

3202 EMC Specifications (Immunity)

		Product testing				Product compliance					
		3202 EMC Specifications				IEC61326-1:2021		Namur NE21:2017		DNVGL-CG-0339,	
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: ±6 kV	B	-	Contact: 4 kV	B	Contact: 6 kV	A	Contact: 6 kV	B
	ESD (A1: NPN output)	IEC61000-4-2	Contact: ±6 kV Air: ±8 kV	A	1.0%	Contact: 4 kV Air: 8 kV	B	Contact: 6 kV Air: 8 kV	A	Air: 2 kV, 4 kV and 8 kV Indirect: 6 kV Contact: 6 kV	B
	ESD (A2: Realy output)	IEC61000-4-2	Contact: ±6 kV Air: ±8 kV	B	1.0%	Contact: 4 kV Air: 8 kV	B	Contact: 6 kV Air: 8 kV	A	Air: 2 kV, 4 kV and 8 kV Indirect: 6 kV Contact: 6 kV	B
	EM-Field	IEC61000-4-3	10 V/m 80-1000 MHz 10 V/m 1.4 - 2 GHz 1 V/m 2-6 GHz	A	0.5%	10 V/m, 80-1000 MHz 3 V/m, 1.4-2 GHz 1 V/m, 2-2.7 GHz	A	10 V/m, 80-2000 MHz 3 V/m, 2-6 GHz	A	10 V/m, 80-6000 MHz	A
	Magnetic Field	IEC61000-4-8	100 A/m	A	0.5%	30 A/m	A	100 A/m	A	Not required	
Power	Burst	IEC61000-4-4	±2 kV, 5 kHz ±2 kV, 100 kHz	A	1.0%	2 kV	B	2 kV, 5 kHz 2 kV, 100 kHz	A	2 kV, 5 kHz	B
	Surge	IEC61000-4-5	Diff.: ±1 kV, 0 Ω Comm.: ±2 kV, 10 Ω	A	1.0%	Diff.: 1kV, 0Ω Comm.: 2kV, 10Ω	B	Diff.: 0.5KV, 0Ω Comm.: 1kV, 10Ω	A	Diff.: 0.5 kV, 0 Ω Comm.: 1 kV, 10 Ω	B
	Conducted RF	IEC61000-4-6	10 V, 150 kHz - 100 MHz	A	0.5%	3 V, 150 kHz - 80 MHz	A	10 V, 10 kHz - 80 MHz Covers RF + LF	A	3 V, 150 kHz - 80 MHz	A
	Interruptions	IEC61000-4-29	60% in 10 ms 100% in 20 ms	B	-	60% in 10 ms 100% in 20 ms	B	100% in 20 ms	B	Not required	
	Conducted 50 Hz	IEC61000-4-8	50/60 Hz 300 Ω 300 V	A	1.0%	Not required		Not required		Not required	
	Supply Ripple Suppression Error (Conducted Immunity LF)	DNVGL-CG-0339 IACS EU-RO E10	50 Hz - 10 kHz, 10% of supply, 60 Hz - 12 kHz, 10% of supply max 2 W	A	0.5%	Not required		Not required		50 Hz - 10 kHz, 10% of supply, max 2 W	A
I/O Signal	Burst	IEC61000-4-4	±1 kV, 5 kHz ±1 kV, 100 kHz	A	1.0%	1 kV, 5 kHz	B	1 kV, 5 kHz 1 kV, 100 kHz	A	1 kV, 5 kHz	B
	Surge Input	IEC61000-4-5	Diff.: ±1kV, 40Ω Comm.: ±2kV, 40Ω	B	-	Diff.: 1 kV, 40 Ω Comm.: 2 kV, 40 Ω	B	Diff.: 1 kV, 40 Ω Comm.: 2 kV, 40 Ω	B	Not required	
	Surge Output	IEC61000-4-5	Diff.: ±1 kV, 40 Ω Comm.: ±2 kV, 40 Ω	A	1.0%	Diff.: 1 kV, 40 Ω Comm.: 2 kV, 40 Ω	B	Diff.: 1 kV, 40 Ω Comm.: 2 kV, 40 Ω	B	Not required	
	Conducted RF	IEC61000-4-6	10 V 150 kHz-100 MHz	A	0.5%	Not required		Not required		Not required	

3202 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.

3202 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 μ V/m	Quasi-peak	10 m	150 - 300 kHz	80 - 52 dB μ V/m	Quasi-peak	3 m	30-230 MHz	30 dB μ V/m	Quasi-peak	10 m
230-1000 MHz	37 dB μ V/m	Quasi-peak	10 m	300 kHz - 30 MHz	52 - 34 dB μ V/m	Quasi-peak	3 m	230-1000 MHz	37 dB μ V/m	Quasi-peak	10 m
				30 MHz - 1 GHz	54 dB μ V/m	Quasi-peak	3 m	1-3 GHz	70 dB μ V/m	Peak	3 m
				1 - 6 GHz	54 dB μ V/m	Average	3 m	1-3 GHz	50 dB μ V/m	Average	3 m
				Except: 156 - 165 MHz	24 dB μ V/m	Quasi-peak	3 m	3-6 GHz	74 dB μ V/m	Peak	3 m
								3-6 GHz	54 dB μ V/m	Average	3 m

3202 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 [dB μ V]	Limit [dB μ A]	Detector
DC Power Port	150 - 500 kHz	84 - 74 dB μ V	Quasi-peak	10-150 kHz	96 - 50 dB μ V	Quasi-peak	150 - 500 kHz	84 - 74 dB μ V		Quasi-peak
		74 - 64 dB μ V	Average	150-500 kHz	60 - 50 dB μ V	Quasi-peak		74 - 64 dB μ V		Average
	500 kHz - 30 MHz	74 dB μ V	Quasi-peak	500 kHz - 30 MHz	50 dB μ V	Quasi-peak	500 kHz - 30 MHz	74 dB μ V		Quasi-peak
		64 dB μ V	Average					64 dB μ V		Average
I/O lines							150 kHz - 500 kHz	84 - 74 dB μ V	40 - 30 dB μ A	Quasi-peak
								74 - 64 dB μ V	30 - 20 dB μ A	Average
								74 dB μ V	30 dB μ A	Quasi-peak
							500 kHz - 30 MHz	64 dB μ V	20 dB μ A	Average