

# SITOP Power Supplies

SIEMENS

Unrestricted | © Siemens 2022 | SITOP Power Supplies

## Portfolio overview SITOP Power Supplies

Advanced		Standard		Basic		SIMATIC design	DC/DC converter	Special designs
<b>SITOP PSU8600</b> The power supply system with TIA integration and open communication up to the Cloud	<b>SITOP PSU8200</b> The technology power supply for demanding solutions	<b>SITOP PSU6200</b> The all-around power supply for a wide range of applications	<b>SITOP smart</b> The high-performance power supply applications	<b>SITOP lite</b> The cost-effective basic power supply	<b>LOGO!Power</b> The flat power supply for distribution boards	<b>SITOP in SIMATIC design</b> The optimal power supply for SIMATIC S7 and more	<b>SITOP DC/DC converter</b> Stable supply despite fluctuating DC voltage	<b>Special designs</b> Equipped for special tasks and conditions

... individual extendable to all-round protection

### SITOP Redundancy modules



### SITOP Selectivity modules



### SITOP Buffer module



### SITOP DC UPS with capacitors



### with battery modules



## SITOP PSU8600 Power supply system with Industrial Ethernet/PROFINET and OPC UA



FB for STEP 7

Faceplate for WinCC

SITOP Lib for PCS 7

### Technology overview

Input	120 – 240 V AC (AC 85...275 or DC 93...275 V) 400 – 500 V 3 AC (320 ... 575 V 3 AC)
Outputs	Basic unit AC: 24 V DC / 4 x 5 A 3 AC: 24 V DC / 1 x 40 A, 4 x 10 A, 1 x 20 A, 4 x 5 A Expansion module 4 x 5 A or 4 x 10 A or 8 x 2.5 A (NEC Class 2) – Max. 4 modules Settings Output voltage (4 ... 28 V) Threshold overload current (0.5 ... 5 A, 0.5 ... 10 A, 0.5 ... 2.5 A)
Overload behavior	Extra power 1.5 x I <sub>rated</sub> for 5 s/min
Efficiency	Up to 94%
Status signaling	LED, signaling contact, Industrial Ethernet/PROFINET, OPC UA
Temperature range	-25 ... +60 ° C
Certifications	


- Multiple individually parameterizable outputs with high efficiency and extremely small width
- Integrated Industrial Ethernet/PROFINET and OPC UA communication for optimum integration in machine or plant automation
- Energy management support by recording energy data and selective switching of outputs
- Modular expansion without wiring overhead for selective monitoring of outputs as well as buffering of power failures
- Expansion to DC UPS with lead or lithium battery modules possible
- Comprehensive monitoring and diagnostics during operation for preventive maintenance
- Complete integration into automation (STEP 7, TIA Portal, SIMATIC PCS 7) saves time and costs during project planning and operation

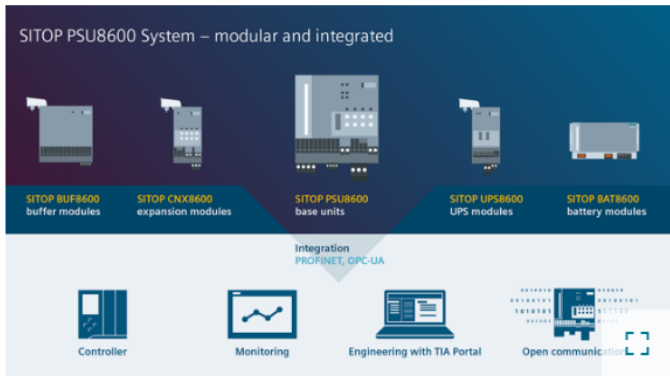


Tel. 705 682 2828 Email [sales@chesscontrols.com](mailto:sales@chesscontrols.com) Web [www.chesscontrols.com](http://www.chesscontrols.com)

