Load Dump Simulator LDS 200NxxD series

Datasheet

In Compliance With

> BMW-(Airbag ECU)
> BMW 600 13.0 (Part 1)
> BMW 600 13.0(Part 2)
> BMW GS 95002(1999)
> BMW GS 95003-2
> Case New Holland ENS0310
> Chrysler CS-11979
> Chrysler PF-9326
> Claas CN 05 0215
> Cummins 14269(982022-026)
> DaimierChrysler DC-10842
> DaimlerChrysler PF-10540
> FAW Diesel ECU MY06.0(Rew.7)
> Fiat 9.90110
> Ford EMC-CS-2009.1
> Ford ES-XW7T-1A278-AB
> Ford ES-XW7T-1A278-AC
> Ford FMC1278
> Ford WDR 00.00EA
> Freightliner 49-00085
> GMW 3097

Introduction

LDS 200NxxD series load dump simulator is used to simulate the battery sudden disconnection from AC generator during AC generator charging to battery (e.g. sudden disconnection caused by corrosion). This load dump pulse which LDS 200 series simulate has high energy and strong destructive effects. Thepulse duration time up to hundreds of milliseconds. Load dump pulses produced by LDS 200D can meet ISO 7637-2, ISO16750-2, SAE J1113 and multiple car manufacturer standards like Ford, Chrysler, Renault, PSA, Nissan, etc. With built-in amplitude limiting circuit, LDS200D can also produce clipping load dump pulses as per international standards and car manufacturer standards.

Features

> 5.7” colorful touch screen; front panel operation
> Generate clipped load dump pulses
> Built-in0.5-38Ω source impedance，selectable in 0.1 Ω step
> Pulse duration time up to 1200ms
> Waveform can be edited freely
> Built-in 60 V / 30 A coupler ,can be extended to 50/100/200 A
> Built-in battery switch
> With functions of DUT current detection and over current protection
> Ethernet, RJ45 interface for PC remote control

Application Areas

> Automotive

Technical parameters	
ISO 7637-2 or ISO 16750-2P5a,&P5b	
Pulse Amplitude	30 V - 210 V
Suppression Voltage	15 V -100 V
Impedance (Ri)	0.5 Ω – 40 Ω, 0.1 Ω adjustable
Pulse Rise Time	5 ms -10 ms（1-10ms adjustable in freestyle，1msincrements）
Pulse Duration	40 ms - 400 ms or 1200ms（subject to internal resistance），1ms adjustable
Pulse Repetition Time	15 s -600 s, 1s adjustable, subject to pulse energy
Pulse Output Mode	Single, continuous or programming control 1-9999

SAE J1113-11-2012 P5A (12 Vbattery supply system)	
Open Circuit Voltage	22 V - 87 V
Rise Time	10 ms + 0/–5 ms
Pulse Duration	40 ms - 400 ms
Internal Resistance	0.5 ohm - 4 ohm
SAE J1113-11-2012 P5A (24 Vbattery supply system)	
Open Circuit Voltage	44V -174V
Rise Time	10 ms +0/–5 ms
Pulse Duration	100 ms - 350 ms
Internal Resistance	1 ohm - 8 ohm
SAE J1113-11-2012 P5B (12 Vbattery supply system)	
Open Circuit Voltage	22 V -87 V
Rise Time	10 ms +0/–5 ms
Pulse Duration	40 ms-400 ms
Internal Resistance	0.5 ohm -4 ohm

SAE J1113-11-2012 P5B (24 Vbattery supply system)	
Open Circuit Voltage	44 V -174 V
Rise Time	10 ms +0/–5 ms
Pulse Duration	100 ms - 350 ms
Internal Resistance	1 ohm - 8 ohm
SAE J1113-11-2012 P5C (12 Vbattery supply system)	
Open Circuit Voltage	86 V (±10%)
Rise Time	5 ms + 0/–5 ms
Pulse Duration	400 ms
Internal Resistance	0.4 ohm
Repetition Rate	10 s
SAE J1113-11-2012 P5C (24 V battery supply system)	
Open Circuit Voltage	122 V (±10%)
Rise Time	5 ms + 0/–5 ms
Pulse Duration	400 ms
Internal Resistance	0.8 ohm
Repetition Rate	10 s
Ford EMC-CS-2009.1 Pulse G1	
Open Circuit Voltage	60 V (±10%)
Rise Time	10 ms（-5/+0ms）
Pulse Duration	300 ms (±20%)
Load Voltage	30 V (±10%), 0.5 ohm load
Pulse Duration	150 ms（±20%）
Internal Resistance	0.5 ohm
Repetition Rate	30 s

