Combined Type Automotive Transient Pulse Simulator Series

TIS 100CXX

- ISO 7637-2-2011
- ISO 7637-3-2016
- GB/T 21437.2-2008
- EN 301489-1
- EN 301489-17
- EN 301489-24
- EN 300329
- EN 300340
- EN 300342-1
- BMW-(Airbag ECU)
- BMW 600 13.0(Part 2)
- BMW GS 95002(1999)
- BMW GS 95002(2001)
- Case New Holland ENS0310
- Cummins 14269 (982022-026)
- DaimlerChrysler PF-10540
- Audi(Reference vehicles)
- Chrysler PF-9326
- Chrysler CS-11809(2009)
- Chrysler CS-11979
- Chrysler DC-11224 Rev.A
- Claas CN 05 0215
- DaimlerChrysler DC-10614

Features

> 5.7-inch color touch screen, front panel operation

> EUT load capacity 60 V, 60 A

> Power cord test pulse P1/2a/3a/3b

> Fast and slow pulse test for signal and data lines

> Equipped with DUT voltage and current detection and overcurrent protection functions

> Built in power switch

> Built in coupling network can serve as a unified central output (EUT) port

> Ethernet and RJ45 interfaces, used for PC remote control and printing test reports

Introduction

The TIS transient pulse interference simulator series integrates the power line testing of test pulses P1/2a/3a/3b required by ISO 7637-2 standard, as well as the signal and data line testing required by ISO 7637-3 standard. The TIS series simulator can not only meet the standard requirements of many global automotive manufacturers, but also customize various waveform simulation generators according to user needs. It has higher pulse voltage and frequency, can be freely set, and is used to find sensitive points of the tested object, far exceeding the requirements of the standard. The input of the built-in coupling network is connected to the outputs of the LDS 200 series, APS series, and APG series, and can serve as a unified central output port for the test equipment. Different simulators are interconnected by a data bus and connected to a remote PC via Ethernet to form a complete testing system.

Application Areas

Technical Parameter

Micro pulse generator module P1	
Test Voltage	3 - 600 V
Polarity	Negative
Rise time Tr	0.5 μs – 1 μs 1.5 μs – 3 μs No load
Duration Td	50 μs ±20% No load 12 μs ±20% 2 Ω Match load 1 ms ±20% No load 1 ms ±20% 50 Ω Match load 2 ms±20% No load 1.5 ms±20% 10 Ω Match load 0.2 ms ±20% No load 0.3 ms ±20% No load 0.5 ms±20% No load
Source impedance	2 Ω，4 Ω，10 Ω，20 Ω，30 Ω，50 Ω
Test frequency	1 - 9999
DUT voltage monitoring	10:1
DUT current monitoring	10 A : 1 V
Pulse interval	0.2 s -999 s (with the minimum interval depending on the output voltage)

Micro pulse generator module P2a	
Test voltage	3 - 200 V
Polarity	W4 CI/GI
Rise time Tr	0.5 μs – 1 μs 1.5 μs – 3 μs No Load
Duration Td	50 μs ±20% No Load 12 μs ±20% 2 Ω Match load 1 ms ±20% No Load 1 ms ±20% 50 Ω Match load 2 ms±20% No Load 1.5 ms±20% 10 Ω Match load 0.2 ms ±20% No Load 0.3 ms ±20% No Load 0.5 ms±20% No Load
Source impedance	2 Ω，4 Ω，10 Ω，20 Ω，30 Ω，50 Ω
Test frequency	1 - 9999
DUT voltage monitoring	10:1
DUT current monitoring	10 A : 1 V
Pulse interval	0.2 s -999 s (with the minimum interval depending on the output voltage)
COUPLING	ICC, DCC

