

Power Supply

**Price groups**

PG 581, 582, 583, 584, 585, 586, 588, 591, 593

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SITOP Power Supply

Introduction

Overview

Additional information

Homepage see www.siemens.com/sitop

Industry Mall see www.siemens.com/product?SITOP

Further products see Catalog KT 10.1 "SITOP Power Supply"



**6EP1
SITOP compact**



**6EP1
LOGO!Power**



**6EP1
SITOP lite**



**6EP1
SITOP smart**

SITOP power supplies

		6EP1 SITOP compact	6EP1 LOGO!Power	6EP1 SITOP lite	6EP1 SITOP smart
Phase		1	1	1	1, 3
Rated input voltage	V	100 ... 230 AC, 110 ... 330 DC	100 ... 240 AC, 110 ... 330 DC	120/230 AC	120/230 AC, 400 ... 500 3 AC
Rated output voltage	V DC	24, 12	5, 12, 15, 24	24	24
Rated output current	A	0.6 ... 6.5	1.3 ... 6.3	2.5 ... 10	2.5 ... 40
Connection		Screw terminal connection	Screw terminal connection	Screw terminal connection	Screw terminal connection
Mounting		Standard rail mounting	Standard rail mounting	Standard rail mounting	Standard rail mounting
Approval		NEC Class 2, UL , cUL , ATEX, GL	UL , cUL , ABS, GL, FM, ATEX	UL , cUL	UL , cUL , CSA, ATEX, GL
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**6EP1
- SITOP modular
- PSU8600 power supply
system**



**6EP1
Special designs,
special applications**



**6EP1
Expansion modules**



**6EP1
SITOP DC-UPS
uninterruptible
power supplies**

SITOP power supplies

		6EP1 - SITOP modular - PSU8600 power supply system	6EP1 Special designs, special applications	6EP1 Expansion modules	6EP1 SITOP DC-UPS uninterruptible power supplies
Phase		1, 2, 3	1	1	1
Rated input voltage	V	120 ... 230/230 ... 500 AC, 120 ... 230 AC, 400 ... 500 3 AC,	120/230 AC	24 DC	24 DC
Rated output voltage	V DC	24, 48	3 ... 52	U_o – approx. 0.5, U_o – approx. 1	24
Rated output current	A	5 ... 40	10	3.5 ... 20, 40, 4 x 3, 4 x 10	6 ... 40
Connection		Screw terminal connection	Screw terminal connection	Screw terminal connection	Screw terminal connection
Mounting		Standard rail mounting	Standard rail mounting	Standard rail mounting	Standard rail mounting (Exception: wall mounting with SITOP UPS500P)
Approval		UL , cUL , CSA, ATEX, GL, ABS	UL , cUL	NEC Class 2, UL , cUL , ATEX, GL	UL , cUL , ATEX, GL, ABS
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Overview








SITOP compact is a series of power supplies for the low performance range. Thanks to the extremely space-saving slim design, they are especially suited to distributed applications in switchboxes or in small control cabinets.

The switching power supply units are characterized by their low power loss over the entire load range. With losses being extremely small even in no-load operation, these units are predestined for supplying machines and plants which are often in stand-by mode, for example. The switching power supply units have a wide range input for AC and DC networks, with plug-in terminals that facilitate easy electrical connection.

To further increase 24 V availability, the SITOP compact power supply units can be combined with DC-UPS, redundancy and selectivity modules.

- Small mounting area thanks to narrow design
- Single-phase wide range input for 85 V to 264 V AC and 110 V to 300 V DC
- High degree of efficiency over the entire load range, up to 28 % energy savings compared to comparable units
- Low energy consumption in no-load operation and stand-by, possible energy savings of up to 53 %
- Adjustable output voltage
- Green LED for "Output voltage OK"
- Plug-in terminals
- Temperature range from -20 °C to $+70\text{ °C}$
- Extensive certification, such as UL, ATEX, GL and NEC Class 2 (24 V/3.7 A)

