

SIEMENS



SITOP power supply

# SITOP DC UPS

Solutions for buffering 24 V  
in the automation

Brochure

Edition  
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[siemens.com/sitop-ups](http://siemens.com/sitop-ups)

# Solutions for bridging power fluctuations and power failures

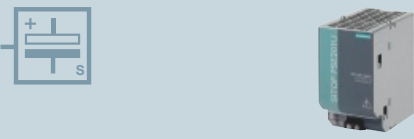
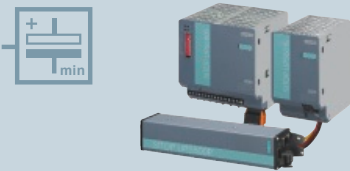

## Uninterruptible 24 V power supplies for any application

A reliable power supply is essential for guaranteeing the productivity of automated processes and machines. The SITOP switched-mode power supplies already offer maximum reliability in this respect. But in order to protect 24 V loads from longer power failures as well, the power supplies can be upgraded with DC UPS modules. Their various applications are differentiated above all by the energy storage. Temperature-insensitive capacitors buffer the 24 V supply for up to a few seconds or minutes, while battery modules can span periods of several hours.

## TIA Selection Tool – Support from planning to documentation

The free software significantly reduces the time required for planning, dimensioning, ordering and documentation. In the 24 V view of the TIA Selection Tool, you can specify not only the SITOP power supply but also the DC UPS that best fits your requirements. The selection parameters include load current, buffer time, minimum backup voltage and ambient temperature. For your product selection you will then obtain all the data relevant for your design and documentation.

[www.siemens.com/tia-selection-tool](http://www.siemens.com/tia-selection-tool)

SITOP DC UPS and buffer modules as a supplement to SITOP 24 V power supplies and application examples		
Bridging in the order of seconds with electrolytic capacitors	Bridging in the order of minutes with ultracapacitors	Bridging in the order of hours with lead-acid or lithium battery
SITOP PSE201U – buffer module up to 40 A	SITOP UPS500 – DC UPS up to 15 A	SITOP UPS1600 – DC UPS up to 40 A
		
<ul style="list-style-type: none"> <li>■ Bridging of short-term voltage dips</li> <li>■ Supports the power supply unit when there is a temporarily increased power demand</li> </ul>	<ul style="list-style-type: none"> <li>■ Bridging of power failures for orderly shutdown of automation systems (i.e. IPCs)</li> </ul>	<ul style="list-style-type: none"> <li>■ Bridging of power failures for continuous plant operation and orderly shutdown</li> </ul>

The SITOP systems are distinguished by their energy storage unit, their performance and also by their functionality, such as integration in the automation system to be buffered. The selection matrix is there to help you find the right 24 V buffer for your application.

SITOP module for 24 V buffering	Buffer module	UPS500	UPS1600	
<b>Energy storage device</b>				
24 V buffering	max. 10 s	Minutes	Hours	
Storage medium	Electrolytic capacitors	Double-layer capacitors	Lead batteries	Lithium batteries
Service life (also temperature dependent)	++	++	•	+
Application area (temperature, degree of protection, ventilation)	++	++	•	+
<b>UPS module/electronics</b>				
max. rated output current	40 A	15 A	40 A	
Overload capacity	++	+	++	
Interfaces		I/O, serial, USB	I/O, USB, Ethernet/PROFINET	
Operating and diagnostic information via				
– Signaling contacts		•	•	
– OPC UA server, webservice, S7-FBs, WinCC faceplate			•	
– Shutting down multiple PCs/PLC			•	
Start from battery without mains voltage (island operation)			•	
Engineering via software tool (PC)		•	•	
Engineering via TIA Portal, STEP 7, WinCC or OPC UA			•	
SITOP library for PCS 7			•	

# SITOP PSE201U – buffer module with electrolytic capacitors: 24 V buffering for periods up to several seconds

When power supply conditions are unstable, for example, in poorly balanced network infrastructures and during switching processes, even brief power failures can result in a plant standstill. The SITOP PSE201U buffer module bridges such brief interruptions of up to 10 seconds and can thus significantly increase plant availability. It can be combined with all 24 V power supply units of the SITOP smart, PSU6200 and PSU8200/200M product lines and is completely maintenance-free thanks to electrolytic capacitors serving as energy storage. A multiplication of the buffer times is possible by connecting the buffer modules in parallel. A buffer module supplies up to 40 A which supports the power supply even in the event of an overload.

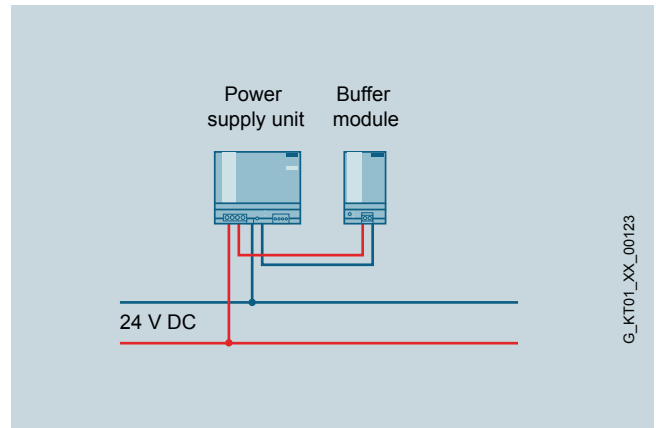


SITOP PSE201U



## Your advantages with the SITOP PSE201U buffer module

- Cost-efficient bridging of short-term power failures for periods up to several seconds
- Totally maintenance-free capacitors as energy storage
- Short charging times
- Parallel switching of several buffer modules possible
- Fast mounting onto standard rail and simple wiring
- High load current up to 40 A, additional support of the power supply unit in the event of overload
- Connection to power supply over only 2 cables



