

Technical Software Specifications - SPS TestManager

All EMC Norms v1.0

Overview of all available EMC tests

TestManager version SPS TestManager v2.17 or higher is required.

The required hardware can also be seen in the [hardware matrix](#).

(Not all tests from each standard are supported)

EMC

DNV-CG-0339

Edition August 2021

Section 3 Environmental test specification

4 Electrical power supply failure test

5 Power supply variation test

14.4 Conducted low frequency immunity test

DNVGL-CG-0339

Edition December 2019

Section 3 Environmental test specification

4 Electrical power supply failure test

5 Power supply variation test

14.4 Conducted low frequency immunity test

IEC 60146-1-1

Edition 4.0 2009-06

Immunity levels to frequency and voltage amplitude

Immunity levels to voltage unbalance

Immunity levels to voltage waveform

Edition 5.0 2024-03

Immunity levels to frequency and voltage amplitude

Immunity levels to voltage unbalance

Immunity levels to voltage waveform

IEC 60947-2

Edition 5.1 2019-07

F.4.1 Harmonic currents

F.4.7 Current dips

IEC 61000-2-2

Edition 2.2 2018-05

- 4.3 Harmonics
- 4.4 Interharmonics
- 4.5 Voltage dips and short supply interruptions
- 4.6 Voltage unbalance
- 4.8 Temporary power frequency variation
- 4.10.2 Ripple control systems (110 Hz to 3000 Hz)
- 4.10.3 Mains communicating systems (band 3 kHz up to 9 kHz)
- 4.10.4 Mains communicating systems (band 9 kHz up to 95 kHz)
- 4.10.5 Mains communicating systems (band 95 kHz up to 150 kHz)
- 4.11 Voltage distortion in differential mode above the 40th harmonic up to 9 kHz
- 4.12.2 Voltage distortion in differential mode from 9 kHz to 30 kHz
- 4.12.3 Voltage distortion in differential mode from 30 kHz to 150 kHz

IEC 61000-3-2

Edition 4.0 2014-05

Harmonic measurement

Edition 5.0 2018-01

Harmonic measurement

Edition 5.1 2020-07

Harmonic measurement

Edition 5.2 2024-03

Harmonic measurement

IEC 61000-3-3

Edition 3.1 2017-05

Flicker measurement

Edition 3.2 2021-03

Flicker measurement

IEC 61000-3-11

Edition 2.0 2017-04

Flicker measurement

IEC 61000-3-12

Edition 2.0 2011-05

Harmonic measurement

Edition 2.1 2021-06

Harmonic measurement

IEC 61000-4-8

Edition 2.0 2009-09

Power frequency magnetic field immunity test

IEC 61000-4-11

Edition 2.0 2004-03

Voltage dips

Short interruptions

Voltage variations

Edition 2.1 2017-05

Voltage dips

Short interruptions

Voltage variations

Edition 3.0 2020-01

Voltage dips

Short interruptions

Voltage variations

IEC 61000-4-13

Edition 1.1 2009-07

Harmonic combination test flat curve

Harmonic combination test over swing

Test method "Sweep in frequencies"

Individual harmonics with a specified test level sequence

Interharmonics with a specified test level sequence

Application of the Meister curve

Complete test process

Edition 1.2 2015-12

Harmonic combination test flat curve

Harmonic combination test over swing

Test method "Sweep in frequencies"

Individual harmonics with a specified test level sequence

Interharmonics with a specified test level sequence

Meister curve test

Complete test process

IEC 61000-4-14

Edition 1.2 2009-08

Voltage fluctuation immunity test

IEC 61000-4-17

Edition 1.2 2009-01

Ripple on d.c. input power port immunity test

IEC 61000-4-27

Edition 1.1 2009-04

Unbalance, immunity test

IEC 61000-4-28

Edition 1.2 2009-04

Variation of power frequency

IEC 61000-4-29

Edition 1.0 2000-08

Voltage dips

Short interruptions

Voltage variations

IEC 61000-4-34

Edition 1.1 2009-11

Voltage dips

Short interruptions

Voltage variations

IEC 61131-2

Edition 3.0 2007-07

6.4.1.1 Voltage range, voltage ripple and frequency range test

6.4.1.2 Third harmonic immunity test

6.4.1.3 Shut-down test (sudden supply interruption)

6.4.1.4 Start-up test

6.4.2.1 Gradual shut-down/start-up test

6.4.2.2 Supply voltage variation tests

6.4.2.3 Voltage interruptions

6.4.3.1 Reversal of d.c. power supply polarity test (withstand test)

6.4.3.2 Improper voltage level and/or frequency test

Edition 4.0 2017-08

6.2.2.1 Verification test method for voltage range, voltage ripple and frequency

6.2.2.2 Shut-down test (sudden supply interruption)

6.2.2.3 Start-up test

6.2.2.4 Gradual shut-down/start-up test

6.2.2.5 Supply voltage variation tests

6.2.2.6 Reversal of d.c. power supply polarity

6.2.2.7 Voltage interruptions verification method

IEC 61496-1

Edition 3.0 2012-04

5.4.1 Rated supply voltage

5.4.3.1 Supply voltage variations

5.4.3.2 Supply voltage interruptions

Edition 4.0 2020-07

5.4.1 Rated supply voltage

5.4.3.1 Supply voltage variations

5.4.3.2 Supply voltage dips and interruptions

IEC 61800-3

Edition 2.1 2012-03

Harmonics and commutation notches/voltage distortion

Voltage deviations, dips and short interruptions

Voltage unbalance and frequency variations

Edition 3.0 2017-02

Harmonics and commutation notches/voltage distortion

Voltage deviations, dips and short interruptions

Voltage unbalance and frequency variations

Edition 4.0 2022-11

Harmonics

Voltage dips and short interruptions

Frequency variations

IEC 62040-2

Edition 2.0 2005-10

Power line harmonics and inter-harmonics

Power line unbalance (three-phase UPS systems only)

Edition 3.0 2016-11

Power line harmonics and inter-harmonics

Power line unbalance (three-phase UPS systems only)

IEC TR 61547-1

Edition 2.0 2017-10

Voltage fluctuations

Edition 3.0 2020-07

Voltage fluctuations

SEMI F47

2006-07

Required Voltage Sag Immunity

Recommended Voltage Sag Immunity