



Figure similar

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\*

Input	
type of the power supply network	1-phase AC
supply voltage at AC	Set by means of wire jumper on the device; starting from $V_{in} > 93/183$ V
<ul style="list-style-type: none"> <li>initial value</li> </ul>	
supply voltage	120 V 230 V
<ul style="list-style-type: none"> <li>1 at AC rated value</li> <li>2 at AC rated value</li> </ul>	
input voltage	85 ... 132 V 176 ... 264 V
<ul style="list-style-type: none"> <li>1 at AC</li> <li>2 at AC</li> </ul>	
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 $V_{in} = 230$ 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 $V_{in} = 230$ V
line frequency	50 Hz 60 Hz
<ul style="list-style-type: none"> <li>1 rated value</li> <li>2 rated value</li> </ul>	
line frequency	47 ... 63 Hz
input current	7.7 A 3.5 A
<ul style="list-style-type: none"> <li>at rated input voltage 120 V</li> <li>at rated input voltage 230 V</li> </ul>	
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
<ul style="list-style-type: none"> <li>in the feeder</li> </ul>	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	24 V
<ul style="list-style-type: none"> <li>at output 1 at DC rated value</li> </ul>	
relative overall tolerance of the voltage	3 %
relative control precision of the output voltage	0.1 %
<ul style="list-style-type: none"> <li>on slow fluctuation of input voltage</li> <li>on slow fluctuation of ohm loading</li> </ul>	
residual ripple	100 mV
<ul style="list-style-type: none"> <li>maximum</li> </ul>	

<ul style="list-style-type: none"> <li>• typical</li> </ul>	30 mV
voltage peak	
<ul style="list-style-type: none"> <li>• maximum</li> <li>• typical</li> </ul>	200 mV 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 Vout 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> <li>• rated range</li> </ul>	20 A 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

#### Efficiency

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

#### Closed-loop control

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> <li>• load step 100 to 50% typical</li> </ul>	2 ms 2 ms
setting time	
<ul style="list-style-type: none"> <li>• maximum</li> </ul>	5 ms

#### Protection and monitoring

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"

#### Safety

galvanic isolation between input and output	Yes
galvanic isolation	Safety extra-low output voltage Uout 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> <li>• typical</li> </ul>	3.5 mA 0.4 mA
protection class IP	IP20

#### Approvals

certificate of suitability	
<ul style="list-style-type: none"> <li>• CE marking</li> <li>• UL approval</li> <li>• CSA approval</li> </ul>	Yes Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259 Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259

<ul style="list-style-type: none"> <li>• cCSAus, Class 1, Division 2</li> </ul>	No
<ul style="list-style-type: none"> <li>• ATEX</li> </ul>	No
certificate of suitability	
<ul style="list-style-type: none"> <li>• IECEx</li> </ul>	No
<ul style="list-style-type: none"> <li>• NEC Class 2</li> </ul>	No
<ul style="list-style-type: none"> <li>• ULhazloc approval</li> </ul>	No
<ul style="list-style-type: none"> <li>• FM registration</li> </ul>	No
type of certification CB-certificate	No
certificate of suitability	
<ul style="list-style-type: none"> <li>• EAC approval</li> </ul>	Yes
certificate of suitability shipbuilding approval	Yes
shipbuilding approval	ABS, GL
Marine classification association	
<ul style="list-style-type: none"> <li>• American Bureau of Shipping Europe Ltd. (ABS)</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• French marine classification society (BV)</li> </ul>	No
<ul style="list-style-type: none"> <li>• DNV GL</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Lloyds Register of Shipping (LRS)</li> </ul>	No
<ul style="list-style-type: none"> <li>• Nippon Kaiji Kyokai (NK)</li> </ul>	No

### EMC

standard	
<ul style="list-style-type: none"> <li>• for emitted interference</li> </ul>	EN 55022 Class B
<ul style="list-style-type: none"> <li>• for mains harmonics limitation</li> </ul>	EN 61000-3-2
<ul style="list-style-type: none"> <li>• for interference immunity</li> </ul>	EN 61000-6-2

### environmental conditions

ambient temperature	
<ul style="list-style-type: none"> <li>• during operation</li> </ul>	0 ... 70 °C; with natural convection
<ul style="list-style-type: none"> <li>• during transport</li> </ul>	-40 ... +85 °C
<ul style="list-style-type: none"> <li>• during storage</li> </ul>	-40 ... +85 °C
environmental category according to IEC 60721	Climate class 3K3, 5 ... 95% no condensation

### Mechanics

type of electrical connection	screw-type terminals
<ul style="list-style-type: none"> <li>• at input</li> </ul>	L, N, PE: 1 screw terminal each for 0.2 ... 4 mm <sup>2</sup> single-core/finely stranded
<ul style="list-style-type: none"> <li>• at output</li> </ul>	+, -: 2 screw terminals each for 0.5 ... 4 mm <sup>2</sup>
<ul style="list-style-type: none"> <li>• for auxiliary contacts</li> </ul>	-
width of the enclosure	160 mm
height of the enclosure	125 mm
depth of the enclosure	125 mm
required spacing	
<ul style="list-style-type: none"> <li>• top</li> </ul>	50 mm
<ul style="list-style-type: none"> <li>• bottom</li> </ul>	50 mm
<ul style="list-style-type: none"> <li>• left</li> </ul>	0 mm
<ul style="list-style-type: none"> <li>• right</li> </ul>	0 mm
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)

