

SITOP PSU8600/3AC/24VDC/20A/4X5A PN  
 SITOP PSU8600 3AC 20A/4x5A PN Stabilized power supply Input:  
 400-500 V 3 AC output: 24 V DC/20 A/4x 5 A with PN/IE connection  
 Integrated web server OPC UA server integrated



Input	
Input	3-phase AC
Rated voltage value $V_{in}$ rated	400 ... 500 V
Voltage range AC	320 ... 575 V
<ul style="list-style-type: none"> <li>Note</li> </ul>	Derating 320 ... 360 and 530 ... 575 V
Wide-range input	Yes
Mains buffering	at $V_{in} = 400$ V; Prioritized supply Output 1 at power failure can be selected via DIP switch
Mains buffering at $I_{out}$ rated, min.	15 ms; at $V_{in} = 400$ V; Prioritized supply Output 1 at power failure can be selected via DIP switch
Rated line frequency 1	50 Hz
Rated line frequency 2	60 Hz
Rated line range	47 ... 63 Hz
input current	
<ul style="list-style-type: none"> <li>at rated input voltage 400 V</li> <li>at rated input voltage 500 V</li> </ul>	1.4 A 1.1 A
Switch-on current limiting (+25 °C), max.	14 A
$I^2t$ , max.	1.2 A <sup>2</sup> ·s
Built-in incoming fuse	none

Protection in the mains power input (IEC 898)	Required: 3-pole connected miniature circuit breaker 6 ... 16 A characteristic C or circuit breaker 3RV2011-1DA10 (setting 3 A) or 3RV2711-1DD10 (UL 489)
---	---

Output	
Output	Controlled, isolated DC voltage
number of outputs	4
Rated voltage Vout DC	24 V
<ul style="list-style-type: none"> <li>output voltage at output 1 at DC rated value</li> <li>output voltage at output 2 at DC rated value</li> <li>output voltage at output 3 at DC rated value</li> <li>output voltage at output 4 at DC rated value</li> </ul>	24 V 24 V 24 V 24 V
Total tolerance, static ±	3 %
Static mains compensation, approx.	0.2 %
Static load balancing, approx.	0.1 %
Residual ripple peak-peak, max.	100 mV
Spikes peak-peak, max. (bandwidth: 20 MHz)	200 mV
Adjustment range	4 ... 28 V
product function output voltage adjustable	Yes
Output voltage setting	via potentiometer or IE/PN interface; Derating > 24 V: 4%/V; max. 120 W per output, max. 480 W overall system
Status display	3-color LED for operating state device; LED for operating mode manual/remote; 4 LEDs for communication PROFINET; 3-color LED per output for operating state output; LED green for parallel operation Output 1 and 2 / 3 and 4
Signaling	Relay contact (changeover contact, contact current capacity DC 60 V/0.3 A) for "Operating state OK"
On/off behavior	No overshoot of Vout (soft start)
Startup delay, max.	1 s; Without on-delay of the outputs
connection of outputs operating	Simultaneous connecting-in of all outputs after device booting or delay time of 25 ms, 100 ms or "load-optimized" for sequential cutting-in of the outputs via DIP switches can be set
voltage increase time of the output voltage maximum	500 ms
Rated current value Iout rated	20 A
output current <ul style="list-style-type: none"> <li>per output</li> <li>at output 1 rated value</li> <li>at output 2 rated value</li> <li>at output 3 rated value</li> <li>at output 4 rated value</li> </ul>	5 A 5 A 5 A 5 A 5 A
Current range <ul style="list-style-type: none"> <li>Note</li> </ul>	0 ... 20 A +50 ... +60 °C: Derating 2.5%/K; no derating in connection with expansion module CNX8600 and total load of the outputs at the basic device max. 240 W
supplied active power typical	480 W

product feature parallel switching of outputs	Yes; Parallel circuit Output 1 with 2 or Output 3 with 4 can be selected via DIP switch
Parallel switching for enhanced performance	No

