

SITOP Modular/1AC/DC24V/20A

SITOP modular 20 A stabilized power supply input: 120/230 V AC output: 24 V DC/20 A



Figure similar

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 $V_{in} > 93/183 \text{ V}$
supply voltage	120 V/230 V
input voltage 1 at AC	85 ... 132 V
input voltage 2 at AC	176 ... 264 V
wide range input	No
overvoltage overload capability	$2.3 \times V_{in}$ rated, 1.3 ms
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	50/60 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
fuse protection type 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
output voltage adjustable	Yes; via potentiometer
adjustable output voltage	24 ... 28.8 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	
• maximum	100 mV
• typical	30 mV
voltage peak	
• maximum	200 mV
• typical	60 mV

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
bridging of equipment	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> <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
<b>protection and monitoring</b>	
design of the overvoltage protection	< 35 V
property of the output short-circuit proof	Yes
design of short-circuit protection <ul style="list-style-type: none"> <li>• typical</li> </ul>	Alternatively, constant current characteristic approx. 23 A or latching shutdown 23 A
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 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
<b>EMC</b>	
standard <ul style="list-style-type: none"> <li>• for emitted interference</li> <li>• for mains harmonics limitation</li> <li>• for interference immunity</li> </ul>	EN 55022 Class B EN 61000-3-2 EN 61000-6-2
<b>standards, specifications, approvals</b>	
certificate of suitability <ul style="list-style-type: none"> <li>• CE marking</li> <li>• UL approval</li> <li>• CSA approval</li> <li>• UKCA marking</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 Yes

<ul style="list-style-type: none"> <li>• EAC approval</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Regulatory Compliance Mark (RCM)</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• NEC Class 2</li> </ul>	No
<ul style="list-style-type: none"> <li>• SEMI F47</li> </ul>	Yes
type of certification	
<ul style="list-style-type: none"> <li>• CB-certificate</li> </ul>	No
MTBF at 40 °C	786 164 h
<b>standards, specifications, approvals hazardous environments</b>	
certificate of suitability	
<ul style="list-style-type: none"> <li>• IECEX</li> </ul>	No
<ul style="list-style-type: none"> <li>• ATEX</li> </ul>	No
<ul style="list-style-type: none"> <li>• ULhazloc approval</li> </ul>	No
<ul style="list-style-type: none"> <li>• cCSAus, Class 1, Division 2</li> </ul>	No
<ul style="list-style-type: none"> <li>• FM registration</li> </ul>	No
<b>standards, specifications, approvals marine classification</b>	
shipbuilding approval	Yes
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>• Det Norske Veritas (DNV)</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Lloyds Register of Shipping (LRS)</li> </ul>	No
<b>standards, specifications, approvals Environmental Product Declaration</b>	
Environmental Product Declaration	Yes
global warming potential [CO2 eq]	
<ul style="list-style-type: none"> <li>• total</li> </ul>	1 881.8 kg
<ul style="list-style-type: none"> <li>• during manufacturing</li> </ul>	34.7 kg
<ul style="list-style-type: none"> <li>• during operation</li> </ul>	1 846.1 kg
<ul style="list-style-type: none"> <li>• after end of life</li> </ul>	0.5 kg
<b>ambient conditions</b>	
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
<b>connection method</b>	
type of electrical connection	screw terminal
<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>	-
<b>mechanical data</b>	
width × height × depth of the enclosure	160 × 125 × 125 mm
installation width × mounting height	160 mm × 225 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
fastening method	Snaps onto DIN rail EN 60715 35x7.5/15
<ul style="list-style-type: none"> <li>• DIN-rail mounting</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• S7 rail mounting</li> </ul>	No
<ul style="list-style-type: none"> <li>• wall mounting</li> </ul>	No
housing can be lined up	Yes
net weight	2.2 kg
<b>accessories</b>	
electrical accessories	Buffer module, signaling module
<b>further information internet links</b>	
internet link	
<ul style="list-style-type: none"> <li>• to website: Industry Mall</li> </ul>	<a href="https://mall.industry.siemens.com">https://mall.industry.siemens.com</a>
<ul style="list-style-type: none"> <li>• to web page: selection aid TIA Selection Tool</li> </ul>	<a href="https://www.siemens.com/tstcloud">https://www.siemens.com/tstcloud</a>
<ul style="list-style-type: none"> <li>• to website: CAx-Download-Manager</li> </ul>	<a href="https://siemens.com/cax">https://siemens.com/cax</a>

• to website: Industry Online Support

<https://support.industry.siemens.com>

**additional information**

other information

Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)

**security information**

security information

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**Classifications**

	Version	Classification
eClass	14	27-04-07-01
eClass	12	27-04-07-01
eClass	9.1	27-04-07-01
eClass	9	27-04-07-01
eClass	8	27-04-90-02
eClass	7.1	27-04-90-02
eClass	6	27-04-90-02
ETIM	9	EC002540
ETIM	8	EC002540
ETIM	7	EC002540
IDEA	4	4130
UNSPSC	15	39-12-10-04

**Approvals Certificates**

**General Product Approval**



[Manufacturer Declaration](#)

[Declaration of Conformity](#)



**General Product Approval**

**Marine / Shipping**

**Environment**



[Miscellaneous](#)



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