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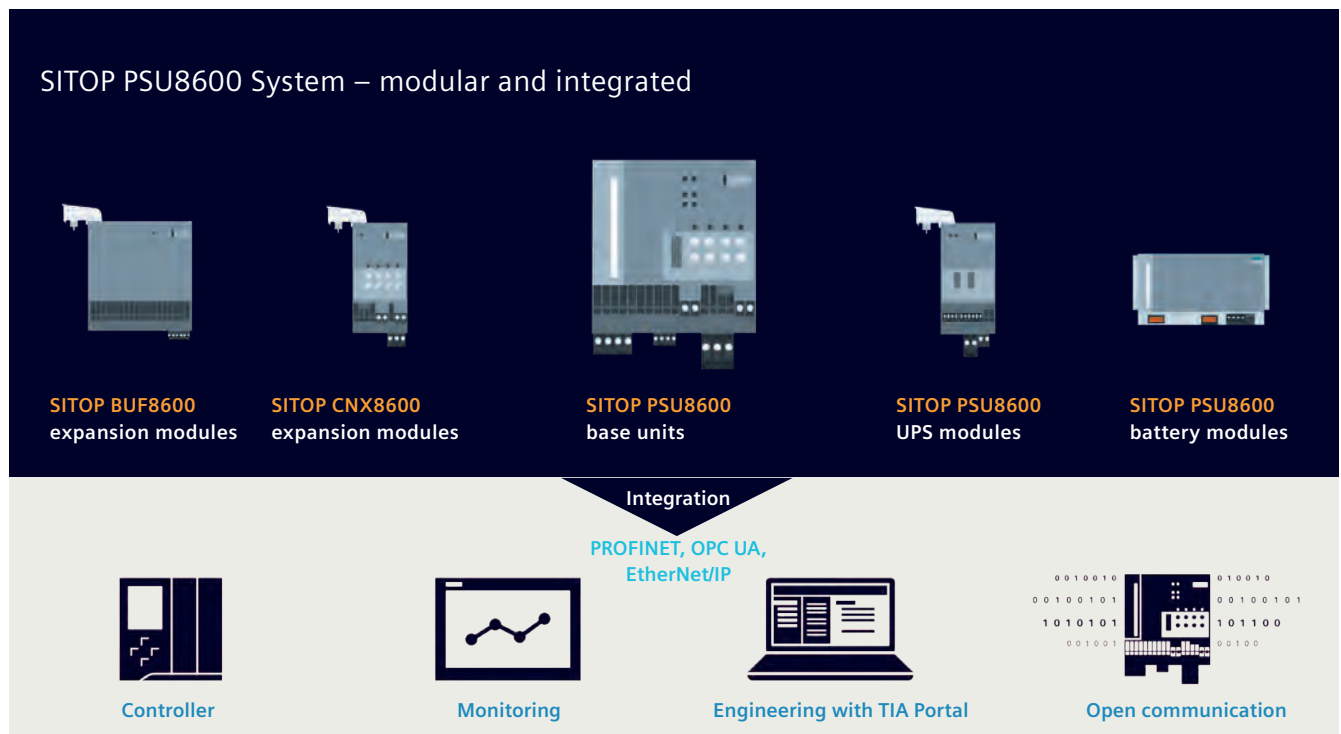
ASK YOUR POWER SUPPLY

SITOP PSU8600

usa.siemens.com/sitop-psu8600

SITOP PSU8600 – the power supply system for digitalization and Industrie 4.0

Complex facilities place high demands on the efficiency, flexibility, and reliability of their components. The SITOP PSU8600 power supply system meets all these demands thanks to its unique functionality, diagnostic capability, modular expandability, and complete integration in TIA or in many other systems via the OPC UA server. A new base unit now also allows for integration in Ethernet/IP networks.



