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SITOP power supply

Technical data



SITOP Power Supply

Answers for industry.

SIEMENS

E80001-A2490-P310-V2-7600_BL.indd 1 08.05.2009 13:14:13 Uhr

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Selection table
SITOP power supplies

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

Contents

Selection tables for power supplies	2 – 3
SITOP modular 1-phase and 2-phase	4
SITOP modular 3-phase	5
SITOP smart	6
LOGO!Power	7
Special design and uses	8 – 9
SIMATIC design	10
SITOP expansion modules	11
SITOP DC UPS with battery technology	12 – 13
SITOP DC UPS with capacitor technology	14 – 15



E80001-A2490-P310-V2-7600_BL.indd 2 08.05.2009 13:14:27 Uhr

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

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

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

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

E80001-A2490-P310-V2-7600_BL.indd 3 08.05.2009 13:14:27 Uhr

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SITOP modular
The modular power supply

				
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/40 A**
Order no.	6EP1333-3BA00	6EP1334-3BA00	6EP1336-3BA00	6EP1337-3BA00
– with protection-coated PCB	6EP1333-3BA00-8AC0	6EP1334-3BA00-8AB0	6EP1336-3BA00-8AA0	–
Rated input voltage – 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 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 230 V)	> 20 ms (at 230 V)
Rated line frequency	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
Rated input current – Inrush current (25 °C)	2.2 to 1.2/1.2 to 0.61 A < 35 A	4.4 to 2.4/2.4 to 1.1 A < 35 A	7.7/3.5 A < 60 A	15.0/8.0 A < 125 A
– Recommended miniature circuit breaker	6 A charact. C or 3RV1021-1xA10	6 A charact. C or 3RV1021-1xA10	10 A charact. C or 3RV1421-1xA10	20 A charact. C or 3RV1421-xxA10
Rated output voltage – 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
Rated output current	5 A	10 A	20 A	40 A
Efficiency at rated values, approx.	87 %	87 %	89 %	88 %
Switching in parallel	Yes, output characteristic can be switched to parallel operation			
Brief overload characteristics	Power boost: 3 x rated output current for 25 ms			
Electronic short-circuit protection	Yes, constant current or latching shutdown selectable. Constant current: 1.15 x rated output current			
Radio interference suppression (EN 55022)	Class B	Class B	Class B	Class B
Line harmonics limitation (EN 61000-3-2)	Yes	Yes	Yes	No
Degree of protection (EN 60529)	IP20	IP20	IP20	IP20
Ambient temperature	0...+60 °C	0...+60 °C	0...+60 °C	0...+60 °C
Dimensions (W x H x D) in mm	70 x 125 x 125	90 x 125 x 125	160 x 125 x 125	240 x 125 x 125
Weight approx.	1.2 kg	1.4 kg	2.2 kg	2.9 kg
Certification	CE, cULus, SEMI F47[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 120 to 230 V AC
[3)] In conjunction with a buffer module
[4)] In conjunction with two buffer modules

E80001-A2490-P310-V2-7600_BL.indd 4 08.05.2009 13:14:27 Uhr

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	new!		new!		
					
Technical data	**SITOP modular 3-phase**				**SITOP modular 3-phase, 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
– with protection-coated PCB	–	6EP1436-3BA00-8AA0	–	6EP1437-3BA00-8AA0	–
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)	1.1 – 0.9 A < 18 A	1.1 – 0.9 A < 35 A	2.6 – 1.2 A < 56 A	2.0 – 1.7 A < 70 A	approx. 2.2 A (at 400 V) < 70 A
– Required miniature circuit breaker	6 – 16 A charact. C, 3-ph. coupled or 3RV1021-1DA10, 3RV1721-1DD10	6 – 16 A charact. C, 3-ph. coupled or 3RV1021-1DA10, 3RV1721-1DD10	10 – 16 A charact. C 3-ph. coupled or 3 RV1021-1DA10, 3RV1721-1DD10	10 – 16 A charact. C, 3-ph. coupled or 3RV1021-1DA10, 3RV1721-1DD10	10 – 16 A char. C, 3-ph. coupled or 3RV1021-1DA10, 3RV1721-1DD10
Rated output voltage – 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	CE, UL, CSA, SEMI F47	CE, cULus	CE, UL, CSA, SEMI F47	CE, UL, CSA

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

E80001-A2490-P310-V2-7600_BL.indd 5 08.05.2009 13:14:30 Uhr

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SITOP smart
The slim universal power supply