Electric fast transient/pulse train generator module P3a/3b		
Test voltage	18-1000 V	
Polarity	Pulse 3b is positive, pulse 3a is negative	
Rise time Tr	5 ns±30% 50 ohm Load 5 ns±30% 1000 ohm Load	
Duration Td	150 ns - 45/+45 ns 50 ohm Load 150 ns - 45/+45 ns 1000 ohm Load	
Source impedance	50 Ω	
Number of pulses	1 - 200	
Pulse group interval time	50 ms - 999 ms	
Pulse frequency	0.1 kHz - 200 kHz	
Test duration	1 s - 50000 s	
Coupling method	CCC,DCC	
Output method	Source port output	BNC
	Power port output	Coaxial terminals

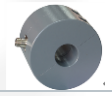
General parameters

Supply voltage	AC 110/220 V， Soil 10%, 45-65 Hz	
Environmental temperature	15 - 35 ℃	
Relative temperature	35% -85% RH (no condensation)	
External dimensions	TIS 100C06 Output current 60 A, 4U chassis	TIS 100C10 Output current 100 A, 6U chassis
Weight	TIS 100C06 About 20 kg	TIS 100C10 About 20 kg
Trigger method	Automatic trigger, manual trigger, external trigger	
Network	Built in coupling/decoupling network 60 V/60 A The maximum current can reach 100 A (customized)	
Input	Power supply for the tested equipment	DC voltage input from APS or APG or other DC power sources
	Pulse 5,7	Overlay pulse 5 and pulse 7 through the TIS100C06 network
Output	Output from LDS200 input	Central test equipment output port
	Coaxial output port	Connect capacitive coupling clamps that meet the requirements of ISO7637-3 standard

Standard accessories

One host, instruction manual, testing report, quality assurance certificate, testing line, power line, DUT power line, grounding wire