Configuration and power supply with SITOP PSE201U buffer module

Technical specifications	SITOP PSE201U buffer module
<b>Article No.</b>	<b>6EP1961-3BA01</b>
Rated input voltage – Range	24 V DC SITOP PSU8200, PSU6200 or smart 24 ... 28.8 V DC
Rated output current	40 A
Parallel switching	Yes
Electronic short-circuit protection	Yes
Radio interference level (EN 55022)	Class B
Degree of protection (EN 60529)	IP20
Ambient temperature	-25...+70 °C
Installation	DIN rail
Dimensions (W x H x D) in mm	70 x 125 x 125
Weight, approx.	1.2 kg
Certifications	CE, cULus, ATEX, IECEx, cCSAus Class I Div 2, DNV GL, ABS

## Buffer times of a buffer module at load current ...

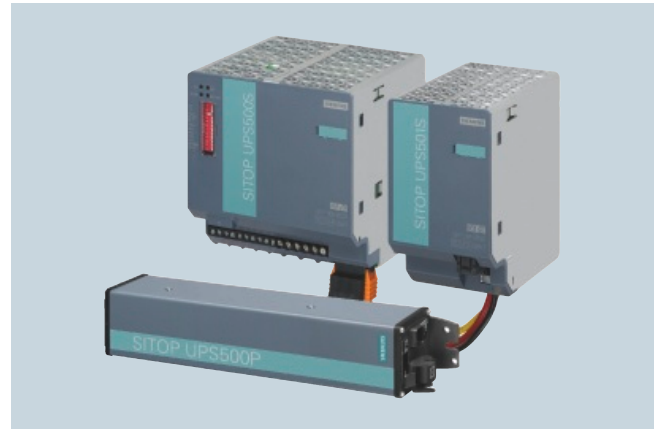
5 A	1.6 s
10 A	800 ms
20 A	400 ms
40 A	200 ms





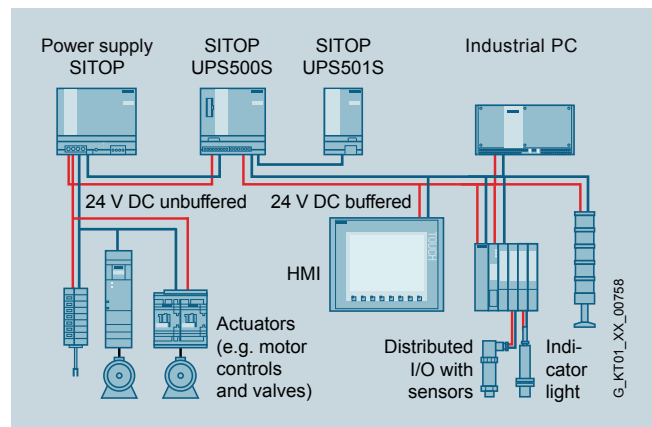
# SITOP UPS500 – DC UPS with maintenance-free double-layer capacitors: 24 V buffering for periods up to several minutes

In many PC-based automation solutions, more serious damage from a power failure can be prevented by bringing the plant to a defined state. The backing up of operating data necessary for this purpose and the subsequent controlled shutdown of the PC generally takes about a minute. The totally maintenance-free and high-capacitance double-layer capacitors of the SITOP UPS500 provide sufficient power for this. Communication with the automation computer can be easily implemented thanks to the USB interface.



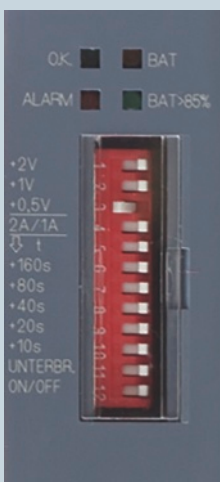
## Your advantages with the SITOP UPS500

- Buffering for periods up to several minutes depending on the load current and DC UPS configuration
- SITOP UPS500S 24 V/15 A standard rail units, energy storage can be combined with up to 3 UPS501S expansion modules
- UPS500P IP65 version for use outside the control cabinet
- Totally maintenance-free double-layer capacitors
- Short charging times for quick recovery of backup readiness
- Long service life eliminates the need to replace batteries: After 8 years, the ultracapacitors still have 80% of rated capacity at 50 °C ambient temperature
- No ventilation of the mounting location required
- Diagnostics via signaling contacts and USB
- USB interface for PC communication
- Easy PC integration with software tool



Configuration with SITOP UPS500S: 24 V buffering to preserve or save the sensor measured values. To relieve the load on the DC UPS, the actuators are supplied directly from the power supply unit

## Signaling and setting options of the SITOP UPS500S



### Signaling via LED and signaling contacts

- OK.: Normal operation/buffer mode
- BAT: Buffer time not available
- ALARM: Buffer readiness
- BAT>85%: Battery charge > 85%

### Settings by means of DIP switches:


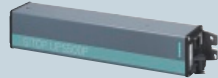
- Connection threshold for buffering: 22 ... 25.5 V DC adjustable in 0.5 V increments
- Mains buffering: 5, 15, 25 ... 315 s in 10 s increments or max. buffer time
- Automatic restarting of IPCs when power is restored during shutdown
- Shutdown of the DC UPS to protect the energy storage. (Also possible by opening a connection at terminal X2)

### DC UPS tool for easy parameter assignment, operation and monitoring on the PC

The status messages and configuration parameters of the DC UPS can also be transferred via the USB interface. The free software tool visualizes the operating state and supports further processing of the status messages. For secure shutdown in the event of a power failure, an individual power failure program can be started after a definable time.

