



Year in, year out ...



... 24 V DC reliability – nonstop.

## SITOP Power Supply

Answers for industry.

**SIEMENS**



The product lines LOGO!Power, SITOP smart and SITOP modular offer the right power supply for the most diverse requirements and performance levels. For a rated current of 40 A, there is even one available requiring just 150 mm on the DIN rail.

## Always available, always safe: SITOP

A reliable, constant supply of power is indispensable to the efficient operation of any plant – 365 days a year. This is precisely what SITOP represents, our perfectly matched, complete range of products that sets standards in reliability, compactness and functionality. SITOP proves its value a million times a day in practical use – protecting against plant shutdown and production downtimes.



The unique range of SITOP expansion modules ensures a constant 24 volts in every case. Even when the power fails, you can use, for example, the maintenance-free DC UPS with innovative capacitor technology.

#### **Reliable, functional ...**

Four product lines of our family of stabilized power supplies cover just about all requirements in automation engineering:

- SITOP modular for the highest demands
- SITOP smart with all the standard functions
- LOGO!Power for the low-end performance range
- SITOP in SIMATIC design

In addition, SITOP versions meet special requirements regarding design, environmental conditions, and output voltage. Regardless of which switched-mode power supply you use, you will profit from the highest quality, reliability and functionality.

#### **... and extremely compact**

The new 3-phase 20 A and 40 A basic units from SITOP modular are impressive proof of the fact that high functionality and performance power do not automatically mean high space requirements. The narrow and compact design sets new standards for stabilized power supplies.

#### **Tailor-made safety**

The quality of the 24 V DC power supply alone is no guarantee for fault-free supply. Power failures, extreme mains voltage fluctuations, or a defective load can cripple plant operation

and cause significant costs. In answer to this, SITOP offers a unique range of add-on modules to protect against faults on the primary and secondary sides – right up to complete all-round protection. There are three SITOP solutions for 24 V DC backup for protection against power failure alone, including the completely maintenance-free UPS with innovative capacitor technology.

#### **For all systems worldwide**

Thanks to its high level of reliability, SITOP has long become established around the globe – and can even handle critical system conditions. The wide-range power supply unit allows connection to just about all the world's power systems. Certification in accordance with CE and UL/cUL is standard with SITOP. Approvals for special applications, such as shipbuilding (GL) or in areas subject to explosion hazard (ATEX), have been granted for many devices.

#### **For and with high availability**

SITOP power supplies increase the availability of your plant, and the devices themselves are quickly in place because they are all available ex warehouse.

# modular

## The power supply for high requirements:

SITOP modular meets the highest requirements for functionality, e.g. for use in complex plants and machines. The wide-range input enables connection to any system in the world and guarantees a high level of safety even in the event of large voltage fluctuations. The power boost function briefly supplies up to three times the rated current. In the case of an overload, you can choose between constant current with automatic restart, or latching shutdown.

The innovative 3-phase 20 and 40 A power supplies now offer even more: with a width of just 70 and 150 mm, they are among the most compact of their performance class. Improvements include the integral signaling contact for "24 V DC o.k.", an expanded input range of 320 to 575 V, high efficiency level of 93 %, and a supply of 1.5 times the rated current for up to 5 seconds..

## Essential product features

- For demanding applications of 5 to 40 A
- Optionally with protection-coated PCB
- 48 V DC/20 A enables small cable cross-sections
- Compact metal housing
- No installation clearances required at the sides
- Wide-range input
- High performance reserves
- Selectable short-circuit characteristics
- Soft characteristic curve selectable for parallel switching
- High efficiency
- Operating status indicated by 3 LEDs
- Can be combined with SITOP expansion modules



# smart

## The slim standard power supplies: SITOP smart

SITOP smart is the optimal power supply for many 24 V DC applications. Narrow dimensions, high performance power, and favorable price: Despite its compactness, it offers outstanding overload characteristics.

Thanks to the extra power feature, providing 1.5 times the rated current for 5 seconds, even large loads can be switched on without any problems. With a continuous rated capacity of 120 percent, the slim power supplies are among the most reliable of their kind. Numerous certifications facilitate universal and global use as well as use in hazardous areas. The 48 V power supply enables the use of cables with narrow cross-sections.

## Essential product features

- 24 V DC/2.5, 5 and 10 A for standard applications
- 48 V DC/10 A enables small cable cross-sections
- 24 V DC/10 A wall-mounted for high shock and vibrations requirements
- Narrow design
- 50 % extra power for 5 s
- Output voltage from 22.8 to 28 V DC, adjustable
- Extensive certification, including GL and ATEX
- Expandable with DC UPS module, redundancy module, and the selectivity and diagnosis module



# LOGO!Power

**Small and powerful for the low-end performance range: LOGO!Power**

With LOGO!Power, we offer you miniature power supplies that can be used extremely flexibly in a host of applications – even in small distribution boards thanks to their low, stepped profile. The following ensure even more flexible application options in the low-end performance range: wide-range input, radio interference class B, large temperature range, and extensive certification.

## Essential product features

- 2 performance classes each with 5V, 12V and 15V DC
- 3 performance classes with 24V DC
- Flat type of construction in LOGO! design with a depth of just 55 mm
- Wide range input from 85V to 264V AC
- Continuous current for switching in loads with high inrush current
- Output voltage adjustable
- Green LED for "Output voltage o.k."
- Temperature range from -20°C to +55°C



# SITOP power supplies in the SIMATIC design

**The optimal power supply for SIMATIC S7 and more**

The design and functionality of the original power supplies of the SIMATIC merge optimally into the PLC network. As well as the following SIMATIC systems, they also supply other loads reliably with 24 V DC:

- SIMATIC S7-1200 – the new micro PLC is supplied by the compact PM1207 power module
- SIMATIC S7-200 – the flat power supply is also in demand for shallow installation depths
- SIMATIC S7-300 – the PS307 is supplied with a connecting comb to the CPU and is mounted direct on the S7 rail. The outdoor version is suitable down to -25 °C, and for increased vibration and shock requirements
- SIMATIC ET200pro – in IP67, this supply is used for the electronics, encoders and load voltage supply of the new I/O device. With a signaling contact for "24 V DC o.k." and „Overvoltage“, and a second connector for looping through the input voltage



# SITOP in special design, for special uses

## Equipped for special tasks and conditions

Restricted installation conditions, harsh environmental conditions, or special input or output voltages – whatever the special conditions, these standard power supplies meet even exceptional requirements.

- SITOP power 0.5 – compact power supplies with a width of just 22.5 mm up to 0.5 A for AC or DC systems
- SITOP flat design – in flat metal housing
- SITOP PSA100E – the low-cost introduction to stabilized power supply; can be mounted in different installation positions
- SITOP 3.7 A Class II with power limiting to 100W
- SITOP PSU300P – in degree of protection IP67, identical construction to the SIMATIC ET200pro PS but without a 2<sup>nd</sup> connector for looping through the input voltage
- DC/DC converter in narrow design for 12V from the 24V direct voltage
- SITOP dual – with 2 outputs, e.g. for electronic loads that are supplied with ±15 volts
- SITOP flexi – flexibly adjustable output
- 3 to 52 V DC for extensive functions such as adjustable output current 2 to 10 A, current monitor and sensor cable





# Expansion modules

Our extensive range of expansion modules offers reliable protection against the most diverse hazard sources.