**Advanced power supplies**

**SITOP PSU8600 – The power supply system for digitalization and Industry 4.0**

	PSU8600 1AC basic unit • 24 V DC/20 A/4 x 5 A <b>NEW</b>	100 – 240 V AC/110 – 220 V DC (85...275 V AC/99...275 V DC)	125 x 125 x 150	6EP3336-8MB00-2CY0	<ul style="list-style-type: none"> <li>• Compact basic units with 1 or 4 outputs, each overload monitored</li> <li>• Expandable without wiring effort: Up to 4 CNX8600 modules and 2 BUF8600/UPS8600 modules</li> <li>• Expansion module for up to 36 outputs</li> <li>• CNX8600 8x2.5 A with NEC Class 2</li> <li>• Outputs individually adjustable: Voltage (4 - 28 V DC) and current</li> <li>• Buffer modules with electrolytic or double-layer capacitors to protect against brief power</li> <li>• UPS module with lead or lithium iron phosphate battery modules to protect against longer power failures</li> <li>• Two Ethernet/PROFINET ports for optimum integration in plants</li> <li>• Integrated Web server and OPC UA server</li> <li>• Simple engineering and comprehensive monitoring and diagnosis in TIA Portal</li> <li>• Support of energy management due to capturing energy data and selectively switching off the outputs</li> </ul>
	PSU8600 3AC basic unit • 24 V DC/20 A	400-500 V 3 AC, (320 ... 575 V 3 AC)	80 x 125 x 150	6EP3436-8SB00-2AY0	
	• 24 V DC/20 A/4 x 5 A		100 x 125 x 150	6EP3436-8MB00-2CY0	
	• 24 V DC/40 A		125 x 125 x 150	6EP3437-8SB00-2AY0	
	• 24 V DC/40A/4 x 10 A		125 x 125 x 150	6EP3437-8MB00-2CY0	
	Modular system: CNX8600 expansion module	Supply from basic unit PSU8600 via connection „System Clip Link“	60 x 125 x 150	6EP4436-8XB00-0CY0	
	• 24 V DC/4 x 5 A		60 x 125 x 150	6EP4437-8XB00-0CY0	
	• 24 V DC/4 x 10 A		100 x 125 x 150	6EP4436-8XB00-0DY0	
	• 24 V DC/8 x 2.5 A NEC Class2		60 x 125 x 150	6EP4297-8HB00-0XY0	
	BUF8600 buffer module		125 x 125 x 150	6EP4297-8HB10-0XY0	
• 100 ms/40 A	Energy exchange with UPS8600	60 x 125 x 150	6EP4293-8HB00-0XY0		
• 300 ms/40 A		125 x 125 x 150	6EP4295-8HB00-0XY0		
• 4 s/40 A		60 x 125 x 150	6EP4197-8AB00-0XY0		
• 10 s/40 A		322 x 187 x 110	6EP4145-8GB00-0XY0		
UPS components		322 x 187 x 110	6EP4143-8JB00-0XY0		
• UPS module UPS860					
• Battery module BAT8600 Pb					
• Battery module BAT8600 LiFePO4					



The SITOP system at a glance

The SITOP power supply system includes the basic SITOP PSU8600 units, the SITOP CNX8600 expansion units, the SITOP BUF8600 buffer modules, and the SITOP UPS8600 UPS module with BAT8600 battery modules.

The modular system toolbox can be fully integrated into automation landscapes and the Totally Integrated Automation Portal (TIA Portal). Communication via the Ethernet/PROFINET or OPC UA interface is easy. In addition to its operating and monitoring processes, you can use the SITOP Manager to set parameters. Use the integrated web server for remote access. A new basic device now also allows integration into EtherNet/IP networks, which are mainly used in the North American market.



SITOP PSU8600 base units

(1- and 3-phase)



SITOP CNX8600 expansion modules



SITOP BUF8600 buffer modules





SITOP PSU8600/1AC/24VDC/20A/4X5A PN

SITOP PSU8600 1AC 20 A/4x5 A PN stabilized power supply input: 100-240 V AC output: 24 V DC/20 A/4x 5 A with PN/IE connection web server integrated OPC UA server integrated \*Ex approval no longer available\*

Input	
type of the power supply network	1-phase and 2-phase AC or DC
supply voltage at AC	
• minimum rated value	100 V
• maximum rated value	240 V
• initial value	85 V
• full-scale value	275 V
supply voltage	
• at DC	110 ... 220 V
input voltage	
• at DC	93 ... 275 V
design of input wide range input	Yes
operating condition of the mains buffering	at $V_{in} = 100$ V; Prioritized supply Output 1 at power failure can be selected via DIP switch
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 $V_{in} = 100$ V; Prioritized supply Output 1 at power failure can be selected via DIP switch
line frequency	
• 1 rated value	50 Hz
• 2 rated value	60 Hz
line frequency	47 ... 63 Hz
input current	
• at rated input voltage 100 V	5.4 A
• at rated input voltage 120 V	4.5 A
• at rated input voltage 230 V	2.5 A
• at rated input voltage 240 V	2.4 A
• at rated input voltage 110 V	4.8 A
• at rated input voltage 220 V	2.4 A
current limitation of inrush current at 25 °C maximum	15 A
I <sup>2</sup> t value maximum	4.33 A <sup>2</sup> ·s
fuse protection type	internal
• in the feeder	required: circuit breaker (for UL: UL489-listed/DIVQ) characteristic C, 10-32 A, alternatively slow-response fuses (for UL: UL248-listed)
Output	
voltage curve at output	Controlled, isolated DC voltage
number of outputs	4
output voltage at DC rated value	24 V
output voltage	
• at output 1 at DC rated value	24 V



SITOP PSU8600/3AC/24VDC/20A PN

SITOP PSU8600 3AC 20 A PN stabilized power supply input: 400-500 V 3 AC output: 24 V DC/20 A with PN/IE connection web server integrated OPC UA server integrated \*Ex approval no longer available\*

