

SITOP PSU8600 40A PN  
 SITOP PSU8600 40 A PN Stabilized power supply Input: 400-500 V  
 3 AC Output: 24 V DC/40 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 $I_{out}$ rated, min.	15 ms; at $V_{in} = 400$ V; Prioritized voltage supply to the outputs at power failure via DIP switch can be selected (only with expansion module CNX8600)
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>	2.75 A 2.2 A
Switch-on current limiting (+25 °C), max.	14 A
$I^2t$ , max.	2.24 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 10 ... 16 A characteristic C or circuit breaker 3RV2011-1DA10 (setting 3 A) or 3RV2711-1DD10 (UL 489)
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Output	
Output	Controlled, isolated DC voltage
Number of outputs	1
Rated voltage Vout DC	24 V
Output voltage <ul style="list-style-type: none"> <li>at output 1 at DC Rated value</li> </ul>	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; Derating > 24 V: 4%/V; max. 960 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 for operating state output
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
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 (only with expansion module CNX8600)
Voltage increase time of the output voltage maximum	500 ms
Rated current value Iout rated	40 A
Output current <ul style="list-style-type: none"> <li>per output</li> <li>at output 1 Rated value</li> </ul>	40 A 40 A
Current range <ul style="list-style-type: none"> <li>Note</li> </ul>	0 ... 40 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. 480 W
Supplied active power typical	960 W
Short-term overload current <ul style="list-style-type: none"> <li>at short-circuit during operation typical</li> <li>Note</li> </ul>	120 A only in operation without CNX8600 extension module
Duration of overloading capability for excess current <ul style="list-style-type: none"> <li>at short-circuit during operation</li> </ul>	25 ms

Parallel switching for enhanced performance	Yes; suitable output characteristics via DIP switch can be selected
Numbers of parallel switchable units for enhanced performance	2

### Efficiency

Efficiency at $V_{out}$ rated, $I_{out}$ rated, approx.	93 %
Power loss at $V_{out}$ rated, $I_{out}$ rated, approx.	72 W
Power loss [W] during no-load operation maximum	20 W

### Closed-loop control

Dynamic mains compensation ( $V_{in}$ rated $\pm 15\%$ ), max.	0.1 %
Dynamic load smoothing ( $I_{out}$ : 50/100/50 %), $U_{out} \pm$ 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 shutdown; optional constant-current operation can be selected via DIP switch
adjustable response value current of current-dependent overload trip	4 ... 40 A
type of threshold value setting	via potentiometer
characteristics of electronic overload switch-off	$I_a > 1.0 \dots < 1.5 \times I_a$ threshold permissible for 5 s; $I_a$ limit (= $1.5 \times I_a$ threshold) permissible for 200 ms
characteristics of constant current operation	$I_a$ limit (= $1.5 \times I_a$ threshold) permissible for 5 s, afterwards $I_a$ threshold continuous
Reset	Via sensor
Remote reset	Non-electrically isolated 24 V input (signal level "high" at > 15 V)
Overcurrent overload capability in normal operation	Total system overloadable 150% $I_a$ rated to 5 s/min
Overload/short-circuit indicator	3-color LED for operating state device; 3-color LED for operating state output

### Interface

Specification interface	Ethernet/PROFINET
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### Safety

Primary/secondary isolation	Yes
Galvanic isolation	Safety extra-low output voltage $U_{out}$ acc. to EN 60950-1 and EN 50178
Protection class	Class I
Leakage current	
• maximum	3.5 mA
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
FM approval	-
CB approval	Yes
Marine approval	ABS, DNV GL
Degree of protection (EN 60529)	IP20

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

Operating data	
Ambient temperature	
<ul style="list-style-type: none"> <li>• during operation</li> <li>— Note</li> <li>• during transport</li> <li>• during storage</li> </ul>	<p>-25 ... +60 °C with natural convection</p> <p>-40 ... +85 °C</p> <p>-40 ... +85 °C</p>
Humidity class according to EN 60721	Climate class 3K3; in addition 95% maximum relative humidity, but without 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> </ul>	<p>L1, L2, L3, PE: Plug-in terminal with 1 screwed connection each for 0.2 ... 4 mm<sup>2</sup> single-wire / fine stranded</p> <p>Output: plug-in terminals with 2 screw connectors for 0.2 ... 4 mm<sup>2</sup>; 0 V: screw terminal with 3 screw connectors for 0.2 ... 4 mm<sup>2</sup></p> <p>RST (Reset): Plug-in terminal (together with alarm signal) with 1 screwed connection for 0.2 ... 1.5 mm<sup>2</sup></p>
Connections signaling contact	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>	<p>Yes</p> <p>Yes</p>
Design of the interface for communication	PROFINET/Ethernet: two RJ45 sockets (2-port switch)
Suitability for interaction modular system	Yes
Width of the enclosure	125 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> <li>• left</li> <li>• right</li> </ul>	<p>50 mm</p> <p>50 mm</p> <p>0 mm</p> <p>0 mm</p>

Weight, approx.	2.6 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
Mechanical accessories	Device identification label 20 mm × 7 mm, TI-grey 3RT2900-1SB20
MTBF at 40 °C	235 118 h
Other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)