SITOP modular and expansion modules.

**Buffer module against brief power failure**  
Power failures usually only last a few 100 ms – voltage drops that the buffer module, in combination with the SITOP modular basic units, bridges reliably and cost-effectively. Electrolytic capacitors provide the energy without delay when required.

**Redundancy for even more safety**  
Additional protection against failure of the 24 V DC supply is provided by the redundancy module. Thanks to decoupling via diodes, one failed power supply unit has no influence on the others. In this way, the 24 V supply is always secured.

**Innovative solution for selectivity**  
The SITOP PSE200U selectivity module is specially tailored to the characteristics of switched-mode power supplies. The electronics permit brief current peaks and switch longer overloads off-circuit – even on long thin cables and with “creeping” short circuits in which the current is limited by the high resistance. Miniature circuit breakers do not trip here or they trip too late, even if the power supply could provide the current. The selectivity module switches the faulty load feeder off reliably and supply to the remaining loads continues completely interruption-free, so total failure of the plant can be avoided. The fault is reported via a common signaling contact and indicated by an LED on the affected feeder. The fault can thus be located quickly and standstill times minimized.

## 1 Signaling module

- Floating signal contacts for “output voltage o.k.” and “operating readiness o.k.”
- Power supply can be turned on and off via remote control
- Simply insert and screw the module onto the basic unit 6EP1xxx-3BA00

## 2 SITOP modular basic unit

## 3 Redundancy module

- 2 integral diodes for decoupling two 5 A to 20 A basic units, or one 40 A basic unit
- Group signals “Infeed 1 and 2 o.k.” via green LED and floating relay contact (CO contact)
- LED and relay switching threshold adjustable from 20 to 25 V DC

## 4 Buffer module

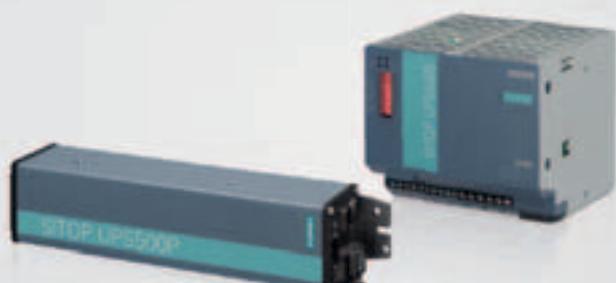
- Cost-effective protection against brief power failures up to 3 seconds
- Load current to 40 A
- Support for the power supply unit during brief periods of increased current requirement
- Connection to the SITOP modular basic unit via just two cables

## 5 SITOP PSE200U selectivity module

- Monitoring of up to 4 load feeders
- Each output adjustable between 0.5 and 3 A or 3 and 10 A
- Safe detection of overloads even on high-resistance cables
- Uninterruptible maintenance of the 24 V DC for other loads
- 3-color LED per output for fast fault locating
- Floating common signaling contact for remote diagnosis
- Remote reset and reset via pushbutton per channel
- The channels can be switched in successively to reduce the strain on the power supply module
- Easy to configure



The SITOP DC UPS with battery modules protects against long power failures.



The innovative UPS500S and UPS500P (IP65) with long-life capacitors save on battery replacement.

## Reliable 24 V DC at all times – even when the power fails

Power failures can cause plant standstills, take up time, and generate costs. SITOP offers three solutions to counter this:

- Buffer module for cost-effective supplementation of the SITOP modular. Electrolytic capacitors buffer the 24 V DC for up to 3s.
- SITOP DC UPS with lead gel battery for bridging power failures for up to a period of hours to allow processes to continue.
- SITOP UPS500, the totally maintenance-free UPS with double-layer capacitors for 24 V DC buffering up to a period of minutes for backing up data and powering down the application.

Both DC UPS systems can be easily integrated into PC-based automation solutions using a free software tool. It supports further processing of the status messages, safe powering down, and correct restart of the system.

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

### SITOP DC UPS with battery modules

Compact DC UPS modules ensure continued operation depending on battery capacity and power requirements, even over a period of hours.

#### High availability through battery management

The sophisticated battery management system ensures optimal charging of the batteries – and thus reliable battery readiness. The active battery test function even checks the age of the battery. That makes preventive replacement of the battery superfluous – and results in significant cost savings.

#### Extremely communicative

All the relevant messages are output via floating contacts, and optionally also via serial interface or USB.

- DC UPS modules 6 A, 15 A and 40 A
- Maintenance-free battery modules up to 12 Ah
- Monitoring of operational readiness, battery feeder, age and charge status
- Long service life of the loads and batteries through battery management
- Interruption-free transition from standby mode to buffer mode

### Maintenance-free DC UPS with capacitors: SITOP UPS500

The high-capacity double-layer capacitors store enough energy for powering down PC-based systems.

#### Completely maintenance-free

Even in high ambient temperatures, the capacitors still have an extremely long service life. There is no need for maintenance or replacement of the energy store so the investment in the DC UPS pays off after a short time. And because the capacitors do not emit any gases, there is also no need for control cabinet ventilation. Short charging times quickly restore buffer readiness after a power failure.

#### Can be used inside and outside the control cabinet

The UPS500S for rail mounting can be supplemented with add-on modules to extend the buffering time. For this purpose, the SITOP UPS500P is designed in degree of protection IP65 and can be used in distributed configurations, e. g. supplied by the new SITOP PSU300P power supply unit. The long design of the aluminum housing is optimally suitable for support arm mounting.

- SITOP UPS500S 15 A, up to 20 kW
- SITOP UPS500P 7 A, 5/10 kW in IP65
- Capacitors save on battery replacement
- Long service life even at high temperatures
- No ventilation of the installation site necessary

## **Further information**

More about SITOP:

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

Information material for downloading:

[www.siemens.com/simatic/printmaterial](http://www.siemens.com/simatic/printmaterial)

Order electronically over the Internet using the A&D Mall:

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

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# SITOP power supply

Technical data



## SITOP Power Supply

Answers for industry.