Input	
type of the power supply network	3-phase AC
supply voltage at AC	
<ul style="list-style-type: none"> <li>● minimum rated value</li> <li>● maximum rated value</li> <li>● initial value</li> <li>● full-scale value</li> </ul>	400 V 500 V 320 V; Derating 320 ... 360 and 530 ... 575 V 575 V
design of input wide range input	Yes
operating condition of the 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)
buffering time for rated value of the output current in the event of power failure minimum	15 ms
operating condition of the 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)
line frequency	
<ul style="list-style-type: none"> <li>● 1 rated value</li> <li>● 2 rated value</li> </ul>	50 Hz 60 Hz
line frequency	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
current limitation of inrush current at 25 °C maximum	14 A
I <sup>2</sup> t value maximum	1.2 A <sup>2</sup> ·s
fuse protection type	none
<ul style="list-style-type: none"> <li>● in the feeder</li> </ul>	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	
voltage curve at output	Controlled, isolated DC voltage
number of outputs	1
output voltage at DC rated value	24 V
output voltage	
<ul style="list-style-type: none"> <li>● at output 1 at DC rated value</li> </ul>	24 V
relative overall tolerance of the voltage	3 %
relative control precision of the output voltage	
<ul style="list-style-type: none"> <li>● on slow fluctuation of input voltage</li> <li>● on slow fluctuation of ohm loading</li> </ul>	0.2 % 0.1 %
residual ripple	
<ul style="list-style-type: none"> <li>● maximum</li> </ul>	100 mV
voltage peak	
<ul style="list-style-type: none"> <li>● maximum</li> </ul>	200 mV



SITOP PSU8600/3AC/24VDC/20A/4X5A PN

SITOP PSU8600 3AC 20 A/4x5 A PN stabilized power supply input: 400-500 V 3 AC output: 24 V DC/20 A/4x 5 A with PN/IE connection web server integrated OPC UA server integrated \*Ex approval no longer available\*

Input	
type of the power supply network	3-phase AC
supply voltage at AC	
<ul style="list-style-type: none"> <li>• minimum rated value</li> <li>• maximum rated value</li> <li>• initial value</li> <li>• full-scale value</li> </ul>	400 V 500 V 320 V; Derating 320 ... 360 and 530 ... 575 V 575 V
design of input wide range input	Yes
operating condition of the mains buffering	at $V_{in} = 400$ V; Prioritized supply Output 1 at power failure can be selected via DIP switch
buffering time for rated value of the output current in the event of power failure minimum	15 ms
operating condition of the mains buffering	at $V_{in} = 400$ V; Prioritized supply Output 1 at power failure can be selected via DIP switch
line frequency	
<ul style="list-style-type: none"> <li>• 1 rated value</li> <li>• 2 rated value</li> </ul>	50 Hz 60 Hz
line frequency	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
current limitation of inrush current at 25 °C maximum	14 A
I <sup>2</sup> t value maximum	1.2 A <sup>2</sup> ·s
fuse protection type	none
<ul style="list-style-type: none"> <li>• in the feeder</li> </ul>	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	
voltage curve at output	Controlled, isolated DC voltage
number of outputs	4
output voltage at DC rated value	24 V
output voltage	
<ul style="list-style-type: none"> <li>• at output 1 at DC rated value</li> <li>• at output 2 at DC rated value</li> <li>• at output 3 at DC rated value</li> <li>• at output 4 at DC rated value</li> </ul>	24 V 24 V 24 V 24 V
relative overall tolerance of the voltage	3 %
relative control precision of the output voltage	
<ul style="list-style-type: none"> <li>• on slow fluctuation of input voltage</li> <li>• on slow fluctuation of ohm loading</li> </ul>	0.2 % 0.1 %
residual ripple	



## SITOP PSU8600/3AC/24VDC/40A PN

SITOP PSU8600 3AC 40 A PN Stabilized power supply Input: 400-500 V 3 AC output: 24 V DC/40 A with PN/IE connection web server integrated OPC UA server integrated \*Ex approval no longer available\*

Input	
type of the power supply network	3-phase AC
supply voltage at AC	
<ul style="list-style-type: none"> <li>● minimum rated value</li> <li>● maximum rated value</li> <li>● initial value</li> <li>● full-scale value</li> </ul>	400 V 500 V 320 V; Derating 320 ... 360 and 530 ... 575 V 575 V
design of input wide range input	Yes
operating condition of the 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)
buffering time for rated value of the output current in the event of power failure minimum	15 ms
operating condition of the 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)
line frequency	
<ul style="list-style-type: none"> <li>● 1 rated value</li> <li>● 2 rated value</li> </ul>	50 Hz 60 Hz
line frequency	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
current limitation of inrush current at 25 °C maximum	14 A
I <sup>2</sup> t value maximum	2.24 A <sup>2</sup> ·s
fuse protection type	none
<ul style="list-style-type: none"> <li>● in the feeder</li> </ul>	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	
voltage curve at output	Controlled, isolated DC voltage
number of outputs	1
output voltage at DC rated value	24 V
output voltage	
<ul style="list-style-type: none"> <li>● at output 1 at DC rated value</li> </ul>	24 V
relative overall tolerance of the voltage	3 %
relative control precision of the output voltage	
<ul style="list-style-type: none"> <li>● on slow fluctuation of input voltage</li> <li>● on slow fluctuation of ohm loading</li> </ul>	0.2 % 0.1 %
residual ripple	
<ul style="list-style-type: none"> <li>● maximum</li> </ul>	100 mV
voltage peak	
<ul style="list-style-type: none"> <li>● maximum</li> </ul>	200 mV



