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UCS 200N

ULTRA COMPACT SIMULATOR FOR AUTOMOTIVE TRANSIENTS

FOR TESTS ACCORDING TO ...

› BMW 600 13.0 (Part 2)
› BMW GS 95002 (1999)
› BMW GS 95002 (2001)
› Chrysler PF 9326
› DaimlerChrysler DC-10614
› DaimlerChrysler PF-10540
› EN 300329
› EN 300340
› EN 300342-1
› EN 301489-1
› EN 301489-17
› EN 301489-24
› EN 301489-7
› Fiat 9.90110
› Ford ES-XW7T-1A278-AB
› Ford ES-XW7T-1A278-AC
› Ford WDR 00.00EA
› Freightliner 49-00085
› GM 9105P
› GMW 3097
› GMW 3097 (2001)
› GMW 3097 (2004)
› GMW 3097 (2006)
› GMW 3100
› ...

ULTRA-COMPACT SIMULATOR FOR AUTOMOTIVE TRANSIENTS FOR PULSES 1, 2 AND 3A/3B

The UCS 200N Ultra-Compact Simulator for Automotive Transients unifies the capabilites of an EFT/Burst simualtor, a Micropulse simulator and the required coupling network into one box. The UCS 200N is equiped to meet all international and car manufacturer specifications from around the globe. The built-in coupling network ranges up to 200A depending on the model. The built-in coupling network can be used and controlled by any unit of the LD 200N series, VDS 200N series and PFS 200N series.
For tests beyond standard's requirements the waveform parameters of the Micropulse generator can be varied in a wide range by means of the FreeStyle mode.

HIGHLIGHTS

› **BUILT-IN EFT/BURST GENERATOR MODULE**
› **BUILT-IN MICROPULSE GENERATOR MODULE INCL. JASO, SAE AND NISSAN**
› **BUILT-IN COUPLING NETWORK 60V, UP TO 200A**
› **CONTROLS EXTERNAL LOAD DUMP AND BATTERY SUPPLY SIMULATORS**
› **USB AND GPIB-BUS**

APPLICATION AREAS

AUTOMOTIVE
TELECOM

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TECHNICAL DETAILS

ELECTRICAL FAST TRANSIENTS

EFT/BURST MODULE FOR TEST PULSES 3A/3B	
	As per ISO 7637-2:2004
Test voltage	25V - 1,000V ± 10%
Rise time	5ns ± 1.5ns
Pulse duration	100ns (+100/-0)ns
Verification	As per Annex D of ISO 7637-2:2004 into 50ohm and 1,000ohm load
Source impedance	Zq = 50ohm
Polarity	Positive/negative (Pulse 3b/3a)

TRIGGER CIRCUIT	
Trigger of bursts	Automatic, manual, external
Burst duration	T4 = 0.1ms - 999.9ms
Repetition rate	T5 = 10ms - 9,999ms
Spike frequency	f = 0.1kHz - 200kHz
Test duration	T = 0:01min - 999:59min T › 999:59min --› endless

OUTPUTS	
Direct	Via 50ohm-coaxial connector (for tests using e.g. a capacitive coupling clamp)
Coupling mode	To the + battery line (supply lines)
CRO trigger	5V trigger signal for oscilloscope

TEST ROUTINES	
Quick Start	On-line adjustable parameters, easy-to-use
Standard Test routines	As per ISO 7637-2:2004, Levels 1 - 4
User Test routines	Random burst release Change voltage after T Change frequency after T

OPTIONS	
ACC	Capacitive coupling clamp
KW50	100:1 divider, 50ohm
KW1000	400:1 divider, 1,000ohm
CA EFT kit	EFT/Burst verification kit
A6dB	6dB attenuator, 50ohm

BUILT-IN COUPLING NETWORKS

TECHNICAL DATA FOR STANDARD CNA 50	
DUT voltage	Max. 60V
DUT current	50A
Peak current	100A for 500ms
Dimensions	19"/3HU (UCS 200N incl. CNA 50)

TECHNICAL DATA FOR OPTIONAL CNA 100	
DUT voltage	Max. 60V
DUT current	100A
Peak current	150A for 500ms
Dimensions	19"/6HU (UCS 200N incl. CNA 100)

TECHNICAL DATA FOR OPTIONAL CNA 150	
DUT voltage	Max. 60V
DUT current	150A
Peak current	› 150A
Dimensions	19"/9HU (UCS 200N incl. CNA 150)

TECHNICAL DATA FOR OPTIONAL CNA 200	
DUT voltage	Max. 60V
DUT current	200A
Peak current	› 200A
Dimensions	19"/9HU (UCS 200N incl. CNA 200)

