

VANTAGE® Ultra EETM309 BID SPECIFICATION



Snap-on® VANTAGE® Ultra
Component Test System

PRODUCT FEATURES

- Integrated multifunction diagnostic & information system
- Upgradeable software
- 2-channel lab scope with Guided Component Tests
- Digital & graphing multimeter
- Data manager function

DISPLAY

- 8" Color, 800 x 480 resolution, resistive touch panel, backlit LCD

SYSTEM & USER INTERFACE

- SMX embedded dedicated operating system
- Touchscreen navigation

STANDARD ACCESSORIES

- Two shielded, color-coded scope leads
- Two insulated test probes
- Three insulated test clips
- 110VAC power adapter
- Removable Lithium-ion battery pack
- Custom-fit organizer trays
- USB cable
- Quick-start guide

LAB SCOPE SPECIFICATIONS

Two-Trace Scope: Captures and displays up to two waveforms on screen in real time.

Sample rate up to 6 million samples per second on one channel (at 50 us sweep).

Sample rate up to 3 million samples per second on two channels (at 100 us sweep).

Note: Also see SCOPE/METER SYSTEM SPECIFICATIONS at end of this document

- Displays digital readout along with each waveform to determine voltage at the selected point on the waveform
- Color-coded waveform for each channel
- Manual & automatic display and trigger configuration
- AC Coupling: Provides the ability to enlarge the alternating current (AC) component of a signal for closer examination
- Invert: Flip waveform to adjust for flexible hookups and easier viewing
- Peak Detect: User selectable for capturing hi-speed signals

DIGITAL & GRAPHING MULTIMETER SPECIFICATIONS

- Auto scaling, high-impedance multimeter measurement system
- Digital and graphing display of results
- Pinpoint measurement of:
 - DC volts, AC Volts RMS, Ohms, Frequency, Pulse-width, Injection pulse-width, Duty cycle,
 - Interface for optional amp probe and pressure/vacuum transducers
 - Continuity tester with audible beep

FAST-TRACK® GUIDED COMPONENT TESTS

- Built-in Guided Component Test software
 - Coverage for over 40 domestic, Asian and European makes; 1979-newer
 - Guided test procedures for over one million components
 - Test coverage for sensors, solenoids, injectors, charging/starting systems, ignition, motors, pumps, ABS and more
 - Automatic meter setup and presets
 - Connector diagrams and connection tips
 - Component description and operation
 - Known good test values
 - Waveform library
- 10 Minute Training Class modules

POWER/WEIGHT/DIMENSIONS

- Battery: Lithium-ion battery pack included
- Dimensions: 12.5"W x 6.5"H x 2.0"D
- Weight: 3.2 lbs

OPTIONAL ACCESSORIES – IGNITION ADAPTERS

- Secondary Coil Adapter Lead – EETA309A05A
- EETM306A02 - Secondary Ignition clip-on Wire Adapter
- EETM306A03 COP-1 Ford
- EETM306A04 COP-2 Chrysler
- EETM306A05 CIC-2 Honda, Toyota
- EETM306A06 CIC-1 GM
- EETM306A07 COP-3 Audi, VW
- EETM306A08 COP-4 Acura/Honda, Isuzu
- EETM306A09 COP-5 Volvo/BMW
- EETM306A10 COP-6 Mercedes
- EETM306A11 COP-7 Mercedes Dual
- EETM306A12 COP-8 BMW
- EETM306A13 COP-9 Lexus
- EETM306A14 COP-11 Audi, BMW, Chrysler, Jeep, Lexus, Mercedes, Saab, Toyota, Volvo, VW

OPTIONAL ACCESSORIES – LAB SCOPE/METER

- Precision low amp current probe – EETA308D
- 100 PSI Pressure/Vacuum transducer w/cable – EEPV302AL
- 500 PSI Pressure transducer w/cable – EEPV302AT
- 5000 PSI Pressure transducer w/cable – EEPV302AH
Note: Pressure transducers require optional pressure transducer adapter – EEMS324PSA
- Pressure transducer extension cable – EAX0024B30A
- Waveform emulation demo board – EESX306A

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OPTIONAL ACCESSORIES – PROTECTION AND ORGANIZATION

- Silicone protective skin, black – EAC0111L51A
- Foam drawer organizers for 3-series carts – SOLVANUFOAM3
- Foam drawer organizers for 4-series carts – SOLVANUFOAM4
- Screen protector 3-pack – EAC0111L76A3

SCOPE/METER SYSTEM SPECIFICATIONS

MULTIMETER

Function	Range	Comments
Channels	1 – 2	Common Ground
Sample Rate	6.0 MSPS @ 50us sweep	Simultaneous
	3.0 MSPS @ 100us sweep	Continuous per channel
Bandwidth	DC – 3 MHz	3 db point @ 3 MHz
Input Impedance	10 M Ω @ DC	All channels
	4 k Ω @ 3MHz	
V dc (Full Scale)	75 V maximum	
V ac (Full Scale)	50 V maximum	
Peak to Peak Voltage		