Selection and ordering data

Version	Inputs		Outputs		Dimensions (W x H x D) mm	SD d	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
	Rated voltage $U_{e\text{ rated}}$		Rated voltage $U_{a\text{ rated}}$	Rated current $I_{a\text{ rated}}$							
24 V power supplies											
 6EP1331-5BA00	0.6 A	100 ... 230 V AC (85 ... 264 V AC/ 110 ... 300 V DC)	24 V DC $\pm 3\%$	0.6 A	22.5 x 80 x 100	1	6EP1331-5BA00		1	1 unit	584
 6EP1331-5BA10	1.3 A	100 ... 230 V AC (85 ... 264 V AC/ 110 ... 300 V DC)	24 V DC $\pm 3\%$	1.3 A	30 x 80 x 100	1	6EP1331-5BA10		1	1 unit	584
 6EP1332-5BA00	2.5 A	100 ... 230 V AC (85 ... 264 V AC/ 110 ... 300 V DC)	24 V DC $\pm 3\%$	2.5 A	45 x 80 x 100	1	6EP1332-5BA00		1	1 unit	584
 6EP1332-5BA10	4 A	100 ... 230 V AC (85 ... 264 V AC/ 110 ... 300 V DC)	24 V DC $\pm 3\%$	4 A	52.5 x 80 x 100	1	6EP1332-5BA10		1	1 unit	584
 6EP1332-5BA20	3.7 A NEC Class 2	120 ... 230 V AC (85 ... 264 V AC/ 110 ... 300 V DC)	24 V DC $\pm 3\%$	3.7 A	52.5 x 80 x 100	1	6EP1332-5BA20		1	1 unit	584
12 V power supplies											
 6EP1321-5BA00	2 A	100 ... 230 V AC (85 ... 264 V AC/ 110 ... 300 V DC)	12 V DC $\pm 3\%$	2 A	30 x 80 x 100	1	6EP1321-5BA00		1	1 unit	584
 6EP1322-5BA10	6.5 A	100 ... 230 V AC (85 ... 264 V AC/ 110 ... 300 V DC)	12 V DC $\pm 3\%$	6.5 A	52.5 x 80 x 100	1	6EP1322-5BA10		1	1 unit	584

SITOP Power Supply

LOGO!Power

Single-phase

Overview

Our new miniature power supply units in the same design as the logic modules offer great performance in the smallest of spaces: Efficiency has been improved across the entire load range, and the low power losses in no-load operation ensure efficient operation.




The wide-range input for single-phase networks as well as operation with direct voltage, the wide operating temperature range, comprehensive certifications as well as the switch-on behavior optimized for capacitive loads makes them suitable for universal use.

These reliable power supplies with their flat, stepped profile can be used extremely flexibly in numerous applications such as in distribution boards, for example.

To further increase 24 V availability, the LOGO!Power power supply units can be combined with DC-UPS, redundancy and selectivity modules.

- Single-phase wide range input from 85 V to 264 V AC and 110 V to 300 V DC
- Flat type of construction in LOGO!8 design with a depth of just 55 mm
- High efficiency across the entire load range, low no-load losses
- Operation on DC voltage from 110 V to 300 V DC
- Power reserves during starting thanks to 1.5 times the rated current for capacitive loads
- Wide temperature range from -20 °C to $+70\text{ °C}$
- Comprehensive certification, such as cULus, CB, FM, ATEX, cC-SAus Class I Div. 2, GL and ABS

Selection and ordering data

Ver- sion	Inputs Rated voltage $U_{e\text{ rated}}$	Outputs Rated voltage $U_{a\text{ rated}}$	Rated current $I_{a\text{ rated}}$	Dimensions (W x H x D)	SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG	
				mm	d						
5 V power supplies											
	3 A	100 ... 240 V AC (85 ... 264 V AC/ 110 ... 300 V DC)	5 V DC $\pm 3\%$	3 A	54 x 90 x 52.6	1	6EP1311-1SH03		1	1 unit	583
	6.3 A	100 ... 240 V AC (85 ... 264 V AC/ 110 ... 300 V DC)	5 V DC $\pm 3\%$	6.3 A	72 x 90 x 52.6	1	6EP1311-1SH13		1	1 unit	583
12 V power supplies											
	1.9 A	100 ... 240 V AC (85 ... 264 V AC/ 110 ... 300 V DC)	12 V DC $\pm 3\%$	1.9 A	54 x 90 x 52.6	1	6EP1321-1SH03		1	1 unit	583
	4.5 A	100 ... 240 V AC (85 ... 264 V AC/ 110 ... 300 V DC)	12 V DC $\pm 3\%$	4.5 A	72 x 90 x 52.6	1	6EP1322-1SH03		1	1 unit	583
15 V power supplies											
	1.9 A	100 ... 240 V AC (85 ... 264 V AC/ 110 ... 300 V DC)	15 V DC $\pm 3\%$	1.9 A	54 x 90 x 52.6	1	6EP1351-1SH03		1	1 unit	583
	4 A	100 ... 240 V AC (85 ... 264 V AC/ 110 ... 300 V DC)	15 V DC $\pm 3\%$	4 A	72 x 90 x 52.6	1	6EP1352-1SH03		1	1 unit	583
24 V power supplies											
	1.3 A	100 ... 240 V AC (85 ... 264 V AC/ 110 ... 300 V DC)	24 V DC $\pm 3\%$	1.3 A	54 x 90 x 52.6	1	6EP1331-1SH03		1	1 unit	583
	2.5 A	100 ... 240 V AC (85 ... 264 V AC/ 110 ... 300 V DC)	24 V DC $\pm 3\%$	2.5 A	72 x 90 x 52.6	1	6EP1332-1SH43		1	1 unit	583
	4 A	100 ... 240 V AC (85 ... 264 V AC/ 110 ... 300 V DC)	24 V DC $\pm 3\%$	4 A	90 x 90 x 52.6	1	6EP1332-1SH52		1	1 unit	583

Overview

The SITOP lite power supplies are designed for standard requirements in industrial environments and offer all important functions at a favorable price.




