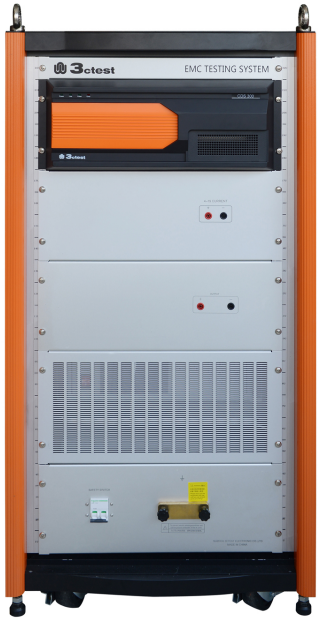
Common-Mode Conducted Disturbances Simulator – CDS 300

Datasheet



In Compliance with

> IEC/EN 61000-4-16

> IEC/EN 61000-4-19

> IEC/EN 60255-22-7

> GB/T 14598.19

> JJF 1245.4-2019

Introduction

The CDS 300 conducted, common mode disturbances simulator can be controlled by CoreLab control software to conduct various functional tests in the frequency range from 0 Hz (DC) to 165 kHz, its voltage up to 300 V. It can perform tests under continuous mode and short-term mode at power frequency DC, 162/3, 50 Hz and 60 Hz as per IEC/EN 61000-4-16 and conduct step tests from 10 Hz to 165 Hz. Also, it satisfies test requirement specified in IEC 61000-4-19, IEC/EN 60255-22-7 and JJF 1245.4-2019. Together with different optional accessories, every test can be conducted as per different standard requirement.

Features

> All-in-one design;

> Frequency range DC~165 kHz;

> Test voltage up to 30 V in frequency range 10 Hz to 165 kHz, Test voltage up to 300 V at power frequency DC, $16^{2/3}$ Hz, 50 Hz, 60 Hz;

> Frequency step: liner, logarithmic or fixed;

> The efficient icon and standard library in CoreLab software make operation easy;

Application Areas

> Household appliances

> Industries

Technical Parameters in continuous mode	
Power Frequency	DC, $16^{2/3}$ Hz, 50 Hz, 60 Hz
Open Circuit Voltage	1 V ~ 30 V
Signal Level	(0.1-30) V (r.m.s.) or DC
Test Level 1	1 V, continuous
Test Level 2	3 V, continuous
Test Level 3	10 V, continuous
Test Level 4	30 V, continuous
Output Impedance	50 Ω±10%
Total Harmonic Distortion	<10%(sinusoidal)
DC Ripple	<5%

Technical Parameters in short-term mode	
Power Frequency	DC, $16^{2/3}$ Hz, 50 Hz, 60 Hz
Open Circuit Voltage	10 V ~330 V
Signal Level	(1~330) V (r.m.s.) or DC
Test Level 1	10 V, continuous for 1 s
Test Level 2	30 V, continuous for 1 s
Test Level 3	100 V, continuous for 1 s
Test Level 4	300 V, continuous for 1 s
Output Impedance	50 Ω±10%
Total Harmonic Distortion	<10%(sinusoidal)
Phase Sync	0°±5%
DC Ripple	< 5%
Fall/Rise Time	1 μs-5 μs

Technical Parameters in 15 kHz-165 kHz	
Power Frequency	10 Hz-165 kHz
Signal Level	(0.1-30) V (r.m.s.)
Test Level 1	1 V-0.1 V-1 V
Test Level 2	3 V-0.3 V-3 V
Test Level 3	10 V-1 V-10 V
Test Level 4	30 V-3 V-30 V
Output Impedance	50 Ω±10%
Total Harmonic Distortion	<1%(sinusoidal)

Technical Parameters in Differential Mode Voltage Disturbances	
Frequency Range	2 kHz~150 kHz
Waveform	Sinusoidal, Total Harmonic Distortion (THD) <5%
Open Circuit Voltage	0.1 V ~20 V
Load Impedance	10 Ω, ±30%

Technical Parameters in Differential Mode Current Disturbances	
Frequency Range	2 kHz~150 kHz
Max. Current	5 A
Load Impedance	1 Ω, ±0.3 Ω
BNC output	10:1 (0.1 V/A)

General Parameters	
Power Supply	AC 110/220 V, ±10%,45 Hz~65 Hz
Ambient Temperature	15 ℃ ~ 35 ℃
Dimension	22U
Weight	Approx. 100 kg

Accessories
User Manual, Testing line, Fuse, ground line, RF cable, network cable, power line

