SITOP power supply

Technical data, April 2010

SITOP Power Supply

Answers for industry.

SIEMENS

SITOP – reliable 24 V DC power supply

Efficient operation of a machine or plant requires a reliable, constant power supply. The quality and reliability of the SITOP stabilized power supplies ensure high levels of safety in DC power supply in industrial engineering and building management systems.

They supply a stabilized 24 volts but also other output voltages. Even in the case of large input voltage variations, the output voltage is kept stable with a high degree of accuracy. This enables the use of primary switched-mode power supplies in many applications for the supply of sensitive electronic systems – all the way up to loads requiring high currents up to 40 A.

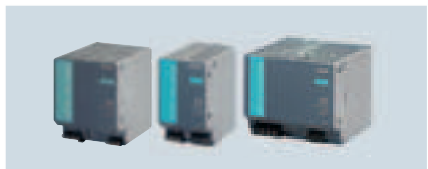
The fan-free power supplies are characterized by their compact and rugged design, high levels of efficiency and high overload capacity. The large input voltage range and the international approvals mean that use is possible in almost all supply networks worldwide.

The complete SITOP range

LOGO!Power

SITOP compact

SITOP smart



SITOP modular

SIMATIC design

„Special design, special use“

Expansion modules

DC UPS Uninterruptible power supply

In addition to the power supplies, the perfectly coordinated complete range offers a unique choice of modules – from those that protect the 24 V DC power supply against interference on the primary and secondary side, right up to those providing allround protection.
For example, with the innovative SITOP UPS500 capacitor based uninterruptible power supply or with the new SITOP PSE200U selectivity module for reliable selectivity in the output circuit.

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LOGO!Power
flat power supply for distribution boards

Technical data	**54 mm design**				**72 mm design**				**90 mm desin**
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 – 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 ± 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	24 V DC ± 3 % 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, NEC 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, NEC Class2	CE, cULus, FM, GL, ABS, ATEX

SITOP compact
Compact power supply for control boxes

	new!	new!	new!
Technical data	**Overall width 22.5 mm**	**Overall width 30 mm**	
Output voltage/current	**24 V/0.6 A**	**24 V/1.3 A**	**12 V/2 A**
Order No.	6EP1331-5BA00	6EP1331-5BA10	6EP1321-5BA00
Rated input voltage – Range	100 to 230 V AC 85...264 V AC/110...300 V DC	100 to 230 V AC 85...264 V AC/110...300 V DC	100 to 230 V AC 85...264 V AC/110...300 V DC
Mains buffering	Typ. 20 ms (at 230 V AC)	Typ. 20 ms (at 230 V AC)	Typ. 20 ms (at 230 V AC)
Rated power frequency	50/60 Hz	50/60 Hz	50/60 Hz
Rated input current – Recommended MCB	0.28 to 0.12 A from 10 A characteristic C from 16 A characteristic B	0.63 to 0.31 A from 10 A characteristic C from 16 A characteristic B	0.63 to 0.31 A from 10 A characteristic C from 16 A characteristic B
Rated output voltage – Tolerance – Setting range	24 V DC ± 3 % –	24 V DC ± 3 % 22.2...26.4 V DC	12 V DC ± 3 % 10.5...12.9 V DC
Rated output current – Derating	0.6 A (up to +55 °C) +55 °C to 70 °C	1.3 A (up to +55 °C) +55 °C to 70 °C	2 A (up to +55 °C) +55 °C to 70 °C
Efficiency with rated values, approx.	82 %	86 %	82 %
No-load loss	< 0.5 W	< 0.75 W	< 0.5 W
Can be switched in parallel	Yes	Yes	Yes
Electronic short-circuit protection	Yes, restart	Yes, restart	Yes, restart
Radio suppression level (EN 55022)	Class B	Class B	Class B
Supply harmonics limitation (EN 61000-3-2)	Not applicable	Not applicable	Not applicable
Degree of protection (EN 60529)	IP 20	IP 20	IP 20
Ambient temperature	–20...+70 °C	–20...+70 °C	–20...+70 °C
Dimensions (W x H x D) in mm	22.5 x 80 x 100	30 x 80 x 100	30 x 80 x 100
Weight, approx.	0.12 kg	0.17 kg	0.17 kg
Certification	CE, UL, CSA, ATEX	CE, UL, CSA, ATEX	CE, UL, CSA, ATEX

