

EMISSIONS EN50121-2 :2006 EN61000-6-4 : 2005				
	Port	Frequency Range	Limits	Basic Standard
Radiated H Field Emissions	Substation to Outside world	9 kHz - 30 MHz	EN50121-2	CISPR 11
Radiated E Field Emissions	Substation to Outside world	30 MHz - 1GHz	EN50121-2	
Radiated Emissions	Enclosure	30 MHz— 230 MHz 230 MHz— 1 GHz	40 dBuV/m (10m Measurement distance) 47 dBuV/m	
Conducted Emissions	AC Mains & DC Power Ports	0.15 MHz— 0.5 MHz 0.5 MHz— 5 MHz 5 MHz— 30 MHz	79 dBuV QP / 66 dBuV Average 73 dBuV QP / 60 dBuV Average 73 dBuV QP / 60 dBuV Average	
Mains Harmonics	AC Mains Power Ports	0 - 2 kHz	EN61000-3-2	
Flicker			EN61000-3-3	
Inrush Current			EN61000-3-3	

IMMUNITY EN50121-5 : 2006					
Item	Port	Phenomenon	Basic Standard	Test Value	Notes
1	Enclosure	Electrostatic discharge (ESD) EM Radiated Field (AM) EM Radiated Field (PM) Power Frequency Magnetic Field	EN61000-4-2 EN61000-4-3 EN61000-4-3 EN61000-4-8	6 kV / 8 kV contact / air 80 MHz - 1000 MHz 80% AM 1 KHz AM 10V/m 800 MHz - 1000MHz 20 V/m 80% AM 1 KHz , 1.4 GHz - 2.1 GHz 10 V/m 80% AM 1 KHz 2.1 GHz - 2.5 GHz 5 V/m 80% AM 1 KHz 100 A/m (rms) at 50 Hz, 16,7 Hz and 0 Hz dc / 300 A/m dc systems	See standard for applicability
2	AC Power	Burst Surge Conducted RF	EN61000-4-4 EN61000-4-5 EN61000-4-6	4.0 kV (ports > 3m / ports within 3m boundary) 4.0 kV Line to Earth / 2.0 kV Line to Line 10 V rms 1 kHz 80% AM modulation	
3	DC Power	Burst Surge Conducted RF	EN61000-4-4 EN61000-4-5 EN61000-4-6	4.0 kV 2.0 kV Line to Earth / 1.0 kV Line to Line 10 V rms 1 kHz 80% AM modulation	
4	I/O Signal / Control	Burst Surge Conducted RF Damped Oscillatory Voltage	EN61000-4-4 EN61000-4-5 EN61000-4-6 EN61000-4-12	2.0 kV 2.0 kV Line to Earth / 1.0 kV Line to Line 10 V rms 1 kHz 80% AM modulation 2.5 kV Line to Earth, 1.0 kV Line to line (100 kHz & 1 MHz)	
5	Earth Ports	Burst Conducted RF	EN61000-4-4 EN61000-4-6	1.0 kV 10 V rms 1 kHz 80% AM modulation	