FREQCON ULTRACAPACITOR (U-UPS)
Technische Angaben
Technical Data

		U-UPS 1000		U-UPS 2000		U-UPS 3000	
CONVERTER	Converter	1 x MSC 1500		2 x MSC 1500		3 x MSC 1500	
	Nominal AC Voltage	400 V					
	Nominal Apparent Power	1,000 kVA		2,000 kVA		3,000 kVA	
	Power Bridging	1 sec	2 sec	1 sec	2 sec	1 sec	2 sec
	Nominal AC Current (I)	1,444 A		2,888 A		4,332 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	1		2		3	
	DC Current per Output / DC Current Combined	1,600 A_{DC} / 1,600 A_{DC}		1,600 A_{DC} / 3,200 A_{DC}		1,600 A_{DC} / 4,800 A_{DC}	
	DC Voltage (Range)	400 V_{DC} to 1,100 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					
	Fast Disconnector (U-UPS Functionality)	FREQCON Fast Disconnector (FFD)					
	Transfer Time (with FFD)	≤ 20 ms					
CONTROL	Cooling Principle	Air-Cooled					
	Main Controller	Beckhoff CX5330-0185					
	Control Software	FREQCON Framework					
	Internal Communication	EtherCat					
GENERAL	External Communication	MODBUS TCP, Ethernet/IP (others available on request)					
	Protection Level	IP31 or IP54					
	Operating Temperature	Ambient: -30°C to 40°C (at rated power)					
	Lifetime	Up to 20 years (at rated conditions)					
PROTECTION DEVICES	Performance	IEC 62040-3, ITI (CBEMA)					
	Noise Level Cabinets	~70 dB(A) at 2 m distance					
	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					