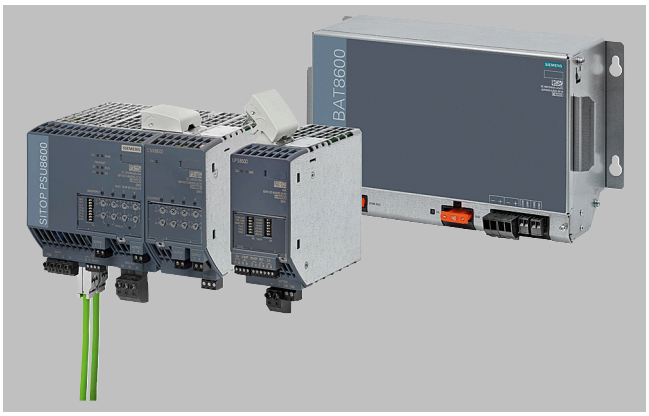
Overview



The power supply system for digitalization and Industry 4.0

As a unique power supply system with network integration, SITOP PSU8600 sets new standards in industrial power supplies. It can be fully integrated into Totally Integrated Automation (TIA) and networked via OPC UA and SITOP Manager with automation systems from different manufacturers. The 3-phase basic unit 24 V/40 A, 4 x 10 A is also available with EtherNet/IP™ interface.

Voltage and current response thresholds can be set individually for each output of the power supply system, and selective monitoring of each output for overload allows fast fault location. Depending on requirements, more modules from the modular system can be added without any wiring effort, for example to buffer against power failures ranging from seconds, minutes or hours, or for increasing the number of outputs.

SITOP PSU8600 can be easily configured in the TIA Portal: From the product selection through the network integration to the parameter assignment.

Comprehensive diagnostic and maintenance information is available via PROFINET. It can be evaluated directly in SIMATIC S7 and visualized in SIMATIC WinCC.

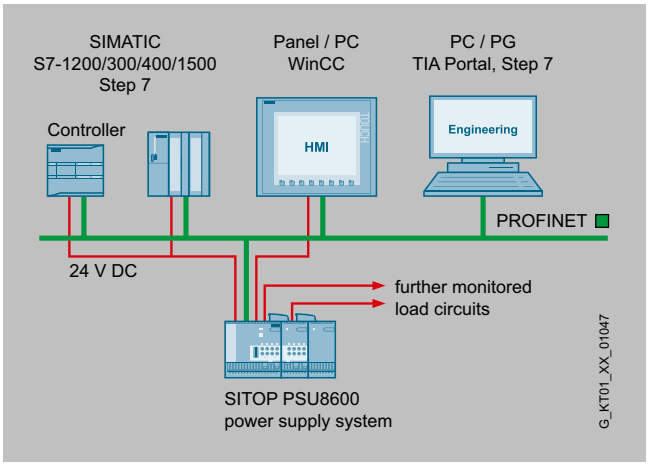
The basic unit SITOP PSU8600 4 x 10 A is also available as a variant with an EtherNet/IP™ interface and is integrated into Rockwell Automation's Studio 5000 design software.

Benefits

- Space and cost savings through up to 36 integrated outputs with selective monitoring (no need for one or more additional selectivity modules)
- Individually parameterizable outputs (elimination of an additional power supply unit, e.g. for 5 V, 12 V or 15 V)
- Compensation for power losses can be set separately for each output
- Narrow width without lateral installation clearances
- Low temperature rise in the control cabinet due to very high efficiency
- Depending on requirements, modular expansion without any wiring effort (additional outputs, buffer module, UPS module)
- Two integrated Ethernet/PROFINET ports or Ethernet/IP ports (no external switch required)
- Basic module PSU8600 3AC 24 V/40 A/4 x 10 A EIP with two integrated EtherNet/IP™ ports
- Integrated web server enables remote monitoring
- Convenient configuration in the TIA Portal
- SIMATIC S7 function blocks for easy integration in STEP 7 user programs
- Fast integration in operator control and monitoring with WinCC faceplates
- Direct integration in SIMATIC PCS 7 via SITOP library
- Easy configuration and monitoring in PC-based automation systems via SITOP Manager
- Preventive maintenance reduces downtimes
- Energy savings during breaks through targeted operation of outputs
- Easy integration in energy management systems (PROFIenergy protocol)

Application

SITOP PSU8600 power supply system is used as a central DC power supply in larger plants, or machines with networked automation systems. The PSU8600 can be directly integrated into the LAN infrastructure by means of the two integrated PROFINET ports.



An extremely high level of reliability is achieved for the DC voltage supply by monitoring the individual DC branches for overload and bridging short-term power failures (brownouts). Complete transparency and fast fault localization are achieved by providing comprehensive diagnostic and maintenance information (e.g. load states of the outputs, phase/power failure, overtemperature) via PROFINET or OPC UA.

Energy-optimized operation is supported by measuring the current power and voltage values of each output as well as the individual activation and deactivation of the DC outputs via PROFIenergy during idle times. The basic unit SITOP PSU8600 4 x 10 A is also available as a variant for integration into EtherNet/IP networks.

Design

- SITOP PSU8600, 1-phase power supply, 24 V DC/20 A/4 × 5 A with four outputs (max. 5 A per output) and two Ethernet/PROFINET ports
- SITOP PSU8600, 3-phase power supply, 24 V DC/20 A/4 × 5 A with four outputs (max. 5 A per output) and two Ethernet/PROFINET ports
- SITOP PSU8600, 3-phase power supply, 24 V DC/20 A with one output and two Ethernet/PROFINET ports
- SITOP PSU8600, 3-phase power supply, 24 V DC/40 A/4 × 10 A with four outputs (max. 10 A per output) and two Ethernet/PROFINET ports
- SITOP PSU8600, 3-phase power supply, 24 V DC/40 A with one output and two Ethernet/PROFINET ports
- SITOP PSU8600, 3-phase power supply, 24 V DC/40 A/4 × 10 A with four outputs and two EtherNet/IP™ ports
- SITOP PSU8600 EIP, 3-phase power supply, 24 V DC/40 A//4 × 10 A with four outputs (max. 10 A per output) and two EtherNet/IP™ ports

Modular system, consisting of:

- SITOP CNX8600 4 × 5 A (expansion module with 4 outputs, each 5 A)
- SITOP CNX8600 4 × 10 A (expansion module with 4 outputs, each 10 A)
- SITOP CNX8600 8 × 2.5 A (expansion module with 8 outputs, each 2.5 A)
- SITOP BUF8600 100 ms/40 A (buffer module for 100 ms at 40 A)
- SITOP BUF8600 300 ms/40 A (buffer module for 300 ms at 40 A)
- SITOP BUF8600 4 s/40 A (buffer module for 4 s at 40 A)
- SITOP BUF8600 10 s/40 A (buffer module for 10 s at 40 A)
- SITOP UPS8600 (UPS module) including external energy storage unit
  - SITOP BAT8600 Pb (battery module with lead-acid batteries for buffering in the event of a power failure for up to 10 min/960 W)
  - SITOP BAT8600 LiFePO4 (battery module with lithium iron phosphate batteries for buffering in the event of a power failure for up to 21 min/960 W)

Up to 4 CNX8600 expansion modules and up to 2 buffer components (BUF8600 or UPS8600) can be connected to a PSU8600 basic unit. The connection is made at the top of the modules without any wiring effort using the System Clip Link and a plug-in connector for system data and power supply. Up to six additional modules can be added in random order; this means that existing configurations do not have to be altered if a module is added at a later stage. Up to 5 BAT8600 battery modules of the same type can be connected to a UPS8600 module. The connection between UPS8600 and BAT8600 via the energy storage link enables intelligent battery management for optimum battery life.

Function

Supply of connected loads

An individual supply voltage can be set at each output of the power supply system. This means you can supply loads with different nominal voltages simultaneously with only one device. Plus the voltage drop caused by the different cable lengths can be compensated individually, which means each load can be supplied with the optimum voltage.

Monitoring of the outputs for overload

Each output of the power supply system is individually monitored for overload. If the load current exceeds the set response threshold, the output is shut down according to specified time-current characteristics. All other outputs continue to be supplied reaction-free.

Enabling and disabling the outputs

Each output can be manually enabled or disabled directly on the device (e.g. for commissioning or service) and an overload tripping can be reset. Outputs disabled due to overload can also be reset remotely using a remote reset signal (24 V input).

In addition, program-controlled enabling and disabling of the outputs is possible using the integrated Ethernet/PROFINET and Ethernet/IP interface. This also means you can disable individual outputs by means of PROFIenergy during breaks to save energy.

Communication

Comprehensive diagnostics information can be queried and processed via the integrated Ethernet/PROFINET and Ethernet/IP interface during operation for both the device status as well as the status of the individual outputs. This results in complete transparency, minimal downtimes and quick fault location. The integrated web server also permits remote monitoring of the power supply system.

Buffering

If brief voltage dips occur on the mains side, the buffer module provides the load current for supplying the outputs via its energy storage devices. Maintenance-free electrolytic capacitors or double-layer capacitors are used as energy-storage units.

UPS module UPS8600 can be used with the corresponding BAT8600 battery modules to protect against longer power failures. This allows power failures in the minutes to hours range to be bridged. These supplementary modules also make it possible to shut down the system in a specific and safe manner in the event of a power failure. For most power interruptions, however, the bridging time is sufficient so that the system can continue to run without malfunction.

Integration

Software for TIA-based automation systems

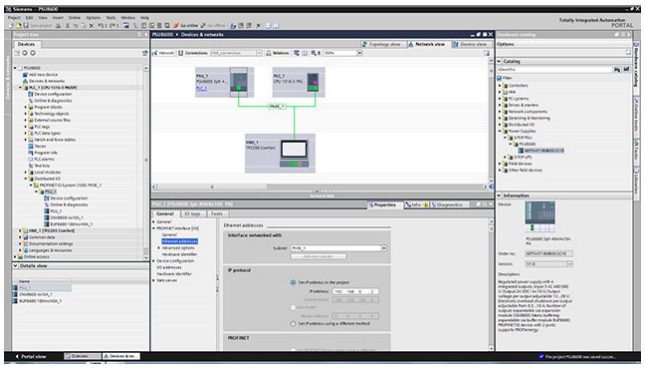
Different software components are available to facilitate easy integration of SITOP PSU8600 in the TIA environment.

Engineering is simple via the TIA Portal. Special function blocks for SIMATIC S7-300, S7-400, S7-1200 and S7-1500 also support integration in the STEP 7 user program.

The comprehensive operating and diagnostic data of the power supply system can be visualized using ready-to-use PSU8600 faceplates for WinCC.

TIA Portal

- User-friendly, fail-safe integration of SITOP PSU8600 into the PROFINET network by means of drag-and-drop
- Convenient configuration of the PSU8600 basic units and CNX8600, BUF8600, UPS8600 and BAT8600 add-on modules though simple selection from the hardware catalog
- Free HSPs (Hardware Support Packages) available for the TIA Portal:
  http://support.automation.siemens.com/WW/view/en/72341852
- Free GSD file (Generic Station Description) for STEP 7 V5
  http://support.automation.siemens.com/WW/view/en/102254061



Establishing the PROFINET connection between the SITOP PSU8600 and the PLC is easy and fail-safe in the TIA Portal

STEP 7 function blocks

Function blocks are available for STEP 7 user programs on SIMATIC S7-300/400/1200/1500. They allow further processing of the PSU8600 operating data.

- Function blocks for STEP 7 V5.6
- Function blocks for STEP 7 in the TIA Portal as of version 15.1

Free download at:
http://support.automation.siemens.com/WW/view/en/102379345

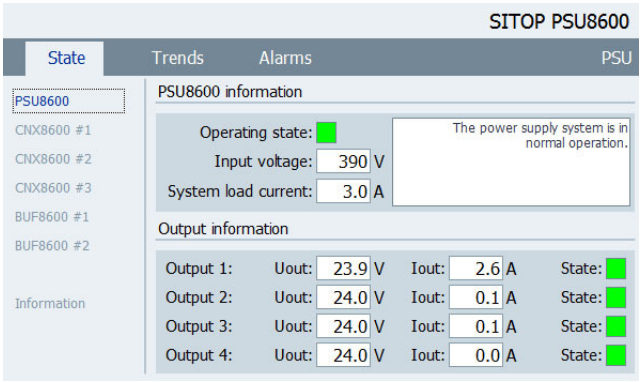
Faceplates for WinCC

Ready-to-use faceplates save programming time during visualization of the SITOP PSU8600. The faceplates show all relevant statuses and values of the power supply system and the individual outputs and are available for the following systems:

- Faceplates for WinCC as of version V7.4
- Faceplates for WinCC flexible 2008 SP5
- Faceplates for WinCC Comfort/Advanced/Professional in the TIA Portal

Free download at:
http://support.automation.siemens.com/WW/view/en/102379345

Integration (continued)



The pre-compiled WinCC faceplates show all the relevant data of the power supply system in an easy-to-understand display.

Software for SIMATIC PCS 7 process control system

The SITOP library is available with blocks and faceplates for direct integration into SIMATIC PCS 7. The SW blocks in the SIMATIC S7 supply the faceplate on the user interface of the process control system with operating and diagnostics data, generate messages and ensure connection to the maintenance system of PCS 7. This ensures constant transparency of the 24 V supply in the control system. The SITOP library is supported in SIMATIC PCS 7 as of version V8.2 with SP1.

