Power Up With Confidence.

SITOP – Reliable 24 VDC Power



sitop



SIEMENS

Reliable Power – Safety Included.
Reliability has a name: SITOP

Modern automation technology is becoming more and more demanding, incorporating electronics that are increasingly sophisticated and sensitive. Therefore, a reliable power supply is the prerequisite for safe efficient system operations. For over a decade, Siemens has engineered SITOP power supplies to be the best solutions - in terms of reliability, sturdiness and expandability. The proof? More than five million units sold protecting our customers against system downtime and production losses.





SITOP modular: power supplies meeting your requirements

Mix and match – for your safety
SITOP. The perfectly harmonized and complete offer

The quality of the 24 V power packs alone does, however, not guarantee uninterrupted power. Total loss of power, extreme network voltage fluctuations or a single faulty load may cause system downtime and considerable financial loss. For this reason, SITOP offers a unique range of add-on modules for protection against various safety hazards. Thanks to its flexible expansion options, SITOP can even be retrofitted in such a way as to provide all-round protection.

Highly flexible solutions – Customized to your system
SITOP. One platform - unlimited possibilities

The product family of SITOP DIN rail power packs consists of two product lines. The extra-narrow SITOP smart line, featuring all standard functions and the SITOP modular line for even higher demands.

Both product lines stand out with maximum quality and reliability. Moreover, their high degree of functionality offers optimum safety in case of power failures. Combined with other SITOP add-on modules, your system can be protected against all external impacts and precisely tailored to special safety

Slim, compact and extremely reliable: SITOP smart



190 countries – one power supply: SITOP modular with ultra-wide input range of up to 550 V



All networks, all new markets – worldwide

requirements, for critical applications or unstable supply networks. Your system's performance remains stable, thanks to the capabilities of the unique SITOP modular architecture. Every single add-on module is fully system-compatible and allows a trouble-free configuration ensuring smooth production processes. Particularly small applications can be realized by means of our LOGO!Power mini power packs, whereas the SITOP facets represent ideal solutions for specific custom applications.





Thanks to its outstanding reliability, SITOP has long since established itself around the globe. Even critical network conditions in extreme climates will no longer expose your system to any risk. Due to their wide input range, the power packs can be connected to almost any network worldwide. Certifications in accordance with CE and UL/cUL are standard SITOP features and additionally facilitate exports to other countries. For special applications, e.g. in the field of ship building (GL) or in hazardous areas (ATEX), SITOP offers the universal solution. All of the SITOP advanced features combined create new potential for your global business.



modular

The answer to all challenges: SITOP modular ...

... no matter where and under which conditions: SITOP modular can be adjusted to power any network in the world. A high degree of safety is provided by the wide input range, compensating for extreme voltage fluctuations and even bridging short network interruptions. The integrated Power Boost feature temporarily supplies up to three times the nominal current. In overload situations, you may choose between constant current with automatic restart of the output voltage or switch-off with storage. Increased current demands? By connecting several SITOP devices in parallel, the output current is added or a redundant power supply is established.

Further product features

- Compact design in rugged metal housing
- For demanding applications from 5 to 40 A
- 3 LED displays facilitate operation and control
- Evaluation of the operating states via a signaling module
- Functionally expandable with all SITOP add-ons

smart

Slim-line universal power supplies: SITOP smart

High performance comes in a small package. Compared to the previous model, the SITOP smart power supply series is one third smaller in width and thus requires less space on the DIN rail. Despite its small dimensions it still delivers excellent overload behavior. Even high loads can be easily switched on. As a result of the permanent nominal outputs of 120 percent, these new power packs cannot be topped in terms of reliability. To bridge voltage drops on the line, the output voltage can be increased to up to 28 V. Numerous certifications facilitate universal and worldwide applications.

Further product features

- Narrow design with 32.5, 50 and 70 mm
- For standard applications with 2.5, 5 and 10 A
- GL certification and compliance with ATEX guidelines
- Expandable with DC-UPS, redundancy and the SITOP select diagnosis module

Add-ons

Specialists for mission-critical applications: SITOP add-ons

Network irregularities in the millisecond range are competently compensated for all our power packs. Larger fluctuations or even complete power failures, however, require special measures: The SITOP buffer module offers optimum protection for temporary failures, whereas the compact SITOP DC UPS modules maintain operation in case of prolonged power failures – up to several hours! To completely avoid the impact of power failures, applications should be equipped with the redundancy module. The diagnosis module facilitates fast and preventive fault analysis.

