

Top efficiency – from engineering to operation

Compact design

With a high efficiency rating of up to 94%, the units produce minimal heat, allowing for a very compact footprint - even with integrated overload monitoring of each output.

High system flexibility

The modular system with the innovative System Clip Link connection system for data and energy transfer allows for an individual combination of the power supply system without additional wiring. The order of the modules is irrelevant in this case.

Comprehensive software support

Simple integration in SIMATIC S7 enables configuration in the TIA Portal and ready-made software blocks. Ready-made faceplates facilitate visualization in SIMATIC WinCC and the SITOP library supports visualization in SIMATIC PCS 7. When it comes to the entire engineering process, 3D data, circuit diagram macros and configurable manuals are available for download free of charge.

Comprehensive manual settings

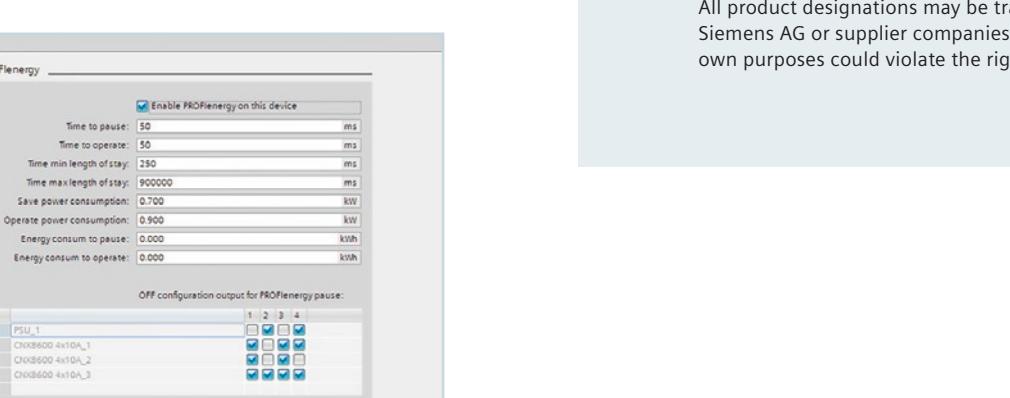
All relevant settings can be made manually, directly on the unit to ensure ease of commissioning." The values can then be applied in the software.

High functionality

Because every output can be set to a custom value between 4 V and 28 V, there is no need for additional power supply units to supply 5 V or 12 V products. Considering that the voltage can be adjusted during operation, applications that previously could not be implemented, or have been implemented at a very high cost, are now easily feasible. Because each output can also be switched on and off via software – including a 40 A output – contactors can be omitted here.

Acquisition of consumption data and PROFlenergy

The energy data of all outputs is acquired during operation. In this way, they offer comprehensive transparency in relation to the load characteristics or can be processed further in energy management systems. On top of this, support of PROFlenergy enables the power supply outputs to be selectively switched off, saving power during break times and lowering energy costs.



In the TIA Portal, the SITOP PSU8600 can easily be configured for the PROFlenergy break. The outputs to be switched off are simply selected to achieve this.

More information:

More on SITOP PSU8600:
siemens.com/sitop-psu8600

Siemens AG
Process Industries and Drives
Process Automation
Postfach 48 48
90026 Nürnberg
Germany

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SITOP power supply
SITOP PSU8600
A cloud-enabled power supply complete with open communication protocols and full TIA integration
siemens.com/sitop-psu8600

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SITOP PSU8600 – the modular power supply system that can be integrated in any plant

SITOP PSU8600 is the first power supply system that enables full integration in your automation system – in Totally Integrated Automation (TIA) via PROFINET or in OPC UA via Industrial Ethernet with open communication. The unique functionalities and communication capabilities offer new usage possibilities and transparency in the control circuit.

The system consists of a basic device with one or four integrated outputs as well as various additional modules which can be connected in series without wiring work. The system can be expanded to include 36 independent outputs, each of which is protected against overload and can be set between 4 and 28 volts.

Because the current of each output is continuously recorded, overload states can be detected at an early stage.

Current and voltage measurements support the energy management of your plant, along with the ability to switch on/off outputs via PROFlenergy.



For protection against brief power failures, the system can be expanded with buffer modules. For protection against long power failures, it can even be expanded to form an uninterruptible power supply.



Thanks to the switch functionality with two ports, the power supply system can be easily integrated into existing automation networks – in both line and ring topologies. Thanks to the OPC UA server, the data can also be transferred directly to the cloud, e.g. to MindSphere.