Free download at:
https://support.industry.siemens.com/cs/ww/en/view/109476154

SITOP Manager - the tool for commissioning, engineering and monitoring of communication-capable SITOP power supplies

SITOP Manager is the medium for all users who do not work with SIMATIC STEP 7 in the TIA Portal or with SIMATIC PCS 7. It manages all communication-capable power supplies in a communication network and enables their commissioning, online and offline engineering, diagnostics as well as operator control and monitoring. With the help of the SITOP Shutdown Service (autonomous function of the SITOP Manager), for example, it also supports continuous monitoring and specific shutdown of one or more PCs in case of a power failure. SITOP Manager is available as a free download in SIOS. It supports the following SITOP devices:

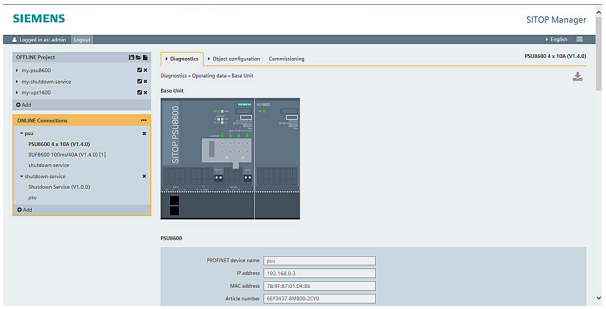
- Requirement for the use of the SITOP Manager with SITOP PSU8600:
  - SITOP PSU8600 3 AC 40 A / 4 x 10 A as of product state (PS) "2" as of firmware V1.4.0
  - SITOP PSU8600 3 AC 20 A / 4 x 5 A, 20 A, 40 A as of product state (PS) "1" as of firmware V1.4.0
  - SITOP PSU8600 1 AC 20 A / 4 x 5 A as of product state (PS) "1" as of firmware V1.5.0

SITOP Manager functions

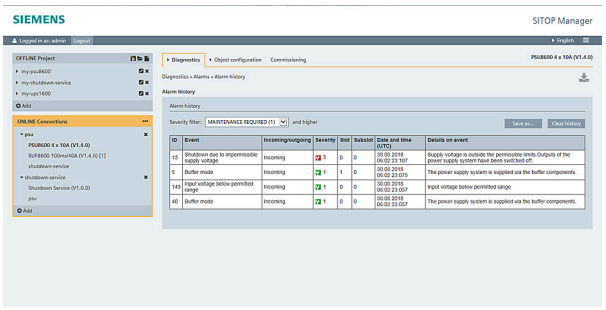
- Integrated engineering, monitoring, diagnostics and service functions save time and operating costs
- Operation via the web interface simplifies automation projects
- Stability and quality prevent plant failures
- Shutting down specific PCs prevents data loss in the event of a power failure
- Possibility to configure multiple SITOP PSU8600 PN/USBs via a single SITOP Manager project file reduces overhead and time, thus saving costs

Integration (continued)

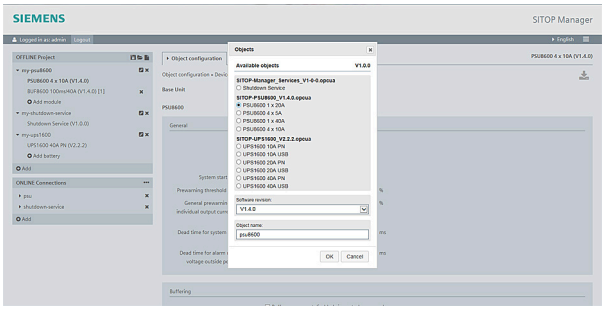
- The option to make configuration changes in runtime (CiR) reduces plant downtimes
- Firmware update option ensures that the SITOP PSU8600 is always up-to-date
- Since SITOP Manager supports Microsoft Windows and SIMATIC Industrial OS, it can be used on all common PCs
- Secure, encrypted communication according to the Siemens security concepts ('Security-in-depth' model)



Diagnostics via SITOP Manager



Alarm history in SITOP Manager



SITOP Manager PSU8600 offline, including saving of offline project to a project file

Free download at:
https://support.industry.siemens.com/cs/ww/en/view/109760607

Web server

A web server is integrated in the PSU8600 basic unit for remote monitoring of the power supply system.

Remote monitoring of

- Hardware configuration data

Integration (continued)

- Operating data of the basic unit, all connected additional modules and the individual outputs
- Alarm messages

Remote access via:

- Internet Explorer 10, 11, Firefox as of V45, Google Chrome as of V50, Microsoft Edge as of V25
- IP address
- User name and password

The password-protected web server offers a view of the configuration and operating data.

Integration of SITOP PSU8600 EIP in Studio 5000 Logix Designer

In Rockwell Automation's Studio 5000 Logix Designer, the basic unit SITOP PSU8600 24 V/40 A/4 x 10 A EIP and the add-on modules SITOP CNX8600, SITOP BUF8600 and SITOP UPS8600 can be integrated, parameterized and diagnosed in projects.

You can find detailed information in the manual:
https://support.industry.siemens.com/cs/ww/en/view/109808793

More information

TIA Selection Tool for quick and easy configuration of the PSU8600 power supply system:
http://www.siemens.com/tst

Overview

Despite their compact overall width, the 1-phase and 3-phase basic units of the SITOP PSU8600 power supply system include one Ethernet/PROFINET or EtherNet/IP interface, as well as one or four configurable outputs (voltage and current threshold) with selective monitoring. If needed, additional modules from the modular system can be added to the basic unit without any wiring effort in order to increase the number of outputs (CNX8600) or to extend the power buffering time (BUF8600, UPS8600). Comprehensive diagnostic and maintenance information is available via PROFINET. It can be evaluated directly in SIMATIC S7 and visualized in SIMATIC WinCC. Energy management is also optimally supported through the acquisition of energy data for each output as well as individual activation and deactivation of the outputs via PROFIenergy.

Multi-vendor transfer of parameters and diagnostic data is also possible via the open communications interface OPC UA.

Product highlights

- Extremely slim design with very high efficiency of up to 94%
- Voltage and current threshold can be set separately and are infinitely adjustable for each output
- Extra power with 1.5 times the rated current (5 s/min) for brief, operational overload
- Integrated Ethernet/PROFINET interface (2 ports)
- Easy configuration in the TIA Portal
- Integrated web server for remote diagnostics
- Outputs can be deactivated and activated in a targeted manner with PROFIenergy
- Variant with integrated EtherNet/IP interface (2 ports), integrated in Rockwell Automation's Studio 5000 design software

Selection and ordering data

SITOP PSU8600 1- and 2-phase, 24 V DC/20 A/4 x 5 A with PN/IE connection Stabilized power supply Input: 100 ... 240 V AC Output: 24 V DC/20 A/4 x 5 A	**6EP3336-8MB00-2CY0**
SITOP PSU8600 3-phase, 24 V DC/20 A with PN/IE connection Stabilized power supply Input: 400 ... 500 V 3 AC Output: 24 V DC/20 A	**6EP3436-8SB00-2AY0**
SITOP PSU8600 3-phase, 24 V DC/40 A with PN/IE connection Stabilized power supply Input: 400 ... 500 V 3 AC Output: 24 V DC/40 A	**6EP3437-8SB00-2AY0**
SITOP PSU8600 3-phase, 24 V DC/20 A/4 x 5 A with PN/IE connection Stabilized power supply Input: 400 ... 500 V 3 AC Output: 24 V DC/20 A/4 x 5 A	**6EP3436-8MB00-2CY0**
SITOP PSU8600 3-phase, 24 V DC/40 A/4 x 10 A with PN/IE connection Stabilized power supply Input: 400 ... 500 V 3 AC Output: 24 V DC/40 A/4 x 10 A	**6EP3437-8MB00-2CY0**
SITOP PSU8600 3-phase, 24 V DC/40 A/4 x 10 A with EIP connection Stabilized power supply Input: 400 ... 500 V 3 AC Output: 24 V DC/40 A/4 x 10 A	**6EP3437-8MB10-2CY0**

Accessories

SITOP CNX8600 4 x 5 A expansion module For SITOP PSU8600 Output: 24 V DC/4 x 5 A	**6EP4436-8XB00-0CY0**
SITOP CNX8600 4 x 10 A expansion module For SITOP PSU8600 Output: 24 V DC/4 x 10 A	**6EP4437-8XB00-0CY0**
SITOP CNX8600 8 x 2.5 A expansion module For SITOP PSU8600 Output: 24 V DC/8 x 2.5 A	**6EP4436-8XB00-0DY0**
SITOP BUF8600 100 ms buffer module For SITOP PSU8600 Buffer capacity 100 ms/40 A	**6EP4297-8HB00-0XY0**
SITOP BUF8600 300 ms buffer module For SITOP PSU8600 Buffer capacity 300 ms/40 A	**6EP4297-8HB10-0XY0**
SITOP BUF8600 4 s buffer module For SITOP PSU8600 Buffer capacity 4 s/40 A	**6EP4293-8HB00-0XY0**
SITOP BUF8600 10 s buffer module For SITOP PSU8600 Buffer capacity 10 s/40 A	**6EP4295-8HB00-0XY0**
SITOP UPS8600 UPS module For SITOP PSU8600 Rated buffer power 960 W	**6EP4197-8AB00-0XY0**
SITOP BAT8600 battery module 380 Wh For SITOP UPS8600 with Pb rechargeable batteries	**6EP4145-8GB00-0XY0**
SITOP BAT8600 battery module 264 Wh For SITOP UPS8600 with LiFePO4 rechargeable batteries	**6EP4143-8JB00-0XY0**
Device identification labels	**3RT2900-1SB20**

Technical specifications

Article number product brand name type of current supply	6EP3336-8MB00-2CY0 SITOP PSU8600 24 V/20 A/4x 5 A	6EP3436-8MB00-2CY0 SITOP PSU8600 24 V/20 A/4x 5 A	6EP3436-8SB00-2AY0 SITOP PSU8600 24 V/20 A
input			
type of the power supply network	1-phase and 2-phase AC or DC	3-phase AC	3-phase AC
supply voltage at AC			
• minimum rated value	100 V	400 V	400 V
• maximum rated value	240 V	500 V	500 V
• initial value	85 V	320 V	320 V
• full-scale value	275 V	575 V	575 V
supply voltage at AC		Derating 320 ... 360 and 530 ... 575 V	Derating 320 ... 360 and 530 ... 575 V
supply voltage at DC	110 ... 220 V		
input voltage at DC	93 ... 275 V		
wide range input	Yes	Yes	Yes
buffering time for rated value of the output current in the event of power failure minimum	20 ms	15 ms	15 ms
operating condition of the mains buffering	at Vin = 100 V; Prioritized supply of Output 1 in case of power failure selectable via DIP switch	at Vin = 400 V; Prioritized supply of Output 1 in case of power failure selectable via DIP switch	at Vin = 400 V; Prioritized supply of the output in case of power failure selectable via DIP switch (only in conjunction with CNX8600 expansion module)
line frequency	50 Hz/60 Hz	50 Hz/60 Hz	50 Hz/60 Hz
line frequency	47 ... 63 Hz	47 ... 63 Hz	47 ... 63 Hz
input current			
• at rated input voltage 100 V	5.4 A		
• at rated input voltage 110 V	4.8 A		
• at rated input voltage 120 V	4.5 A		
• at rated input voltage 220 V	2.4 A		
• at rated input voltage 230 V	2.5 A		
• at rated input voltage 240 V	2.4 A		
• at rated input voltage 400 V		1.4 A	1.4 A
• at rated input voltage 500 V		1.1 A	1.1 A
current limitation of inrush current at 25 °C maximum	15 A	14 A	14 A
I2t value maximum	4.33 $A^2 \cdot s$	1.2 $A^2 \cdot s$	1.2 $A^2 \cdot s$
fuse protection type	internal	none	none
fuse protection type in the feeder	required: circuit breaker (for UL: UL489-listed/DIVQ) characteristic C, 10-32 A, alternatively slow-response fuses (for UL: UL248-listed)	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)	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	Controlled, isolated DC voltage	Controlled, isolated DC voltage
number of outputs	4	4	1
output voltage at DC rated value	24 V	24 V	24 V
output voltage			
• at output 1 at DC rated value	24 V	24 V	24 V
• at output 2 at DC rated value	24 V	24 V	
• at output 3 at DC rated value	24 V	24 V	
• at output 4 at DC rated value	24 V	24 V	
	5 ... 24 V	5 ... 24 V	5 ... 24 V
output voltage adjustable	Yes; via potentiometer or IE/PN interface	Yes; via potentiometer or IE/PN interface	Yes; via potentiometer or IE/PN interface
adjustable output voltage	4 ... 28 V; Derating > 24 V: 4%/V; max. 120 W per output, max. 480 W overall system	4 ... 28 V; Derating > 24 V: 4%/V; max. 120 W per output, max. 480 W overall system	4 ... 28 V; Derating > 24 V: 4%/V; max. 480 W overall system

Technical specifications (continued)

