

SITOP SMART 24 V/10 A, WITH PFC  
SITOP smart 240 W Stabilized power supply input: 120/230 V AC,  
output: DC 24 V/10 A Version with PFC

Input	
Input	1-phase AC
• Note	Set by means of selector switch on the device
supply voltage	
• 1 at AC rated value	120 V
• 2 at AC rated value	230 V
input voltage	
• 1 at AC	85 ... 132 V
• 2 at AC	170 ... 264 V
Wide-range input	No
Overvoltage resistance	$2.3 \times V_{in}$ rated, 1.3 ms
Mains buffering	at $V_{in} = 93/187$ V
Mains buffering at I <sub>out</sub> rated, min.	20 ms; at $V_{in} = 93/187$ 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	4.1 A
• at rated input voltage 230 V	2 A
Switch-on current limiting (+25 °C), max.	65 A
duration of inrush current limiting at 25 °C	
• typical	3 ms
I <sup>2</sup> t, 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 <sub>out</sub> DC	24 V
Total tolerance, static ±	3 %
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)	150 mV
Adjustment range	22.8 ... 28 V
product function output voltage adjustable	Yes
Output voltage setting	via potentiometer
Status display	Green LED for 24 V OK
On/off behavior	Overshoot of Vout approx. 4 %
Startup delay, max.	0.1 s
Voltage rise, typ.	50 ms
Rated current value Iout rated	10 A
Current range	0 ... 12 A
• Note	12 A up to +45 °C
supplied active power typical	288 W
short-term overload current	
• on short-circuiting during the start-up typical	30 A
• at short-circuit during operation typical	33 A
duration of overloading capability for excess current	
• on short-circuiting during the start-up	100 ms
• at short-circuit during operation	200 ms
Parallel switching for enhanced performance	Yes
Numbers of parallel switchable units for enhanced performance	2

#### Efficiency

Efficiency at Vout rated, Iout rated, approx.	91 %
Power loss at Vout rated, Iout rated, approx.	24 W

#### Closed-loop control

Dynamic mains compensation (Vin rated $\pm 15$ %), max.	0.3 %
Dynamic load smoothing (Iout: 50/100/50 %), Uout $\pm$ typ.	1 %
Load step setting time 50 to 100%, typ.	0.2 ms
Load step setting time 100 to 50%, typ.	0.2 ms

#### Protection and monitoring

Output overvoltage protection	< 33 V
Current limitation	12.5 ... 13.5 A
property of the output short-circuit proof	Yes
Short-circuit protection	Constant current characteristic
enduring short circuit current RMS value	
• typical	16 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 0.8 mA
Degree of protection (EN 60529)	IP20

## Approvals

CE mark	Yes
UL/cUL (CSA) approval	cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259, cCSAus (CSA C22.2 No. 60950-1, UL 60950-1, UL 1604)
Explosion protection	ATEX (EX) II 3G Ex nA II T4; UL 1604 Class I, Div. 2, Group ABCD
certificate of suitability NEC Class 2	No
FM approval	-
CB approval	Yes
Marine approval	ABS, GL

## EMC

Emitted interference	EN 55022 Class B
Supply harmonics limitation	EN 61000-3-2
Noise immunity	EN 61000-6-2

## environmental conditions

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 with natural convection -40 ... +85 °C -40 ... +85 °C
Humidity class according to EN 60721	Climate class 3K3, 5 ... 95% 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>	L, N, PE: 1 screw terminal each for 0.5 ... 2.5 mm <sup>2</sup> single-core/finely stranded L+, M: 2 screw terminals each for 0.5 ... 2.5 mm <sup>2</sup> -
width of the enclosure	70 mm
height of the enclosure	125 mm
depth of the enclosure	125 mm
required spacing <ul style="list-style-type: none"> <li>• top</li> <li>• bottom</li> <li>• left</li> </ul>	50 mm 50 mm 0 mm



• right	0 mm
Weight, approx.	0.8 kg
product feature of the enclosure housing can be lined up	Yes
Installation	Snaps onto DIN rail EN 60715 35x7.5/15
MTBF at 40 °C	1 443 606 h
other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)