The wide range input with manual switchover supports connection to a variety of single-phase supply systems.

Thanks to the slim design, the power supplies have a low space requirement on the standard mounting rail, and their excellent degree of efficiency ensures low thermal losses in the control cabinet.

To further increase 24 V availability, the SITOP lite power supplies can be combined with DC UPS, redundancy and selectivity modules.

- 24 V/2.5 A, 5 A and 10 A for industrial applications with standard requirements
- Single-phase wide range input with manual switchover
- Narrow width
- Excellent degree of efficiency
- Green LED for "24 V OK"
- Can be switched in parallel
- No lateral installation clearances required
- Ambient temperature range from 0 °C to 60 °C (above 45 °C with derating)
- Cooling through natural convection
- Short-circuit and overload protection
- Certification in accordance with CE, cULus and CD

Selection and ordering data

Version	Inputs Rated voltage $U_{e \text{ rated}}$	Outputs Rated voltage $U_{a \text{ rated}}$	Rated current $I_{a \text{ rated}}$	Dimensions (W x H x D) mm	SD d	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
24 V power supplies										
 6EP1332-1LB00	2.5 A	120/230 V AC (93 ...132 V/ 187 ... 264 V AC)	24 V DC ± 3 %	2.5 A	32.5 x 125 x 120	1	6EP1332-1LB00	1	1 unit	593
 6EP1333-1LB00	5 A	120/230 V AC (93 ...132 V/ 187 ... 264 V AC)	24 V DC ± 3 %	5 A	50 x 125 x 120	1	6EP1333-1LB00	1	1 unit	593
 6EP1334-1LB00	10 A	120/230 V AC (93 ...132 V/ 187 ... 264 V AC)	24 V DC ± 3 %	10 A	70 x 125 x 120	1	6EP1334-1LB00	1	1 unit	593

SITOP Power Supply

SITOP smart

Single-phase and three-phase

Overview

SITOP smart are the universal and powerful standard power supplies for mechanical and plant engineering.

Despite their compact design, they offer excellent overload behavior: Thanks to a power boost of 150 %, loads with high power consumption can be connected without any problems and the permanent overload capability of 120 % offers power reserves in case of expansions.

The high degree of efficiency results in low energy consumption and minimal heat generation inside the control cabinet.

To further increase 24 V availability, the SITOP smart power supplies can be combined with buffer, DC-UPS, redundancy and selectivity modules.

- For 24 V standard applications up to 40 A
- Compact design, no lateral clearances required
- Extra power with 1.5 times the rated current (5 s/min) for brief operational overloads
- Permanent overload capability with 1.2 times the rated current up to 45 °C ambient temperature
- Adjustable output voltage for compensating voltage drops
- Parallel switching option to increase performance
- High degree of efficiency up to 91.5 %
- Wide temperature range from –25 °C or 0 °C to +70 °C
- Comprehensive certification such as cULus, cCSAus, ATEX, IECEx and GL

Selection and ordering data

	Rated current $I_{a \text{ rated}}$	Inputs Rated voltage $U_{e \text{ rated}}$	Outputs Rated voltage $U_{a \text{ rated}}$	Dimensions (W x H x D) mm	SD d	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
24 V power supplies										
	2.5 A	120/230 V AC (85 ... 132 V/ 170 ... 264 V AC)	24 V DC ± 3 %	32.5 x 125 x 120	1	6EP1332-2BA20		1	1 unit	582
6EP1332-2BA20	Limitation of input current harmonics according to IEC 61000-3-2									
	5 A	120/230 V AC (85 ... 132 V/ 170 ... 264 V AC)	24 V DC ± 3 %	50 x 125 x 120	1	6EP1333-2BA20		1	1 unit	582
6EP1333-2BA20	Limitation of input current harmonics according to IEC 61000-3-2									
	10 A	120/230 V AC (85 ... 132 V/ 170 ... 264 V AC)	24 V DC ± 3 %	70 x 125 x 120	1	6EP1334-2BA20		1	1 unit	582
6EP1334-2BA20	Limitation of input current harmonics according to IEC 61000-3-2									
	20 A	120/230 V AC (85 ... 132 V/ 176 ... 264 V AC)	24 V DC ± 3 %	115 x 145 x 150	1	6EP1336-2BA10		1	1 unit	582
6EP1336-2BA10	Limitation of input current harmonics according to IEC 61000-3-2									
	5 A	400 ... 500 V 3 AC (340 ... 550 V 3 AC)	24 V DC ± 3 %	50 x 125 x 120	NEW 1	6EP1433-2BA20		1	1 unit	582
6EP1433-2BA20	Limitation of input current harmonics according to IEC 61000-3-2									
	10 A	400 ... 500 V 3 AC (340 ... 550 V 3 AC)	24 V DC ± 3 %	70 x 125 x 120	NEW 1	6EP1434-2BA20		1	1 unit	582
6EP1434-2BA20	Limitation of input current harmonics according to IEC 61000-3-2									
	20 A	400 ... 500 V 3 AC (340 ... 550 V 3 AC)	24 V DC ± 3 %	90 x 145 x 150	1	6EP1436-2BA10		1	1 unit	582
6EP1436-2BA10	Limitation of input current harmonics according to IEC 61000-3-2									
	40 A	400 ... 500 V 3 AC (360 ... 550 V 3 AC)	24 V DC ± 3 %	150 x 145 x 150	1	6EP1437-2BA20		1	1 unit	582
6EP1437-2BA20	Limitation of input current harmonics according to IEC 61000-3-2									

Overview

SITOP modular are the technology power supplies for demanding solutions and provide maximum functionality for use in complex systems and machines.

