CWS 500N3

SIMULATOR FOR LOW FREQUENCIES 10 HZ - 250 KHZ

FOR TESTS ACCORDING TO ...

› Chrysler CS-11979
› DaimlerChrysler DC-10614
› DaimlerChrysler DC-10615
› DO 160 Section 18
› Fiat 7.Z0450 (2004)
› Ford EMC-CS-2009.1
› Ford FMC1278
› GMW 3097 (2006)
› ISO 11452-10
› ISO 11452-8
› Jaguar EMC-CS-2010JLR V1.1 (2011-01)
› MIL STD 461 D CS 101
› MIL STD 461 D CS 109
› MIL STD 461 D RS 101
› MIL STD 461 E CS 101
› MIL STD 461 E CS 109
› MIL STD 461 E RS 101
› MIL STD 461 F CS 101
› MIL STD 461 F CS 109
› MIL STD 461 F RS 101
› ...

CWS 500N3 - TESTING OF RIPPLE NOISE AND MAGNETIC FIELDS

Key applications of the CWS 500N3 are in the automotive and aerospace area. Various international standards and MIL requirements call for magnetic field tests in the low frequency range. Apart from this the automotive industry requires conducted immunity tests with superposed sinusoidal signals on the DC supply voltage (ripple noise). For both applications the CWS 500N3 is the perfect equipment including everything in a single box, necessary for these tests.
The CWS 500N3 meets requirements of SAE J1113-2, ISO 11452-8, DO 160D/E Section 18 and MIL-STD-461 D/E/F/G CS101, CS109 and RS101.

HIGHLIGHTS

› **Most compact equipment for ripple noise on ac/dc supplies and magnetic fields**
› **Built-in LF signal generator**
› **Built-in LF amplifier**
› **Built-in LF transformer 2:1**
› **Built-in frequency-selective voltage and current meter**

APPLICATION AREAS

AUTOMOTIVE
AVIONICS
MILITARY

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TECHNICAL DETAILS

GENERAL OUTPUT CHARACTERISTICS (AMPLIFIER)	
Frequency range	10Hz - 250kHz
Signal power	100W (nominal)
Signal level	0.001V - max. 7Vrms (14Vrms)
Signal current	Max. 15A rms
Harmonic distortion	› -20dBc at 100W power 0.5ohm
Current protection	Short circuit protected for current › 15A rms
Overvoltage protection	For voltages › 60V fed back by DUT
LF indicator	LED indicationg the LF output status
LCD	Display of the test voltage and frequency

MEASUREMENTS	
General	Freuqency selective instrument for Voltage Current and Magnetic field
Frequency	10Hz - 250kHz
Accuracy	Better than 5%
Current	Sense by 0.02ohm shunt. 1mA - 16A rms
Voltage	0.5mV - 12 V rms
Magnetic field	50ohm input for loop sensor

COUPLING TO BATTERY SUPPLY LINES	
Transformer	Impedance ratio 1:4
Frequency range	10Hz - 250kHz
DUT load	60VDC up to 30A
DUT load	300VAC up to 20A
Coupling capacitor	100uF/10uF to shunt the DC source
Output impedance	less than 0.5ohm@f ‹80kHz

MIL STD 461 D/E, CS 101, CS 109, RS 101	
CS 101 STD 461D	Voltage ripple AC/DC, 30Hz - 50kHz
CS 101 STD 461E/F/G	Voltage ripple AC/DC, 30Hz - 150kHz
CS 109	Structure current, 60Hz - 100kHz
RS 101	H-field (Army, Navy), 30Hz - 100kHz
Calibration resistor	built-in 0.5ohm power resistor

DO 160 D/E SECTION 18	
Cat A	AC and DC ports, 10Hz - 150kHz
Cat B	DC (14V / 28V), 200Hz - 15kHz
Cat E	AC (5V - 140V), 750Hz - 15kHz
Cat Z	DC (28V), 10Hz - 150kHz

SAE J1113-2, CONDUCTED IMMUNITY	
Level control	Closed loop and Substitution method
Frequency range	30Hz - 80kHz (250kHz)
Frequency steps	As specified in the test plan
Test levels	0.15Vpp / 0.5Vpp / 1.0Vpp / 3.0Vpp
Calibration resistor	built-in 4ohm power resistor
Injected current	Limited to max. 1A during test

ISO 11452-8, RADIATED MAGNETIC FIELD	
Level control	Subsitution method
Frequency range	15Hz - 150kHz
Frequency steps	As specified in the test plan
Test levels	30A/m, 100A/m, 300A/m and 1,000 A/m as per Annex A

