

Multimeters and Accessories



1000V CAT III Hybrid Multimeter



3990

OTC 1000V CAT III Hybrid Multimeter with Insulation Test. A full function Multimeter with an insulation test feature is used to test for voltage leaks through insulation found on Hybrid and Electric Vehicles.

Features:

- Hybrid Insulation Resistance Test
- True RMS
- Auto Ranging
- Diode Test
- Continuity Buzzer
- Data Hold
- Data Logging
- Display Backlight
- Min/Max Mode
- Sleep Mode
- Low Battery Display

Specifications:

Insulation Testing Voltage:	50V, 100V, 250V, 500V, 1000V
AC Voltage:	6V, 60V, 600V, 1000V
DC Voltage:	6V, 60V, 600V, 1000V
DC Millivolts:	60mV, 600mV
AC Current:	60mA, 600mA
DC Current:	60mA, 600mA
Ohms:	600., 6k., 60k., 600k., 6M., 40M.
Capacitance:	10nF, 100nF, 1000nF, 10µF, 100µF
Frequency at mV range:	60Hz, 600Hz, 6kHz, 60kHz, 600kHz, 1MHz
Frequency at DCV/ACV range:	10Hz ~ 100kHz
Temperature:	-40C to + 537C (-40F to + 998F)

Kit Includes: Heavy Duty Class III test leads with alligator clips, Short Lead, K Type temperature adapter and Manual.



Hybrid Multimeter Accessories

These Hybrid Electric Safety Gloves are the most important articles of personal protective equipment when working on high voltage vehicles. They are the first line of defense for contact with any energized components.

3991-10

Small Glove with Leather outer protector set

3991-11

Medium Glove with Leather outer protector set

3991-12

Large Glove with Leather outer protector set



3991-2

Use this Orange Magnetic Warning Sign to deter people from entering an area where a high voltage system is being worked on.



WARNING: Safety Gloves must be inspected prior to each use in accordance with ASTM Standard F1236 and the applicable Service manual for the vehicle being serviced. Rubber insulating gloves must be retested electrically at least once every six (6) months using the test procedures described in the most recent editions of ASTM Standard F496.



Multimeter Family Comparison Chart

						
	3907	3908	3910	3940	3980	3990
Technical Specifications:						
Frequency:				1Hz ~ 10MHz ± 0.1%	1Hz ~ 10MHz ± 0.1%	10Hz ~ 1MHz
RPM (Direct Test with Leads):					0 - 10,000	
RPM (with RPM Pickup):					0 - 10,000	
DWELL Angle:					0 - 360° (1 - 12 CYL)	
Duty Cycle:				0.1% ~ 99.9% ± 2.5%	0.1% ~ 99.9% ± 2.5%	
Pulse Width-ms (negative):					1 ~ 999ms	
Temperature:			-50°C to 200°C, -58°F to 392°F		-50°C to 400°C, -58°F to 752°F	-40°C to 537°C, -40°F to 998°F
DC Volts:	200mV/2/20/200V ± 0.5%, 600V ± 0.8%	400mV/4/40/400V ± 0.5%, 600V ± 0.8%	200mV/2/20/200V ± 0.5%, 600V ± 0.8%	400mV/4/40/400V ± 0.5%, 1000V ± 0.8%	400mV/4/40/400V ± 0.5%, 1000V ± 0.8%	60mV/600mV/6V/60V/600V/1000V
AC Volts:	2/20/200V ± 0.8%, 200mV/600V ± 1.2%	TRMS-4/40/400V ± 1%, 400mV/600V ± 1.5%	2/20/200V ± 0.8%, 200mV/600V ± 1.5%	4/40/400V ± 0.8%, 400mV/750V ± 1.2%	TRMS - 4/40/400V ± 1.5%, 400mV/750V ± 2%	TRMS - 6V/60V/600V/1000V
DC Amps (through Meter):			400/4000µA ± 2%, 40/400mA ± 1.5%, 4/10A ± 2%	400/4000µA ± 2%, 40/400mA ± 1.5%, 4/10A ± 2%	400/4000µA ± 2%, 40/400mA ± 1.5%, 4/10A ± 2%	0.01mA to 600mA
AC Amps (through Meter):			200/2000µA ± 2.5%, 20/200mA ± 2%, 2/10A ± 2.5%	400/4000µA ± 2.5%, 40/400mA ± 2%, 4/10A ± 2.5%	TRMS - 400/4000µA ± 2%, 40/400A ± 2%, 4/10A ± 2.5%	3mA to 600mA
DC Amps (Inductive):		400A ± (1.5% + 5), 1000A ± (2% + 10)				
AC Amps (Inductive):		400A ± (2% + 5), 1000A ± (2.5% + 10)				
Resistance:	200Ω/2/20/200kΩ/2MΩ±1%, 20MΩ±2%	400Ω/4/40/400kΩ ± 1%, 4/40MΩ ± 2%	200Ω/2/20/200kΩ/2MΩ ± 1%, 20MΩ ± 2%	400Ω/4/40/400kΩ ± 1%, 4/40MΩ ± 2%	400Ω/4/40/400kΩ ± 1%, 4/40MΩ ± 2%	600Ω, 6kΩ, 60kΩ, 600kΩ, 6MΩ, 40MΩ
Capacitance:		400nF/4µF ± (2.5%+5), 40µF/100µF ± (5%+10)		40nF ± 3.5%, 400nF/4µF/40µF ± 3%, 400µF/4000µF ± 20%	40nF/400nF/4µF/40µF ± 3%, 400µF/4000µF ± 20%	
Insulation Testing						50V,100V,250V,500V,1000V
Features:						
Diode Test / Continuity Test	■	■	■	■	■	■
Auto Range	■	■	■	■	■	■
Auto Power Off	■	■	■	■	■	■
Data Hold		■	■	■	■	■
Backlight	■	■			■	■
True RMS		■			■	■
Relative Change				■	■	
Min/Max				■	■	■
Temperature Adapter			■		■	■
Hybrid Compatible / Class III					■	■
Alligator Clips					■	■
Class III Test Leads					■	■
Case		■			■	■
RS232 Computer Interface					■	
PC Cable and Software					■	
RPM Pickup Adapter					■	
Insulation Test (Hybrid)						■
Inductive Current Measurement		■				

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