Add-ons at a glance

- Signaling module
- Redundancy module
- Buffer module
- DC UPS and battery pack module
- SITOP select diagnosis module

Facets

Taking care of special applications: The SITOP facets

SITOP facets assume special supply tasks. Under harsh environmental conditions, for special designs or unconventional output voltages: The many talents of this series support your need to solving specific tasks.

A selection of facets

- SITOP power 0.5
- Flat designs
- Outdoor variants in SIMATIC design
- SITOP flexi

... further variants? Simply click www.siemens.com/sitop





NEW





Add-ons. One System – One Major Benefit:
No more Risk



Signaling module

- Extremely easy installation: Simply insert and screw-fit the module onto the basic device
- Optimum integration of the power supply into the automation system
- Floating signal contacts for "output voltage o.k." and "operating readiness o.k."
- Timely avoidance of potential damage
- The power supply can be turned on/off via remote control

Basic device

- 5 A and 10 A for 1- and 2-phase connection
- 20 A and 40 A in 1-phase or 3-phase version
- Vibration-proof DIN rail mounting
- Indication of operating status via 3 LED displays
- Voltage drop compensation with long lines
- Selectable short-circuit behavior: automatic restart or switch-off
- Up to three times nominal current thanks to Power Boost
- Identical-type SITOP devices can be operated in parallel
- Wide range input

Redundancy module

- Fast and easy DIN rail mounting
- 2 integrated diodes for decoupling two basic devices of 5 A to 20 A or one basic device of 40 A
- Group signals "Feed-in 1 and 2 o.k." via green LED and floating relay contact (CO contact)
- Settable LED and relay switching threshold from 20 to 25 V

Buffer module

- Fast and easy DIN rail mounting
- Connection to the basic module with only 2 lines
- Compensation of fatal interruptions in the millisecond range caused by substandard current
- Bridging ensured for up to 3 seconds

DC UPS module

- DC UPS module 6 A, 15 A and 40 A, optionally with PC connection
- Maintenance-free battery pack modules 1.2/2.5/3.2/7/12 Ah
- Long service life of the 24 V loads and batteries thanks to integrated battery management
- Battery monitoring for buffer readiness
- Uninterrupted transition from standby to buffer mode

SITOP select electronic diagnosis module

- Monitoring of up to 4 load feeders
- Each output can be set to provide between 2 and 10 A
- Trouble-free connection of loads with high starting current requirements
- Reliable switch-off of of overcurrents in case of load short-circuits
- Maintenance of the 24 V supply for the remaining loads
- Multi-colored LED per output for immediate fault localization
- Floating group signaling contact for remote diagnosis

The buffer module: short power failures

Short power failures or "brown-outs" in the range of several hundred milliseconds can be handled reliably and cost-efficient with our buffer module. It is simply actuated via two lines in parallel to the basic device of SITOP modular. Electrolytic capacitors regulate the energy storage. As soon as the 24 V are under run, the capacitors release the energy immediately. By connecting several buffer modules in parallel, the bridging time can be increased accordingly. Thus, power failures of up to 3 seconds can be reliably bridged.

... longer power failures without consequences: the DC UPS module

The compact DC UPS modules of the SITOP product range help to overcome prolonged power failures and maintain operation for hours. An innovative circuitry concept guarantees the transition from AC power line to buffer operation without interruption.

Always ready with battery management

Despite the small dimensions with a width of only 50 or 102 mm, the UPS modules offer a sophisticated battery management system for optimum battery charging and thus providing constant buffer readiness. Comprehensive monitoring functions ensure high availability at all times. The active battery test function even checks the battery's aging condition, dispensing with the usual preventive battery replacement and saving considerable costs.



Always up-to-date

All relevant messages are either output via floating contacts or optionally via a serial or USB interface. The small-size DC UPS can therefore be considered a real communication expert, which can be easily integrated into the PC world through software tools.