**SIEMENS**

# Selection table

## SITOP power supplies

Input voltage	Output current	modular	smart	LOGO!Power	"Special design, special use"	SIMATIC design	Others
<b>Output voltage 24 V</b>							
1-phase 120V AC, 230V AC	0.5 A				6EP1331-2BA10		
	1.3 A			6EP1 331-1SH02			
	2 A				6ES7307-1BA00-0AA0		
	2.5 A	6EP1332-2BA10		6EP1 332-1SH42	6EP1232-1AA00	6EP1332-1SH71	6EP1332-1SH12
	3.5 A					6EP1332-1SH31	
	3.7 A			6EP1332-2BA00			
	4 A			6EP1332-1SH51	6EP1232-1AA10		6EP1332-1SH22
	5 A	6EP1333-3BA00	6EP1333-2AA01		6EP1333-1AL12	6ES7307-1EA80-0AA0	
		6EP1333-3BA00-8AC0	6EP1333-2BA01			6ES7307-1EA00-0AA0	
	6 A			6EP1233-1AA00			
	10 A	6EP1334-3BA00	6EP1334-2AA01		6EP1334-1AL12	6ES7307-1KA01-0AA0	6EP1334-1SH01
		6EP1334-3BA00-8AB0	6EP1334-2BA01				
			6EP1334-2AA01-0AB0				
	12 A				6EP1234-1AA00		
	20 A	6EP1336-3BA00					
		6EP1336-3BA00-8AA0					
	40 A	6EP1337-3BA00					

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Input voltage	Output current	modular	"Special design, special use"	SIMATIC design	Others
<b>Output voltage 24 V</b>					
3-phase 400 to 500 V AC	5 A	6EP1333-3BA00 (...-8AC0) <sup>1)</sup>			
	8 A		6EP1 433-2CA00	6ES7 148-4PC00-0HA0	
	10 A	6EP1334-3BA00 (...-8AB0) <sup>1)</sup>			6EP1434-2BA00
	20 A	6EP1436-3BA10			6EP1436-2BA00
		6EP1436-3BA00			
		6EP1436-3BA00-8AA0			
	30 A				6EP1437-2BA00
	40 A	6EP1437-3BA10			6EP1437-2BA10
		6EP1437-3BA00			
		6EP1437-3BA00-8AA0			
48 to 220 V DC	0.375 A		6EP1731-2BA00		
48 to 110 V DC	2 A				6EP1732-0AA0
24 to 110 V DC	2 A			6ES7305-1BA80-0AA0	
	2.5 A				6EP1332-1SH12
110 to 350 V DC	4 A				6EP1332-1SH22
	10 A				6EP1 334-1SH01

<sup>1)</sup>Connection to 2 phases 230 to 500 V AC – see data sheet SITOP modular 1-/2-phase

Input voltage	Output current	modular	smart	LOGO!Power	"Special design, special use"
<b>Output voltage 5, 12, 15, 48, ... V DC</b>					
1-phase 120 V AC, 230 V AC	5 V/3 A			6EP1 311-1SH02	
	5 V/6.3 A			6EP1 311-1SH12	
	12 V/1.9 A			6EP1 321-1SH02	
	12 V/4.5 A			6EP1 322-1SH02	
	15 V/1.9 A			6EP1 351-1SH02	
	15 V/4 A			6EP1 352-1SH02	
	3 to 52 V/2 to 10 A				6EP1353-2BA00
	2 x 15 V/3.5 A				6EP1353-0AA00
24 V DC	12 V/2.5 A				6EP1621-2BA00
3-phase 400 to 500 V AC	48 V/10 A		6EP1456-2BA00		
	48 V/20 A	6EP1457-3BA00			

# SITOP modular

## The modular power supply



Technical data		SITOP modular 1-phase and 2-phase <sup>1)</sup>			
Output voltage/current	24 V/5 A	24 V/10 A	24 V/20 A	24 V/40 A	
Order no.	6EP1333-3BA00	6EP1334-3BA00	6EP1336-3BA00	6EP1337-3BA00	
– with protection-coated PCB	6EP1333-3BA00-8AC0	6EP1334-3BA00-8AB0	6EP1336-3BA00-8AA0	–	
Rated input voltage	120 – 230/230 – 500 V AC	120 – 230/230 – 500 V AC	120/230 V AC	120/230 V AC	
– Range	85...264/176...550 V AC	85...264/176...550 V AC	93...132/183...264 V AC	95...132/190...264 V AC	
Mains buffering	> 25 ms (at 120/230 V)	> 25 ms (at 120/230 V)	> 20 ms (at 230 V)	> 20 ms (at 230 V)	
Rated line frequency	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	
Rated input current	2.2 to 1.2/1.2 to 0.61 A	4.4 to 2.4/2.4 to 1.1 A	7.7/3.5 A	15.0/8.0 A	
– Inrush current (25 °C)	< 35 A	< 35 A	< 60 A	< 125 A	
– Recommended miniature circuit breaker	6 A charact. C or 3RV1021-1xA10	6 A charact. C or 3RV1021-1xA10	10 A charact. C or 3RV1421-1xA10	20 A charact. C or 3RV1421-xxA10	
Rated output voltage	24 V DC	24 V DC	24 V DC	24 V DC	
– Tolerance	± 3 %	± 3 %	± 3 %	± 3 %	
– Setting range	24...28.8 V DC	24...28.8 V DC	24...28.8 V DC	24...28.8 V DC	
Rated output current	5 A	10 A	20 A	40 A	
Efficiency at rated values, approx.	87 %	87 %	89 %	88 %	
Switching in parallel	Yes, output characteristic can be switched to parallel operation				
Brief overload characteristics	Power boost: 3 x rated output current for 25 ms				
Electronic short-circuit protection	Yes, constant current or latching shutdown selectable. Constant current: 1.15 x rated output current				
Radio interference suppression (EN 55022)	Class B	Class B	Class B	Class B	
Line harmonics limitation (EN 61000-3-2)	Yes	Yes	Yes	No	
Degree of protection (EN 60529)	IP20	IP20	IP20	IP20	
Ambient temperature	0...+60 °C	0...+60 °C	0...+60 °C	0...+60 °C	
Dimensions (W x H x D) in mm	70 x 125 x 125	90 x 125 x 125	160 x 125 x 125	240 x 125 x 125	
Weight approx.	1.2 kg	1.4 kg	2.2 kg	2.9 kg	
Certification	CE, cULus, SEMI F47 <sup>2)</sup>	CE, cULus, SEMI F47 <sup>2)</sup>	CE, cULus, SEMI F47 <sup>3)</sup>	CE, cULus, SEMI F47 <sup>4)</sup>	

<sup>1)</sup> Connection to 2 phases of a three-phase supply system

<sup>2)</sup> At input voltage 120 to 230 V AC

<sup>3)</sup> In conjunction with a buffer module

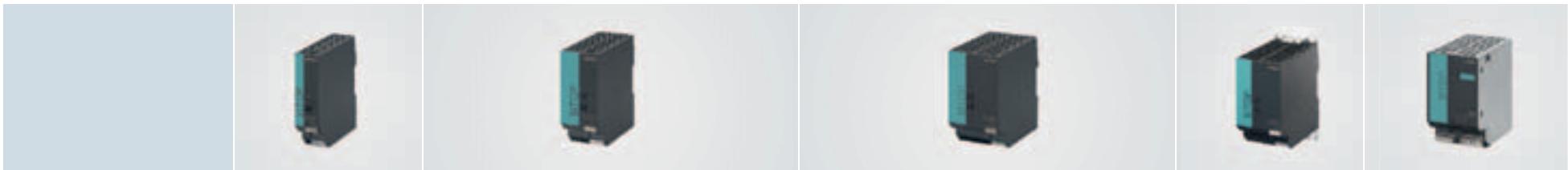
<sup>4)</sup> In conjunction with two buffer modules