SITOP smart
Powerful standard power supply

Technical data	SITOP smart 1-phase					
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**
Order no.	6EP1332-2BA10	6EP1333-2AA01	6EP1333-2BA01	6EP1334-2AA01	6EP1334-2BA01	6EP1334-2AA01-0AB0
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
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)
Rated line frequency	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 [1] 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
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
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)
Efficiency at rated values approx.	85 %	87 %	87 %	90 %	91 %	90 %
Switching in parallel	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
Line harmonics limitation (EN 61000-3-2)	Not applicable	No	Yes	No	Yes	Yes
Degree of protection (EN 60529)	IP20	IP20	IP20	IP20	IP20	IP 20
Ambient temperature	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	70 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
Certification	CE, UL, CSA, GL, ATEX, Hazardous Location Class I Div 2 Groups A, B, C & D, T4 CE, cULus					

[1] 6EP1456-2BA00: Fusing required

SITOP smart
Powerful standard power supply

	new!	
Technical data	**SITOP smart 3-phase**	
Output voltage/current	**24 V/20 A**	**48 V/10 A**
Order no.	6EP1436-2BA10	6EP1456-2BA00
Rated input voltage – Range	400 – 500 V 3 AC 340...550 V 3 AC	400 – 500 V 3 AC 360...550 V 3 AC
Mains buffering	> 6 ms (at 400 V)	> 7 ms (at 400 V)
Rated line frequency	50/60 Hz	50/60 Hz
Rated input current – Inrush current (25 °C) – Required miniature circuit breaker	1.2 – 1.0 A < 25 A From 6 – 16 A charact. C, 3-ph. coupled or 3RV1021-1DA10 or 3RV1721-1DD10	1.1 – 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 % 24...28 V DC	48 V DC ± 3 % 42...56 V DC
Rated output current	20 A	10 A
Efficiency at rated values approx.	91 %	93 %
Switching in parallel	Yes	Yes
Brief overload characteristics	Extra Power: 1.5 x rated output current for 5 s/min, permanently 120 % up to 45 °C	Extra Power: 1.5 x rated output current for 5 s/min
Electronic short-circuit protection	Yes, restart	Yes, constant current
Radio interference suppression (EN 55022)	Class B	Class B
Line harmonics limitation (EN 61000-3-2)	Yes	Yes
Degree of protection (EN 60529)	IP20	IP 20
Ambient temperature	0...+60 °C	0...+60 °C
Dimensions (W x H x D) in mm	100 x 145 x 150	70 x 125 x 125
Weight approx.	1.6 kg	1.2 kg
Certification	CE	CE, cULus

SITOP modular
Technology power supply for demanding solutions

new!

Technical data	SITOP modular 1-phase and 2-phase[1]				
Output voltage/current	**24 V/5 A**	**24 V/10 A**	**24 V/20 A**	**24 V/20 A**	**24 V/40 A**
Order no.	6EP1333-3BA00	6EP1334-3BA00	6EP1336-3BA10	6EP1336-3BA00	6EP1337-3BA00
Rated input voltage – Range	120 – 230/230 – 500 V AC 85...264/176...550 V AC	120 – 230/230 – 500 V AC 85...264/176...550 V AC	120/230 V AC 85...275 V AC/88...350 V DC	120/230 V AC 93...132/183...264 V AC	120/230 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 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	50/60 Hz
Rated input current – Inrush current (25 °C) – Recommended miniature circuit breaker	2.2 to 1.2/1.2 to 0.61 A < 35 A 6 A charact. C or 3RV1021-1xA10	4.4 to 2.4/2.4 to 1.1 A < 35 A 6 A charact. C or 3RV1021-1xA10	4.6 to 2.5 A < 20 A 6 A charact. C or 3RV1021-1xA10	7.7/3.5 A < 60 A 10 A charact. C or 3RV1421-1xA10	15.0/8.0 A < 125 A 20 A charact. C or 3RV1421-xxA10
Rated output voltage – 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
Rated output current	5 A	10 A	20 A	20 A	40 A
Efficiency at rated values, approx.	87 %	87 %	93 %	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, additional with 6EP1336-3BA10: extra power with 1.5 x rated output current for 5 s/min				
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	Class B
Line harmonics limitation (EN 61000-3-2)	Yes	Yes	Yes	Yes	No
Degree of protection (EN 60529)	IP20	IP20	IP20	IP20	IP20
Ambient temperature	0...+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	90 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	1.5 kg	2.2 kg	2.9 kg
Certification	CE, cULus, SEMI F47[2]	CE, cULus, SEMI F47[2]	CE, cULus, SEMI F47[2]	CE, cULus, SEMI F47[3]	CE, cULus, SEMI F47[4]