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

[1] 6EP1456-2BA00: Fusing required

E80001-A2490-P310-V2-7600_BL.indd 6 08.05.2009 13:14:36 Uhr

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LOGO!Power – the mini power packs

									
Technical data	**54 mm design**				**72 mm design**				**90 mm design**
SITOP	**5 V/3 A**	**12 V/1.9 A**	**15 V/1.9 A**	**24 V/1.3 A**	**5 V/6.3 A**	**12 V/4.5 A**	**15 V/4 A**	**24 V/2.5 A**	**24 V/4 A**
Order no.	6EP1311-1SH02	6EP1321-1SH02	6EP1351-1SH02	6EP1331-1SH02	6EP1311-1SH12	6EP1322-1SH02	6EP1352-1SH02	6EP1332-1SH42	6EP1332-1SH51
Rated input voltage – Range	100 – 240 V AC 85...264 V AC				100 – 240 V AC 85...264 V AC				100 – 240 V AC 85...264 V AC
Mains buffering	> 40 ms (at 187 V)				> 40 ms (at 187 V)				> 40 ms (at 187 V)
Rated line frequency	50/60 Hz				50/60 Hz				50/60 Hz
Rated input current – Inrush current (25 °C)	0.36 to 0.22 A < 15 A	0.53 to 0.30 A	0.63 to 0.33 A	0.70 to 0.35 A	0.71 to 0.37 A < 30 A	1.13 to 0.61 A	1.24 to 0.68 A	1.22 to 0.66 A	1.95 to 0.97 A < 30 A
– Recommended miniature circuit breaker	From 10 A characteristic C resp. 16 A characteristic B				From 10 A characteristic C resp. 16 A characteristic B				From 10 A char. C resp. 16 A char. B
Rated output voltage – Tolerance – 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, Class2	CE, cULus, FM, GL, ATEX	CE, cULus, FM, GL, ABS, ATEX	CE, cULus, FM, GL, ATEX	CE, cULus, FM, GL, ABS, ATEX, SEMI F47, Class2	CE, cULus, FM, GL, ABS, ATEX

E80001-A2490-P310-V2-7600_BL.indd 7 08.05.2009 13:15:13 Uhr

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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	–	–	22...29 V DC	22...29 V DC	23...26 V DC	23...26 V DC	23...26 V DC	23...26 V DC
Rated output current	0.375 A	0.5 A	5 A	10 A	2.5 A (+45 °C)	4 A (+45 °C)	6 A (+45 °C)	12 A (+45 °C)
Efficiency at rated values, approx.	68 %	74 %	88 %	89 %	84 %	87 %	87 %	88 %
Switching in parallel	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Electronic short-circuit protection	Yes, restart	Yes, 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, variFromle installation position			
Dimensions (W x H x D) in mm	22.5 x 80 x 91	22.5 x 80 x 91	160 x 130 x 60	160 x 130 x 60	approx. 52 x 170 x 110 incl. mounting rail clip			
Weight approx.	0.14 kg	0.11 kg	0.6 kg	0.72 kg	0.8 kg	0.8 kg	0.9 kg	0.9 kg
Certification	CE, cULus	CE, cULus	CE, cULus	CE, cULus	CE, cULus	CE, cULus	CE, cULus	CE, cULus

E80001-A2490-P310-V2-7600_BL.indd 8 08.05.2009 13:15:37 Uhr

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SITOP
in special design, for special uses

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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	
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. 125 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

E80001-A2490-P310-V2-7600_BL.indd 9 08.05.2009 13:15:39 Uhr

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SITOP
in SIMATIC design

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

[1)] Condensation permissible, increased vibration and shock resistance

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SITOP expansion modules
The range for all-round protection