The challenge of selectivity

In connection with switched-mode power supply units, conventional line protection, fuses or circuit-breakers alone, do not offer reliable protection. Due to the electronic current limiting of the power supply, conventional protection units do not trip reliably. If a single 24 V load fails, it can cause a breakdown of the DC voltage supply by a short circuit or an increase in power consumption. The use of quick-acting protective units is not an alternative either, as such units can already be tripped by starting current peaks of diverse capacitive and inductive loads.

... and the innovative solution: the SITOP select diagnosis module

Fault diagnosis determines how fast your system can restore operation after a failure. This is exactly what our electronic SITOP select diagnosis module is able to realize. The module has been particularly adjusted to the behavior of switched-mode power supply units. The electronics differentiate between starting currents, overloads and short circuits. In fault cases, SITOP select switches off the respective load feeder – the 24 V supply of the remaining loads is maintained. Thanks to on-site signaling, rapid fault localization is possible.



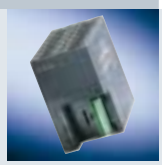
More than simply safe: the redundancy module

The redundancy module provides extra protection against a failure of the 24 V supply. It decouples the power supplies connected in parallel with the help of diodes. The failure of one power pack does not affect the other packs. Thus, 24 V supply is ensured at all times.

The integration factor: the signaling module

This module has been designed to quickly and efficiently integrate your power supply with automation projects. You can furthermore rely on immediate response to diverse operating states – an essential advantage to timely avoid potential damage.

Freedom to create your own solution: **the SITOP facets**



When it comes to specific solutions or particularly complex feeding tasks, SITOP presents another significant strength: its almost unlimited versatility. Whether standard industrial applications, extreme environmental conditions or unconventional output voltages: SITOP offers everything you need for your power supply – worldwide.

SITOP power 0.5: small dimensions, minimum power consumption

The mini power pack with 0.5 A output voltage for AC networks and 0.375 A for DC networks requires extremely little space. With a width of only 22.5 mm, the minis are ideally suitable for the supply of low-voltage switchgear. The wide temperature range from –25 °C to +70 °C additionally offers a wide application area.

Ready for even the harshest conditions

The 2 A and 5 A power supplies for extreme environmental conditions have been engineered for temperatures of –25 °C. The rugged devices in the design of the SIMATIC S7-300 withstand even increased vibration and shock impacts.

Especially flat for less depth

For locations whith only limited mounting depth, the 5 A and 10 A devices in flat design make a big impression. Both 24 V power packs are accommodated in the same rugged metal housing.

SITOP flexi: Total freedom for your output voltages

One standard device for even the most extravagant applications and rarest voltage rates? That's the innovative 120 W SITOP flexi DIN rail unit. Even continuous settings of the output voltage in an extremely wide range from 3 to 52 V DC can be easily realized – even during operation. How? Either via a potentiometer or remote-controlled via an analog input signal at the power supply.



Have **you** developed a taste for SITOP?

Are you striving for more? Go for a live experience of reliable power without risk!

For information and list of contacts,
go to www.siemens.com/sitop

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Siemens AG

Automation and Drives
System Engineering
P.O. Box 23 55
90713 FUERTH, GERMANY
www.siemens.com/sitop

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SITOP modular
The modular power supply