[1] Connection to 2 phases of a three-phase supply system
[2] At input voltage 208 to 230 V AC
[3] In conjunction with a buffer module
[4] In conjunction with two buffer modules

Technical data	**SITOP modular 3-phasig**				**SITOP modular 3-phasig, 48 V**
Output voltage/current	**24 V/20 A**	**24 V/20 A**	**24 V/40 A**	**24 V/40 A**	**48 V/20 A**
Order no.	6EP1436-3BA10	6EP1436-3BA00	6EP1437-3BA10	6EP1437-3BA00	6EP1457-3BA00
Rated input voltage – Range	400 – 500 V 3 AC 320...575 V 3 AC	400 – 500 V 3 AC 340...550 V 3 AC	400 – 500 V 3 AC 320...575 V 3 AC	400 – 500 V 3 AC 340...550 V 3 AC	400 – 500 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 – Inrush current (25 °C) – Recommended miniature circuit breaker	1.2 – 1.0 A < 18 A 6 – 16 A charact. C 3-ph. coupled or 3RV1021-1DA10 or 3RV1721-1DD10	1.1 – 0.9 A < 35 A 6 – 16 A charact. C 3-ph. coupled or 3RV1021-1DA10 or 3RV1721-1DD10	2.6 – 2.1 A < 56 A 10 – 16 A charact. C 3-ph. coupled or 3RV1021-1DA10 or 3RV1721-1DD10	2.0 – 1.7 A < 70 A 10 – 16 A charact. C 3-ph. coupled or 3RV1021-1DA10 or 3RV1721-1DD10	2.2 A (at 400 V) < 70 A 10 – 16 A charact. C 3-ph. coupled or 3RV1021-1DA10 or 3RV1721-1DD10
Rated output voltage – 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	48 V DC ± 3 % 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[1]: 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, SEMI F47	CE, UL, CSA, SEMI F47	CE, cULus, SEMI F47	CE, UL, CSA, SEMI F47	CE, UL, CSA

[1] Extra power only available with 6EP1436-3BA10 and 6EP1437-3BA10

SITOP
in special design, for special uses

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	–	–	24...28.8 V DC	24...28.8 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, constant current	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	–25...+70 °C	–25...+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, variable 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	120/230 V AC	400 – 480 V 3 AC	24 V DC	120 – 230 V AC	120/230 V AC
– Range	93...132 V/187...264 V AC	340...550 V 3 AC	18.5...30.2 V DC	93...264 V AC	85...132 V/170...264 V AC
Mains buffering	> 10 ms (at 93/187 V)	15 ms (at 400 V)	> 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, 16 A characteristic B	6 A characteristic C
Rated output voltage	24 V DC	24 V DC	12 V DC	2 x 15 V DC	24 V DC
– Tolerance	± 3 %	–5 %/+3 %	± 3 %	± 3 %	± 1 %
– Setting range	22.8...26.4 V DC [1]	–	12...14 V DC	14.5...17 V DC	3...52 V 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. 120 W)
Efficiency at rated values, approx.	> 80 %	88 %	80 %	80 %	84 % (at 24 V/5 A)
Switching in parallel	Yes [1]	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 pending	CE, cULus	CE	CE, cULus

[1] Only permissible at an ambient temperature of 0 to 50 °C

SITOP
in SIMATIC design

			new!	new!	new!		
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/10 A**	**24 V/5 A Outdoor** [1]	**24 V/8 A**
Order no.	6EP1332-1SH71	6EP1332-1SH31	6ES7307-1BA01-0AA0	6ES7307-1EA01-0AA0	6ES7307-1KA02-0AA0	6ES7307-1EA80-0AA0	6ES7 148-4PC00-0HA0
Rated input voltage	120/230 V AC automatic range selection	120/230 V AC	120/230 V AC automatic range selection	120/230 V AC automatic range selection	120/230 V AC automatic range selection	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	85...132 V/170...264 V AC	93...132 V/187...264 V AC	340...550 V 3 AC
Mains buffering	> 20 ms (at 93/187 V)	> 20 ms (at 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	0.9/0.5 A	2.3/1.2 A	4.2/1.9 A	2.2/1.2 A	2 A
– Inrush current (25 °C)	< 13 A	< 33 A	< 22 A	< 20 A	< 55 A	< 45 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	10 A	5 A	8 A
Efficiency at rated values, approx.	83 %	84 %	84 %	86 %	90 %	84 %	88 %
Switching in parallel	Yes	Yes	Yes	Yes	Yes	No	No
Electronic short-circuit protection	Yes, constant current characteristic	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 A	Class A
Line harmonics limitation (EN 61000-3-2)	Not applicable	Yes	Not applicable	Yes	Yes	No	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	0...+60 °C	–25...+70 °C	–25 °C...+55 °C
Installation	DIN rail or wall mounting	DIN rail or wall mounting	Can be mounted on S7 rail. Mounting adapter for DIN rail 35 x 15 mm: 6EP1971-1BA00			Can be mounted on S7 rail. Mounting adapter: 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	40 x 125 x 120	60 x 125 x 120	80 x 125 x 120	80 x 125 x 120	310 x 135.5 x 90 + plug connector
Weight approx.	0.3 kg	0.5 kg	0.4 kg	0.6 kg	0.8 kg	0.57 kg	2.8 kg
Certification	CE, cULus	CE, cULus	CE, cULus, ATEX, Hazardous Location Class I Div 2 Groups A, B, C & D, T4			CE, UL, CSA	CE, UL 508 pending

