                                 | 170 ... 264 V                                 |
| Wide-range input                          | No                                            |
| Overvoltage resistance                    | 2.3 × Vin rated, 1.3 ms                       |
| Mains buffering at lout rated, min.       | 20 ms; at Vin = 93/187 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 A                                           |
| • at rated input voltage 230 V            | 2.5 A                                         |
| Switch-on current limiting (+25 °C), max. | 65 A                                          |

|                                               |                                                                   |
|-----------------------------------------------|-------------------------------------------------------------------|
| Duration of inrush current limiting at 25 °C  |                                                                   |
| • maximum                                     | 3 ms                                                              |
| $I^2t$ , max.                                 | 3.3 A <sup>2</sup> ·s                                             |
| Built-in incoming fuse                        | T 6.3 A/250 V (not accessible)                                    |
| Protection in the mains power input (IEC 898) | Recommended miniature circuit breaker: from 10 A characteristic C |

| Output                                                        |                                        |
|---------------------------------------------------------------|----------------------------------------|
| Output                                                        | Controlled, isolated DC voltage        |
| Rated voltage $V_{out}$ DC                                    | 24 V                                   |
| Total tolerance, static $\pm$                                 | 1 %                                    |
| Static mains compensation, approx.                            | 0.1 %                                  |
| Static load balancing, approx.                                | 0.5 %                                  |
| Residual ripple peak-peak, max.                               | 150 mV                                 |
| Residual ripple peak-peak, typ.                               | 50 mV                                  |
| Spikes peak-peak, max. (bandwidth: 20 MHz)                    | 240 mV                                 |
| Spikes peak-peak, typ. (bandwidth: 20 MHz)                    | 200 mV                                 |
| Adjustment range                                              | 22 ... 29 V                            |
| Product function Output voltage adjustable                    | Yes                                    |
| Output voltage setting                                        | via potentiometer                      |
| Status display                                                | Green LED for 24 V OK                  |
| On/off behavior                                               | No overshoot of $V_{out}$ (soft start) |
| Startup delay, max.                                           | 2 s                                    |
| Voltage rise, typ.                                            | 40 ms                                  |
| Rated current value $I_{out}$ rated                           | 10 A                                   |
| Current range                                                 | 0 ... 10 A                             |
| Supplied active power typical                                 | 240 W                                  |
| Short-term overload current                                   |                                        |
| • on short-circuiting during the start-up typical             | 35 A                                   |
| • at short-circuit during operation typical                   | 35 A                                   |
| Duration of overloading capability for excess current         |                                        |
| • on short-circuiting during the start-up                     | 700 ms                                 |
| • at short-circuit during operation                           | 700 ms                                 |
| Parallel switching for enhanced performance                   | Yes                                    |
| Numbers of parallel switchable units for enhanced performance | 2                                      |

| Efficiency                                              |      |
|---------------------------------------------------------|------|
| Efficiency at $V_{out}$ rated, $I_{out}$ rated, approx. | 89 % |
| Power loss at $V_{out}$ rated, $I_{out}$ rated, approx. | 30 W |

| Closed-loop control                                           |       |
|---------------------------------------------------------------|-------|
| Dynamic mains compensation ( $V_{in}$ rated $\pm 15$ %), max. | 0.3 % |

|                                                                                  |        |
|----------------------------------------------------------------------------------|--------|
| Dynamic load smoothing (I <sub>out</sub> : 50/100/50 %), U <sub>out</sub> ± typ. | 0.6 %  |
| Load step setting time 50 to 100%, typ.                                          | 0.1 ms |
| Load step setting time 100 to 50%, typ.                                          | 0.2 ms |

#### Protection and monitoring

|                                                                                                      |                                                                      |
|------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|
| Output overvoltage protection                                                                        | Additional control loop, shutdown at approx. 33 V, automatic restart |
| Current limitation                                                                                   | 11 ... 13 A                                                          |
| Property of the output Short-circuit proof                                                           | Yes                                                                  |
| Short-circuit protection                                                                             | Electronic shutdown, automatic restart                               |
| Enduring short circuit current RMS value <ul style="list-style-type: none"> <li>• maximum</li> </ul> | 10 A                                                                 |
| Overload/short-circuit indicator                                                                     | -                                                                    |

#### 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> <li>• typical</li> </ul> | 3.5 mA<br>0.27 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 | -                |
| 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> | 0 ... 60 °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                                                        |                                                                                                   |
| • Supply input                                                     | L, N, PE: 1 screw terminal each for 0.5 ... 2.5 mm <sup>2</sup> single-core/finely stranded       |
| • Output                                                           | L+, M: 3 screw terminals each for 0.5 ... 2.5 mm <sup>2</sup>                                     |
| • Auxiliary                                                        | -                                                                                                 |
| Width of the enclosure                                             | 160 mm                                                                                            |
| Height of the enclosure                                            | 130 mm                                                                                            |
| Depth of the enclosure                                             | 60 mm                                                                                             |
| Required spacing                                                   |                                                                                                   |
| • top                                                              | 50 mm                                                                                             |
| • bottom                                                           | 50 mm                                                                                             |
| • left                                                             | 0 mm                                                                                              |
| • right                                                            | 0 mm                                                                                              |
| Weight, approx.                                                    | 0.72 kg                                                                                           |
| Product feature of the enclosure housing for side-by-side mounting | Yes                                                                                               |
| Installation                                                       | Snaps onto DIN rail EN 60715 35x7.5/15                                                            |
| MTBF at 40 °C                                                      | 1 176 471 h                                                                                       |
| Other information                                                  | Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified) |