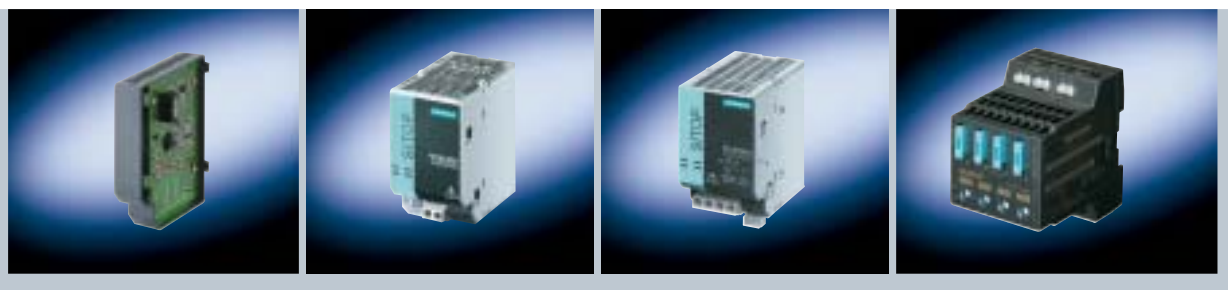


Technical specifications	SITOP modular 1-phase and 2-phase[1)]				SITOP modular 3-phase		
SITOP	**Basic unit 24 V/5 A**	**Basic unit 24 V/10 A**	**Basic unit 24 V/20 A**	**Basic unit 24 V/40 A**	**Basic unit 24 V/20 A**	**Basic unit 24 V/40 A**	**Basic unit 48 V/20 A**
Order No.	6EP1333-3BA00	6EP1334-3BA00	6EP1336-3BA00	6EP1337-3BA00	6EP1436-3BA00	6EP1437-3BA00	6EP1457-3BA00
Input voltage rated value -range	120/230–500 V AC 85...132/176...550 V AC	120/230–500 V AC 85...132/176...550 V AC	120/230 V AC 93...132/183...264 V AC	120/230 V AC 95...132/190...264 V AC	3x 400–500 V AC 3x 340...550 V AC	3x 400–500 V AC 3x 340...550 V AC	3x 400–500 V AC 3x 340...550 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)	> 6 ms (at 400 V)	> 6 ms (at 400 V)	> 6 ms (at 400 V)
Line frequency rated value	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
Input current rated value – inrush current (25 °C / 77 °F) – recommended protection in the supply cable	2.2/1.2 A - 0.61 A < 35 A from 10 A Char. B or 6 A Char. C or 3RV1021-...	4.4/2.4 A - 1.1 A < 35 A from 10 A Char. B or 6 A Char. C or 3RV1021-...	7.7/3.5 A < 60 A 10 A Char. C or 6 A Char. D or 3RV1421-...	15.0/8.0 A < 125 A 20 A Char. C or 10 A Char. D or 3RV1421-...	1.1 A (at 400 V) < 35 A required 3-ph. coupled circuit-breaker 6–16 A Char. C or 3RV 1021-1DA10	2.2 A (at 400 V) < 70 A required 3-ph. coupled circuit-breaker 6–16 A Char. C or 3RV 1021-1DA10	ca. 2.2 A (at 400 V) < 70 A required 3-ph. coupled circuit-breaker 6 – 16 A Char. C or 3RV1021-1DA10
Output voltage rated value -tolerance -setting range	24 V DC ± 3% 24...28.8 V DC	24 V DC ± 3% 24...28.8 V DC	24 V DC ± 3% 24...28.8 V DC	24 V DC ± 3% 24...28.8 V DC	24 V DC ± 3% 24...28.8 V DC	24 V DC ± 3% 24...28.8 V DC	48 V DC ± 3% 42...56 V DC
Output current rated value	5 A	10 A	20 A	40 A	20 A	40 A	20 A
Efficiency at rated value approx.	87%	87%	89%	88%	90 %	90 %	90%
Parallel switch for higher perf.	Yes, Output characteristics can be switched to parallel operation						
Electronic short-circuit protection	Yes, selectable constant current or latching shut-down						
RI specification (EN 55022)	Class B	Class B	Class B	Class B	Class B	Class B	Class B
Line harmonic limitation EN 61000-3-2	Yes	Yes	Yes	No	Yes	Yes	Yes
Degree of prot. (EN 60529)	IP 20	IP 20	IP 20	IP 20	IP 20	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
Dimension (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	160 x 125 x 125	240 x 125 x 125	240 x 125 x 125
Weight approx.	1.2 kg	1.4 kg	2.2 kg	2.9 kg	2.0 kg	3.2 kg	3.2 kg
Approvals	CE, cULus, SEMI F47	CE, cULus, SEMI F47	CE, cULus	CE, cULus	CE, UL, CSA	CE, UL, CSA	CE, cULus