[1] Condensation permissible, increased vibration and shock resistance

SITOP expansion modules to increase system availability

		new!	new!		
Technical data	**Signaling**	**Mains buffering**	**Redundancy**	**Monitoring**	
SITOP	**Signaling module** [1]	**Buffer module** [2]	**Redundancy module**	**SITOP PSE200U selectivity module**	**SITOP select diagnosis module**
Order no.	6EP1961-3BA10	6EP1961-3BA01	6EP1961-3BA21	6EP1961-2BA11 6EP1961-2BA21	6EP1961-2BA00
Rated input voltage – 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	24 V DC 22...30 V DC
Brief description of product/ function	Signaling module for snapping onto the side of the basic unit SITOP modular (6EP1xxx-3BA00); 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; parallel connection at output of 24 V basic units (6EP1x3x-3BAxx); buffer time 100 ms to 10 s dependent on load current; multiplication possible using parallel switching.	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 push-button per channel	Status indication via 2-color LED per channel, common reset via pushbutton, plug-in fuse per channel
Rated output current	Not applicable	40 A	40 A (Total output current)	4 x 3 A 4 x 10 A	4 x 10 A
– Setting range				0,5 to 3 A 3 to 10 A	2 to 10 A
Efficiency at rated values, approx.	Not applicable	Not applicable	97 %	97 %	97 %
Switching in parallel	Not applicable	Yes	No	No (channels)	No (channels)
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	70 x 80 x 72	72 x 90 x 90
Weight approx.	0.15 kg	1.2 kg	0.5 kg	0.2 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, UL, ATEX	CE, cULus, Hazardous Location Class I Div 2 Groups A, B, C & D, T4; ATEX

[1] Can only be combined with SITOP modular power supply 6EP1__-3BA00 [2] 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

Technical data	SITOP DC UPS, for longer power failures					
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[1)]**	**DC UPS battery module 24 V/3.2 Ah[1)]**	**DC UPS battery module 24 V/7 Ah[1)]**
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, Any	Infeed from 24 V SITOP power supply: 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

[1)] 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)

Input voltage	Output current	smart	modular	„Special design, special use“	SIMATIC design	Others
Output voltage 24 V DC						
3-phase 400 to 500 V AC	5 A		6EP1333-3BA00 [1]			
	8 A			6EP1 433-2CA00	6ES7 148-4PC00-0HA0	
	10 A		6EP1334-3BA00 [1]			6EP1434-2BA00
	20 A	6EP1436-2BA10	6EP1436-3BA10			6EP1436-2BA00
			6EP1436-3BA00			
	30 A					6EP1437-2BA00
	40 A		6EP1437-3BA10			6EP1437-2BA10
			6EP1437-3BA00			
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	
110 – 350 V DC	2.5 A					6EP1332-1SH12
	4 A					6EP1332-1SH22
	10 A					6EP1 334-1SH01
88 – 350 V DC	20 A		6EP1336-3BA10			

[1] Connection to 2 phases 230 – 500 V AC – see data sheet SITOP modular 1-/2-phase

Gray: more information in Catalog KT10.1 or in Online Catalog CA01

Input voltage	Output current	LOGO!Power	compact	smart	modular	„Special design, special use“
Output voltage 5, 12, 15, 48, ... V DC						
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/2.0 A		6EP1 321-5BA00			
	12 V/4.5 A	6EP1 322-1SH02				
	15 V/1.9 A	6EP1 351-1SH02				
	15 V/4 A	6EP1 352-1SH02				
	3 – 52 V/2 – 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	

Further information

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