	<b>new!</b> 	<b>new!</b> 	<b>new!</b> 	<b>SITOP modular 3-phase</b> 	<b>SITOP modular 3-phase, 48V</b> 
<b>Technical data</b>	<b>SITOP modular 3-phase</b>				<b>SITOP modular 3-phase, 48V</b>
<b>Output voltage/current</b>	<b>24 V/20 A</b>	<b>24 V/20 A</b>	<b>24 V/40 A</b>	<b>24 V/40 A</b>	<b>48 V/20 A</b>
Order no.	6EP1436-3BA10	6EP1436-3BA00	6EP1437-3BA10	6EP1437-3BA00	6EP1457-3BA00
– with protection-coated PCB	–	6EP1436-3BA00-8AA0	–	6EP1437-3BA00-8AA0	–
Rated input voltage	400–500 V 3 AC	400–500 V 3 AC	400–500 V 3 AC	400–500 V 3 AC	400–500 V 3 AC
– Range	360...550 V 3 AC <sup>1)</sup>	340...550 V 3 AC	320...575 V 3 AC	340...550 V 3 AC	340...550 V 3 AC
Mains buffering	> 15 ms (at 400 V)	> 6 ms (at 400 V)	> 15 ms (at 400 V)	> 6 ms (at 400 V)	> 6 ms (at 400 V)
Rated line frequency	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
Rated input current	1.1–0.9 A	1.1–0.9 A	2.6–1.2 A	2.0–1.7 A	approx. 2.2 A (at 400 V)
– Inrush current (25 °C)	< 18 A	< 35 A	< 56 A	< 70 A	< 70 A
– Required miniature circuit breaker	6–16 A charact. C, 3-ph. coupled or 3RV1021-1DA10, 3RV1721-1DD10	6–16 A charact. C, 3-ph. coupled or 3RV1021-1DA10, 3RV1721-1DD10	10–16 A charact. C, 3-ph. coupled or 3 RV1021-1DA10, 3RV1721-1DD10	10–16 A charact. C, 3-ph. coupled or 3RV1021-1DA10, 3RV1721-1DD10	10–16 A char. C, 3-ph. coupled or 3RV1021-1DA10, 3RV1721-1DD10
Rated output voltage	24 V DC	24 V DC	24 V DC	24 V DC	48 V DC
– Tolerance	± 3 %	± 3 %	± 3 %	± 3 %	± 3 %
– Setting range	24...28.8 V DC	24...28.8 V DC	24...28.8 V DC	24...28.8 V DC	42...56 V DC
Rated output current	20 A	20 A	40 A	40 A	20 A
Efficiency at rated values, approx.	93 %	90 %	93 %	90 %	90 %
Switching in parallel	Yes, output characteristic can be switched to parallel operation				
Brief overload characteristics	Power boost: 3 x rated output current for 25 ms, extra power <sup>1)</sup> : 1.5 x rated output current for 5 s/min				
Electronic short-circuit protection	Yes, constant current or latching shutdown selectable. Constant current: approx. 1.15 x rated output current				
Radio interference suppression (EN 55022)	Class B	Class B	Class B	Class B	Class B
Line harmonics limitation (EN 61000-3-2)	Yes	Yes	Yes	Yes	Yes
Degree of protection (EN 60529)	IP20	IP20	IP20	IP20	IP20
Ambient temperature	-10...+60 °C	0...+60 °C	-10...+60 °C	0...+60 °C	0...+60 °C
Dimensions (W x H x D) in mm	70 x 125 x 125	160 x 125 x 125	150 x 125 x 150	240 x 125 x 125	240 x 125 x 125
Weight approx.	1.2 kg	2.0 kg	3.4 kg	3.2 kg	3.2 kg
Certification	CE, cULus	CE, UL, CSA, SEMI F47	CE, cULus	CE, UL, CSA, SEMI F47	CE, UL, CSA

<sup>1)</sup> Extra power only available with 6EP1436-3BA10 and 6EP1437-3BA10

# SITOP smart

## The slim universal power supply



Technical data	SITOP smart 1-phase						SITOP smart 3-phase, 48V
Output voltage/current	24 V/2.5 A	24 V/5 A	24 V/5 A	24 V/10 A	24 V/10 A	24 V/10 A Wallmount	48 V/10 A
Order no.	6EP1332-2BA10	6EP1333-2AA01	6EP1333-2BA01	6EP1334-2AA01	6EP1334-2BA01	6EP1334-2AA01-0AB0	6EP1456-2BA00
Rated input voltage – Range	120/230 V AC 85...132/ 170...264 V AC	120/230 V AC 85...132/ 170...264 V AC	120/230 V AC 85...132/ 170...264 V AC	120/230 V AC 85...132/ 170...264 V AC	120/230 V AC 85...132/ 170...264 V AC	120/230 V AC 85...132/ 170...264 V AC	400–500 V 3 AC 360...550 V 3 AC
Mains buffering	> 20 ms (at 93/187 V)	> 20 ms (at 93/187 V)	> 20 ms (at 93/187 V)	> 20 ms (at 93/187 V)	> 20 ms (at 93/187 V)	> 20 ms (at 93/187 V)	> 7 ms (at 400 V)
Rated line frequency	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
Rated input current – Inrush current (25 °C) – Recommended <sup>1)</sup> miniature circuit breaker	1.1/0.65 A < 14 A 3 A characteristic C	2.1/1.15 A < 32 A 6 A characteristic C	2.1/1.15 A < 32 A 6 A characteristic C	4.1/2.4 A < 65 A 10 A characteristic C	4.1/2.0 A < 65 A 10 A characteristic C	4.1/2.0 A < 65 A 10 A characteristic C	1.1 to 0.9 A < 18 A From 6 – 16 A charact. C, 3-ph. coupled or 3 RV1021-1DA10 or 3 RV1721-1DD10
Rated output voltage – Tolerance – Setting range	24 V DC ± 3 % 22.8...28 V DC	24 V DC ± 3 % 22.8...28 V DC	24 V DC ± 3 % 22.8...28 V DC	24 V DC ± 3 % 22.8...28 V DC	24 V DC ± 3 % 22.8...28 V DC	24 V DC ± 3 % 22.8...28 V DC	48 V DC ± 3 % 42...56 V DC
Rated output current	2.5 A (3 A to +45 °C)	5 A (6 A to +45 °C)	5 A (6 A to +45 °C)	10 A (12 A to +45 °C)	10 A (12 A to +45 °C)	10 A (12 A to +45 °C)	10 A
Efficiency at rated values approx.	85 %	87 %	87 %	90 %	91 %	90 %	93 %
Switching in parallel	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Brief overload characteristics	Extra power: 1.5 x rated output current for 5 s/min						
Electronic short-circuit protection	Yes, constant current						
Radio interference suppression (EN 55022)	Class B	Class B	Class B	Class B	Class B	Class B	Class B
Line harmonics limitation (EN 61000-3-2)	Not applicable	No	Yes	No	Yes	Yes	Yes
Degree of protection (EN 60529)	IP20	IP20	IP20	IP20	IP20	IP 20	IP 20
Ambient temperature	0...+60 °C	0...+60 °C	0...+60 °C	0...+60 °C	0...+60 °C	0...+60 °C	0...+60 °C
Dimensions (W x H x D) in mm	32.5 x 125 x 125	50 x 125 x 125	50 x 125 x 125	70 x 125 x 125			
Weight approx.	0.4 kg	0.5 kg	0.5 kg	0.75 kg	0.8 kg	0.85 kg	1.2 kg
Certification	CE, UL, CSA, GL, ATEX, Hazardous Location Class I Div 2 Groups A, B, C & D, T4 CE, cULus						CE, cULus