SITOP PSU8600/3AC/24VDC/40A/4X10A PN

SITOP PSU8600 3AC 40 A/4x10 A PN stabilized power supply input: 400-500 V 3 AC output: 24 V DC/40 A/4x 10 A with PN/IE connection web server integrated OPC UA server integrated \*Ex approval no longer available\*

Input	
type of the power supply network	3-phase AC
supply voltage at AC	
<ul style="list-style-type: none"> <li>● minimum rated value</li> <li>● maximum rated value</li> <li>● initial value</li> <li>● full-scale value</li> </ul>	400 V 500 V 320 V; Derating 320 ... 360 and 530 ... 575 V 575 V
design of input wide range input	Yes
operating condition of the mains buffering	at $V_{in} = 400\text{ V}$ ; Prioritized supply Output 1 at power failure can be selected via DIP switch
buffering time for rated value of the output current in the event of power failure minimum	15 ms
operating condition of the mains buffering	at $V_{in} = 400\text{ V}$ ; Prioritized supply Output 1 at power failure can be selected via DIP switch
line frequency	
<ul style="list-style-type: none"> <li>● 1 rated value</li> <li>● 2 rated value</li> </ul>	50 Hz 60 Hz
line frequency	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
current limitation of inrush current at 25 °C maximum	14 A
I <sub>2t</sub> value maximum	2.24 A <sup>2</sup> ·s
fuse protection type	none
<ul style="list-style-type: none"> <li>● in the feeder</li> </ul>	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	
voltage curve at output	Controlled, isolated DC voltage
number of outputs	4
output voltage at DC rated value	24 V
output voltage	
<ul style="list-style-type: none"> <li>● at output 1 at DC rated value</li> <li>● at output 2 at DC rated value</li> <li>● at output 3 at DC rated value</li> <li>● at output 4 at DC rated value</li> </ul>	24 V 24 V 24 V 24 V
relative overall tolerance of the voltage	3 %
relative control precision of the output voltage	
<ul style="list-style-type: none"> <li>● on slow fluctuation of input voltage</li> <li>● on slow fluctuation of ohm loading</li> </ul>	0.2 % 0.1 %
residual ripple	



## SITOP CNX8600/4X5A

SITOP CNX8600 4x5 A expansion module for PSU8600 output: 24 V DC/4x 5 A \*Ex approval no longer available\*

Output	
voltage curve at output	Controlled, isolated DC voltage
number of outputs	4
output voltage at DC rated value	24 V
output voltage <ul style="list-style-type: none"> <li>at output 1 at DC rated value</li> <li>at output 2 at DC rated value</li> <li>at output 3 at DC rated value</li> <li>at output 4 at DC rated value</li> </ul>	24 V 24 V 24 V 24 V
relative overall tolerance of the voltage	3 %
relative control precision of the output voltage <ul style="list-style-type: none"> <li>on slow fluctuation of input voltage</li> <li>on slow fluctuation of ohm loading</li> </ul>	0.2 % 0.1 %
residual ripple <ul style="list-style-type: none"> <li>maximum</li> </ul>	100 mV
voltage peak <ul style="list-style-type: none"> <li>maximum</li> </ul>	200 mV
adjustable output voltage	4 ... 28 V
product function output voltage adjustable	Yes
type of output voltage setting	via potentiometer or IE/PN interface; Derating > 24 V: 4%/V; max. 120 W per output
display version for normal operation	3-color LED for operating state module; 3-color LED per output for operating state output
type of signal at output	Relay contact (changeover contact, contact current capacity DC 60 V/0.3 A) for "Operating state OK" at power supply unit PSU8600
behavior of the output voltage when switching on	No overshoot of $V_{out}$ (soft start)
response delay maximum	1.5 s; Without on-delay of the outputs
type of outputs connection	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 at power supply unit PSU8600 can be set
voltage increase time of the output voltage <ul style="list-style-type: none"> <li>maximum</li> </ul>	500 ms
output current <ul style="list-style-type: none"> <li>rated value</li> <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> <li>rated range</li> </ul>	20 A 5 A 5 A 5 A 5 A 5 A 0 ... 20 A; No increase in the maximum output power of the overall system SITOP PSU8600 via the expansion module SITOP CNX8600





