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RPM Measurement

Just touching the supplied RPM sensor on the direct ignition.

Versatile Automotive DMM with Full Range of Functions

**Large LCD with Backlight and Bargraph.
Easy-to-hold Ergonomical Design.**

For Various Automotive Measurements

- Battery voltage
- RPM
- Injection pulse width (PFI and TBI)
- Charging current for alternator (with optional clampadapter)
- Temperature
- Other sensor measurement

※ For direct ignition and high tension code engines.
※ Non usable for : rotary engine / diesel engine / vehicles with MSD or MDI / some vehicles with wasted spark ignition

Protective Holster with Enhanced Good Grip

Equipped with Plastic Carrying Case



KT-2022

For various automotive measurements

• Battery voltage



• Alternator charging current



* with optional clamp adapter

• RPM



※IP-RPM: measure with RPM sensor
 IG-RPM: measure with test leads
 ※For direct ignition and high tension code engines.
 ※Non usable for: rotary engine / diesel engine / vehicles with MSD or MDI / some vehicles with wasted spark ignition

• Dwell Angle (1 to 12 cylinders)

• Injection pulse width

※Can measure PFI (port fuel injection) and TBI (throttle body injection) systems.

• Temperature

• Other sensor measurement

Measurement Items

AC / DC Voltage
 AC / DC Current
 Resistance
 Frequency
 RPM
 Dwell Angle
 Duty Cycle
 Injection Pulse Width
 Temperature
 Diode Test
 Continuity Test
 Capacitance



Large LCD with backlight and bar graph.



Equipped with plastic carrying case

Tough designed plastic carrying case that has enough space to hold the tester and the all accessories.



Functions

- Error input warning
- Display hold
- Range Hold
- Auto power off

(23°C±5°C, <80%RH in non-condensing)

DC Voltage (mV)	Range	Accuracy	Input Impedance	Overload Protection
	60.00 mV	±0.4%rdg±3dgt	≐10MΩ,50pF	1000Vrms
	600.0 mV	±0.3%rdg±3dgt		
DC Voltage (V)	6.000 V	±0.4%rdg±3dgt	≐10MΩ,50pF	1050Vrms 1450Vpeak
	60.00 V			
	600.0 V			
	1000 V			
AC Voltage (mV)	60.00 mV	±2.0%rdg±5dgt	≐10MΩ,50pF	1000Vrms
50Hz to 500Hz	600.0 mV			
AC Voltage (V)	6.000 V	±2.0%rdg±5dgt	≐10MΩ,50pF	1050Vrms 1450Vpeak
	60.00 V			
	600.0 V			
	1000 V			

Resistance (Ω)	Range		Accuracy	Open Circuit Voltage
	600.0Ω		±0.5%rdg±6dgt	0.45V DC
	6.000kΩ		±0.5%rdg±3dgt	
	60.00kΩ			
	600.0kΩ		±0.8%rdg±4dgt	
	6.000MΩ		±1.0%rdg±5dgt	
	60.00MΩ		±1.5%rdg±5dgt	
Frequency (Hz)	Function	Sensitivity	Range	Accuracy
	6 V	0.5 V	10Hz to 10kHz	±0.1%rdg±3dgt
	60 V	5 V	10Hz to 50kHz	
	600 V	50 V	10Hz to 50kHz	
	1000 V	500 V	45Hz to 1kHz	
RPM (rpm)		Range (IP-RPM)	Range (IG-RPM)	Accuracy
IP-RPM : Inductive Pickup type IG-RPM : Contact Signal type *Measurement cannot be made depending on the vehicles.	RPM4	240 to 20000RPM	60 to 20000RPM	±0.2%rdg±20dgt
	RPM2	120 to 10000RPM	30 to 10000RPM	
	RPM2-M	60 to 5000RPM	15 to 5000RPM	
Diode Test (→)	Range	Accuracy	Test Current	Open Circuit Voltage
	1.000 V	±1.0%rdg±3dgt	0.50mA	<1.6V DC

Display (LCD)	4 digit 6000 count, with Bar Graph
Operating Principle	Sigma-delta Conversion
Measuring Principle	Average Rectification
Sampling Rate	5 times per second (Bar Graph : 40 times per second max.)
Range Selection	Auto / Manual (Frequency, Injection Pulse width and Capacitance measurement are Auto only)
Battery Warning	⚡ indication at approx. 2.3V or less
Display Hold	Hold indicating values by pressing HOLD Key
Auto Power Off	Power turns off automatically after approx. 34 minutes
Overload Protection	μA & mA : 0.4A/1000V fast-acting fuse A : 11A/1000V fast-acting fuse V : 1050Vrms or 1450Vpeak
Operating Temperature & Humidity	Maximum relative humidity 80% for temperature up to 31°C decreasing linearly to 50% relative humidity at 40°C
Storage Temperature & Humidity	-20 to 60°C, less than 80%RH in non-condensing.
Temperature Coefficient	Accuracy at 23°C±5°C x 0.15/°C