The wide-range input enables connection to any power system in the world and ensures high safety even in the event of extreme voltage fluctuations. The power boost provides up to three times the rated current for brief periods, and with the extra power of 150 %, loads with high power consumption can be connected without problems. And in the event of an overload there is a choice between constant current or automatic restart. The very high degree of efficiency keeps energy consumption and heating in the control cabinet low, and the compact metal housing also saves space.

To further increase 24 V availability, the SITOP modular power supply units can be combined with buffer, UPS, redundancy and selectivity modules.







- For demanding applications from 5 A to 40 A
- 48 V/10 A and 20 A enable small conductor cross-sections
- Extremely slim design – no lateral clearances required
- Extra power function for brief operational overloads
- Power boost for tripping protective devices
- Selectable short-circuit behavior
- Optional symmetrical load distribution for parallel operation
- Very high degree of efficiency up to 94 %
- Operating status indicated by 3 LEDs
- Wide temperature range from -25 °C to +70 °C
- Comprehensive certification, including cULus, ATEX, IECEx or GL

Selection and ordering data

Rated current I_a rated	Inputs Rated voltage U_e rated	Outputs Rated voltage U_a rated	Dimensions (W x H x D)	SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
			mm	d					

24 V power supplies

SITOP modular, single-phase and two-phase

	5 A	120/230 V AC (85 ... 132 V/ 170 ... 264 V AC)	24 V DC ± 3 %	45 x 125 x 125	1	6EP3333-8SB00-0AY0	1	1 unit	581
6EP3333-8SB00-0AY0									
	10 A	120/230 V AC (85 ... 132 V/ 170 ... 264 V AC)	24 V DC ± 3 %	55 x 125 x 125	1	6EP3334-8SB00-0AY0	1	1 unit	581
6EP3334-8SB00-0AY0									
	5 A	120 ... 230 V/ 230 ... 500 V AC (85 ... 264 V AC/ 176 ... 550 V AC)	24 V DC ± 3 %	70 x 125 x 125	1	6EP1333-3BA10	1	1 unit	581
6EP1333-3BA10									
	10 A	120 ... 230 V/ 230 ... 500 V AC (85 ... 264 V AC/ 176 ... 550 V AC)	24 V DC ± 3 %	90 x 125 x 125	1	6EP1334-3BA10	1	1 unit	581
6EP1334-3BA10									
	20 A	120 ... 230 V AC (85 ... 275 V AC or 88 ... 350 V DC)	24 V DC ± 3 %	90 x 125 x 125	1	6EP1336-3BA10	1	1 unit	581
6EP1336-3BA10									
	40 A	120/230 V AC (85 ... 132 V/ 170 ... 264 V AC)	24 V DC ± 3 %	145 x 145 x 150	1	6EP3337-8SB00-0AY0	1	1 unit	581
6EP3337-8SB00-0AY0									

SITOP Power Supply

SITOP modular

Single-, two- and three-phase

Rated current $I_{a \text{ rated}}$	Inputs Rated voltage $U_e \text{ rated}$	Outputs Rated voltage $U_a \text{ rated}$	Dimensions (W x H x D) mm	SD d	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
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Power supplies 24 V (continued)

SITOP modular, three-phase



6EP3436-8SB00-0AY0

20 A	400 ... 500 V 3 AC (320 ... 575 V 3 AC)	24 V DC ± 3 %	70 x 125 x 125	1	6EP3436-8SB00-0AY0		1	1 unit	581
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6EP1437-3BA10

40 A	400 ... 500 V 3 AC (320 ... 575 V 3 AC)	24 V DC ± 3 %	150 x 125 x 150	1	6EP1437-3BA10		1	1 unit	581
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Power supplies 48 V

SITOP modular, three-phase



6EP1456-3BA00

10 A	400 ... 500 V 3 AC (320 ... 575 V 3 AC)	48 V DC ± 3 %	70 x 125 x 125	1	6EP1456-3BA00		1	1 unit	581
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6EP1457-3BA00

20 A	400 ... 500 V 3 AC (320 ... 550 V 3 AC)	48 V DC ± 3 %	240 x 125 x 125	1	6EP1457-3BA00		1	1 unit	581
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Overview

The three-phase basic units of the SITOP PSU8600 power supply system accommodate within their extremely compact width an Ethernet/PROFINET interface as well as four individually parameterizable outputs (voltage and current threshold) with selective monitoring.

