

SITOP PSU8600/3AC/24VDC/40A PN
 SITOP PSU8600 3AC 40A 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"> Note 	Derating 320 ... 360 and 530 ... 575 V
Wide-range input	Yes
Mains buffering	at $V_{in} = 400$ V; Prioritized supply to the output on power failure via DIP switch can be selected (only with expansion module CNX8600)
Mains buffering at I_{out} rated, min.	15 ms; at $V_{in} = 400$ V; Prioritized supply to the output on 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"> at rated input voltage 400 V at rated input voltage 500 V 	2.75 A 2.2 A
Switch-on current limiting (+25 °C), max.	14 A
I^2t , max.	2.24 A ² ·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)

Output	
Output	Controlled, isolated DC voltage
number of outputs	1
Rated voltage V_{out} DC	24 V
<ul style="list-style-type: none"> output voltage at output 1 at DC rated value 	24 V
Total tolerance, static \pm	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. 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 V_{out} (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 I_{out} rated	40 A
output current	
<ul style="list-style-type: none"> per output 	40 A
<ul style="list-style-type: none"> at output 1 rated value 	40 A
Current range	0 ... 40 A
<ul style="list-style-type: none"> Note 	+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"> at short-circuit during operation typical 	120 A
<ul style="list-style-type: none"> note 	only in operation without CNX8600 extension module
duration of overloading capability for excess current	
<ul style="list-style-type: none"> at short-circuit during operation 	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 Vout rated, Iout rated, approx.	93 %
Power loss at Vout rated, Iout rated, approx.	72 W
power loss [W] during no-load operation maximum	20 W

Closed-loop control

Dynamic mains compensation (Vin rated ± 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 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 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 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 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 Uout acc. to EN 60950-1 and EN 50178
Protection class	Class I
leakage current	
• maximum	3.5 mA
Degree of protection (EN 60529)	IP20

Approvals

CE mark	Yes
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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"> during operation — Note during transport during storage 	-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"> Supply input Output Auxiliary signaling contact 	L1, L2, L3, PE: Plug-in terminal with 1 screwed connection each for 0.2 ... 4 mm ² single-wire / fine stranded Output: plug-in terminals with 2 screw connectors for 0.2 ... 4 mm ² ; 0 V: screw terminal with 3 screw connectors for 0.2 ... 4 mm ² RST (Reset): Plug-in terminal (together with alarm signal) with 1 screwed connection for 0.2 ... 1.5 mm ² 11, 12, 14 (alarm signal): Plug-in terminal (together with Reset) with 1 screwed connection each for 0.2 ... 1.5 mm ²
product function	
<ul style="list-style-type: none"> removable terminal at input removable terminal at output 	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	125 mm
height of the enclosure	125 mm
depth of the enclosure	150 mm
required spacing	
<ul style="list-style-type: none"> top bottom left 	50 mm 50 mm 0 mm

• right	0 mm
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, module UPS8600
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)