

## LD 200N

### LOAD DUMP GENERATOR



#### FOR TESTS ACCORDING TO ...

- > Case New Holland ENS0310
- > Chrysler PF 9326
- > Cummins 14269 (982022-026)
- > DaimlerChrysler DC-10842
- > DaimlerChrysler PF-10540
- > EN 300329
- > EN 300340
- > EN 300342-1
- > EN 301489-1
- > EN 301489-17
- > FAW Diesel ECU MY06.0 (Rev.7)
- > Fiat 9.90110
- > Ford ES-XW7T-1A278-AB
- > Ford ES-XW7T-1A278-AC
- > Ford WDR 00.00EA
- > Freightliner 49-00085
- > GMW 3097
- > GMW 3097 (2001)
- > GMW 3097 (2004)
- > GMW 3100
- > GMW 3100 (2001)
- > GOST 28751-90
- > Honda 3982Z-SDA-0030
- > Hyundai/Kia ES 96100-02 (2006)
- > ...

#### LD 200N - COMPACT HIGH-ENERGY LOAD DUMP GENERATOR

Load Dump pulses simulate the sudden disconnection (e.g. by corrosion) of the battery from the alternator while the alternator is generating current to load the battery. Such Load Dump pulses are high energy pulses with a high potential of destruction. The LD 200N simulates these high energy pulses having a duration time in the range of hundreds of milliseconds.

The LD 200N generates the Load Dump pulses as per ISO 7637, SAE J1113, SAE J1455, JASO and many more manufacturer specification, e.g. Ford, Chrysler, Renault, PSA, NISSAN etc. By means of a built-in clipping circuit (optional) the LD 200N also generates clipped load dump pulses as per international standards as well as manufacturer requirements.

#### HIGHLIGHTS

- > **LOAD DUMP GENERATOR ACCORDING TO ISO 7637, SAE J1113, SAE J1455, JASO, NISSAN AND MOST CAR MANUFACTURER REQUIREMENTS**
- > **GENERATES CLIPPED LOAD DUMP PULSES (OPTIONAL BUILT-IN MODULE)**
- > **BUILT-IN 0.5 - 38 OHM SOURCE IMPEDANCE, SELECTABLE IN 0.1 OHM STEPS**

#### APPLICATION AREAS

-  AUTOMOTIVE
-  TELECOM

## TECHNICAL DETAILS

## LOAD DUMP GENERATOR

## PULSE SPECIFICATION

Voltage (o.c.)	20V - 200V ± 10%
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## ISO PULSE 5 AND 7

Rise time	5ms - 10ms (10 - 90%)
Pulse duration	40 - 400ms (10 - 10%)
Int. resistor	0.5ohm - 38ohm, selectable in steps of 0.1ohm
Repetition rate	Min. 30s

## SAE J1455 FOR 12V BATTERY SUPPLY

Voltage (o.c.)	+86V ± 10%
Rise time	100us (10% - 90%)
Pulse duration	400ms ± 10% (10 - 10%)
Int. resistor	0.4ohm

## SAE J1455 FOR 24V BATTERY SUPPLY

Voltage (o.c.)	+122V ± 10%
Rise time	100us
Pulse duration	400ms ± 10% (10 - 10%)
Int. resistor	0.8ohm

## JASO PULSE A1

Voltage (o.c.)	+70V ± 10%
Rise time	1us (10% - 90%)
Pulse duration	200ms ± 10% (measured at tau)
Int. resistor	0.8ohm
Capacitor	110mF

## JASO PULSE B1 (FIELD DECAY)

Voltage (o.c.)	-80V ± 10%
Rise time	1us (10% - 90%)
Pulse duration	60ms (measured at tau)
Int. resistor	8ohm
Capacitor	3mF

## JASO PULSE D1

Voltage (o.c.)	+110V ± 10%
Rise time	1us (10% - 90%)
Pulse duration	400ms (measured at tau)
Int. resistor	1.5ohm
Capacitor	73mF

## CHRYSLER PF 9326 PULSE 5

Voltage (o.c.)	+91.5V ± 10%
Rise time	5 - 10ms (10% - 90%)
Pulse duration	300ms td (10 - 10%)
Loaded pulse	+45.75V ± 10% into a 0.5ohm load
Pulse duration	> 95ms (10 - 10%)
Int. resistor	0.5ohm
Repetition rate	120s

## FORD ES-XW7T CI 240 (AB-VERSION)

Voltage (o.c.)	+60V ± 10%
Rise time	1 - 10ms (10% - 90%)
Pulse duration	300ms (10% - 10%)
Voltage (loaded)	+30V ± 10% into a 0.7ohm load
Pulse duration	150ms ± 10% (10 - 10%)
Int. resistor	0.5ohm
Repetition rate	3 pulses every 30s

## FORD ES-XW7T CI 220G (AC-VERSION)

Voltage (o.c.)	+60V ± 10%
Rise time	1 - 10ms (10% - 90%)
Pulse duration	300ms (10% - 10%)
Voltage (loaded)	+30V ± 10% into a 0.5ohm load
Pulse duration	150ms ± 10% (10 - 10%)
Int. resistor	0.5ohm
Repetition rate	3 pulses every 30s