[1)] Connection to 2 phases of a 3-phase power supply system

SITOP ordering data

SITOP Add-ons
All-round protection offer



Technical specifications	Signaling	Power failure bridging	Redundancy	Monitoring
SITOP	**Signaling module[1)]**	**Buffer module[1)]**	**Redundancy module**	**Diagnosis module SITOP select**
Order No.	6EP1961-3BA10	6EP1961-3BA00	6EP1961-3BA20	6EP1961-2BA00
Input voltage rated value -range	Contact rating 240 V 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
Product/Functiondescription	Signaling module for lateral snapping onto the basic unit (6EP1xxx-3BA00); automatic contacting; with potential-free signaling contacts for "Output voltage o.k." and "Operating readiness o.k."; with signal input for remote ON/OFF switching of the basic unit.	Buffer module for bridging power failures; connected in parallel to basic unit's output; buffering time 800 ms at 5 A (6EP1x3x-3BA00) or 100 ms at 40 A load current; multiplication through paralleling possible; maximum buffering time 3 s.	Module for redundancy mode. Decoupling of two power supplies 5 A to 20 A or of one power supply 40 A per redundancy module. Isolated relay contact and green LEDs for signaling "Feed-in 1 and 2 o.k.", operating point settable from 20 to 25 V.	Diagnosis module for monitoring up to four 24 V load feeders; selective disabling of faulty feeders, nominal current of between 2 and 10 A individually specifiable; with common signal contact and LEDs in multiple colors; universal diagnosis module for all power supplies.
Output current rated value	Not applicable	40 A	40 A (total output current)	4 x 10 A
Efficiency at rated values approx.	Not applicable	Not applicable	97 %	97 %
Parallel switch for higher perf.	Not applicable	Yes	No	No
Electronic short-circuit protection	Not applicable	Yes	No	Yes
RI specification (EN 55022)	Class B	Class B	Class B	Class B
Degree of prot. (EN 60529)	IP 20	IP 20	IP 20	IP 20
Ambient temperature	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 90 x appr. 90
Weight approx.	0.15 kg	1.2 kg	1.0 kg	0.4 kg
Approvals	CE, UL, CSA	CE, UL, CSA	CE, cULus	CE, cULus

1) only combinable with power supply SITOP modular

SITOP ordering data

Uninterruptible power supplies
SITOP DC UPS for long-term power failures



Technical specifications	SITOP DC UPS, for long power outages					
SITOP	**DC UPS Module 24 V/6 A**	**DC UPS Battery Module 24 V/1.2 Ah[3)]**	**DC UPS Module 24 V/15 A**	**DC UPS Battery Module 24 V/3.2 Ah[3)]**	**DC UPS Module 24 V/40 A**	**DC UPS Battery Module 24 V/7 Ah[3)]**
Order No.	6EP1931-2DC21 6EP1931-2DC31[1)] 6EP1931-2DC41[2)]	6EP1935-6MC01	6EP1931-2EC21 6EP1931-2EC31[1)] 6EP1931-2EC41[2)]	6EP1935-6MD11	6EP1931-2FC21 6EP1931-2FC41[2)]	6EP1935-6ME21
Input voltage	24 V, 22...29 V DC Feed via 24 V SITOP power supply	Rec. final charging level: 26.4...27.3 V DC (> +20 °C) 27.3...29.0 V DC (< + 20 °C)	24 V, 22...29 V DC Feed via 24 V SITOP power supply (5 A or higher)	Rec. final charging level: 26.4...27.3 V DC (> +20 °C) 27.3...29.0 V DC (< + 20 °C)	24 V, 22...29 V DC Feed via 24 V SITOP power supply (10 A or higher)	Rec. final charging level: 26.4...27.3 V DC (> +20 °C) 27.3...29.0 V DC (< + 20 °C)
Mains buffering	Depending on battery	approx. 2 min. at 4 A	Depending on battery	approx. 1.5 min. at 10 A	Depending on battery	approx. 2 min. at 20 A
Input current rated value	6 A + appr. 0.6 A for empty battery	Charging current max. 0.3 A	15 A + approx. 1 A for empty battery	Charging current 0.7 A	40 A + approx. 2.6 A for empty battery	Charging current max. 2.5 A
Overflow and short-circuit protection	Electronic, automatic restart	Battery fuse 7.5 A / 32 V built in	Electronic, automatic restart	Battery fuse 15 A/32 V built in	Electronic, automatic restart	Battery fuse 20 A/32 V built in
Output voltage rated value	24 V DC (upstream SITOP unit or battery) Charging voltage: 27.0 V	24 V DC 22...27.0 V DC (idle)	24 V DC (upstream SITOP unit or battery) Charging voltage: 27.0 V	24 V DC 22...27.0 V DC (idle)	DC 24 V (upstream SITOP unit or battery) Charging voltage: 27.0 V	24 V DC 22...27.0 V DC (idle)
Output current rated value	6 A, charge current: typ. 0.4 A	2.5 A	15 A, charge current: typ. 0.7 A	10 A	40 A, charge current: typ. 2 A	20 A
Efficiency at rated value approx.	Backup mode: 94%, Ready mode: 95%		Backup mode: 96 %, Ready mode: 96 %		Backup mode: 97 % Ready mode: 97 %	
Parallel switch	No	Yes	No	Yes	No	Yes
RI specification (EN 55022)	Class B	—	Class B	—	Class B	—
Degree of prot. (EN 60529)	IP 20	IP 00	IP 20	IP 00	IP 20	IP 00
Ambient temperature	0...+60 °C	+5...+40 °C	0...+60 °C	+5...+40 °C	0...+60 °C	+5...+40 °C
Dimensions (W x H x D) in mm	50 x 125 x 125	96 x 106 x 108	50 x 125 x 125	190 x 151 x 82	102 x 125 x 125	186 x 168 x 121
Weight approx.	0.4 kg	2 kg	0.4 kg	3.5 kg	1.1 kg	6.0 kg
Approvals	CE, cULus	CE, cULus	CE, cULus	CE, cULus	CE, cULus	CE, cULus

