Micro-Pulse Interference Generator

TIS 700M10

- ISO 7637-2:2011
- ISO 7637-3:2016
- 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
- GB/T 21437.2:2008
- GB/T 21437.2:2021

Features

> 5.7-inch colorful touchscreen front panel operation
> Built-in CDN rated 80 V, 100 A
> Support power line test pulses P1/2a/3a/3b
> Support customized waveform editing with programmable pulse rise and fall parameters
> Support fast and slow transient pulses tests on signal and data lines
> Support DUT voltage, current monitoring and overcurrent protection
> Built-in power switch
> Integrated coupling network, can be used as output port of LDS or APS series
> Ethernet RJ45 interfaces for PC remote control and test reports printing

Introduction

The TIS 700M10 Micro-Pulse Interference Generator can perform pulses 1, 2a, 3a and 3b on power lines as per ISO 7637-2, and fast and slow transient pulses on signal and data lines tests as per ISO 7637-3. The max. test voltage for pulses 3a and 3b is 1,000 V.

TIS 700M10 supports customized waveform editing with programmable pulse rise and fall parameters. It has built-in coupling/decoupling networks rated 80 V, 100 A. When worked with LDS 200 series and APS series, its output port can be used as the main output port of the entire system. All devices can be controlled by Autolab PC control software, which makes the test simple and convenient.

Application Areas

Technical Parameters

Micro Pulse P1	
Test Voltage	3 V ~ 600 V, 1 V step
Polarity	-
Rise Time (T_r)	0.5 µs ~ 1 µs 1.5 µs ~ 3 µs (no load)
Duration Time (T_d)	50 µs ± 20% (no load) 12 µs ± 20% (2 Ω load) 1 ms ± 20% (no load) 1 ms ± 20% (50 Ω load) 2 ms ± 20% (no load) 1.5 ms ± 20% (10 Ω 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
Pulse Repetition Time	0.2 s ~ 999 s（Min. interval depends on output voltage）
Counter	1 ~ 9,999
Micro Pulse P2a	
Test Voltage	3 V ~ 200 V, 1 V step
Polarity	+
Rise Time (T_r)	0.5 µs ~ 1 µs 1.5 µs ~ 3 µs (no load)
Duration Time (T_d)	50 µs ± 20% (no load) 12 µs ± 20% (2 Ω load) 1 ms ± 20% (no load) 1 ms ± 20% (50 Ω load) 2 ms ± 20% (no load) 1.5 ms ± 20% (10 Ω 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
Pulse Repetition Time	0.2 s ~ 999 s（Min. interval depends on output voltage）
Counter	1 ~ 9,999
Coupling Method	ICC, DCC
MicroPulse P3a/3b	
Test Voltage	18 V ~ 1,000 V
Polarity	+: Pulse 3b - : Pulse 3a
Rise Time (T_r)	5 ns ± 30% (50 Ω load) 5 ns ± 30% (1,000 Ω load)
Duration Time (Optional)	100 ns ± 30 ns (50 Ω load) 150 ns ± 45 ns (1,000 Ω load)
Source Impedance	50 Ω
Number of Pulse	1 ~ 200
Burst Duration	0.1 ms ~ 10 ms

Technical Parameters

Micro Pulse P3a/3b	
Burst Repetition Time	50 ms ~ 999 ms
Pulse Frequency	0.1 kHz ~ 200 kHz
Test Duration	1 s ~ 50,000 s
Coupling Method	CCC, DCC
Programmable RC Parameters	
Pulse Amplitude	3 V ~ 200 V, 1 V step
Polarity	+/-
Impedance (R_i)	2 Ω, 4 Ω, 5 Ω ~ 100 Ω (5 Ω step), 200 Ω, 400 Ω, 450 Ω
Rise Time T_r (V_p)	1 μs ~ 10 μs, +0/-50% (1 μs step)
Pulse Duration	50 μs ~ 1,000 μs ± 10 % (50 μs step) 1,000 μs ~ 10,000 μs ± 10 % (500 μs step)
Power Supply Disconnection Time t_2	1 ms ~ 500 ms
Pulse Application Delay Time t_3	0 μs ~ 150 μs
Pulse Repetition Time	0.2 s ~ 999 s
Counter	1 ~ 9,999

General Parameters

Screen	5.7-inch TFT touch screen
Working Power	AC 230 V, ± 10 %, 50/60 Hz
Fuse	6 A
Max. Power Consumption	300 W
Storage Space	Infinite (PC)
Communication Mode	Ethernet LAN, RJ45
Trigger Mode	Automatic, manual, external
Network	Buit-in coupling/decoupling network 80 V/100 A
External Trigger Input	BNC, 5 V TTL (no contact, trigger to close)
CRO Trigger Input	BNC, 5 V TTL
Operation Trigger Input	BNC, 5 V TTL
Fault Detection	The front-panel LCD displays fault information and stops operation in case of failure
DUT Voltage Monitor Output	BNC, 10:1, coaxial connector output
DUT Current Monitor Output	BNC. 40 A: 1 V, coaxial connector output
Working Status Indication	LED indication and LCD display on the front panel
Grounding Method	Flat grounding wire
DUT Power Supply Voltage Injection	Red and black test cable
Dimension	19-inch/6 U, 446 (W)*280 (H)*612 (D) mm
Weight	Approx. 28 kg
Ambient Temperature	15℃ ~ 35℃
Relative Humidity	45% ~ 75%
Atmospheric Pressure	86 kPa ~ 106 kPa

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Standard Accessories

Test Cable, Fuse, Grounding Wire, RF Cable, Coaxial Cable Assembly, ZJH 100 Adapter Box, User Manual

Optional Accessories

1	Immunity Test Software	Model: AutoLab > 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.	
Calibration Accessories for ISO 7637-3			
1	Current Injection	Model: BCIP7637-3 Frequency: 4 kHz ~ 100 MHz	
2	Calibration Fixture	Model: BCICF-200 Frequency: DC ~ 200 MHz Characteristic Impedance: 50 Ω	
3	Direct Capacitive Coupling	Model: DCC-100 nF Capacitance: 100 nF Withstand Voltage: 200 V	
4	Direct Capacitive Coupling	Model: DCC-100 pF Capacitance: 100 pF Withstand Voltage: 200 V	
5	Direct Capacitive Coupling	Model: DCC-470 pF Capacitance: 470 pF Withstand Voltage: 200 V	
6	Capacitive Coupling Clamp	Model: V-EFTC Coupling Capacitor: 100 pF ~ 200 pF, DC 5 kV	

Optional Accessories

Calibration Accessories for ISO 7637-2				
1	Calibration Resistor	Model	Resistance	
		PVK 05	0.5 Ω	
		PVK 1	1 Ω	
		PVK 2	2 Ω	
		PVK 4	4 Ω	
		PVK 10	10 Ω	
		PVK 20	20 Ω	
		PVK 30	30 Ω	
		PVK 50	50 Ω	

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