

SPIK3000A

Applications:

- HiPIMS
- HiPIMS + MF
- HiPIMS + Bias
- Bias (unsynchronized)
- Pulsed DC

Features:

- ARM Processor control
- FPPG (Free Pulse Pattern Controller)
- Symmetric voltage output
- Fast arc detection and suppression less than 2 μ s
- Remote interface (Profibus / RS485)
- 1 x Trigger input
- 2 x Trigger output
- Fast parallel interface (Stacking)



SPIK3000A pulse power controller is capable of operating with any DC power supply with floating outputs to upgrade a current averaged DC technology easily to the state-of-the-art pulse-power-control technology.

The **SPIK3000A** is the next evolution step in the SPIK line and provides an integrated function generator (FPPG) to generate up to 8 pulses in on-/off-time and polarity. Up to five **SPIK3000A** can be synchronized to switch parallel, for higher peak current (up to 5000A peak).

SPIK3000A provides the most stable pulsed voltage and current output waveforms. The **SPIK3000A** is controlled via serial communication and has the option to integrate any standard industrial communication interface. The quick arc-level-control-function with arc suppression time, less than 2 μ s ensures the applications remain free of any arc damage. The new concept to control the real instant kinetics of the application provides more opportunities to obtain the optimized your final solution.

SPIK3000A Models:

Type	DC Power(kW)	DC Voltage (V)	DC Current (A)	Pulsed Peak Power (kW)	Frequency range
A-05-EF	5kW	1000V	10A	500kW	DC – 50kHz
A-10	10kW	1000V	25A	1000kW	DC – 25kHz
A-20	20kW	1000V	35A	1000kW	DC – 25kHz
A-30	30kW	1000V	50A	1000kW	DC – 25kHz

SPIK3000A-05-EF/10/20/30 Specifications:

Type	SPIK3000A-EF-05
Average Power	5 kW
AC input ; controller only	110V - 230V, 50/60 Hz, +/-10%, PE
DC Input Power	5 kW
DC Input Voltage	1000 V (max.)
DC Input Current	10 A DC (max.)
Pulse Output Power	+/- 500 kW (peak)
Pulse Output Voltage	+/- 1000 V (max.)
Pulse Output Current	+/- 500 A (max.) ≤ 2 kHz
	+/- 250 A (max.) ≤ 12,5 kHz
	+/- 150 A (max.) ≤ 25 kHz
	+/- 75 A (max.) ≤ 50 kHz
ON-Times	≥ 5μs (TON + TOFF ≥ 20μs)
OFF-Times	≥ 5μs (TON + TOFF ≥ 20μs)
Arc suppression	≤ 2 μs
ARC Level Adjustment	+/- (0 - 500A)
ARC delay time	30 μs - 32000 μs
Operation Frequency	DC - 50 kHz
Cooling Capacity	Air & Water
Water Rate	≥ 5 l / min.
Water Pressure	≤ 6 bar / 87psi max.
Temperature	dew point < T < 30°C
19" Dimension: H / W / D	7HE / 440 mm / 660 mm
Net Weight	67 kg
Interface	RS485 (other optional)
DC Power supply Interface	ADL serial Interface (optional)
User Interface (24 V)	Interlock, On/Off
Trigger Output	BNC +/- 5V max. (+/-10mA) max.
Trigger Input	BNC +/- 5V max. (+/-5mA) max.
Certification	CE

Type	SPIK3000A-10	SPIK3000A-20	SPIK3000A-30
Average Power	10 kW	20 kW	30 kW
AC input ; controller only	110V - 230V, 50/60 Hz, +/-10%, PE		
DC Input Power	10 kW	20 kW	30 kW
DC Input Voltage	1000 V (max.)		
DC Input Current	25 A DC (max.)	35 A DC (max.)	50 A DC (max.)
Pulse Output Power	+/- 1000 kW (peak)		
Pulse Output Voltage	+/- 1000 V (max.)		
Pulse Output Current	+/- 1000 A (max.) ≤ 2 kHz	+/- 1000 A (max.) ≤ 2 kHz	+/- 1000 A (max.) ≤ 2 kHz
	+/- 500 A (max.) ≤ 12,5 kHz	+/- 500 A (max.) ≤ 12,5 kHz	+/- 500 A (max.) ≤ 12,5 kHz
	+/- 150 A (max.) ≤ 25 kHz	+/- 150 A (max.) ≤ 25 kHz	+/- 150 A (max.) ≤ 25 kHz
ON-Times	≥ 10μs (TON + TOFF ≥ 40μs)		
OFF-Times	≥ 10μs (TON + TOFF ≥ 40μs)		
Arc suppression	≤ 2 μs		
ARC Level Adjustment	+/- (0 - 1000 A)		
ARC delay time	30 μs - 32000 μs		
Operation Frequency	DC - 25 kHz		
Cooling Capacity	Air & Water		
Water Rate	≥ 5 l / min.		
Water Pressure	≤ 6 bar / 87psi max.		
Temperature	dew point < T < 30°C		
19" Dimmension: H / W / D	7HE / 440 mm / 660 mm		
Net Weight	67 kg		
Interface	RS485 (other optional)		
DC Power supply Interface	ADL serial Interface (optional)		
User Interface (24 V)	Interlock, On/Off		
Trigger Output	BNC +/- 5V max. (+/-10mA) max.		
Trigger Input	BNC +/- 5V max. (+/-5mA) max.		
Certification	CE		