Article number product brand name type of current supply	6EP3336-8MB00-2CY0 SITOP PSU8600 24 V/20 A/4x 5 A	6EP3436-8MB00-2CY0 SITOP PSU8600 24 V/20 A/4x 5 A	6EP3436-8SB00-2AY0 SITOP PSU8600 24 V/20 A
relative control precision of the output voltage			
• on slow fluctuation of input voltage	0.2 %	0.2 %	0.2 %
• on slow fluctuation of ohm loading	0.1 %	0.1 %	0.1 %
residual ripple			
• maximum	100 mV	100 mV	100 mV
voltage peak			
• maximum	200 mV	200 mV	200 mV
display version for normal operation	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	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	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
type of signal at output	Relay contact (changeover contact, contact current capacity DC 60 V/0.3 A) for "Operating state OK"	Relay contact (changeover contact, contact current capacity DC 60 V/0.3 A) for "Operating state OK"	Relay contact (changeover contact, contact current capacity DC 60 V/0.3 A) for "Operating state OK"
behavior of the output voltage when switching on	No overshoot of Vout (soft start)	No overshoot of Vout (soft start)	No overshoot of Vout (soft start)
response delay maximum	1 s; Without on-delay of the outputs	1 s; Without on-delay of the outputs	1 s
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 can be set	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	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	500 ms	500 ms
output current			
• rated value	20 A	20 A	20 A
• per output	5 A	5 A	20 A
• at output 1 rated value	5 A	5 A	20 A
• at output 2 rated value	5 A	5 A	
• at output 3 rated value	5 A	5 A	
• at output 4 rated value	5 A	5 A	
• rated range	0 ... 20 A	0 ... 20 A; +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. 240 W	0 ... 20 A; +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. 240 W
	20 A	20 A	20 A
supplied active power typical	480 W	480 W	480 W
short-term overload current			
• at short-circuit during operation typical			60 A; only in operation without CNX8600 extension module
duration of overloading capability for excess current			
• at short-circuit during operation			25 ms
parallel switching of outputs	Yes; Parallel circuit Output 1 with 2 or Output 3 with 4 can be selected via DIP switch	Yes; Parallel circuit Output 1 with 2 or Output 3 with 4 can be selected via DIP switch	
bridging of equipment	No	No	Yes; suitable output characteristics via DIP switch can be selected
number of parallel-switched equipment resources			2
efficiency			
efficiency in percent	92 %	93 %	93 %
power loss [W]			

Technical specifications (continued)

Article number product brand name type of current supply	6EP3336-8MB00-2CY0 SITOP PSU8600 24 V/20 A/4x 5 A	6EP3436-8MB00-2CY0 SITOP PSU8600 24 V/20 A/4x 5 A	6EP3436-8SB00-2AY0 SITOP PSU8600 24 V/20 A
• at rated output voltage for rated value of the output current typical	39 W	34 W	34 W
• during no-load operation maximum	14 W	12 W	12 W
closed-loop control			
relative control precision of the output voltage with rapid fluctuation of the input voltage by +/- 15% typical	0.1 %	0.1 %	0.1 %
relative control precision of the output voltage load step of resistive load 50/100/50 % typical	0.4 %	0.4 %	0.4 %
setting time			
• maximum	10 ms	10 ms	10 ms
protection and monitoring			
design of the overvoltage protection	max. 35 V (max. 500 ms)	max. 35 V (max. 500 ms)	max. 35 V (max. 500 ms)
property of the output short-circuit proof	Yes	Yes	Yes
design of short-circuit protection	electronic overload cut-off; optionally constant current operation can be selected for Output 4 via DIP switches	electronic overload cut-off; optionally constant current operation can be selected for Output 4 via DIP switches	Electronic overload shutdown; optional constant-current operation can be selected via DIP switch
adjustable current response value current of the current-dependent overload release	0.5 ... 5 A	0.5 ... 5 A	2 ... 20 A
type of response value setting	via potentiometer or IE/PN interface	via potentiometer or IE/PN interface	via potentiometer or IE/PN interface
switching characteristic			
• of the excess current	Ia >1.0...<1.5 x Ia threshold permissible for 5 s; Ia limit (= 1.5 x Ia threshold) permissible for 200 ms	Ia >1.0...<1.5 x Ia threshold permissible for 5 s; Ia limit (= 1.5 x Ia threshold) permissible for 200 ms	Ia >1.0...<1.5 x Ia threshold permissible for 5 s; Ia limit (= 1.5 x Ia threshold) permissible for 200 ms
• of the current limitation	Ia limit (= 1.5 x Ia threshold) permissible for 5 s, afterwards Ia threshold continuous	Ia limit (= 1.5 x Ia threshold) permissible for 5 s, afterwards Ia threshold continuous	Ia limit (= 1.5 x Ia threshold) permissible for 5 s, afterwards Ia threshold continuous
overcurrent overload capability			
• in normal operation	Total system overloadable 150% Ia rated to 5 s/min	Total system overloadable 150% Ia rated to 5 s/min	Total system overloadable 150% Ia rated to 5 s/min
display version for overload and short circuit	3-color LED for operating state device; 3-color LED per output for operating state output	3-color LED for operating state device; 3-color LED per output for operating state output	3-color LED for operating state device; 3-color LED for operating state output
design of the reset device/resetting mechanism	via sensor per output or IE/PN interface	via sensor per output or IE/PN interface	via sensor or IE/PN interface
remote reset function	Non-electrically isolated 24 V input (signal level "high" at > 15 V)	Non-electrically isolated 24 V input (signal level "high" at > 15 V)	Non-electrically isolated 24 V input (signal level "high" at > 15 V)
interfaces			
product function communication function	Yes	Yes	Yes
design of the interface	Ethernet/PROFINET	Ethernet/PROFINET	Ethernet/PROFINET
• design of the interface PROFINET protocol	Yes	Yes	Yes
protocol is supported			
• OPC UA	Yes	Yes	Yes
safety			
galvanic isolation between input and output	Yes	Yes	Yes
galvanic isolation	Safety extra low output voltage Vout according to EN 61204-7	Safety extra low output voltage Vout according to EN 61204-7	Safety extra low output voltage Vout according to EN 61204-7
operating resource protection class	Class I	Class I	Class I
leakage current			
• maximum	3.5 mA	3.5 mA	3.5 mA
protection class IP	IP20	IP20	IP20
standard			
• for emitted interference	EN 55022 Class B	EN 55022 Class B	EN 55022 Class B
• for mains harmonics limitation	EN 61000-3-2	EN 61000-3-2	EN 61000-3-2
• for interference immunity	EN 61000-6-2	EN 61000-6-2	EN 61000-6-2

Technical specifications (continued)

Article number product brand name type of current supply	6EP3336-8MB00-2CY0 SITOP PSU8600 24 V/20 A/4x 5 A	6EP3436-8MB00-2CY0 SITOP PSU8600 24 V/20 A/4x 5 A	6EP3436-8SB00-2AY0 SITOP PSU8600 24 V/20 A
standards, specifications, approvals			
certificate of suitability			
• CE marking	Yes	Yes	Yes
• UL approval	Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259	Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259	Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259
• CSA approval	Yes; cCSAus (CSA C22.2 No. 62368-1, UL 62368-1)	Yes; cCSAus (CSA C22.2 No. 62368-1, UL 62368-1)	Yes; cCSAus (CSA C22.2 No. 62368-1, UL 62368-1)
• EAC approval	Yes	Yes	Yes
• NEC Class 2	No	No	No
• SEMI F47	Yes	Yes	Yes
type of certification			
• BIS	Yes; R-41188271	Yes; R-41188271	Yes; R-41188271
• CB-certificate	Yes	Yes	Yes
MTBF at 40 °C	186 700 h	243 178 h	298 979 h
standards, specifications, approvals hazardous environments			
certificate of suitability			
• IECEx	No	No	No
• ATEX	No	No	No
• ULhazloc approval	No	No	No
• cCSAus, Class 1, Division 2	No	No	No
• FM registration	No	No	No
standards, specifications, approvals marine classification			
shipbuilding approval	Yes	Yes	Yes
Marine classification association			
• American Bureau of Shipping Europe Ltd. (ABS)	Yes	Yes	Yes
• French marine classification society (BV)	No	No	No
• Det Norske Veritas (DNV)	No	Yes	Yes
• Lloyds Register of Shipping (LRS)	No	No	No
standards, specifications, approvals Environmental Product Declaration			
Environmental Product Declaration	Yes	Yes	Yes
Global Warming Potential [CO2 eq]			
• total	1 262.5 kg	1 096.3 kg	1 093.1 kg
• during manufacturing	41 kg	31.5 kg	28.4 kg
• during operation	1 220.3 kg	1 063.9 kg	1 063.9 kg
• after end of life	0.59 kg	0.45 kg	0.41 kg
ambient conditions			
ambient temperature			
• during operation	-25 ... +60 °C; with natural convection	-25 ... +60 °C; with natural convection	-25 ... +60 °C; with natural convection
• during transport	-40 ... +85 °C	-40 ... +85 °C	-40 ... +85 °C
• during storage	-40 ... +85 °C	-40 ... +85 °C	-40 ... +85 °C
environmental category according to IEC 60721	Climate class 3K3, 5 ... 95% no condensation	Climate class 3K3, 5 ... 95% no condensation	Climate class 3K3, 5 ... 95% no condensation
connection method			
type of electrical connection	Plug-in terminals with screwed connection	Plug-in terminals with screwed connection	Plug-in terminals with screwed connection
• at input	L1/+, N/L2/-, PE: Plug-in terminal with 1 screwed connection each for 0.2 ... 4 mm² single-wire / fine stranded	L1, L2, L3, PE: Plug-in terminal with 1 screwed connection each for 0.2 ... 4 mm² single-wire / fine stranded	L1, L2, L3, PE: Plug-in terminal with 1 screwed connection each for 0.2 ... 4 mm² single-wire / fine stranded

Technical specifications (continued)

Article number product brand name type of current supply	6EP3336-8MB00-2CY0 SITOP PSU8600 24 V/20 A/4x 5 A	6EP3436-8MB00-2CY0 SITOP PSU8600 24 V/20 A/4x 5 A	6EP3436-8SB00-2AY0 SITOP PSU8600 24 V/20 A
• at 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 ... 4 mm²	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 ... 4 mm²	Output: plug-in terminals with 2 screw connectors for 0.2 ... 4 mm²; 0 V: screw terminal with 3 screw connectors for 0.2 ... 4 mm²
• for auxiliary contacts	RST (Reset): Plug-in terminal (together with alarm signal) with 1 screwed connection for 0.2 ... 1.5 mm²	RST (Reset): Plug-in terminal (together with alarm signal) with 1 screwed connection for 0.2 ... 1.5 mm²	RST (Reset): Plug-in terminal (together with alarm signal) with 1 screwed connection for 0.2 ... 1.5 mm²
• for signaling contact	11, 12, 14 (alarm signal): Plug-in terminal (together with Reset) with 1 screwed connection each for 0.2 ... 1.5 mm²	11, 12, 14 (alarm signal): Plug-in terminal (together with Reset) with 1 screwed connection each for 0.2 ... 1.5 mm²	11, 12, 14 (alarm signal): Plug-in terminal (together with Reset) with 1 screwed connection each for 0.2 ... 1.5 mm²
removable terminal at input	Yes	Yes	Yes
removable terminal at output	Yes	Yes	Yes
design of the interface for communication	PROFINET/Ethernet: two RJ45 sockets (2-port switch)	PROFINET/Ethernet: two RJ45 sockets (2-port switch)	PROFINET/Ethernet: two RJ45 sockets (2-port switch)
suitability for interaction modular system	Yes	Yes	Yes
mechanical data			
width × height × depth of the enclosure	125 mm × 150 mm	100 mm × 150 mm	80 mm × 150 mm
installation width × mounting height	125 mm	100 mm	80 mm
required spacing			
• top	50 mm	50 mm	50 mm
• bottom	50 mm	50 mm	50 mm
• left	0 mm	0 mm	0 mm
• right	0 mm	0 mm	0 mm
fastening method	Snaps onto DIN rail EN 60715 35x15	Snaps onto DIN rail EN 60715 35x15	Snaps onto DIN rail EN 60715 35x15
• standard rail mounting	Yes	Yes	Yes
• S7 rail mounting	No	No	No
• wall mounting	No	No	No
housing can be lined up	Yes	Yes	Yes
net weight	2.6 kg	2 kg	1.8 kg
accessories			
electrical accessories	Expansion modules CNX8600, buffer modules BUF8600, module UPS8600	Expansion modules CNX8600, buffer modules BUF8600, module UPS8600	Expansion modules CNX8600, buffer modules BUF8600, module UPS8600
mechanical accessories	Device identification label 20 mm × 7 mm, TI-grey 3RT2900-1SB20	Device identification label 20 mm × 7 mm, TI-grey 3RT2900-1SB20	Device identification label 20 mm × 7 mm, TI-grey 3RT2900-1SB20
further information internet links			
internet link			
• to website: Industry Mall	https://mall.industry.siemens.com	https://mall.industry.siemens.com	https://mall.industry.siemens.com
• to web page: selection aid TIA Selection Tool	https://siemens.com/tst	https://siemens.com/tst	https://siemens.com/tst
• to website: Industrial communication	http://www.siemens.com/simatic-net	http://www.siemens.com/simatic-net	http://www.siemens.com/simatic-net
• to website: CAx-Download-Manager	http://www.siemens.com/cax	http://www.siemens.com/cax	http://www.siemens.com/cax
• to website: Industry Online Support	https://support.industry.siemens.com	https://support.industry.siemens.com	https://support.industry.siemens.com
additional information			
other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)

Technical specifications (continued)