Without wiring overhead, further modules from the modular system can be added to expand the number of outputs (CNX8600) or to increase the mains buffering time (BUF8600) according to requirements.

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 by collecting the energy data for each output as well as individual activation and deactivation of the outputs via PROFEnergy.

- Three-phase wide-range input 400 to 500 V 3 AC for global use
- Extremely slim design with very high efficiency of up to 94 %
- Versions with a configurable output with up to 20 A or 40 A and selective monitoring.
- Versions with four integrated, individually configured outputs with up to 5 A or 10 A each and selective monitoring
- Voltage and response 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 functional overload
- Integrated Ethernet/PROFINET interface (2 ports)
- Easy configuration in the TIA Portal
- Comprehensive diagnostic information during operation
- Outputs can be deactivated and activated selectively via PROFEnergy
- Individual expansion options from the modular system (CNX8600 expansion modules, BUF8600 buffer modules) without wiring overhead

Selection and ordering data

Rated current $I_{a \text{ rated}}$	Inputs Rated voltage $U_{e \text{ rated}}$	Outputs Rated voltage $U_{a \text{ rated}}$	Dimensions (W x H x D) mm	SD d	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
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24 V power supplies

SITOP PSU8600 power supply with Ethernet/PROFINET interface									
 6EP3437-8MB00-2CY0	20 A	400 ... 500 V 3 AC	24 V DC	80 x 125 x 150	NEW 1	6EP3436-8SB00-2AY0	1	1 unit	581
	40 A		± 3 %	125 x 125 x 150	NEW 1	6EP3437-8SB00-2AY0	1	1 unit	581
	20 A (4 x 5 A)			100 x 125 x 150	NEW 1	6EP3436-8MB00-2CY0	1	1 unit	581
	40 A (4 x 10 A)			125 x 125 x 150	1	6EP3437-8MB00-2CY0	1	1 unit	581
Modular system, expansion of outputs (CNX8600)									
 6EP4436-8XB00-0CY0	4 x 5 A		24 V DC ± 3 %	60 x 125 x 150	1	6EP4436-8XB00-0CY0	1	1 unit	581
	4 x 10 A			60 x 125 x 150	1	6EP4437-8XB00-0CY0	1	1 unit	581
Modular system, buffering (BUF8600)									
 6EP4297-8HB00-0XY0	100 ms/ 40 A		24 V DC ± 3 %	60 x 125 x 150	1	6EP4297-8HB00-0XY0	1	1 unit	581
	300 ms/ 40 A			125 x 125 x 150	1	6EP4297-8HB10-0XY0	1	1 unit	581
 6EP4293-8HB00-0XY0	4 s/40 A			60 x 125 x 150	NEW 1	6EP4293-8HB00-0XY0	1	1 unit	581
	10 s/40 A			125 x 125 x 150	NEW 1	6EP4295-8HB00-0XY0	1	1 unit	581

* You can order this quantity or a multiple thereof. Illustrations are approximate

SITOP Power Supply

Special Design, Special Use

Single-phase

Overview

SITOP flexi with steplessly adjustable output voltage:
One standard unit for various special voltages.

Selection and ordering data

Rated current $I_{a \text{ rated}}$	Inputs Rated voltage $U_{e \text{ rated}}$	Outputs Rated voltage $U_{a \text{ rated}}$	Dimensions (W x H x D) mm	SD d	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Power supplies 3 V to 52 V									
	Limitation of input current harmonics according to IEC 61000-3-2, adjustable output voltage 3 V to 52 V, output max. 10 A or 120 W								
max. 10 A or 120 W	120/230 V AC (85 ... 132 V/ 170 ... 264 V AC)	3 ... 52 V DC $\pm 1\%$	75 x 125 x 125 ▶		6EP1353-2BA00		1	1 unit	582



6EP1353-2BA00

Overview

A power supply unit on its own cannot guarantee fault-free 24 V supply. Power failures, extreme variations in the mains voltage, or a faulty load can bring plant operation to a standstill and cause high costs. The expansion modules offer extensive protection against malfunctions on the primary and secondary circuits, right through to complete all-round protection.

The **redundancy module** disconnects two 24 V power supply units of the same type, enabling the configuration of a redundant 24 V power supply. If a power supply fails, the 24 V supply is reliably maintained. Signaling takes place via LED as well as signaling contacts whereby the switching threshold for LED and signaling contacts can be adjusted.

The following applies to the redundant configuration:

- Power supplies up to 5 A:
One redundancy module with 10 A summation current
- Power supplies up to 10 A:
Two redundancy modules with 10 A summation current
- Power supplies up to 20 A:
One redundancy module with 40 A summation current
- Power supplies up to 40 A:
Two redundancy modules with 40 A summation current





The **buffer module** bridges brief mains failures for up to several seconds for SITOP smart or SITOP modular 24 V power supply units. Maintenance-free capacitors are used as energy stores.

