FREQCON ULTRACAPACITOR (UGS)
Technische Angaben
Technical Data

		UGS 1000		UGS 1500		UGS 3000	
CONVERTER	Converter	MSC 1030		MSC 1500		2 x MSC 1500	
	Nominal AC Voltage	620 V					
	Medium Voltage	Option available as completely containerized turnkey solution					
	Nominal Apparent Power	1,000 kVA		1,500 kVA		3,000 kVA	
	Power Bridging	10 sec	> 30 sec	10 sec	> 30 sec	10 sec	> 30 sec
	Nominal AC Current (I)	931 A		1,397 A		2,794 A	
	Maximum Short Circuit Current Breaking Capacity (Icu)	40 kA					
	Power Factor at Rated Power / adjustable	1 (0.03 capacitive to 0.0 inductive)					
	AC Power Frequency (range)	50 Hz (47 to 53 Hz)					
	IGBT Switching Frequency	2 to 4 kHz					
	Number of DC Outputs	2		3		4	6
	DC Current per Output / DC Current Combined	1,500 A_{DC} / 3,000 A_{DC}		1,500 A_{DC} / 4,500 A_{DC}		1,500 A_{DC} / 6,000 A_{DC}	1,500 A_{DC} / 9,000 A_{DC}
	DC Voltage Range	400 V_{DC} to 1,200 V_{DC}					
	Max. Efficiency (AC to DC)	98.3%					
	Max. Efficiency (DC to DC)	99.4%					
	Max. THD	< 3% (at nominal power)					
	Cooling Principle	Liquid-Cooled					
ULTRACAPS	Energy Storage Medium	Ultracapacitors					
	Cycle Life	1,000,000					
	Reaction Time	≤ 150 ms					
	Cooling Principle	Air-Cooled					
CONTROL	Main Controller	Beckhoff CX5330-0185					
	Control Software	FREQCON Framework					
	Internal Communication	EtherCAT					
	External Communication	MODBUS TCP, EtherNet/IP (others available on request)					
GENERAL	Protection Level	IP31 / IP54					
	Operating Temperature	Ambient: -30°C to 40°C (at rated power)					
	Lifetime	Up to 20 years (at rated conditions)					
	Performance	IEC 62040-3, ITI (CBEMA)					
PROTECTION DEVICES	Ultracapacitors (DC)	Fuse and DC Load Break Switch					
	AC Side Disconnection Point	Circuit Breaker					
	DC Overvoltage Protection	Surge Arrester, Class II (I)					
	AC Overvoltage Protection	Surge Arrester, Class II (I)					
	Ground Fault Monitoring	Yes					
	Fire Protection	Smoke Detection, Stat-X Aerosol Fire Suppression					