Article number product brand name type of current supply	6EP3336-8MB00-2CY0 SITOP PSU8600 24 V/20 A/4x 5 A	6EP3436-8MB00-2CY0 SITOP PSU8600 24 V/20 A/4x 5 A	6EP3436-8SB00-2AY0 SITOP PSU8600 24 V/20 A
security information			
security information	Siemens provides products and solutions with industrial cybersecurity functions that support the secure operation of plants, systems, machines and networks. In order to protect plants, systems, machines and networks against cyber threats, it is necessary to implement – and continuously maintain – a holistic, state-of-the-art industrial cybersecurity concept. Siemens' products and solutions constitute one element of such a concept. Customers are responsible for preventing unauthorized access to their plants, systems, machines and networks. Such systems, machines and components should only be connected to an enterprise network or the internet if and to the extent such a connection is necessary and only when appropriate security measures (e.g. firewalls and/or network segmentation) are in place. For additional information on industrial cybersecurity measures that may be implemented, please visit www.siemens.com/cybersecurity-industry. Siemens' products and solutions undergo continuous development to make them more secure. Siemens strongly recommends that product updates are applied as soon as they are available and that the latest product versions are used. Use of product versions that are no longer supported, and failure to apply the latest updates may increase customer's exposure to cyber threats. To stay informed about product updates, subscribe to the Siemens Industrial Cybersecurity RSS Feed under https://www.siemens.com/cert. (V4.7)	Siemens provides products and solutions with industrial cybersecurity functions that support the secure operation of plants, systems, machines and networks. In order to protect plants, systems, machines and networks against cyber threats, it is necessary to implement – and continuously maintain – a holistic, state-of-the-art industrial cybersecurity concept. Siemens' products and solutions constitute one element of such a concept. Customers are responsible for preventing unauthorized access to their plants, systems, machines and networks. Such systems, machines and components should only be connected to an enterprise network or the internet if and to the extent such a connection is necessary and only when appropriate security measures (e.g. firewalls and/or network segmentation) are in place. For additional information on industrial cybersecurity measures that may be implemented, please visit www.siemens.com/cybersecurity-industry. Siemens' products and solutions undergo continuous development to make them more secure. Siemens strongly recommends that product updates are applied as soon as they are available and that the latest product versions are used. Use of product versions that are no longer supported, and failure to apply the latest updates may increase customer's exposure to cyber threats. To stay informed about product updates, subscribe to the Siemens Industrial Cybersecurity RSS Feed under https://www.siemens.com/cert. (V4.7)	Siemens provides products and solutions with industrial cybersecurity functions that support the secure operation of plants, systems, machines and networks. In order to protect plants, systems, machines and networks against cyber threats, it is necessary to implement – and continuously maintain – a holistic, state-of-the-art industrial cybersecurity concept. Siemens' products and solutions constitute one element of such a concept. Customers are responsible for preventing unauthorized access to their plants, systems, machines and networks. Such systems, machines and components should only be connected to an enterprise network or the internet if and to the extent such a connection is necessary and only when appropriate security measures (e.g. firewalls and/or network segmentation) are in place. For additional information on industrial cybersecurity measures that may be implemented, please visit www.siemens.com/cybersecurity-industry. Siemens' products and solutions undergo continuous development to make them more secure. Siemens strongly recommends that product updates are applied as soon as they are available and that the latest product versions are used. Use of product versions that are no longer supported, and failure to apply the latest updates may increase customer's exposure to cyber threats. To stay informed about product updates, subscribe to the Siemens Industrial Cybersecurity RSS Feed under https://www.siemens.com/cert. (V4.7)

Article number product brand name type of current supply	6EP3437-8MB00-2CY0 SITOP PSU8600 24 V/40 A/4x 10 A	6EP3437-8SB00-2AY0 SITOP PSU8600 24 V/40 A	6EP3437-8MB10-2CY0 SITOP PSU8600 24 V/40 A/4x 10 A
input			
type of the power supply network	3-phase AC	3-phase AC	3-phase AC
supply voltage at AC			
• minimum rated value	400 V	400 V	400 V
• maximum rated value	500 V	500 V	500 V
• initial value	320 V	320 V	320 V
• full-scale value	575 V	575 V	575 V
supply voltage at AC	Derating 320 ... 360 and 530 ... 575 V	Derating 320 ... 360 and 530 ... 575 V	Derating 320 ... 360 and 530 ... 575 V
wide range input	Yes	Yes	Yes

Technical specifications (continued)

Article number product brand name type of current supply	6EP3437-8MB00-2CY0 SITOP PSU8600 24 V/40 A/4x 10 A	6EP3437-8SB00-2AY0 SITOP PSU8600 24 V/40 A	6EP3437-8MB10-2CY0 SITOP PSU8600 24 V/40 A/4x 10 A
buffering time for rated value of the output current in the event of power failure minimum	15 ms	15 ms	15 ms
operating condition of the mains buffering	at Vin = 400 V; Prioritized supply of Output 1 in case of power failure selectable via DIP switch	at Vin = 400 V; Prioritized supply of the output in case of power failure selectable via DIP switch (only in conjunction with CNX8600 expansion module)	at Vin = 400 V; Prioritized supply of Output 1 in case of power failure selectable via DIP switch
line frequency	50 Hz/60 Hz	50 Hz/60 Hz	50 Hz/60 Hz
line frequency	47 ... 63 Hz	47 ... 63 Hz	47 ... 63 Hz
input current			
• at rated input voltage 400 V	2.75 A	2.75 A	2.75 A
• at rated input voltage 500 V	2.2 A	2.2 A	2.2 A
current limitation of inrush current at 25 °C maximum	14 A	14 A	14 A
I2t value maximum	2.24 A^2·s	2.24 A^2·s	2.24 A^2·s
fuse protection type	none	none	none
fuse protection type in the feeder	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)	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)	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	Controlled, isolated DC voltage	Controlled, isolated DC voltage
number of outputs	4	1	4
output voltage at DC rated value	24 V	24 V	24 V
output voltage			
• at output 1 at DC rated value	24 V	24 V	24 V
• at output 2 at DC rated value	24 V		24 V
• at output 3 at DC rated value	24 V		24 V
• at output 4 at DC rated value	24 V		24 V
	5 ... 24 V	5 ... 24 V	5 ... 24 V
output voltage adjustable	Yes; via potentiometer or IE/PN interface	Yes; via potentiometer or IE/PN interface	Yes; via potentiometer or EIP interface
adjustable output voltage	4 ... 28 V; Derating > 24 V: 4%/V; max. 240 W per output, max. 960 W overall system	4 ... 28 V; Derating > 24 V: 4%/V; max. 960 W overall system	4 ... 28 V; Derating > 24 V: 4%/V; max. 240 W per output, max. 960 W overall system
relative control precision of the output voltage			
• on slow fluctuation of input voltage	0.2 %	0.2 %	0.2 %
• on slow fluctuation of ohm loading	0.1 %	0.1 %	0.1 %
residual ripple			
• maximum	100 mV	100 mV	100 mV
voltage peak			
• maximum	200 mV	200 mV	200 mV
display version for normal operation	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	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	3-color LED for operating state device; LED for operating mode manual/remote; 4 LEDs for communication EtherNet/IP™; 3-color LED per output for operating state output; LED green for parallel operation Output 1 and 2 / 3 and 4
type of signal at output	Relay contact (changeover contact, contact current capacity DC 60 V/0.3 A) for "Operating state OK"	Relay contact (changeover contact, contact current capacity DC 60 V/0.3 A) for "Operating state OK"	Relay contact (changeover contact, contact current capacity DC 60 V/0.3 A) for "Operating state OK"

Technical specifications (continued)

Article number product brand name type of current supply	6EP3437-8MB00-2CY0 SITOP PSU8600 24 V/40 A/4x 10 A	6EP3437-8SB00-2AY0 SITOP PSU8600 24 V/40 A	6EP3437-8MB10-2CY0 SITOP PSU8600 24 V/40 A/4x 10 A
behavior of the output voltage when switching on	No overshoot of Vout (soft start)	No overshoot of Vout (soft start)	No overshoot of Vout (soft start)
response delay maximum	1 s; Without on-delay of the outputs	1 s	1 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 can be set	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)	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	500 ms	500 ms
output current			
• rated value	40 A	40 A	40 A
• per output	10 A	40 A	10 A
• at output 1 rated value	10 A	40 A	10 A
• at output 2 rated value	10 A		10 A
• at output 3 rated value	10 A		10 A
• at output 4 rated value	10 A		10 A
• rated range	0 ... 40 A; +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	0 ... 40 A; +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	0 ... 40 A; +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
	40 A	40 A	40 A
supplied active power typical	960 W	960 W	960 W
short-term overload current			
• at short-circuit during operation typical		120 A; only in operation without CNX8600 extension module	
duration of overloading capability for excess current			
• at short-circuit during operation		25 ms	
parallel switching of outputs	Yes; Parallel circuit Output 1 with 2 or Output 3 with 4 can be selected via DIP switch		
bridging of equipment	No	Yes; suitable output characteristics via DIP switch can be selected	
number of parallel-switched equipment resources		2	
efficiency			
efficiency in percent	93 %	93 %	93 %
power loss [W]			
• at rated output voltage for rated value of the output current typical	72 W	72 W	72 W
• during no-load operation maximum	20 W	20 W	20 W
closed-loop control			
relative control precision of the output voltage with rapid fluctuation of the input voltage by +/- 15% typical	0.1 %	0.1 %	0.1 %
relative control precision of the output voltage load step of resistive load 50/100/50 % typical	0.4 %	0.4 %	0.4 %
setting time			
• maximum	10 ms	10 ms	10 ms
protection and monitoring			
design of the overvoltage protection	max. 35 V (max. 500 ms)	max. 35 V (max. 500 ms)	max. 35 V (max. 500 ms)
property of the output short-circuit proof	Yes	Yes	Yes

Technical specifications (continued)

Article number product brand name type of current supply	6EP3437-8MB00-2CY0 SITOP PSU8600 24 V/40 A/4x 10 A	6EP3437-8SB00-2AY0 SITOP PSU8600 24 V/40 A	6EP3437-8MB10-2CY0 SITOP PSU8600 24 V/40 A/4x 10 A
design of short-circuit protection	electronic overload cut-off; optionally constant current operation can be selected for Output 4 via DIP switches	Electronic overload shutdown; optional constant-current operation can be selected via DIP switch	electronic overload cut-off; optionally constant current operation can be selected for Output 4 via DIP switches
adjustable current response value current of the current-dependent overload release	0.5 ... 10 A	4 ... 40 A	0.5 ... 10 A
type of response value setting	via potentiometer or IE/PN interface	via potentiometer or IE/PN interface	via potentiometer or EIP interface
switching characteristic			
• of the excess current	Ia >1.0...<1.5 x Ia threshold permissible for 5 s; Ia limit (= 1.5 x Ia threshold) permissible for 200 ms	Ia >1.0...<1.5 x Ia threshold permissible for 5 s; Ia limit (= 1.5 x Ia threshold) permissible for 200 ms	Ia >1.0...<1.5 x Ia threshold permissible for 5 s; Ia limit (= 1.5 x Ia threshold) permissible for 200 ms
• of the current limitation	Ia limit (= 1.5 x Ia threshold) permissible for 5 s, afterwards Ia threshold continuous	Ia limit (= 1.5 x Ia threshold) permissible for 5 s, afterwards Ia threshold continuous	Ia limit (= 1.5 x Ia threshold) permissible for 5 s, afterwards Ia threshold continuous
overcurrent overload capability			
• in normal operation	Total system overloadable 150% Ia rated to 5 s/min	Total system overloadable 150% Ia rated to 5 s/min	Total system overloadable 150% Ia rated to 5 s/min
display version for overload and short circuit	3-color LED for operating state device; 3-color LED per output for operating state output	3-color LED for operating state device; 3-color LED for operating state output	3-color LED for operating state device; 3-color LED per output for operating state output
design of the reset device/resetting mechanism	via sensor per output or IE/PN interface	via sensor or IE/PN interface	via sensor per output or EIP interface
remote reset function	Non-electrically isolated 24 V input (signal level "high" at > 15 V)	Non-electrically isolated 24 V input (signal level "high" at > 15 V)	Non-electrically isolated 24 V input (signal level "high" at > 15 V)
interfaces			
product function communication function	Yes	Yes	Yes
design of the interface	Ethernet/PROFINET	Ethernet/PROFINET	EtherNet/IP™
• design of the interface PROFINET protocol	Yes	Yes	
protocol is supported			
• EtherNet/IP protocol			Yes
• OPC UA	Yes	Yes	
safety			
galvanic isolation between input and output	Yes	Yes	Yes
galvanic isolation	Safety extra low output voltage Vout according to EN 61204-7	Safety extra low output voltage Vout according to EN 61204-7	Safety extra low output voltage Vout according to EN 61204-7
operating resource protection class	Class I	Class I	Class I
leakage current			
• maximum	3.5 mA	3.5 mA	3.5 mA
protection class IP	IP20	IP20	IP20
standard			
• for emitted interference	EN 55022 Class B	EN 55022 Class B	EN 55022 Class B
• for mains harmonics limitation	EN 61000-3-2	EN 61000-3-2	EN 61000-3-2
• for interference immunity	EN 61000-6-2	EN 61000-6-2	EN 61000-6-2
standards, specifications, approvals			
certificate of suitability			
• CE marking	Yes	Yes	Yes
• UL approval	Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259	Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259	Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259
• CSA approval	Yes; cCSAus (CSA C22.2 No. 62368-1, UL 62368-1)	Yes; cCSAus (CSA C22.2 No. 62368-1, UL 62368-1)	Yes; cCSAus (CSA C22.2 No. 62368-1, UL 62368-1)
• EAC approval	Yes	Yes	Yes
• NEC Class 2	No	No	No
• SEMI F47	Yes	Yes	
type of certification			

Technical specifications (continued)