SITOP CNX8600/4X10A

SITOP CNX8600 4x10 A expansion module for PSU8600 output: 24 V DC/4x 10 A \*Ex approval no longer available\*

Output	
voltage curve at output	Controlled, isolated DC voltage
number of outputs	4
output voltage at DC rated value	24 V
output voltage <ul style="list-style-type: none"> <li>at output 1 at DC rated value</li> <li>at output 2 at DC rated value</li> <li>at output 3 at DC rated value</li> <li>at output 4 at DC rated value</li> </ul>	24 V 24 V 24 V 24 V
relative overall tolerance of the voltage	3 %
relative control precision of the output voltage <ul style="list-style-type: none"> <li>on slow fluctuation of input voltage</li> <li>on slow fluctuation of ohm loading</li> </ul>	0.2 % 0.1 %
residual ripple <ul style="list-style-type: none"> <li>maximum</li> </ul>	100 mV
voltage peak <ul style="list-style-type: none"> <li>maximum</li> </ul>	200 mV
adjustable output voltage	4 ... 28 V
product function output voltage adjustable	Yes
type of output voltage setting	via potentiometer or IE/PN interface; Derating > 24 V: 4%/V; max. 240 W per output
display version for normal operation	3-color LED for operating state module; 3-color LED per output for operating state output
type of signal at output	Relay contact (changeover contact, contact current capacity DC 60 V/0.3 A) for "Operating state OK" at power supply unit PSU8600
behavior of the output voltage when switching on	No overshoot of Vout (soft start)
response delay maximum	1.5 s; Without on-delay of the outputs
type of outputs connection	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 at power supply unit PSU8600 can be set
voltage increase time of the output voltage <ul style="list-style-type: none"> <li>maximum</li> </ul>	500 ms
output current <ul style="list-style-type: none"> <li>rated value</li> <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> <li>rated range</li> </ul>	40 A 10 A 10 A 10 A 10 A 10 A 0 ... 40 A; No increase in the maximum output power of the overall system SITOP PSU8600 via the expansion module SITOP CNX8600



## SITOP CNX8600/8X2.5A

SITOP CNX8600 8x2.5 A expansion module for PSU8600 output: 24 V DC/8x 2.5 A outputs according to NEC Class 2 \*Ex approval no longer available\*

Output	
voltage curve at output	Controlled, isolated DC voltage
number of outputs	8
output voltage at DC rated value	24 V
output voltage	
• at output 1 at DC rated value	24 V
• at output 2 at DC rated value	24 V
• at output 3 at DC rated value	24 V
• at output 4 at DC rated value	24 V
• at output 5 at DC rated value	24 V
• at output 6 at DC rated value	24 V
• at output 7 at DC rated value	24 V
• at output 8 at DC rated value	24 V
relative overall tolerance of the voltage	3 %
relative control precision of the output voltage	
• on slow fluctuation of input voltage	0.2 %
• on slow fluctuation of ohm loading	0.1 %
residual ripple	
• maximum	100 mV
voltage peak	
• maximum	200 mV
adjustable output voltage	4 ... 28 V
product function output voltage adjustable	Yes
type of output voltage setting	via potentiometer or IE/PN interface; Derating > 24 V: 4%/V; max. 60 W per output
display version for normal operation	3-color LED for operating state module; 3-color LED per output for operating state output
type of signal at output	Relay contact (changeover contact, contact current capacity DC 60 V/0.3 A) for "Operating state OK" at power supply unit PSU8600
behavior of the output voltage when switching on	No overshoot of $V_{out}$ (soft start)
response delay maximum	1.5 s; Without on-delay of the outputs
type of outputs connection	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 at power supply unit PSU8600 can be set
voltage increase time of the output voltage	
• maximum	500 ms
output current	
• rated value	20 A
• per output	2.5 A
• at output 1 rated value	2.5 A
• at output 2 rated value	2.5 A



## SITOP BUF8600/100MS/40A

SITOP BUF8600 100ms buffer module for PSU8600 buffer capacity 100 ms/40 A with electrolytic capacitors maintenance-free \*Ex approval no longer available\*

