

Damped Oscillatory Wave Simulator **DOS 300 Series**



- IEC/EN 61000-4-10
- IEC/EN 61000-4-18
- IEC 255-22-1
- ANSI C37.90
- GB/T 17626.10
- GB/T 17626.18
- GB/T 14598.13

Features

- > 5.7-inch colorful touch screen
- > Max. voltage 3.3 KV
- > Max. continuous magnetic field strength up to 100 A/m (optional)
- > Built-in three-phase CDN, Max. current up to 300 A
- > LAN Ethernet interface for remote control

Introduction

The DOS 300 Series Damped Oscillatory Wave Simulator can perform slow damped oscillatory wave tests according to IEC 61000-4-18 and damped oscillatory magnetic field tests according to IEC 61000-4-10 (optional).

The DOS 300 can simulate repeatable transient phenomena generated on high-voltage or medium-voltage power lines, control lines and signal lines, as well as damped oscillatory magnetic field phenomena caused by high-voltage busbar switching by disconnecting switches.

Application Areas



Technical Parameters

IEC 61000-4-18 Technical Parameters of Slow Damped Oscillation Waveform	
Test Voltage	0.2 kV ~ 3.3 kV, $\pm 10\%$ (source port)
Polarity	Positive, negative (magnetic field has positive and negative modes)
Source Impedance	200 $\Omega \pm 20\%$
Rise Time	75 ns $\pm 20\%$
Repetition Rate	1 ~ 500 Hz, adjustable 100 kHz (1 ~ 50 Hz), calibration frequency: 40 Hz 1 MHz (1 Hz ~ 500 Hz), calibration frequency: 400 Hz
Oscillation Frequency	100 kHz, 1 MHz, $\pm 10\%$
Attenuation Rate	Pk5 > 50% of Pk1, Pk10 < 50% of Pk1
Pulse Duration	1 s ~ 99 s
Pulse Interval	1 s ~ 99 s
Repetition Time	1 ~ 999
Trigger Mode	Automatic, manual
Synchronization	0° ~ 360°, 1° step setting or random mode
CDN	Built-in three-phase AC/DC automatic coupling/decoupling network
IEC 61000-4-10 Technical Parameters for Damping Oscillating Magnetic Fields (Optional)	
Test Current	5 A ~ 120 A, $\pm 10\%$
Polarity	Positive, negative, alternative
Repetition Rate	1 Hz ~ 500 Hz adjustable 100 kHz (1 Hz ~ 50 Hz), calibration frequency: 40 Hz 1 MHz (1 Hz ~ 500 Hz), calibration frequency: 400 Hz
Oscillation Frequency	100 kHz, 1 MHz, $\pm 10\%$
Attenuation Rate	Pk5 > 50% of Pk1, Pk10 < 50% of Pk1
Pulse Duration	1 s ~ 99 s
Pulse Interval	1 s ~ 99 s
Repetition Time	1 ~ 999

General Parameters

Display Screen	5.7-inch TFT touchscreen
Working Power	AC 220 V, $\pm 10\%$, 50 Hz/60 Hz
Fuse	6 A
Max. Power Consumption	200 W
Working Status Indication	Front panel LED indication
Grounding Method	Flat grounding wire
Dimension	4U: 450 (W)*190 (H)*620 (D) mm 22U: 600 (W)*1250 (H)*800 (D) mm 35U: 600 (W)*1850 (H)*800 (D) mm
Weight	4U: Approx. 30 kg 22U: Approx. 220 kg 35U: Approx. 550 kg
Ambient Temperature	15 °C ~ 35 °C
Relative Humidity	45% ~ 75%
Atmospheric Pressure	86 kPa ~ 106 kPa

Standard Accessories

Power Cord, Fuse, Test Cable, Grounding Wire, User Manual

Optional Accessories

1	CDN for Unshielded Asymmetric Communication Line of Damped Oscillatory Wave	Model: CDN 418AFL8 Pulse voltage: 4 kV (6 kV customizable) Coupling mode: line-to-line line-to-ground Communication frequency: < 5 MHz Data rate: Max. 5 Mbit/s Working voltage: Max. 12 V DC Working current: Max. 4 A Decoupling inductor: 20 mH Residual voltage: 90 V	
2	CDN for Damped Oscillatory Waves Testing on Unshielded Symmetrical High-Speed Communication Lines	Model: CDN 418TH8 Pulse voltage: 4 kV (6 kV customizable) Coupling mode: 4 to 8 wire unshielded symmetry Communication frequency: 10 MB/100 MB/1,000 MB Data rate: 1000 Mbit/s Working voltage: Max. 250 V DC Working current: Max. 1 A Decoupling inductor: 20 mH Residual voltage: <10 %	
3	Data and Control Line CDN	Model: CDN 418CAN Pulse voltage: ≥ 3 kV Coupling mode: CAN H+CAN L simultaneous ground/LIN ground Communication frequency: < 5 MHz Data rate: CAN 10Mbit/s, LIN 100 kbit/s Working voltage: Max. 12 V DC Working current: Max. 2 A Residual voltage: <25 V	
4	Magnetic Field Coil	Model: TCXS111 Magnetic field strength: 1 A/m ~ 400 A/m 1.26 μT ~ 504 μT Coil factor (typical): 0.87 Coil turns: single turn Magnetic field direction: 90°/180° Max. current carrying capability: Max. AC 120 A cont. Test duration: ≤ 100 A/m cont. 8 h; < 100 A/m short-time, 10 s Frequency: 50 Hz/60 Hz Coil size: 1,000 (D) * 1,000 (W) mm Overall coil size (incl. fixing shaft): 1,400 (D) * 1,000 (W) mm Coil height adjustable stroke: 500 mm Package size: 1,500 (D) * 1,250 (W) * 200 (H) mm Weight: Approx. 10 kg	

