



MAIN FEATURES

- Voltage range - 60 ... + 60 VDC
- Output current 10 A
- Four quadrant, symmetrical amplifier
- Bandwidth up to 180 kHz, full signal
- Very Low Ri: <10 mOhm
- Sense lines
- Table top unit (rack mounting possible)

**VDS 200Q10.1
4-Quadrant Amplifier**

The VDS 200Q10.1 is a compact symmetrical 4-quadrant amplifiers. It is used to simulate the various battery supply waveforms required by international standards for example the pulse 2b and 4 . There is a large variety of various car manufacturer requirements the VDS 200Q10.1 covers as well including sine waves and complex arb waves.

For automotive transient testing like pulse 1, pulse 2a or pulses 3a/3b, the VDS 200Q10.1 serves as a battery simulator, also taking the required low source impedance of less than 10 mΩ into account.

It covers all three common supply voltage ranges in vehicles, 12V, 24V and 48V. The current capability goes up to 10 A continuous, for small current application it is a suitable amplifier for compliance testing.

Sense lines allow to compensate the voltage drop through the cabling between source and DUT.

The autowave.control software tool with its large pre-programmed standard test library completes our offer.

The software offers a reporting tool. External measuring equipment such as scope are either already available to chose from or can be easily implemented.

Models

VDS 200Q10.1-120	-60 ... +60 Vpk, 0 ... 10 A continous, up to 180 kHz Power mains supply 120 VAC
VDS 200Q10.2-230	-60 ... +60 Vpk, 0 ... 10 A continous, up to 180 kHz Power mains supply 230 VAC

Applicable test standards (extract)

ISO 7637-2	BMW 95024-2
ISO 16750-2	Tesla TS-0000425-05
ISO 21780	Stellantis CS.00244
LV 124	Scania TB1901
LV 148	GMW 3172
VW 80000	CVS41
Ford FMC 1278	MBN 10567

Specifications

Parameter	Value
Output voltage (cont.)	-60 ... +60 VDC
Output current (cont.)	0 ... 10A
Bandwidth (-3dB)	DC ... 180kHz, full signal
Slew rate	typical < 10us (STD mode) / < 3us (HF mode)
Source impedance	< 10 mΩ
Compensation Modes	CAP: DC ... 3kHz / STD: DC ... 40 kHz / HF: DC ... 150 kHz
Recovery time	90 % of max. excursion within 25 μs
Sense Lines	Yes, voltage drop compensation in cabling, max 8 VDC (AC up to to approx. 8 kHz)
Ripple voltage (noise)	< 10 mVpp up to min. 400 Hz
Safety	Circuit breaker
Interface (remote control)	1 x IEEE 1 x USB (ethernet only pass-through AutoWave)
Interfaces	1 x trigger IN 1 x trigger OUT 1 x ± 10 analoge input
Cooling	Temperature- controlled air cooling
Power Mains	120 / 230 VAC ± 10 % / L, N, PE
Fusage	120 V: 10 AT / 230 V: 6.3 AT
Power mains frequency	50 ... 60 Hz
Housing / Compartment	19" / 6HU
Dimension	289 x 535 x 500 mm
Weight	37 kg
Environment	Operating temperature 10 ... 40 °C Humidity 10 ... 90%, non-condensing Pressure 860 mbar ... 1060 mbar

Other automotive emc test equipment

AutoWave	ArbWave generator, up to 4 output channels, parameter iteration possible
PFM 200Nx	Power Fail Module for fast drop-out testing, rise time < 200 ns, incl. data line switches
AMP 200N2	Audio amplifier for magnetic field and AC ripple testing
CN 200N1	Coupling transformer, 50A
RDS 200N1	2-Quadrant source, 0 ... 16V, 10 A, up to 30 kHz
autowave.control	Windows remote control software