FORD EMC-CS-2009.1 Pulse G2	
Open Circuit Voltage	30 V (±10%),0.5 ohm load
Suppression Voltage	21.5 V（-1/+ 0 V）
Rise Time	10 ms（-5/+ 0 ms）
Pulse Duration	150 ms (±20%)
Internal Resistance	0.5 ohm
Repetition Rate	30 s
FORD ES-XW7T CI 220G(AC-version)	
Open Circuit Voltage	+60 V±10%
Rise Time	1 ms -10 ms（10%-90%）
Pulse Duration	300 ms（10%-10%）
Load Voltage	30 V (±10%) at 0.5 ohm load
Pulse Duration	150 ms ±10%（10-10%）
Internal Resistance	0.5 ohm
Repetition Rate	30 s
Number of Pulses	3 pulses
FORD FMC 1278，CI222 PULSE 5A	
Open Circuit Voltage	60V±10%(12Vsystem) 120V±10%（24Vsystem）
Rise Time	10ms（-5/+0ms）
Pulse Duration	300ms±20%
Load Voltage	30 V±10%，0.5 ohm load
Pulse Duration	150 ms±20%
Internal Resistance	0.5 ohm
Repetition Rate	60 s
Number of Pulses	5 pulses

FORD FMC 1278，CI222 PULSE 5B	
Load voltage	30 V (±10%), 0.5 ohm load
Suppression Voltage	21.5 V（-1/+0V）
Rise time	10 ms（-5/+ 0 ms）
Pulse duration	150 ms (±20%)
Internal resistance	0.5 ohm
Repetition rate	60 s
Number of Pulses	5 pulses
FORD ES-XW7T CI 240 (AB-version)	
Open Circuit Voltage	+60 V±10%
Rise Time	1 ms -10 ms（10%-90%）
Pulse Duration	300 ms（10%-10%）
Load Voltage	30 V (±10%) at 0.7 ohm load
Pulse Duration	150 ms±10%（10-10%）
Internal Resistance	0.5 ohm
Repetition Rate	30 s
CHRYSLER PF 9326 Pulse 5	
Open Circuit Voltage	+91.5 V (±10%)
Rise Time	5 ms-10 ms（10%-90%）
Pulse Duration	300 ms td（10-10%）
Load Voltage	+45.75 V(±10%) at 0.5 ohm load
Pulse Duration	＞95 ms（10-10%）
Internal Resistance	0.5 ohm
Repetition Rate	120s

MERCEDES BENZ MBN 10 284 PART 2	
Open Circuit Voltage	100 V (±10%) (pulse5a，12 V supply system)
Rise Time	＜0.1 ms（10%-90%）
Pulse Duration	400 ms（10-10%）
Internal Resistance	2 ohm
Load Voltage	50V±20%（2 ohm）
Open Circuit Voltage	200V(±10%)(pulse 5a, 24Vsupply system）
Rise Time	＜0.1ms（10%-90%）
Pulse Duration	500ms（10-10%）
Internal Resistance	2 ohm
Load Voltage	100 V±20%（2 ohm）
Open Circuit Voltage	100 V（±10%）(pulse 5a，42 V supply system）
Rise Time	＜0.1ms（10%-90%）
Pulse Duration	400ms（10-10%）
Internal Resistance	2 ohm
Load Voltage	50 V±20%（2 ohm）
Repetition Rate	120 s
Number of Pulses	5 pulses

NISSAN Pulse A1	
Open Circuit Voltage	+60 V (±10%)
Rise Time	1 μs(±10% ±1 μs) (10%-90%)
Internal Resistance R1	18 ohm
Internal Resistance R2	0.66 ohm
Capacitance	15 mF
Load Voltage	30 V ± 10%（0.66 ohm）
Repetition Rate	30 s
Number of Pulses	10 pulses