# SITOP UPS500 – Technical specifications



				
SITOP	UPS500S – Basic unit 15 A		UPS500P – Basic unit 7 A	
Energy	2.5 kW	5 kW	5 kW	10 kW
Article No.	6EP1933-2EC41	6EP1933-2EC51	6EP1933-2NC01	6EP1933-2NC11
Input voltage	24 V DC, 22 ... 29 V, infeed SITOP 24 V		24 V DC, 22.5 ... 29 V, infeed SITOP 24 V	
Rated input current	15.2 A + approx. 2.3 A while charging		7 A + approx. 2 A while charging	
Rated output voltage	Buffer mode and normal operation: 24 V DC, +/-3%		Buffer mode and normal operation: 24 V DC, +/-3%	
Rated output current	15 A, charging current 1 A or 2 A selectable		7 A, charging current 2 A	
Efficiency at rated values, approx.	97.50%		96.90%	
Radio interference level (EN 55022)	Class B		Class B	
Degree of protection (EN 60529)	IP20		IP65	
Ambient temperature	0...+60 °C		0...+55 °C	
Installation	DIN rail		Screw mounting in all mounting positions	
Dimensions (W x H x D) in mm	120 x 125 x 125		400 (without connector) x 80 x 80	470 (without connector) x 80 x 80
Weight, approx.	1.0 kg		1.9 kg	2.2 kg
Certifications	CE, cULus, CB, ATEX, cCSAus Class I Div 2, DNV GL, ABS		CE	
SITOP	UPS501 – Expansion module 5 kW		Connector set for SITOP UPS500P	
Article No.	6EP1935-5PG01		6EP1975-2ES00	
Description	Expansion module to extend the backup time, up to 3 units can be connected in parallel with one UPS500S basic unit		Connector for input and output, and preassembled USB cable in 2 m length	
Dimensions (W x H x D) in mm	70 x 125 x 125			
Weight, approx.	0.7 kg			

## Buffer and charging times

Available energy	SITOP UPS500S/501S								SITOP UPS500P		
Basic units	2.5 kW	5 kW	2.5 kW	5 kW	2.5 kW	5 kW	2.5 kW	5 kW	5 kW	10 kW	
Expansion modules	–	–	1 x 5 kW	1 x 5 kW	2 x 5 kW	2 x 5 kW	3 x 5 kW	3 x 5 kW	–	–	
Combined	2.5 kW	5 kW	7.5 kW	10 kW	12.5 kW	15 kW	17.5 kW	20 kW	5 kW	10 kW	
Buffer times											
at load current ...	0.5 A	134 s	236 s	390 s	478 s	632 s	748 s	851 s	1007 s	284 s	647 s
	0.8 A	90 s	167 s	266 s	346 s	440 s	527 s	580 s	706 s	190 s	435 s
	1 A	75 s	138 s	219 s	296 s	365 s	414 s	490 s	572 s	153 s	351 s
	2 A	38 s	76 s	122 s	156 s	203 s	230 s	265 s	306 s	80 s	152 s
	3 A	26 s	52 s	82 s	106 s	136 s	159 s	186 s	213 s	53 s	108 s
	4 A	19 s	39 s	61 s	81 s	101 s	120 s	139 s	160 s	40 s	84 s
	5 A	15 s	31 s	49 s	65 s	81 s	95 s	111 s	130 s	30 s	68 s
	6 A	12 s	26 s	40 s	55 s	67 s	80 s	94 s	106 s	25 s	57 s
	7 A	10 s	21 s	34 s	47 s	58 s	69 s	81 s	82 s	21 s	49 s
	8 A	8 s	18 s	29 s	40 s	50 s	59 s	69 s	79 s	–	–
	10 A	6 s	15 s	23 s	32 s	39 s	47 s	54 s	62 s	–	–
	12 A	4 s	12 s	19 s	26 s	32 s	38 s	44 s	52 s	–	–
	15 A	3 s	9 s	14 s	20 s	25 s	30 s	35 s	40 s	–	–
Charging times											
at charge current ...	2 A	54 s	120 s	158 s	223 s	263 s	318 s	355 s	417 s	130 s	360 s
	1 A	110 s	205 s	311 s	425 s	503 s	625 s	695 s	816 s	–	–

The technical specifications apply with rated input voltage and +25 °C ambient temperature

## SITOP UPS1600 – DC UPS with battery modules 24 V buffering for periods up to several hours

Energy storage units with high capacity are required for applications in which processes must continue to be supplied with power and, for example, measuring data must continue to be collected or communication networks must be maintained during power failures. The SITOP DC UPS with maintenance-free lead-acid or lithium batteries offer long buffer times for a high level of security during power failures. Depending on the current requirements, they can supply energy for hours. They also offer unique possibilities for diagnostics and system integration. The SITOP UPS1600 includes comprehensive functions and communicates via USB, Ethernet/PROFINET and OPC UA. Plus complete integration into the TIA Portal affords convenient engineering. If no SIMATIC S7 controllers are protected from power failure but PCs are, for example, the SITOP Manager facilitates engineering and monitoring.

