



AC-DC Rectifier (Active Front-End Topology + Phase Shift Modulation Topology)



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Sr.No.	Feature/Parameter	Specification
	Input power per module:	300 kW
	Input voltage	400V AC ± 20%
1	Frequency	50 Hz ± 3%
	Number of phases/wires	3 Ph, 3 wire
	Power Factor	Better than 0.98 in the load range
2		from 10% to 100%
	Harmonic content (THDi)	As per IEEE 519, in the load range
		from 10% to 100%
	Maximum Rated output of	300 kW rectifier module shall be
3	the IGBT module:	paralleled to get required output levels.
	Voltage	300 - 1000 V DC
	Max Current per module	1000A DC
4	DC ripple (rms)	≤3% at rated output and nominal input
		at load range from 15% to 100%
5	Efficiency	>95% At load range from 15% to 100%
	Mode of control	Constant Current and Constant
6		Voltage Mode
	Accuracy	0.1% of set value
	Protection against short circuit	In case of short circuit, the controller
7		shall at once inhibit the IGBT's to
		reduce the output to Zero
	EMC compliance	
8	Emission	According to IEC 61000-6-4
	Immunity	According to IEC 61000-6-2
9	Communication protocol	



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	Between Main controller	Serial/CAN communication
	and Individual Module	
12	Between Main controller and	Serial/Profinet communication
	external systems (PC/PLC)	
13	Dielectric strength	As per supply voltage requirement
14	Climatic conditions:	
	Ambient Temperature	-10° C to 50° C
	Relative humidity	95% non-condensing
	Maximum altitude	1500m above MSL
	Enclosure class	IP20 (for Module)
15	Cooling	Air cooled / Water cooled
16	Protection	Under Voltage
		Over Voltage
		Over Current
		Residual Current
		Over Temperature
		Ground Fault
		Emergency Stop
		Inrush Current Protection
17	Safety Integrity Levels (SIL)	Comply to SIL1, SIL2
	as per IEC 61508-4	