Buffering times:

200 ms at 40 A,
400 ms at 20 A,
800 ms at 10 A

To increase the buffer time (max. 10 s), up to 8 buffer modules can be connected in parallel. To bridge longer mains failures we recommend using uninterruptible power supplies with capacitors (up into the minutes range) or with battery modules (up into the hours range).

Selection and ordering data

	Inputs Rated voltage U_e rated	Outputs Rated voltage U_a rated	Rated current I_a rated	Dimensions (W × H × D) mm	SD d	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
SITOP PSE202U redundancy module										
	24 V DC (19 ... 29 V DC)	U_e – approx. 0.5 V	10 A (Summation current)	30 × 80 × 100	1	6EP1964-2BA00		1	1 unit	588
6EP1964-2BA00										
	24 V DC (19 ... 29 V DC)	U_e – approx. 0.5 V	3.5 A (NEC Class 2)	30 × 80 × 100	1	6EP1962-2BA00		1	1 unit	588
6EP1962-2BA00										
	24 V DC (24 ... 28.8 V DC)	U_e – approx. 0.5 V	40 A (Summation current)	70 × 125 × 125	1	6EP1961-3BA21		1	1 unit	588
6EP1961-3BA21										
Buffer modules										
	24 V DC (24 ... 28.8 V DC)	U_e – approx. 1 V	40 A	70 × 125 × 125	1	6EP1961-3BA01		1	1 unit	588
6EP1961-3BA01										

SITOP Power Supply Expansion Modules

Selectivity modules

Overview




The SITOP PSE200U selectivity modules and the SITOP select diagnostics module are used in combination with 24 V power supplies for distributing the load current among several current branches and for monitoring the individual partial currents.

Faults caused by overload or short circuits in individual branches are detected and selectively switched off so that the remaining load current paths remain unaffected. Rapid fault diagnosis is achieved and downtimes are minimized.

Signaling is performed via a group alarm contact or single-channel signaling. The selectivity modules with single-channel signaling output the status of the 4 channels cyclically by means of a serial code which can be read in by a digital PLC input.

Function blocks for SIMATIC S7-1500/1200/300/400 and for SIMOTION CPUs are available free of charge for the evaluation, see <https://support.industry.siemens.com/cs/ww/en/view/61450284>.

Selection and ordering data

Inputs Rated voltage U_e rated	Outputs		Dimensions (W × H × D) mm	SD d	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
	Rated voltage U_a rated	Rated current I_a rated							
SITOP PSE200U selectivity module									
 24 V DC (22 ... 30 V DC)	U_e - 0.2 V	4 × 3 A (0.5 ... 3 A)	72 × 80 × 72	1	6EP1961-2BA11		1	1 unit	586
24 V DC (22 ... 30 V DC)	U_e - 0.2 V	4 × 10 A (3 ... 10 A)	72 × 80 × 72	1	6EP1961-2BA21		1	1 unit	586
6EP1961-2BA11, 6EP1961-2BA21									
SITOP PSE200U selectivity modules with single-channel signaling									
 24 V DC (22 ... 30 V DC)	U_e - 0.2 V	4 × 3 A (0.5 ... 3 A)	72 × 80 × 72	1	6EP1961-2BA31		1	1 unit	586
24 V DC (22 ... 30 V DC)	U_e - 0.2 V	4 × 10 A (3 ... 10 A)	72 × 80 × 72	1	6EP1961-2BA41		1	1 unit	586
6EP1961-2BA31, 6EP1961-2BA41									
SITOP select diagnostics modules									
 24 V DC (22 ... 30 V DC)	U_e - 0.3 V	4 × 10 A (2 ... 10 A)	72 × 90 × 90	▶	6EP1961-2BA00		1	1 unit	586
6EP1961-2BA00									

SITOP Power Supply

SITOP DC-UPS Uninterruptible Power Supply

DC-UPS with capacitors

Overview

To combat prolonged power failures, the 24 V SITOP power supply units can be upgraded into a 24 V DC uninterruptible power supply.

SITOP offers two systems with different energy stores for this purpose:

- Capacitors for 24 V buffering in the minute range
- Battery modules which provide a buffer in the hours range

The DC UPS systems are used, for example, in machine tool manufacturing, in the textile industry, on all types of production lines and filling plants, and in conjunction with 24 V industrial PCs. They prevent the negative consequences which often result from mains failures.

DC-UPS with capacitors

To bridge brief power failures, 24 V SITOP power supply units can be expanded with a SITOP UPS500 uninterruptible DC power supply (DC-UPS).

In PC-based automation solutions, the highly capacitive double-layer capacitors of the SITOP UPS500 supply enough energy to safeguard operating and application data and close software applications in a defined manner.