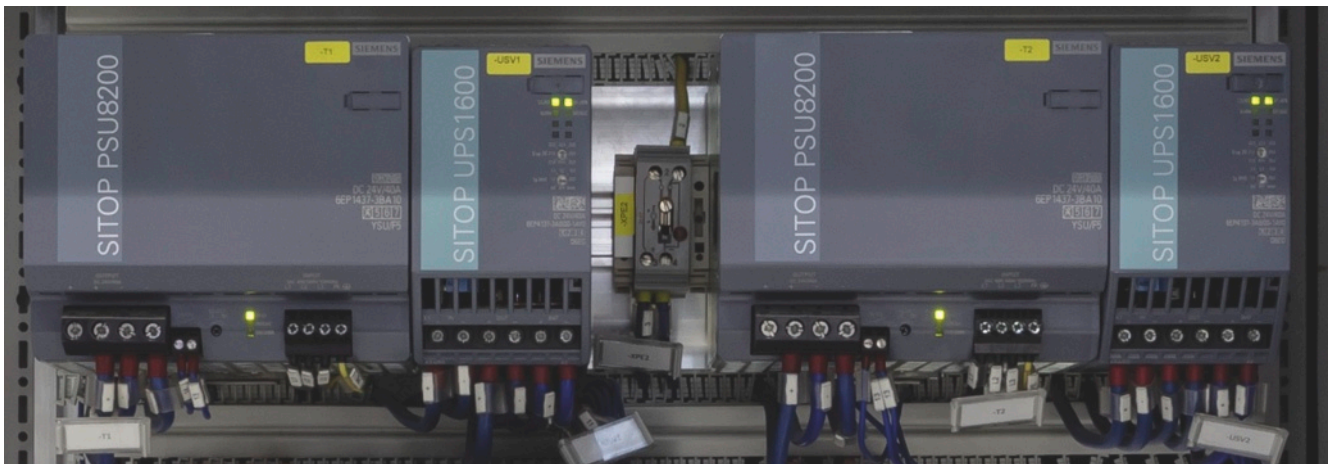


### The benefits at a glance

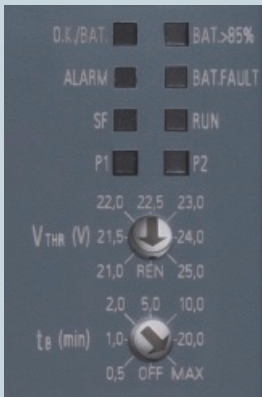
- Compact DC UPS modules SITOP UPS1600 24 V / 10 A, 20 A and 40 A with digital inputs and outputs, optionally with USB or Ethernet/PROFINET interfaces with 2 ports
- SITOP UPS1100 battery modules with integrated electronics comprising maintenance-free
  - 24 V/1.2 Ah, 3.2 Ah, 7 Ah and 12 Ah lead batteries
  - 24 V/2.5 Ah pure lead batteries for low and high temperatures
  - 24 V/5 Ah (lithium iron phosphate – LiFePO<sub>4</sub>) lithium batteries for long lifetime, even at high temperatures
- Intelligent battery management with automatic detection of battery modules and temperature-controlled charging characteristics. Monitoring of operational readiness, battery feed and charge level
- All diagnostic data and alarms available via USB and Ethernet/PROFINET

### The benefits at a glance

- High dynamic overload capacity: 3 times rated current for 30 ms and 1.5 times rated current for 5 s per minute
- High charging currents
- Battery module starting when mains voltage is unavailable
- Remote monitoring with integrated web server
- Integrated OPC UA server enables open and multi-vendor communication
- SITOP Manager: Free software tool for commissioning, engineering and monitoring of PC-based systems
- Complete integration in TIA: Convenient engineering in the TIA Portal, S7 function blocks for integration in user programs and WinCC faceplates
- SITOP library for SIMATIC PCS 7



# SITOP UPS1600 – Diagnostics and setting options



## Signaling via LED and signaling contacts

- O.K./BAT: Normal operation/buffer mode
- BAT > 85%: Battery charge > 85%
- ALARM: Buffer readiness
- BAT FAULT: Buffer time not available
- SF, RUN: for PROFINET-specific diagnostic displays
- P1, P2: Connection status Ethernet Port 1 and Port 2



## Settings by means of rotary coding switch:

- Connection threshold for buffering: 21 ... 25 V DC in 0.5 V increments
- Mains buffering: 0.5, 1, 2, 5, 10, 20 min, max. buffer time
- REN (Remote Enable): the software settings apply for the connection threshold as well as the buffer time

## Open interfaces and convenient software for transparent DC UPS diagnostics

In addition to the standard equipment with LED and signaling contacts, the UPS1600 modules with USB or Industrial Ethernet/PROFINET interface enable even more detailed diagnostics options and settings. The IE/PN interface with 2 ports also offers integration in different networks. During engineering and visualization the SITOP Manager provides support for PC connections, and the TIA Portal with standard function blocks during SIMATIC integration. The integrated web and OPC UA servers enable completely platform-independent integration.