SCANIA TB1400	
Open Circuit Voltage	+90 V（±10%）(Truck）
Rise Time	1-10 ms（10%-90%）
Pulse Duration	300 ms（10-10%）
Internal Resistance	1.5 ohm
Load Voltage	45V (± 10%)（1.5 ohm）
Number of Pulses	10 pulses

SCANIA TB1700	
Open Circuit Voltage	+125V（±10%）(ECU's)
Rise Time	1ms -10ms（10%-90%）
Pulse Duration	480ms（10-10%）
Internal Resistance	1.5 Ohm
Load Voltage	62.5V ± 10%（1.5 Ohm）
Number of Pulses	10 Pulses

SCANIA TB1901	
Open Circuit Voltage	+140 V（±10%）
Rise Time	1 ms -10 ms（10%-90%）
Pulse Duration	600 ms（10-10%）
Internal Resistance	1 ohm
Load Waveform	70 V ± 10%（1 ohm）
Number of Pulses	10 pulses

NISSAN Pulse A2	
Open Circuit Voltage	+60 V（±10%）
Rise Time	1 μs (±10% ±1 μs) (10%-90%)
Internal Resistance R1	11 ohm
Internal Resistance R2	0.8 ohm
Capacitance	15mF
Load Voltage	30 V (± 10%) at 0.8 ohm load
Repetition Rate	30 s
Number of Pulses	10 pulses

NISSAN Pulse B1	
Open Circuit Voltage	80 V (±10%)
Rise Time	1μs (±10%±1μs)(10%-90%)
Internal Resistance R1	20 ohm
Internal Resistance R2	20 ohm
Capacitance	1 mF
Load Voltage	-40 V ± 10%（20 ohm）
Repetition Rate	3 s
Number of Pulses	1000 pulses

Clipped load dump test	ISO 7637-2 5b（12 V、24 V system）
	ISO/WD 16750 pulse 5b
	SAE J1113-11 pulse 5b
	EMC-CS-2009.1(Ford pulse G2
	FMC-1278 CI 222 pulse 5b
	FIAT 9.90110 pulse 5a
	PSAB217110 pulse 5b（12Vsystem）
	Volvo pulse 5a and 5c
	GS 95003-2 pulse 5b
	Porsche EMV pulse 5
	GMW 3097 pulse 5b
	36.00.808 pulse 5b
	TSC 7034G pulse 5b
	Iveco pulse 5b
	Scania TB1400 pulse 5b
	Scania TB1700 pulse 5b
	ES 96100-02 pulse 5b

Model Selection	
LDS 200N30D	EUT Supply up to max. 60 V / 30 A
LDS 200N50D	EUT Supply up to max.60 V / 50 A
LDS 200N75D	EUT Supply up to max.60 V / 75 A
LDS 200N100D	EUT Supply up to max.60 V / 100 A
LDS 200N200D	EUT Supply up to max.60 V / 200 A

ISO7637-1990 P7	
Open circuit voltage	-20 V ~ -80 V （±10%）
Rise time	5 ms -10 ms（10%-90%）
Pulse duration	100 ms (10%-10%)
Internal resistance	10 ohm
Disconnect before pulse	＜100 μs
Number of Pulses	≥1 pulses

General Parameters	
Resistance for pulse calibration	0.4 ~ 38 Ω
High accuracy resistors for load dump pulse calibration as per the requirements of ISO 7637 and multiple manufacturer standards	
Output	Can connect to TIS 700 transient pulse simulator for P5a/5b output waveform
Coupling	Coupling to battery positive pole
Decoupling	By diode and battery switch
EUT supply	60 V / 30 A or 50 A or 100 A or 200 A
CRO	Trigger oscilloscope 5V TTL signal
Serial interface	LAN Ethernet RJ45
Supply voltage	AC 110 V / 220V,±10%, 45 Hz -65 Hz
Temperature and humidity	15 ℃- 35 ℃
Dimension	2*6U rack (450mm×600mm×266mm）or others
Weight	Approx.60 kg