The SITOP system at a glance

The SITOP power supply system includes the SITOP PSU8600 base units, the SITOP CNX8600 expansion modules, the SITOP BUF8600 buffer modules, and the SITOP UPS8600 UPS module with BAT8600 battery modules. SITOP PSU8600 can be fully integrated into automation landscapes and the Totally Integrated Automation Portal (TIA Portal). Engineering in the TIA Portal is very user-friendly, with prefabricated SIMATIC S7 function blocks for data analysis and free WinCC faceplates for operating and monitoring. The Ethernet/PROFINET interface makes integration in networked machines and

systems easy. SITOP PSU8600 also communicates with systems from other manufacturers via the OPC UA interface. In addition to its operating and monitoring processes, the user-friendly SITOP Manager can be used to set parameters. The integrated web server enables remote access.

The PSU8600 4 x 10 A base unit is also available as a variant with an Ethernet/IP interface and can be parameterized using suitable engineering tools.

| Power supplies and more ...

SITOP Manager



Commissioning, engineering, and monitoring of SITOP power supply systems

With the SITOP Manager software, all power supply systems with a PROFINET or USB interface in a network can be parameterized and diagnosed using a PC running the Windows 7 or 10 operating system. This is ideal, especially if the system configuration and programming doesn't take place via the TIA Portal or SIMATIC STEP 7. Communication takes place via OPC UA, the open, manufacturer-independent, and Ethernet-based communication standard. With the web browser-based user interface, the application can also run on mobile devices and automatically adapts to the display size. SITOP Manager makes it easy to parameterize the SITOP PSU8600 power supply system and SITOP uninterruptible power supplies – for example, in order to define output voltages and current thresholds or shut down PCs safely in the event of a power outage.

TIA Selection Tool – quick, easy, smart configuration



Product selection and configurator for automation technology

Using intelligent configurators and selection assistants, the TIA Selection Tool makes error-free configuration possible even without expert knowledge – and is a reliable assistant when it comes to selecting a power supply system, add-on modules, or a DC UPS. After entering the relevant parameters – and if multiple solutions are possible – an overview is provided in the form of a table that compares several devices. Once a power supply unit has been selected, a suitable redundancy, selectivity and DC UPS module can then be selected with very little effort. The resulting product configuration can be transferred for further use in different CAD, CAE, and engineering systems (for example, the TIA Portal). With just one click, the selected products are moved to your Industry Mall shopping cart for easy ordering. In addition, the 24 V DC Load View in the TIA Selection Tool makes it easy to choose a power supply system for a project by automatically calculating the power needs of the automation products supplied.

SITOP PSU8600 basic devices with one or four outputs

24 V/20 A



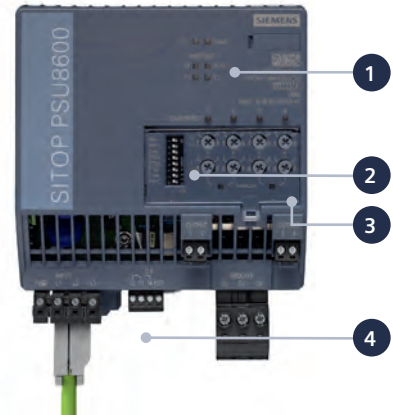
24 V/40 A



24 V/20 A, 4 x 5 A



24 V/40 A, 4 x 10 A



Additional diagnostics and setting options via PROFINET or Ethernet/IP interface with 2 ports



Setting options in the TIA Portal, SITOP Manager, or Ethernet/IP engineering tools:

- Switch-on and switch-off of individual outputs for direct control of consumers or to save energy, for example via PROFIenergy 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 (for example in fans or belt drives)
- Threshold below the tripping current for messages for preventive maintenance



Diagnostic capabilities in the TIA Portal, SITOP Manager, or Ethernet/IP engineering tools:

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

| Output current, outputs | 1-phase | 3-phase | | | |
|--|--|--|--------------------|--------------------|--------------------|
| Ausgangsstrom, Ausgänge | 20 A, 4 x 5 A | 20 A, 4 x 5 A | 40 A, 4 x 10 A | 20 A, 1 x 20 A | 40 A, 1 x 40 A |
| Article No. PROFINET variant | 6EP3336-8MB00-2CY0 | 6EP3436-8MB00-2CY0 | 6EP3437-8MB00-2CY0 | 6EP3436-8SB00-2AY0 | 6EP3437-8SB00-2AY0 |
| Article No. Ethernet/IP variant | | | 6EP3437-8MB10-2CY0 | | |
| Rated input voltage value/range, frequency | 100–240 V AC, 110–220 V DC/AC 85 to 275 V, 93 to 275 V DC, 50/60 Hz | 3 400-500 V AC/3 320 to 575 V AC, 50/60 Hz | | | |
| Mains buffering | > 20 ms (at 100 V), extendable via buffer modules or UPS module | > 15 ms (at 400 V), extendable via buffer modules and UPS module | | | |
| Rated input current value | 5.4–2.4 A. 4.8–2.4 A | 1.4–1.1 A | 2.75–2.2 A | 1.4–1.1 A | 2.75–2.2 A |
| Inrush current, required MCB | 10–32 A Char. C or slow-acting fuses | < 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 (EN 55022) Class B | | | | |
| Efficiency at rated values, approx. | 92% | 93% | 94% | 93% | 94% |
| Output voltage, rated value | 24 V DC ± 3%, setting range 4 to 28 V DC | | | | |
| Setting range threshold value over-load protection | 0.5...5 A | 0.5...5 A | 2...10 A | 2...20 A | 4...40 A |
| Output current, overload (extra power) | 30 A for 5 s/min | 30 A for 5 s/min | 60 A for 5 s/min | 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 | 125 x 125 x 150 | 125 x 125 x 150 | 125 x 125 x 150 | 80 x 125 x 150 | 125 x 125 x 150 |
| Weight, approx. | 2.65 kg | 2.0 kg | 2.65 kg | 1.8 kg | 2.65 kg |
| Certifications | CE, cULus, CB, cCSAus | CE, cULus, CB, cCSAus, SEMI F47, DNV GL, ABS | | | |

CNX8600 expansion modules (max. 4)



Buffer components BUF8600 and UPS8600 (max. 4)



Diagnosis and setting options on the modules

1 Status displays on basic devices

- 3-color LED for status of power supply system
- Display for manual or remote operation
- 4 LEDs for PROFINET or Ethernet/IP status

2 Mode selector on basic devices

- Control via IE/PN or EIP (settings on device are disabled)
- Prioritized buffering output 1 on power failure, i.e. buffering of the first output for as long as possible, remaining outputs switched off after approx. half of buffering time
- Selectable overload behavior: electronic shutdown or constant current
- On delay between the outputs, also of expansion modules CNX8600: 0 ms, 25 ms, 100 ms, load-optimized
- PSU8600 with 4 outputs: parallel operation of outputs 1 + 2 or 3 + 4; with 1 output: characteristic curve can be switched for symmetrical load distribution in parallel operation
- Approval of web servers (not for EIP variant)

3 Settings and displays per output (manual operation for commissioning and servicing)

- LED button for ON/OFF/reset with status display
- Output voltage setting: 4 to 28 V DC
- Response threshold setting: See table
- Overload behavior at 101 to 149% of setpoint: switch-off after 5 s
- Overload behavior at over 149%: current limitation to 150% and switch-off after 200 ms
- PSU8600 with 4 outputs: LED displays with parallel operation of outputs 1 + 2, 3 + 4