[1)] With serial interface
[2)] With USB interface
[3)] Battery module 24 V/2.5 Ah (6EP1935-6MD31) and 24 V/12 Ah (6EP1935-6MF01) on request

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SITOP smart
The narrow universal power supply





Technical specifications	SITOP smart 1-phase				
SITOP	**24 V / 2.5 A**	**24 V / 5 A**	**24 V / 5 A**	**24 V / 10 A**	**24 V / 10 A**
Order No.	6EP1332-2BA10	6EP1333-2AA01	6EP1333-2BA01	6EP1334-2AA01	6EP1334-2BA01
Input voltage rated value - 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
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)
Line frequency rated value	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
Input current rated value – inrush current (25 °C / 77 °F) – recommended protection in the supply cable	1.1/0.65 A < 14 A from 3 A characteristic C	2.1/1.15 A < 32 A from 6 A characteristic C	2.1/1.15 A < 32 A from 6 A characteristic C	4.1/2.4 A < 65 A from 10 A characteristic C	4.1/2.0 A < 65 A from 10 A characteristic C
Output voltage rated value - 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
Output current rated value	2.5 A (3 A up to +45°C)	5 A (6 A up to +45°C)	5 A (6 A up to +45°C)	10 A (12 A up to +45°C)	10 A (12 A up to +45°C)
Efficiency at rated value approx.	85%	87%	87%	90%	91%
Parallel switch for higher perf.	Yes	Yes	Yes	Yes	Yes
Electronic short-circuit protection	Yes, constant current approx.1.3 x output current rated value, overload capacity 1.5 x output current rated value for 5 seconds				
RI specification (EN 55022)	Class B	Class B	Class B	Class B	Class B
Line harmonic limitation EN 61000-3-2	Not applicable	No	Yes	No	Yes
Degree of prot. (EN 60529)	IP 20	IP 20	IP 20	IP 20	IP 20
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	32.5x125x125	50x125x125	50x125x125	70x125x125	70x125x125
Weight approx.	0.4 kg	0.5 kg	0.5 kg	0.75 kg	0.8 kg
Approvals	CE; UL; CSA; GL; ATEX; Hazardous Location Class I Div 2 Groups A, B, C & D, T4				

