

SITOP MODULAR/1AC/24VDC/20A

SITOP modular 20 A Stabilized power supply input: 120/230 V AC output: 24 V DC/20 A \*Ex approval no longer available\*



Figure similar

Input	
type of the power supply network	1-phase AC
supply voltage at AC	
• initial value	Set by means of wire jumper on the device; starting from $V_{in} > 93/183 \text{ V}$
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	176 ... 264 V
design of input wide range input	No
overvoltage overload capability	$2.3 \times V_{in}$ rated, 1.3 ms
operating condition of the mains buffering	at $V_{in} = 230 \text{ V}$
buffering time for rated value of the output current in the event of power failure minimum	20 ms
operating condition of the mains buffering	at $V_{in} = 230 \text{ V}$
line frequency	
• 1 rated value	50 Hz
• 2 rated value	60 Hz
line frequency	47 ... 63 Hz
input current	
• at rated input voltage 120 V	7.7 A
• at rated input voltage 230 V	3.5 A
current limitation of inrush current at 25 °C maximum	60 A
I <sup>2</sup> t value maximum	9.9 A <sup>2</sup> ·s
fuse protection type	Yes
• in the feeder	Recommended miniature circuit breaker at 1-phase operation: 10 A characteristic C; required at 2-phase operation: circuit breaker 2-pole connected or circuit breaker 3RV2411-1JA10 (120 V) or 3RV2411-1FA10 (230 V)
Output	
voltage curve at output	Controlled, isolated DC voltage
output voltage at DC rated value	24 V
output voltage	
• at output 1 at DC rated value	24 V
relative overall tolerance of the voltage	3 %
relative control precision of the output voltage	
• on slow fluctuation of input voltage	0.1 %
• on slow fluctuation of ohm loading	0.1 %
residual ripple	

<ul style="list-style-type: none"> <li>• maximum</li> </ul>	100 mV
<ul style="list-style-type: none"> <li>• typical</li> </ul>	30 mV
voltage peak	
<ul style="list-style-type: none"> <li>• maximum</li> </ul>	200 mV
<ul style="list-style-type: none"> <li>• typical</li> </ul>	60 mV
adjustable output voltage	24 ... 28.8 V
product function output voltage adjustable	Yes
type of output voltage setting	via potentiometer
display version for normal operation	Green LED for 24 V OK
type of signal at output	via signaling module (6EP1961-3BA10)
behavior of the output voltage when switching on	Overshoot of $V_{out}$ approx. 3 %
response delay maximum	0.1 s
voltage increase time of the output voltage	
<ul style="list-style-type: none"> <li>• typical</li> </ul>	50 ms
output current	
<ul style="list-style-type: none"> <li>• rated value</li> </ul>	20 A
<ul style="list-style-type: none"> <li>• rated range</li> </ul>	0 ... 20 A; +60 ... +70 °C: Derating 3.5%/K
supplied active power typical	480 W
short-term overload current	
<ul style="list-style-type: none"> <li>• at short-circuit during operation typical</li> </ul>	60 A
duration of overloading capability for excess current	
<ul style="list-style-type: none"> <li>• at short-circuit during operation</li> </ul>	25 ms
constant overload current	
<ul style="list-style-type: none"> <li>• on short-circuiting during the start-up typical</li> </ul>	23 A
product feature	
<ul style="list-style-type: none"> <li>• bridging of equipment</li> </ul>	Yes; switchable characteristic
number of parallel-switched equipment resources for increasing the power	2
<b>Efficiency</b>	
efficiency in percent	89 %
power loss [W]	
<ul style="list-style-type: none"> <li>• at rated output voltage for rated value of the output current typical</li> </ul>	59 W
<b>Closed-loop control</b>	
relative control precision of the output voltage with rapid fluctuation of the input voltage by +/- 15% typical	1 %
relative control precision of the output voltage load step of resistive load 50/100/50 % typical	2 %
setting time	
<ul style="list-style-type: none"> <li>• load step 50 to 100% typical</li> </ul>	2 ms
<ul style="list-style-type: none"> <li>• load step 100 to 50% typical</li> </ul>	2 ms
setting time	
<ul style="list-style-type: none"> <li>• maximum</li> </ul>	5 ms
<b>Protection and monitoring</b>	
design of the overvoltage protection	< 35 V
<ul style="list-style-type: none"> <li>• typical</li> </ul>	23 A
property of the output short-circuit proof	Yes
design of short-circuit protection	Alternatively, constant current characteristic approx. 23 A or latching shutdown
enduring short circuit current RMS value	
<ul style="list-style-type: none"> <li>• typical</li> </ul>	23 A
display version for overload and short circuit	LED yellow for "overload", LED red for "latching shutdown"
<b>Safety</b>	
galvanic isolation between input and output	Yes
galvanic isolation	Safety extra-low output voltage $U_{out}$ acc. to EN 60950-1 and EN 50178
operating resource protection class	Class I
leakage current	
<ul style="list-style-type: none"> <li>• maximum</li> </ul>	3.5 mA
<ul style="list-style-type: none"> <li>• typical</li> </ul>	0.4 mA
protection class IP	IP20
<b>Approvals</b>	
certificate of suitability	
<ul style="list-style-type: none"> <li>• CE marking</li> </ul>	Yes

