

Combination Wave Surge Immunity Test Simulator

CWS 1000CM, CWS 1000MM

Datasheet



In Compliance with

- > IEC 61000-4-5
- > IEC 61643-1
- > GB/T 17626.5
- > GB/T 16927.1
- > ITU-T K.21
- > ITU-T K.44

Introduction

CWS 1000CM/MM is designed to perform combination wave surge immunity tests according to IEC 61000-4-5, capable of generating waveforms of 1.2/50 μ s, 8/20 μ s, 10/700 μ s, 5/320 μ s, connected to EUT via external CDN. The equipment meets the relevant requirements of CE, CCC etc.

Features

- > 5.7" color touch screen front panel
- > Mini size, high capacity (up to 10 kV)
- > Capable of generating 1.2/50 μ s, 8/20 μ s, 10/700 μ s, 5/320 μ s waveforms as per IEC 61000-4-5
- > LCD display of surge voltage and current monitoring
- > Easy to operate with test sequencing and scheduling
- > External automatic coupling / decoupling network

Application Areas

- | | |
|-------------------|-------------------------|
| > IT | > Military |
| > Telecom | > Avionics |
| > Medical | > New energy |
| > TV broadcasting | > New energy automotive |
| > Railway | |

Technical Parameters-1.2/50 μ s, 8/20 μ s	
Test Voltage	0.5 kV –10.0 kV $\pm$ 10%
Voltage Tr	1.2 μ s $\pm$ 30%
Voltage Td	50 μ s $\pm$ 20%
Test Current	0.25 kA - 5.0 kA $\pm$ 10% (2 ohm)
Current Tr	8 μ s $\pm$ 20%
Current Td	20 μ s $\pm$ 20%
Output Impedance	2 ohm or 12 ohm
Test Interval	6 s – 99 s (the shortest time subject to test voltage)
Measuring Of Peak Voltage	Via BNC on Front Panel: 1000 V:1 V; Results shown on LCD;
Measuring Of Peak Current	Via BNC on Front Panel: 100A:1V; Results shown on LCD;
No. Of Tests	1 – 999
Triggering Mode	Automatic, manual, or external triggering
Test Method	As per standard test requirements

Technical Parameters-10/700 μ s, 5/320 μ s	
Test Voltage	0.5 kV –10.0 kV $\pm$ 10%
Voltage Tr	10 μ s $\pm$ 20%
Voltage Td	700 μ s $\pm$ 20%
Current Tr	5 μ s $\pm$ 20%
Current Td	320 μ s $\pm$ 20%
Output Impedance	15ohm or 40ohm optional
Test Interval	11 s - 99 s (the shortest time subject to test voltage)
Measuring Of Peak Voltage	Via BNC on Front Panel: 1000V:1V; Results shown on LCD;
Measuring Of Peak Current	Via BNC on Front Panel: 100 A:1 V; Results shown on LCD;
No. Of Tests	1–999
Triggering Mode	Automatic, manual, or external triggering
Test Method	As per standard test requirements

Technical Parameters - 1.2/50 μ s	
Test Voltage	0.5 kV–10.0 kV $\pm$ 10%
Voltage Tr	1.2 μ s $\pm$ 30%
Voltage Td	50 μ s $\pm$ 20%
Output Impedance	500 ohm
Test Interval	5 s – 99 s (the shortest time subject to test voltage)
Measuring Of Peak Voltage	Via BNC on Front Panel: 1000 V : 1 V; Results shown on LCD;
No. Of Tests	1–999
Triggering Mode	Automatic, manual, or external triggering
Test Method	As per standard test requirements

General Parameters	
Display	5.7" TFT color touch screen
Operating Voltage	AC 110 V/220 V $\pm$ 10, 50/60 Hz
Fuse	6 A
Capacity	200 W
Storage Space	Unlimited (PC)
Communication Method	Ethernet, RJ45
Safety Circuit	Not operating if the open safety circuit is not closed
Error Detection	Errors will be shown on LCD while operation will be stopped.
Output Measuring Method	Via 1 m co-axial cable
Dimension (W x H x D)	19", 4U (CWS 1000CM) + 6U (CWS 1000MM)
Weight	About 40 Kg
Operating Temp.	15 $^{\circ}$ C – 35 $^{\circ}$ C
Operating Humidity	45% - 75%
Operating Air Pressure	86 kPa - 106 kPa