<sup>1)</sup> 6EP1456-2BA00: Fusing required

# LOGO!Power – the mini power packs

									
Technical data	54 mm design				72 mm design				90 mm design
SITOP	5 V/3 A	12 V/1.9 A	15 V/1.9 A	24 V/1.3 A	5 V/6.3 A	12 V/4.5 A	15 V/4 A	24 V/2.5 A	24 V/4 A
Order no.	6EP1311-1SH02	6EP1321-1SH02	6EP1351-1SH02	6EP1331-1SH02	6EP1311-1SH12	6EP1322-1SH02	6EP1352-1SH02	6EP1332-1SH42	6EP1332-1SH51
Rated input voltage – Range	100 – 240 V AC 85...264 V AC				100 – 240 V AC 85...264 V AC				100 – 240 V AC 85...264 V AC
Mains buffering	> 40 ms (at 187 V)				> 40 ms (at 187 V)				> 40 ms (at 187 V)
Rated line frequency	50/60 Hz				50/60 Hz				50/60 Hz
Rated input current – Inrush current (25 °C)	0.36 to 0.22 A < 15 A	0.53 to 0.30 A	0.63 to 0.33 A	0.70 to 0.35 A	0.71 to 0.37 A < 30 A	1.13 to 0.61 A	1.24 to 0.68 A	1.22 to 0.66 A	1.95 to 0.97 A < 30 A
– Recommended miniature circuit breaker	From 10 A characteristic C resp. 16 A characteristic B				From 10 A characteristic C resp. 16 A characteristic B				From 10 A char. C resp. 16 A char. B
Rated output voltage – Tolerance	5 V DC ± 3 %	12 V DC	15 V DC	24 V DC	5 V DC ± 3 %	12 V DC	15 V DC	24 V DC	24 V DC ± 3 %
– Setting range	4.6...5.4 V DC	10.5...16.1 V DC	10.5...16.1 V DC	22.2...26.4 V DC	4.6...5.4 V DC	10.5...16.1 V DC	10.5...16.1 V DC	22.2...26.4 V DC	22.2...26.4 V DC
Rated output current	3.0 A	1.9 A	1.9 A	1.3 A	6.3 A	4.5 A	4.0 A	2.5 A	4.0 A
Efficiency at rated values, approx.	76 %	80 %	80 %	82 %	83 %	85 %	85 %	87 %	89 %
Switching in parallel	Yes				Yes				Yes
Electronic short-circuit protection	Yes, constant current				Yes, constant current				Yes, constant current
Radio interference suppression (EN 55022)	Class B				Class B				Class B
Line harmonics limitation (EN 61000-3-2)	Not applicable				Not applicable				Yes
Degree of protection (EN 60529)	IP20				IP20				IP20
Ambient temperature	–20...+55 °C				–20...+55 °C				–20...+55 °C
Dimensions (W x H x D) in mm	54 x 90 x 55				72 x 90 x 55				90 x 90 x 55
Weight approx.	0.17 kg				0.25 kg				0.34 kg
Certification	CE, cULus, FM, GL, ATEX	CE, cULus, FM, GL, ABS, ATEX	CE, cULus, FM, GL, ATEX	CE, cULus, FM, GL, ABS, ATEX, SEMI F47, Class2	CE, cULus, FM, GL, ATEX	CE, cULus, FM, GL, ABS, ATEX	CE, cULus, FM, GL, ATEX	CE, cULus, FM, GL, ABS, ATEX, SEMI F47, Class2	CE, cULus, FM, GL, ABS, ATEX

# SITOP facets special types

								
Technical data	SITOP power 0.5		SITOP flat design		SITOP PSA100E			
Output voltage/current	24 V/0.375 A	24 V/0.5 A	24 V/5 A	24 V/10 A	24 V/2.5 A	24 V/4 A	24 V/6 A	24 V/12 A
Order no.	6EP1731-2BA00	6EP1331-2BA10	6EP1333-1AL12	6EP1334-1AL12	6EP1232-1AA00	6EP1232-1AA10	6EP1233-1AA00	6EP1234-1AA00
Rated input voltage	48–220 V DC	120–230 V AC	120/230 V AC	120/230 V AC	230 V AC	230 V AC	230 V AC	230 V AC
– Range	30–264 V DC	93–264 V AC	85...132/ 170...264 V AC	85...132/ 170...264 V AC	187...264 V AC	187...264 V AC	187...264 V AC	187...264 V AC
Mains buffering	> 10 ms (at 220 V DC)	> 10 ms (at 230 V)	> 20 ms (at 93/187 V)	> 20 ms (at 93/187 V)	> 10 ms (at 230 V)	> 10 ms (at 230 V)	> 10 ms (at 230 V)	> 10 ms (at 230 V)
Rated line frequency	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
Rated input current	0.3–0.06 A	0.22–0.13 A	2.2/1.2 A	4/2.5 A	0.65 A	1.1 A	1.4 A	2.5 A
– Inrush current (25 °C)	< 35 A	< 23 A	< 32 A	< 65 A	< 30 A	< 30 A	< 35 A	< 50 A
– Recommended miniature circuit breaker	From 3 A charact. C	From 3 A charact. C	From 6 A charact. C	From 10 A charact. C	From 6 A charact. C	From 6 A charact. C	From 10 A charact. C	10 A charact. C
Rated output voltage	24 V DC	24 V DC	24 V DC	24 V DC	24 V DC	24 V DC	24 V DC	24 V DC
– Tolerance	± 3 %	± 3 %	± 1 %	± 1 %	± 3 %	± 3 %	± 3 %	± 3 %
– Setting range	–	–	22...29 V DC	22...29 V DC	23...26 V DC	23...26 V DC	23...26 V DC	23...26 V DC
Rated output current	0.375 A	0.5 A	5 A	10 A	2.5 A (+45 °C)	4 A (+45 °C)	6 A (+45 °C)	12 A (+45 °C)
Efficiency at rated values, approx.	68 %	74 %	88 %	89 %	84 %	87 %	87 %	88 %
Switching in parallel	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Electronic short-circuit protection	Yes, restart	Yes	Yes, restart	Yes, restart	Yes, restart	Yes, restart	Yes, restart	Yes, restart
Radio interference suppression (EN 55022)	Class B	Class B	Class B	Class B	Class B	Class B	Class B	Class B
Line harmonics limitation (EN 61000-3-2)	Not applicable	Not applicable	No	No	Not applicable	No	No	No
Degree of protection (EN 60529)	IP20	IP20	IP20	IP20	IP20	IP20	IP20	IP20
Ambient temperature	–20...+70 °C	–20...+70 °C	0...+60 °C	0...+60 °C	–10 °C...+70 °C (Derating 45 °C...70 °C)			
Installation	Standard mounting rail	Standard mounting rail	Standard mounting rail	Standard mounting rail	Wall mounting and standard mounting rail, variFromle installation position			
Dimensions (W x H x D) in mm	22.5 x 80 x 91	22.5 x 80 x 91	160 x 130 x 60	160 x 130 x 60	approx. 52 x 170 x 110 incl. mounting rail clip			
Weight approx.	0.14 kg	0.11 kg	0.6 kg	0.72 kg	0.8 kg	0.8 kg	0.9 kg	0.9 kg
Certification	CE, cULus	CE, cULus	CE, cULus	CE, cULus	CE, cULus	CE, cULus	CE, cULus	CE, cULus