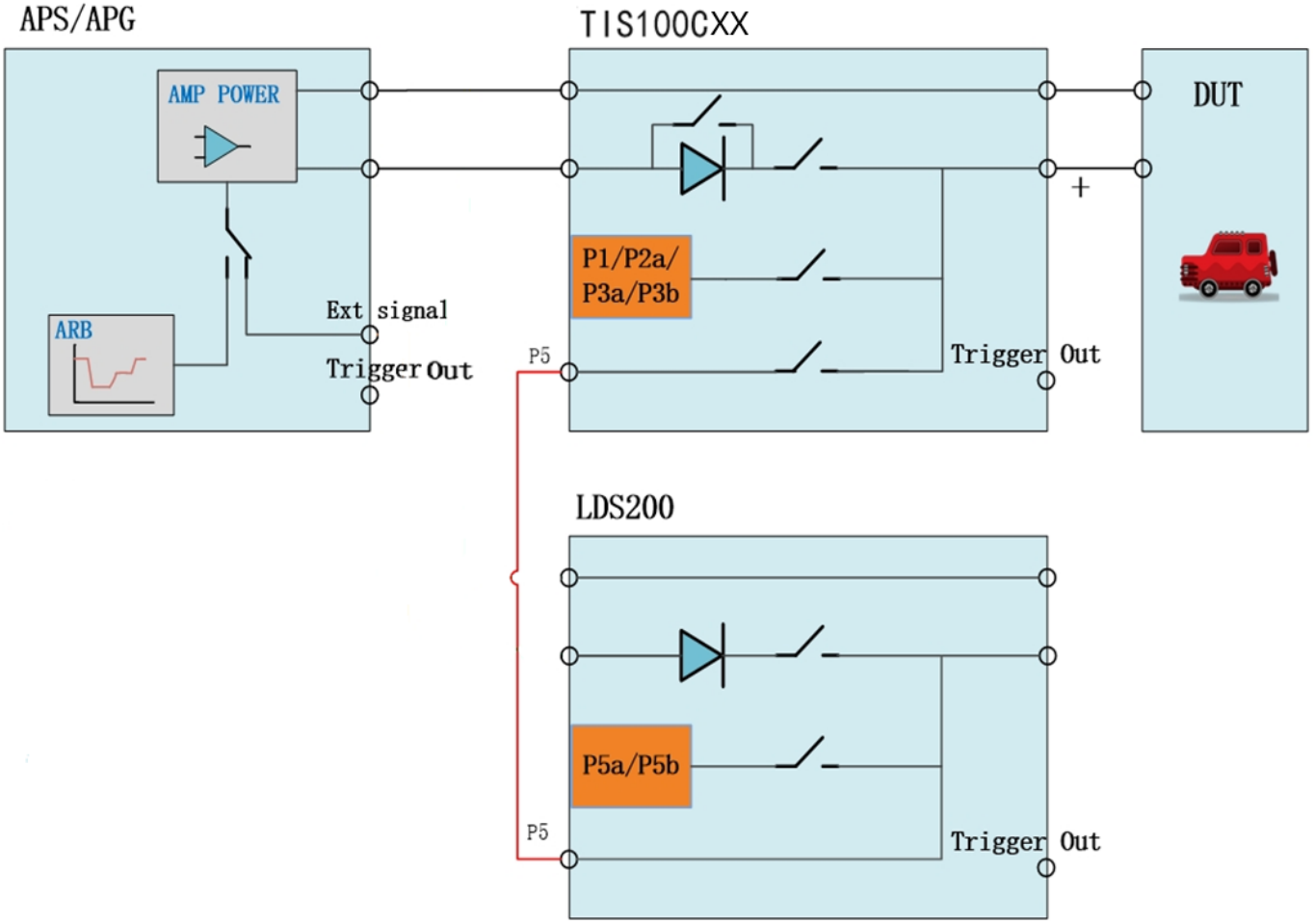
Optional accessories

<table>
<tr><td colspan="3">ISO 7637-3 Calibration Attachment</td></tr>
<tr><td>1. Current injection
BCIP7637-3
  </td><td colspan="2">Frequency range: 4 kHz -100 MHz</td></tr>
<tr><td>2. Calibration fixture
BCICF-400
  </td><td colspan="2">Frequency range: DC - 400 MHz
Characteristic impedance: 50 Ω</td></tr>
<tr><td>3. Direct capacitance coupling DOC-100 nF
  </td><td colspan="2">Capacity: 100 nF
Voltage withstand value: 200 V</td></tr>
<tr><td>4. Direct capacitance DOC-100pF
  </td><td colspan="2">Capacity: 100 pF
Voltage withstand value: 200 V</td></tr>
<tr><td>5. Capacitive coupling clamp V-EFTC
  </td><td colspan="2">Coupling capacitance:
100 pF - 200 pF DC 5 kV</td></tr>
<tr><td colspan="3">ISO 7637-2 Calibration Attachment</td></tr>
<tr><td rowspan="9">6. Calibrate the resistance PVK
  </td><td>Model</td><td>Impedance [Ω]</td></tr>
<tr><td>PVK 05</td><td>0.5</td></tr>
<tr><td>PVK 1</td><td>1</td></tr>
<tr><td>PVK 2</td><td>2</td></tr>
<tr><td>PVK 4</td><td>4</td></tr>
<tr><td>PVK 10</td><td>10</td></tr>
<tr><td>PVK 20</td><td>20</td></tr>
<tr><td>PVK 30</td><td>30</td></tr>
<tr><td>PVK 50</td><td>50</td></tr>
<tr><td colspan="3">Other Accessory</td></tr>
<tr><td>7. Software</td><td colspan="2">The computer online control software AutoLab supports Windows 7 and above. It is easy to use, has a beautiful and intuitive user interface, and various operational functions and standard testing libraries allow users to easily complete custom testing programs;
It can automatically/manually identify the connected AutoLab testing equipment and perform automatic configuration; The template based reporting feature can help users generate test reports flexibly.</td></tr>
</table>

Naming convention: Taking TIS 100C06 as an example

TIS ： Automotive Transient Pulse Conducted Interference Signal Simulator
100: Maximum voltage 1000V;
C ： Representing Current
06 ： Output current level, 06:60A 10: Output voltage level 100A

Test connection diagram:



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