<ul style="list-style-type: none"> <li>• UL approval</li> <li>• CSA approval</li> <li>• cCSAus, Class 1, Division 2</li> <li>• ATEX</li> </ul>	<p>Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259</p> <p>Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259</p> <p>No</p> <p>No</p>
<p>certificate of suitability</p> <ul style="list-style-type: none"> <li>• IECEx</li> <li>• NEC Class 2</li> <li>• ULhazloc approval</li> <li>• FM registration</li> </ul>	<p>No</p> <p>No</p> <p>No</p> <p>No</p>
type of certification CB-certificate	No
<p>certificate of suitability</p> <ul style="list-style-type: none"> <li>• EAC approval</li> <li>• Regulatory Compliance Mark (RCM)</li> </ul>	<p>Yes</p> <p>Yes</p>
certificate of suitability shipbuilding approval	Yes
shipbuilding approval	ABS, GL
<p>Marine classification association</p> <ul style="list-style-type: none"> <li>• American Bureau of Shipping Europe Ltd. (ABS)</li> <li>• French marine classification society (BV)</li> <li>• DNV GL</li> <li>• Lloyds Register of Shipping (LRS)</li> <li>• Nippon Kaiji Kyokai (NK)</li> </ul>	<p>Yes</p> <p>No</p> <p>Yes</p> <p>No</p> <p>No</p>
<b>EMC</b>	
<p>standard</p> <ul style="list-style-type: none"> <li>• for emitted interference</li> <li>• for mains harmonics limitation</li> <li>• for interference immunity</li> </ul>	<p>EN 55022 Class B</p> <p>EN 61000-3-2</p> <p>EN 61000-6-2</p>
<b>environmental conditions</b>	
<p>ambient temperature</p> <ul style="list-style-type: none"> <li>• during operation</li> <li>• during transport</li> <li>• during storage</li> </ul>	<p>0 ... 70 °C; with natural convection</p> <p>-40 ... +85 °C</p> <p>-40 ... +85 °C</p>
environmental category according to IEC 60721	Climate class 3K3, 5 ... 95% no condensation
<b>Mechanics</b>	
<p>type of electrical connection</p> <ul style="list-style-type: none"> <li>• at input</li> <li>• at output</li> <li>• for auxiliary contacts</li> </ul>	<p>screw-type terminals</p> <p>L, N, PE: 1 screw terminal each for 0.2 ... 4 mm<sup>2</sup> single-core/finely stranded</p> <p>+, -: 2 screw terminals each for 0.5 ... 4 mm<sup>2</sup></p> <p>-</p>
width of the enclosure	160 mm
height of the enclosure	125 mm
depth of the enclosure	125 mm
<p>required spacing</p> <ul style="list-style-type: none"> <li>• top</li> <li>• bottom</li> <li>• left</li> <li>• right</li> </ul>	<p>50 mm</p> <p>50 mm</p> <p>0 mm</p> <p>0 mm</p>
net weight	2.2 kg
product feature of the enclosure housing can be lined up	Yes
fastening method	Snaps onto DIN rail EN 60715 35x7.5/15
electrical accessories	Buffer module, signaling module
MTBF at 40 °C	786 164 h
other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)