- Buffering into the minutes range depending on the load current and DC-UPS configuration
- SITOP UPS500S basic units for standard mounting rails can be combined with up to 3 UPS501S expansion modules
- SITOP UPS500P in degree of protection IP65 for distributed applications
- Absolutely maintenance-free double-layer capacitors
- Short charging times
- Long service life even at high ambient temperatures
- No ventilation of the installation location required
- USB interface for PC communication
- Easy PC integration thanks to free software tool




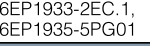

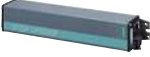
	SITOP UPS500S/501S configurations									UPS500P	
Basic unit	2.5 kW	5 kW	2.5 kW	5 kW	2.5 kW	5 kW	2.5 kW	5 kW	5 kW	10 kW	
Expansion modules	--	--	1 x 5 kW	1 x 5 kW	2 x 5 kW	2 x 5 kW	3 x 5 kW	3 x 5 kW	--	--	
Total energy	2.5 kW	5 kW	7.5 kW	10 kW	12.5 kW	15 kW	17.5 kW	20 kW	5 kW	10 kW	
Load current	Buffer times										
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	--	--	

SITOP Power Supply

SITOP DC-UPS Uninterruptible Power Supply

DC-UPS with capacitors

Selection and ordering data

Version	Inputs Rated voltage U_e rated	Outputs Rated voltage U_a rated	Rated current I_a rated	Dimensions (W × H × D) mm	SD d	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
SITOP UPS500S										
Basic units 15 A										
	2.5 kW	24 V DC (22 ... 29 V DC)	24 V DC ± 3 %	15.2 A + approx. 125	120 × 125 × 125	1	6EP1933-2EC41	1	1 unit	585
	5 kW	infeed through SITOP 24 V DC		2.3 A (charging mode)	120 × 125 × 125	1	6EP1933-2EC51	1	1 unit	585
SITOP UPS501 expansion modules										
	5 kW	Infeed through basic unit	--	--	70 × 125 × 125	1	6EP1935-5PG01	1	1 unit	585
6EP1933-2EC.1, 6EP1935-5PG01										
SITOP UPS500P										
Basic units 7 A, degree of protection IP65										
	5 kW	24 V DC (22.5 ... 29 V DC)	24 V DC ± 3 %	7 A + approx. 2 A (charging mode)	400 (without connector) x 80 x 80	1	6EP1933-2NC01	1	1 unit	585
6EP1933-2NC01	10 kW	Infeed through SITOP 24 V DC			470 (without connector) x 80 x 80	1	6EP1933-2NC11	1	1 unit	585
										
6EP1933-2NC11										
Accessories										
	Connector set for SITOP UPS500P					1	6EP1975-2ES00	1	1 unit	591
	With input and output connector and assembled USB cable 2 m in length									

For DC UPS with battery modules see from page 15/15.

SITOP Power Supply

SITOP DC-UPS Uninterruptible Power Supply

DC-UPS with Battery Modules

SITOP UPS1600 DC-UPS modules

Overview

To bridge longer power failures, 24 V SITOP power supply units can be expanded with a SITOP UPS1600 uninterruptible DC power supply (DC-UPS) and SITOP UPS1100 battery modules.

Intelligent battery management using Energy Storage Link automatically detects the UPS1100 energy storage device, and ensures optimum temperature-controlled charging and continuous monitoring. The compact DC-UPS modules have overload capability, for example, to supply the inrush current of industrial PCs. They enable starting from the battery for stand-alone operation.




The DC-UPS communicates openly over USB or Ethernet/PROFINET and can be easily integrated into the PC or PLC world. Complete integration in TIA offers user-friendly engineering in the TIA Portal and is supported by ready-to-use function blocks for S7 user programs and WinCC faceplates for rapid visualization.

Use of the SITOP UPS manager also enables easy monitoring and configuration in PC systems, e.g. the shutting down of several PCs in accordance with the master-slave principle.

- Intelligent battery management using Energy Storage Link: Automatic detection of the battery modules and selection of the optimal, temperature-controlled charging characteristic, monitoring of operational readiness, battery connection, aging and charge current
- All diagnostic data and alarm messages are available via USB and Ethernet/PROFINET
- Starting from the battery module supports stand-alone mode, e.g. for starting generators
- Remote monitoring via integrated web server
- SITOP UPS Manager (free software download) supports configuration and monitoring on PC-based systems, see <https://support.industry.siemens.com/cs/ww/en/view/75854607>
- Complete integration in TIA:
 - User-friendly engineering in the TIA Portal, see <https://support.automation.siemens.com/WWW/view/en/75854606>
 - SIMATIC S7 function blocks for integration in user programs (free download), see <https://support.industry.siemens.com/cs/ww/en/view/78817848>
 - Ready-to-use "faceplates" for SIMATIC Panels and SIMATIC WinCC (free download) see <https://support.industry.siemens.com/cs/ww/en/view/78817848>

- 24 V buffering in the hour range for continuing processes
- Open communication over USB or two Ethernet/PROFINET ports
- High overload capability for mains and buffering operation