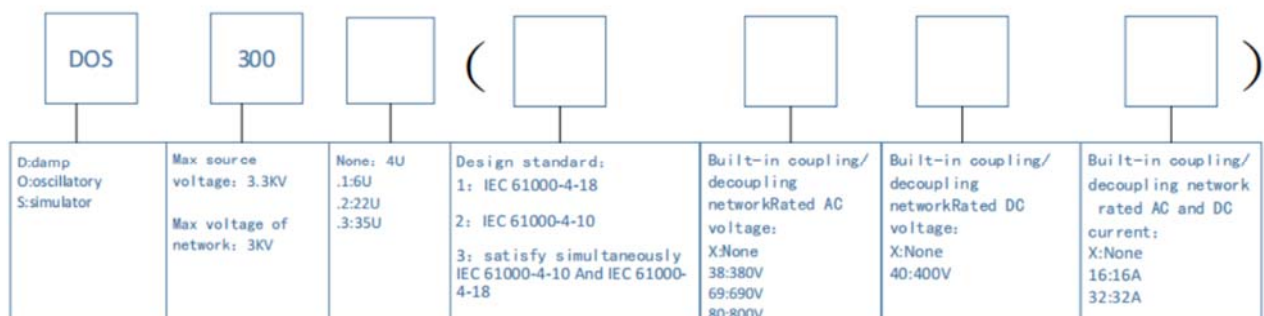
Optional Accessories

5	Immunity Test Software	Model: Corelab > Support Windows 7/8/10 /11 > Supports Ethernet and serial communication modes > Supports parameter sequence, test sequences, easy for operation > Supports customer information configuration and automatic test report printing.	
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Selection Guide

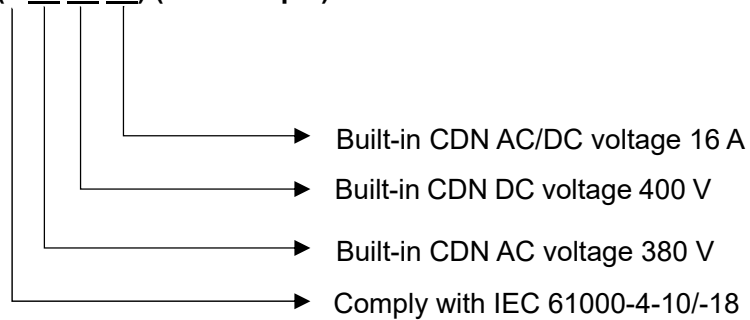
1	DOS 300(122X10)	4U chassis, complies with IEC 61000-4-18, single-phase AC 220 V 10 A
2	DOS 300(1384016)	4U chassis, complies with IEC 61000-4-18, three-phase AC 380 V 16 A/DC 400 V 16 A
3	DOS 300(138X16)	4U chassis, complies with IEC 61000-4-18, three-phase AC 380 V 16 A
4	DOS 300(2XXX)	4U chassis, complies with IEC 61000-4-10, without built-in network
5	DOS 300(3384016)	4U chassis, complies with IEC 61000-4-10/-18, three-phase AC 380 V 16 A/DC 400 V 16 A
6	DOS 300.2(1384032)	22U cabinet, complies with IEC 61000-4-18, three-phase AC 380 V 32 A/DC 400 V 32 A
7	DOS 300.2(14410032)	22U cabinet, complies with IEC 61000-4-18, three-phase AC 440 V 32 A/DC 1,000 V 32 A
8	DOS 300.2(169100100)	22U cabinet, complies with IEC 61000-4-18, three-phase AC 690 V 100 A/DC 1,000 V 100 A
9	DOS 300.2(3100150100)	22U cabinet, complies with IEC 61000-4-10/-18, three-phase AC 1000 V 150 A/DC 1,500 V 100 A
10	DOS 300.2(3384032)	22U cabinet, complies with IEC 61000-4-10/-18, three-phase AC 380 V 32 A/DC 400 V 32 A
11	DOS 300.2(3694032)	22U cabinet, complies with IEC 61000-4-10/-18, three-phase AC 690 V 32 A/DC 400 V 32 A
12	DOS 300.3(170150300)	35U cabinet, complies with IEC 61000-4-18, three-phase AC 700 V 300 A/DC 1,500 V 300 A

Naming Rules



Naming Rules

DOS 300(3 38 40 16) (for example)



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