Integrated Web server
Monitoring or diagnostics of the power supply can also take place remotely using the integrated Web server. This function can be enabled physically on the unit, which simplifies commissioning and service.

Top reliability – through selectivity, monitoring and buffering of outputs

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Monitoring and selectively switching outputs

To prevent a short circuit or singular overload causing a plant-wide outage, all outputs are monitored and selectively switched off in event of a failure.¹ The voltage and current threshold can be set individually for each output.

Outputs with 100 VA power limitation according to NEC Class 2

Each SITOP CNX8600 expansion module with 8 outputs of 2.5 A is certified according to NEC Class 2, meaning that all requirements are met for switching equipment in the USA. However, it can also be used worldwide to supply devices that are designed for supply according to NEC Class 2.

Comprehensive diagnostics

The SITOP PSU8600 is able to capture and transmit voltage and current data independently across all outputs via PROFINET. Dynamic, continuous, or frequent overload situations can be identified early on to reduce plant downtimes. Furthermore, the time of any power failures is recorded, allowing users to examine a history of grid feed-in quality.

State	Trends	Alarms	PSU
PSU8600 information			
CNX8600 #1	Operating state: The power supply system is in normal operation.		
CNX8600 #2	Input voltage: 390 V		
CNX8600 #3	System load current: 3.0 A		
BUF8600 #1	Output information		
BUF8600 #2	Output 1: Uout: 23.9 V Iout: 2.6 A State: OK	Output 2: Uout: 24.0 V Iout: 0.1 A State: OK	Output 3: Uout: 24.0 V Iout: 0.1 A State: OK
Information	Output 4: Uout: 24.0 V Iout: 0.0 A State: OK		
The visualization of all relevant values and states of the power supply system offers maximum transparency. Like here, via ready-made WinCC faceplates, but also via the SIMATIC PCS 7 library, the integrated Web server or the SITOP Manager			

Easily bridge power failures from seconds to hours

Buffer modules with electrolytic capacitors are used in the event of very short power interruptions. Variants with double-layer capacitors (UltraCaps) enable buffering for up to several seconds. With the UPS module UPS8600, the power supply system actually becomes a fully-fledged DC UPS. The outputs are buffered for up to several hours by means of lead-based or lithium-iron-phosphate-based battery modules. In contrast to a conventional DC UPS, the output voltage in buffer mode does not change the battery voltage. Instead, each output is supplied with precisely the set voltage. Configuration of the UPS is made easy with the engineering and monitoring tool, SITOP Manager. Even several PCs can be specifically shut down.

Additional diagnostics and settings options via Industrial Ethernet/PROFINET interface with 2 ports

Setting options in the TIA Portal, via STEP 7 or SITOP Manager:

- Switch-on and switch-off of individual outputs for direct control of consumers or to save energy, e.g. via PROFinergy protocol
- Program-controlled change of the voltage of each output from 4 to 28 volts for the variable supply of consumers such as DC motors
- Threshold below the tripping current for messages for preventive maintenance

Diagnostics options in the TIA Portal, via STEP 7 or SITOP Manager:

- Early detection of dynamic, continuous or recurring overload states with the aid of momentary current values
- Outputs can be freely configured for messages for preventive maintenance
- Detection and logging of short-term power and phase failures to analyze the mains quality
- Advance warning of the overload of individual outputs, system overload and excess temperature
- Acquisition of the energy data (current, voltage) of each output to determine possible energy savings

Technical specifications

	Basic units PSU8600 with one output	Basic device PSU8600 with four outputs
Output current, outputs	20 A, 1 x 20 A 40 A, 1 x 40 A	20 A, 4 x 5 A 40 A, 4 x 10 A
Article No.	6EP3436-8SB00-2AY0 6EP3437-8SB00-2AY0	6EP3436-8MB00-2CY0 6EP3437-8MB00-2CY0
Rated input voltage value/range	3 400–500 V AC/3 320 ... 575 V AC	
Rated line frequency value/range	50/60 Hz/47 ... 63 Hz	
Mains buffering	15 ms (at 400 V), extendable via buffer modules and UPS module	
Rated input current value	1.4–1.1 A 2.75–2.2 A	1.4–1.1 A 2.75–2.2 A
– Inrush current, required MCB	< 14 A, 6–16 A Char. C, 3-ph. coupled or 3RV2011-1DA10 (setting 3 A) or 3RV2711-1DD10	
EMC	Line harmonics limitation (EN 61000-3-2), radio suppression level Class B (EN 55022)	
Efficiency at rated values, approx.	93 % 94 %	93 % 94 %
Output voltage, rated value	24 V DC ±3 %, setting range: 4 ... 28 V DC	
Setting range threshold value overload protection	2 ... 20 A 4 ... 40 A	0.5 ... 5 A 0.5 ... 10 A
Output current, overload (extra power)	30 A for 5 s/min	60 A for 5 s/min
Ambient temperature	-25 ... +60 °C	
Dimensions (W x H x D) in mm	80 x 125 x 150	125 x 125 x 150
Weight, approx.	1.8 kg	2.65 kg
Certifications	CE, cULus, CB, cCSAus, IECEx, ATEX, cCSAus Class I Div 2, SEMI F47, DNV GL, ABS	