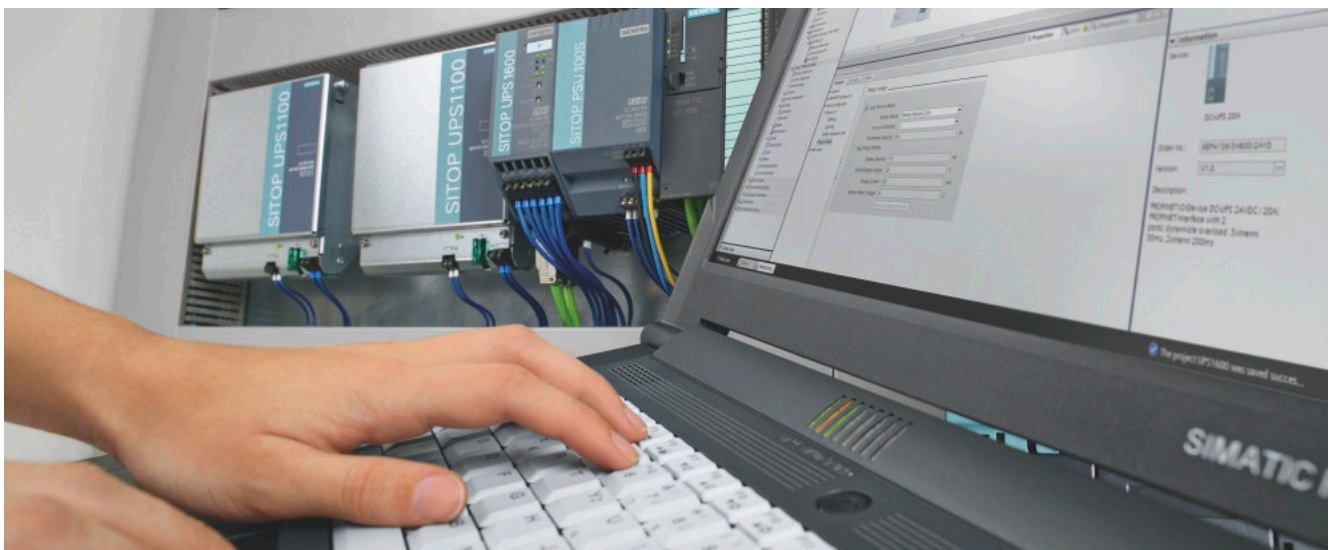
## Diagnostics options over interfaces/software

- Hardware configuration
- Normal operation or buffer mode
- Battery charge status, buffer readiness, achievable buffer time
- Active alarms
- Alarm sequence
- Load and charging current
- Input and output voltage
- Battery voltage
- Battery temperature



## Setting options over interfaces

- All aforementioned options, including rotary switches
- Simultaneous and targeted shutdown of multiple PCs
- Opening or closing of software applications
- End-of-charging voltage for 3rd party batteries





# SITOP UPS1600 – can be integrated into any automation solution

Whether open or system-integrated, the communication capable DC UPS can be integrated into any automation solution. Fully flexible data communication is performed via USB and Industrial Ethernet/PROFINET. The SITOP Manager provides support during configuration and visualization for easy integration of the DC UPS in PC-based systems. The integrated web and OPC UA servers enable completely platform-independent integration. The integration of the DC UPS in Industrial Ethernet enables a defined shutdown of multiple PCs in the event of a power failure.

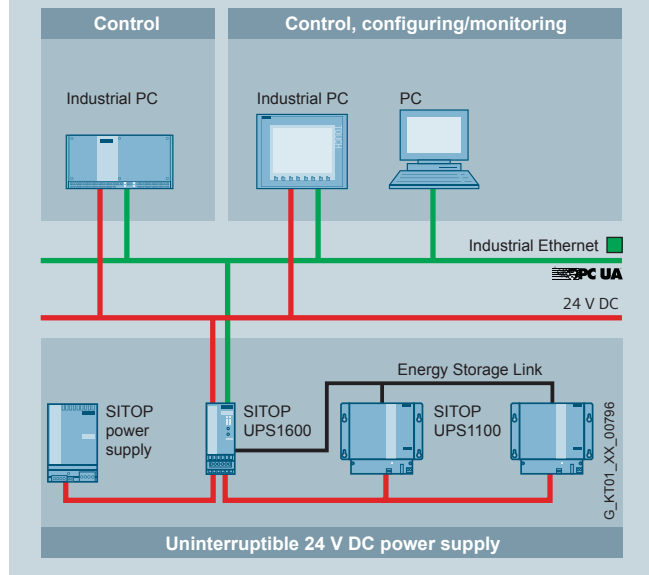
## The integration of SITOP UPS1600 in PC-based systems

- Connection via USB or Ethernet
- Vendor-neutral system integration via certified OPC UA server
- Remote monitoring via integrated web server
- Easy configuration and monitoring with the SITOP Manager

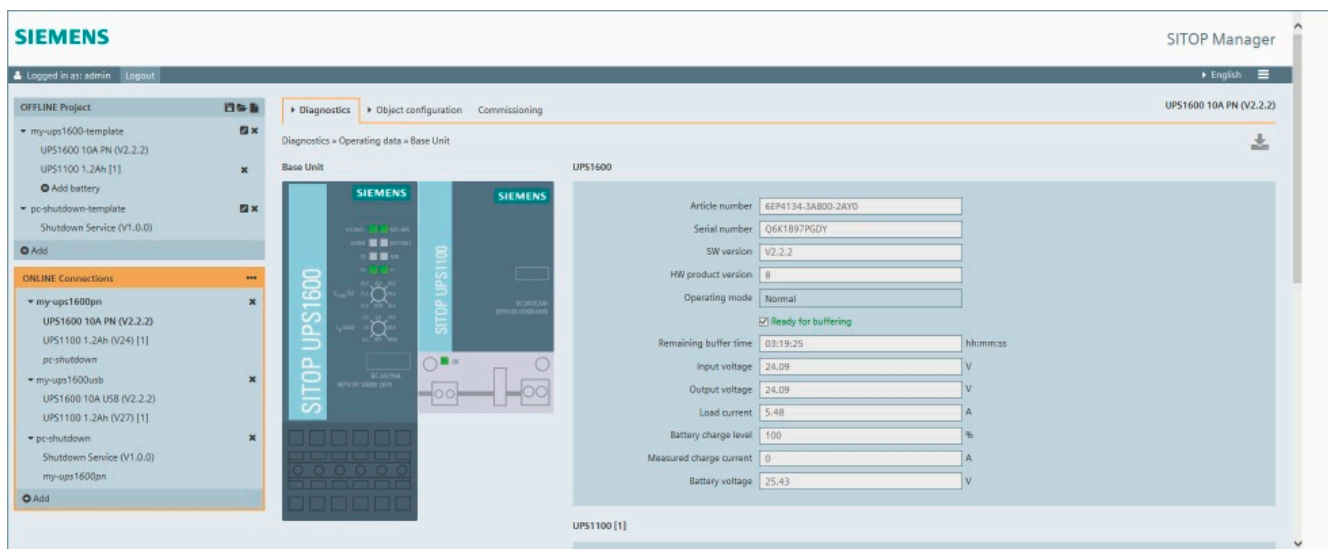
## SITOP Manager – The PC software for SITOP power supplies with communications capability