# SITOP in special design, for special uses

					
Technical data	Class2 approval	SITOP PSU300P in IP67	SITOP DC/DC	SITOP dual	SITOP flexi
Output voltage/current	24 V/3.7 A	24 V/8 A	12 V/2.5 A	2 x 15 V/3.5 A	3...52 V/10A
Order no.	6EP1332-2BA00	6EP1 433-2CA00	6EP1621-2BA00	6EP1353-0AA00	6EP1353-2BA00
Rated input voltage	120/230V AC	400 – 480V 3 AC	24V DC	120 – 230V AC	120/230V AC
– Range	93...132V/187...264V AC	340...550V 3 AC	18.5...30.2V DC	93...264V AC	85...132V/170...264V AC
Mains buffering	> 10 ms (at 93/187 V)	15 ms (at 400V)	> 5 ms	> 10/40 ms (at 120/187 V)	> 10 ms (at 93/187 V)
Rated line frequency	50/60 Hz	50/60 Hz	–	50/60 Hz	50/60 Hz
Rated input current	1.8/0.7 A	2 A	1.6 A	1.6/1.0 A	2.2/0.9 A
– Inrush current (25 °C)	< 32 A	< 40 A	< 20 A for 20 ms	< 30 A, < 3 ms	< 32 A
– Recommended miniature circuit breaker	6 A charact. C	3RV1021-1DA10	10 A charact. B	10 A characteristic C, 6 A charact. C	16 A characteristic B
Rated output voltage	24V DC	24V DC	12V DC	2 x 15V DC	24V DC
– Tolerance	± 3 %	-5%/+3 %	± 3 %	± 3 %	± 1 %
– Setting range	22.8...26.4V DC <sup>1)</sup>	–	12...14V DC	14.5...17V DC	3...52V DC
Rated output current	3.7 A	8 A	2.5 A	2 x 3.5 A (2 x 2.5 A from 45 °C)	2 to 10 A (max. 125 W)
Efficiency at rated values, approx.	> 80 %	88 %	80 %	80 %	84 % (at 24V/5 A)
Switching in parallel	Yes <sup>1)</sup>	No	Yes, 2 units	Yes	Yes
Electronic short-circuit protection	Yes, restart	Yes, restart	Yes, constant current	Yes, restart	Yes, constant current
Radio interference suppression (EN 55022)	Class B	Class A	Class B	Class A	Class B
"Line harmonics limitation"					
(EN 61000-3-2)"	Yes	No	Yes	No	Yes
Degree of protection (EN 60529)	IP20	IP67	IP20	IP20	IP20
Ambient temperature	0...+60 °C	-25 °C...+55 °C	0...+60 °C	0...+60 °C (Derating from 45 °C)	0...+60 °C
Installation	DIN rail	Screw-mounting on SIMATIC ET200pro system rail	DIN rail	DIN rail	DIN rail
Dimensions (W x H x D) in mm	70 x 125 x 125	310 x 135.5 x 90 + plug connector	32.5 x 125 x 125	75 x 125 x 125	75 x 125 x 125
Weight approx.	0.75 kg	2.8 kg	0.26 kg	0.75 kg	0.9 kg
Certification	CE, cULus, Class2	CE, UL 508	CE, cULus	CE	CE, cULus

<sup>1)</sup> Only permissible at an ambient temperature of 0 to 50 °C

# SITOP in SIMATIC design

	<b>new!</b>						<b>new!</b>
Technical data	SIMATIC S7-1200 design	SIMATIC S7-200 design	SIMATIC S7-300 design				SIMATIC ET200pro PS
Output voltage/current	24 V/2.5 A – PM1207	24 V/3.5 A	24 V/2 A	24 V/5 A	24 V/5 A Outdoor <sup>1)</sup>	24 V/10 A	24 V/8 A
Order no.	6EP1332-1SH71	6EP1332-1SH31	6ES7307-1BA00-0AA0	6ES7307-1EA00-0AA0	6ES7307-1EA80-0AA0	6ES7307-1KA01-0AA0	6ES7 148-4PC00-0HA0
Rated input voltage	120/230 V AC	120/230 V AC	120/230 V AC	120/230 V AC	120/230 V AC	120/230 V AC	400-480 V 3 AC
– Range	85...132 V/176...264 V AC	93...132 V/187...264 V AC	85...132 V/170...264 V AC	85...132 V/170...264 V AC	93...132 V/187...264 V AC	85...132 V/170...264 V AC	340...550 V 3 AC
Mains buffering	> 20 ms (at 93/187 V)	> 20 ms (at 93/187 V)	> 20 ms (at 93/187 V)	> 20 ms (at 93/187 V)	> 20 ms (at 93/187 V)	> 20 ms (at 93/187 V)	15 ms (at 400 V)
Rated line frequency	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
Rated input current	1.2/0.67 A	1.65/0.95 A	0.9/0.6 A	2.2/1.3 A	2.2/1.2 A	4.1/1.8 A	2 A
– Inrush current (25 °C)	< 13 A	< 33 A	< 20 A	< 45 A	< 45 A	< 55 A	< 40 A
– Recommended miniature circuit breaker	16 A charact. B, 10 A charact. C	10 A charact. C, 6 A charact. D	3 A charact. C	6 A charact. C	10 A charact. C	10 A charact. C	3RV1021-1DA15 or fuse max. 25 A, time-lag
Rated output voltage	24 V DC	24 V DC	24 V DC	24 V DC	24 V DC	24 V DC	24 V DC
– Tolerance	± 3 %	± 5 %	± 3 %	± 3 %	± 3 %	± 3 %	-5 %/+3 %
– Setting range	–	–	–	–	–	–	–
Rated output current	2.5 A	3.5 A	2 A	5 A	5 A	10 A	8 A
Efficiency at rated values, approx.	83 %	84 %	83 %	87 %	84 %	87 %	88 %
Switching in parallel	Yes, 2 units	Yes, up to 5 units	No	No	No	No	No
Electronic short-circuit protection	Yes, restart	Yes, restart	Yes, restart	Yes, restart	Yes, restart	Yes, restart	Yes, restart
Radio interference suppression (EN 55022)	Class B	Class B	Class B	Class B	Class A	Class B	Class A
Line harmonics limitation (EN 61000-3-2)	Not applicable	Yes	Not applicable	Yes	No	Yes	No
Degree of protection (EN 60529)	IP20	IP20	IP20	IP20	IP20	IP20	IP67
Ambient temperature	0...+60 °C	0...+60 °C	0...+60 °C	0...+60 °C	-25...+70 °C	0...+60 °C	-25 °C...+55 °C
Installation	DIN rail	DIN rail or wall mounting	Can be mounted on S7 rail. Mounting adapter for DIN rail 35x15 mm: 6ES7390-6BA00-0AA0				Screw mounting on SIMATIC ET200pro system rail
Dimensions (W x H x D) in mm	70 x 100 x 75	160 x 80 x 62	50 x 125 x 120	80 x 125 x 120	80 x 125 x 120	120 x 125 x 120	310 x 135.5 x 90 + plug connector
Weight approx.	0.3 kg	0.5 kg	0.42 kg	0.74 kg	0.57 kg	1.1 kg	2.8 kg
Certification	CE, UL, CSA	CE, UL, CSA	CE, UL, CSA	CE, UL, CSA	CE, UL, CSA	CE, UL, CSA	CE, UL 508

