Data sheet

SITOP MODULAR PLUS 40 STABILIZED POWER SUPPLY INPUT: 400-500 V 3 AC OUTPUT: 24 V DC/40 A VERSION WITH COATED PCB



Technical specifications	
Product	SITOP modular plus
Power supply, type	24 V/40 A

Input		
Input	3-phase AC	
Rated voltage value Vin rated	400 500 V	
Voltage range AC	320 550 V	
Note	Starting from Vin > 340 V	
Wide-range input	Yes	
Overvoltage resistance	2.3 × Vin rated, 1.3 ms	
Mains buffering at lout rated, min.	6 ms; at Vin = 400 V	
Rated line frequency	50 60 Hz	
Rated line range	47 63 Hz	
Input current at rated input voltage 400 V Rated value	2.2 A	
Switch-on current limiting (+25 °C), max.	70 A	
I²t, max.	2.8 A ² ·s	
Built-in incoming fuse	none	
Protection in the mains power input (IEC 898)	Required: 3-pole connected miniature circuit breaker 10 16 A characteristic C or circuit breaker 3RV2011-1DA10 (setting 3 A) or 3RV2711-1DD10 (UL 489)	

Output	
Output	Controlled, isolated DC voltage
Rated voltage Vout DC	24 V
Total tolerance, static ±	3 %

Static load balancing, approx. Steic load balancing, approx. Spikes peak-peak, max. Spikes peak-peak, max. Spikes peak-peak, max. Adjustment range Output voltage adjustable Output voltage setting Via potentiometer; max. 960 W Status display Green LED for 24 V OK Signaling Via signaling Via signaling Via signaling module (6EP1981-3BA10) On/off behavior No overshoot of Vout (soft start) Startup delay, max. Voltage increase time of the output voltage maximum Rated current value lout rated 40 A Current range 040 A *Note Note Active power supplied typical Short-term overload current at short-circuit during operation typical Duration of overloading capability for excess current at short-circuit during operation typical Duration of overloading capability for excess current at short-circuit during operation typical Efficiency Efficiency Efficiency Efficiency at Vout rated, lout rated, approx. Power loss at Vout rated, lout rated, approx. 106 W Clossed-loop control Dynamic load smoothing (lout: 50/100/50 %), Uout ± typ. Load step setting time 50 to 100%, typ. Load step setting time 50 to 100%, typ. Load step setting time 50 to 100%, typ. Load step setting time for operation Protection and monitoring Output overvoltage protection Current limitation, typ. 46 A Property of the output Short-circuit proof Short-circuit protection Alternatively, constant current characteristic approx. 46 A or latching shutdown Enduring short circuit current RMS value typical			
Residual ripple peak-peak, max. Spikes peak-peak, max. (bandwidth: 20 MHz) Adjustment range Product function Output voltage adjustable Ves Output voltage setting Via potentiometer; max. 960 W Status display Green LED for 24 V OK Signaling Via signaling module (6EP1961-3BA10) On/off behavior No overshoot of Vout (soft start) Startup delay, max. 2.5 s Voltage increase time of the output voltage maximum Rated current value fout rated 40 A Current range Note Note Active power supplied typical Constant overload current at short-circuit during operation typical Duration of overloading capability for excess current at short-directul during operation typical Duration of overloading capability for excess current at short-directul during operation shorts for arallel switchiable units for enhanced performance Parallel switching for enhanced performance Parallel switchable units for enhanced performance Pifficiency Efficiency Efficiency at Vout rated, lout rated, approx. 90 % Power loss at Vout rated, lout rated, approx. 106 W Closed-loop control Dynamic mains compensation (Vin rated ±15 %), max. Dynamic load smoothing (lout: 50/100/50 %), Uout ± typ. Load step setting time 50 to 100%, typ. 4 ms Setting time maximum 10 ms Protection and monitoring Output overvoltage protection Current limitation, typ. 46 A Property of the output Short-circuit proof Yes Short-circuit protection Alternatively, constant current characteristic approx. 46 A or latching shutdown	Static mains compensation, approx.	0.1 %	
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Protection and monitoring Output overvoltage protection < 35 V Current limitation, typ. 46 A Property of the output Short-circuit proof Yes Short-circuit protection Alternatively, constant current characteristic approx. 46 A or latching shutdown	Load step setting time 100 to 50%, typ.	4 ms	
Output overvoltage protection < 35 V Current limitation, typ. 46 A Property of the output Short-circuit proof Yes Short-circuit protection Alternatively, constant current characteristic approx. 46 A or latching shutdown	Setting time maximum	10 ms	
Output overvoltage protection < 35 V Current limitation, typ. 46 A Property of the output Short-circuit proof Yes Short-circuit protection Alternatively, constant current characteristic approx. 46 A or latching shutdown	Protection and monitoring		
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Short-circuit protection Alternatively, constant current characteristic approx. 46 A or latching shutdown		Yes	
		Alternatively, constant current characteristic approx. 46 A or	
	Enduring short circuit current RMS value typical	-	

Overload/short-circuit indicator	LED yellow for "overload", LED red for "latching shutdown"	
Safety		
Primary/secondary isolation	Yes	
Galvanic isolation	Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178	
Protection class	Class I	
Leakage current maximum	3.5 mA	
CE mark	Yes	
UL/CSA approval	Yes	
UL/cUL (CSA) approval	UL-Listed (UL 508), File E197259, CSA (CSA C22.2 No. 14, CSA C22.2 No. 107.1)	
Explosion protection	-	
Certificate of suitability IECEx	No	
Certificate of suitability NEC Class 2	No	
FM approval	-	
CB approval	No	
Marine approval	-	
Degree of protection (EN 60529)	IP20	
Emitted interference	EN 55022 Class B	
Supply harmonics limitation	EN 61000-3-2	
Noise immunity	EN 61000-6-2	
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Operating data		
Ambient temperature during operation	0 70 °C	
• Note	with natural convection	
Ambient temperature during transport	-40 +85 °C	
Ambient temperature during storage	-40 +85 °C	
Humidity class according to EN 60721	Climate class 3K3, no condensation	
Mechanics		
Connection technology	screw-type terminals	
Connections Supply input	L1, L2, L3, PE: 1 screw terminal each for 0.2 4 mm² single-core/finely stranded	
Connections Output	+, -: 2 screw terminals each for 0.33 10 mm²	
Connections Auxiliary	-	
Width of the enclosure	240 mm	
Height of the enclosure	125 mm	
Depth of the enclosure	125 mm	
Weight, approx.	3.2 kg	
Product property of the enclosure housing for side- by-side mounting	Yes	
Installation	Snaps onto DIN rail EN 60715 35x15	
Electrical accessories	Buffer module, signaling module	

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