- Online and offline engineering, commissioning and diagnostics of multiple SITOP PSU8600 and UPS1600
- Continuous monitoring of SITOP UPS1600
- Monitoring and controlled shutdown of multiple PCs in the event of a power failure, for example, by starting batch files and closing software applications
- Online functions, such as firmware updates
- Executable on Windows 7 and Windows 10 operating systems
- Easy operation via web-based user interface with automatic scaling to window width
- Remote access possible via mobile devices

## Open communication



Remote monitoring: The integrated web server provides access to all relevant data of the uninterruptible power supply.

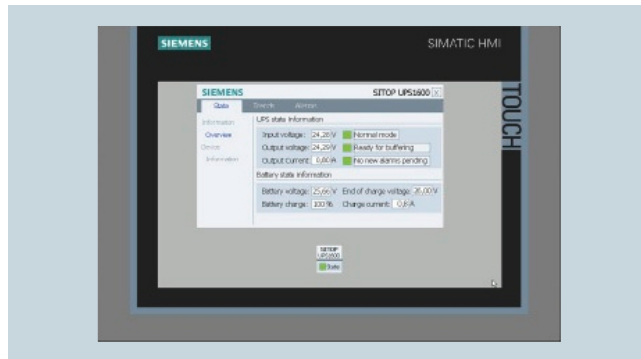




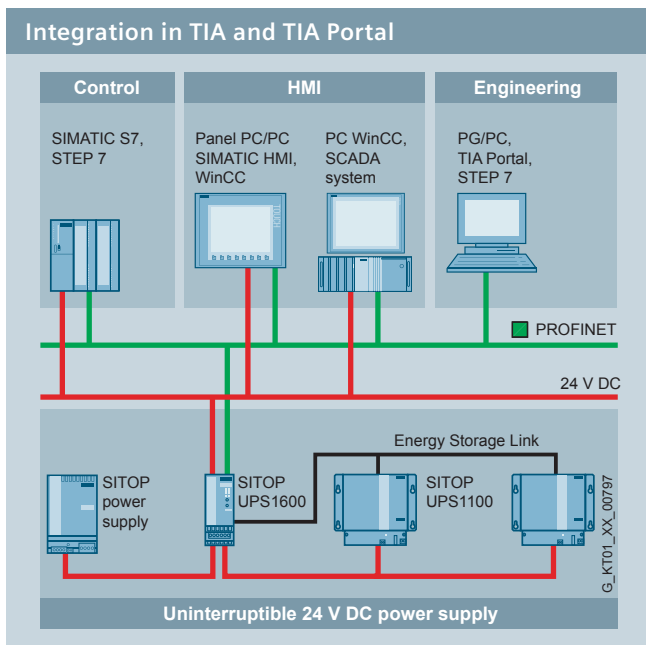
# SITOP UPS1600 – integration in TIA and PCS 7

SITOP UPS1600

**SITOP UPS1600 in Totally Integrated Automation –** Engineering takes place via the TIA Portal. If a power failure occurs, the 24 V DC buffer and the integration of the DC UPS in PROFINET enables the PLCs to be brought to a defined state independent of one another. Function blocks for SIMATIC S7-300, 400, 1200 and 1500 are available for this purpose. The comprehensive diagnostic data of the power supply can be visualized by various devices, for example, via UPS faceplates.

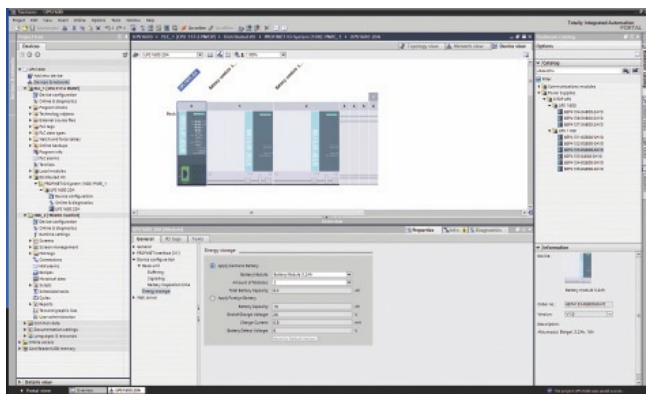
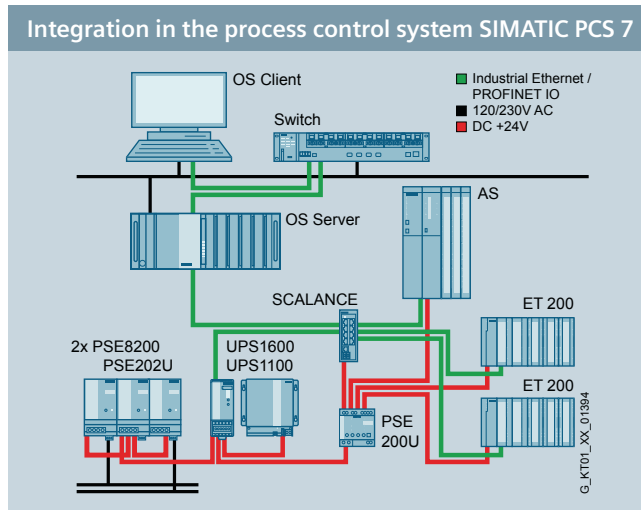


