

# SIEMENS

The Latest  
Developments  
in SITOP

## SITOP power DC/DC Utilizes Drive Energy on Mains Failure and Keeps the Consumer Running Safely

Tool fracture and damaged work-pieces, faults in woven textiles and broken threads, danger to human life and damage to machines – the consequences of mains failure are incalculable. Despite the highly developed electronics used by NC, PLCs or microcomputers today to perform a large number of functions, a mains failure remains as critical as ever.

All the more reason why, especially in the case of machines with rapidly rotating spindles and traversing axes, functional capability and safety must not be lost with the mains voltage.

The SITOP® power DC/DC converter offers the solution. With this converter, you will soon have any mains failure under control, efficiently and at low cost.

### SITOP power leaves nothing to chance – not even in the event of mains failure

Maintenance-free AC motors are usually employed to drive machines with modern drive technology: In the case of machine tools and textile or paper machines, for example. Various converters are responsible for open-loop and closed-loop control of the motors.

SIMODRIVE® 611 or SIMOVERT® Master Drives are converters of this type that feature a DC link for energy storage.

SITOP power DC/DC converts the DC-link voltage that can lie between 300 and 770V DC into a stabilized 24V DC voltage. The DC/DC converter creates stability in the drive environment with an output current of 12 A or 20 A. If this is not sufficient, no problem, you can connect up to 5 SITOP power units in parallel.

### Reliable 24 V mains bridging from a large-capacity energy source

The DC-link capacitors and rotating masses hold enough energy to supply the controllers and load consumers for a time even after mains failure, certainly long enough for defined coast-down of the machine.

This is the case, for example, with machining centers, hobbing and grinding machines. Emergency retraction of the axes is guaranteed by the power supply of the numerical control or of the programmable controller and by load consumers such as solenoid valves or interlocks. The tool and work-piece can be separated from each other in controlled paths; so tool fracture and rejects on mains failure are a thing of the past and absolute safety is assured for the machine operator.

### No more time-consuming readjustment and restarting of installations!

With SITOP power DC/DC, faulty behaviour of machines due to power failure is a thing of the past. Faulty lengths of cloth and broken threads are foreign concepts with textile machines thanks to controlled spindle stopping. Even sheets of paper no longer tear in printing and paper-making machines on mains failure. This is how SITOP power DC/DC saves you time-consuming readjustment and restarting of your installations. You can, of course, also operate the primary switchgear on DC power supply systems.

### An investment that pays off

Protection in the mains feeder is no longer required, because two infeed fuses are already integrated in the unit, in contrast to power supplies connected to the mains. And as for the purchase price of a SITOP power PSU, it is surprisingly low.



Technical Specifications	DC/DC 12 A	DC/DC 20 A
<b>Input voltage</b> Rated value Range	600 V DC 300 to 770 V DC	600 V DC 480 to 770 V DC <sup>1)</sup>
<b>Input current</b> Rated value Inrush current (25°) Integrated infeed fuse	0.65 A < 70 A, < 5 ms F4A KLKD ul: 1 each for + and -	1.1 A < 70 A, < 5 ms F4A KLKD ul: 1 each for + and -
<b>Output voltage</b> Rated value/setting range <sup>2)</sup> Tolerance Residual ripple Switching impulses	24 V DC/24 to 28.8 V ± 2% < 100 mVpp (50 kHz) < 200 mVpp (< 20 MHz)	24 V DC/24 to 28.8 V ± 2% < 100 mVpp (50 kHz) < 200 mVpp (< 20 MHz)
Degree of efficiency	> 83%	> 83%
<b>Output current</b> Rated value/range	12 A/ 0 to 12 A	20 A/ 0 to 20 A
Parallel connection possible to increase output	Yes, up to 5 units	Yes, up to 5 units
Electronic short-circuit protection	Yes, > 13 A switch-off; automatic restart	Yes, > 21 A switch-off; automatic restart
Class of protection (IEC 536, VDE0106T1)	Class I	Class I
Galvanic isolation, primary/secondary	Yes, SELV acc. to EN 60950	Yes, SELV acc. to EN 60950
Radio interference suppression level (EN 55011)	Class A	Class A
<b>Connections (single-core or stranded)</b> Input Output L+/E	0.5 to 10 mm <sup>2</sup> 1 x 0.5 to 10 mm <sup>2</sup> /2 x 0.5 to 10 mm <sup>2</sup>	0.5 to 10 mm <sup>2</sup> 1 x 0.5 to 10 mm <sup>2</sup> /2 x 0.5 to 10 mm <sup>2</sup>
Degree of protection (IEC529, DIN VDE 0470, Part 1)	IP 20	IP 20
Humidity class (DIN 40 040)	F	F
Ambient temperature	0 to + 60°C	0 to + 60°C
Transport and storage temperature	-25 to +85°C	-25 to +85°C
Dimensions (W x H x D) in mm	240 x 130 x 131	240 x 130 x 131
Weight approx.	3.5 kg	3.5 kg
Order No.	6EP1534-1SL01	6EP1536-1SL01

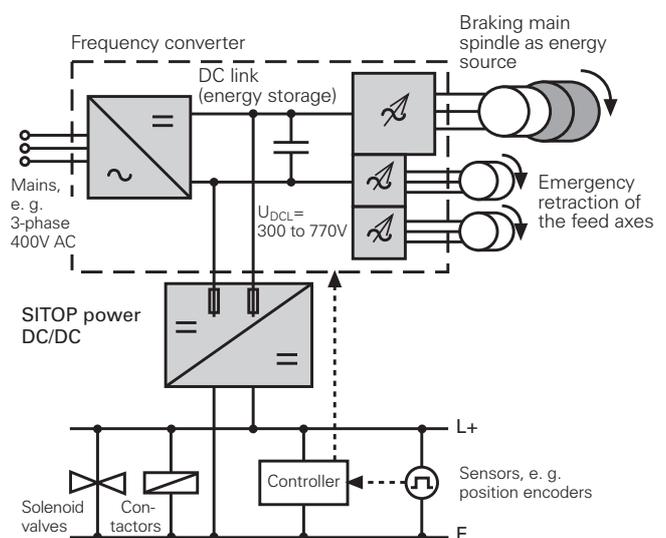
- <sup>1)</sup> The range 400 to 480 V is permitted for 20 s max.; at 400 V input voltage, the output voltage is still at least 22 V.  
<sup>2)</sup> In the case of output voltage settings above 25 V, the ambient temperature must not exceed +45°C. For output voltages above 28 V, an input voltage of 400 V (DC/DC 12 A) or 550 V (DC/DC 20 A) is necessary.

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### Example on the basis of a machine tool drive



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