



Multi Group Pulse Test System

ETS 160W3

- DO-160G S22
- MIL-STD-461G

Features

- > 5.7-inch color touch screen control, simple and intuitive interface operation
- > Can be remotely controlled with CoreLab software
- > Supports cable bundle test level 5 requirements, with an output voltage of up to 5 kV
- > Meet W3 voltage waveforms of 1 MHz and 10 MHz
- > Can be used in various complex testing environments (such as on-site testing). The coupler with a 3-meter-long load meets the requirements of Test Level 5 (maximum output voltage up to 4 kV)

Introduction

ETS 160W3 is a testing system designed according to the standards DO-160G S22 and MIL-STD-461G, which can meet the testing requirements of waveform 3 (1 MHz and 10 MHz), and can perform cable bundle testing of level 5 as required by the standard. In addition, it meets the voltage requirements of level 5 under load.

When flying in severe convective weather, airplanes are often affected by lightning strikes, which generate transient induced voltage or current on the circuits or cables of onboard equipment, known as indirect lightning effects. This phenomenon may cause the aircraft to lose control and even lead to serious accidents such as a fire on the aircraft fuselage. For safety reasons, onboard equipment must undergo lightning protection design and testing verification to ensure that critical systems and equipment on board can still function properly after exposure to lightning environments, without affecting the continuous safe flight of the aircraft.

Application Areas



Technical Parameters

Voltage Wave W3 1 MHz	
Coupling Mode	Cable Induction (CI)
Repetition Frequency	1 MHz $\pm$ 20%
The fifth Waveform Decays	Between 25% and 75% of the first wave
Single Shot Back Test Level	2,000 V ~ 5,500 V (-0% ~ +20%);
Multiple Shot Back Test Level	2,000 V ~ 5,500 V (-0% ~ +20%) (first wave); 1,000 V ~ 2,750 V (-0% ~ +50%) (subsequent wave);
Polarity	Positive or negative
Number of Subsequent Waves in MS Mode	1 ~ 14
Subsequent Wave Time Interval in MS Mode	10 ms ~ 200 ms, random mode is available adjustable, with options for uniform and random modes
Number of Test Times	1 ~ 9,999
Test Repetition	1.5 s ~ 300 s
Voltage Wave W3 10 MHz	
Coupling Mode	Cable Induction (CI)
Repetition Frequency	10 MHz $\pm$ 20%
The fifth Waveform Decays	Between 25% and 75% of the first wave
Single Shot Back Test Level	2,000 V ~ 4,800 V (-0% ~ +20%);
Multiple Shot Back Test Level	2,000 V ~ 4,800 V (-0% ~ +20%) (first wave); 1,000 V ~ 2,400 V (-0% ~ +50%) (subsequent wave);
Polarity	Positive or negative
Number of Subsequent Waves in MS Mode	1 ~ 14
Subsequent Wave Time Interval in MS Mode	10 ms ~ 200 ms, random mode is available adjustable, with options for uniform and random modes
Number of Test Times	1 ~ 9,999
Test Repetition	1.5 s ~ 300 s
LVT-2C Voltage Coupling Transformer	
Rated Voltage	5,500 V
Rated Current	320 A
Dimension	260 mm (W) * 250 mm (H) * 470 mm (D) Inner width: 84 mm Inner height: 70 mm
Weight	Approx 35 kg

General Parameters

Display	5.7" TFT touch screen
Working Power	220 V, $\pm 10\%$, 50/60Hz
Fuse	6 A
Max. Power Consumption	200 W
User's Memory Space	Infinite (PC)
Communication Mode	Ethernet LAN, RJ45
Working Status Indication	LED indication and LCD display on front panel
Grounded Connection	Flat grounding wire
Dimension	6U rack, 450 mm (W) * 280 mm (H) * 610 mm (D)
Weight	Approx. 22 kg
Ambient Temperature	15 °C ~ 35 °C
Relative Humidity	45% ~ 75%, RH(no condensation)
Atmospheric Pressure	86 kPa ~ 106 kPa

Standard Accessories

Power cord, Testing Wire, Voltage Coupling Transformer LVT-2C, Fuse, RF Cable
Flat Grounding Wire, User Manual

Optional Accessories

1	Immunity Testing Software	Model: Corelab The software is used for remote control; > Support connection with oscilloscope for monitoring waveforms; > Support generating test report;	
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SUZHOU 3CTEST ELECTRONIC CO., LTD.

Address: No. 99 E'meishan Road, SND, Suzhou, Jiangsu Province, China

E-mail: globalsales@3ctest.cn

Service: service@3ctest.cn

Tel: +86 - 512 - 68077192

Web: www.3ctest.com



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