Software（Optional）

PC control by AutoLab

Support windowsXP and Windows7, easy to operate and nice-looking appearance

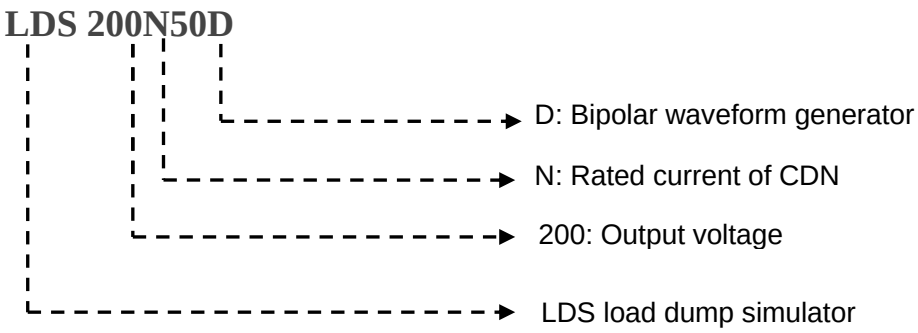
Kinds of operating functions and standard library can be self-defined by users. It is available to identify the connected devices automatically/manually and configure automatically.

Based on template report, users can generate test report flexibly.

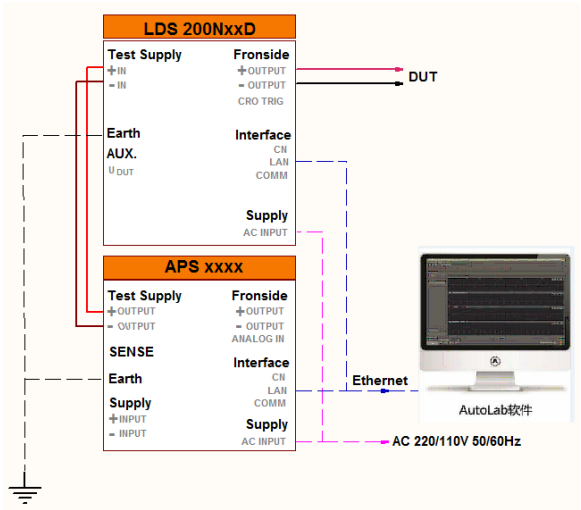
Standard Equipped：

Power line, User manual, Test wire, Fuse

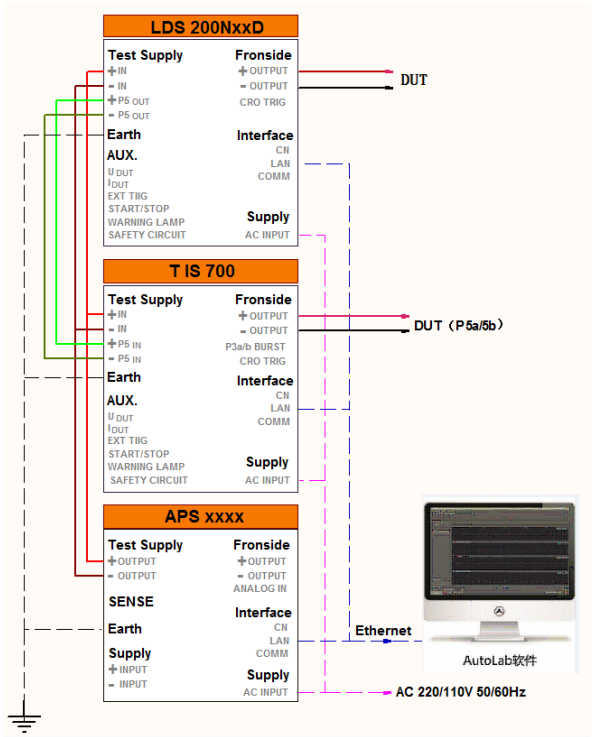
Naming rules：



Test Connecting Diagram 1：



Test Connecting Diagram 2:



SUZHOU 3CTEST ELECTRONIC CO., LTD.

Add.: No. 99 E'meishan Road, SND, Suzhou, Jiangsu Province, China
Tel: +86 (0)512 6807 7192 Fax: +86-512-68079795
Sales Email: globalsales@3ctest.cn Service Email: service@3ctest.cn
www.3c-test.com

3ctest is always striving for product innovation and quality improvement.
Product appearance and technical specifications are subject to change without further notice.

© 3ctest