

CAR – Arbitrary-Waveform-Generator 1200

EMC-Test Equipment for electrical installation of vehicles

- Batterie simulator
- Bandwidth DC-1MHz
- 4 quadrant amplifier
- Max. 75V Vpeak / 40A (100A short)
- Fast rise time up to 80V/μs
- Sense lines
- Arbitrary waveform up to 16kSa / 20MSa/s



According to

ISO 7637: 2011

ISO 16750-2

ISO 21848-2

SAE J1113

LV124 (VW80000)

... many manufacturer standards,
GM, Ford, Chrysler, Mercedes, BMW,
VW, PSA, Renault, Fiat

The CAR arbitrary waveform generator 1200 is a compact EMC testing system for performing voltage variations on supply lines of vehicles. The system strictly complies with the international standards and manufacturer standards that describe phenomena on the power supply of vehicles.

Thus, the CAR arbitrary waveform generator 1200 is the optimal voltage power source for battery simulation up to 70V. It can simulate pulse 2b, pulse 4, starting profile, superimposed alternating voltage and others, up to a battery current of 40A.

Optionally it can be expanded with CAR-TEST-SYSTEM 14 and PG2804. The CAR-TEST-SYSTEM 14 allows generation of transient immunity test pulses, pulse #1, #2 and #3. The generator PG2804 generates load dump pulses according to ISO16750-2 (Test A, Test B (Clip)).

The software program CAR-remote permits the PC control of the generator via Ethernet and also allows the standardized documentation according to IEC 17025 and the evaluation of test results.

The user can use the PC software to call up standard test procedures (ISO, VG, vehicle manufacturer specific) or define and execute individual test procedures on a point-by-point basis. Voltage curves up to 16kSa can be generated.

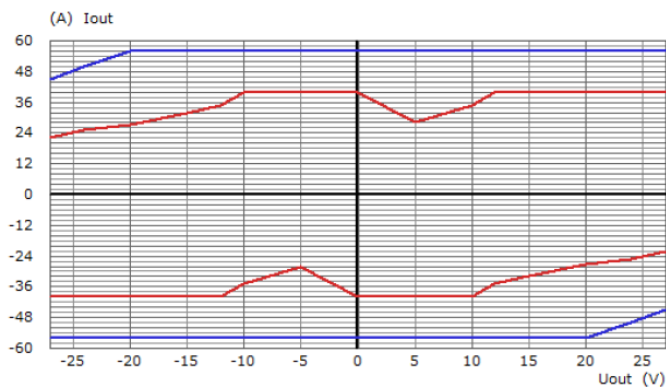
It is equipped with an Impulse Recording Function (IRF) to record definite impulses (with oscilloscope).

Control	Description
CAR-REMOTE-AWG	Remote software with Impulse Recording Function (IRF) (XP, WIN7, WIN10) incl. 5 m fibre optic cable and PC Ethernet PC-Interface

TECHNICAL SPECIFICATIONS:		CAR – AWG 1200
Mainframe		
Ethernet Interface for remote control of the generator		buildin
Connector for external safety interlock loop		24 V=
External red and green warning lamps acc. to VDE 0104		230V / 60 W
Mains power		230V, 50 Hz
Dimensions desk top case, W * H * D		450*180*500 mm ³
Weight		15kg
Amplifier		
4-quadrant voltage and current amplifier		
Bandwidth		1MHz
Max. Voltage		±75V
Max. Current		±40A
Max. Current /10ms		±100A
Arbitrary		
Resolutuion		14 Bit
Samplerate		20MSa/s
Max. Points		16kSa
Segmenttyps		DC, Sinus, Sinussweep, Ramp, Exponentialfunction

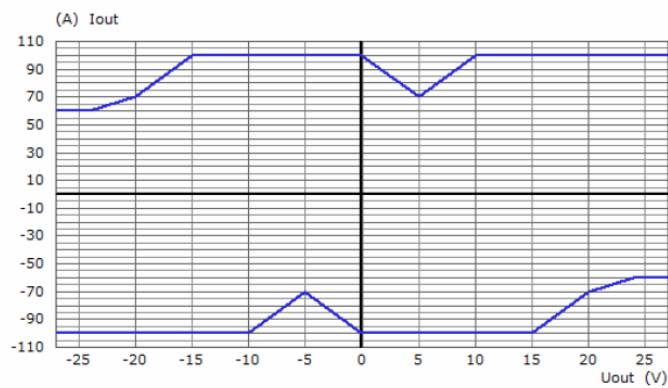
Continuous Output Current vs. Output Voltage (THD + N < 1%)

U_{out} = +/- 27V
 Supply Voltage: Auto
 Blue: AC Limit
 Red: DC Limit



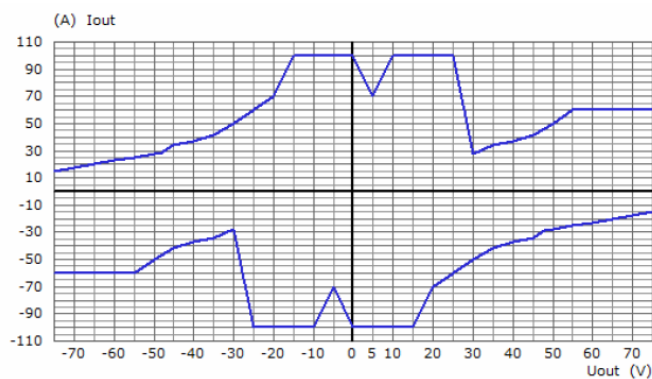
Short-Time Output Current vs. Output Voltage (THD + N < 1%)

U_{out} = +/- 27V
 Supply Voltage: Auto
 Blue: Pulse Current Limit; 200ms Pulse, duty cycle=5 %

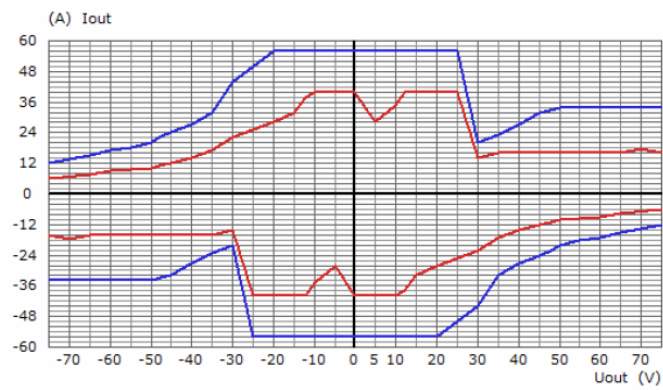


Short-Time Output Current vs. Output Voltage (THD + N < 1%)

U_{out} = +/- 75V
 Supply Voltage: Auto
 Blue: Pulse Current Limit; 200ms Pulse, duty cycle=5 %



Continuous Output Current vs. Output Voltage (THD + N < 1%)
U_{out} = +/- 75V
Supply Voltage: Auto
Blue: AC Limit
Red: DC Limit



Example configuration of HILO-TEST system:

CAR-TEST-SYSTEM 14 I Puls #1, #2 und #3, Build in 19" Rack
+ Option CAR-AWG 40 (75V/40A)
+ Option PG2804