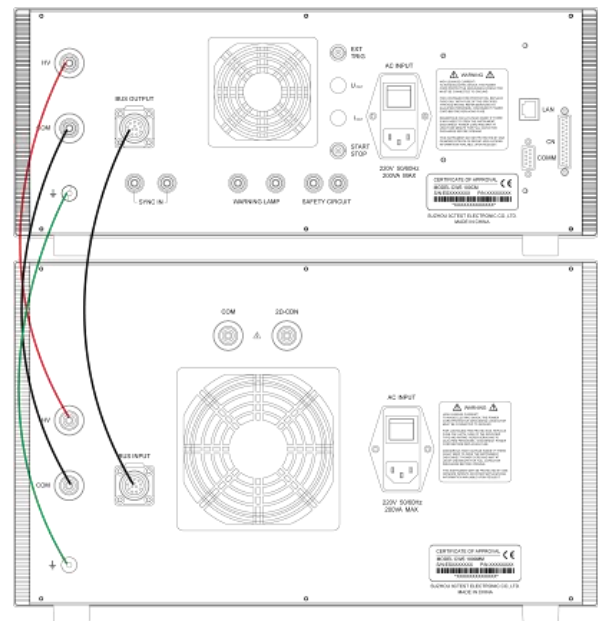
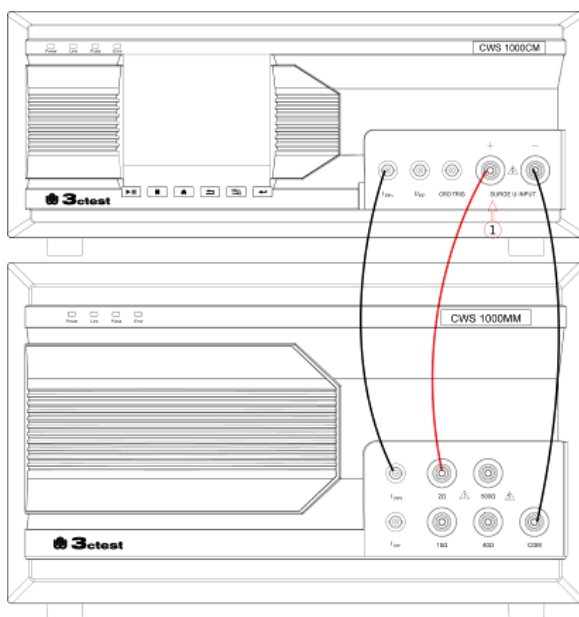
Standard Accessories

Testing wire	1 pc
Power supply cable	1 pc
Fuse	1 pc
Factory Inspection Report	1 pc
User Manual	1 pc

Optional Accessories

1. CDN for Surge immunity tests as per IEC 61000-4-5:
SPN series:
SPN 2216S10 (10 kV external single-phase);
SPN 3816S10 (10 kV external single-phase);
SPN 3816T10 (10 kV external 3-phase)
SPN 3832T10 (10 kV external 3-phase)
2. CDN for signal lines as per IEC 61000-4-5:
CDN 405 series (10 kV or to be customized)
3. HV differential probe VCF-80:
Test voltage 8 kV, attenuation: 1000:1
4. HV current probe TR 5025

Equipment Connection Diagram:



Naming Rules:

CWS 1000CM/MM

- CM: control; MM: main circuit
- 1000: voltage level as 10 kV;
- Combination Wave Simulator



MAINLAND CHINA

SUZHOU 3CTEST ELECTRONIC CO., LTD.
 Add.: No. 99 Emeishan Rd, SND, Suzhou 215153,
 Tel: +86 (0)512 6807 7192
 Fax: +86-512-68079795
 Email: globalsales@3ctest.cn
www.3c-test.com

TAIWAN

RICHTEC INSTRUMENTS CO., LTD.
 Add.: 6F.-5, No.130, Ln. 235, Baoqiao Rd., Xindian
 Dist., New Taipei City 23145, Taiwan, China
 Tel: +886 2 8912 1185 #10
 Email: ryan@richtec.com.tw
www.richtec.com.tw

SOUTH KOREA

TESTEK Co., LTD.
 Add.: 601Ho, SungwoonKoa, 141 Hyeonam-ro,
 Suji-Gu, Yongin-Si, Gyeonggi-Do, South Korea.
 Tel: +82 70 4099 2071,
 E-mail: woo@testek.co.kr
www.testek.co.kr

SINGAPORE

QUANTEL PTE LTD.
 Add.: 25 Kallang Ave, #05-02, 339416, Singapore
 Tel: +65 6745 3200
 Email: engtat.ong@sg.quantel-global.com
www.quantel-global.com

USA

THE EMC SHOP
 Add.: 7401 Galilee Rd. #160, Roseville, CA 95678,
 USA
 Tel: +1 844 423 7435
 Email: brendon.berg@theemcshop.com
www.theemcshop.com

RUSSIA

CDIP LLC
 Add.: Room 7, Building 5, House 69, Ryabinovaya
 Street, Moscow 121471, Russia
 Tel: +7 (495) 956 20 22
 Email: info@cdip.ru
www.cdip.ru