SITOP facets
from our complete offer






Technical specifications	SITOP power 0.5	SITOP power Flat Design	SITOP Outdoor[2]	SITOP flexi	
SITOP	**24 V / 0,5 A**	**24 V / 5 A**	**24 V / 10 A**	**24 V / 5 A**	**3 ... 52 V / 10A**
Order No.	6EP1331-2BA10	6EP1333-1AL12	6EP1334-1AL12	6ES7307-1EA80-0AA0	6EP1353-2BA00
Input voltage rated value - range	120–230 V[1] AC 93...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 93...132/187...264 V AC	120/230 V AC 85...132/170...264 V AC
Mains buffering	> 10 ms (at 230 V)	> 20 ms (at 93/187 V)	> 20 ms (at 93/187 V)	> 20 ms (at 93/187 V)	> 10 ms (at 93/187 V)
Line frequency rated value	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
Input current rated value – inrush current (25 °C / 77 °F) – recommended protection in the supply cable	0.22–0.13 A < 23 A from 3 A charact. C	2.2/1.2 A < 32 A from 6 A charact. C	4/2.5 A < 65 A from 10 A charact. C	2.2/1.2 A < 45 A from 10 A charact. C	2.2/0.9 A < 32 A from 6 A charact. C
Output voltage rated value - tolerance - setting range	24 V DC ± 3% —	24 V DC ± 1% 22...29 V DC	24 V DC ± 1% 22...29 V DC	24 V DC ± 3% —	24 V DC ± 1% 3...52 V DC
Output current rated value	0.5 A	5 A	10 A	5 A	2-10 A (max. 120 W)
Efficiency at rated values approx.	74%	88%	89%	84%	84% (at 24 V/5 A)
Parallel switch for higher perf.	No	Yes	Yes	No	Yes
Electronic short-circuit protection	Yes	Yes	Yes	Yes	Yes
RI specification (EN 55022)	Class B	Class B	Class B	Class A	Class B
Line harmonic limitation EN 61000-3-2	Not applicable	No	No	No	Yes
Degree of prot. (EN 60529)	IP 20	IP 20	IP 20	IP 20	IP 20
Ambient temperature	–20...+70 °C	0...+60 °C	0...+60 °C	–25...+60 °C	0...+60 °C
Dimensions (W x H x D) in mm	22.5 x 80 x 91	160 x 130 x 60	160 x 130 x 60	80 x 125 x 120	75 x 125 x 125
Weight approx.	0.11 kg	0.6 kg	0.72 kg	0.57 kg	0.9 kg
Approvals	CE, cULus	CE, cULus	CE, cULus	CE, UL, CSA	CE, cULus

[1]) With input voltage 48-220 V DC, Order No. 6EP1731-2BA00
[2]) Condensation permissible, increased vibration and shock resistance

For further SITOP power supplies, please refer to the KT 10.1 catalog

LOGO!Power
The mini power packs





Technical specifications	54 mm housing				72 mm housing				90 mm housing
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
Input voltage rated value -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)
Line frequency rated value	50/60 Hz				50/60 Hz				50/60 Hz
Input current rated value – inrush current (25 °C / 77 °F) – recommended protection in the supply cable	0.36–0.22 A < 15 A from 10 A characteristic C or 16 A characteristic B	0.53–0.30 A	0.63–0.33 A	0.70–0.35 A	0.71–0.37 A < 30 A from 10 A characteristic C or 16 A characteristic B	1.13–0.61 A	1.24-0.68 A	1.22-0.66 A	1.95-0.97 A < 30 A from 10 A char. C or 16 A char. B
Output voltage rated value -tolerance -setting range	5 V DC ± 3% 4.6...5.4 V DC	12 V DC 10.5...16.1 V DC	15 V DC 10.5...16.1 V DC	24 V DC 22.2...26.4 V DC	5 V DC 4.6...5.4 V DC	12 V DC 10.5...16.1 V DC	15 V DC 10.5...16.1 V DC	24 V DC 22.2...26.4 V DC	24 V DC 22.2...26.4 V DC
Output current rated value	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 value approx.	76%	80%	80%	82%	83%	85%	85%	87%	89%
Parallel switch for higher perf.	Yes				Yes				Yes
Electronic short-circuit protection	Yes, constant current				Yes, constant current				Yes, constant current
RI specification (EN 55022)	Class B				Class B				Class B
Line harmonic limitation EN 61000-3-2	Not applicable				Not applicable				Yes
Degree of prot. (EN 60529)	IP 20				IP 20				IP 20
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
Approvals	CE, cULus, FM, GL	CE, cULus, FM, GL, ABS	CE, cULus, FM, GL	CE, cULus, FM, GL, ABS	CE, cULus, FM, GL	CE, cULus, FM, GL, ABS	CE, cULus, FM, GL	CE, cULus, FM, GL, ABS	CE, cULus, FM, GL, ABS