TEST ROUTINES	
Quick Start	Immediate start; easy to use and fast
Service	Service, Set-up

INTERFACE	
Serial interface	USB
Parallel interface	IEEE 488, addresses 1 - 30
Fail 1	BNC input; test will be stopped (active low)
Fail 2	BNC input; test status will be saved (max. 10 events) when active low. Test continues

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TECHNICAL DETAILS

GENERAL DATA	
Dimensions	19"/6HU (555mm x 448mm x 286mm)
Weight	Approx. 36kg
Supply voltage	115V or 230V +10/-15%, 50/60Hz
Input power	Max. 600W
Power factor	cos(phi) = 0.96 at max. output power as per IEC 555
Fuses	2 x 6.3AT (115V) or 2 x 3.15AT (230V)
Cooling	Active cooling, air ventilation
Temperature	10°C - 40°C
Rel. humidity	Max. 85%, non-condensing

ACCESSORIES	
Radiating loop	For magnetic field test
Field sensor probe	To measure the magnetic field
icd.control	Extensive and most versatile remote con-trol and reporting software. A standard library helps to configure the test setup. Multiple interruption functions automated by IEEE instruments or manually. Easy-to-use and expandable to complex test routines on the base of vector definitions.

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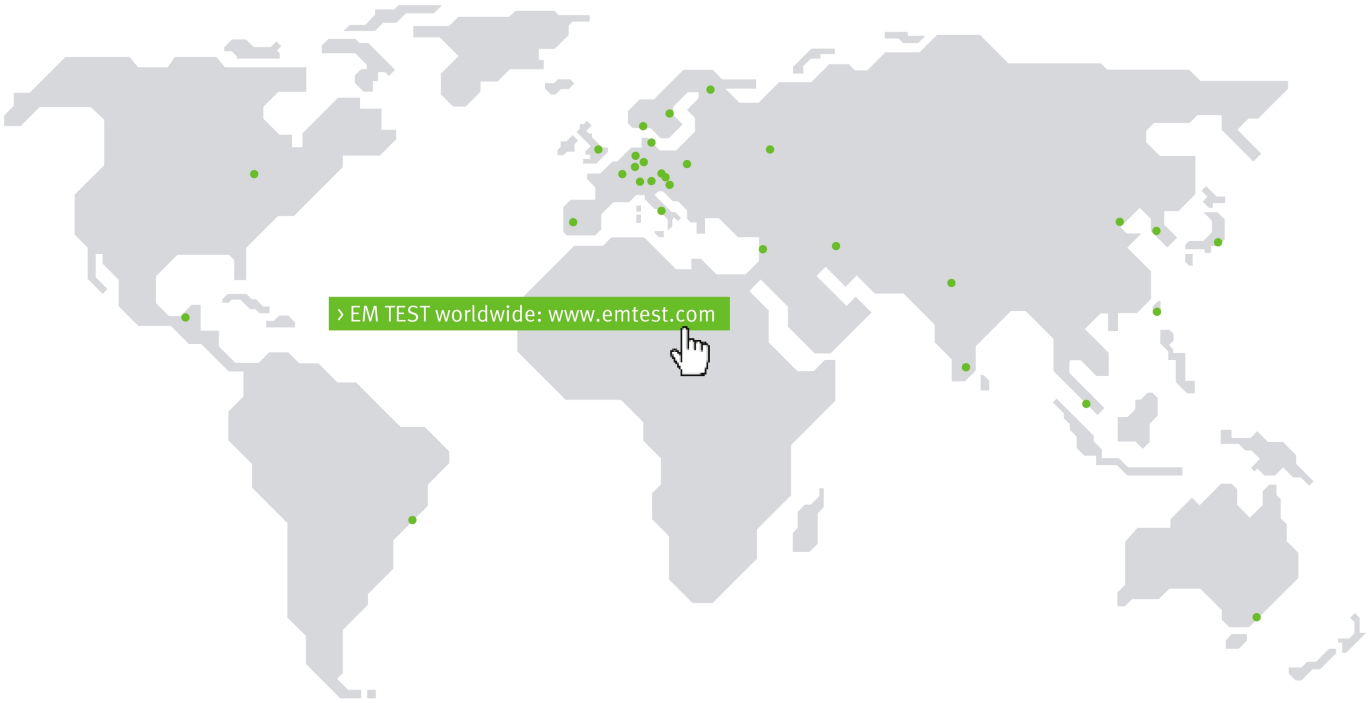
COMPETENCE WHEREVER YOU ARE



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