

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



Technical data	Maintenance-free DC UPS				
SITOP	UPS500S – basic unit 15 A		UPS501S – expansion module	UPS500P – basic unit 7 A, degree of protection IP65	
Energy	2.5 kW	5 kW	5 kW	5 kW	10 kW
Order No.	6EP1933-2EC41	6EP1933-2EC51	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 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.	97.5 %			96.5 %	
Overload and short-circuit protection	Electronic, automatic restart			Electronic, automatic restart	
Parallel switching	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 (WxHxD) 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	1.0 kg	0.7 kg	1.9 kg	2.2 kg
Certification	CE, cULus			CE	

¹⁾ Connector set with input and output connector as well as prepared USB cable in 2 m length: Order no. 6EP1975-2ES00
Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)

Buffering times and charging times

SITOP UPS500



	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

Buffering 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	–	–

Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)

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⁾ for DC UPS module 6 A	DC UPS battery module 24 V/3.2 Ah ¹⁾ for DC UPS module 6 A and 15 A	DC UPS battery module 24 V/7 Ah ¹⁾ for DC UPS module 6 A, 15 A and 40 A (for >30 A to 40 A two units in parallel)	DC UPS battery module 24 V/12 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	6EP1935-6MF01
Input voltage	24 V DC, 22...29 V, infeed from 24 V SITOP power supply: From 24 V/0.6 A			24 V DC, 22...27.0 V DC (> +20 °C), 27.3...29.0 V DC (< +20 °C) From 24 V/5 A			
Rated input current	6 A + approx. 0.85 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 max. 0.8 A	Charging current max. 1.75 A	Charging current max. 3 A
Rated output voltage	24 V DC (upstream SITOP device or battery), charging voltage: 27.0 V			24 V DC, 22...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	6 A	15 A	30 A	30 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	Not applicable
Overload and short-circuit protection	Electronic, automatic restart			Installed battery fuse: 7.5 A/32 V			
Parallel switching	No	No	No	Yes	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	IP00
Ambient temperature	-25...+60 °C	-25...+60 °C	-25...+60 °C	0...+40 °C	0...+40 °C	0...+40 °C	0...+40 °C
Installation	DIN rail	DIN rail	DIN rail	DIN rail or wall mounting		Wall mounting	Wall mounting
Dimensions (WxHxD) 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	253 x 168 x 121
Weight approx.	0.4 kg	0.4 kg	1.1 kg	1.8 kg	3.2 kg	6.0 kg	9.0 kg
Certification	CE, cULus	CE, cULus	CE, cULus	CE, cURus	CE, cURus	CE, cURus	CE, cURus

¹⁾ Also available: High-temperature battery module 24 V / 2.5 Ah (6EP1935-6MD31) for ambient temperatures from -40 to +60 °C
 Technical data subject to nominal input voltage value and +25 °C ambient temperature (unless stated otherwise)

Selection table battery modules and buffer 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 (15 A)	6 min.	15 min.	4 min.
20 A	–	–	3 min.	11 min.	–
25 A	–	–	2 min.	9 min.	–
30 A	–	–	1 min.	6 min.	–

¹⁾ High-temperature battery module for ambient temperatures from –40 to +60 °C

Buffer time determination was based on the discharging time of new and completely charged battery modules with a minimum battery temperature of +25 °C until decrease of the battery voltage to 21 V (with voltage drops in the DC UPS, approx. 20.4 V DC remain for the load)