Article number product brand name type of current supply	6EP3437-8MB00-2CY0 SITOP PSU8600 24 V/40 A/4x 10 A	6EP3437-8SB00-2AY0 SITOP PSU8600 24 V/40 A	6EP3437-8MB10-2CY0 SITOP PSU8600 24 V/40 A/4x 10 A
• BIS	Yes; R-41188271	Yes; R-41188271	
• CB-certificate	Yes	Yes	Yes
MTBF at 40 °C	207 612 h	235 118 h	207 612 h
standards, specifications, approvals hazardous environments			
certificate of suitability			
• IECEx	No	No	No
• ATEX	No	No	No
• ULhazloc approval	No	No	No
• cCSAus, Class 1, Division 2	No	No	No
• FM registration	No	No	No
standards, specifications, approvals marine classification			
shipbuilding approval	Yes	Yes	Yes
Marine classification association			
• American Bureau of Shipping Europe Ltd. (ABS)	Yes	Yes	Yes
• French marine classification society (BV)	No	No	No
• Det Norske Veritas (DNV)	Yes	Yes	Yes
• Lloyds Register of Shipping (LRS)	No	No	No
standards, specifications, approvals Environmental Product Declaration			
Environmental Product Declaration	Yes	Yes	Yes
Global Warming Potential [CO2 eq]			
• total	2 295.1 kg	2 295.1 kg	2 295.1 kg
• during manufacturing	41 kg	41 kg	41 kg
• during operation	2 252.9 kg	2 252.9 kg	2 252.9 kg
• after end of life	0.59 kg	0.59 kg	0.59 kg
ambient conditions			
ambient temperature			
• during operation	-25 ... +60 °C; with natural convection	-25 ... +60 °C; with natural convection	-25 ... +60 °C; with natural convection
• during transport	-40 ... +85 °C	-40 ... +85 °C	-40 ... +85 °C
• during storage	-40 ... +85 °C	-40 ... +85 °C	-40 ... +85 °C
environmental category according to IEC 60721	Climate class 3K3, 5 ... 95% no condensation	Climate class 3K3, 5 ... 95% no condensation	Climate class 3K3, 5 ... 95% no condensation
connection method			
type of electrical connection	Plug-in terminals with screwed connection	Plug-in terminals with screwed connection	Plug-in terminals with screwed connection
• at input	L1, L2, L3, PE: Plug-in terminal with 1 screwed connection each for 0.2 ... 4 mm² single-wire / fine stranded	L1, L2, L3, PE: Plug-in terminal with 1 screwed connection each for 0.2 ... 4 mm² single-wire / fine stranded	L1, L2, L3, PE: Plug-in terminal with 1 screwed connection each for 0.2 ... 4 mm² single-wire / fine stranded
• at 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	Output: plug-in terminals with 2 screw connectors for 0.5 ... 10 mm²; 0 V: screw terminal with 3 screw connectors for 0.5 ... 10 mm²	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
• for auxiliary contacts	RST (Reset): Plug-in terminal (together with alarm signal) with 1 screwed connection for 0.2 ... 1.5 mm²	RST (Reset): Plug-in terminal (together with alarm signal) with 1 screwed connection for 0.2 ... 1.5 mm²	RST (Reset): Plug-in terminal (together with alarm signal) with 1 screwed connection for 0.2 ... 1.5 mm²
• for signaling contact	11, 12, 14 (alarm signal): Plug-in terminal (together with Reset) with 1 screwed connection each for 0.2 ... 1.5 mm²	11, 12, 14 (alarm signal): Plug-in terminal (together with Reset) with 1 screwed connection each for 0.2 ... 1.5 mm²	11, 12, 14 (alarm signal): Plug-in terminal (together with Reset) with 1 screwed connection each for 0.2 ... 1.5 mm²

Technical specifications (continued)

Article number product brand name type of current supply	6EP3437-8MB00-2CY0 SITOP PSU8600 24 V/40 A/4x 10 A	6EP3437-8SB00-2AY0 SITOP PSU8600 24 V/40 A	6EP3437-8MB10-2CY0 SITOP PSU8600 24 V/40 A/4x 10 A
removable terminal at input	Yes	Yes	Yes
removable terminal at output	Yes	Yes	Yes
design of the interface for communication	PROFINET/Ethernet: two RJ45 sockets (2-port switch)	PROFINET/Ethernet: two RJ45 sockets (2-port switch)	EtherNet/IP™: two RJ45 sockets (2-port switch)
suitability for interaction modular system	Yes	Yes	Yes
mechanical data			
width × height × depth of the enclosure	125 mm × 150 mm	125 mm × 150 mm	125 mm × 150 mm
installation width × mounting height	125 mm	125 mm	125 mm
required spacing			
• top	50 mm	50 mm	50 mm
• bottom	50 mm	50 mm	50 mm
• left	0 mm	0 mm	0 mm
• right	0 mm	0 mm	0 mm
fastening method	Snaps onto DIN rail EN 60715 35x15	Snaps onto DIN rail EN 60715 35x15	Snaps onto DIN rail EN 60715 35x15
• standard rail mounting	Yes	Yes	Yes
• S7 rail mounting	No	No	No
• wall mounting	No	No	No
housing can be lined up	Yes	Yes	Yes
net weight	2.6 kg	2.6 kg	2.6 kg
accessories			
electrical accessories	Expansion modules CNX8600, buffer modules BUF8600, module UPS8600	Expansion modules CNX8600, buffer modules BUF8600, module UPS8600	Expansion modules CNX8600, buffer modules BUF8600
mechanical accessories	Device identification label 20 mm × 7 mm, TI-grey 3RT2900-1SB20	Device identification label 20 mm × 7 mm, TI-grey 3RT2900-1SB20	Device identification label 20 mm × 7 mm, TI-grey 3RT2900-1SB20
further information internet links			
internet link			
• to website: Industry Mall	https://mall.industry.siemens.com	https://mall.industry.siemens.com	https://mall.industry.siemens.com
• to web page: selection aid TIA Selection Tool	https://siemens.com/tst	https://siemens.com/tst	https://siemens.com/tst
• to website: Industrial communication	http://www.siemens.com/simatic-net	http://www.siemens.com/simatic-net	http://www.siemens.com/simatic-net
• to website: CAx-Download-Manager	http://www.siemens.com/cax	http://www.siemens.com/cax	http://www.siemens.com/cax
• to website: Industry Online Support	https://support.industry.siemens.com	https://support.industry.siemens.com	https://support.industry.siemens.com
additional information			
other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)
security information			
security information	Siemens provides products and solutions with industrial cybersecurity functions that support the secure operation of plants, systems, machines and networks. In order to protect plants, systems, machines and networks against cyber threats, it is necessary to implement – and continuously maintain – a holistic, state-of-the-art industrial cybersecurity concept. Siemens' products and solutions constitute one element of such a concept. Customers are responsible for preventing unauthorized access to their plants, systems, machines and networks. Such systems, machines and components should only be connected to an enterprise network or the internet if and to the extent such a	Siemens provides products and solutions with industrial cybersecurity functions that support the secure operation of plants, systems, machines and networks. In order to protect plants, systems, machines and networks against cyber threats, it is necessary to implement – and continuously maintain – a holistic, state-of-the-art industrial cybersecurity concept. Siemens' products and solutions constitute one element of such a concept. Customers are responsible for preventing unauthorized access to their plants, systems, machines and networks. Such systems, machines and components should only be connected to an enterprise network or the internet if and to the extent such a	Siemens provides products and solutions with industrial cybersecurity functions that support the secure operation of plants, systems, machines and networks. In order to protect plants, systems, machines and networks against cyber threats, it is necessary to implement – and continuously maintain – a holistic, state-of-the-art industrial cybersecurity concept. Siemens' products and solutions constitute one element of such a concept. Customers are responsible for preventing unauthorized access to their plants, systems, machines and networks. Such systems, machines and components should only be connected to an enterprise network or the internet if and to the extent such a

Technical specifications (continued)

Article number product brand name type of current supply	6EP3437-8MB00-2CY0 SITOP PSU8600 24 V/40 A/4x 10 A	6EP3437-8SB00-2AY0 SITOP PSU8600 24 V/40 A	6EP3437-8MB10-2CY0 SITOP PSU8600 24 V/40 A/4x 10 A
	connection is necessary and only when appropriate security measures (e.g. firewalls and/or network segmentation) are in place. For additional information on industrial cybersecurity measures that may be implemented, please visit www.siemens.com/cybersecurity-industry. Siemens' products and solutions undergo continuous development to make them more secure. Siemens strongly recommends that product updates are applied as soon as they are available and that the latest product versions are used. Use of product versions that are no longer supported, and failure to apply the latest updates may increase customer's exposure to cyber threats. To stay informed about product updates, subscribe to the Siemens Industrial Cybersecurity RSS Feed under https://www.siemens.com/cert. (V4.7)	connection is necessary and only when appropriate security measures (e.g. firewalls and/or network segmentation) are in place. For additional information on industrial cybersecurity measures that may be implemented, please visit www.siemens.com/cybersecurity-industry. Siemens' products and solutions undergo continuous development to make them more secure. Siemens strongly recommends that product updates are applied as soon as they are available and that the latest product versions are used. Use of product versions that are no longer supported, and failure to apply the latest updates may increase customer's exposure to cyber threats. To stay informed about product updates, subscribe to the Siemens Industrial Cybersecurity RSS Feed under https://www.siemens.com/cert. (V4.7)	connection is necessary and only when appropriate security measures (e.g. firewalls and/or network segmentation) are in place. For additional information on industrial cybersecurity measures that may be implemented, please visit www.siemens.com/cybersecurity-industry. Siemens' products and solutions undergo continuous development to make them more secure. Siemens strongly recommends that product updates are applied as soon as they are available and that the latest product versions are used. Use of product versions that are no longer supported, and failure to apply the latest updates may increase customer's exposure to cyber threats. To stay informed about product updates, subscribe to the Siemens Industrial Cybersecurity RSS Feed under https://www.siemens.com/cert. (V4.7)

Overview

The CNX8600 expansion modules are part of the SITOP PSU8600 modular system and expand the basic unit by increasing the number of selectively monitored outputs.

Up to four CNX8600 expansion modules can be connected to the PSU8600 basic device. The connection is made on top of the modules without any wiring effort using the System Clip Link, a connecting plug for system data and power supplies.

Product highlights

- Available modules:
  - Four integrated outputs with up to 5 A each and selective monitoring
  - Four integrated outputs with up to 10 A each and selective monitoring
  - Eight integrated outputs with up to 2.5 A each and selective monitoring
- Voltage and current threshold can be set separately and are infinitely adjustable for each output
- NEC Class 2 approval for 2.5 A outputs
- Comprehensive diagnostic information during operation via the PSU8600 basic unit
- Outputs can be activated and deactivated in a targeted manner with PROFIenergy via the PSU8600 basic unit

User-friendly connection system without any wiring effort thanks to System Clip Link.

Selection and ordering data

SITOP CNX8600 4 x 5 A expansion module For SITOP PSU8600 Output: 24 V DC/4 x 5 A	**6EP4436-8XB00-0CY0**
SITOP CNX8600 4 x 10 A expansion module For SITOP PSU8600 Output: 24 V DC/4 x 10 A	**6EP4437-8XB00-0CY0**
SITOP CNX8600 8 x 2.5 A expansion module For SITOP PSU8600 Output: 24 V DC/8 x 2.5 A	**6EP4436-8XB00-0DY0**

Accessories

Device labeling plates	**3RT2900-1SB20**

Technical specifications

Article number product brand name type of current supply	6EP4436-8XB00-0CY0 SITOP CNX8600 4x 5 A	6EP4437-8XB00-0CY0 SITOP CNX8600 4x 10 A	6EP4436-8XB00-0DY0 SITOP CNX8600 8x 2.5 A
output			
voltage curve at output	Controlled, isolated DC voltage	Controlled, isolated DC voltage	Controlled, isolated DC voltage
number of outputs	4	4	8
output voltage at DC rated value	24 V	24 V	24 V
output voltage			
• at output 1 at DC rated value	24 V	24 V	24 V
• at output 2 at DC rated value	24 V	24 V	24 V
• at output 3 at DC rated value	24 V	24 V	24 V
• at output 4 at DC rated value	24 V	24 V	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
output voltage adjustable	Yes; via potentiometer or IE/PN interface	Yes; via potentiometer or IE/PN interface	Yes; via potentiometer or IE/PN interface
adjustable output voltage	4 ... 28 V; Derating > 24 V: 4%/V; max. 120 W per output	4 ... 28 V; Derating > 24 V: 4%/V; max. 240 W per output	4 ... 28 V; Derating > 24 V: 4%/V; max. 60 W per output
relative control precision of the output voltage			
• on slow fluctuation of input voltage	0.2 %	0.2 %	0.2 %
• on slow fluctuation of ohm loading	0.1 %	0.1 %	0.1 %
residual ripple			
• maximum	100 mV	100 mV	100 mV
voltage peak			
• maximum	200 mV	200 mV	200 mV
display version for normal operation	3-color LED for operating state module; 3-color LED per output for operating state output	3-color LED for operating state module; 3-color LED per output for operating state output	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	Relay contact (changeover contact, contact current capacity DC 60 V/0.3 A) for "Operating state OK" at power supply unit PSU8600	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)	No overshoot of Vout (soft start)	No overshoot of Vout (soft start)
response delay maximum	1.5 s; Without on-delay of the outputs	1.5 s; Without on-delay of the outputs	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	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	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	500 ms	500 ms
output current			
• rated value	20 A	40 A	20 A
• per output	5 A	10 A	2.5 A
• at output 1 rated value	5 A	10 A	2.5 A
• at output 2 rated value	5 A	10 A	2.5 A
• at output 3 rated value	5 A	10 A	2.5 A
• at output 4 rated value	5 A	10 A	2.5 A
• at output 5 rated value			2.5 A
• at output 6 rated value			2.5 A
• at output 7 rated value			2.5 A