Mains buffering	
type of energy storage	electrolytic capacitors
design of the mains power cut bridging-connection	Backup time with 40 A load current: 100 ms
buffering time for rated value of the output current in the event of power failure	100 ms
Output	
output current	
<ul style="list-style-type: none"> <li>rated value</li> </ul>	40 A
Signaling	
display version	3-color LED for operating state module
<ul style="list-style-type: none"> <li>for normal operation</li> <li>in buffering mode</li> </ul>	LED green for "buffer standby exist" LED yellow for "buffered mode"
Interface	
design of the interface	Ethernet/PROFINET via power supply unit PSU8600
Safety	
operating resource protection class	Class III
protection class IP	IP20
Approvals	
certificate of suitability	
<ul style="list-style-type: none"> <li>CE marking</li> <li>UL approval</li> <li>as approval for USA</li> </ul>	Yes Yes cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 60950-1, UL 60950-1)
<ul style="list-style-type: none"> <li>cCSAus, Class 1, Division 2</li> <li>ATEX</li> </ul>	No No
type of certification CB-certificate	Yes
certificate of suitability	
<ul style="list-style-type: none"> <li>EAC approval</li> <li>C-Tick</li> <li>shipbuilding approval</li> </ul>	Yes No Yes
shipbuilding approval	ABS, DNV GL
Marine classification association	
<ul style="list-style-type: none"> <li>American Bureau of Shipping Europe Ltd. (ABS)</li> <li>DNV GL</li> </ul>	Yes Yes
EMC	
standard	
<ul style="list-style-type: none"> <li>for emitted interference</li> <li>for interference immunity</li> </ul>	EN 55022 Class B EN 61000-6-2
environmental conditions	



## SITOP BUF8600/300MS/40A

SITOP BUF8600 300ms buffer module for PSU8600 buffer capacity 300 ms/40 A with electrolytic capacitors maintenance-free \*Ex approval no longer available\*

Mains buffering	
type of energy storage	electrolytic capacitors
design of the mains power cut bridging-connection	Backup time with 40 A load current: 300 ms
buffering time for rated value of the output current in the event of power failure	300 ms
Output	
output current	
<ul style="list-style-type: none"> <li>rated value</li> </ul>	40 A
Signaling	
display version	3-color LED for operating state module
<ul style="list-style-type: none"> <li>for normal operation</li> <li>in buffering mode</li> </ul>	LED green for "buffer standby exist" LED yellow for "buffered mode"
Interface	
design of the interface	Ethernet/PROFINET via power supply unit PSU8600
Safety	
operating resource protection class	Class III
protection class IP	IP20
Approvals	
certificate of suitability	
<ul style="list-style-type: none"> <li>CE marking</li> <li>UL approval</li> <li>as approval for USA</li> </ul>	Yes Yes cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 60950-1, UL 60950-1)
<ul style="list-style-type: none"> <li>cCSAus, Class 1, Division 2</li> <li>ATEX</li> </ul>	No No
type of certification CB-certificate	Yes
certificate of suitability	
<ul style="list-style-type: none"> <li>EAC approval</li> <li>C-Tick</li> <li>shipbuilding approval</li> </ul>	Yes No Yes
shipbuilding approval	ABS, DNV GL
Marine classification association	
<ul style="list-style-type: none"> <li>American Bureau of Shipping Europe Ltd. (ABS)</li> <li>DNV GL</li> </ul>	Yes Yes
EMC	
standard	
<ul style="list-style-type: none"> <li>for emitted interference</li> <li>for interference immunity</li> </ul>	EN 55022 Class B EN 61000-6-2
environmental conditions	



## SITOP BUF8600/4S/40A

SITOP BUF8600 4s buffer module for PSU8600 buffer capacity 4 s/40 A with dual-layer capacitors maintenance-free \*Ex approval no longer available\*

Mains buffering	
type of energy storage	Double-layer capacitors
design of the mains power cut bridging-connection	Backup time with 40 A load current: 4 s
buffering time for rated value of the output current in the event of power failure	4 000 ms
Output	
output current	
<ul style="list-style-type: none"> <li>rated value</li> </ul>	40 A
Signaling	
display version	3-color LED for operating state module
<ul style="list-style-type: none"> <li>for normal operation</li> <li>in buffering mode</li> </ul>	LED green for "buffer standby exist" LED yellow for "buffered mode"
Interface	
design of the interface	Ethernet/PROFINET via power supply unit PSU8600
Safety	
operating resource protection class	Class III
protection class IP	IP20
Approvals	
certificate of suitability	
<ul style="list-style-type: none"> <li>CE marking</li> <li>UL approval</li> <li>as approval for USA</li> </ul>	Yes Yes cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 60950-1, UL 60950-1)
<ul style="list-style-type: none"> <li>cCSAus, Class 1, Division 2</li> <li>ATEX</li> </ul>	No No
type of certification CB-certificate	Yes
certificate of suitability	
<ul style="list-style-type: none"> <li>EAC approval</li> <li>C-Tick</li> <li>shipbuilding approval</li> </ul>	Yes No Yes
shipbuilding approval	ABS, DNV GL
Marine classification association	
<ul style="list-style-type: none"> <li>American Bureau of Shipping Europe Ltd. (ABS)</li> <li>DNV GL</li> </ul>	Yes Yes
EMC	
standard	
<ul style="list-style-type: none"> <li>for emitted interference</li> <li>for interference immunity</li> </ul>	EN 55022 Class B EN 61000-6-2
environmental conditions	



## SITOP BUF8600/10S/40A

SITOP BUF8600 10s buffer module for PSU8600 buffer capacity 10 s/40 A with dual-layer capacitors maintenance-free \*Ex approval no longer available\*