INPUT	
DUT supply +/-	From VDS 200N or PFS 200N
Pulse 5, 7	From one LD 200x

OUTPUT	
DUT supply +/-	Central DUT output
Coaxial output port	To connect the capacitive coupling clamp as per ISO 7637-3:2007

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TECHNICAL DETAILS

MICROPULSES

MICROPULSE MODULE FOR TEST PULSES 1, 2A AND 6	
	As per ISO 7637-2:2004
Test voltage	U = 20V - 600V ± 10% (peak voltage and polarity as per selected standard)
Repetition rate	0.2s - 99.0s

ISO PULSE 1 (12V)	
Rise time	1us +0%/-50% (10% - 90%)
Pulse duration	2ms ± 10% (10% - 10%)
Int. resistor	10ohm ± 10%

ISO PULSE 1 (24V)	
Rise time	3us +0%/-50% (10% - 90%)
Pulse duration	1ms ± 10% (10% - 10%)
Int. resistor	50ohm ± 10%

ISO PULSE 2 (12V/24V)	
Rise time	1us +0%/-50% (10% - 90%)
Pulse duration	50us ± 10% (10% - 10%)
Int. resistor	2ohm ± 10%

ISO PULSE 6 (12V)	
Rise time	30us +0%/-50% (10% - 90%)
Pulse duration	600us ± 10% (10% - 10%)
Int. resistor	30ohm ± 10%

AS PER ISO 7637-2 THE FOLLOWING STANDARDS CAN BE COVERED	
SAE J1113	GM 3097
BMW	Volkswagen
PSA	Chrysler PF 9326
DC 10614	Renault
FIAT	Mitsubishi
Honda	Ford ES-XW7T

FREESTYLE MODE MICROPULSES

PULSE PROGRAMMING MODE	
Rise time	1us - 10us in steps of 1us
Pulse duration	50us - 10,000us
Int. resistor	2ohm - 100ohm in steps of 5ohm; 200ohm, 400ohm and 450ohm

TRIGGER	
Automatic	Automatic release of the pulses
Manual	Manual release of a single pulse
External	External release of a single pulse
Supply switch	Off time, selectable; 0 - 10,000ms

OUTPUT	
DUT supply +/-	Central DUT output
Coupling	To the battery +line
Decoupling	Via diode and battery supply switch

TEST ROUTINES	
Quick Start	Immediate start; easy to use and fast
User Test routines	1. Custom made test routines 2. Change voltage after n pulses
Standard Test routines	As per ISO 7637, SAE J1113, JASO and manufacturer specifications
Service	Service, setup, self test

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TECHNICAL DETAILS

MICROPULSES AS PER MANUFACTURER STANDARDS

JASO D-001, PULSE A2	
Test voltage	+110V
Capacitor	C = 4.7uF
Pulse duration	2.5us ± 30% at tau(36.8%)
R1	0.6ohm ± 10%
R2	0.4ohm ± 10%
Polarity	Positive

JASO D-001, PULSE B2	
Test voltage	-260V
Capacitor	C = 33uF
Pulse duration	2.0ms ± 20% at tau(36,8%)
R1	60ohm ± 10%
R2	80ohm ± 10%
Polarity	Negative

JASO D-001, PULSE D2	
Test voltage	+170V
Capacitor	C = 2.2uF
Pulse duration	2.5us ± 30% at tau(36,8%)
R1	1.2ohm ± 10%
R2	0.9ohm ± 10%
Polarity	Positive

NISSAN 28400 NDS 03, PULSE B2	
Test voltage	-300V ± 10%
Capacitor	C = 33uF
R1	100ohm ± 10%
R2	75ohm ± 10%
Polarity	Negative

NISSAN 28400 NDS 07, PULSE C8	
Test voltage	±300V ± 10%
Capacitor	C = 1uF
R1	500ohm ± 10%
R2	450ohm ± 10%
Polarity	Positive and negative

NISSAN 28400 NDS 07, PULSE C50	
Test voltage	±300V ± 10%
Capacitor	C = 33uF
R1	30ohm ± 10%
R2	200ohm ± 10%
Polarity	Positive and negative

NISSAN 28400 NDS 07, PULSE C300	
Test voltage	-300V ± 10%
Capacitor	C = 33uF
R1	100ohm ± 10%
R2	75ohm ± 10%
Polarity	Negative

SAE J1455 | MUTUAL PULSE	
Rise time	1us ± 20% (10% - 90%)
Pulse duration	15µs ± 20% at tau(36.8%)
Int. resistor	50ohm ± 10%