4 Contacts on basic devices

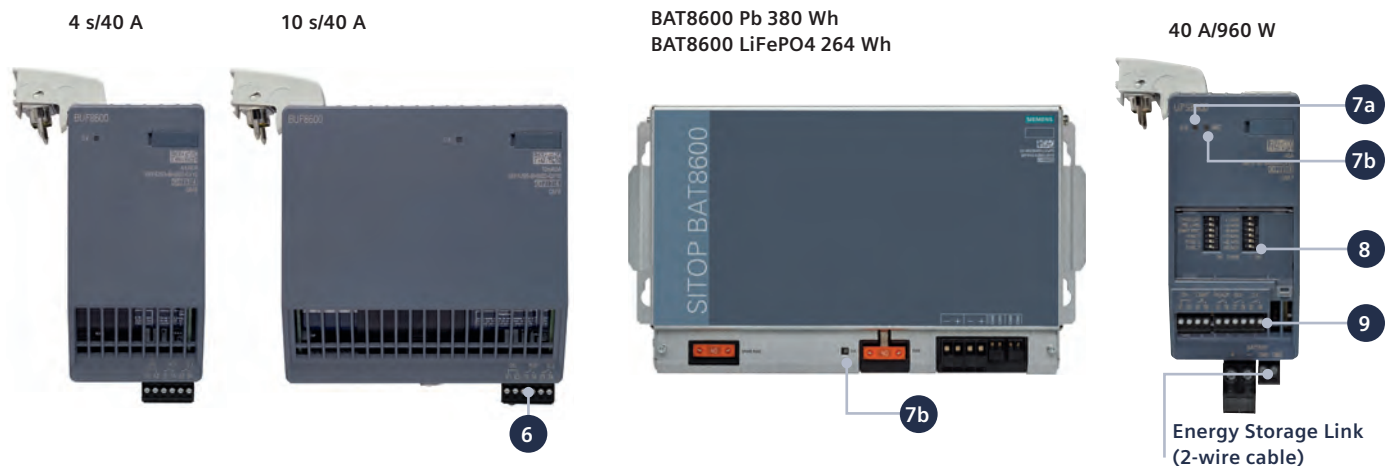
- Signaling contact (changeover contact) "DC OK"
- Remote reset

CNX8600 expansion modules

| 4 x 5 A | 4 x 10 A | 8 x 2.5 A |
|--|--------------------|---|
| 6EP4436-8XB00-0CY0 | 6EP4437-8XB00-0CY0 | 6EP4436-8XB00-0DY0 |
| Brief description: Distribution of DC supply to additional load feeders and monitoring for overload; selective switch-off of faulty feeders, response threshold can be set individually. A total of 4 modules can be used in the system network. | | |
| 97% | 97% | 97% |
| 24 V DC \pm 3%, setting range: 4 to 28 DC V | | |
| 0.5 ... 5 A | 0.5 ... 10 A | 0.5 ... 2.5 A |
| -25 ... +60 °C | | |
| 60 x 125 x 150 | 60 x 125 x 150 | 100 x 125 x 150 |
| 1.15 kg | 1.15 kg | 1.29 kg |
| CE, cULus, CB, cCSAus, DNV GL; ABS | | CE, cULus, CB, cCSAus, ABS, DNV GL, NEC Class 2 |

Technical data

| Type/buffer times with rated current | 100 ms/40 A | 300 ms/40 A |
|--|---|--------------------|
| Article No. | 6EP4297-8HB00-0XY0 | 6EP4297-8HB10-0XY0 |
| 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) | |
| Buffer time at 120 W (24 V/5 A) | 800 ms | 2,4 s |
| Buffer time at 240 W (24 V/10 A) | 400 ms | 1.2 s |
| Buffer time at 480 W (24 V/20 A) | 200 ms | 600 ms |
| Buffer time at 960 W (24 V/40 A) | 100 ms | 300 ms |
| Typical charging time | 19 s | 54 s |
| Output current, overload (extra power) | 60 A for 5 s/min | 60 A for 5 s/min |
| Ambient temperature | -25 ... +60 °C | |
| Dimensions (W x H x D) in mm | 60 x 125 x 150 | 125 x 125 x 150 |
| Weight, approx. | 1.33 kg | 2.26 kg |
| Certifications | CE, cULus, CB, cCSAus, cCSAus Class I Div 2, SEMI | |



5 Status displays on expansion and buffer modules

- 3-color LED

6 Contacts on buffer modules

- Remote ON/OFF (for disabling buffering, e.g. on shutdown of plant)
- Signaling contact (normally open) "Charge status > x %" (can be set via software)
- Signaling contact (normally open) "Buffer mode"

7 Status displays on UPS/battery module

- a) 3-color LED UPS module
- b) 3-color LED battery circuit

8 Mode selector on UPS module

- Charging capacity 120 W/60 W
- Preferred charging mode
- Buffer time limit 1 to 88 min.