DC Current (μA)	Range	Accuracy	Burden Voltage
	600.0 μA	±0.7%rdg±3dgt	0.25mV / μA
	6000 μA	±0.5%rdg±3dgt	
DC Current (mA/A)	60.00 mA	±0.7%rdg±3dgt	2.5mV / mA
*10A Continuous measurement is possible. 10A to 20A is measurable within 30 seconds but 5 minutes cooling down interval is necessary.	600.0 mA	±0.5%rdg±3dgt	
	6.000 A	±0.7%rdg±3dgt	0.03V / A
	10.00 A	±0.5%rdg±3dgt	
AC Current (μA)	600.0 μA	±2.2%rdg±5dgt	0.25mV / μA
50Hz to 500Hz	6000 μA	±2.0%rdg±5dgt	
AC Current (mA/A)	60.00 mA	±2.2%rdg±5dgt	2.5mV / mA
50Hz to 500Hz *10A Continuous measurement is possible. 10A to 20A is measurable within 30 seconds but 5 minutes cooling down interval is necessary.	600.0 mA	±2.0%rdg±5dgt	
	6.000 A	±2.2%rdg±5dgt	0.03V / A
	10.00 A	±1.2%rdg±5dgt	

Dwell Angle (°), Duty Cycle (%)	Range*	Accuracy	Selectable Number of Cylinders
	0.0° to 360.0°	±1.2°/krpm±1dgt	1, 2, 3, 4, 5, 6, 8, 10, 12 (Select by CYLINDER Key)
*Specified ranges depend on engine rpm and number of cylinders (cyl).	0.0% to 100.0%	±0.04%/krpm/cyl±2dgt	
Injection Pulse Width (ms), Duty Cycle (%)	Range*	Accuracy	
*Specified ranges depend on trigger slopes, engine rpm and number of cylinders (cyl).	Multi Point	0.05 to 99.99ms / 100.0 to 250.0ms	±0.05ms±1dgt
	Injection	0.0% to 100.0%	±0.04%/krpm±2dgt
	Single Point	0.05 to 99.99ms / 100.0 to 250.0ms	±0.05ms±1dgt
	Injection	0.0% to 100.0%	±0.04%/krpm/cyl±2dgt
Temperature (°C / °F)	Range	Accuracy	
*K-type thermocouple / sensor accuracy is not included. *818-02 Temperature Probe can measure up to 100°C.	-50°C to 1000°C	±0.5%rdg±3dgt	
	-58°F to 1832°F	±0.5%rdg±6dgt	
Continuity (→)	Threshold Level	Response Time	
	between 10Ω and 200Ω	32ms	
Capacitance (⇄)	Range	Accuracy	
	6.000 μF	±2.0%rdg±5dgt	
	60.00 μF	±3.5%rdg±5dgt	
	600.0 μF		
	2000 μF	±4.0%rdg±5dgt	

Safety Level	CE marking approved. LVD : CAT II 1000V, CAT III 600V, CAT IV 300V AC and DC EMC : EN61326-1 (2013)
Power Supply	1.5V R03(AAA) Battery x 2
Fuse	Fast-acting 11A/1000V (φ10×38mm) x 1, Fast-acting 0.4A/1000V (φ6×32mm) x 1
Power Consumption	approx. 4.3mA (in Auto Power Off : approx. 10 μA, in backlighting : approx. 27mA)
Continuous Operating Time	approx. 180 hours (manganese cell), approx. 360 hours (alkaline cell)
Dimensions & Weight	161(H) x 80(W) x 50(D)mm, approx. 340g
Accessories	100-66 Test Lead, 653 RPM Sensor (for Direct Ignition), 654 RPM Sensor (for High Tension Code), 818-02 Temperature Probe, 943 Alligator Clip, 1024 Carrying Case, Holster, 1.5V R03(AAA) Battery (Installed), F38 Spare Fuse (11A/1000V), F39 Spare Fuse (0.4A/1000V), Instruction Manual
Optional Accessories	660 AC/DC Clamp Adapter, 100-41 Test Lead Kit, 100-62 Test Lead Set, 944 Test Pin, 946 Battery Clip, 793 Coil Contact Pin

DISTRIBUTOR

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