Technical specifications (continued)

Article number product brand name type of current supply	6EP4436-8XB00-0CY0 SITOP CNX8600 4x 5 A	6EP4437-8XB00-0CY0 SITOP CNX8600 4x 10 A	6EP4436-8XB00-0DY0 SITOP CNX8600 8x 2.5 A
• at output 8 rated value			2.5 A
• rated range	0 ... 20 A; No increase in the maximum output power of the overall system SITOP PSU8600 via the expansion module SITOP CNX8600 possible	0 ... 40 A; No increase in the maximum output power of the overall system SITOP PSU8600 via the expansion module SITOP CNX8600 possible	0 ... 20 A; Outputs meet requirements to NEC Class 2; an increase of the maximum output power of the SITOP PSU8600 overall system is not possible over the SITOP CNX8600 expansion module
supplied active power typical	480 W	960 W	480 W
parallel switching of outputs	No	No	No
bridging of equipment	No	No	No
efficiency			
efficiency in percent	97 %	97 %	97 %
power loss [W]			
• at rated output voltage for rated value of the output current typical	15 W	30 W	15 W
closed-loop control			
relative control precision of the output voltage with rapid fluctuation of the input voltage by +/- 15% typical	0.1 %	0.1 %	0.1 %
relative control precision of the output voltage load step of resistive load 50/100/50 % typical	0.4 %	0.4 %	0.4 %
setting time			
• maximum	10 ms	10 ms	10 ms
protection and monitoring			
design of the overvoltage protection	max. 35 V (max. 500 ms)	max. 35 V (max. 500 ms)	max. 35 V (max. 500 ms)
property of the output short-circuit proof	Yes	Yes	Yes
design of short-circuit protection	electronic overload cut-off	electronic overload cut-off	electronic overload cut-off
adjustable current response value current of the current-dependent overload release	0.5 ... 5 A	0.5 ... 10 A	0.5 ... 2.5 A
type of response value setting	via potentiometer or IE/PN interface	via potentiometer or IE/PN interface	via potentiometer or IE/PN interface
switching characteristic			
• of the excess current	Ia >1.0...<1.5 x Ia threshold permissible for 5 s; Ia limit (= 1.5 x Ia threshold) permissible for 200 ms	Ia >1.0...<1.5 x Ia threshold permissible for 5 s; Ia limit (= 1.5 x Ia threshold) permissible for 200 ms	Ia >1.0...<1.5 x Ia threshold permissible for 5 s; Ia limit (= 1.5 x Ia threshold) permissible for 200 ms
display version for overload and short circuit	3-color LED for operating state module; 3-color LED per output for operating state output	3-color LED for operating state module; 3-color LED per output for operating state output	3-color LED for operating state module; 3-color LED per output for operating state output
design of the reset device/resetting mechanism	via sensor per output or IE/PN interface	via sensor per output or IE/PN interface	via sensor per output or IE/PN interface
remote reset function	Non-electrically isolated 24 V input (signal level "high" at > 15 V) at power supply unit PSU8600	Non-electrically isolated 24 V input (signal level "high" at > 15 V) at power supply unit PSU8600	Non-electrically isolated 24 V input (signal level "high" at > 15 V) at power supply unit PSU8600
interfaces			
product function communication function	Yes	Yes	Yes
design of the interface	Ethernet/PROFINET via power supply unit PSU8600	Ethernet/PROFINET via power supply unit PSU8600	Ethernet/PROFINET via power supply unit PSU8600
safety			
galvanic isolation between input and output	Yes	Yes	Yes
galvanic isolation	Safety extra low output voltage Vout according to EN 61204-7	Safety extra low output voltage Vout according to EN 61204-7	Safety extra low output voltage Vout according to EN 61204-7
operating resource protection class	Class III	Class III	Class III
protection class IP	IP20	IP20	IP20
standard			
• for emitted interference	EN 55022 Class B	EN 55022 Class B	EN 55022 Class B
• for interference immunity	EN 61000-6-2	EN 61000-6-2	EN 61000-6-2

Technical specifications (continued)

Article number product brand name type of current supply	6EP4436-8XB00-0CY0 SITOP CNX8600 4x 5 A	6EP4437-8XB00-0CY0 SITOP CNX8600 4x 10 A	6EP4436-8XB00-0DY0 SITOP CNX8600 8x 2.5 A
standards, specifications, approvals			
certificate of suitability			
• CE marking	Yes	Yes	Yes
• UL approval	Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259	Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259	Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259
• CSA approval	Yes; cCSAus (CSA C22.2 No. 62368-1, UL 62368-1)	Yes; cCSAus (CSA C22.2 No. 62368-1, UL 62368-1)	Yes; cCSAus (CSA C22.2 No. 62368-1, UL 62368-1)
• EAC approval	Yes	Yes	Yes
• Regulatory Compliance Mark (RCM)			Yes
• NEC Class 2	No	No	Yes; according to UL1310
• SEMI F47	Yes	Yes	Yes
type of certification			
• CB-certificate	Yes	Yes	Yes
MTBF at 40 °C	358 372 h	358 372 h	327 369 h
standards, specifications, approvals hazardous environments			
certificate of suitability			
• IECEx	No	No	No
• ATEX	No	No	No
• ULhazloc approval	No	No	No
• cCSAus, Class 1, Division 2	No	No	No
• FM registration	No	No	No
standards, specifications, approvals marine classification			
shipbuilding approval	Yes	Yes	Yes
Marine classification association			
• American Bureau of Shipping Europe Ltd. (ABS)	Yes	Yes	Yes
• French marine classification society (BV)	No	No	No
• Det Norske Veritas (DNV)	Yes	Yes	Yes
• Lloyds Register of Shipping (LRS)	No	No	No
standards, specifications, approvals Environmental Product Declaration			
Environmental Product Declaration	Yes	Yes	Yes
Global Warming Potential [CO2 eq]			
• total	521.3 kg	990.8 kg	58.1 kg
• during manufacturing	46.4 kg	20.4 kg	32.5 kg
• during operation	281.6 kg	219.1 kg	0 kg
• after end of life	0.74 kg	0.32 kg	0.52 kg
ambient conditions			
ambient temperature			
• during operation	-25 ... +60 °C; with natural convection	-25 ... +60 °C; with natural convection	-25 ... +60 °C; with natural convection
• during transport	-40 ... +85 °C	-40 ... +85 °C	-40 ... +85 °C
• during storage	-40 ... +85 °C	-40 ... +85 °C	-40 ... +85 °C
environmental category according to IEC 60721	Climate class 3K3, 5 ... 95% no condensation	Climate class 3K3, 5 ... 95% no condensation	Climate class 3K3, 5 ... 95% no condensation

Technical specifications (continued)

Article number product brand name type of current supply	6EP4436-8XB00-0CY0 SITOP CNX8600 4x 5 A	6EP4437-8XB00-0CY0 SITOP CNX8600 4x 10 A	6EP4436-8XB00-0DY0 SITOP CNX8600 8x 2.5 A
connection method			
type of electrical connection	Plug-in terminals with screwed connection	Plug-in terminals with screwed connection	Plug-in terminals with screwed connection
• at 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; Ground: Plug-in terminal with 3 screwed connections for 0.2 ... 2.5 mm²	1, 2, 3, 4: Two plug-in terminals (1, 2 and 3, 4) with 2 screwed connections each for 0.2 ... 2.5 mm²; Ground: Plug-in terminal with 3 screwed connections for 0.2 ... 2.5 mm²	1, 2, 3, 4, 5, 6, 7, 8: Two plug-in terminals (1...4 and 5...8) with 1 screwed connection each for 0.2 ... 2.5 mm²; Ground: Plug-in terminal with 3 screwed connections for 0.2 ... 2.5 mm²
removable terminal at output	Yes	Yes	Yes
suitability for interaction modular system	Yes	Yes	Yes
type of connection to system components	Via integrated connector	Via integrated connector	Via integrated connector
mechanical data			
width × height × depth of the enclosure	60 mm × 150 mm	60 mm × 150 mm	100 mm × 150 mm
installation width × mounting height	60 mm	60 mm	100 mm
required spacing			
• top	50 mm	50 mm	50 mm
• bottom	50 mm	50 mm	50 mm
• left	0 mm	0 mm	0 mm
• right	0 mm	0 mm	0 mm
fastening method	Snaps onto DIN rail EN 60715 35x15	Snaps onto DIN rail EN 60715 35x15	Snaps onto DIN rail EN 60715 35x15
• standard rail mounting	Yes	Yes	Yes
• S7 rail mounting	No	No	No
• wall mounting	No	No	No
housing can be lined up	Yes	Yes	Yes
net weight	1.15 kg	1.15 kg	1.29 kg
accessories			
mechanical accessories	Device identification label 20 mm × 7 mm, TI-grey 3RT2900-1SB20	Device identification label 20 mm × 7 mm, TI-grey 3RT2900-1SB20	Device identification label 20 mm × 7 mm, TI-grey 3RT2900-1SB20
further information internet links			
internet link			
• to website: Industry Mall	https://mall.industry.siemens.com	https://mall.industry.siemens.com	https://mall.industry.siemens.com
• to web page: selection aid TIA Selection Tool	https://siemens.com/tst	https://siemens.com/tst	https://siemens.com/tst
• to website: Industrial communication	http://www.siemens.com/simatic-net	http://www.siemens.com/simatic-net	http://www.siemens.com/simatic-net
• to website: CAx-Download-Manager	http://www.siemens.com/cax	http://www.siemens.com/cax	http://www.siemens.com/cax
• to website: Industry Online Support	https://support.industry.siemens.com	https://support.industry.siemens.com	https://support.industry.siemens.com
additional information			
other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)

Technical specifications (continued)

Article number product brand name type of current supply	6EP4436-8XB00-0CY0 SITOP CNX8600 4x 5 A	6EP4437-8XB00-0CY0 SITOP CNX8600 4x 10 A	6EP4436-8XB00-0DY0 SITOP CNX8600 8x 2.5 A
security information			
security information	Siemens provides products and solutions with industrial cybersecurity functions that support the secure operation of plants, systems, machines and networks. In order to protect plants, systems, machines and networks against cyber threats, it is necessary to implement – and continuously maintain – a holistic, state-of-the-art industrial cybersecurity concept. Siemens' products and solutions constitute one element of such a concept. Customers are responsible for preventing unauthorized access to their plants, systems, machines and networks. Such systems, machines and components should only be connected to an enterprise network or the internet if and to the extent such a connection is necessary and only when appropriate security measures (e.g. firewalls and/or network segmentation) are in place. For additional information on industrial cybersecurity measures that may be implemented, please visit www.siemens.com/cybersecurity-industry. Siemens' products and solutions undergo continuous development to make them more secure. Siemens strongly recommends that product updates are applied as soon as they are available and that the latest product versions are used. Use of product versions that are no longer supported, and failure to apply the latest updates may increase customer's exposure to cyber threats. To stay informed about product updates, subscribe to the Siemens Industrial Cybersecurity RSS Feed under https://www.siemens.com/cert. (V4.7)	Siemens provides products and solutions with industrial cybersecurity functions that support the secure operation of plants, systems, machines and networks. In order to protect plants, systems, machines and networks against cyber threats, it is necessary to implement – and continuously maintain – a holistic, state-of-the-art industrial cybersecurity concept. Siemens' products and solutions constitute one element of such a concept. Customers are responsible for preventing unauthorized access to their plants, systems, machines and networks. Such systems, machines and components should only be connected to an enterprise network or the internet if and to the extent such a connection is necessary and only when appropriate security measures (e.g. firewalls and/or network segmentation) are in place. For additional information on industrial cybersecurity measures that may be implemented, please visit www.siemens.com/cybersecurity-industry. Siemens' products and solutions undergo continuous development to make them more secure. Siemens strongly recommends that product updates are applied as soon as they are available and that the latest product versions are used. Use of product versions that are no longer supported, and failure to apply the latest updates may increase customer's exposure to cyber threats. To stay informed about product updates, subscribe to the Siemens Industrial Cybersecurity RSS Feed under https://www.siemens.com/cert. (V4.7)	Siemens provides products and solutions with industrial cybersecurity functions that support the secure operation of plants, systems, machines and networks. In order to protect plants, systems, machines and networks against cyber threats, it is necessary to implement – and continuously maintain – a holistic, state-of-the-art industrial cybersecurity concept. Siemens' products and solutions constitute one element of such a concept. Customers are responsible for preventing unauthorized access to their plants, systems, machines and networks. Such systems, machines and components should only be connected to an enterprise network or the internet if and to the extent such a connection is necessary and only when appropriate security measures (e.g. firewalls and/or network segmentation) are in place. For additional information on industrial cybersecurity measures that may be implemented, please visit www.siemens.com/cybersecurity-industry. Siemens' products and solutions undergo continuous development to make them more secure. Siemens strongly recommends that product updates are applied as soon as they are available and that the latest product versions are used. Use of product versions that are no longer supported, and failure to apply the latest updates may increase customer's exposure to cyber threats. To stay informed about product updates, subscribe to the Siemens Industrial Cybersecurity RSS Feed under https://www.siemens.com/cert. (V4.7)

Overview

SITOP BUF8600 for buffering brief power interruptions

The BUF8600 buffer modules with maintenance free energy storage units are part of the SITOP PSU8600 modular system and are designed to bridge short-term power failures. They automatically take over the DC power supply in case of a line voltage failure. You can connect up to two BUF8600 buffer modules to the PSU8600 basic unit. The connection is made on top of the modules without any wiring effort using the System Clip Link, a connecting plug for system data and power supplies.