Mains buffering	
type of energy storage	Double-layer capacitors
design of the mains power cut bridging-connection	Backup time with 40 A load current: 10 s
buffering time for rated value of the output current in the event of power failure	10 000 ms
Output	
output current	
• rated value	40 A
Signaling	
display version	3-color LED for operating state module
• for normal operation	LED green for "buffer standby exist"
• in buffering mode	LED yellow for "buffered mode"
Interface	
design of the interface	Ethernet/PROFINET via power supply unit PSU8600
Safety	
operating resource protection class	Class III
protection class IP	IP20
Approvals	
certificate of suitability	
• CE marking	Yes
• UL approval	Yes
• as approval for USA	cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 60950-1, UL 60950-1)
• cCSAus, Class 1, Division 2	No
• ATEX	No
type of certification CB-certificate	Yes
certificate of suitability	
• EAC approval	Yes
• C-Tick	No
• shipbuilding approval	Yes
shipbuilding approval	ABS, DNV GL
Marine classification association	
• American Bureau of Shipping Europe Ltd. (ABS)	Yes
• DNV GL	Yes
EMC	
standard	
• for emitted interference	EN 55022 Class B
• for interference immunity	EN 61000-6-2
environmental conditions	



SITOP UPS8600/120W

SITOP UPS8600 UPS module for PSU8600 nominal voltage: DC 48 V  
buffer power: 960 W charging power: 120 W

Mains buffering	
type of energy storage	External battery module
design of the mains power cut bridging-connection	Buffer time limit 1 ... 88 min. can be set with DIP switches or until the connected battery modules are discharged
charging current	1.25 A, 2.5 A
adjustable charging current maximum note	Charging capacity 60 W/120 W, can be set with DIP switches
Output	
output voltage	48 V
<ul style="list-style-type: none"> <li>in normal operation at DC rated value</li> </ul>	
property of the output short-circuit proof	Yes
supplied active power typical	960 W
Efficiency	
efficiency in percent	99 %
<ul style="list-style-type: none"> <li>in case of operation on rechargeable battery typical</li> </ul>	
power loss [W]	10 W
<ul style="list-style-type: none"> <li>in case of operation on rechargeable battery typical</li> </ul>	
Protection and monitoring	
product function	Yes
<ul style="list-style-type: none"> <li>reverse polarity protection against energy storage unit polarity reversal</li> </ul>	
Signaling	
display version	Three-color LED for operating state of module, three-color LED for status of battery circuit
<ul style="list-style-type: none"> <li>for normal operation</li> <li>in buffering mode</li> </ul>	LED green for "buffer standby exist" LED yellow for "buffered mode"
Interface	
design of the interface	Ethernet/PROFINET via power supply unit PSU8600
Safety	
operating resource protection class	Class III
protection class IP	IP20
Approvals	
certificate of suitability	Yes
<ul style="list-style-type: none"> <li>CE marking</li> <li>UL approval</li> <li>as approval for USA</li> </ul>	Yes cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 60950-1, UL 60950-1)
<ul style="list-style-type: none"> <li>CSA approval</li> <li>cCSAus, Class 1, Division 2</li> <li>ATEX</li> </ul>	Yes No No

SITOP BAT8600/PB/380WH

SITOP BAT8600 Pb battery module for UPS8600 DC 48 V/380 Wh energy storage: mainten.-free lead batteries



Output	
energy content of energy storage	380 W·h
output current rated value	20 A
output voltage at DC rated value	48 V
number of parallel-switched equipment resources for increasing the power	5
Safety	
design of short-circuit protection	Blade-type fuse 40 A, 58 V DC
design of the overload protection	Valve control
Safety	
operating resource protection class	Class III
protection class IP	IP20
Approvals	
certificate of suitability	
<ul style="list-style-type: none"> <li>● CE marking</li> <li>● UL approval</li> <li>● as approval for USA</li> </ul>	Yes Yes cURus-Recognized (UL 1778, CSA C22.2 No. 107.1), File E219627; cCSAus (CSA C22.2 No. 60950-1, UL 60950-1)
<ul style="list-style-type: none"> <li>● CSA approval</li> <li>● cCSAus, Class 1, Division 2</li> <li>● ATEX</li> </ul>	Yes No No
type of certification CB-certificate	Yes
certificate of suitability	
<ul style="list-style-type: none"> <li>● EAC approval</li> <li>● shipbuilding approval</li> </ul>	Yes Yes
shipbuilding approval	ABS, DNV GL
Marine classification association	
<ul style="list-style-type: none"> <li>● American Bureau of Shipping Europe Ltd. (ABS)</li> <li>● DNV GL</li> </ul>	Yes Yes
environmental conditions	
Operating data note	For storage, mounting and operation of batteries, the relevant DIN/VDE regulations or country-specific regulations (e.g. VDE 0510 Part 2/EN 50272-2) must be observed.
ambient temperature	
<ul style="list-style-type: none"> <li>● during operation</li> <li>● during transport</li> <li>● during storage</li> </ul>	-10 ... +50 °C -40 ... +60 °C -15 ... +40 °C
Service life	
service life of energy storage	
<ul style="list-style-type: none"> <li>● typical</li> </ul>	capacity falls to 80 % of original capacity (according to EUROBAT)



