

SITOP power for High Mains Voltages: 24V DC/20 A from 500-600 V AC

The Latest Developments: SITOP power

SITOP power – the standard for the next generation of stabilized power supplies

Thanks to global experience and constant innovation, SITOP power sets the future standards. Its increased functionality and more compact dimensions equip it for tomorrow's global markets and applications. No matter whether it's used in harsh industrial environments or in sensitive public networks – it can be used anywhere in the world. With SITOP power you get exactly what you need to provide you with the maximum advantages you need. The range of devices covering every performance grade allows for profitable usage in the most varied markets and branches.

In some industrial applications such as the chemical and steel industries, powerful mains fluctuations can occur under off-peak conditions. The result of this can be voltage peaks over 550 V in the supply system. This is too much for even power supplies designed for 500V – but not for the two-phase power supply from SITOP power. Thanks to the special wide-range input, the primary switched-mode regulator can be connected to two phases of a three-phase system with system voltages ranging between 500 and 600 V. This makes it also suitable for the 600V industrial networks in the USA and for the widespread 575 V networks in Canada. With the UL, cUL and CSA we have the green light from the North-American authorities.



Two-phase connection means that the third phase need not be connected, thus saving not only on installation time but also on cable fusing. Because power input is low, asymmetries in power consumption can be safely ignored.

While we're on the subject of power: if an output current of 20 A is insufficient, 2 devices can simply be switched in parallel. In fact, handling of the fan-free device is in extremely easy thanks to the light weight, compact dimensions and snap-on installation for 35 mm DIN rails.

As you would expect from SITOP power devices, there is a precise, stabilized DC voltage available at the output. This provides the connected loads with the best protection against mains fluctuations and faults. Since the output voltage can be set between 22.8 and 28.8 V, the loads still receive the full 24 V even where they have to be supplied at a distance via a long connecting cable.

Technical Specifications

SITOP power 24V/20A for high mains voltages

Input data	Input voltage-nominal value $V_{IN \text{ rated}}$	2 phase 500-600 V AC
	-Range	2 phase 420 to 682 V AC
	Frequency-nominal value	50/60 Hz
	-Range	47 to 63 Hz
	Mains buffering at $I_{out \text{ rated}}$	6 ms (at $V_I = 420 \text{ V}$)
	Input current-nominal value $I_{IN \text{ rated}}$	1.82 A _{eff} (at $V_I = 420 \text{ V}$)
	Inrush current (+25 °C)	< 25A
Necessary fusing on the incoming line	two-phase coupled circuit breaker 3A to 10A characteristic C or motor protection switch type 3VU1300-OMJ00 or 3RV1021-1DA10, Setting 3A	
Output data	Output voltage-nominal value $V_{out \text{ rated}}$	24V DC
	Total tolerance	± 2%
	Residual ripple	< 150 mVpp
	Switching peaks	< 240 mVpp
	Setting range	22,8 to 28,8 V
	Output current-nominal value $I_{out \text{ rated}}$	20A
	Overcurrent limitation	0 to 20A
	Outputs switchable in parallel	Typically 1,05 to 1,3 $I_{out \text{ rated}}$
	Electronic short-circuit protection	Yes
Efficiency V_{IN} and $I_{out \text{ rated}}$	Yes, constant current characteristic approx.28A Approx. 89%	
Elektromagnetic compatibility	Radio interference suppression level (EN55011)	Class A
Safety	Galvanic isolation primary/secondary	Yes (SELV in accordance with EN 60950)
	Protection class	I (IEC 536 / VDE 0106 T1)
	Degree of protection	IP 20
	Certification	CE, UL/cUL, CSA
General	Ambient temperature range	0 to +60°C with natural convection
	Transport and storage temperature	-25 to +85°C
	Connections (single-core or finely stranded)	Screw-type terminals
	Connections input L1, L2, PE	0.5 to 2.5 mm ²
	Connections output L+	1 x 0.5 to 10 mm ²
	Connections output M	2 x 0.5 to 10 mm ²
	Assembly	on standard sectional rail DIN EN 50022-35x15/7.5
Weight approx.	3,3 kg	
Dimensions (W x H x D)	280 mm x 180 mm x 92 mm	
Ordering data	Order No.	6EP1536-2AA00

<http://www.ad.siemens.de/sitop>

Siemens AG
Automation & Drives
Systems Engineering, A&D SE PS
P.O. Box 23 55, D-90713 Fürth, Germany

Subject to change without prior notice

Siemens Aktiengesellschaft

Order No. E80001-A0020-P310-X-7600
Printed in Germany
21C6921 MK.SE.ST.SITP.52.1. SB 02013.0
SEK 30474 Dispo. 06305