Technical specifications

	CNX8600 expansion modules	BUF8600 buffer modules	BAT8600 battery modules			
Type/buffer times with rated current	100 ms/40 A 300 ms/40 A 4 s/40 A	100 ms/40 A 300 ms/40 A 4 s/40 A	BAT8600 Pb BAT8600 LiFePO4			
Article No.	6EP4297-8XB00-0CY0 6EP4437-8XB00-0CY0 6EP4436-8XB00-0DY0	6EP4297-8HB00-0XY0 6EP4298-8HB00-0XY0 6EP4295-8HB00-0XY0	6EP4145-8GB00-0XY0 6EP4143-8JB00-0XY0			
Brief description:	Extension of buffer time on power interruptions. A total of two buffer components (BUF8600, UPS8600) can be used in the system network.					
Storage technology	Electrolytic capacitors (internal)	Double-layer capacitors (internal)	Lead (Pb), 380 Wh, 48 V Lithium-Iron-Phosphate (LiFePO4), 264 Wh, 48 V			
Buffer time at 120 W (24 V/5 A)	800 ms	2.4 s	40 s	80 s	2 h 4 min	1 h 56 min
Buffer time at 240 W (24 V/10 A)	400 ms	1.2 s	20 s	40 s	57 min	60 min
97 % 97 % 97 %						
Buffer time at 480 W (24 V/20 A)	200 ms	600 ms	10 s	20 s	25 min	29 min
24 V DC ±3 %, setting range: 4 ... 28 V DC						
Buffer time at 960 W (24 V/40 A)	100 ms	300 ms	4 s	10 s	10 min	14 min
0.5 ... 5 A 0.5 ... 10 A 0.5 ... 2.5 A						
Typical charging time	19 s	54 s	5 min	10 min	2 h 45 min (120 W)	2 h 40 min (120 W)
Output current, overload (extra power)	60 A for 5 s/min	60 A for 5 s/min	40 A	60 A for 5 s/min	60 A for 5 s/min via UPS8600	
Ambient temperature	-25 ... +60 °C					
Dimensions (W x H x D) in mm	60 x 125 x 150	125 x 125 x 150	60 x 125 x 150	125 x 125 x 150	322 x 187 x 110 (for wall mounting)	
Weight, approx.	1.15 kg	1.15 kg	1.29 kg	1.25 kg	1.95 kg	13 kg
Certifications	CE, cULus, CB, cCSAus, IECEx, ATEX, cCSAus Class I Div 2, SEMI F47, DNV GL, ABS		CE, cULus, CB, cCSAus, IECEx, ATEX, pending: DNV GL and ABS	CE, cULus, CB, cCSAus, IECEx, ATEX, pending: DNV GL and ABS	CE, cULus, CB, cCSAus, IECEx, ATEX, pending: DNV GL and ABS	

Technical specifications

	UPS module UPS8600
Type	UPS8600
Article No.	6EP4197-8AB00-0XY0
Brief description	Buffering in case of power failures. The Energy Storage Link enables diagnostics and selective switch-off of faulty feeders, response threshold can be set individually. A total of 4 modules can be used in the system network.
External energy storage	BAT8600 battery module
Charging capacity	120 W, 60 W (switchable)
Buffer power	960 watt (40 A at 24 V)
Ambient temperature	-25 ... +60 °C
Dimensions (W x H x D) in mm	60 x 125 x 150
Weight, approx.	0.9 kg
Certifications	CE, cULus, CB, cCSAus, IECEx, ATEX, pending: DNV GL and ABS

Technical specifications

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