

3225 EMC Specifications (Immunity) V1R0

		Product testing				Product compliance					
		3225 EMC Specifications				IEC61326-1:2021 Standard EMC		Namur NE21:2017 Extended EMC		DNVGL-CG-0339, Edition December 2019	
Port	Phenomenon	Test Standard	Test value	Criteria	Performance level	Test value	Criteria	Test value	Criteria	Test value	Criteria
Enclosure	ESD Input terminals	IEC61000-4-2	Contact: 6KV	B	-	Contact: 4kV	B	Contact: 6kV	A	Contact: 6kV	B
	ESD	IEC61000-4-2	Contact: 6kV Air: 8kV	A	1.0%	Contact: 4kV Air: 8kV	B	Contact: 6kV Air: 8kV	A	Air: 2kV, 4kV and 8kV Indirect: 6kV Contact: 6kV	B
	EM-Field	IEC61000-4-3	10V/m 80-1000 MHz 10V/m 1.4 - 2GHz 1V/m 2-6GHz	A	0.5%	10V/m, 80-1000 MHz 3V/m, 1.4-2GHz 1V/m, 2-2.7GHz	A	10V/m, 80-2000 MHz 3V/m, 2-6GHz	A	10 V/m, 80-6000 MHz	A
	Magnetic Field	IEC61000-4-8	30A/m	A	0.5%	30A/m	A	100A/m	A	Not required	
Power	Burst	IEC61000-4-4	2kV, 5KHz 2kV, 100 kHz	A	1.0%	2KV	B	2KV, 5KHz 2kV, 100 kHz	A	2KV, 5kHz	B
	Surge	IEC61000-4-5	Diff.: 1kV, 0Ω Comm.: 2kV, 10Ω	A	1.0%	Diff.: 1kV, 0Ω Comm.: 2kV, 10Ω	B	Diff.: 0.5KV, 0Ω Comm.: 1kV, 10Ω	A	Diff.: 0.5KV, 0Ω Comm.: 1kV, 10Ω	B
	Conducted RF	IEC61000-4-6	10V, 150KHz - 100MHz	A	0.5%	3V, 150KHz - 80MHz	A	10V, 10KHz - 80MHz Covers RF + LF	A	3V, 150KHz - 80MHz	A
	Interruptions	IEC61000-4-29	60% in 10ms 100% in 20 ms	B	-	60% in 10ms 100% in 20 ms	B	100% in 20 ms	B	Not required	
	Conducted 50Hz	IEC61000-4-8	50/60Hz 300Ω 230V	A	1.0%	Not required		Not required		Not required	
	Conducted LF	DNVGL-CG-0339 IACS EU-RO E10	50Hz - 10kHz, 10% of supply, max 2W	A	0.5%	Not required		Not required		50Hz - 10kHz, 10% of supply, max 2W	A
I/O Signal	Burst	IEC61000-4-4	1KV, 5KHz 1kV, 100kHz	A	1.0%	1KV, 5kHz	B	1KV, 5KHz 1kV, 100 kHz	A	1KV, 5kHz	B
	Surge Input	IEC61000-4-5	Diff.: 1kV, 40Ω Comm.: 2kV, 40Ω	B	-	Diff.: 1kV, 40Ω Comm.: 2kV, 40Ω	B	Diff.: 1kV, 40Ω Comm.: 2kV, 40Ω	B	Not required	
	Surge Output	IEC61000-4-5	Diff.: 1kV, 40Ω Comm.: 2kV, 40Ω	A	1.0%	Diff.: 1kV, 40Ω Comm.: 2kV, 40Ω	B	Diff.: 1kV, 40Ω Comm.: 2kV, 40Ω	B	Not required	
	Conducted RF	IEC61000-4-6	10V 150KHz-100MHz	A	0.5%	Not required		Not required		Not required	

3225 comply with standard

- A: During testing, normal performance within the specification limits.
- B: During testing, temporary degradation, or loss of function or performance which is self recovering.
- C: During testing, temporary degradation, or loss of function or performance which requires operator intervention or system reset occurs.

### 3225 EMC Specifications (Emission)

Radiated Emission

CISPR 11 / EN 55011				DNVGL-CG-0339, EMC-B				EN 61000-6-3			
Frequency Range	Limit	Detector	Antenna Distance	Frequency Range	Limit	Detector	Antenna Distance	Frequency range	Limit	Detector	Antenna Distance
30-230 MHz	30 dB $\mu$ V/m	Quasi-peak	10 m	150 - 300 kHz	80 - 52 dB $\mu$ V/m	Quasi-peak	3 m	30-230 MHz	30 dB $\mu$ V/m	Quasi-peak	10 m
230-1000 MHz	37 dB $\mu$ V/m	Quasi-peak	10 m	300 kHz - 30 MHz	52 - 34 dB $\mu$ V/m	Quasi-peak	3 m	230-1000 MHz	37 dB $\mu$ V/m	Quasi-peak	10 m
				30 MHz - 1 GHz	54 dB $\mu$ V/m	Quasi-peak	3 m	1-3 GHz	70 dB $\mu$ V/m	Peak	3 m
				1 - 6 GHz	54 dB $\mu$ V/m	Average	3 m	1-3 GHz	50 dB $\mu$ V/m	Average	3 m
				Except: 156 - 165 MHz	24 dB $\mu$ V/m	Quasi-peak	3 m	3-6GHz	74 dB $\mu$ V/m	Peak	3 m
								3-6GHz	54 dB $\mu$ V/m	Average	3 m

### 3225 EMC Specifications (Emission)

Conducted Emission

	CISPR 11 / EN 55011			DNVGL-CG-0339, EMC-B			EN 61000-6-3			
	Frequency Range	Limit	Detector	Frequency Range	Limit	Detector	Frequency range	Limit [dBμV]	Limit [dBμA]	Detector
DC Power Port	150 - 500 kHz	84 - 74 dBμV	Quasi-peak	10-150 kHz	96 - 50 dBμV	Quasi-peak	150 - 500 kHz	84 - 74 dBμV		Quasi-peak
		74 - 64 dBμV	Average	150-500 kHz	60 - 50 dBμV	Quasi-peak		74 - 64 dBμV		Average
	500 kHz - 30 MHz	74 dBμV	Quasi-peak	500 kHz - 30 MHz	50 dBμV	Quasi-peak	500 kHz - 30 MHz	74 dBμV		Quasi-peak
		64 dBμV	Average					64 dBμV		Average
I/O lines							150 kHz - 500 kHz	84 - 74 dBμV	40 - 30 dBμA	Quasi-peak
							150 kHz - 500 kHz	74 - 64 dBμV	30 - 20 dBμA	Average
							150 kHz - 500 kHz	74 dBμV	30 dBμA	Quasi-peak
							500 kHz - 30 MHz	64 dBμV	20 dBμA	Average