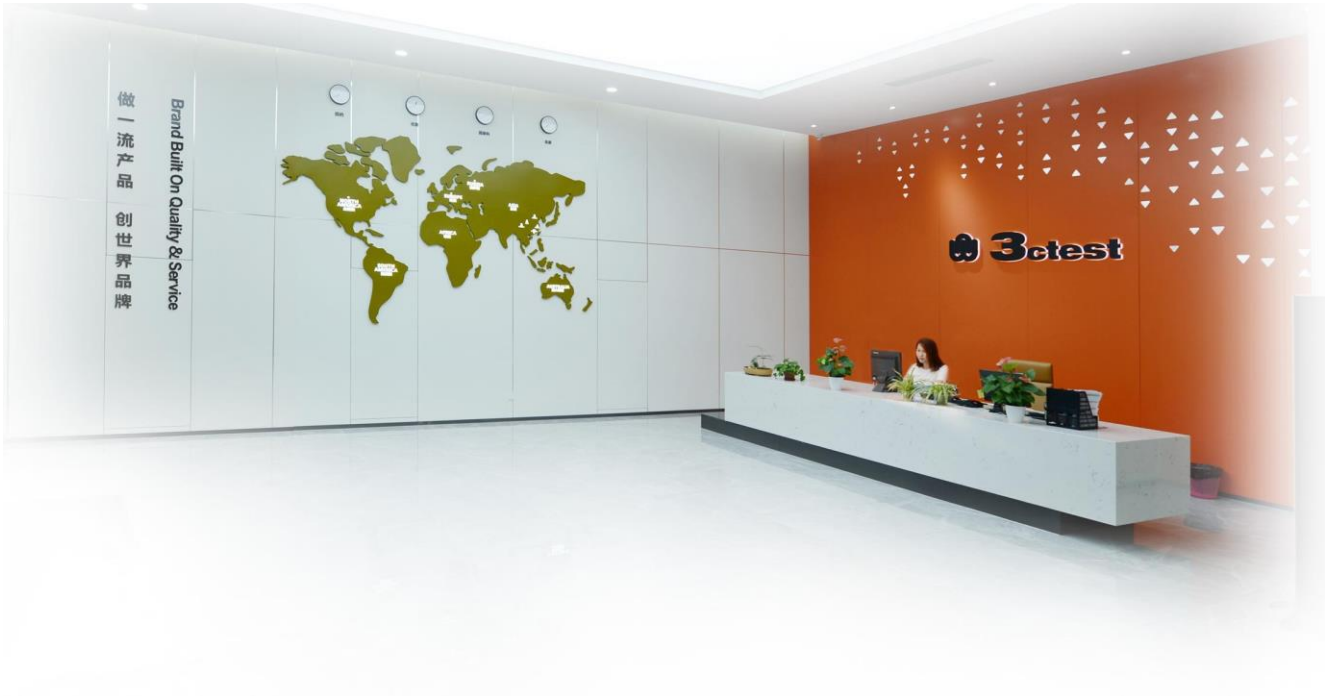
Options	
1. Coupling Networks CN416M2/M3-32	EUT voltage: single-phase 2-line or 3-line, 32 A, 250 V AC/DC Test voltage: DC-300V Frequency: DC（$16^{2/3}$ Hz, 50 Hz, 60 Hz）2 kHz~150 kHz
2. Coupling Networks CN416M4N-32	EUT voltage: three-phase 4-line, 32 A, L-PE 250 V AC/DC Test voltage: DC-300 V Frequency: DC（$16^{2/3}$ Hz, 50 Hz, 60 Hz）2 kHz~150 kHz
3. Coupling Networks CN416M5-32	EUT voltage: three-phase 5-line, 32 A, L-PE 250 V AC/DC Test voltage: DC-300 V Frequency: DC（$16^{2/3}$ Hz, 50 Hz, 60 Hz）2 kHz~150 kHz
4. Coupling/ decoupling Networks CDN416T2	Frequency range: 2 kHz ~150 kHz, lines: 2, Max. current: 0.5 A, Max. voltage: AC 150 V DC 200 V, joint: terminal block
5. Coupling/ decoupling Networks CDN416T4	Frequency range: 2 kHz ~ 150 kHz, Number of lines: 4, Max. current: 0.5 A, Max. voltage: AC 150 V DC 200 V, joint: terminal block
6. Coupling/ decoupling Networks CDN416T8	Frequency range: 2 kHz ~ 150 kHz, Number of lines: 8, Max. current: 0.5 A, Max. voltage: AC 150 V DC 200 V, joint: terminal block
7. Isolation transformer	Used in conducting test as per IEC/EN 61000-4-16 for coupling and decoupling function. Users need to consult detailed model number according to the power consumption of 1-phase or 3-phase power.
8. CoreLab PC Control Software	Support Windows 7 and above; easy to use; clean and beautiful UI; with powerful operating function and standard test library, customized automatic testing configuration can be realized; generating test reports flexibly.

Options	
9. Coupling/decoupling Networks CDN419M3-32	EUT voltage: single-phase 3-line, 32 A, 250 V AC/DC Frequency: 2 kHz~150 kHz
10. Coupling/decoupling Networks CDN419M4N-32	EUT voltage: three-phase 4-line, 32 A, line-to-ground, 250 V AC/DC Frequency: 2 kHz~150 kHz
11. Differential-mode Current Test Module WCT 20	Frequency:2 kHz ~ 150 kHz Max. Current: 5 A Max. Voltage: < 22 V Impedance: 1 Ω±0.3 Ω
12. Differential-mode Voltage Test Module R419-10	10 Ω
13. Balanced / unbalanced impedance converter Balun50/10	Characteristic impedance: 50 Ω / 10 Ω; Frequency: 2 kHz~150 kHz; Max input voltage (Vpp): 400 V;
14. Coupling Networks CN14598-19	EUT voltage: Max. 250 V AC EUT current: Max. 32 A
15. Differential-mode Voltage Test Module RJJF-100	100 Ω

Naming Rules：

CDS 300

- 300：Umax300V
- CDS: Common-mode, Differential-mode Simulator



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