



Electrostatic Discharge Simulator

EDS MAX20

- IEC 61000-4-2
- IEC 61000-6-1
- IEC 61000-6-2
- IEC 61326
- ITU-T K.20
- Bellcore GR-1089-Core
- RTCA DO-160 Section 25
- MIL-STD-461G CS118
- GJB 151C CS112
- GB/T 17626.2

Features

- > 3.5-inch HD color screen
- > Test voltage 20 kV
- > Exquisite ergonomic design and UI design
- > Built - in 3 test modes: standard test, sequence test and easy test
- > Changeable discharge tip
- > Support remote control via optical fiber communication
- > Up to 18 working hours for rechargeable battery
- > Equipped with two batteries
- > 1.25 kg weight (incl. battery)

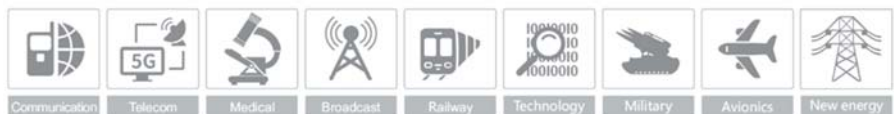


Introduction

The EDS MAX20 is 3CTEST's fourth - generation electrostatic discharge simulator in compliance with IEC 61000-4-2 and other standards. This new product has a test voltage up to 20 kV and features 3.5-inch HD color screen, along with compact mechanical design, intuitive UI design, lightweight, and impeccable waveforms.

With three test modes designed in this equipment, the EDS MAX20 offers customers convenient operation tailored to their specific testing requirement, catering not only to research and development stage but also to quality check stage.

Application Areas



Technical Parameters

Test Voltage	0.5 kV ~ 20 kV (±5%)
Voltage Step	100 V
Polarity	Positive, negative, alternative
Holding Time	5 s ~ 10 s
Discharge Tip	Air discharge tip and contact discharge tip
RC Module	150 pF / 330 Ω (support optional RC modules)
RC Module Identification	Automatic Identification and display
Control Mode	Touch screen, trigger button, optical fiber remote control
Frequency	Single, 0.1 Hz, 0.2 Hz, 0.5 Hz, 1 Hz, 2 Hz, 5 Hz, 10 Hz and 20 Hz
Trigger Mode	Automatic, manual, remote
Counter	1~9, 999
Sequence Test	Up to 4 sequence levels
Counter	Counting happens upon tips voltage lowered than setting voltage thresholds
Voltage Thresholds	50%, 60%, 70%, 80%, 90%
Temperature and Humidity	Built-in temperature and humidity meter, serving as real-time test environment record and protection function.
Battery Parameters	
Battery Type	Lithium battery
Battery Group Voltage	3*3.7 V
Battery Capacity	27 Wh
Battery Life	12 h@ contact discharge 20 kV, 1 Hz, first positive and then negative 18 h@ contact discharge 8 kV, 1 Hz, first positive and then negative
Power Supply for Battery Charger	Input: 100 V ~ 240 V, 50 Hz ~ 60 Hz Output: DC 13 V 0.8 A
Battery Charge Time	Approx. 5 h
Service Life	300 times > 80%

General Parameters

Display Screen	3.5 inches color screen
Language	English, Chinese
Auto Power OFF Function	Power off automatically upon no operations: 5 min / 10 min / 15 min / 30 min / never
Screen Brightness	0 ~ 100%
Lock Screen	Lock screen upon no operation: 5 min / 10 min / 15 min / 30 min / never
Memory	Latest 4 groups testing parameters
Communication mode	Optical fiber
Grounding Method	4 mm banana plug
Dimension	285 * 85 * 245 mm
Weight	Approx. 1.25 kg (Incl. battery)
Ambient Temperature	5°C ~ 40°C
Relative Humidity	20% ~ 80% (no condensation)
Atmospheric Pressure	86 kPa ~ 106 kPa