Product highlights

- Reliable bridging of short-term power failures up to max. 20 s for an output power of 960 W
- Buffer modules with maintenance-free electrolytic capacitors for bridging short-term power failures (brownouts) between 100 ms and max. 600 ms (at 24 V DC/40 A)
- Buffer modules with maintenance-free double-layer capacitors for bridging longer power failures between 4 s and max. 20 s (at 24 V DC/40 A)
- The two buffer modules can be combined as required
- Easy connection without any wiring effort

Selection and ordering data

SITOP BUF8600 100 ms buffer module For SITOP PSU8600 Buffer capacity 100 ms/40 A	**6EP4297-8HB00-0XY0**
SITOP BUF8600 300 ms buffer module For SITOP PSU8600 Buffer capacity 300 ms/40 A	**6EP4297-8HB10-0XY0**
SITOP BUF8600 4 s buffer module For SITOP PSU8600 Buffer capacity 4 s/40 A	**6EP4293-8HB00-0XY0**
SITOP BUF8600 10 s buffer module For SITOP PSU8600 Buffer capacity 10 s/40 A	**6EP4295-8HB00-0XY0**

Accessories

Device labeling plates	**3RT2900-1SB20**

Technical specifications

Article number product brand name type of current supply	6EP4297-8HB00-0XY0 SITOP BUF8600 100 ms/40 A	6EP4297-8HB10-0XY0 SITOP BUF8600 300 ms/40 A	6EP4293-8HB00-0XY0 SITOP BUF8600 4 s/40 A	6EP4295-8HB00-0XY0 SITOP BUF8600 10 s/40 A
memory				
type of energy storage	electrolytic capacitors	electrolytic capacitors	Double-layer capacitors	Double-layer capacitors
design of the mains power cut bridging-connection	Backup time with 40 A load current: 100 ms	Backup time with 40 A load current: 300 ms	Backup time with 40 A load current: 4 s	Backup time with 40 A load current: 10 s
buffering time for rated value of the output current in the event of power failure	100 ms	300 ms	4 000 ms	10 000 ms
load time typical	20 s; at 400 V	60 s; at 400 V	5 min; at 400 V	10 min; at 400 V
output				
output current				
• rated value	40 A	40 A	40 A	40 A
protection and monitoring				
display version	3-color LED for operating state module	3-color LED for operating state module	3-color LED for operating state module	3-color LED for operating state module
• for normal operation	LED green for "buffer standby exist"	LED green for "buffer standby exist"	LED green for "buffer standby exist"	LED green for "buffer standby exist"
• in buffering mode	LED yellow for "buffered mode"	LED yellow for "buffered mode"	LED yellow for "buffered mode"	LED yellow for "buffered mode"
interfaces				
product function communication function	Yes	Yes	Yes	Yes
design of the interface	Ethernet/PROFINET via power supply unit PSU8600	Ethernet/PROFINET via power supply unit PSU8600	Ethernet/PROFINET via power supply unit PSU8600	Ethernet/PROFINET via power supply unit PSU8600
safety				
operating resource protection class	Class III	Class III	Class III	Class III
protection class IP	IP20	IP20	IP20	IP20
standard				
• for emitted interference	EN 55022 Class B	EN 55022 Class B	EN 55022 Class B	EN 55022 Class B
• for interference immunity	EN 61000-6-2	EN 61000-6-2	EN 61000-6-2	EN 61000-6-2
standards, specifications, approvals				
certificate of suitability				
• CE marking	Yes	Yes	Yes	Yes
• UL approval	Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259	Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259	Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259	Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259
• CSA approval	Yes; cCSAus (CSA C22.2 No. 62368-1, UL 62368-1)	Yes; cCSAus (CSA C22.2 No. 62368-1, UL 62368-1)	Yes; cCSAus (CSA C22.2 No. 62368-1, UL 62368-1)	Yes; cCSAus (CSA C22.2 No. 62368-1, UL 62368-1)
• EAC approval	Yes	Yes	Yes	Yes
• SEMI F47		Yes	Yes	Yes
type of certification CB-certificate	Yes	Yes	Yes	Yes
MTBF at 40 °C	4 505 531 h	4 505 531 h	1 374 707 h	1 190 747 h
standards, specifications, approvals hazardous environments				
certificate of suitability				
• ATEX	No	No	No	No
• cCSAus, Class 1, Division 2	No	No	No	No
standards, specifications, approvals marine classification				
shipbuilding approval	Yes	Yes	Yes	Yes
Marine classification association				
• American Bureau of Shipping Europe Ltd. (ABS)	Yes	Yes	Yes	Yes
• Det Norske Veritas (DNV)	Yes	Yes	Yes	Yes
ambient conditions				
ambient temperature				
• during operation	-25 ... +60 °C; with natural convection	-25 ... +60 °C; with natural convection	-25 ... +60 °C; with natural convection	-25 ... +60 °C; with natural convection

Technical specifications (continued)

Article number product brand name type of current supply	6EP4297-8HB00-0XY0 SITOP BUF8600 100 ms/40 A	6EP4297-8HB10-0XY0 SITOP BUF8600 300 ms/40 A	6EP4293-8HB00-0XY0 SITOP BUF8600 4 s/40 A	6EP4295-8HB00-0XY0 SITOP BUF8600 10 s/40 A
• during transport	-40 ... +70 °C	-40 ... +70 °C	-40 ... +70 °C	-40 ... +70 °C
• during storage	-40 ... +70 °C	-40 ... +70 °C	-40 ... +70 °C	-40 ... +70 °C
environmental category according to IEC 60721	Climate class 3K3, 5 ... 95% no condensation	Climate class 3K3, 5 ... 95% no condensation	Climate class 3K3, 5 ... 95% no condensation	Climate class 3K3, 5 ... 95% no condensation
connection method				
type of electrical connection			Plug-in terminal with screw connectors	Plug-in terminal with screw connectors
• for control circuit and status message			X1, X2 (control contact) and 13,14, 23, 24 (message signals): 1 screw terminal each for 0.2 ... 1.5 mm²	X1, X2 (control contact) and 13,14, 23, 24 (message signals): 1 screw terminal each for 0.2 ... 1.5 mm²
suitability for interaction modular system	Yes	Yes	Yes	Yes
type of connection to system components	Via integrated connector	Via integrated connector	Via integrated connector	Via integrated connector
mechanical data				
width × height × depth of the enclosure	60 mm × 125 mm × 150 mm	125 mm × 125 mm × 150 mm	60 mm × 125 mm × 150 mm	125 mm × 125 mm × 150 mm
installation width × mounting height	60 mm × 225 mm	125 mm × 225 mm	60 mm × 225 mm	125 mm × 225 mm
required spacing				
• top	50 mm	50 mm	50 mm	50 mm
• bottom	50 mm	50 mm	50 mm	50 mm
• left	0 mm	0 mm	0 mm	0 mm
• right	0 mm	0 mm	0 mm	0 mm
fastening method	Snaps onto DIN rail EN 60715 35x15	Snaps onto DIN rail EN 60715 35x15	Snaps onto DIN rail EN 60715 35x15	Snaps onto DIN rail EN 60715 35x15
• standard rail mounting	Yes	Yes	Yes	Yes
• S7 rail mounting	No	No	No	No
• wall mounting	No	No	No	No
housing can be lined up	Yes	Yes	Yes	Yes
net weight	1.33 kg	2.26 kg	1.25 kg	1.95 kg
accessories				
mechanical accessories	Device identification label 20 mm × 7 mm, TI-grey 3RT2900-1SB20	Device identification label 20 mm × 7 mm, TI-grey 3RT2900-1SB20	Device identification label 20 mm × 7 mm, TI-grey 3RT2900-1SB20	Device identification label 20 mm × 7 mm, TI-grey 3RT2900-1SB20
further information internet links				
internet link				
• to website: Industry Mall	https://mall.industry.siemens.com	https://mall.industry.siemens.com	https://mall.industry.siemens.com	https://mall.industry.siemens.com
• to web page: selection aid TIA Selection Tool	https://siemens.com/tst	https://siemens.com/tst	https://siemens.com/tst	https://siemens.com/tst
• to website: Industrial communication	http://www.siemens.com/simatic-net	http://www.siemens.com/simatic-net	http://www.siemens.com/simatic-net	http://www.siemens.com/simatic-net
• to website: CAx-Download-Manager	http://www.siemens.com/cax	http://www.siemens.com/cax	http://www.siemens.com/cax	http://www.siemens.com/cax
• to website: Industry Online Support	https://support.industry.siemens.com	https://support.industry.siemens.com	https://support.industry.siemens.com	https://support.industry.siemens.com
additional information				
other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)

Technical specifications (continued)

Article number product brand name type of current supply	6EP4297-8HB00-0XY0 SITOP BUF8600 100 ms/40 A	6EP4297-8HB10-0XY0 SITOP BUF8600 300 ms/40 A	6EP4293-8HB00-0XY0 SITOP BUF8600 4 s/40 A	6EP4295-8HB00-0XY0 SITOP BUF8600 10 s/40 A
security information				
security information	Siemens provides products and solutions with industrial cybersecurity functions that support the secure operation of plants, systems, machines and networks. In order to protect plants, systems, machines and networks against cyber threats, it is necessary to implement – and continuously maintain – a holistic, state-of-the-art industrial cybersecurity concept. Siemens’ products and solutions constitute one element of such a concept. Customers are responsible for preventing unauthorized access to their plants, systems, machines and networks. Such systems, machines and components should only be connected to an enterprise network or the internet if and to the extent such a connection is necessary and only when appropriate security measures (e.g. firewalls and/or network segmentation) are in place. For additional information on industrial cybersecurity measures that may be implemented, please visit www.siemens.com/cybersecurity-industry. Siemens’ products and solutions undergo continuous development to make them more secure. Siemens strongly recommends that product updates are applied as soon as they are available and that the latest product versions are used. Use of product versions that are no longer supported, and failure to apply the latest updates may increase customer’s exposure to cyber threats. To stay informed about product updates, subscribe to the Siemens Industrial Cybersecurity RSS Feed under https://www.siemens.com/cert. (V4.7)	Siemens provides products and solutions with industrial cybersecurity functions that support the secure operation of plants, systems, machines and networks. In order to protect plants, systems, machines and networks against cyber threats, it is necessary to implement – and continuously maintain – a holistic, state-of-the-art industrial cybersecurity concept. Siemens’ products and solutions constitute one element of such a concept. 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Overview

SITOP UPS8600 for buffering longer power failures

UPS module UPS8600 is part of the SITOP PSU8600 modular system and is used to bridge power failures in the range of minutes to hours. It can be supplemented with a maximum of five SITOP BAT8600 battery modules of the same type as the external energy storage. The lithium iron phosphate (LiFePO4) battery modules have a typical buffer time of 14 minutes at full load (960 W) and ensure an especially long service life. The lead-acid batteries (Pb) offer a typical buffer time of 10 minutes at full load (960 W).

Product highlights

- Power failure bridging in the hours range facilitates continuous system operation
- Prioritized output buffering of the PSU8600 power supply system possible
- Automatic recognition of BAT8600 "Pb" and BAT8600 "LiFePO4" battery modules
- Intelligent battery managementfor optimum charging and monitoring via the energy storage link
- Complete system integration into the TIA or OPC UA environment for engineering and diagnostic functions
- Selective shutdown of IPCs via Ethernet interface (PROFINET/OPC UA protocol)
- User-friendly connection system without any wiring effort thanks to System Clip Link (UPS8600)

Selection and ordering data

SITOP UPS8600 UPS module For SITOP PSU8600 Rated buffer power 960 W	**6EP4197-8AB00-0XY0**
SITOP BAT8600 battery module 380 Wh For SITOP UPS8600 with Pb rechargeable batteries	**6EP4145-8GB00-0XY0**
SITOP BAT8600 battery module 264 Wh For SITOP UPS8600 with LiFePO4 rechargeable batteries	**6EP4143-8JB00-0XY0**

Accessories

Device identification labels	**3RT2900-1SB20**

Technical specifications

The following table shows the maximum possible buffer times of the SITOP BAT8600 battery modules at different loads as well as the required charging times until full charge is achieved.

Buffer and charging times	6EP4143-8JB00-0XY0 (LiFePO4, 264 Wh)	6EP4145-8GB00-0XY0 (Pb, 380 Wh)
Buffer time with 1x BAT8600		
Load 120 W	typ. 1 h 56 min	typ. 2 h 4 min
Load 240 W	typ. 60 min	typ. 57 min
Load 480 W	typ. 29 min	typ. 25 min
Load 720 W	typ. 19 min	typ. 14 min
Load 960 W	typ. 14 min	typ. 10 min
Buffer time with 5× BAT8600 (maximum configuration)		
Load 120 W	typ. 9 h 30 min	typ. 12 h 37 min
Load 240 W	typ. 5 h 03 min	typ. 6 h 19 min
Load 480 W	typ. 2 h 33 min	typ. 2 h 56 min
Load 720 W	typ. 1 h 41 min	typ. 1 h 50 min
Load 960 W	typ. 1 h 15 min	typ. 1 h 17 min
Charging time until the 85% charging threshold is reached.		
Charging capacity 60 W	typ. 5 h 15 min	typ. 3 h 10 min
Charging capacity 120 W	typ. 2 h 15 min	typ. 1 h 35 min
Charging time until full charge is reached		
Charging capacity 60 W	typ. 6 h 10 min	typ. 4 h 20 min
Charging capacity 120 W	typ. 2 h 40 min	typ. 2 h 45 min

Note:

Buffer and charging times were determined on the basis of unaged and fully charged or discharged battery modules with a battery temperature of +25 °C. Due to aging of the rechargeable batteries, the remaining battery capacity is reduced to 80% of the original capacity value when new by the end of the service life (definition of service life according to EUROBAT). To achieve the desired buffer time even at the end of service life, a higher battery capacity may therefore have to be selected during project planning.