DIGITAL METER OHMS AND DIODE CONTINUITY TESTS

Function	Range	Comments
Channels	1-2	Inputs between channels 1 (-) and 2 (+)
Input Impedance	10 M Ω	
Glitch capture	Approximately 50 mS	
Ohms	400 Ω – 4 M Ω	Fixed scales or Auto Ranging
Diode Test	2 V Scale	

GRAPHING MULTIMETER

Function	Range	Comments
Input Channels	1 – 2	
Input Impedance	10 Megohm	
Volts (DC)	400 mV thru 400V*	Auto Ranging
Frequency	5 Hz thru 50 KHz	Auto Threshold Setting
Pulse Width	5 ms thru 2 s	Auto Threshold Setting
Inj Pulse Width	5 ms thru 2 s	
MC Dwell (60)	20 - 40 - 60 degrees	Auto Threshold Setting
MC Dwell (90)	30 - 60 - 90 degrees	Auto Threshold Setting
Duty Cycle	20 - 40 - 60 - 80 - 100%	Auto Threshold Setting
Low Amps (20)	1 - 2 - 5 - 10 – 20A	With EETA308D
Low Amps (40)	10 – 20 - 40A	With EETA308D
Low Amps (60)	10 – 20 – 40 – 60A	With EETA308D
Vacuum	5 - 10 – 20 in Hg	Sensor specific
100 psi Pressure	10 - 25 - 50 - 100 PSI	Sensor specific
500 psi Pressure	50 - 100 - 250 - 500 PSI	Sensor specific
5000 psi Pressure	500 - 1000 - 2500 - 5000 PSI	Sensor specific

* See Safety Warnings in VANTAGE Ultra user manual

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LAB SCOPE

Function	Range	Comments
Channels	1 – 2	Common Ground
Bandwidth	DC - 3 MHz	3 db point @ 3 MHz
Input Impedance	10 MΩ @ DC	All channels
	4 kΩ @ 3MHz	
VDC (full scale) Do not test greater than 75Vdc	400 Volts	
	200 Volts	
	100 Volts	
	50 Volts	
	20 Volts	
	10 Volts	
VAC (full scale) Peak to Peak Voltage Do not test greater than 50Vac (rms)	5 Volt	
	2 Volt	
	1 Volt	
	500 millivolt	
	200 millivolt	
	100 millivolt	
Secondary Ignition	1 – 50 KV	Channels 1 and 2

LAB SCOPE SPECIFICATIONS BY SWEEP RATE

Sweep	Channels	Data points per screen	Buffer storage/Ch	Max # Screens	Total time ¹	Sample rate ²	Peak Detect ³
50 μs	Ch 1	300	524,288	1747	87.3 ms	6.0 MHz	N
100 μs	Ch 1,2	300	261,120	870	87.0 ms	3.0 MHz	N
200 μs	Ch 1,2	300	131,040	436	87.2 ms	1.5 MHz	N
500 μs	Ch 1,2	500	131,070	262	131 ms	1.0 MHz	N
1 ms	Ch 1,2	500	131,040	262	262 ms	500 KHz	Y
2 ms	Ch 1,2	500	131,040	262	524 ms	250 KHz	Y
5 ms	Ch 1,2	500	131,040	262	1.3 S	100 KHz	Y
10 ms	Ch 1,2	500	131,040	262	2.6 S	50 KHz	Y
20 ms	Ch 1,2	500	131,070	262	5.2 S	25 KHz	Y
50 ms	Ch 1,2	500	131,070	262	13.1 S	10 KHz	Y
100 ms	Ch 1,2	500	131,070	262	26.2 S	5 KHz	Y
200 ms	Ch 1,2	500	131,070	262	52.4 S	2.5 KHz	Y
500 ms	Ch 1,2	500	131,070	262	2.2 M	1.0 KHz	Y
1 s	Ch 1,2	500	131,070	262	4.3 M	500 Hz	Y
2 s	Ch 1,2	500	131,070	262	8.7 M	250 Hz	Y
5 s	Ch 1,2	500	131,070	262	21.8 M	100 Hz	Y
10 s	Ch 1,2	500	131,070	262	43.7 M	50 Hz	Y
20 s	Ch 1,2	500	131,070	262	87.3 M	25 Hz	Y

* See Safety Warnings in VANTAGE Ultra user manual

1 - Total time is equal to the sweep times the number of screens.

2 - Actual sample rate for sweeps 50-200 μs. Effective sample rate for sweeps 500 μs and longer. The effective sample rate is based on the number of sample points stored to the data buffer memory over the selected time sweep. On all sweeps 500 μs and longer, the ADC samples at 1.5 MHz per channel regardless of sweep. The number of sample points is greater than the number of points needed to complete a screen. Only enough points to complete a screen are selected to be stored to the data buffer. This results in the effective sample rate being lower than the actual sample rate of 1.5MHz.

3 - When Peak Detect is on, all samples are evaluated. The points stored to the buffer are intelligently selected to capture fast events that might be missed at slower effective sample rates. Peak Detect will capture fast changes at an effective sample rate of 1.5MHz.