Diagnostics in WinCC: Prefabricated SITOP UPS1600 faceplates make visualization possible without the need for complicated programming.

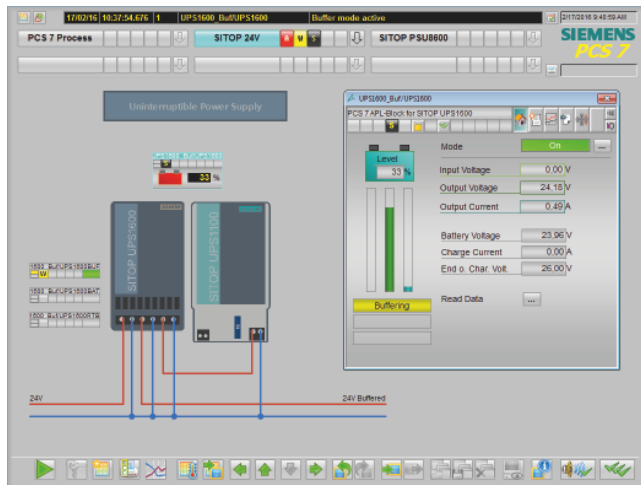


## SITOP library for SIMATIC PCS 7

The SITOP library allows for convenient integration of the DC UPS in SIMATIC PCS 7. The software blocks supply the faceplate on the user interface of the process control system with operating and diagnostic data, generate messages and ensure connection to the maintenance system.






Engineering in the TIA Portal: The UPS configuration is also extremely user-friendly. This is because the configuration data of UPS1600 and UPS1100 are stored in the TIA Portal.



Visualization with the SITOP library in SIMATIC PCS 7

# SITOP UPS1600 – technical specifications of DC UPS modules









			
<b>SITOP UPS1600</b>	<b>24 V/10 A</b>	<b>24 V/20 A</b>	<b>24 V/40 A</b>
Article No.	6EP4134-3AB00-0AY0	6EP4136-3AB00-0AY0	6EP4137-3AB00-0AY0
– with USB interface	6EP4134-3AB00-1AY0	6EP4136-3AB00-1AY0	6EP4137-3AB00-1AY0
– with 2 Ethernet/PROFINET interfaces	6EP4134-3AB00-2AY0	6EP4136-3AB00-2AY0	6EP4137-3AB00-2AY0
Input voltage	24 V DC, 22 ... 29 V, infeed through 24 V SITOP power supply		
Rated input current	Approx. 14 A for max. charging current (3 A)	Approx. 25 A for max. charging current (4 A)	Approx. 46 A for max. charging current (5 A)
Connectable batteries	SITOP UPS1100 (max. 6 over Energy Storage Link) Siemens types 6EP1935-6M 3rd party manufacturers		
Output voltage in normal operation	24 V DC (primary SITOP device or battery), charging voltage: 27.0 V		
Output voltage in buffer mode	27 V DC (no load); 24 V DC (50% battery rated current); 22 V DC (100% battery rated current); 18.5 V DC (exhaustive discharge protection)		
End-of-charge voltage	Automatic temperature-controlled setting with SITOP UPS1100 battery modules, otherwise adjustable from 24 to 30 volts		
Charging current	Automatic setting with SITOP UPS1100 battery modules, otherwise adjustable		
Rated output current	10 A, charging current: Max. 3 A	20 A, charging current: Max. 4 A	40 A, charging current: Max. 5 A
– Overload behavior (power boost for 30 ms)	30 A	60 A	120 A
– Overload behavior (extra power for 5 s/min)	15 A	30 A	60 A
Efficiency at rated values, approx.	> 97.7%	> 98.2%	> 98.8%
Overload and short-circuit protection	Yes, restart in normal operation		
Radio interference level (EN 55022)	Class B		
Degree of protection (EN 60529)	IP20		
Ambient temperature	-25 ... + 70 °C (derating from +60 °C)		
Installation	DIN rail		
Dimensions (W x H x D) in mm	50 x 125 x 125	50 x 125 x 125	70 x 125 x 150
Weight, approx.	0.38 kg/0.4 kg/0.44 kg	0.39 kg/0.41 kg/0.45 kg	0.65 kg/0.65 kg/0.7 kg
Certifications	CE, cULus, CB, ATEX, IECEx, cCSAus Class I Div 2, DNV GL, ABS		

The technical specifications apply with rated input voltage and +25 °C ambient temperature