<sup>1)</sup> Condensation permissible, increased vibration and shock resistance

# SITOP expansion modules

## The range for all-round protection



				new!	
<b>Technical data</b>	<b>Signaling</b>	<b>Mains buffering</b>	<b>Redundancy</b>		<b>Monitoring</b>
<b>SITOP</b>	<b>Signaling module<sup>1)</sup></b>	<b>Buffer module<sup>2)</sup></b>	<b>Redundancy module</b>	<b>SITOP PSE200U selectivity module</b>	<b>SITOP select diagnosis module</b>
Order no.	6EP1961-3BA10	6EP1961-3BA00	6EP1961-3BA20	6EP1961-2BA10	6EP1961-2BA20
Rated input voltage – Range	Contact rating 240V AC/6 A	24 V DC 24...28.8 V DC	24 V DC 24...28.8 V DC	24 V DC 22...30 V DC	24 V DC 22...30 V DC
Brief description of product/ function	Signaling module for snapping onto the side of the basic unit; automatic contacting, with floating signaling contacts for "Output voltage o.k." and "operating readiness o.k."; with signal input for switching the basic unit ON/OFF remotely.	Buffer module for mains buffering; connection by parallel switching at the output of the basic unit (6EP1x3x-3BA0x); buffer time 100 ms at 40 A to 800 ms at 5 A load current; multiplication possible using parallel switching; maximum buffer time 3 s.	Module for redundancy mode. Decoupling of two 5 A to 20 A power supplies or one 40 A power supply per redundancy module. Floating relay contact and green LED for signaling "Infeed 1 and 2 o.k.", switching threshold adjustable between 20 to 25 V DC.	Module for distributing the 24 V supply over up to four load feeders and their monitoring for overload; selective shutdown of faulty feeders, rated current individually adjustable; with common signaling contact, universal use for all power supplies. Individual load feeders can be switched on sequentially.  Status indication via 3-color LED per channel; remote reset with 24 V signal and reset via pushbutton per channel	Status indication via 2-color LED per channel, common reset via pushbutton, plug-in fuse per channel
Rated output current – Setting range	Not applicable	40 A	40 A (Total output current)	4 x 3 A 0,5 to 3 A	4 x 10 A 3 to 10 A
Efficiency at rated values, approx.	Not applicable	Not applicable	97 %	97 %	97 %
Switching in parallel	Not applicable	Yes	No	No	No
Electronic short-circuit protection	Not applicable	Yes	No	Yes	Yes
Radio interference suppression (EN 55022)	Class B	Class B	Class B	Class B	Class B
Degree of protection (EN 60529)	IP20	IP20	IP20	IP20	IP20
Ambient temperature	0...+60 °C	0...+60 °C	0...+60 °C	0...+60 °C	0...+60 °C
Dimensions (W x H x D) in mm	25 x 125 x 125	70 x 125 x 125	70 x 125 x 125	72 x 80 x 72	72 x 90 x 90
Weight approx.	0.15 kg	1.2 kg	1.0 kg	0.22 kg	0.4 kg
Certification	CE, UL, CSA	CE, UL, CSA	CE, cULus, Hazardous Location Class I Div 2 Groups A, B, C & D, T4; ATEX	CE, cULus	CE, cULus, Hazardous Location Class I Div 2 Groups A, B, C & D, T4; ATEX

<sup>1)</sup> Can only be combined with SITOP modular power supply 6EP1\_\_-3BA00

<sup>2)</sup> Can only be combined with SITOP modular power supply 24 V DC

# Uninterruptible power supplies

## SITOP DC UPS with battery modules for bridging longer power failures



SITOP DC UPS, for longer power failures							
Technical data	DC UPS module 24 V/6 A	DC UPS module 24 V/15 A	DC UPS module 24 V/40 A	DC UPS battery module 24 V/1.2 Ah <sup>1)</sup>	DC UPS battery module 24 V/3.2 Ah <sup>1)</sup>	DC UPS battery module 24 V/7 Ah <sup>1)</sup>	
SITOP Output voltage/current	DC UPS module 24 V/6 A	DC UPS module 24 V/15 A	DC UPS module 24 V/40 A	DC UPS battery module 24 V/1.2 Ah <sup>1)</sup>	DC UPS battery module 24 V/3.2 Ah <sup>1)</sup>	DC UPS battery module 24 V/7 Ah <sup>1)</sup>	
Order no. – with serial interface – with USB interface	6EP1931-2DC21 6EP1931-2DC31 6EP1931-2DC42	6EP1931-2EC21 6EP1931-2EC31 6EP1931-2EC42	6EP1931-2FC21 6EP1931-2FC42	6EP1935-6MC01	6EP1935-6MD11	6EP1935-6ME21	
Input voltage	24 V DC, 22...29 V, Infeed from 24 V SITOP power supply: Any	From 24 V/5 A	From 24 V/10 A	Recomm. end-of-charge voltage: 26.4...27.3 V DC (> +20°C), 27.3...29.0 V DC (< +20°C)			
Rated input current	6 A + approx. 0.6 A with empty battery	15 A + approx. 1 A with empty battery	40 A + approx. 2.6 A with empty battery	Charging current max. 0.3 A	Charging current 0.7 A	Charging current max. 2.5 A	
Rated output voltage	24 V DC (Upstream SITOP device or battery), charging voltage: 27.0 V			24 V DC, 22 to 27.0 V DC (No-load operation)			
Rated output current	6 A, Charging current: typ. 0.4 A	15 A, Charging current: typ. 0.7 A	40 A, Charging current: typ. 2 A	2.5 A	10 A	20 A	
Efficiency at rated values, approx.	Buffer mode: 94 %, Standby mode: 95 %	Buffer mode: 96 %, Standby mode: 96 %	Buffer mode: 97 %, Standby mode: 97 %	Not applicable	Not applicable	Not applicable	
Overload and short-circuit protection	Electronic, automatic restart			Installed battery fuse 7.5 A/32 V	15 A/32 V	7.5 A/32 V	
Switching in parallel	No	No	No	Yes	Yes	Yes	
Radio interference suppression (EN 55022)	Class B	Class B	Class B				
Degree of protection (EN 60529)	IP20	IP20	IP20	IP00	IP00	IP00	
Ambient temperature	0...+60°C	0...+60°C	0...+60°C	+5...+40°C	+5...+40°C	+5...+40°C	
Installation	DIN rail	DIN rail	DIN rail	DIN rail	DIN rail	Wall mounting	
Dimensions (W x H x D) in mm	50 x 125 x 125	50 x 125 x 125	102 x 125 x 125	96 x 106 x 108	190 x 151 x 82	186 x 168 x 121	
Weight approx.	0.4 kg	0.4 kg	1.1 kg	2 kg	3.5 kg	6.0 kg	
Certification	CE, cULus	CE, cULus	CE, cULus	CE, cULus	CE, cULus	CE, cULus	