**TECHNICAL DETAILS**
**MERCEDES BENZ MBN 10 284 PART 2**

Voltage (o.c.)	100V ± 10% (Pulse 5a for 12V)
Rise time	< 0.1ms (10% - 90%)
Pulse duration	400ms (10 - 10%)
Int. resistor	2ohm
Voltage (o.c.)	200V ± 10% (Pulse 5a for 24V)
Rise time	< 0.1ms (10% - 90%)
Pulse duration	500ms (10 - 10%)
Int. resistor	2ohm
Voltage (o.c.)	100V ± 10% (Pulse 5a for 42V)
Rise time	< 0.1ms (10% - 90%)
Pulse duration	400ms (10 - 10%)
Int. resistor	2ohm
Repetition rate	120s

**SCANIA TB1400**

Voltage (o.c.)	+90V ± 10% for trucks
Rise time	1 - 10ms (10% - 90%)
Pulse duration	300ms (10 - 10%)
Voltage (o.c.)	+125V ± 10% for buses
Rise time	1 - 10ms (10% - 90%)
Pulse duration	480ms (10 - 10%)
Int. resistor	1.5ohm

**SCANIA TB1700**

Voltage (o.c.)	+125V ± 10%
Rise time	1 - 10ms (10% - 90%)
Pulse duration	480ms (10 - 10%)
Int. resistor	1.5ohm

**NISSAN PULSE A1**

Voltage (o.c.)	+60V ± 10%
Rise time	1ms ± 50% (10% - 90%)
Int. resistor R1	18ohm
Int. resistor R2	0.66ohm
Capacitor	15mF

**NISSAN PULSE A2**

Voltage (o.c.)	+60V ± 10%
Rise time	1ms ± 50% (10% - 90%)
Int. resistor R1	11ohm
Int. resistor R2	0.8ohm
Capacitor	1mF

**NISSAN PULSE B1**

Voltage (o.c.)	+80V ± 10%
Rise time	1ms ± 50% (10% - 90%)
Int. resistor R1	20ohm
Int. resistor R2	20ohm
Capacitor	1mF

**TEST ROUTINES**

ISO 7637-2	Load Dump & Field Decay
PF-9326	Pulse 5a and 5b
Ford ES-XW7T	AB & AC version
MBN 10284	Pulse 5a, 5b and 5c
SCANIA	Pulse 5 & 5b (TB1400 and TB1700)
JASO	Pulse A1, B1, D1
NISSAN	Pulse A1, A2, B1
Service	Service, setup, self test

## TECHNICAL DETAILS

## FREESTYLE MODE LOAD DUMP

## PULSE PROGRAMMING MODE

Rise time	<1us 10us - 90us with 10us steps 100us - 900us with 100us steps 1ms - 10ms with 1ms steps
Pulse duration	10ms - 1,200ms
Int. resistor	0.5ohm - 38ohm, in steps of 0.1ohm

## MODULE CLIPPED LOAD DUMP

## TEST ROUTINES (REQUIRES OPTIONAL CLD MODULE)

Standard Test routines	pre-programmed and controlled via iso.control
ISO 7637-2	Pulse 5b for 12V and 24V
ISO/WD 16750	Pulse 5b
SAE J1113-11	Pulse 5b
FIAT 9.90110	Pulse 5a
PSA B21 7110	Pulse 5b for 12V
Volvo	Pulse 5a and 5c
GS 95003-2	Pulse 5b
Porsche EMV	Pulse 5
GMW 3097	Pulse 5b
36.00.808/--H	Pulse 5b
TSC 7034G	Pulse 5b
Iveco	Pulse 5b
Scania TB1400	Pulse 5b
Scania TB1700	Pulse 5b
ES 96100-02	Pulse 5b

## PULSE PROGRAMMING MODE (REQUIRES OPTIONAL CLD MODULE)

Clipped Voltage	15V - 95.5V, in steps of 0.5V
Rise time	100us - 10ms
Pulse duration	10ms - 1,200ms
Int. resistor	0.5ohm - 38ohm, in steps of 0.1ohm

## GENERAL DATA

## DIMENSIONS AND WEIGHT

Dimensions	19"/6HU, 500mm x 450mm x 290mm
Weight	approx. 25kg
Supply voltage	115V/230V +10%/-15%
Fuses	2x T2AT (230V) or 2x T4AT (115V)

## OUTPUT

+/- output	Safety laboratory connectors
Coupling	To the battery +line
Decoupling	Via diode
DUT supply	Max. 60V/30A

## INTERFACE

Serial interface	USB
Parallel interface	IEEE 488, addresses 1 - 30
CN interface	To control external CN - UCS 200N

## OPTIONS

iso.control	Software to control the test, including standard library, test report facility and data conversion generator
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# COMPETENCE WHEREVER YOU ARE



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