SAE J1455 | INDUCTIVE PULSE	
Rise time	1us ± 20% (10 - 90%)
Pulse duration	1,000us ± 20% at tau(36.8%)
Int. resistor	20ohm ± 10%

OPTIONS	
CA ISO	Load resistors for the verification of micropulses and Load Dump pulses

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TECHNICAL DETAILS

GENERAL DATA

DIMENSIONS AND WEIGHT	
UCS 200N	19"/3HU, approx. 20kg
UCS 200N with CNA100	19"/6HU, approx. 30kg
UCS 200N with CNA150	19"/9HU, approx. 35kg
UCS 200N with CNA200	19"/9HU, approx. 35kg
Supply voltage	115/230V +10/-15%
Fuses	2 x T 2AT (230V) or 2 x T 4AT (115V)

INTERFACE	
Serial interface	USB
Parallel interface	IEEE 488, address 1 - 30
CN interface	To control the internal CN and battery switch

OPTIONS	
CNA/Ext	Extention to connect up to three additional pulse generators.
iso.control	Software to control the test, including standard library, test report facility and data conversion generator.
Rack	For system integration; includes GPIB bus, pulse bus, ground reference plane, security switch and power contact.

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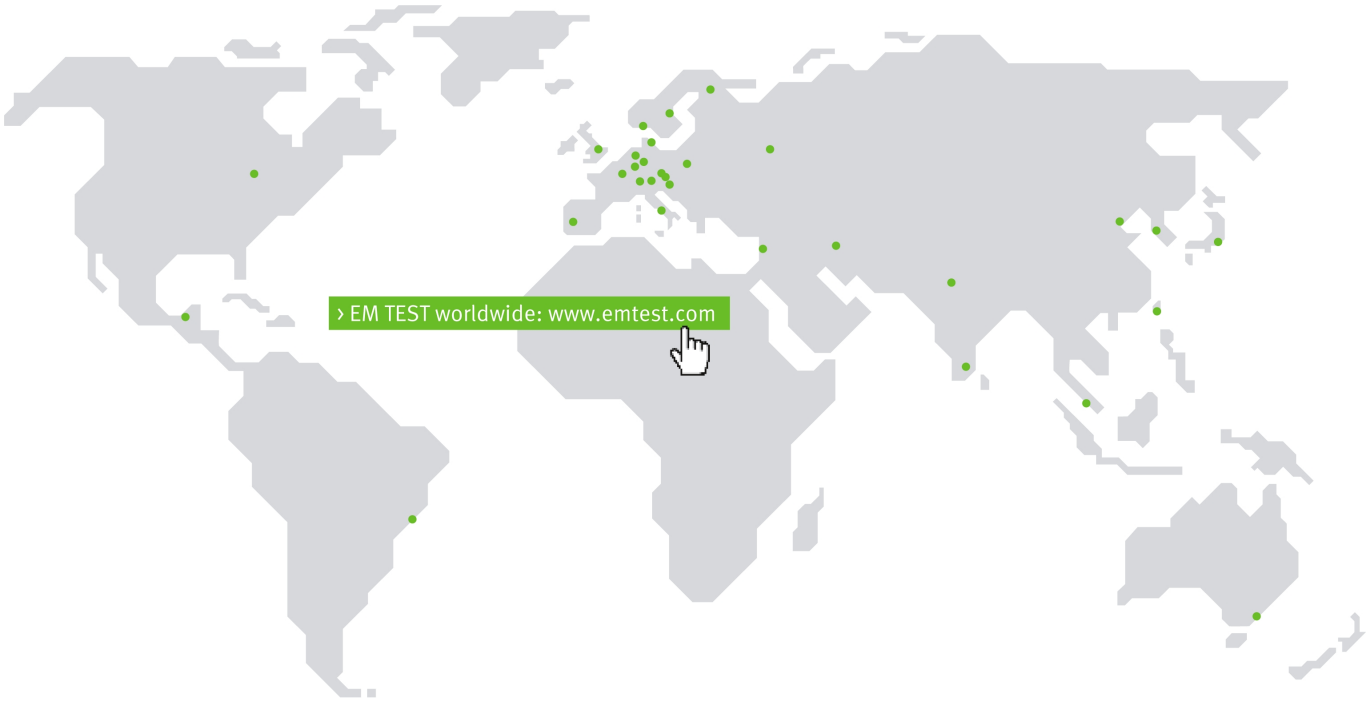
COMPETENCE WHEREEVER YOU ARE



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