Standard Accessories

1	RC Module	Model: 20C150R330, 150 pF / 330 Ω	
2	Insulated Casing Gun Head Module	Model: EDS MAX20-TM330	
3	Air Discharge Tip	Model: EDS MAX20-AirTip	
4	Contact Discharge Tip	Model: EDS MAX20-ConTip	
5	Battery Pack	Model: TST231-3S1P (Quantity: 2)	
6	Battery Charger	Model: FY1300800	
7	Base Support	Model: EDS MAX20-BASE	
8	Electrostatic Suitcase	Size: 420 (W) $\times$ 350 (H) $\times$ 185 (D) mm Weight: 5.3 kg (incl. device)	
9	Discharge Return Cable	Model: CSX210GX2.5HJ	
10	Factory Report		
11	User Manual		

Optional Accessories

1	RC Module	Model	
	50 pF / 100 Ω	20C50R100	
	100 pF / 1,500 Ω	20C100R1500	
	150 pF / 150 Ω	20C150R150	
	150 pF / 2,000 Ω	20C150R2000	
	200 pF / 0 Ω	20C200R0	
	200 pF / 50 Ω	20C200R50	
	250 pF / 0 Ω	20C250R0	
	330 pF / 330 Ω	20C330R330	
	330 pF / 2,000 Ω	20C330R2000	
	500 pF / 100 Ω	20C500R100	
	500 pF / 500 Ω	20C500R500	
	500 pF / 5,000 Ω	20C500R5000	
	Customizable RC modules according to user needs		
2	Discharge Tip	Model: EDS MAX20-TM2000	
3	Power Adapter Box	Model: EDS MAX20-ADBOX Note: EDS MAX20-DCPower replaces the battery and powers the EDS MAX20.	
4	Power Adapter	Model: EDS MAX20-DCPower AC 110 / 220 V input, 12 V/ 5 A output, can replace battery pack	
5	PC Communication	Model: EDS-REMOTE Fiber optic to USB converter	
6	Optical Fiber	Model: HFBR4503-4513 Used together with the EDS-REMOTE to enable remote control of the instrument through host computer software. Cable length: 10 m.	
7	Electrostatic Discharge Test Setup	Model: ESDD 1.VCP (ESD-DZ): 500*500*3 mm 2.HCP (ESD-DZ): 1,600*800*2 mm 3.GRP (ESD-CD): 2,700*1,800*2 mm 4.Insulating Mat: 1,600 *800 *0.5 mm 5.Discharge cable: ES 470-1.4 (1.4 m) ES 470-1.7 (1.7 m)	
8	Calibration Kit	Model: ESD-CALA Used for waveform calibration of IEC / EN 61000 -4 -2, including 2 Ω target/ 1 m coaxial cable	
9	Attenuator	Model: JZ602 Impedance: 50 Ω, Attenuation: 20 dB	
10	Attenuator	Model: JZ603 Impedance: 50 Ω Attenuation: 30 dB	

Optional Accessories

11	Electrostatic Dissipative Mat	Model: ESD-DM Surface Resistance: $10^8 \Omega/\text{square}$ Dimensions: 1,000 * 1,000 * 2.5 mm	
12	Insulating Pad	Dimensions: 2,000 * 1,000 * 2 mm	
13	ESD Calibration Fixture	Model: ESDD-D Note: Complies with the requirements of IEC 61000-4-2:2025.	
14	High Voltage Divider	Model: EDS-HVM30 Used to measure the output voltage parameters of the electrostatic discharge simulator in air discharge mode. Max. Test Voltage: 30 kV Impedance: 20 G Ω // 3 pF Attenuation Ratio: 20651:1 (Reference Value)	
15	PC Software	Model: Corelab Compatible with Windows 7/8/10 operating systems. > Supports Ethernet interface and serial communication modes. > Supports parameter scheduling tests and test sequences, allowing one-click test execution with simple operation. > Allows customer information configuration, automatically generates test reports, and supports report export for convenient recording of real-time test data.	

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