# SITOP UPS1600 – technical specifications of battery modules

						
Battery modules	UPS1100 24 V/ 1.2 Ah	UPS1100 24 V/ 3.2 Ah	UPS1100 24 V/ 7 Ah	UPS1100 24 V/ 12 Ah	UPS1100 24 V/ 2.5 Ah high temperature	UPS1100 24 V/ 5 Ah LiFePO
For SITOP UPS1600	10 A	10 A and 20 A	10 A, 20 A and 40 A	20 A and 40 A	10 A and 20 A	10 A and 20 A
Article No.	6EP4131-0GB00- 0AY0	6EP4133-0GB00- 0AY0	6EP4134-0GB00- 0AY0	6EP4135-0GB00- 0AY0	6EP4132-0GB00- 0AY0	6EP4133-0JB00- 0AY0
Recommended end of charge voltage	set automatically by SITOP UPS1600					
Charging current	Max. 0.3 A	Max. 0.8 A	Max. 1.75 A	Max. 3 A	Max. 5 A	Max. 2.1 A
Rated output voltage	24 V DC, 22 ... 27.0 V DC (no load)					
Rated output current	10 A	20 A	40 A	40 A	20 A	20 A
Integral battery fuse	15 A	25 A	2 x 25 A	2 x 25 A	25 A	25 A
Signaling	LED green: Battery OK, flashing green: Error or warning, OFF: No communication					
Degree of protection (EN 60529)	IP20					
Ambient temperature	-15...+50 °C				-40...+60 °C	-20...+50 °C
Transport and storage temperature	-20...+50 °C				-40...+60 °C	-40...+60 °C
Installation	DIN rail or wall mounting	DIN rail or wall mounting	Wall mounting	Wall mounting	DIN rail or wall mounting	DIN rail or wall mounting
Dimensions (W x H x D) in mm	89 x 130 x 107	190 x 169 x 80	186 x 186 x 110	253 x 186 x 110	265 x 115 x 76	189 x 186 x 112.7
Weight, approx.	1.9 kg	3.8 kg	6.1 kg	9.3 kg	3.7 kg	3.4 kg
Certifications	CE, C-Tick, KCC, cULus, cCSAus, CB, ATEX, IECEx, cCSAus Class I Div2, GL, ABS					CE, cURus, CB, GL, ABS
<b>Buffer times</b>						
<b>Load current</b>						
1 A	27 min	2 h	5 h	8 h 30 min	1 h 30 min	4 h
2 A	14 min	1 h	2 h 40 min	4 h 30 min	50 min	2 h 10 min
3 A	10 min	45 min	1 h 50 min	3 h 10 min	36 min	1 h 30 min
4 A	7 min 50 s	34 min	1 h 20 min	2 h 30 min	26 min	1 h 10 min
6 A	4 min 40 s	21 min	48 min	1 h 30 min	15 min	48 min
8 A	3 min	15 min	34 min	1 h	11 min	37 min
10 A	1 min 30 s	9 min 30 s	21 min	42 min	6 min 40 s	26 min
12 A	–	8 min 10 s	19 min	37 min	5 min 40 s	23 min
14 A	–	6 min 50 s	16 min	32 min	4 min 40 s	21 min
16 A	–	5 min 30 s	13 min	27 min	3 min 40 s	18 min
20 A	–	2 min 50 s	7 min 50 s	17 min	1 min 40 s	13 min
30 A	–	–	3 min 50 s	10 min	3 min 20 s, 2x <sup>1)</sup>	17 min, 2x <sup>1)</sup>
40 A	–	–	1 min 40 s	5 min 30 s	1 min 40 s, 2x <sup>1)</sup>	13 min, 2x <sup>1)</sup>
Ambient temperature	Service life (when capacity falls to 80% of original capacity), depending on battery temperature, approx.					
+20 °C	4 years	4 years	4 years	4 years	10 years	15 years
+30 °C	2 years	2 years	2 years	2 years	7 years	10 years
+40 °C	1 year	1 year	1 year	1 year	3 years	9 years
+50 °C	0.5 years	0.5 years	0.5 years	0.5 years	1.5 years	2 years
+60 °C	–	–	–	–	1 year	–

The technical specifications apply with rated input voltage and +25 °C ambient temperature (unless otherwise specified).

Determination of the buffer times is based on the discharge period of new and completely charged battery modules with a battery temperature of not less than +25 °C until shutdown of the DC UPS (19 volt). Buffer times for further ambient temperatures and buffer voltages can be calculated in the TIA Selection Tool. [siemens.com/tia-selection-tool](http://siemens.com/tia-selection-tool)

<sup>1)</sup>With two parallel connected battery modules UPS1100 and a UPS1600 40 A

## More information

More information on SITOP DC UPS:

[www.siemens.com/sitop-ups](http://www.siemens.com/sitop-ups)

SITOP Manager (for SITOP UPS1600, PSU8600):

[www.siemens.com/download-smgr](http://www.siemens.com/download-smgr)

DC UPS Software (for SITOP UPS500):

<https://support.industry.siemens.com/cs/ww/en/view/42822724>

Using the TIA Selection Tool to select the appropriate power supply:

[www.siemens.com/tia-selection-tool](http://www.siemens.com/tia-selection-tool)

Operating instructions for downloading:

[www.siemens.com/sitop/manuals](http://www.siemens.com/sitop/manuals)

CAX data (2D, 3D, circuit diagram macros) for downloading:

[www.siemens.com/sitop-cax](http://www.siemens.com/sitop-cax)

Electronic ordering via the Internet with the Industry Mall:

[www.siemens.com/industrymall](http://www.siemens.com/industrymall)

Your personal contact partner is listed at:

[www.siemens.com/automation/partner](http://www.siemens.com/automation/partner)

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## Security information

Siemens provides products and solutions with industrial security functions that support the secure operation of plants, systems, machines and networks.

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For additional information on industrial security measures that may be implemented, please visit

<https://www.siemens.com/industrialsecurity>.

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<https://www.siemens.com/industrialsecurity>.