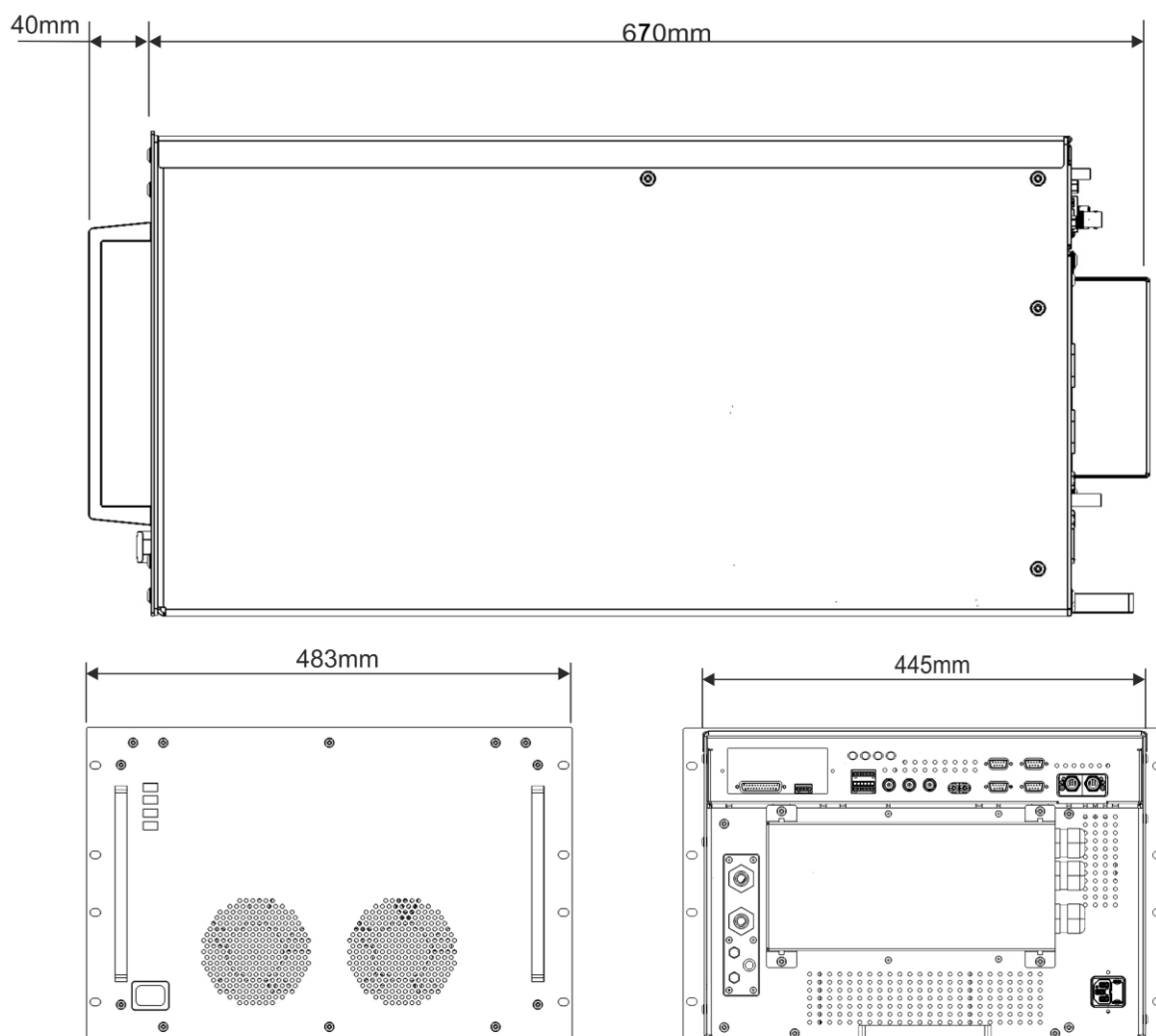


figure 1:mechanical drawings

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