Selection and ordering data

	Rated current $I_{a \text{ rated}}$	Inputs Rated voltage $U_{e \text{ rated}}$	Outputs Rated voltage $U_{a \text{ rated}}$	Dimensions (W × H × D) mm	SD d	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG	
SITOP UPS1600											
	10 A	24 V DC (21 ... 29 V DC)	24 V DC	50 × 125 × 125							
						• SITOP UPS1600	3	6EP4134-3AB00-0AY0	1	1 unit	585
						- with USB interface	3	6EP4134-3AB00-1AY0	1	1 unit	585
						- With Ethernet/PROFINET	3	6EP4134-3AB00-2AY0	1	1 unit	585
6EP4134-3AB00-.AY0											
	20 A	24 V DC (21 ... 29 V DC)	24 V DC	50 × 125 × 125							
						• SITOP UPS1600	3	6EP4136-3AB00-0AY0	1	1 unit	585
						- With USB interface	3	6EP4136-3AB00-1AY0	1	1 unit	585
						- With Ethernet/PROFINET	3	6EP4136-3AB00-2AY0	1	1 unit	585
6EP4136-3AB00-.AY0											
	40 A	24 V DC (21 ... 29 V DC)	24 V DC	70 × 125 × 150							
						• SITOP UPS1600	3	6EP4137-3AB00-0AY0	1	1 unit	585
						- With USB interface	3	6EP4137-3AB00-1AY0	1	1 unit	585
						- With Ethernet/PROFINET	3	6EP4137-3AB00-2AY0	1	1 unit	585
6EP4137-3AB00-.AY0											

SITOP Power Supply

SITOP DC-UPS Uninterruptible Power Supply

DC-UPS with Battery Modules

SITOP UPS1100 battery modules

Overview





SITOP UPS1100 maintenance-free battery modules with 1.2 Ah to 12 Ah for SITOP UPS1600 DC-UPS modules. The intelligent UPS1600 battery management charges the UPS1100 with the optimal, temperature-controlled charging characteristics and monitors the status (operating data and diagnostics information) via the energy storage link of the connected battery modules.

For longer buffer times, up to six battery modules can be connected in parallel. Mounting is on a standard mounting rail or directly on a wall.



Battery modules	SITOP UPS1100 24 V/1.2 Ah	SITOP UPS1100 24 V/2.5 Ah High temperature	SITOP UPS1100 24 V/3.2 Ah	SITOP UPS1100 24 V/5 Ah LiFePo	SITOP UPS1100 24 V/7 Ah	SITOP UPS1100 24 V/12 Ah
	6EP4131-0GB00-0AY0	6EP4132-GB00-0AY0	6EP4133-0GB00-0AY0	6EP4133-0JB00-0AY0	6EP4134-0GB00-0AY0	6EP4135-0GB00-0AY0
Load current	Buffer times					
1 A	34 min	1.7 h	2.5 h	5.2 h	5.4 h	10.3 h
2 A	15 min	54.6 h	1 h	2.5 h	2.6 h	4.8 h
3 A	9 min	32.9 min	39 min	1.7 h	1.6 h	3 h
4 A	6 min	20.6 min	27 min	1.25 h	1.2 h	2.3 h
6 A	3.5 min	14.3 min	17.5 min	50.6 min	41 min	1.4 h
8 A	2 min	10.5 min	12 min	37.8 min	28 min	1 h
10 A	1 min	7.2 min	9 min	30.2 min	22 min	48.6 min
12 A	--	6 min	7 min	25.1 min	17 min	40.3 min
14 A	--	4.5 min	5 min	21.6 min	15 min	33.6 min
16 A	--	4.1 min	4 min	18.8 min	12.5 min	26 min
20 A	--	2.9 min	1 min	12.9 min	9.1 min	19.6 min
30 A	--	--	--	--	4.6 min	12.1 min
40 A	--	--	--	--	2.8 min	8.5 min

Selection and ordering data

	Rated current $I_{a \text{ rated}}$ A	Dimensions (W × H × D) mm	SD d	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
SITOP UPS1100 battery modules								
	For UPS1600 10 A 1.2 Ah	89 × 130 × 107	3	6EP4131-0GB00-0AY0		1	1 unit	585
6EP4131-0GB00-0AY0								
	For UPS1600 10 A and 20 A 3.2 Ah	190 × 169 × 79	3	6EP4133-0GB00-0AY0		1	1 unit	585
	5 Ah LiFePo	189 × 186 × 113	NEW 1	6EP4133-0JB00-0AY0		1	1 unit	585
	7 Ah	186 × 186 × 110	3	6EP4134-0GB00-0AY0		1	1 unit	585
6EP4133-0JB00-0AY0								
SITOP UPS1100 battery modules								
	For UPS1600 20 A and 40 A 12 Ah	253 × 186 × 110	3	6EP4135-0GB00-0AY0		1	1 unit	585
6EP4135-0GB00-0AY0								
SITOP UPS1100 battery modules, high-temperature								
	For UPS1600 10 A and 20 A 2.5 Ah	265 × 115 × 76	3	6EP4132-0GB00-0AY0		1	1 unit	585
6EP4132-0GB00-0AY0								

* You can order this quantity or a multiple thereof.
Illustrations are approximate