Technical specifications

Article number	6EP4197-8AB00-0XY0
product brand name	SITOP UPS8600
type of current supply	960 W
memory	
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
output	
output voltage	
• in normal operation at DC rated value	48 V
property of the output short-circuit proof	Yes
charging current	1.25 A - 2.5 A
type of signal at output	relay contacts (NO contact, contact rating DC 60 V/0.3 A) for "sufficient buffer readiness", "buffer mode" and "battery circuit fault"
efficiency	
efficiency in percent	
• in case of operation on rechargeable battery typical	99 %
power loss [W]	
• in case of operation on rechargeable battery typical	10 W
supplied active power typical	960 W
protection and monitoring	
product function	
• reverse polarity protection against energy storage unit polarity reversal	Yes
display version	Three-color LED for operating state of module, three-color LED for status of battery circuit
• for normal operation	LED green for "buffer standby exist"
• in buffering mode	LED yellow for "buffered mode"
interfaces	
product function communication function	Yes
design of the interface	Ethernet/PROFINET via power supply unit PSU8600
safety	
operating resource protection class	Class III
protection class IP	IP20
standard	
• for emitted interference	EN 55022 Class B
• for interference immunity	EN 61000-6-2
standards, specifications, approvals	
certificate of suitability	
• CE marking	Yes
• UL approval	Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259
• CSA approval	Yes; cCSAus (CSA C22.2 No. 62368-1, UL 62368-1)
• EAC approval	Yes
type of certification CB-certificate	Yes
MTBF at 40 °C	405 763 h

Article number	6EP4197-8AB00-0XY0
product brand name	SITOP UPS8600
type of current supply	960 W
standards, specifications, approvals hazardous environments	
certificate of suitability	
• ATEX	No
• cCSAus, Class 1, Division 2	No
standards, specifications, approvals marine classification	
shipbuilding approval	Yes
Marine classification association	
• American Bureau of Shipping Europe Ltd. (ABS)	Yes
• Det Norske Veritas (DNV)	Yes
standards, specifications, approvals Environmental Product Declaration	
Environmental Product Declaration	Yes
Global Warming Potential [CO2 eq]	
• total	356.3 kg
• during manufacturing	41.8 kg
• during operation	313.9 kg
• after end of life	0.66 kg
ambient conditions	
ambient temperature	
• during operation	-25 ... +70 °C; with natural convection
• during transport	-40 ... +85 °C
• during storage	-40 ... +85 °C
environmental category according to IEC 60721	Climate class 3K3, 5 ... 95% no condensation
connection method	
type of electrical connection	Plug-in terminals with screwed connection
• for rechargeable battery module	+, -: plug-in terminals each with 1 screw terminal for 0.2 ... 10 mm²
• for auxiliary contacts	X1, X2, X3, X3 (control contacts): plug-in terminal with one screw-type terminal each for 0.14 ... 1.5 mm²
• for signaling contact	13, 14, 23, 24, 33, 34 (signaling contacts): plug-in terminal with one screw-type terminal each for 0.14 ... 1.5 mm²
suitability for interaction modular system	Yes
type of connection to system components	Via integrated connector
number of expansion modules maximum	2
mechanical data	
width × height × depth of the enclosure	60 mm × 125 mm × 150 mm
installation width × mounting height	60 mm × 225 mm
required spacing	
• top	50 mm
• bottom	50 mm
• left	0 mm
• right	0 mm
fastening method	Snaps onto DIN rail EN 60715 35x15

Technical specifications (continued)

Article number product brand name type of current supply	6EP4197-8AB00-0XY0 SITOP UPS8600 960 W
• standard rail mounting	Yes
• S7 rail mounting	No
• wall mounting	No
housing can be lined up	Yes
net weight	0.9 kg
accessories	
electrical accessories	Battery module BAT8600
mechanical accessories	Device identification label 20 mm × 7 mm, TI-grey 3RT2900-1SB20
further information internet links	
internet link	
• to website: Industry Mall	https://mall.industry.siemens.com
• to web page: selection aid TIA Selection Tool	https://siemens.com/tst
• to website: Industrial communication	http://www.siemens.com/simatic-net
• to website: CAx-Download-Manager	http://www.siemens.com/cax
• to website: Industry Online Support	https://support.industry.siemens.com
additional information	
other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)

Article number product brand name type of current supply	6EP4197-8AB00-0XY0 SITOP UPS8600 960 W
security information	
security information	Siemens provides products and solutions with industrial cybersecurity functions that support the secure operation of plants, systems, machines and networks. In order to protect plants, systems, machines and networks against cyber threats, it is necessary to implement – and continuously maintain – a holistic, state-of-the-art industrial cybersecurity concept. Siemens' products and solutions constitute one element of such a concept. Customers are responsible for preventing unauthorized access to their plants, systems, machines and networks. Such systems, machines and components should only be connected to an enterprise network or the internet if and to the extent such a connection is necessary and only when appropriate security measures (e.g. firewalls and/or network segmentation) are in place. For additional information on industrial cybersecurity measures that may be implemented, please visit www.siemens.com/cybersecurity-industry. Siemens' products and solutions undergo continuous development to make them more secure. Siemens strongly recommends that product updates are applied as soon as they are available and that the latest product versions are used. Use of product versions that are no longer supported, and failure to apply the latest updates may increase customer's exposure to cyber threats. To stay informed about product updates, subscribe to the Siemens Industrial Cybersecurity RSS Feed under https://www.siemens.com/cert. (V4.7)

Article number product brand name product designation	6EP4145-8GB00-0XY0 SITOP BAT8600 Pb Battery module 380 Wh	6EP4143-8JB00-0XY0 SITOP BAT8600 LiFePO4 Battery module 264 Wh
output		
energy content of energy storage	380 W·h	264 W·h
output current rated value	20 A	20 A
output voltage at DC rated value	48 V	48 V
design of the mains power cut bridging-connection	typ. 10 min at 960 W system load, typ. 25 min at 480 W system load (applies to new, fully charged battery module at ambient temperature 25°C)	typ. 14 min at 960 W system load, typ. 29 min at 480 W system load (applies to new, fully charged battery module at ambient temperature 25°C)
number of parallel-switched equipment resources for increasing the power	5	5
interfaces		
communication function	Yes	Yes
protection and monitoring		
design of short-circuit protection	Blade-type fuse 40 A, 58 V DC	Blade-type fuse 40 A, 58 V DC
design of the overload protection	Valve control	Valve control
display version for normal operation	3-color LED for operating state module	3-color LED for operating state module
safety		
operating resource protection class	Class III	Class III
protection class IP	IP20	IP20

Technical specifications (continued)

Article number product brand name product designation	6EP4145-8GB00-0XY0 SITOP BAT8600 Pb Battery module 380 Wh	6EP4143-8JB00-0XY0 SITOP BAT8600 LiFePO4 Battery module 264 Wh
standards, specifications, approvals		
certificate of suitability		
• CE marking	Yes	Yes
• UL approval	Yes; cURus-Recognized (UL 1778, CSA C22.2 No. 107.1), File E219627	Yes
• CSA approval	Yes; cCSAus (CSA C22.2 No. 62368-1, UL 62368-1)	Yes; cCSAus (CSA C22.2 No. 62368-1, UL 62368-1)
• EAC approval	Yes	Yes
type of certification CB-certificate	Yes	Yes
standards, specifications, approvals hazardous environments		
certificate of suitability		
• ATEX	No	No
• cCSAus, Class 1, Division 2	No	No
standards, specifications, approvals marine classification		
shipbuilding approval	Yes	Yes
Marine classification association		
• American Bureau of Shipping Europe Ltd. (ABS)	Yes	Yes
• Det Norske Veritas (DNV)	Yes	Yes
standards, specifications, approvals Environmental Product Declaration		
Environmental Product Declaration	Yes	
Global Warming Potential [CO2 eq]		
• total	61.2 kg	
• during manufacturing	30.8 kg	
• during operation	24.7 kg	
• after end of life	1.94 kg	
ambient conditions		
ambient condition	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.	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		
• during operation	-10 ... +50 °C	-10 ... +50 °C
• during transport	-40 ... +60 °C	-40 ... +80 °C
• during storage	-15 ... +40 °C	-40 ... +35 °C
service life of energy storage		
• typical	capacity falls to 80 % of original capacity (according to EUROBAT)	capacity falls to 80 % of original capacity (according to EUROBAT)
• at 20 °C typical	4 a	15 a
• at 30 °C typical	2 a	10 a
• at 40 °C typical	1 a	9 a
• at 50 °C typical	0.5 a	2 a
note	In addition to the storage temperature, additional factors, such as storage duration and charging status during storage, have a major impact on the potential service life. This means batteries should preferably be stored fully charged for short periods of time in a dry, cool and frost-proof (temperature range 0 to +20 °C) location.	In addition to the storage temperature, additional factors, such as storage duration and charging status during storage, have a major impact on the potential service life. This means batteries should preferably be stored fully charged for short periods of time in a dry, cool and frost-proof (temperature range 0 to +20 °C) location.
connection method		
type of electrical connection	Plug-in terminals with screwed connection	Plug-in terminals with screwed connection
• for power supply unit	+, -: 2 plug-in terminals with 1 screwed connection each for 0.2 ... 10 mm²	+, -: 2 plug-in terminals with 1 screwed connection each for 0.2 ... 10 mm²

Technical specifications (continued)

Article number product brand name product designation	6EP4145-8GB00-0XY0 SITOP BAT8600 Pb Battery module 380 Wh	6EP4143-8JB00-0XY0 SITOP BAT8600 LiFePO4 Battery module 264 Wh
mechanical data		
width × height × depth of the enclosure	322 mm × 187 mm × 110 mm	322 mm × 187 mm × 110 mm
installation width × mounting height	322 mm × 207 mm	322 mm × 207 mm
required spacing		
• top	20 mm	20 mm
• bottom	0 mm	0 mm
• left	0 mm	0 mm
• right	0 mm	0 mm
fastening method	Keyhole mounting for hooking in to M4 screws	Keyhole mounting for hooking in to M4 screws
• standard rail mounting	No	No
• S7 rail mounting	No	No
• wall mounting	Yes	Yes
net weight	13.5 kg	6.5 kg
number of batteries	4	4
accessories		
product component included	2x blade-type fuse 40 A, 58 V DC	2x blade-type fuse 40 A, 58 V DC
further information internet links		
internet link		
• to website: Industry Mall	https://mall.industry.siemens.com	https://mall.industry.siemens.com
• to web page: selection aid TIA Selection Tool	https://siemens.com/tst	https://siemens.com/tst
• to website: Industrial communication	http://www.siemens.com/simatic-net	http://www.siemens.com/simatic-net
• to website: CAx-Download-Manager	http://www.siemens.com/cax	http://www.siemens.com/cax
additional information		
other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)
security information		
security information	Siemens provides products and solutions with industrial cybersecurity functions that support the secure operation of plants, systems, machines and networks. In order to protect plants, systems, machines and networks against cyber threats, it is necessary to implement – and continuously maintain – a holistic, state-of-the-art industrial cybersecurity concept. Siemens' products and solutions constitute one element of such a concept. Customers are responsible for preventing unauthorized access to their plants, systems, machines and networks. Such systems, machines and components should only be connected to an enterprise network or the internet if and to the extent such a connection is necessary and only when appropriate security measures (e.g. firewalls and/or network segmentation) are in place. For additional information on industrial cybersecurity measures that may be implemented, please visit www.siemens.com/cybersecurity-industry. Siemens' products and solutions undergo continuous development to make them more secure. Siemens strongly recommends that product updates are applied as soon as they are available and that the latest product versions are used. Use of product versions that are no longer supported, and failure to apply the latest updates may increase customer's exposure to cyber threats. To stay informed about product updates, subscribe to the Siemens Industrial Cybersecurity RSS Feed under https://www.siemens.com/cert. (V4.7)	Siemens provides products and solutions with industrial cybersecurity functions that support the secure operation of plants, systems, machines and networks. In order to protect plants, systems, machines and networks against cyber threats, it is necessary to implement – and continuously maintain – a holistic, state-of-the-art industrial cybersecurity concept. Siemens' products and solutions constitute one element of such a concept. Customers are responsible for preventing unauthorized access to their plants, systems, machines and networks. Such systems, machines and components should only be connected to an enterprise network or the internet if and to the extent such a connection is necessary and only when appropriate security measures (e.g. firewalls and/or network segmentation) are in place. For additional information on industrial cybersecurity measures that may be implemented, please visit www.siemens.com/cybersecurity-industry. Siemens' products and solutions undergo continuous development to make them more secure. Siemens strongly recommends that product updates are applied as soon as they are available and that the latest product versions are used. Use of product versions that are no longer supported, and failure to apply the latest updates may increase customer's exposure to cyber threats. To stay informed about product updates, subscribe to the Siemens Industrial Cybersecurity RSS Feed under https://www.siemens.com/cert. (V4.7)