### Efficiency

Efficiency at Vout rated, Iout rated, approx.	93 %
Power loss at Vout rated, Iout rated, approx.	34 W
power loss [W] during no-load operation maximum	12 W

### Closed-loop control

Dynamic mains compensation (Vin rated $\pm 15\%$ ), max.	0.1 %
Dynamic load smoothing (Iout: 50/100/50 %), Uout $\pm$ typ.	0.4 %
setting time maximum	10 ms

### Protection and monitoring

Output overvoltage protection	< 35 V
property of the output short-circuit proof	Yes
Short-circuit protection	electronic overload cut-off; optionally constant current operation can be selected for Output 4 via DIP switches
adjustable response value current of current-dependent overload trip	0.5 ... 5 A
type of threshold value setting	via potentiometer or IE/PN interface
characteristics of electronic overload switch-off	Ia > 1.0... < 1.5 x Ia threshold permissible for 5 s; Ia limit (= 1.5 x Ia threshold) permissible for 200 ms
characteristics of constant current operation	Ia limit (= 1.5 x Ia threshold) permissible for 5 s, afterwards Ia threshold continuous
Reset	via sensor per output or IE/PN interface
Remote reset	Non-electrically isolated 24 V input (signal level "high" at > 15 V)
overcurrent overload capability in normal operation	Total system overloadable 150% Ia rated to 5 s/min
Overload/short-circuit indicator	3-color LED for operating state device; 3-color LED per output for operating state output

### Interface

Specification interface	Ethernet/PROFINET
-------------------------	-------------------

### Safety

Primary/secondary isolation	Yes
galvanic isolation	Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178
Protection class	Class I
leakage current <ul style="list-style-type: none"> <li>• maximum</li> </ul>	3.5 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)
Explosion protection	IECEX Ex nA nC IIC T4 Gc; ATEX (EX) II 3G Ex nA nC IIC T4 Gc; cCSAus (CSA C22.2 No. 213, ANSI/ISA-12.12.01) Class I, Div. 2, Group ABCD, T4
certificate of suitability NEC Class 2	No
FM approval	-
CB approval	Yes
Marine approval	ABS, DNV 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>	-25 ... +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	Plug-in terminals with screwed connection
Connections	
<ul style="list-style-type: none"> <li>Supply input</li> <li>Output</li> <li>Auxiliary</li> <li>signaling contact</li> </ul>	L1, L2, L3, PE: Plug-in terminal with 1 screwed connection each for 0.2 ... 4 mm <sup>2</sup> single-wire / fine stranded 1, 2, 3, 4: Two plug-in terminals (1, 2 and 3, 4) with 2 screwed connections each for 0.2 ... 2.5 mm <sup>2</sup> ; 0 V: Plug-in terminal with 3 screwed connections for 0.2 ... 4 mm <sup>2</sup> RST (Reset): Plug-in terminal (together with alarm signal) with 1 screwed connection for 0.2 ... 1.5 mm <sup>2</sup> 11, 12, 14 (alarm signal): Plug-in terminal (together with Reset) with 1 screwed connection each for 0.2 ... 1.5 mm <sup>2</sup>
product function	
<ul style="list-style-type: none"> <li>removable terminal at input</li> <li>removable terminal at output</li> </ul>	Yes Yes
design of the interface for communication	PROFINET/Ethernet: two RJ45 sockets (2-port switch)
suitability for interaction modular system	Yes
width of the enclosure	100 mm
height of the enclosure	125 mm
depth of the enclosure	150 mm
required spacing	
<ul style="list-style-type: none"> <li>top</li> <li>bottom</li> </ul>	50 mm 50 mm

<ul style="list-style-type: none"> <li>• left</li> <li>• right</li> </ul>	0 mm
	0 mm
Weight, approx.	2 kg
product feature of the enclosure housing for side-by-side mounting	Yes
Installation	Snaps onto DIN rail EN 60715 35x15
electrical accessories	Expansion modules CNX8600, buffer modules BUF8600, module UPS8600
mechanical accessories	Device identification label 20 mm × 7 mm, TI-grey 3RT2900-1SB20
MTBF at 40 °C	243 178 h
other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)