Data sheet



SITOP PSU8600/3AC/24VDC/40A/4X10A PN SITOP PSU8600 3AC 40A/4x10A PN Stabilized power supply Input: 400-500 V 3 AC output: 24 V DC/40 A/4x 10 A with PN/IE connection Integrated web server OPC UA server integrated

Input	
Input	3-phase AC
Rated voltage value Vin rated	400 500 V
Voltage range AC	320 575 V
• Note	Derating 320 360 and 530 575 V
Wide-range input	Yes
Mains buffering	at Vin = 400 V; Prioritized supply Output 1 at power failure can be selected via DIP switch
Mains buffering at lout rated, min.	15 ms; at Vin = 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	
 at rated input voltage 400 V 	2.75 A
 at rated input voltage 500 V 	2.2 A
Switch-on current limiting (+25 °C), max.	14 A
I²t, max.	2.24 A²·s
Built-in incoming fuse	none

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Output	
Output	Controlled, isolated DC voltage
number of outputs	4
Rated voltage Vout DC	24 V
 output voltage at output 1 at DC rated value 	24 V
• output voltage at output 2 at DC rated value	24 V
• output voltage at output 3 at DC rated value	24 V
 output voltage at output 4 at DC rated value 	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. 240 W per output, 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 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 lout rated	40 A
output current	
• per output	10 A
• at output 1 rated value	10 A
• at output 2 rated value	10 A
• at output 3 rated value	10 A
• at output 4 rated value	10 A
Current range	0 40 A
• 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



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selected via DIP switch Parallel switching for enhanced performance Efficiency Efficiency Efficiency at Vout rated, lout rated, approx. Power loss at Vout rated, lout rated, approx. Power loss [W] during no-load operation maximum 20 W Closed-loop control Dynamic mains compensation (Vin rated ±15 %), max. Dynamic load smoothing (lout: 50/100/50 %), Uout ± typ. setting time maximum 10 ms Protection and monitoring Output overvoltage protection property of the output short-circuit proof Short-circuit protection selectronic 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 type of threshold value setting via potentiometer or IE/PN interface		
Efficiency Efficiency at Vout rated, lout rated, approx. Power loss at Vout rated, lout rated, approx. Power loss [W] during no-load operation maximum 20 W Closed-loop control Dynamic hairs compensation (Vin rated ±15 %), max. Dynamic load smoothing (lout: 50/100/50 %), Uout ± typ. setting time maximum 10 ms Protection and monitoring Output overvoltage protection property of the output short-circuit proof Short-circuit protection adjustable response value current of current-dependent overload trip type of threshold value setting Characteristics of electronic overload switch-off threshold) permissible for 20 ms characteristics of constant current operation characteristics of constant current operation Reset Reset Reset Non-electrically isolated 24 V input (signal level "high" at > 15 V) overcurrent overload capability in normal operation Overload/short-circuit indicator Interface Specification interface Ethernet/PROFINET Safety Primary/secondary isolation Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Protection class I leakage current • maximum 3.5 mA	product feature parallel switching of outputs	Yes; Parallel circuit Output 1 with 2 or Output 3 with 4 can be selected via DIP switch
Efficiency at Vout rated, lout rated, approx. Power loss at Vout rated, lout rated, approx. power loss [W] during no-load operation maximum 20 W Closed-loop control Dynamic mains compensation (Vin rated ±15 %), max. Dynamic load smoothing (lout: 50/100/50 %), Uout ± typ. setting time maximum 10 ms Protection and monitoring Output overvoltage protection property of the output short-circuit proof Short-circuit protection adjustable response value current of current-dependent overload trip type of threshold value setting characteristics of electronic overload switch-off characteristics of electronic overload switch-off Aracteristics of constant current operation characteristics of constant current operation Total system overloadable 150% la rated to 5 s/min Overload/short-circuit indicator Overload/short-circuit indicator Second 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 setra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Protection class leakage current • maximum 3.5 mA	Parallel switching for enhanced performance	No
Efficiency at Vout rated, lout rated, approx. Power loss at Vout rated, lout rated, approx. power loss [W] during no-load operation maximum 20 W Closed-loop control Dynamic mains compensation (Vin rated ±15 %), max. Dynamic load smoothing (lout: 50/100/50 %), Uout ± typ. setting time maximum 10 ms Protection and monitoring Output overvoltage protection property of the output short-circuit proof Short-circuit protection adjustable response value current of current-dependent overload trip type of threshold value setting characteristics of electronic overload switch-off characteristics of electronic overload switch-off Aracteristics of constant current operation characteristics of constant current operation Total system overloadable 150% la rated to 5 s/min Overload/short-circuit indicator Overload/short-circuit indicator Second 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 setra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Protection class leakage current • maximum 3.5 mA	Efficiency	
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Frotection class Class I leakage current • maximum 50178 Class I 3.5 mA	Primary/secondary isolation	Yes
leakage current ● maximum 3.5 mA	galvanic isolation	· · ·
● maximum 3.5 mA	Protection class	Class I
● maximum 3.5 mA	leakage current	
Degree of protection (EN 60529) IP20	• maximum	3.5 mA
	Degree of protection (EN 60529)	IP20
	· · · · · · · · · · · · · · · · · · ·	
Approvals		
CE mark Yes	<u> </u>	



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	
during operation	-25 +60 °C
— Note	with natural convection
 during transport 	-40 +85 °C
during storage	-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	
Supply input	L1, L2, L3, PE: Plug-in terminal with 1 screwed connection each for 0.2 4 mm² single-wire / fine stranded
Output	1, 2, 3, 4: Two plug-in terminals (1, 2 and 3, 4) with 2 screwed connections each for 0.2 2.5 mm²; 0 V: Plug-in terminal with 3 screwed connections for 0.2 10 mm²
Auxiliary	RST (Reset): Plug-in terminal (together with alarm signal) with 1 screwed connection for 0.2 1.5 mm²
• signaling contact	11, 12, 14 (alarm signal): Plug-in terminal (together with Reset) with 1 screwed connection each for 0.2 1.5 mm²
product function	
 removable terminal at input 	Yes
 removable terminal at output 	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	
 top 	50 mm
• bottom	50 mm



• left	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	207 612 h
other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)