<sup>1)</sup> Also available: high-temperature battery module 24 V/2.5 Ah (6EP1935-6MD31) for ambient temperature -40 to +60 °C and battery module 24 V/12 Ah (6EP1935-6MF01)

## Selection table battery modules and power failure times

					
Load current	Battery module 1.2 Ah (6EP1935-6MC01)	Battery module 3.2 Ah (6EP1935-6MD11)	Battery module 7 Ah (6EP1935-6ME21)	Battery module 12 Ah (6EP1935-6MF01)	Battery module <sup>1)</sup> 2.5 Ah (6EP1935-6MD31)
1 A	30 min.	2.5 h	6 h	11 h	2 h
2 A	11 min.	45 min.	2.5 h	5 h	45 min.
3 A	4 min.	25 min.	1.5 h	3 h	30 min.
4 A	2 min.	20 min.	45 min.	2 h	20 min.
6 A	1 min.	10 min.	30 min.	1 h	13 min.
8 A	–	4 min.	20 min.	40 min.	9 min.
10 A	–	1.5 min.	15 min.	30 min.	7 min.
12 A	–	1 min.	10 min.	25 min.	5.5 min.
14 A	–	50 s	8 min.	20 min.	4.5 min.
16 A	–	40 s	6 min.	15 min.	4 min.
20 A	–	–	2 min.	11 min.	–

<sup>1)</sup> High temperature battery module for ambient temperature –40 to +60 °C

# Uninterruptible power supplies – SITOP UPS500 maintenance-free DC UPS with capacitor technology

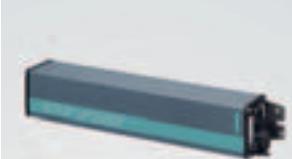


Technical data		Maintenance-free DC UPS		
SITOP	UPS500S – Basic unit 15 A	UPS501 – Expansion module	UPS500P – Basic unit 7 A, degree of protection IP65	
Energy	2.5 kWs	5 kWs	5 kWs	10 kWs
Order no.	6EP1 933-2EC41	6EP1 933-2EC51	6EP1935-5PG01	6EP1933-2NC01 <sup>1)</sup>
Input voltage	24 V DC, 22...29 V, Infeed from SITOP 24 V	Infeed from basic unit	24 V DC, 22.5...29 V, Infeed from SITOP 24 V	
Rated input current	15.2 A + approx. 2.3 A in charging mode	Description: expansion module for extending the buffering time, up to 3 units can be switched in parallel with one UPS500S basic unit	7 A + approx. 2 A in charging mode	
Rated output voltage	In buffer mode and normal mode 24 V DC +/-3 %		In buffer mode and normal mode 24 V DC +/-3 %	
Rated output current	15 A, charging current 1 A (factory setting) or 2 A selectable		7 A, charging current 2 A	
Efficiency at rated values, approx.	97.50 %		96.90 %	
Overload and short-circuit protection	Electronic, automatic restart		Electronic, automatic restart	
Switching in parallel	No	Yes, up to 3 units	No	No
Radio interference suppression (EN 55022)	Class B	Class B	Class B	Class B
Degree of protection (EN 60529)	IP20	IP20	IP20	IP65
Ambient temperature	0...+60 °C	0...+60 °C	0...+60 °C	0...+55 °C
Installation	DIN rail	DIN rail	DIN rail	Screw mounting in all mounting positions
Dimensions (W x H x D) in mm	120 x 125 x 125	120 x 125 x 125	70 x 125 x 125	400 (without connector) x 80 x 80
Weight approx.	1.0 kg	1.2 kg	0.7 kg	1.9 kg
Certification	CE, UL 508/CSA C22.2, File E197259		CE, UL508 available soon, File E179336	

<sup>1)</sup> Connector set with input and output connector as well as prepared USB cable in 2 m length: Order no. 6EP1975-2ES00

# Buffer times and charging times

## SITOP UPS500



SITOP UPS500S/501S UPS500P configurations										UPS500P
Basic unit	2.5 kWs	5 kWs	2.5 kWs	5 kWs	2.5 kWs	5 kWs	2.5 kWs	5 kWs	5 kWs	10 kWs
Expansion modules	–	–	1 x 5 kWs	1 x 5 kWs	2 x 5 kWs	2 x 5 kWs	3 x 5 kWs	3 x 5 kWs	–	–
Total energy	2.5 kWs	5 kWs	7.5 kWs	10 kWs	12.5 kWs	15 kWs	17.5 kWs	20 kWs	5 kWs	10 kWs

Buffer times										
Load current										
0.5 A	134 sec	236 sec	390 sec	478 sec	632 sec	748 sec	851 sec	1007 sec	284 sec	647 sec
0.8 A	90 sec	167 sec	266 sec	346 sec	440 sec	527 sec	580 sec	706 sec	190 sec	435 sec
1 A	75 sec	138 sec	219 sec	296 sec	365 sec	414 sec	490 sec	572 sec	153 sec	351 sec
2 A	38 sec	76 sec	122 sec	156 sec	203 sec	230 sec	265 sec	306 sec	80 sec	152 sec
3 A	26 sec	52 sec	82 sec	106 sec	136 sec	159 sec	186 sec	213 sec	53 sec	108 sec
4 A	19 sec	39 sec	61 sec	81 sec	101 sec	120 sec	139 sec	160 sec	40 sec	84 sec
5 A	15 sec	31 sec	49 sec	65 sec	81 sec	95 sec	111 sec	130 sec	30 sec	68 sec
6 A	12 sec	26 sec	40 sec	55 sec	67 sec	80 sec	94 sec	106 sec	25 sec	57 sec
7 A	10 sec	21 sec	34 sec	47 sec	58 sec	69 sec	81 sec	82 sec	21 sec	49 sec
8 A	8 sec	18 sec	29 sec	40 sec	50 sec	59 sec	69 sec	79 sec	–	–
10 A	6 sec	15 sec	23 sec	32 sec	39 sec	47 sec	54 sec	62 sec	–	–
12 A	4 sec	12 sec	19 sec	26 sec	32 sec	38 sec	44 sec	52 sec	–	–
15 A	3 sec	9 sec	14 sec	20 sec	25 sec	30 sec	35 sec	40 sec	–	–

Charging times										
Charging current										
2 A	54 sec	120 sec	158 sec	223 sec	263 sec	318 sec	355 sec	417 sec	130 sec	360 sec
1 A	110 sec	205 sec	311 sec	425 sec	503 sec	625 sec	695 sec	816 sec	–	–

## **Further information**

More about SITOP:

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

Information material for downloading:

[www.siemens.com/simatic/printmaterial](http://www.siemens.com/simatic/printmaterial)

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