9 Contacts on UPS module

- Remote ON/OFF (for disabling buffering)
- Start from the battery (standalone mode)
- Signaling contact (normally open) "Charge status > x %"
- Signaling contact (normally open) "Buffer mode"
- Signaling contact (normally open) "Battery circuit fault"

| | | BAT8600 battery modules | |
|------------------------------------|--------------------|--|--|
| 4 s/40 A | 10 s/40 A | BAT8600 Pb | BAT8600 LiFePO4 |
| 6EP4293-8HB00-0XY0 | 6EP4295-8HB00-0XY0 | 6EP4145-8GB00-0XY0 | 6EP4143-8JB00-0XY0 |
| (8600) | | External energy storage for UPS8600 UPS module. Up to 5 battery modules of the same type can be connected to extend the buffer time. | |
| Double-layer capacitors (internal) | | Lead (Pb), 380 Wh, 48 V | Lithium-iron-phosphate (LiFePO4), 264 Wh, 48 V |
| 40 s | 80 s | 2 h 4 min | 1 h 56 min |
| 20 s | 40 s | 57 min | 60 min |
| 10 s | 20 s | 25 min | 29 min |
| 4 s | 10 s | 10 min | 14 min |
| 5 min | 10 min | 2 h 45 min (120 W) | 2 h 40 min (120 W) |
| 40 A | 60 A for 5 s/min | 60 A for 5 s/min via UPS8600 | |
| | | -10 ... +50 °C | |
| 60 x 125 x 150 | 125 x 125 x 150 | 322 x 187 x 110 (for wall mounting) | |
| 1.25 kg | 1.95 kg | 13 kg | 6.5 kg |
| F47, DNV GL, ABS | | CE, cURus, CB, cCSAus, DNV GL and ABS | CE, CB, cCSAus, DNV GL and ABS |

| Technical data | UPS8600 DC UPS module |
|---------------------------|--|
| Type | UPS8600 |
| Article No. | 6EP4197-8AB00-0XY0 |
| Brief description: | Buffering in case of power failures. The Energy Storage Link enables diagnostics and temperature-controlled charging to maximize the service life of the battery modules. A total of two buffer components (BUF8600, UPS8600) can be used in the system network. |
| External energy storage | BAT8600 battery module |
| Charging capacity | 120 W, 60 W (switchable) |
| Buffer power | 960 W (40 A at 24 V) |
| Ambient temperature | -25 ... +60 °C |
| Dimens. (W x H x D) in mm | 60 x 125 x 150 |
| Weight, approx. | 0.9 kg |
| Certifications | DNV GL and ABS |

SITOP PSU8600 – benefits of the power supply system



Quick and easy integration into automation

The SITOP PSU8600 power supply system can be seamlessly integrated into the TIA Portal, SIMATIC PCS 7, and WinCC. It can easily be implemented in the automation environment via two Industrial Ethernet/PROFINET ports. And multi-vendor data exchange is also possible using the OPC UA open communication interface. In addition to its operating and monitoring processes, the SITOP Manager engineering and diagnostic software can also be used for setting parameters. The new SITOP PSU8600 4 x 10 A EIP base unit now also allows for integration in Ethernet/IP networks.



Extreme flexibility with a varied functionality

The compact base unit of the SITOP PSU8600 power supply system provides one or four individually configurable outputs, which means up to four power supplies in one device. Each output can be flexibly set to 4–28 volts, including dynamically during operation and with selective monitoring for overcurrent.



Time savings with a modular system

The power supply system can be supplemented with various modules without additional wiring effort using the "System Clip Link" connection system, which makes it possible to add up to 36 outputs or protect against power outages. Both data and power are transferred.



High plant availability

The comprehensive diagnostic options offered by SITOP PSU8600 provide the basis for predictive maintenance. To prevent a short circuit or overload on a single consumer from causing an outage in the entire plant, all outputs are selectively monitored and individually switched off in the event of failure. Power interruptions lasting from seconds to hours can be bridged and plant downtimes prevented with the aid of suitable buffer and battery modules.



Legal Manufacturer

Siemens Industry, Inc.
100 Technology Drive
Alpharetta, GA 30005
United States of America
Telephone: +1 (800) 333-7421
www.usa.siemens.com/sitop-psu8600
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