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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	6EP1961-3BA00	6EP1961-3BA20	6EP1961-2BA10 6EP1961-2BA20	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; automatic contacting, with floating signaling contacts for "Output voltage o.k." and "operating readiness o.k."; with signal input for switching the basic unit ON/ OFF remotely.	Buffer module for mains buffering; connection by parallel switching at the output of the basic unit (6EP1x3x-3BA0x); buffer time 100 ms at 40 A to 800 ms at 5 A load current; multiplication possible using parallel switching; maximum buffer time 3 s.	Module for redundancy mode. Decoupling of two 5 A to 20 A power supplies or one 40 A power supply per redundancy module. Floating relay contact and green LED for signaling "Infeed 1 and 2 o.k.", switching threshold adjustable between 20 to 25 V DC.	Module for distributing the 24 V supply over up to four load feeders and their monitoring for overload; selective shutdown of faulty feeders, rated current individually adjustable; with common signaling contact, universal use for all power supplies. Individual load feeders can be switched on sequentially. Status indication via 3-color LED per channel; remote reset with 24 V signal and reset via 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	No
Electronic short-circuit protection	Not applicable	Yes	No	Yes	Yes
Radio interference suppression (EN 55022)	Class B	Class B	Class B	Class B	Class B
Degree of protection (EN 60529)	IP20	IP20	IP20	IP20	IP20
Ambient temperature	0...+ 60 °C	0...+60 °C	0...+60 °C	0...+60 °C	0...+60 °C
Dimensions (W x H x D) in mm	25 x 125 x 125	70 x 125 x 125	70 x 125 x 125	72 x 80 x 72	72 x 90 x 90
Weight approx.	0.15 kg	1.2 kg	1.0 kg	0.22 kg	0.4 kg
Certification	CE, UL, CSA	CE, UL, CSA	CE, cULus, Hazardous Location Class I Div 2 Groups A, B, C & D, T4; ATEX	CE, cULus	CE, cULus, Hazardous Location Class I Div 2 Groups A, B, C & D, T4; ATEX

[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

E80001-A2490-P310-V2-7600_BL.indd 11 08.05.2009 13:15:44 Uhr

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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, Infeed from 24 V SITOP power supply:			Recomm. end-of-charge voltage: 26.4...27.3 V DC (> +20 °C), 27.3...29.0 V DC (< +20 °C)		
	Any	From 24 V/5 A	From 24 V/10 A			
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)

E80001-A2490-P310-V2-7600_BL.indd 12 08.05.2009 13:15:55 Uhr

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Selection table battery modules and power failure times

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

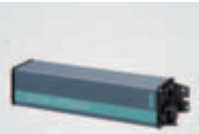
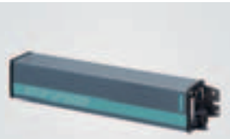
[1] High temperature battery module for ambient temperature –40 to +60 °C

E80001-A2490-P310-V2-7600_BL.indd 13 08.05.2009 13:15:56 Uhr

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



Technical data	Maintenance-free DC UPS				
SITOP	**UPS500S – Basic unit 15 A**		**UPS501 – Expansion module**	**UPS500P – Basic unit 7 A, degree of protection IP65**	
Energy	2.5 kWs	5 kWs	5 kWs	5 kWs	10 kWs
Order no.	6EP1 933-2EC41	6EP1 933-2EC51	6EP1935-5PG01	6EP1933-2NC01 [1]	6EP1933-2NC11 [1]
Input voltage	24 V DC, 22...29 V, Infeed from SITOP 24 V		Infeed from basic unit	24 V DC, 22.5...29 V, Infeed from SITOP 24 V	
Rated input current	15.2 A + approx. 2.3 A in charging mode		Description: expansion module for extending the buffering time, up to 3 units can be switched in parallel with one UPS500S basic unit	7 A + approx. 2 A in charging mode	
Rated output voltage	In buffer mode and normal mode 24 V DC +/-3 %			In buffer mode and normal mode 24 V DC +/-3 %	
Rated output current	15 A, charging current 1 A (factory setting) or 2 A selectable			7 A,charging current 2 A	
Efficiency at rated values, approx.	97.50 %			96.90 %	
Overload and short-circuit protection	Electronic, automatic restart			Electronic, automatic restart	
Switching in parallel	No		Yes, up to 3 units	No	No
Radio interference suppression (EN 55022)	Class B	Class B	Class B	Class B	Class B
Degree of protection (EN 60529)	IP20	IP20	IP20	IP65	IP65
Ambient temperature	0...+60 °C	0...+60 °C	0...+60 °C	0...+55 °C	0...+60 °C
Installation	DIN rail	DIN rail	DIN rail	Screw mounting in all mounting positions	
Dimensions (W x H x D) in mm	120 x 125 x 125	120 x 125 x 125	70 x 125 x 125	400 (without connector) x 80 x 80	470 (without connector) x 80 x 80
Weight approx.	1.0 kg	1.2 kg	0.7 kg	1.9 kg	2.2 kg
Certification	CE, UL 508/CSA C22.2, File E197259			CE, UL508 pending, File E179336	

[1] Connector set with input and output connector as well as prepared USB cable in 2 m length: Order no. 6EP1975-2ES00

E80001-A2490-P310-V2-7600_BL.indd 14 08.05.2009 13:15:58 Uhr

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Buffer times and charging times
SITOP UPS500





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

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

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

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Dispo 06305
GI.SE.ST.SITP.52.9.08 WS 05093PDF
Printed in Germany
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