SITOP BAT8600/LiFePO4/264WH

SITOP BAT8600 LiFePO4 battery module for UPS8600 DC 48 V/264 Wh energy storage: mainten.-free lithium iron-phosph. batteries



Output	
energy content of energy storage	264 W·h
output current rated value	20 A
output voltage at DC rated value	48 V
number of parallel-switched equipment resources for increasing the power	5
Safety	
design of short-circuit protection	Blade-type fuse 40 A, 58 V DC
design of the overload protection	Valve control
Safety	
operating resource protection class	Class III
protection class IP	IP20
Approvals	
certificate of suitability	
<ul style="list-style-type: none"> <li>UL approval</li> </ul>	Yes
<ul style="list-style-type: none"> <li>as approval for USA</li> </ul>	cCSAus (CSA C22.2 No. 60950-1, UL 60950-1)
<ul style="list-style-type: none"> <li>CSA approval</li> </ul>	Yes
<ul style="list-style-type: none"> <li>cCSAus, Class 1, Division 2</li> </ul>	No
<ul style="list-style-type: none"> <li>ATEX</li> </ul>	No
type of certification CB-certificate	Yes
certificate of suitability	
<ul style="list-style-type: none"> <li>EAC approval</li> </ul>	Yes
<ul style="list-style-type: none"> <li>shipbuilding approval</li> </ul>	Yes
shipbuilding approval	ABS, DNV GL
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>DNV GL</li> </ul>	Yes
environmental conditions	
Operating data note	For storage, mounting and operation of batteries, the relevant DIN/VDE regulations or country-specific regulations (e.g. VDE 0510 Part 2/EN 50272-2) must be observed.
ambient temperature	
<ul style="list-style-type: none"> <li>during operation</li> </ul>	-10 ... +50 °C
<ul style="list-style-type: none"> <li>during transport</li> </ul>	-40 ... +80 °C
<ul style="list-style-type: none"> <li>during storage</li> </ul>	-40 ... +35 °C
Service life	
service life of energy storage	
<ul style="list-style-type: none"> <li>typical</li> </ul>	capacity falls to 80 % of original capacity (according to EUROBAT)
<ul style="list-style-type: none"> <li>at 20 °C typical</li> </ul>	15 y
<ul style="list-style-type: none"> <li>at 30 °C typical</li> </ul>	10 y

## SITOP PSU8600 power supply system

### Modular system

Basic units			Add-on modules						
PSU8600, 1-phase	PSU8600, 3-phase		CNX8600, max. 4 units		BUF8600		UPS8600	BAT8600, max. 5 units per UPS8600	
4 outputs	1 output	4 outputs	4 outputs	8 outputs	Max. 2			Pb	LiFePO4
20 A, 4 x 5 A	20 A	20 A, 4 x 5 A	4 x 5 A	8 x 2.5 A	100 ms/40 A	300 ms/40 A		380 Wh	264 Wh
	40 A	40 A, 4 x 10 A	4 x 10 A		4 s/40 A	10 s/40 A			

Basic units				
SITOP PSU8600 stabilized power supply with PROFINET/Industrial Ethernet connection, OPC UA server and web server integrated				
1-ph. 24 V DC/20 A 4 x 5 A	3-ph. 24 V DC/20 A 4 x 5 A	3-ph. 24 V DC/ 20 A	3-ph. 24 V DC/40 A 4 x 10 A	3-ph. 24 V DC/ 40 A
6EP3336-8MB00-2CY0	6EP3436-8MB00-2CY0	6EP3436-8SB00-2AY0	6EP3437-8MB00-2CY0	6EP3437-8SB00-2AY0
Can be expanded individually depending on requirements				

The SITOP PSU8600 can be expanded with add-on modules (can be combined as required)									
max. 4			max. 2				max. 5		
CNX8600 expansion modules			BUF8600 buffer modules				UPS8600 UPS module	BAT8600 battery modules	
4 x 5 A	4 x 10 A	8 x 2,5 A	100 ms at 40 A	300 ms at 40 A	4 s at 40 A	10 s at 40 A	960 W	Pb, 380 Wh	LiFePO4, 264 Wh
6EP4436-8XB00-0CY0	6EP4437-8XB00-0CY0	6EP4436-8XB00-0DY0	6EP4297-8HB00-0XY0	6EP4297-8HB10-0XY0	6EP4293-8HB00-0XY0	6EP4295-8HB00-0XY0	6EP4197-8AB00-0XY0	6EP4145-8GB00-0XY0	6EP4143-8JB00-0XY0
... by means of "system clip link"									