

SITOP POWER 24 V/20 A  
SITOP power 20 A, Stabilized power supply input: 3 AC 400-500 V  
output: 24 V DC/20 A



| Input                                         |                                                                                                                                                                              |
|-----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input                                         | 3-phase AC                                                                                                                                                                   |
| Rated voltage value Vin rated                 | 400 ... 500 V                                                                                                                                                                |
| Voltage range AC                              | 360 ... 550 V                                                                                                                                                                |
| • Note                                        | 340 ... 360 V for max. 2 s or at max. 0.9 x Iout rated                                                                                                                       |
| Wide-range input                              | Yes                                                                                                                                                                          |
| Overvoltage resistance                        | 2.3 × Vin rated, 1.3 ms                                                                                                                                                      |
| Mains buffering at Iout rated, min.           | 3 ms; at Vin = 360 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                | 1.2 A                                                                                                                                                                        |
| Switch-on current limiting (+25 °C), max.     | 25 A                                                                                                                                                                         |
| I²t, max.                                     | 1 A²·s                                                                                                                                                                       |
| Built-in incoming fuse                        | none                                                                                                                                                                         |
| Protection in the mains power input (IEC 898) | Required: 3-pole connected miniature circuit breaker characteristic C up to 25 A (recommended: 6 A) or circuit-breaker 3RV1021-1DA10 (setting 3 A) or 3RV1721-1DD10 (UL 489) |

| Output                                                        |                                                                           |
|---------------------------------------------------------------|---------------------------------------------------------------------------|
| Output                                                        | Controlled, isolated DC voltage                                           |
| Rated voltage Vout DC                                         | 24 V                                                                      |
| Total tolerance, static $\pm$                                 | 3 %                                                                       |
| Residual ripple peak-peak, max.                               | 150 mV                                                                    |
| Residual ripple peak-peak, typ.                               | 60 mV                                                                     |
| Spikes peak-peak, max. (bandwidth: 20 MHz)                    | 240 mV                                                                    |
| Spikes peak-peak, typ. (bandwidth: 20 MHz)                    | 120 mV                                                                    |
| Adjustment range                                              | 22.8 ... 26.4 V                                                           |
| Product function Output voltage adjustable                    | Yes                                                                       |
| Output voltage setting                                        | via potentiometer; only permissible at ambient temperature 0 °C to +45 °C |
| Status display                                                | Green LED for 24 V OK                                                     |
| On/off behavior                                               | No overshoot of Vout (soft start)                                         |
| Startup delay, max.                                           | 3 s                                                                       |
| Voltage rise, typ.                                            | 40 ms                                                                     |
| Rated current value Iout rated                                | 20 A                                                                      |
| Current range                                                 | 0 ... 20 A                                                                |
| Supplied active power typical                                 | 480 W                                                                     |
| Constant overload current                                     |                                                                           |
| • on short-circuiting during the start-up typical             | 30 A                                                                      |
| • at short-circuit during operation typical                   | 30 A                                                                      |
| Parallel switching for enhanced performance                   | Yes; only permissible at ambient temperature 0 °C to 45 °C                |
| Numbers of parallel switchable units for enhanced performance | 2                                                                         |
| Efficiency                                                    |                                                                           |
| Efficiency at Vout rated, Iout rated, approx.                 | 89 %                                                                      |
| Power loss at Vout rated, Iout rated, approx.                 | 59 W                                                                      |
| Closed-loop control                                           |                                                                           |
| Dynamic mains compensation (Vin rated $\pm 15$ %), max.       | 1 %                                                                       |
| Dynamic load smoothing (Iout: 50/100/50 %), Uout $\pm$ typ.   | 2 %                                                                       |
| Setting time maximum                                          | 2 ms                                                                      |
| Protection and monitoring                                     |                                                                           |
| Output overvoltage protection                                 | Yes, according to EN 60950                                                |
| Current limitation                                            | 21 ... 26 A                                                               |
| Property of the output Short-circuit proof                    | Yes                                                                       |
| Short-circuit protection                                      | Constant current characteristic                                           |
| Enduring short circuit current RMS value                      |                                                                           |
| • maximum                                                     | 30 A                                                                      |
| Overload/short-circuit indicator                              | -                                                                         |

## Safety

|                                                                                                |                                                              |
|------------------------------------------------------------------------------------------------|--------------------------------------------------------------|
| Primary/secondary isolation                                                                    | Yes                                                          |
| Galvanic isolation                                                                             | Safety extra low output voltage Vout according to EN 60950-1 |
| Protection class                                                                               | Class I                                                      |
| Leakage current <ul style="list-style-type: none"> <li>• maximum</li> <li>• typical</li> </ul> | 3.5 mA<br>0.35 mA                                            |
| CE mark                                                                                        | Yes                                                          |
| UL/cUL (CSA) approval                                                                          | cULus-Listed (UL 508, CSA C22.2 No. 142), File E143289       |
| Explosion protection                                                                           | -                                                            |
| FM approval                                                                                    | -                                                            |
| CB approval                                                                                    | Yes                                                          |
| 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> | 0 ... 55 °C<br>with natural convection<br>-25 ... +85 °C<br>-25 ... +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 0.5 ... 2.5 mm² single-core/finely stranded<br>L+: 1 screw terminal for 0.33 ... 10 mm²; M: 2 screw terminals for 0.33 ... 10 mm²<br>- |
| Width of the enclosure                                                                                                      | 280 mm                                                                                                                                                                           |
| Height of the enclosure                                                                                                     | 125 mm                                                                                                                                                                           |
| Depth of the enclosure                                                                                                      | 92 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>40 mm<br>0 mm                                                                                                                                                  |
| Weight, approx.                                                                                                             | 2 kg                                                                                                                                                                             |

|                                                                    |                                                                                                   |
|--------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| Product feature of the enclosure housing for side-by-side mounting | No                                                                                                |
| Installation                                                       | Snaps onto DIN rail EN 60715 35x7.5/15                                                            |
| Mechanical accessories                                             | Mounting bracket 90° (6EP1971-2BA00)                                                              |
| MTBF at 40 °C                                                      | 962 496 h                                                                                         |
| Other information                                                  | Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified) |